2021 Hazardous Waste Scanning Project

File Form Naming Convention.

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ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PRELIMINARY SITE ASSESSMENT EVALUATION REPORT OF INITIAL DATA

Volume I

Guterl Specialty Steel
City of Lockport

Site No. 932032
Niagara County

Prepared for:

New York State Department of Environmental Conservation

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ABB Environmental Services

Portland, Maine

APRIL 1994

NYSDEC SUPERFUND STANDBY CONTRACT
WORK ASSIGNMENT NO. D002472-6.1

PRELIMINARY SITE ASSESSMENT EVALUATION REPORT OF INITIAL DATA VOLUME I

GUTERL SPECIALTY STEEL
LOCKPORT, NEW YORK

SITE NO. 932032

Submitted to:

New York State Department of Environmental Conservation
Albany, New York

Submitted by:

ABB Environmental Services
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April 1994

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GUTERL SPECIALTY STEEL
PRELIMINARY SITE ASSESSMENT
EVALUATION REPORT OF INITIAL DATA
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EXECUTIVE SUMMARY

The Guterl Specialty Steel Corporation (Guterl) site is an 8.6-acre inactive landfill located at 695 Ohio Street, Lockport, Niagara County, New York. The landfill was originally owned and used by Simonds Saw and Steel (Simonds) from 1962 to 1978, and was subsequently owned and used by Guterl Specialty Steel from 1978 to 1980. The landfill allegedly was used for the disposal of slag, baghouse flue dust, foundry sand, waste oils and greases, and miscellaneous plant rubbish (Buri, 1990). The landfill is not lined or covered, and although its surface has been regraded, ponding occurs and surface runoff is uncontrolled.

Guterl discontinued disposal in the landfill when baghouse flue dust containing chromium and nickel was listed as a Resource Conservation and Recovery Act hazardous waste (K091) in 1980 (Buri, 1990). Composite and leachate samples of baghouse dust and slag disposed of on site were analyzed by Recra Research, Inc., in 1979 for total recoverable oil and grease, total recoverable phenolics, aluminum, chromium, copper, iron, lead, manganese, and nickel. The leachate extracts were prepared using the New York State Leachate Potential Test (a precursor to the Extraction Procedure [EP] Toxicity Test). A conservative comparison of the baghouse dust leachate extracts to EP Toxicity regulatory limits indicate that the disposed baghouse dust would be considered a characteristic hazardous waste because of chromium (138 milligrams per liter [mg/L] in the baghouse dust leachate compared to an EP Toxicity regulatory limit of 5 mg/L). Based on the New York State Leachate Potential Test results, Guterl was required by the New York State Department of Environmental Conservation (NYSDEC) to (1) stop disposing of baghouse dust in the landfill; (2) stop

providing this material to outside construction companies; and (3) cleanup the baghouse dust disposal area (Erk, 1980).

In 1981, Guterl retained Secure Landfill Contractors (SLC) to prepare an application for a Title 6 New York Codes, Rules, and Regulations Part 360 permit to operate a solid waste management facility. As part of the permit process, SLC installed four shallow groundwater monitoring wells along the landfill perimeter and sampled the wells five times between 1980 and 1982. Groundwater analytical results indicated that New York State Class GA standards for phenols, metals, and pH were exceeded (Engineering Science [E-S], 1988). The Part 360 permit application was submitted to the state; however, the permit was not acted upon and consequently never issued.

In 1981 or 1982, Guterl reclaimed approximately 2 million pounds of metal slag from the landfill for recycling. The landfill was regraded after the salvage operation, and reportedly has not been used since (Buri, 1990). In 1984, Guterl declared bankruptcy and transferred property ownership of most of the facility to the Niagara County Industrial Development Agency (NCIDA).

In 1984, Allegheny Ludlum Steel Corporation entered into a lease agreement with NCIDA to use most of the former Guterl Steel property after Guterl declared bankruptcy. This property included the landfill but excluded several acres of the eastern portion of the property along Ohio Street, where Simonds had conducted uranium and thorium milling operations for the Manhattan Engineering District of the Atomic Energy Commission (AEC). Allegheny Ludlum has not used the landfill and reportedly has no plans to do so.

The U.S. Department of Energy (DOE) investigated the mill buildings used for uranium and thorium milling in 1977 and in 1984 (DOE, 1979; U.S. Environmental Protection Agency [USEPA], 1986). These studies are not known to have included characterization of the Guterl landfill area.

NUS Corporation (NUS) attempted to perform a Preliminary Assessment of the Guterl site for the USEPA in 1983. However, because of restricted site access during Guterl bankruptcy proceedings, the site inspection was considered incomplete by the NUS project team (NUS, 1983). E-S completed a Phase I investigation of the landfill site for the NYSDEC in 1988. E-S concluded that inadequate data exist to confirm the presence of hazardous wastes in the landfill (E-S, 1988).

ABB Environmental Services (ABB-ES, formerly E.C. Jordan Co.), under contract to the NYSDEC, conducted this Preliminary Site Assessment (PSA) Task 3 investigation to establish the presence of hazardous waste at the site and to assist NYSDEC in establishing whether the site poses a significant threat to public health or the environment.

The Task 3 investigation consisted of sampling several media and a radiation survey. One waste sample from a 35-gallon container, and samples of soil and slag from five soil borings and six test pits were collected from the landfill. Fifty-five-gallon containers, observed on the ground surface of the site, were not sampled because the material contained in them was frozen solid and appeared to be similar to that sampled from the 35-gallon container. Crushed, empty 55-gallon containers were observed in test pits at the site. Four groundwater

samples and five collocated surface water and sediment samples were collected from the site.

The radiation survey consisted of general site screening and collection of radiation measurements at 228 grid elements. The radiation survey showed that radiation levels exceeding twice background are present at the northeast corner of the site, with the highest readings associated with debris piles located in thick brush.

Task 3 field investigations and the NYSDEC follow-on sampling indicated no exceedances above regulatory limits for hazardous waste characteristics and EP Toxicity results from laboratory analyses. Comparison of inorganics data from Task 3 samples to previous data from slag and baghouse dust show that materials sampled during Task 3 represent slag. Baghouse dust disposed on site was not encountered during Task-3 and could not be sampled. For the purpose of the Task 3 investigation, significant threat was evaluated by comparing surface water and groundwater sample results to New York State Class D surface water standards and groundwater quality Class GA standards, respectively. Groundwater results were also compared to USEPA Maximum Contaminant Levels (MCLs). Iron and sodium concentrations exceeded the New York State Class GA groundwater standards, and aluminum, magnesium, and thallium exceeded either USEPA MCLs, secondary MCLs, or New York State Class GA standards. Alpha radioactivity and pH also exceeded the Class GA groundwater quality standards. Only phenol and iron contravened Class D standards for surface water. These surface water and groundwater contraventions of standards, coupled with previous data from site monitoring wells, indicate a significant threat to public health and the environment.

During ABB-ES' Task 3 investigation, a monitoring well (MW-04) installed and sampled during previous investigations was found to be dry and could not be resampled. This monitoring well had been shown during the previous study to be the well most contaminated with chromium (E-S, 1988). To address this data gap in the PSA, the NYSDEC Region 9 visited the site twice in 1993 to resample all of the wells for selected inorganics. The NYSDEC collected a groundwater sample from MW-04 in December 1993 (NYSDEC, 1994). The MW-04 sample contains chromium at a concentration exceeding the New York State Class GA standard and USEPA MCL. The NYSDEC sampling detected nickel at concentrations exceeding the USEPA MCL in two groundwater samples. Iron exceeded the New York State Class GA standard and USEPA secondary MCL. Magnesium exceeded the New York State Class GA standard. These results confirm that the site poses a significant threat to public health and the environment.

Based on information developed during the PSA Task 1 and Task 3 investigations and NYSDEC follow-on sampling at the Guterl site, it is recommended that the site be reclassified from a Class 2a to a Class 2 hazardous waste site. This recommendation is based principally on previous data that documented the presence of listed or characteristic hazardous waste, and that the RCRA-listed waste constituents (chromium and nickel) contravene groundwater standards.

The Task 3 activities are reported in two volumes. Volume I presents the project purpose, description of the Task 3 scope of work, results of Task 3 sampling and analysis, and the final recommendation for reclassifying the site. Included in Volume I are Appendix A, Registry Site Classification Decision Form, and Appendix B, Site Inspection Form, USEPA Form 2070-13. Volume II, Supporting

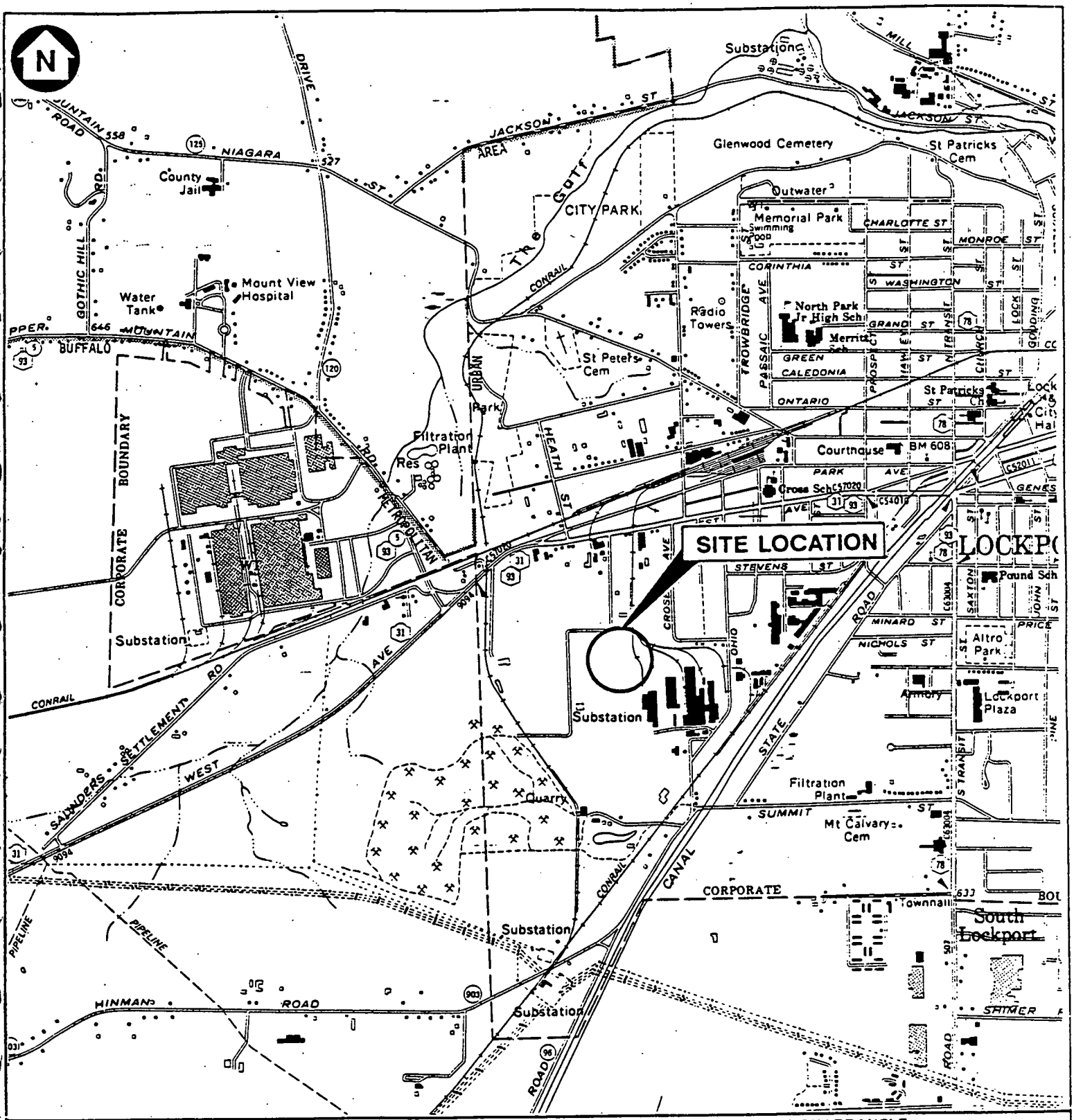
Documentation, contains the field data records, test pit logs, laboratory results, and Survey Control Report.

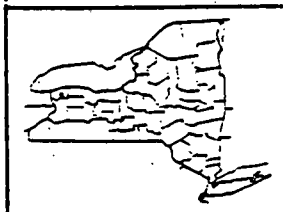
1.0 PURPOSE

ABB Environmental Services (ABB-ES) is submitting this Evaluation Report of Initial Data to the New York State Department of Environmental Conservation (NYSDEC) as part of the Preliminary Site Assessment (PSA) of the Guterl Specialty Steel site (Guterl) located in the City of Lockport, New York (Figure 1-1). This report was prepared in response to Work Assignment No. D002472-6.1, in accordance with the requirements of the NYSDEC Superfund Standby Contract No. D002472, dated November 1989, between the NYSDEC and ABB-ES (formerly E.C. Jordan Co.).

Guterl is a suspected inactive hazardous waste site recognized by the NYSDEC in its *Registry of Inactive Hazardous Waste Disposal Sites in New York* (NYSDEC, 1992b). The site (no. 932032) was assigned a Class 2a site classification because of insufficient information to document hazardous waste disposal and/or assess the significance of potential risks to public health and the environment (E.C. Jordan Co., 1991). Upon completion of Task 1 (a data records search and assessment), information was insufficient to reclassify the site.

ABB-ES completed Task 2 (preparation of Site Work Plans for Guterl) in September 1992. ABB-ES also prepared a scope of work for the Task 3 field investigation to develop the data necessary to reclassify the site according to guidelines set forth in Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375 (NYSDEC, 1992c). PSA activities are designed to produce a recommendation to reclassify Guterl to one of the following categories:





SOURCE: N.Y.S. DEPARTMENT OF TRANSPORTATION, LOCKPORT QUADRANGLE
DATED 1976, 7.5 MINUTE SERIES

SITE NO: 932032
LOCATION: CITY OF LOCKPORT
NIAGARA COUNTY

SCALE IN FEET

0 2000 4000

FIGURE 1-1
SITE LOCATION MAP
GUTERL SPECIALTY STEEL SITE
PRELIMINARY SITE ASSESSMENT
NEW YORK STATE DEC

EC JORDAN CO

6291-

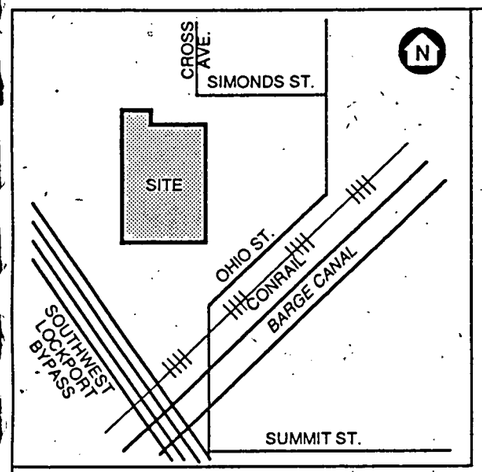
Class 2 - Hazardous waste sites presenting a significant threat to public health or the environment; defined by the NYSDEC as sites that had a release(s) resulting in violation of the NYSDEC environmental quality standards.

Class 3 - Hazardous waste sites not presenting a significant threat to public health or the environment.

Delist - Sites where hazardous waste disposal is not documented.

The Task 3 investigation involved environmental sampling and analysis to develop the data necessary to reclassify the site. Task 3 sampling locations are shown in Figure 1-2. The Task 3 investigation was completed in two separate sampling events. The first sampling event, completed in October 1992, included:

- Preliminary land surveying to delineate the western and northern property boundaries;
- Drilling four soil borings to characterize landfilled and geologic materials at the site;
- Drilling one soil boring to install a replacement shallow groundwater monitoring well;
- Collecting three subsurface samples from soil borings to assess (1) background soil conditions, and (2) whether materials disposed of



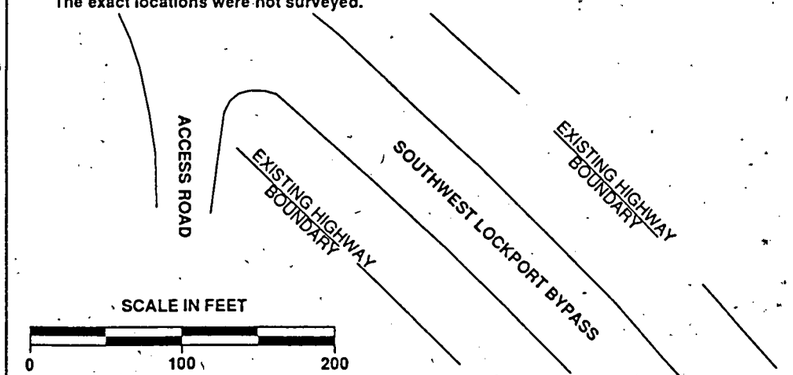
LOCATION MAP
N.T.S.

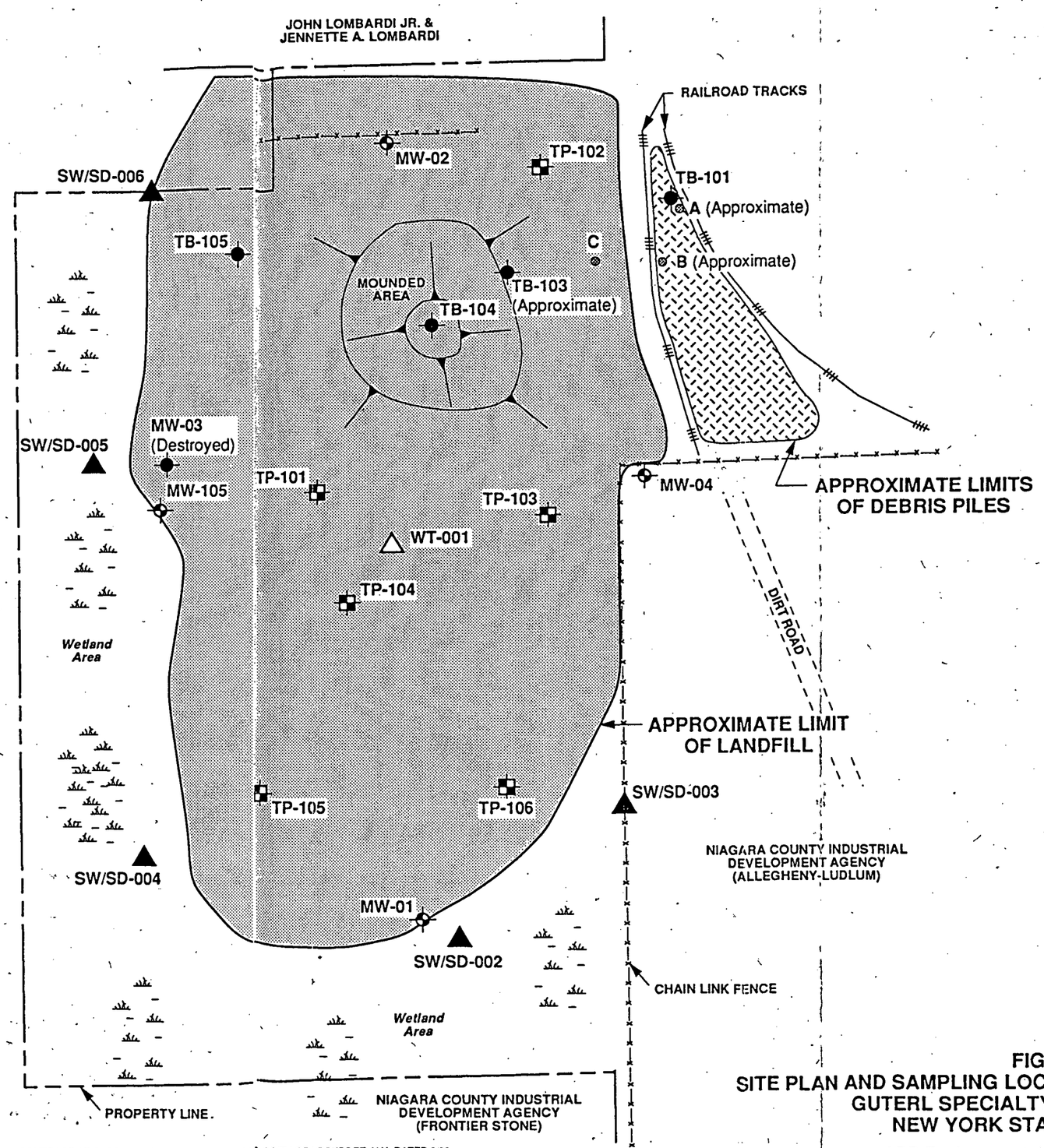
LEGEND

- MONITORING WELL LOCATION
- TEST BORING/SOIL SAMPLING LOCATION
- TEST PIT LOCATION
- SURFACE WATER/SEDIMENT LOCATION
- WASTE SAMPLE (DRUM REMAINS)
- RADIATION ANOMALIES
- PROPERTY LINE
- CHAIN LINK FENCE
- RAILROAD TRACKS
- APPROXIMATE LIMITS OF LANDFILL
- APPROXIMATE LIMITS OF DEBRIS PILES

SURVEY NOTES:

1. All locations on this map are based on the New York state plane coordinate system west zone.
2. All property line and R.O.W. information shown on this map was determined from current tax map information and iron pins as shown.
3. Coordinates for TB-103 and MW-03 are based on field notes. The exact locations were not surveyed.





NIAGARA COUNTY INDUSTRIAL DEVELOPMENT AGENCY (FRONTIER STONE)

FIGURE 1-2
SITE PLAN AND SAMPLING LOCATIONS
GUTERL SPECIALTY STEEL
NEW YORK STATE DEC

BASE MAP SOURCE: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION MAP ENTITLED "SUPERFUND STANDBY CONTRACT AT GUTERL SPECIALTY STEEL SITE N. 4 CITY OF LOCKPORT, N.Y. DATED 2/93.

ABB Environmental Services

9303029D

on the site are hazardous as defined by 6 NYCRR Part 371 (NYSDEC, 1992a).

During the October 1992 sampling event, radiation monitoring detected anomalous levels of radioactivity at the site, so work was halted to assess the adequacy of the Work Plan and Health and Safety Plan (HASP). After an addendum to the Work Plan was prepared by ABB-ES and approved by the NYSDEC, the work was restarted and completed in January 1993. This second sampling event included:

- Collection of one sample of solid material from a waste container to assess whether materials disposed of on the site are hazardous as defined by New York State Hazardous Waste Regulations 6 NYCRR Part 371 (NYSDEC, 1992a).

- Excavation of six test pits to collect landfill samples to assess whether materials disposed of and remaining on site are hazardous waste as defined by New York State Hazardous Waste Regulations 6 NYCRR Part 371 (NYSDEC, 1992a).

- Collection of five surface water/sediment sample pairs to assess significant threat to public health and the environment.

- Collection of three groundwater samples from two existing monitoring wells and one new monitoring well to assess significant threat to public health and the environment. One monitoring well (MW-04) was found dry and could not be sampled as planned.

- Completion of a detailed radiological survey to assess the extent of areas with anomalous radiation.

- Completion of a location and elevation survey of all sampling locations, selected radiation survey grid reference points, spot elevations, and property boundaries.

Upon completion of Task 3, NYSDEC Region 9 initiated a sampling program to address the data gap caused by dry MW-04. NYSDEC Region 9 personnel visited the site on October 26, 1993 and December 22, 1993.

- On October 26, 1993, NYSDEC found MW-04 still dry; the other three wells were sampled for selected metals (cadmium, chromium, lead, nickel, and hexavalent chromium).

- On December 22, 1993, NYSDEC found the four wells to contain water (including MW-04) and sampled groundwater for selected metals (cadmium, chromium, iron, magnesium, nickel, thallium, and hexavalent chromium).

Task 3 activities are reported in two volumes. Volume I presents the project purpose, description of the Task 3 scope of work, the results of the Task 3 activities and follow-on NYSDEC activities, and a final recommendation for reclassifying the site. Volume II, Supporting Documentation, contains Task 3 field data records and laboratory results.

2.0 SCOPE OF WORK

2.1 SITE RECONNAISSANCE

As part of the Task 2 Site Work Plan development, ABB-ES personnel conducted a site reconnaissance of Guterl with Mr. John Hyden, the NYSDEC Region 9 site manager, to discuss sampling locations and rationale. In attendance was Mr. Reginald Buri, representing Allegheny Ludlum Steel (current plant operators), representatives of Om Popli (surveying subcontractor), and Parratt-Wolff (drilling subcontractor).

The Task 2 site reconnaissance was conducted on March 31, 1992. During this reconnaissance, the NYSDEC requested that a replacement monitoring well be installed at the former location of MW-03 and that groundwater be sampled for Target Compound List (TCL) organic and inorganic compounds. The NYSDEC also requested that all surface water and groundwater samples be analyzed for gross alpha and beta radioactivity. During the site reconnaissance, six empty 55-gallon containers were observed on the site near the eastern boundary fence, in addition to a railroad carboy.

During Task 3, an additional site walkover to review sampling locations and gain utility clearance was performed on October 26, 1992. Participants in the walkover were ABB-ES personnel and Mr. Srikanth Maddineni, the NYSDEC project manager. The carboy and empty containers noted during the Task 2 site reconnaissance were not present at the site. Mr. Maddineni said that because the carboy was not present and surface water was not ponded at that location, the

proposed ponded surface water sample (SW-01) discussed in the Work Plan should not be collected. In addition, it was agreed that a more suitable location for a surface water/sediment sample pair (SW/SD-06) would be investigated to better characterize background concentrations. During the Task 3 walkover, conversations between ABB-ES representatives and an employee of the City of Lockport water department (on site for utility clearance purposes) revealed that former Guterl employees recalled disposing of radioactive materials in or near the landfill.

2.2 FILE REVIEWS

An additional file review was performed beyond that conducted during Task 1. This file review consisted of assessing correspondence and analytical data associated with characterization of baghouse dust and slag disposed of in the landfill prior to 1980 (Beecher, 1979; Recra Research, Inc., 1979). The results of the additional file review are discussed in Section 3.3.

2.3 RADIOLOGICAL SURVEY

The original developers at the site (Simonds Saw and Steel) provided milling services to the Manhattan Engineering District in the 1950s, for the radioactive materials uranium and thorium. Information reviewed during Tasks 1 and 2 suggested that radioactive materials could remain on-site in the vicinity of the Guterl landfill. Based on this information, Task 3 activities were conducted using protocols to protect workers against potential radiation exposure.

During the October 1992 Task 3 sampling event, radiation monitoring instruments used on site consisted of (1) a Radiation Monitor 4 survey meter; (2) a Ludlum Model 3 meter with a model 44-3 Gamma Scintillator probe; and a Ludlum Model 3 meter with a Model 44-9 pancake Geiger-Mueller (GM) probe. In addition, all personnel wore film dosimeter badges. All radiation monitoring equipment used at the site had different levels of sensitivity in detecting radiation. The standard usage of the equipment was as follows:

- General location screening and health and safety monitoring was performed with the dosimeter badges and the Radiation Monitor 4. This equipment provided data only for screening purposes and was the least sensitive of the radiation detection equipment used.

- Personnel, equipment, split-spoon samples, and drill cuttings were monitored for radiation with the Ludlum Model 3 with the 44-9 pancake probe, which is sensitive to alpha, beta, and gamma radiation. This instrument provided readings only in counts per minute (cpm).

- Detailed screening of proposed sampling locations (at the ground surface and at a height of 3 feet) was performed with the Ludlum Model 3 with the 44-3 GM probe, which is sensitive to gamma radiation. This instrument had a scale for converting radiation measurements in cpm to millirems per hour (mrem/hr). This was the most sensitive instrument used to detect radiation during the October 1992 sampling event.

Radiation monitoring conducted in the October 1992 sampling event is further detailed in Volume II. During sampling activities, all radiation measurements of personnel, equipment, and samples were within background ranges (e.g., 200 cpm). Detailed screening of sampling locations, however, identified three points having anomalous radiation levels located along the northeast part of the landfill in the vicinity of background soil boring, TB-101 (points are denoted A, B, and C and are shown on Figure 1-2). Contact measurements at these three locations showed radiation levels between 1,000 and 30,000 cpm (e.g., between 0.6 and 15 mrem/hr as measured by that instrument). Because these radiation measurements exceeded background (e.g., 200 cpm), the NYSDEC project manager halted site activities upon completion of the day's work on October 28, 1992 to allow for review of adequacy of the site Work Plan and HASP to address radiation.

Revisions to the site Work Plan and HASP after the October 1992 sampling event included modifying the HASP to include additional radiation safety training of site personnel, detailed procedures and contingencies for radiation safety, the addition of more sensitive and efficient radiation detection instrumentation, and a detailed survey of the site to map areas that contained anomalous radiation levels. Radiation detection instruments used during the January 1993 sampling event included: (1) a Ludlum Model 3 meter with a 44-9 pancake GM probe; (2) a Ludlum Model 18 with a Model 44-10 Gamma Scintillator probe; (3) a Ludlum 2221 meter with a Model 44-10 Gamma Scintillator probe. In addition, all personnel wore film dosimeter badges and a dosimeter badge was placed approximately 1 foot above the ground surface at the location of the highest radiation measurements detected during the October 1992 sampling event. A Radiation Monitor 4 was also used for general site screening. Because the

radiation detection instruments used during the January 1993 sampling event were different than those used in the October 1992 sampling event, direct comparison of data collected in the two events cannot be made. The standard usage of the equipment was as follows:

- General location screening and health and safety monitoring was performed with the dosimeter badges and the Radiation Monitor 4. This equipment provided data only for screening purposes and was the least sensitive of the radiation detection equipment used.

- Personnel, equipment, split-spoon samples, and drill cuttings were monitored for radiation with the Ludlum Model 3 with the 44-9 pancake probe, which is sensitive to alpha, beta, and gamma radiation. This instrument provided readings only in cpm.

- Personnel, equipment, split-spoon samples, proposed sampling locations, and test pit spoils were monitored for radiation with the Ludlum Model 18 with the 44-10 probe, which is sensitive to beta and gamma radiation. This instrument provided direct readings only in cpm.

- A detailed survey of the site surface was conducted with the Ludlum Model 2221 with the 44-10 probe, which is sensitive to beta and gamma radiation. This was the most sensitive instrument used to detect radiation during the January 1993 sampling event. This instrument provided direct readings only in cpm.

The radiation survey consisted of collecting radiation measurements along a grid established at the site, plus additional measurements in the northeastern corner of the site where debris piles were observed in thick brush between two railway spurs. The grid was established with a tape and compass with radiation measurements conducted at 33-foot intervals. Overall, the survey collected measurements at 228 locations. Data collected and an interpretive contour map of the data is included in Volume II. Results show that anomalous radiation measurements, exceeding twice background levels, are located in the northeastern corner of the site, between two railroad spurs where mounds of debris consisting of brick and steel are located. The highest readings are associated with the debris piles, and appear to increase when bricks or other cover material on the piles are removed. During this second sampling event, a dosimeter badge was suspended over the spot with the highest radiation readings to try to assess the strength of the radiation anomaly in mrem/hr. The dosimeter badge remained there for 16 hours. Results from the analysis of the dosimeter badge showed no detection (with a detection limit of 40 mrem total).

2.4 ENVIRONMENTAL SAMPLING

The following subsections describe the Task 3 sampling activities completed on October 26 and 27, 1992, and on January 12 through 14, 1993. ABB-ES conducted the field investigations in accordance with the scope of work set forth in the Site Work Plan and addendum (E.C. Jordan Co., 1992c and 1992d), the specifications presented in the Quality Assurance Program Plan (QAPP) (E.C. Jordan Co., 1992a), and the site-specific Quality Assurance Project Plan (QAPjP) and addendum (E.C. Jordan Co., 1992c and 1992d). Health and safety procedures for all on-site activities were in conformance with the Program HASP (E.C.

Jordan Co., 1992b) and the site-specific HASP and addendum (E.C. Jordan Co., 1992c and 1992d). Task 3 environmental sampling was conducted using Level C dermal personal protective equipment.

Analytical data developed by ABB-ES during the Task 3 investigation met the data quality objectives set forth in the QAjPP and are suitable for site reclassification. A complete list of laboratory analytical data developed during Task 3 is presented in Volume II. Data validation and usability documentation are included therein.

Analytical data developed during previous investigations are summarized and presented in Subsection 3.3. However, the original sources of these data do not include supporting documentation about the validity and usability of the data. Previous data from the site include analyses of baghouse dust, slag, and groundwater.

2.4.1 Waste Sampling

During the Task 3 field investigation, one sample (designated WT-001) of solid material from a severely corroded 35-gallon waste container observed on the ground near TP-104 was collected using a stainless steel spoon. The sample was sent to NYTEST of Port Washington, New York, for laboratory analysis for TCL volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), inorganics, and characteristics of hazardous waste including EP Toxicity (metals only), ignitability, corrosivity, and reactivity (see Table 2-1). Five corroded and partially crushed 55-gallon containers containing frozen black solid material similar to that sampled in the

TABLE 2–1
SOIL/WASTE SAMPLE DESCRIPTION AND ANALYSES

GUTERL SPECIALTY STEEL
LOCKPORT, NEW YORK

EXPLORATION	COMPLETION DEPTH (FT. BGS)	SAMPLE DEPTH (FT. BGS)	SAMPLE DESCRIPTION	TCL VOC	TCL SVOC	TCL PCB	TCL INORG	HAZ WASTE CHAR[1]
WT–01	--	--	Black granular slag from waste container	X	X	X	X	X
TB–101	11.0	2.0 – 4.0	Reddish–brown silt	X	X	X	X	X
TB–103	10.0	--	No sample collected					
TB–104	15.3	2.0 – 5.0	Brown gravelly fine sand with little slag fragments	X	X	X	X	X
TB–105	5.2	0 – 2.0	Brown silty fine sand with little grey/metallic slag	X	X	X	X	X
MW–105	5.0	--	No sample collected					
TP–101	7.0	2.0	Brown to olive silty sand with slag, metal scrap,	X	X	X	X	X
TP–102	9.5	1.0	Silver–black blocky slag	X	X	X	X	X
TP–103	4.0	4.0	Dark brown to black gravelly silt with fire brick, wood fragments	X	X	X	X	X
TP–104	7.5	1.0	Gray–yellow blocky slag	X	X	X	X	X
TP–105	4.0	2.0	Dark brown granular material	X	X	X	X	X
TP–106	6.0	1.0	Dark brown to black silty sand with wood, rags, tar	X	X	X	X	X

Notes:

1 = Hazardous waste characteristic testing includes EP Toxicity (metals only), Reactivity, Ignitability, and Corrosivity.
ft. bgs = feet below ground surface
INORG = inorganics, including cyanide
PCB = polychlorinated biphenyls
SVOC = Semivolatile Organic Compounds
TCL = Target Compound List
VOC = Volatile Organic Compounds

35-gallon container were observed on the ground surface of the site near TP-103. The material in these five containers was not sampled because it was frozen solid, and because it was believed that the sample from the 35-gallon container would adequately characterize the contents of all the containers. Analytical results for WT-001 are presented and discussed in Subsection 3.4.1.

2.4.2 Subsurface Soil Sampling

Five soil borings (designated TB-101, TB-103, TB-104, TB-105, and MW-105) and six test pits (designated TP-101 through TP-106) were excavated by Parratt-Wolff, Inc., of West Syracuse, New York. The purpose of the soil borings and test pits was to sample and investigate landfilled material at the site. The placement, purpose, and rationale associated with these subsurface explorations is discussed in the following subsections. The subsurface soil sampling plan, as presented in the Site Work Plan and addendum, proposed to collect as many as 10 subsurface samples, one from each exploration. The Site Work Plan allowed for fewer samples to be collected if similar material was encountered in the test pits.

Soil Borings. Five soil borings were drilled at the landfill using 4.25-inch inside diameter (ID) hollow-stem augers. Soil boring TB-101 was drilled on the northeast corner of the site between two railroad spurs to assess background soil conditions (see Figure 1-2). Soil borings TB-103, TB-104, and TB-105 were drilled to sample landfilled material in the northern half of the site, with TB-104 drilled directly through the landfill mound. MW-105 was drilled on the western boundary of the landfill to install a shallow groundwater monitoring well. The soil borings were drilled to depths ranging from 5 to 15.3 feet below ground

surface (bgs). The explorations were advanced until auger and split-spoon refusal, interpreted to represent bedrock, was encountered.

Subsurface split-spoon soil samples were collected from each soil boring at 2-foot intervals starting at the ground surface using a 2-foot-long, 2-inch ID stainless steel split-spoon sampler. Soil samples were collected according to the procedures in the QAPP (E.C. Jordan Co., 1992a). The soil samples were described using the Unified Soil Classification System and screened with a photoionization detector (PID). Sample descriptions, PID measurements, split spoon blow counts, and sample recovery were recorded on soil boring logs included in Volume II.

Soil boring at location MW-105 was completed as a shallow groundwater monitoring well to replace existing MW-03, which was destroyed in 1982. The water table at MW-105 was extremely shallow (1.5 feet bgs), which precluded installing the monitoring well with the screen straddling the water table. MW-105 was constructed of a 2-inch ID Schedule 40 flush-jointed polyvinyl chloride (PVC) riser with a 2-foot-long, 2-inch ID Schedule 40 well screen with 0.010-inch machined slots. The bottom of the well screen was placed on the top of a hard surface interpreted to be bedrock. The sandpack installed around the well screen is Morie #0 grade fine silica sand, and extends 1 foot above the well screen. A cement/bentonite grout was used to create a seal over the sandpack to the ground surface. The well was completed with a locked, steel protective casing concreted into place over the well riser. The well construction diagram is included in Volume II. Because work at the site was halted during the October 1992 sampling event because of anomalous radiation measurements, MW-105 was not developed as planned. The well was purged during sampling (see Subsection

2.4.3). All other soil borings were backfilled with soil cuttings, with a cement/bentonite grout to the ground surface.

Test Pit Excavations. Test pits TP-101, TP-103, TP-104, TP-105, and TP-106 were excavated in the southern half of the site for visual characterization and sampling of landfill materials. TP-102 was excavated along the northern site boundary to characterize a mound of fill and soil beneath the mound. The test pits were excavated to depths ranging from 4 to 9.5 feet bgs. The test pits were advanced until either natural soil, bedrock, or groundwater was encountered. Water was encountered between 2 and 8 feet bgs in all explorations. Natural soil (i.e., the base of the landfill) was encountered usually between 2 and 7.5 feet bgs in each exploration. Bedrock was encountered at 4 feet bgs in one exploration (TP-103). Three crushed, empty, 55-gallon containers were encountered during excavation of test pits TP-101, TP-102, and TP-104.

Sample Collection and Laboratory Analysis. Nine subsurface soil samples, from three of the soil borings (TB-101, TB-104, and TB-105) and each of the six test pits (TP-101 through TP-106), plus one duplicate sample (from TP-101), were collected for laboratory analysis. Except for the sample from TB-101, the samples were representative of fill encountered in the explorations. The sample from TB-101 was of native soil at the site. The depth of each sample and a brief description of the material submitted for analyses are presented in Table 2-1. Soil samples from test pits were collected from discrete fill horizons collected from the backhoe bucket or directly from the test pit face. Samples were analyzed in the field for the presence of VOCs with a PID. All PID readings were at background levels. Samples were also monitored for radiation as described in Subsection 2.3.

All radiation measurements of samples collected for laboratory analysis were within twice the background level.

Subsurface soil samples were sent to NYTEST for laboratory analysis. Samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, inorganics, and for characteristics of hazardous waste including EP Toxicity (metals only), ignitability, corrosivity, and reactivity. A summary of the analytical parameters each sample was analyzed for is included in Table 2-1. Analytical results are presented and discussed in Subsection 3.4.2.

2.4.3 Groundwater

The purpose of the groundwater sampling and analysis program was to characterize groundwater quality to evaluate whether a significant threat to public health or the environment exists. Significant threat is established by evaluating whether a contravention of promulgated state and/or federal standards has occurred.

Groundwater samples were collected from two existing shallow groundwater monitoring wells (MW-01 and MW-02) and one new shallow groundwater monitoring well (MW-105) on January 13, 1993. Another existing overburden well at the site (MW-04) was planned to be sampled, but was dry. Monitoring well locations are shown in Figure 1-2. There are no wells upgradient of the site. MW-01 is located along the southern part of the landfill. MW-105 is located along the western edge of the landfill. MW-02 is located along the northern site boundary in a low area that appears to receive runoff from the mound in the north-central part of the landfill.

Groundwater samples were collected according to the procedures in the QAPP (E.C. Jordan Co., 1992a). Upon removing the riser cap, the headspace of each well was screened for total VOCs with a PID, and physical data (depth to bottom of well, riser stickup, and depth to water) were recorded. The riser cap for MW-02 was noted as missing as early as the Task 1 site reconnaissance. Before sampling, the volume of standing water in each well was calculated, and a minimum of three times this volume was purged. Purging of MW-105 is considered to also have met the requirements of well development. During sampling, purge water was monitored for temperature, pH, Eh, and specific conductivity with a YSI 3580 Water Quality Monitor. Reference samples of purge water were collected for off-site analysis for turbidity. This was done with approval of the NYSDEC project manager, Mr. Srikanth Maddineni. Turbidity measurements were conducted off site by ABB-ES using a Hach DR-2000 Spectrophotometer. All purge water was disposed of on the ground in the vicinity of each well. PID measurements were at background levels during well purging. During sampling, groundwater from MW-01 had a yellowish color and foamed when poured. Groundwater from MW-02 and MW-105 appeared clear to slightly turbid.

Groundwater samples were submitted to NYTEST for analysis for TCL VOCs, SVOCs, inorganics, and gross alpha and beta radioactivity. Groundwater samples collected for analysis were not filtered in accordance with the NYSDEC procedures as outlined in the NYSDEC Sampling and Analysis Plan. Field data, including temperature, pH, Eh, specific conductivity, and turbidity, as well as visual descriptions of the groundwater samples are provided in the field sampling records in Volume II. Analytical results for groundwater are discussed in Subsection 3.4.3.

2.4.4 Surface Water and Sediment

The purpose of the surface water and sediment sampling program was to characterize surface water and sediment in wetland areas and drainages surrounding the landfill, to evaluate significant threat to public health or the environment. Five surface water/sediment sample pairs (designated SW/SD-002 through SW/SD-006) were collected from the site. An additional sample (SW-001) was to have been collected from standing water previously observed beneath a carboy near the railroad tracks on the east side of the site. Because the carboy was gone from the site and standing water was not present, this sample was not collected. In addition, samples SW/SD-006 were to have been collected to characterize background conditions at the site; however, the location from which the samples were collected receives seepage from the landfilled part of the site. There was no location from which to collect surface water or sediment samples upgradient (upstream) of the site. Surface water/sediment sampling locations are shown in Figure 1-2.

The surface water and sediment samples were collected during the January 1993 sampling event according to procedures in the QAPP (E.C. Jordan Co., 1992a). At each location, surface water samples were collected first by direct filling of sample containers. Sediment samples were collected next using a bucket auger. Surface water and sediment samples were sent to NYTEST for laboratory analysis for TCL VOCs, SVOCs, and inorganics. Surface water samples were also analyzed for gross alpha and beta radioactivity.

Field measurements of temperature, pH, Eh, and specific conductivity, as well as visual descriptions and PID readings of surface water and sediment samples, are

included in the field sampling records in Volume II. Field measurements of water quality parameters were made with a YSI 3580 Water Quality Monitor.

Analytical results for surface water and sediment are discussed in Subsection 3.4.2.

3.0 SITE ASSESSMENT

3.1 SITE HISTORY

The Guterl site is a 8.6-acre landfill in the northwest corner of the former Guterl Specialty Steel Mill. The steel mill complex is located near the Erie Canal, and surface water from the mill may discharge to the canal. In 1978, Guterl Specialty Steel purchased 109 acres of land, including several steel manufacturing buildings and the landfill, from Simonds Saw and Steel, which ran the mill complex. Milling of uranium and thorium ingots was conducted at the mill by Simonds for the Manhattan Engineering District of the AEC from approximately 1948 to 1956 (DOE, 1979). Reportedly, all dross (residue) and radioactive materials were returned to the AEC.

Guterl declared bankruptcy in 1984, at which time it conveyed to the NCIDA all but several acres of land fronting Ohio Street on the eastern edge of their plant. The property conveyed to NCIDA included the landfill. In November 1984, Allegheny Ludlum entered into a lease agreement with NCIDA for use of the property, including the landfill. The parcel of land, fronting Ohio Street, which had been used for the uranium and thorium milling operations by Simonds is currently held by the Guterl Steel Bankruptcy Trustee at the Western Bankruptcy Court in Pittsburgh, Pennsylvania (Buri, 1990; Drake, 1990; and Everett, 1990). The remaining portions of the mill complex are operated by Allegheny Ludlum for recycling stainless steel.

Simonds Saw and Steel began disposing of wastes in the landfill in 1962, after the time that uranium and thorium were used in its operations (Buri, 1990). There is no evidence that uranium and thorium were disposed of in the landfill by Simonds. Aerial photographs dated 1958 do not show the current landfill, although an elongated area parallel to the rail spur appears disturbed (U.S. Department of Agriculture [USDA], 1958). The location of the landfill and adjacent wetlands appears to have originally been a fruit tree orchard, the remains of which can be observed immediately south of the landfill.

Between 1962 and 1978, Simonds Saw and Steel allegedly discarded unknown quantities of slag, baghouse flue dust, foundry sand, wood, and miscellaneous plant rubbish (associated with steel manufacturing) in the landfill. Aerial photographs show the landfill was approximately half its present size in 1966 and had almost reached its present size by 1977 (USDA, 1966 and 1977).

From 1978 to 1980, Guterl Specialty Steel reportedly continued to dispose of similar wastes in the landfill, including pelletized baghouse flue dust, in the landfill used by Simonds. In September 1979, Guterl Specialty Steel was found to be in violation of waste disposal laws by not having a Part 360 permit and its continuing disposal of slag, pelletized baghouse dust, garbage, and other wastes. Guterl Specialty Steel proposed to have the landfilled wastes (baghouse dust and slag) analyzed by the New York State leachate potential test to facilitate finding construction projects that would accept the material. Composite samples of baghouse dust and slag were collected for analysis in October 1979, by Recra Research, Inc., for Guterl Specialty Steel with the approval of the NYSDEC.

In August 1980, the facility was required by NYSDEC to (1) stop disposing of baghouse dust in the landfill because this waste was shown by the New York State leachate potential test (a precursor to the EP Toxicity test) to be a hazardous waste due to the presence of chrome in the leachate extract, (2) stop providing this material to outside construction companies, and (3) clean up the baghouse dust disposal area (Erk, 1980). In addition, baghouse dust containing chromium was listed as a hazardous waste (K091) in 1980 under the Resource Conservation and Recovery Act (RCRA). Guterl Specialty Steel allegedly complied with the NYSDEC requirement to stop disposal of baghouse dust (Buri, 1990). The 1980 correspondence by Mr. Yavuz Erk of the NYSDEC also stated that "three big holding tanks filled with waste oil were overflowing" during a previous NYSDEC tour of the landfill; however, the location of the tanks was not documented (Erk, 1980). Action taken, if any, in response to the correspondence between the NYSDEC and Guterl Specialty Steel is unknown.

In 1981, Guterl Specialty Steel hired SLC to prepare an application for a Part 360 permit to operate a solid waste management facility. As part of the permit process, SLC installed and sampled four shallow groundwater monitoring wells along the landfill perimeter (SLC, 1981). The Part 360 permit application was submitted to the state; however, the permit was never acted upon and consequently never issued (Buri, 1990).

In 1981 or 1982, Guterl Specialty Steel salvaged approximately 2 million pounds of metal slag from the landfill for recycling. The landfill was regraded after the salvaging operation, and reportedly has not been used since (Buri, 1990). Allegheny Ludlum has not used the landfill since they acquired the property in 1984, and reportedly have no plans for future use (Buri, 1990; Calderazzo, 1990).

No fire or explosive hazards or records of historical chemical releases are documented for the site (Millihan, 1990).

3.2 SITE DESCRIPTION

The Guterl Specialty Steel site is located on the edge of the City of Lockport in an area zoned for heavy industry (E.C. Jordan Co., site visit, 1990). The landfill is bordered by the New York State Electric and Gas Corporation to the north and west, the City of Lockport water line easement to the south, and the active Allegheny Ludlum facility to the east. Private residences are located approximately 600 feet northeast of the site. Topography surrounding the site is characterized by low rolling hills, with a regional topographic feature, the Niagara Escarpment, located north of the site. Topography has recently been altered in the area by quarry mining at the Frontier Stone Company quarry less than a mile south of the site (New York State Department of Transportation [NYSDOT], 1976). The Niagara County Refuse Disposal District (NCRDD) landfill, located less than a mile west of the site, occupies a former quarry with a base approximately 30 feet below the bedrock surface (NYSDOT, 1976; and Hopkins, 1989). In addition, the Erie Canal is located some 2,000 feet south of the site. The canal is located in a channel carved into the bedrock.

Wetlands are common in the surrounding low-lying areas, and numerous Class II and a few Class III state-regulated wetlands are located within 3 miles of the site (NYSDEC, 1980 and 1990). The wetlands adjacent to the site, however, are not regulated by the state (Doleski, 1980; and NYSDEC, 1990).

Elevation of the landfill is approximately 600 feet above mean sea level; the mound at the north-central part of the landfill rises to approximately 610 feet above mean sea level (NYSDOT, 1976; and SLC, 1981). The landfill surface is graded with slight slopes toward the wetlands on the west and south and toward a drainage ditch on the east bordering the Allegheny Ludlum security fence. The drainage ditch on the east drains into the remains of the orchard and wetlands south of the site. Standing water is observed north of the mound in the vicinity of MW-02 and mud cracks were observed in several locations of the landfill.

Regional bedrock geology is characterized by Lockport dolomite, limestone, and shale. Bedrock has a regional dip of approximately 30 to 40 feet per mile toward the south (SLC, 1981). Regional surficial geology is characterized by glacial landforms and deposits. Thin layers of poorly sorted glacial till overlie bedrock in the region. In addition, the Lockport area was occupied by glacial lakes during the recession of the ice sheets, and glaciolacustrine sediments including fine-grained silts and clays overlain by well-sorted sand and gravels are common (E-S, 1988).

The site is underlain by the Lockport dolomite, with an estimated permeability of 1×10^{-4} to 1×10^{-6} centimeters per second (cm/sec) (E-S, 1988). Depth to bedrock beneath the landfill ranges from 3.5 to 15.3 feet, based on previous boring refusal depths along the landfill perimeter and results of Task 3 drilling and test pitting (SLC, 1981). Bedrock at the site is overlain by glacial till ranging in thickness from zero to 3.5 feet, with an estimated permeability of 1×10^{-6} to 1×10^{-7} cm/sec (E-S, 1988).

Groundwater flows toward the southwest beneath the site. Occasionally, the quarry at the Frontier Stone Company south of the site is dewatered, suppressing the water table at the quarry by as much as 30 feet. Dewatering at the quarry might possibly influence the depth and direction of groundwater flow beneath the Guterl landfill (E-S, 1988). The NCRDD landfill west of the site occupies a former quarry with a base greater than 30 feet below the bedrock surface. The base of this landfill is estimated to be at least 40 feet below the base of the former Guterl landfill (Hopkins, 1989).

Wetlands along the south and west side of the landfill are drained by tributaries to Eighteen Mile Creek or toward the Erie Canal. The closest mapped tributaries for Eighteen Mile Creek are approximately 4,000 feet west of the landfill, and the Erie Canal is located approximately 2,000 feet south of the landfill (NYSDOT, 1976).

Drinking and irrigation water supplies for the Town of Lockport are obtained from the Niagara River west of Lockport, and are supplied through the Niagara County Water District. The City of Lockport is also supplied with drinking and irrigation water obtained from the Niagara River; however, this is channeled through the City of Lockport's water treatment plant (Dicky, 1990).

Emergency drinking water is supplied for the City of Lockport from the Erie Canal via the Summit Street intakes located immediately southeast of the mill facility (Figure 1-1). The most recent use of this emergency water supply was between June 2 and 12, 1990. Although municipal water supplies are available to all residents of the Town and City of Lockport, some unidentified private wells may exist (Dicky, 1990).

3.3 PREVIOUS INVESTIGATIONS

The mill buildings used by Simonds for milling uranium and thorium were investigated by the U.S. Department of Energy (DOE) as part of the Formerly Utilized Sites Remedial Action Program (DOE, 1979). The investigation did not include radiological surveys in the vicinity of the Guterl landfill or railroad tracks leading to the mill complex. The DOE investigation noted that the mill may have discharged process water from their milling operations to the Erie Canal; however, sampling of surface water in the canal did not identify radiation levels exceeding background ranges. Mill building floors and equipment where uranium and thorium milling were conducted were found to contain alpha, beta, and gamma radiation levels exceeding background concentrations, with the highest readings associated with a piece of material containing 6.3 percent uranium found under a floor slab. Additional investigation of the mill complex by the DOE occurred in 1984, at which time it was confirmed that the mill complex contained radiological contamination and acknowledged that "the rolling mill area of this facility does not meet the criteria for release of facilities and equipment for unrestricted use" (USEPA, 1986).

In October 1979, composite and leachate samples of baghouse dust and slag disposed of on site were collected by Recra Research, Inc. The leachate extracts were prepared from composites using the New York State leachate potential test, which consists of mixing the material with distilled water and analyzing the filtered extract. This test, unlike the EP Toxicity test, does not alter the pH of the sample to facilitate leaching. The composite samples and leachate extracts were analyzed for total recoverable oil and grease, total recoverable phenolics, aluminum, chromium, copper, iron, lead, manganese, and nickel. The leachate

extracts were also analyzed for pH, specific conductivity, and total organic carbon. The leachate results from the New York State leachate potential test were reviewed using the EP Toxicity method. Accounting for the different dilution factors, the baghouse dust leachate concentration of chromium (138 mg/L) is equivalent to approximately 28 mg/L using the EP Toxicity method. Thus, the baghouse dust disposed of on site contained leachate concentrations of chromium (28 mg/L) in excess of the EP Toxicity regulatory limit (5 mg/L), confirming the material would be a characteristic hazardous waste. Laboratory analytical results for these samples are summarized in Table 3-1. Guterl Specialty Steel discontinued disposal in the landfill when baghouse flue dust containing chromium and nickel was listed as a RCRA hazardous waste (K091) in 1980 (Buri, 1990).

In 1981, Guterl Specialty Steel retained SLC to prepare an application for a Part 360 permit to operate a solid waste management facility. As part of the permit process, SLC installed four shallow groundwater monitoring wells (MW-01, MW-02, MW-03, and MW-04) along the perimeter of the landfill, which SLC sampled five times between 1980 and 1982 (SLC, 1981; E-S, 1988). Results of the groundwater analysis indicate that groundwater pH and concentrations of phenols, chromium, copper, iron, lead, and manganese exceeded New York State Class GA water quality standards (Table 3-2). Concentrations of inorganics in groundwater samples also exceeded USEPA Maximum Contaminant Levels (MCLs) for chromium, lead, and nickel, and USEPA secondary MCLs for aluminum, iron, and manganese. This study also showed shallow groundwater to flow toward the southwest beneath the site.

TABLE 3–1
ANALYTICAL RESULTS OF PREVIOUS BAGHOUSE DUST AND SLAG DATA[1]

GUTERL SPECIALTY STEEL
LOCKPORT, NEW YORK

	BAGHOUSE DUST COMPOSITE SAMPLE (mg/kg)	BAGHOUSE DUST COMPOSITE LEACHATE[2] (mg/L)	SLAG COMPOSITE SAMPLE (mg/kg)	SLAG LEACHATE[2] (mg/L)
Total Recoverable Oil and Grease	35,000	63	30,900	5.7
Total Recoverable Phenolics	1.55	0.263	0.85	0.169
Aluminum	15,000	14.2	58,000	126
Chromium	18,000	138	2,600	0.050
Copper	580	0.016	647	< 0.003
Iron	95,000	0.05	23,000	0.05
Lead	3,100	0.75	110	0.02
Manganese	27,000	< 0.02	2,300	< 0.02
Nickel	36,000	< 0.02	1,890	< 0.02
pH (standard units)	--	12.19	--	11.63
Conductance (μmhos/cm)	--	16,900	--	1,510
Total Organic Carbon	--	276	--	325

NOTES:

[1] Results supplied by Recra Research, Inc. Samples taken 10/19/79.

[2] Leachate prepared from composites according to the New York State Leachate Potential Test.

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

TABLE 3-2
SUMMARY OF PREVIOUS GROUNDWATER DATA[1]

GUTERL SPECIALTY STEEL
LOCKPORT, NEW YORK

PARAMETER	CONCENTRATION RANGES IN EACH MONITORING WELL			
	MW-01	MW-02	MW-03	MW-04
pH	7.4 – 9.2	7.3 – 8.0	10.7 – 11.3	7.5 – 11.1
Oil & Grease (mg/L)	<1.0 – 98	<1.0 – 25.8	1.0 – 4.4	15.2
Conductivity (μmhos/cm)	1,800 – 3,150	2,280 – 3,700	2,900 – 3,850	1,300 – 1,310
TOC (mg/L)	110 – 280	9.0 – 200	106 – 132.5	63 – 175
Phenols (μg/L)	12 – 250	<1.0 – 468	39 – 1,250	6 – 27
Total Halogenated Organics (μg/L)	<0.1 – 5.7	<0.1 – 0.6	<0.1	1.3
Aluminum (μg/L)	<300 – 19,100	<300 – 131,000	<1,000 – 180,000	<300 – 58,300
Total Chromium (μg/L)	<10 – 74	<10 – 223	<10 – 109	100 – 450
Copper (μg/L)	<25 – 460	<25 – 160	36 – 250	42 – 2,100
Iron (μg/L)	<50 – 27,600	<50 – 28,800	<60 – 300	<50 – 27,000
Lead (μg/L)	8 – 50	<10 – 36	1 – 74	3 – 590
Manganese (μg/L)	90 – 4,400	720 – 4,900	<20 – 270	<10 – 21,000
Nickel (μg/L)	95 – 706	1.5 – 653	27 – 855	21 – 3,500

NOTES:

1 = Samples collected by SLC between 1980 – 1982
mg/L = milligrams per liter
μg/L = micrograms per liter
μmhos/cm = micromhos/centimeter

NUS Corporation attempted to perform a preliminary assessment of Guterl Mill complex for the USEPA in 1983; however, the site inspection was not completed because of restricted site access (NUS, 1983). E-S completed a Phase I investigation of the Guterl landfill site for NYSDEC in 1988. The purpose of the Phase I investigation was to calculate a hazard ranking score for the site. This calculation involved a review of all existing information and data for the site. The Phase I review could not confirm hazardous waste deposition at the site, although no sampling was performed (E-S, 1988). The Phase I investigation proposed additional sampling of environmental media.

3.4 CONTAMINATION ASSESSMENT

The following subsections present the results of the sampling and analysis conducted at the Guterl site during the PSA Task 3 investigation. Data evaluation is limited to determining (1) whether hazardous waste was disposed of on the site, (2) whether the site exhibits a significant threat to public health and the environment. Hazardous waste is evaluated based on the Task 3 results of characteristics testing of landfill and waste samples for EP Toxicity (metals only), ignitability, reactivity, and corrosivity, and results of PCB analyses. Because no standards are promulgated for soil, the only evaluation of TCL data for soil and sediment is a comparison of inorganic data with inorganics data in one site-specific background soil sample (from TB-101) collected during Task 3, and background concentration ranges of New York State and the eastern United States (Table 3-3). Groundwater data are compared to New York State Class GA water quality standards and USEPA MCLs. Surface water data are compared to New York State Class D surface water quality standards.

TABLE 3-3
REGIONAL BACKGROUND SOIL CONCENTRATION RANGES

GUTERL SPECIALTY STEEL
LOCKPORT, NEW YORK

COMPOUND	EASTERN U.S.[1] (mg/kg)	NEW YORK REGION[2] (mg/kg)
Aluminum	7,000 – > 100,000	1,000 – 25,000
Antimony	a	a
Arsenic	<0.1 – 73	3 – 12
Barium	10 – 1,500	15 – 600
Beryllium	<1 – 7	0 – 1.75
Cadmium	a	0.01 – 2
Calcium	100 – 280,000	130 – 35,000
Chromium	1 – 1,000	1.5 – 40
Cobalt	<0.3 – 70	2.5 – 60
Copper	<1 – 700	<1 – 15
Iron	100 – > 100,000	17,500 – 25,000
Lead	< 10 – 300	10 – 37
Magnesium	50 – 50,000	1,700 – 6,000
Manganese	<2 – 7,000	50 – 5,000
Mercury	0.01 – 3.4	0.042 – 0.066
Nickel	<5 – 700	0.5 – 25
Potassium	50 – 37,000	8,500 – 43,000
Selenium	<0.1 – 3.9	<0.1 – 0.125
Silver	a	a
Sodium	<500 – 50,000	6,000 – 8,000
Vanadium	<7 – 300	25 – 60
Zinc	<5 – 2,900	37 – 60

NOTES:

mg/kg = milligrams per kilogram

a = background range not developed

1 = Shacklette, M.T. and J.G. Boerngen, 1984. "Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States"; USGS Professional Paper 1270.

2 = Concentrations obtained from "Background Concentrations of 20 Elements in Soils with Special Regard for New York State". (no date) Paper prepared by E. Carol McGovern, NYSDEC Wildlife Resources Center.

3.4.1 Waste Container Sample Analytical Results

A single sample (WT-01) of solid material was collected from a severely corroded 35-gallon waste container on the landfill ground. The material sampled was black and crumbly, and PID readings were at background levels. The sample was analyzed for TCL VOCs, SVOCS, pesticides, PCBs, and inorganics and hazardous waste characteristics testing including EP Toxicity (metals only), ignitability, reactivity, and corrosivity. Analytical results are presented in Table 3-4.

TCL VOCs and PCBs were not detected in WT-01. TCL SVOCs in WT-01 are acenaphthene, anthracene, dibenzofuran, fluoranthene, fluorene, phenanthrene, and pyrene. Fourteen TCL inorganics were also detected in WT-01. Concentrations of aluminum, calcium, chromium, copper, cyanide, manganese, nickel, silver, sodium, thallium, and zinc in WT-01 exceeded site-specific background results (TB-101) (see Table 3-5). Chromium, copper, manganese, nickel, and zinc concentrations exceeded the New York State background concentrations, while copper, manganese and nickel exceeded the eastern United States background soil concentrations. Barium was detected in the EP Toxicity extract, but at a concentration below regulatory limits to define the material as hazardous waste. Overall, analysis of WT-01 for hazardous waste characteristics shows the material does not meet the criteria of a characteristic hazardous waste as defined by 6 NYCRR Part 371.

3.4.2 Subsurface Soil Sample Analytical Results

Nine subsurface soil samples of material encountered in soil borings, test pits were submitted for laboratory analysis. Sample depths and sample descriptions

Table 3–4
Waste Container Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND		CRQL/CRDL	WT–01
TCL Volatile Organic Compounds (µg/kg)			
None Detected			
TCL Semivolatile Organic Compounds (µg/kg)			
Acenaphthene		330	20 JJ
Anthracene		330	17 JJ
Dibenzofuran		330	9 JJ
Fluoranthene		330	140 JJ
Fluorene		330	14 JJ
Phenanthrene		330	220 JJ
Pyrene		330	120 JJ
TCL Polychlorinated Biphenyls (µg/kg)			
None Detected			
TCL Inorganic Compounds (mg/kg)			
Aluminum		40	16200
Barium		40	27.9 []
Cadmium		1	R
Calcium		1000	3700
Chromium		2	495
Cobalt		10	R
Copper		5	66000
Cyanide		2	3.3
Iron		20	7040
Lead		0.6	4.5
Manganese		3	530000
Nickel		8	39800
Silver		2	65.7 J
Sodium		1000	7270
Thallium		2	9.0
Zinc		4	321 J
EP Toxicity (mg/L)	**R.L.**		
Arsenic	5	.0668	–
Barium	100	.020	0.510 J
Cadmium	1	.0046	–
Chromium	5	.0068	–
Lead	5	.0420	–
Mercury	0.2	.0002	–
Selenium	1.0	.0801	–
Silver	5	.0074	R
Hazardous Waste Characteristics	**D.L.**		
Corrosivity (pH) 2.0 ≥pH ≥12.5			6.40
Ignitability (degree F)			–
Reactivity, Cyanide (mg/kg)	1.0		–
Reactivity, Sulfide (mg/kg)	1.0		–

NOTES:

CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
R.L. = regulatory limit
D.L. = detection limit

J = estimated
JJ = estimated below sample specific CRQL
DUP = duplicate sample
R = Rejected
[ ] = less than sample specific CRDL
– = not detected

are summarized in Table 2-1. During sampling, all PID readings were at background ranges. The three subsurface soil samples from soil borings and six subsurface soil samples from the test pits, and one duplicate sample were analyzed for TCL VOCs, SVOCS, pesticides, PCBs, and inorganics and hazardous waste characteristics testing including EP Toxicity (metals only), ignitability, reactivity, and corrosivity. Analytical results for soil boring samples and test pit samples are presented in Tables 3-5 and 3-6, respectively.

Background Soil. Soil was collected from soil boring TB-101 (two to four feet bgs) to characterize background soil conditions. Organic chemicals detected in the background sample were the TCL VOC methylene chloride (6 JJ micrograms per kilogram [μg/kg]) and the TCL SVOC di-n-butylphthalate (46 JJ μg/kg). PCBs were not detected. Sixteen TCL inorganics were detected in sample TB-101. The only inorganic to exceed New York State background soil concentrations was zinc. None of the inorganics exceeded the eastern United States background soil concentrations. The result for lead was rejected, and the background concentration of lead at the site cannot be established from TB-101. Analysis of sample TB-101 for EP Toxicity metals detected barium, cadmium, and silver, but all below regulatory limits. The sample did not exhibit characteristics of a hazardous waste as defined by 6 NYCRR Part 371.

Landfill Materials. TCL VOCs in the landfill materials sampled (TB-104, TB-105, and TP-101 through TP-106) were methylene chloride, toluene, ethylbenzene, and total xylenes. Twenty TCL SVOCs were detected in the samples; however, most were estimated below the sample-specific detection limit. PCB mixtures in the samples were Aroclor-1248 (up to 15,000 μg/kg),

Table 3–5
Soil Boring Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	TB–101	TB–104	TB–105
TCL Volatile Organic Compounds (µg/kg)				
Methylene Chloride	10	6 JJ	7 JJ	5 JJ
TCL Semivolatile Organic Compounds (µg/kg)				
2–Methylnaphthalene	330	–	9 JJ	47 JJ
Acenaphthene	330	–	–	30 JJ
Anthracene	330	–	3 JJ	35 JJ
Benzo(a)Anthracene	330	–	–	180 JJ
Benzo(a)Pyrene	330	–	–	63 JJ
Benzo(b)Fluoranthene	330	–	12 JJ	97 JJ
Benzo(k)Fluoranthene	330	–	13 JJ	71 JJ
Butylbenzylphthalate	330	–	21 JJ	–
Chrysene	330	–	26 JJ	270 JJ
Di–n–butylphthalate	330	46 JJ	610 J	320 JJ
Dibenzofuran	330	–	5 JJ	35 JJ
Fluoranthene	330	–	51 JJ	460 JJ
Fluorene	330	–	–	17 JJ
N–Nitrosodiphenylamine	330	–	–	34 JJ
Phenanthrene	330	–	42 JJ	220 JJ
Pyrene	330	–	34 JJ	380 JJ
TCL Polychlorinated Biphenyls (µg/kg)				
Aroclor–1248	33	–	150 J	220 J
TCL Inorganic Compounds (mg/kg)				
Aluminum	40	9180 J	39300 J	35900 J
Antimony	12	–	34.0 J	21.0 J
Arsenic	2	3.9	6.4	8.6
Barium	40	52.4	438	382
Beryllium	1	0.55 []	5.5	4.5
Calcium	1000	2080	125000	106000
Chromium	2	14.9 J	1690 J	1690 J
Cobalt	10	8.0 []	182	245
Copper	5	12.3 J	359 J	3450 J
Iron	20	17500	31500	37700
Lead	0.6	R	186	218
Magnesium	1000	3120	48200	37900
Manganese	3	614	3680	10400
Mercury	0.04	–	0.22 J	–
Nickel	8	17.2	3130	7350
Potassium	1000	1120 []	826 []	698 []
Selenium	1	–	2.9	1.2
Sodium	1000	203 []	596 []	549 []
Vanadium	10	20.6	696	578
Zinc	4	130 J	173 J	231 J
EP Toxicity (mg/L)	**R.L.**			
Arsenic	5	0.043	–	–	–
Barium	100	0.010	0.450	0.564	0.531
Cadmium	1.0	0.003	0.0045 []J	0.0036 []J	–
Chromium	5	0.005	–	0.0084 []J	0.0066 []J

Table 3–5
Soil Boring Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND		CRQL/CRDL	TB–101	TB–104	TB–105
EP Toxicity (mg/L) Con't	**R.L.**				
Lead	5	0.040	–	–	–
Mercury	0.2	0.0002	–	–	–
Selenium	1.0	0.051	–	–	–
Silver	5	0.0040	0.0070 []J	–	–
Hazardous Waste Characteristics	**D.L.**				
Corrosivity (pH) 2.0 ≥pH ≥ 12.5			7.81	8.12	8.65
Ignitability (degree F)			–	–	–
Reactivity, Cyanide (mg/kg)	1.0		–	–	–
Reactivity, Sulfide (mg/kg)	1.0		–	–	–

NOTES:
CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/kg = micrograms per kilogram
µg/L = micrograms per liter
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
J = estimated
JJ = estimated below sample specific CRQL
R = rejected
[ ] = less than sample specific CRDL
– = not detected
R.L. = Regulatory Limit
D.L. = Detection Limit

Table 3–6
Test Pit Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	TP–101	TP–101 DUP	TP–102	TP–103	TP–104	TP–105	TP–106
TCL Volatile Organic Compounds (µg/kg)								
Toluene	10	–	–	–	–	–	–	1 JJ
Ethylbenzene	10	–	–	–	–	–	–	3 JJ
Total Xylenes	10	–	–	–	–	–	–	40 J
TCL Semivolatile Organic Compounds (µg/kg)								
2,4,5–Trichlorophenol	800	R	R	–	R	R	–	R
2,4,6–Trichlorophenol	330	R	R	–	R	R	–	R
2,4–Dichlorophenol	330	R	R	–	R	R	–	R
2,4–Dimethylphenol	330	R	R	–	31 JJ	R	–	60 JJ
2,4–Dinitrophenol	800	R	R	–	R	R	–	R
2–Chlorophenol	330	R	R	–	R	R	–	R
2–Methylnaphthalene	330	30 JJ	47 JJ	18 JJ	180 JJ	36 JJ	74 JJ	230 JJ
2–Methylphenol	330	R	R	–	R	R	–	R
4–Methylphenol	330	R	R	–	R	R	–	R
4,6–Dinitro–2–methylphenol	800	R	R	–	R	R	–	R
4–Chloro–3–Methylphenol	330	R	R	–	R	R	–	R
2–Nitrophenol	330	R	R	–	R	R	–	R
4–Nitrophenol	800	R	R	–	R	R	–	R
Acenaphthene	330	–	83 JJ	41 JJ	95 JJ	22 JJ	52 JJ	110 JJ
Anthracene	330	24 JJ	37 JJ	34 JJ	33 JJ	16 JJ	11 JJ	55 JJ
Benzo(a)Anthracene	330	150 JJ	190 JJ	35 JJ	68 JJ	52 JJ	–	63 JJ
Benzo(a)Pyrene	330	110 JJ	71 JJ	–	24 JJ	25 JJ	–	–
Benzo(b)Fluoranthene	330	62 JJ	180 JJ	–	120 JJ	95 JJ	–	130 JJ
Benzo(k)Fluoranthene	330	150 JJ	110 JJ	–	88 JJ	57 JJ	–	110 JJ
Butylbenzylphthalate	330	–	–	–	–	–	–	35 JJ
Carbazole	330	26 JJ	19 JJ	–	–	–	10 JJ	–
Chrysene	330	390 JJ	440 JJ	52 JJ	210 JJ	130 JJ	–	260 JJ
Di–n–butylphthalate	330	–	–	79 JJ	27 JJ	15 JJ	17 JJ	–
Di–n–octylphthalate	330	–	62 JJ	7 JJ	9 JJ	10 JJ	12 JJ	69 JJ
Dibenzofuran	330	14 JJ	18 JJ	18 JJ	65 JJ	20 JJ	59 JJ	68 JJ
Fluoranthene	330	230 JJ	170 JJ	330 JJ	110 JJ	120 JJ	110 JJ	160 JJ
Fluorene	330	23 JJ	22 JJ	48 JJ	68 JJ	–	39 JJ	90 JJ
N–Nitrosodiphenylamine	330	750 JJ	240 JJ	–	83 JJ	–	–	100 JJ

Table 3–6
Test Pit Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	TP–101	TP–101 DUP	TP–102	TP–103	TP–104	TP–105	TP–106
TCL Semivolatile Organic Compounds (µg/kg) Con't								
Naphthalene	330	–	75 JJ	18 JJ	140 JJ	30 JJ	–	120 JJ
Pentachlorophenol	800	R	R	–	R	R	–	R
Phenanthrene	330	220 JJ	230 JJ	270 JJ	390 JJ	130 JJ	240 JJ	490 JJ
Phenol	330	R	R	–	R	R	–	R
Pyrene	330	470 JJ	400 JJ	410	130 JJ	140 JJ	84 JJ	220 JJ
TCL Polychlorinated Biphenyls (µg/kg)								
Aroclor–1248	33	13000	15000	–	900	390	–	–
Aroclor–1254	33	–	–	–	–	190 J	–	340 J
Aroclor–1260	33	–	–	32 JJ	–	140	110	–
TCL Inorganic Compounds (mg/kg)								
Aluminum	40	31700	29200	10300	25000	26800	9610	16400
Antimony	12	50.7 J	–	–	45.2 J	62.8 J	129 J	41.0 J
Arsenic	2	8.2 J	9.1 J	1.9 []J	5.3 J	6.2 J	15.1 J	9.2 J
Barium	40	505	450	24.6 []	360	247	171	430
Beryllium	1	2.2	2.5	0.46 []	3.0	2.1	6.0	2.3
Cadmium	1	R	R	R	R	R	R	R
Calcium	1000	104000	88400	11300	90900	87300	35200	35300
Chromium	2	1690	2060	54.1	2020	1880	4360	1480
Cobalt	10	R	R	R	R	R	R	R
Copper	5	891 J	5240 J	1060	922	2330	4720	823
Iron	20	35000	95500	9460	40000	52800	206000	54400
Lead	0.6	303 J	344 J	124 J	301 J	334 J	269 J	273 J
Magnesium	1000	41500	32900	16800	48100	39600	6200	15900
Manganese	3	4280 J	21900 J	361	3830	9440	15900	2350
Mercury	0.04	–	0.12	–	–	–	–	–
Nickel	8	4840 J	38100 J	270	4200	7120	13500	3930
Potassium	1000	809 []	778 []	327 []	825 []	1310	318 []	1420
Selenium	1	1.7 J	–	–	–	–	–	–
Sodium	1000	499 []	447 []	427 []	627 []	658 []	283 []	539 []
Thallium	2	–	–	1.4 []	–	–	2.0 []	1.3 []
Vanadium	10	283 J	319 J	101 J	383 J	237 J	892 J	271 J
Zinc	4	324 J	366 J	578 J	374 J	574 J	315 J	345 J

Table 3–6
Test Pit Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND		CRQL/CRDL	TP–101	TP–101 DUP	TP–102	TP–103	TP–104	TP–105	TP–106
EP Toxicity (mg/L)	**R.L.**								
Arsenic	5	0.0668	–	–	–	–	–	–	–
Barium	100	0.020	1.560 J	1.280 J	0.453 J	1.020 J	0.732 J	0.770 J	1.420 J
Cadmium	1	0.0046	0.0078	–	–	–	–	–	–
Chromium	5	0.0068	0.041 J	0.0165 J	–	0.0177	0.0203	–	–
Lead	5	0.042	0.0548	–	–	–	–	–	–
Mercury	0.2	0.0002	–	–	–	–	–	–	–
Selenium	1.0	0.0801	0.0817	–	–	–	–	–	–
Silver	5	0.0074	–	–	–	–	–	–	–
Hazardous Waste Characteristics									
Corrosivity (pH) 2.0 ≥ pH ≥ 12.5			9.20	9.16	6.92	9.18	8.90	7.98	8.21
Ignitability (degree F)			–	–	–	–	–	–	–
Reactivity, Cyanide (mg/kg)		1.0	–	–	–	–	–	–	–
Reactivity, Sulfide (mg/kg)		1.0	–	–	–	–	–	–	–

NOTES:

CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/kg = micrograms per kilogram
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
J = estimated
JJ = estimated below sample specific CRQL
R = rejected
DUP = duplicate sample
R.L. = regulatory limit
[ ] = less than sample specific CRDL
– = not detected

Aroclor-1254 (up to 340 J μg/kg), and Aroclor-1260 (up to 140 μg/kg). The hazardous waste standard for PCBs under 6 NYCRR Part 371 of 50,000 μg/kg was not exceeded. TCL inorganic concentrations detected in landfill samples were compared to site background (TB-101) and to ranges of inorganic concentrations of soils in the eastern United States and New York State (see Table 3-3). Site background concentrations were all exceeded by at least one sample except for lead, for which a background concentration was not available, and for selenium and mercury, which were not detected. The inorganics that exceeded the published background range for soil in New York State and the eastern U.S. are chromium, cobalt, copper, iron, lead, manganese, nickel, and vanadium. In addition, comparison of inorganic results on Table 3-5 and 3-6 to the slag composite sample collected and analyzed by Recra Research, Inc., in 1979 (see Table 3-1) show that landfill materials sampled as part of Task 3 represent slag disposed of on site and do not resemble the baghouse dust co-disposed at that time.

EP toxicity analysis of the landfill material samples detected the inorganics barium, cadmium, chromium, lead, and selenium in the sample extracts. Overall, none of the samples exhibited the characteristics of hazardous waste as defined by 6 NCYRR Part 371.

3.4.3 Groundwater Sample Analytical Results

MW-01, MW-02, and MW-105 were sampled for laboratory analysis of TCL VOCs, SVOCs, inorganics, and gross alpha and beta radioactivity. During sampling, groundwater pH, Eh, specific conductivity, and temperature were also measured. MW-04 was dry and could not be sampled.

Laboratory analytical data are summarized in Table 3-7. TCL VOCs were not detected in the groundwater samples from MW-01, MW-02, and MW-105. TCL SVOCs detected in the samples were diethylphthalate and bis(2-ethylhexyl)-phthalate, both at estimated concentrations. TCL inorganics detected in the samples, were aluminum, barium, calcium, copper, iron, lead, magnesium, nickel, potassium, sodium, thallium, and zinc. Of these, the following inorganics exceeded applicable New York State or federal standards:

- Aluminum in MW-01 (211 μg/L) and MW-105 (1,680 μg/L) exceeds the USEPA secondary MCL of 200 micrograms per liter (μg/L).

- Iron in MW-01 (517 μg/L) and MW-105 (2,360 μg/L) exceeds the New York State Class GA standard of 300 μg/L and the USEPA secondary MCL of 300 μg/L.

- Magnesium in MW-01 (152,000 μg/L) exceeds the New York State Class GA guidance value of 35,000 μg/L.

- Sodium in all the wells (93,400 to 729,000 μg/L) exceeds the New York State Class GA standard of 20,000 μg/L.

- Thallium in all the wells (15.5 to 28.4 μg/L) exceeds the New York State Class GA guidance value of 4 μg/L and the USEPA MCL of 2 μg/L.

Table 3–7
Groundwater Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	NYS CLASS GA (µg/L)	CRQL/CRDL	MW–01	MW–02	MW–105
TCL Volatile Organic Compounds (µg/L)					
None detected					
TCL Semivolatile Organic Compounds (µg/L)					
Diethylphthalate	50 G	10	2 JJ	1 JJ	1 JJ
bis(2–Ethylhexyl)phthalate	50	10	4 JJ	2 JJ	1 JJ
TCL Inorganic Compounds (µg/L)					
Aluminum	50 – 200 S[1]	200	211	138 []	1680
Barium	1,000	200	283	47.4 []	78.1 []
Calcium	a	5000	64500	85900	54900
Copper	200	25	24.1 []	8.0 []	9.4 []
Iron	300	100	517	261	2360
Lead	25	3	–	–	3.8 J
Magnesium	35,000 G	5000	152000	25800	21500
Manganese	300	15	R	R	R
Nickel	100[1]	40	72.0	–	–
Potassium	a	5000	6160	2950 []	16300
Sodium	20,000	5000	93400	729000	451000
Thallium	4 G	10	15.5 J	28.4 J	25.6 J
Zinc	300	20	–	29.8	157
Miscellaneous Parameters					
pH	6.5 – 8.5 S[1]		8.03	7.6	8.8
Gross Alpha (pci/L)	a		< 8	23 +/– 14	< 10
Gross Beta (pci/L)	a		20 +/– 5	18 +/– 5	31 +/– 6

NOTES:

CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/L = micrograms per liter
J = estimated
JJ = estimated below sample specific CRQL
R = rejected
DUP = duplicate sample

[ ] = less than sample specific CRDL
– = not detected
pci/L = picocuries/liter
a = no standard available
S = Secondary Federal Maximum Contaminant Level
G = Guidance Value
1 = USEPA MCL

Field analysis of groundwater for pH shows that the pH of MW-105 (measured at 8.8) exceeds the New York State Class GA water quality standard of 6.5 to 8.5 pH units.

Groundwater from MW-01, MW-02, and MW-105 was also analyzed for gross alpha and beta radioactivity. Alpha radioactivity was present in MW-105 at 23 picocuries per liter (pci/L), which exceeds the New York State Class GA water quality standard of 15 pci/L and the USEPA MCL of 15 pci/L. Beta radioactivity was detected in every sample from 18 to 31 pci/L. These levels are below the New York State Class GA water quality standard of 1,000 pci/L. The USEPA MCL for gross beta radioactivity is 4 mrem, and the data collected in pci/L is not directly comparable to this standard.

3.4.4 Surface Water/Sediment Sample Analytical Results

Surface water/sediment sample pairs SW/SD-002 through SW/SD-006 and the duplicate for SW/SD-002 were sampled for laboratory analysis for TCL VOCs, SVOCs, and inorganics. Surface water samples were also analyzed for gross alpha and beta radioactivity. During sampling, surface water pH, Eh, specific conductivity and temperature were also measured. Results are summarized in the following subsections.

Surface Water Results. Laboratory analytical data are summarized in Table 3-8. The TCL VOC toluene was detected in SW-002 DUP at 1 JJ μg/L. TCL VOCs were not detected in the other samples. TCL SVOCs detected were 4-methylphenol, diethylphthalate, and bis(2-ethylhexyl)phthalate. TCL inorganics detected in the surface water samples were aluminum, antimony, barium,

Table 3–8
Surface Water Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	SW–002	SW–002 DUP	SW–003	SW–004	SW–005	SW–006
TCL Volatile Organic Compounds (µg/L)							
Toluene	10	–	1 JJ	–	–	–	–
TCL Semivolatile Organic Compounds (µg/L)							
4–Methylphenol	10	5 JJ	–	–	–	–	–
Diethylphthalate	10	–	3 JJ	–	3 JJ	1 JJ	–
bis(2–Ethylhexyl)phthalate	10	–	–	1 JJ	1 JJ	1 JJ	1 JJ
TCL Inorganic Compounds (µg/L)							
Aluminum	200	228	177 []	626	389	171 []	286
Antimony	60	70.2 J	116 J	–	61.4 J	–	–
Barium	200	544	528	35.8 []	46.1 []	41.0 []	48.7 []
Cadmium	5	–	–	–	7.2 J	–	–
Calcium	5000	59900	58000	43900	43500	49100	20600
Chromium	10	13.8	11.3	50.7	–	–	41.9
Cobalt	50	11.5 []	21.3 []	–	9.8 []	–	–
Copper	25	28.1	26.7	8.0 []	10.7 []	–	–
Iron	100	5720	5420	781	1460	1210	145
Lead	3	4.4 J	3.8 J	–	–	5.3 J	–
Magnesium	5000	162000	155000	28000	104000	19900	43000
Manganese	15	R	R	R	R	R	R
Nickel	40	74.4	–	50.4	74.4	–	–
Potassium	5000	9650	9870	7590	8370	8130	3090 []
Sodium	5000	46900	45100	279000	33700	361000	323000
Thallium	10	9.0 []J	10.5 J	8.1 []J	5.2 []J	–	8.8 []J
Vanadium	50	–	–	–	–	–	37.8 []J
Zinc	20	9.2 []	8.2 []	30.8	7.2 []	–	–
Miscellaneous Parameters							
pH		7.99	–	8.54	9.15	8.31	8.62
Gross Alpha (pci/L)		< 8	< 8	35 +/– 11	< 6	< 8	< 7
Gross Beta (pci/L)		2 +/– 5	25 +/– 5	30 +/– 5	13 +/– 4	15 +/– 4	5.4 +/– 3.4

NOTES:

CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/L = micrograms per liter
J = estimated
JJ = estimated below sample specific CRQL
R = rejected
DUP = duplicate sample
[ ] = less than sample specific CRDL
– = not detected
pci/L = picocuries/liter

cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, nickel, potassium, sodium, thallium, vanadium, and zinc. Of these, the concentration of iron exceeds the New York State Class D water quality standard of 300 μg/L in all samples except SW-006. The concentration of 4-methylphenol (5 JJ μg/L in SW-001), although at a concentration less than the Contract Required Quantitation Limit, is at the New York State Class D water quality standard for total phenols of 5 μg/L.

Field analysis of site surface water shows pH within the New York State Class D water quality standard range of 6.0 to 9.5.

Surface water samples were also analyzed for gross alpha and beta radioactivity. Alpha radioactivity was present only in SW-003 at 35 pci/L. Beta radioactivity was detected in every sample from 5.4 to 30 pci/L. There are no regulatory standards for gross alpha and beta radioactivity in surface water samples. The highest alpha and beta radiation measurements were in SW-003, which is the sample closest to the northeast corner of the site, where surface radiation exceeds twice background levels.

Sediment Results. Laboratory analytical data are summarized in Table 3-9. TCL VOCs were not detected in the samples. Several TCL SVOCs were detected in sediment samples, with the highest number of analytes and the highest concentrations detected in sample SD-004. TCL SVOCs were not detected in SD-002 and SD-003. TCL SVOCs detected in SD-002 DUP, SD-004, SD-005, and SD-006 at concentrations exceeding site background soil ranges (from TB-101) are naphthalene, 2-methylnaphthalene, acenaphthene, dibenzofuran, fluorene, phenanthrene, anthracene, di-n-butylphthalate,

Table 3–9
Sediment Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	SD–002	SD–002 DUP	SD–003	SD–004	SD–005	SD–006
TCL Volatile Organic Compounds (µg/kg)							
None Detected							
TCL Semivolatile Organic Compounds (µg/kg)							
Naphthalene	330	–	–	–	150 JJ	–	–
2–Methylnaphthalene	330	–	–	–	74 JJ	–	7 JJ
Acenaphthene	330	–	–	–	48 JJ	–	–
Anthracene	330	–	–	–	10 JJ	–	–
Di–n–butylphthalate	330	36 JJ	–	–	360 JJ	200 JJ	140 JJ
Dibenzofuran	330	–	–	–	38 JJ	–	–
Fluoranthene	330	22 JJ	–	–	140 JJ	–	65 JJ
Fluorene	330	–	–	–	26 JJ	–	–
Phenanthrene	330	18 JJ	–	–	190 JJ	–	45 JJ
Pyrene	330	15 JJ	–	–	150 JJ	–	52 JJ
TCL Inorganic Compounds (mg/kg)							
Aluminum	40	17200	20700	18800	16300	22500	30000
Antimony	12	22.8 J	32.6 J	32.3 J	55.8 J	–	32.5 J
Arsenic	2	3.8 J	5.5 J	8.7 J	13.7 J	4.3 J	4.0 J
Barium	40	111	102	230	594	142	267
Beryllium	1	0.61 []	0.98 []	1.1 []	1.3 []	0.89 []	7.1
Cadmium	1	R	R	R	R	R	R
Calcium	1000	11800	7400	16800	61600	34400	167000
Chromium	2	29.3	25.6	30.0	511	29.1	3150
Cobalt	10	R	R	R	R	R	R
Copper	5	25.6 J	11.5 J	36.7	207	20.4	327
Iron	20	25000	32000	31800	46900	24400	20400
Lead	0.6	31.3	R	38.0	60.2	45.9	42.0
Magnesium	1000	7550	6940	11700	36500	20400	39900
Manganese	3	372	260	4990	9940	557	2470
Mercury	0.04	–	–	0.17	–	–	–
Nickel	8	40.0 J	22.9 J	28.8	1370	21.1	669

Table 3–9
Sediment Sampling Data

Guterl Specialty Steel
Lockport, New York

COMPOUND	CRQL/CRDL	SD–002	SD–002 DUP	SD–003	SD–004	SD–005	SD–006
TCL Inorganic Compounds (mg/kg) Con't							
Potassium	1000	1300 []	1760	1860	1090 []	2390	836 []
Sodium	1000	682 []	579 []	395 []	292 []	2010	1360 []
Thallium	2	1.8 []	2.0 []	1.6 []	–	5.3	–
Vanadium	10	25.6 J	33.5 J	34.7 J	52.1 J	33.2 J	978 J
Zinc	4	345 J	439 J	702 J	270 J	386 J	280 J

NOTES:

CRQL = Contract Required Quantitation Limit (organics)
CRDL = Contract Required Detection Limit (inorganics)
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
J = estimated
JJ = estimated below sample specific CRQL
R = rejected
DUP = duplicate sample
[ ] = less than sample specific CRDL
– = not detected

fluoranthene, and pyrene. Nineteen TCL inorganic compounds were detected in the sediment samples, with most of them exceeding background soil concentrations (from TB-101). Of these, only beryllium, chromium, manganese, nickel, and vanadium concentrations exceeded published soil background ranges for both New York State and the eastern United States.

3.4.5 NYSDEC Groundwater Sample Analytical Results

NYSDEC sampled monitoring wells at the site in two events (NYSDEC, 1994). These events (in October and December 1993) included sampling of MW-01, MW-02, and MW-105. In December 1993, MW-04 contained water and could also be sampled. Laboratory analytical results for the samples were reviewed by NYSDEC and provided to ABB-ES for inclusion in this report. Results are summarized in Table 3-10. Of the inorganics detected, the following exceeded applicable New York State or federal standards:

- Chromium in MW-04 (185 μg/L) exceeds the New York State Class GA standard of 50 μg/L and the USEPA MCL of 100 μg/L. Of this, most of the chromium in MW-04 is hexavalent (131 μg/L).

- Iron in MW-01 (970 μg/L), MW-02 (1,240 μg/L), MW-04 (3,910 μg/L), and MW-105 (1,460 μg/L) exceeds the New York State Class GA standard of 300 μg/L and the USEPA secondary MCL of 300 μg/L.

- Magnesium in MW-01 (193,000 μg/L) and MW-02 (43,100 μg/L) exceeds the New York State Class GA standard of 35,000 μg/L.

TABLE 3-10
NYSDEC GROUNDWATER SAMPLING DATA

GUTERL SPECIALITY STEEL
LOCKPORT, NEW YORK

COMPOUND	NYS CLASS GA (µg/L)	MW-01		MW-02		MW-04		MW-105	
		10/93	12/93	10/93	12/93	10/93	12/93	10/93	12/93
Inorganic Compounds (µg/L)									
Cadmium	10	0.20	0.20	0.90	1.0	NA	0.20	0.70	0.39
Chromium	50	<10	<10	<10	<10	NA	185	<10	<10
Iron	300	NR	970	NR	1,240	NA	3,910	NR	1,460
Lead	25	4.0	NR	11.5	NR	NA	NR	9.0	NR
Magnesium	35,000G	NR	193,000	NR	43,100	NA	9,810	NR	17,600
Nickel	100[1]	160	133	<40	<30	NA	113	<40	<30
Thallium	4G	NR	<3.0	NR	<3.0	NA	<3.0	NR	<3.0
Hexavalent Chromium	50	13.0	17.0	14.0	15.0	NA	131	19.0	12.0

Notes:

1 = USEPA MCL
< = less than
µg/L = micrograms per liter
G = guidance value
NA = no sample collected for analysis
NR = analysis not requested

- Nickel in MW-01 (up to 160 μg/L) and MW-04 (113 μg/L) exceeds the USEPA MCL of 100 μg/L.

4.0 ASSESSMENT OF DATA ADEQUACY AND RECOMMENDATIONS

The following subsections further evaluate the findings presented in Section 3.0 against the purpose of the Task 3 PSA investigation at the Guterl site to establish whether hazardous waste was disposed of on site and evaluate whether the site poses a significant threat to public health or the environment. This discussion does not include an assessment of the results of the radiation survey performed at the site.

4.1 HAZARDOUS WASTE DEPOSITION

Baghouse dust containing nickel and chromium, slag, waste oils and greases, and other plant rubbish were allegedly disposed of in the landfill from 1962 to 1980. Baghouse flue dust containing nickel and chromium is listed as a hazardous waste under RCRA, and 6 NYCRR Part 371 (NYSDEC, 1988). The alleged disposal of these materials is referenced in several documents (Erk, 1980; NUS, 1983; E-S, 1988; and Buri, 1990). In 1980, before landfill reclamation by Guterl Specialty Steel, results of New York State leachate potential testing of baghouse dust was interpreted by NYSDEC to indicate that baghouse dust disposed of on-site met the characteristics of hazardous waste due to the concentration of leachable chromium (Erk, 1980). Comparison of the 1980 baghouse dust leachate potential results for chromium with EP Toxicity regulatory limits indicates an exceedance.

Subsurface samples from soil borings and test pits and a sample of material from a 35-gallon container collected during PSA Task 3 activities did not fail any hazardous waste characteristics tests. While analysis for EP Toxicity (metals only)

of these samples detected leachable levels of barium, cadmium, chromium, lead, selenium, and silver, the concentrations were below regulatory limits. Comparison of analytical results of the samples collected during Task 3 to previous slag and baghouse dust data show the materials sampled during Task 3 are representative of slag. The baghouse dust disposed on site was not found.

4.2 SIGNIFICANT THREAT DETERMINATION

Previous groundwater sampling at the Guterl site showed that concentrations of phenols, metals (chromium, copper, iron, lead, and manganese), and pH detected in groundwater beneath the Guterl landfill exceeded New York State Class GA standards and USEPA MCLs (SLC, 1981; E-S, 1988). Most of the exceedances were noted in monitoring well MW-04 on the east side of the site.

The PSA Task 3 investigation at the Guterl site gathered additional groundwater and surface water data for purposes of evaluating significant threat. There were several standard contraventions in the groundwater analytical results from the Task 3 sampling. Iron and sodium concentrations exceeded the New York State Class GA standards, and aluminum, magnesium, and thallium exceeded either USEPA MCLs, secondary MCLs or Class GA standards. Groundwater results also exceeded the Class GA standards for pH and alpha radioactivity. MW-04, which had previously shown exceedances of standards, was dry in January 1993 and could not be sampled as part of PSA Task 3. The only exceedances of New York State Class D surface water standards were with total phenol and iron.

Follow-on NYSDEC sampling gathered additional groundwater data for purposes of evaluating significant threat (NYSDEC, 1994). NYSDEC's 1993 results show chromium, iron, and magnesium concentrations exceeded either New York Class GA standards, USEPA MCLs, or secondary MCLs. Nickel exceeded the USEPA MCL.

4.3 RECOMMENDATIONS

Information collected during Task 1 and evaluated during Task 3 documents (1) the presence of a listed hazardous waste (K091) as defined by 6 NYCRR Part 371 (i.e., baghouse dust containing chromium and nickel); and (2) that New York State leachate potential testing in 1979 of a composite sample of baghouse dust disposed of on site indicated the material was a characteristic hazardous waste because of chromium. Previous investigations and Task 3 investigations documented several contraventions of standards (phenols, metals, pH, and alpha radioactivity) that indicate significant threat to the public health and the environment. The constituents of the listed waste (chromium and nickel) have been shown to contravene groundwater standards.

Based on these results, it is recommended that the Guterl site be reclassified from a Class 2a to a Class 2 hazardous waste site. Based upon this recommendation, PSA Tasks 4 through 6 will not be conducted.

ABB-ES	ABB Environmental Services
AEC	Atomic Energy Commission
USDA	U.S. Department of Agriculture
bgs	below ground surface
cm/sec	centimeters per second
cpm	counts per minute
DOE	U.S. Department of Energy
EP	Extraction Procedure
ES	Engineering Science
GM	Geiger-Mueller
Guterl	Guterl Specialty Steel
HASP	Health and Safety Plan
ID	inside diameter
MCL	Maximum Contaminant Level
mg/L	milligrams per liter
mrem/hr	millirems per hour
MW	monitoring well
NCIDA	Niagara County Industrial Development Agency
NCRDD	Niagara County Refuse Disposal District
NUS	NUS Corporation
NYSDOT	New York State Department of Transportation
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
PCBs	polychlorinated biphenyls
pci/L	picocuries per liter
PID	photoionization detector
PSA	Preliminary Site Assessment
PVC	polyvinyl chloride
QAPjP	Quality Assurance Project Plan

QAPP	Quality Assurance Program Plan
RCRA	Resource Conservation and Recovery Act
SLC	Secure Landfill Contractors
SVOCs	semivolatile organic compounds
TCL	Target Compound List
USEPA	U.S. Environmental Protection Agency
VOCs	volatile organic compounds
µg/kg	microgram per kilogram
µg/L	microgram per liter

Beecher, John L., New York State Department of Environmental Conservation, Region 9, Buffalo, New York, 1979. Written correspondence to Ms. Terry Vigilette, Recra Research, Inc., Tonawanda, New York. October 10.

Buri, Reginald, Allegheny Ludlum Steel Corporation Plant Maintenance Supervisor, Lockport, New York, 1990. Personal communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. July 18.

Calderazzo, Deborah, Allegheny Ludlum Steel Corporation, Engineer, Brackenridge, Pennsylvania, 1990. Personal communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. July 27.

Dicky, Paul, Niagara County Health Department, Environmental Health Services, Niagara Falls, New York, 1990. Personal communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. July 20 and August 2.

Doleski, Steven, New York State Department of Environmental Conservation, Division of Regulatory Affairs, Region 9, Buffalo, New York, 1980. Written correspondence to Mr. Donald Kuhn, Secure Landfill Contractors. December 29.

Drake, John, Assistant Director, Niagara County Industrial Development Agency, Assistant Director, Lockport, New York, 1990. Personal Communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. July 18.

E.C. Jordan Co., 1991. *Final Report Task 1: Data Records Search and Assessment, Preliminary Site Assessment, Guterl Specialty Steel Site*. Prepared for the New York Department of Environmental Conservation, Albany, New York. February.

E.C. Jordan Co., 1992a. *Program Quality Assurance Project Plan*. Prepared for the New York Department of Environmental Conservation, Albany, New York. June.

E.C. Jordan Co., 1992b. *Program Quality Health and Safety Plan, Part II, Revision 1*. Prepared for the New York Department of Environmental Conservation, Albany, New York. June.

E.C. Jordan Co., 1992c. *Preliminary Site Assessment, Site Work Plan, Guterl Specialty Steel Site, City of Lockport, New York.* Prepared for the New York State Department of Environmental Conservation, Albany, New York. September.

E.C. Jordan Co., 1992d. *Preliminary Site Assessment, Addendum to the Site Work Plan, Site Specific QAPP and HASP, Guterl Specialty Steel Site, City of Lockport, New York.* Prepared for the New York State Department of Environmental Conservation; Albany, New York. September.

Engineering-Science (E-S) and Dames and Moore, 1988. *Phase I Investigation, Guterl Specialty Steel Corporation, City of Lockport, Niagara County, New York.* Prepared for New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Albany, New York. January.

Erk, Yavuz, New York State Department of Environmental Conservation, Region 9, Buffalo, New York, 1990. Written correspondence to Mr. Donald R. Hulshoff, Plant Engineer Guterl Steel (formerly Simonds Saw and Steel), Lockport, New York. August 7.

Everett, William, Lockport Community Development, Lockport, New York, 1990. Personal communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. August 2.

Hopkins, Michael, Niagara County Health Department, Niagara Falls, New York, 1989. Written correspondence to Mr. Abul Barkat, New York State Department of Environmental Conservation, Region 9, Buffalo, New York. February 15.

Hopkins, Michael, Niagara County Health Department, Niagara Falls, New York, 1982. Written correspondence to file, June 16.

Millihan, Gary, Assistant Fire Chief, Lockport Fire Prevention and Training Bureau, Lockport, New York, 1990. Personal communication with Catherine C. Lanois, E.C. Jordan Co., Wakefield, Massachusetts. July 18.

New York State Department of Environmental Conservation, (NYSDEC), 1980. "Freshwater Wetlands Maps and Classification Regulations, 6 NYCRR Part 664." Lockport, Clarence Center, and Cambria Quadrangles.

New York State Department of Environmental Conservation (NYSDEC), 1986. "Water Quality Regulations, Surface Water and Groundwater Classifications and Standards, 6 NYCRR Chapter X, Parts 700-705." March 31.

New York State Department of Environmental Conservation, (NYSDEC) 1988. "Identification and Listing of Hazardous Wastes; 6 NYCRR Part 371."

New York State Department of Environmental Conservation (NYSDEC), 1990. Natural Heritage Program; Albany, New York. Map 43-078-26; 1990.

New York State Department of Environmental Conservation (NYSDEC), 1992a. *New York Compilation of Rules and Regulations, Title 6, Part 371 - Identification and Listing of Hazardous Wastes*. January 31.

New York State Department of Environmental Conservation (NYSDEC), 1992b. *Inactive Hazardous Waste Disposal Sites in New York State*; Volume 9; A Joint Report of the New York State Department of Environmental Conservation and Health. January 31.

New York State Department of Environmental Conservation (NYSDEC), 1992c. *New York Codes, Rules, and Regulations, Title 6, Part 375, Inactive Hazardous Waste Disposal Site Remedial Program*. Effective May.

New York State Department of Environmental Conservation (NYSDEC), 1994. Memorandum to ABB-ES from John Hyden, NYSDEC Region 9 Documenting Results of Groundwater Sampling Performed in October and December 1994 at Specialty Steel Guterl Site.

New York State Department of Transportation, (NYSDOT) 1976. Topographic Map, Lockport Quadrangle, Second Edition.

Niagara County Refuse Disposal District, (NCRDD) 1990. "Niagara County Refuse Disposal District Quarterly Groundwater Monitoring Program." Analytical Results. July 24.

NUS Corporation, 1983. "Potential Hazardous Waste Site Preliminary Assessment, USEPA Form 2070-12." Prepared for USEPA Guterl Specialty Steel Corporation. May 9.

Recra Research, Inc., 1979. Baghouse Dust and Slag Composite Sample Results for the Guterl Landfill - Composite and NYS Leachate Potential Testing. Untitled documents dated November 13.

Secure Landfill Contractors (SLC), 1981. "Plans and Report for a Solid Waste Management Facility at Guterl Specialty Steel Corporation, 695 Ohio Street, Lockport, New York."

U.S. Department of Agriculture (USDA) Soil Conservation Service, 1979. "Soil Survey of Niagara County, New York."

U.S. Department of Agriculture (USDA) Soil and Water Conservation Service, Niagara County, Lockport, New York, 1958. Aerial Photograph ARE-3V-17, 1" - 660'. August 11.

U.S. Department of Agriculture (USDA) Soil and Water Conservation Service, Niagara County, Lockport, New York, 1966. Aerial Photograph ARE-1GG-134 K7, 1' = 660'. June 12.

U.S. Department of Agriculture (USDA) Soil and Water Conservation Service, Niagara County, Lockport, New York, 1977. Aerial Photograph 316063 177 44L K7, 1" = 660'. Spring.

U.S. Department of Energy (DOE), 1979. "Radiological Survey of the former Simonds Saw and Steel Company, Lockport, New York." November.

U.S. Environmental Protection Agency (USEPA), 1986. Written correspondence between Mr. F.J. Bradley, Regional Administrator, USEPA and Mr. J.E. Baublitz, Director, Division of Remedial Action Projects, U.S. Department of Energy. June 6.

APPENDIX A

NYSDEC REGISTRY SITE CLASSIFICATION DECISION FORM

Original-BHSC
Copy-REGION
Copy-DEE
Copy-DOH
Copy-PREPARER

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

REGISTRY SITE CLASSIFICATION DECISION

1. SITE NAME	2. SITE NO	3. TOWN/CITY/VILLAGE	4. COUNTY
Guterl Specialty Steel Corp. Landfill Site	932032	Lockport	Niagara

5. REGION 9

6. CLASSIFICATION Current 2a Proposed 2 Modify

7. LOCATION OF SITE (Attached U.S.G.S Topographic Map showing site Location)

a. Quadrangle: Lockport
b. Site Latitude: 43° 09' 39.3 N Longitude: 78° 47' 51.4" W
c. Tax Map Number

8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations)

The Guterl Specialty Steel Corp. site is an 8.6 acre inactive landfill allegedly used for the disposal of slag, baghouse flue dust, foundry sand, waste oils and greases, and miscellaneous plant rubbish. The landfill is not lined or covered. It is located at the northwestern end of a steel alloy facility. Radioactive materials are allegedly disposed on or near site.

a. Area 8.6 acres b. EPA ID Number D094174554

c. Completed (X) Phase I ( ) Phase II (X) PSA ( ) RI/FS (X) PA/SI ( ) Other

9. HAZARDOUS WASTES DISPOSED

Baghouse flue dust containing chromium and nickel disposed of in the landfill is a listed RCRA hazardous waste (K091). Baghouse dust tested by New York State leachate potential test in 1979 confirms material contains leachable chromium and nickel.

10. ANALYTICAL DATA AVAILABLE

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

b. Contravention of Standards or Guidance Values

Chromium, iron, magnesium, sodium, and thallium concentrations exceeded the New York State Class GA groundwater standards, and aluminum, chromium, magnesium, nickel, and thallium exceeded either USEPA MCLs or Secondary MCLs. Alpha radioactivity and pH also exceeded the Class GA standards. Phenol and iron exceeded Class D surface water standards.

11. JUSTIFICATION FOR CLASSIFICATION DECISION

The presence of documented hazardous waste in addition to contraventions of standards, indicate a significant threat exists at the site from site contaminants leaching to surface water and groundwater. In addition, radiation >2X background associated with debris piles at the northeast corner of the site. Listed waste constituents (chromium and nickel), contravene groundwater standards.

12. SITE IMPACT DATA

a. Nearest surface water:	Distance 2,000 ft.	Direction east	Classification Erie Canal	
b. Nearest groundwater:	Depth 1 - 5 ft.	Flow Direction unknown	( ) Sole Source	( ) Primary ( ) Principal
c. Nearest water supply:	Distance 3 mi.	Direction southwest	Active (X)Yes ( )No	
d. Nearest building:	Distance 500 ft.	Direction north and southeast	Use Manufacturing (light industrial)	

e. In State Economic Development Zone? ( )Y (X)N
f. Crops or livestock on site? ( )Y (X)N
g. Documented fish or wildlife mortality? ( )Y (X)N
h. Impact on special status fish or wildlife resource? ( )Y (X)N
i. Controlled site access? ( )Y (X)N
j. Exposed hazardous waste? ( )Y ( )N (X) Unknown
k. HRS Score Incomplete
l. For Class 2: Priority Category N/A

13. SITE OWNER'S NAME	14. ADDRESS	15. TELEPHONE NUMBER
Allegheny Ludlum Steel	695 Ohio Street, Lockport, New York 14095	716-433-4411

16. PREPARER

Signature Date

Brian Butler, Geologist, ABB Environmental Services
Name, Title, Organization

17. APPROVED

Signature Date

Name, Title, Organization

APPENDIX B

SITE INSPECTION FORM
(USEPA FORM 2070-13)

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

EPA

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D094174554

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Guterl Specialty Steel Corp. Landfill site	695 Ohio Street

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST
Lockport	New York	14094	Niagara	093	032

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
43° 09' 39.3 N	78° 47' 51.4" W	X A. PRIVATE _ B. FEDERAL _____ _ C. STATE _ D. COUNTY _ E. MUNICIPAL _ F. OTHER _____ _ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION		
7 / 18 / 90 (MONTH DAY YEAR)	_ ACTIVE X INACTIVE	1962 (BEGINNING YEAR)	1981 (ENDING YEAR)	____ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)
_ A. EPA _ B. EPA CONTRACTOR _____ (Name of firm) _ C. MUNICIPAL _ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
_ E. STATE X F. STATE CONTRACTOR ABB Environmental Services (ABB-ES) (Name of firm) _ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Brian Butler	Geologist	ABB-ES	(207) 775-5401
09 OTHER INSPECTORS Nick Migliaccio	10 TITLE Scientist	11 ORGANIZATION ABB-ES	12 TELEPHONE NO. (617) 245-6606
John Hyden, PhD., P.E.	Environmental Engineer	NYSDEC - Region 9	(716) 851-7220
Tom Hillman	Environmental Technician	ABB-ES	(207) 775-5401
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO.
Reginald Buri	Supervisor Maintenance	Allegheny Ludlum 695 Ohio St., Lockport, New York	(716) 433-4411
Deborah Calderazzo	Engineer	Allegheny Ludlum River Road, Brackenridge, PA	(412) 226-5030
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
X PERMISSION ☐ WARRANT	9:00 am	(cold, wet conditions)

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Sri Maddineni	New York State Department of Environmental Conservation	(518) 457-0638

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	03 DATE
Brian Butler		ABB-ES	(207) 775-5401	4/21/93 (MONTH DAY YEAR)

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

EPA

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D094174554

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- X A. SOLID
- _ B. POWDER, FINES
- _ C. SLUDGE
- X D. OTHER Debris, slag (Specify)
- _ E. SLURRY
- X F. LIQUID
- _ G. GAS

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

TONS > 1,000
CUBIC YARDS
NO. OF DRUMS > 5

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE	3200	gal/year	spent machinery lubrication oils and greases
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS	460,000	gal/year	pickling acid discharged to sewer (not landfill)
BAS	BASES			
MES	HEAVY METALS	> 1,000	tons	baghouse dust and slag with chromium and nickel

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04/STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	chromium	7440-47-3	landfill	up to 4,360	mg/kg
MES	nickel	7440-02-0	landfill	up to 39,800	mg/kg
SOL	phenol	108-95-2	landfill	up to 1.25	mg/L
MES	aluminum		landfill	up to 39,300	mg/kg
MES	copper	7440-50-8	landfill	up to 66,000	mg/kg
MES	lead	7439-92-1	landfill	up to 344	mg/kg
	PCBs	1336-36-3	landfill	up to 15,000	µg/kg
	alpha radioactivity			up to 35	pci/L
	beta radioactivity			up to 31	pci/L

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	none		FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D094174554

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 X A. GROUNDWATER CONTAMINATION
02 _ OBSERVED (DATE: _____) _ POTENTIAL X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Groundwater in on-site wells contain elevated phenols, heavy metals, and alpha and beta radioactivity; however adequate background data do not exist, and groundwater not used as drinking water supply.

01 X B. SURFACE WATER CONTAMINATION
02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Wetlands abut landfill to west and south. Nearby surface water bodies include tributary to eighteen mile creek which is 4,000 feet northwest of the site, and the Erie Canal which is 3,000 feet southeast of the site. Contamination by phenols, metals, and alpha and beta radioactivity in on site surface water.

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

None indicated.

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

None indicated.

01 X E. DIRECT CONTACT
02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: unknown
04 NARRATIVE DESCRIPTION

Site is accessible to public through unfenced areas. Potential exists for direct contact with potentially hazardous surface materials containing phenols, metals, radioactivity.

01 X F. CONTAMINATION OF SOIL
02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0
04 NARRATIVE DESCRIPTION

Site inspection found soil/landfill materials contaminated with PAHs, phenols, PCBs, and metals. Areas with radiation > 2X background measured. Highest radiation estimated at 15 mrem/hr direct contact.

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

None indicated. Aquifer not used for drinking purposes.

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

None indicated.

01 _ I. POPULATION EXPOSURE/INJURY
02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

None indicated.

EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS	I. IDENTIFICATION 01 STATE: New York 01 SITE NUMBER: D094174554

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

Landfill surface is sparsely vegetated; potential exists for slag and other materials to affect flora in adjacent wetlands.

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

None identified.

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

None identified.

01 X M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

Site well graded, however landfill not lined or covered.

01 _ N. DAMAGE TO OFFSITE PROPERTY — 02 _ OBSERVED (DATE: _____) _ POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None identified.

01 X O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 _ OBSERVED (DATE: _____) X POTENTIAL _ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 0 — 04 NARRATIVE DESCRIPTION

None identified. However, spent pickling solution from adjacent mill was allegedly discharged to Lockport Wastewater Treatment Plant in the past.

01 _ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 _ OBSERVED (DATE: _____) _ POTENTIAL X ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

Lockport city water department worker alleges radioactive materials disposed in or near landfill area.

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

None indicated.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 0

IV. COMMENTS

Population within 3-mile radius of site served by municipal water provided from Niagara River. Nearest residential housing is less than 1,000 feet from the site.

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

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

EPA

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D094174554

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
_ A. NPDES				
_ B. UIC				
_ C. AIR				
_ D. RCRA				
_ E. RCRA INTERIM STATUS				
_ F. SPCC PLAN				
_ G. STATE (specify)				
_ H. LOCAL (specify)				
X I. OTHER (specify)				permit for operation of solid waste facility applied for in 1981; had not been issued.
_ J. NONE	No other permits	applicable to	landfill, however	steel plant has current air and SPDES permits.

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
_ A. SURFACE IMPOUNDMENT		
X B. PILES	Unknown	<1 acre
X C. DRUMS, ABOVE GROUND	> 5	
_ D. TANK, ABOVE GROUND		
_ E. TANK, BELOW GROUND		
X F. LANDFILL	> 1,000	tons
_ G. LANDFARM		
_ H. OPEN DUMP		
X I. OTHER Drums, below growth (specify)	> 3	

04 TREATMENT (check all that apply)
- _ A. INCINERATION
- _ B. UNDERGROUND INJECTION
- _ C. CHEMICAL/PHYSICAL
- _ D. BIOLOGICAL
- _ E. WASTE OIL PROCESSING
- _ F. SOLVENT RECOVERY
- X G. OTHER RECYCLING/RECOVERY
- _ H. OTHER _____ (specify)

05 OTHER
- _ A. BUILDINGS ONSITE

06 AREA OF SITE
8.6 (acres)

07 COMMENTS

Refractory bricks, molds, scrap metal, baghouse dust, slag, scrap wood, packaging materials disposed of in on-site landfill from 1962 until 1981. Quantity of material disposed unknown. Waste oils may also have been disposed of in landfill. Piles adjacent to landfill contain radioactive materials with radiation > 2X background. Facility is a known FUSRAP site.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (check one)

_ A. ADEQUATE, SECURE _ B. MODERATE X C. INADEQUATE, POOR _ D. INSECURE, UNSOUND, DANGEROUS

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

Landfill with no liner, uncovered and sparsely vegetated. Surface graded, although ponding on surface occurs. Crushed, partially full 55- and 35-gallon containers on landfill surface; crushed, empty 55-gallon containers observed in excavations.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: X YES _ NO

02 COMMENTS

Landfill only partially surrounded by fence, however wetlands abut landfill to west and south so landfill not easily accessible on those sides. Waste piles/landfill accessible at northeast corner in direction of residential housing.

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

Evaluation Report of Initial Data, March 1994,, ABB Environmental Services, and references cited therein.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D094174554

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (check as applicable)	SURFACE	WELL
COMMUNITY	A. X	A. _
NON-COMMUNITY	B. _	B. _

02 STATUS		
ENDANGERED	AFFECTED	MONITORED
A. _	B. _	C. _
D. _	E. _	F. _

03 DISTANCE TO SITE
A. > 3 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (check one)

_ A. ONLY SOURCE FOR DRINKING
_ B. DRINKING (other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available)
_ C. COMMERCIAL INDUSTRIAL IRRIGATION (Limited other sources available)
X D. NOT USED, UNUSABLE

02 POPULATION SERVED BY GROUNDWATER 0

03 DISTANCE TO NEAREST DRINKING WATER WELL > 3 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
1.5 - 4.5 (ft)	southwest	N/A (ft)	_____ (gpd)	_ YES X NO

09 DESCRIPTION OF WELLS (including usage, depth, and location relative to population and buildings)

There are no known wells within three miles of the site that are used as a source of drinking water.

10 RECHARGE AREA		11 DISCHARGE AREA	
X YES _ NO	COMMENTS - shallow fill over bedrock likely recharges bedrock aquifer	_ YES X NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

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

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Tributary to Eighteen Mile Creek	No	4,000 feet
Erie Canal	No	2,000 feet
Wetlands	Possibly	0 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. > 1,400 NO. OF PERSONS	B. > 8,000 NO. OF PERSONS	C. --- NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION
<1,000 feet

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE
> 2,000

04 DISTANCE TO NEAREST OFF-SITE BUILDING
500 feet

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

The site is situated in an industrial area on the edge of the city of Lockport. The site is surrounded by the County Landfill, a quarry, and other industrial facilities. Residential housing located beyond woods at northeast corner of site.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

EPA

PART 6 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D09417554

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

X A. 10^{-6} - 10^{-8} cm/sec _ B. 10^{-4} - 10^{-6} cm/sec _ C. 10^{-4} - 10^{-3} cm/sec _ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

_ A. IMPERMEABLE (less than 10^{-6} cm/sec) X B. RELATIVELY IMPERMEABLE (10^{-4} - 10^{-6} cm/sec) _ C. RELATIVELY PERMEABLE (10^{-2} - 10^{-4} cm/sec) _ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL Ph	
3.5 - 15.3 (ft)	To Bedrock (ft)	Not Measured	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9 (in)	2.1 (in)	2 - 4 %	south and west	< 1 %

09 FLOOD POTENTIAL

SITE IS IN _____ YEAR FLOODPLAIN

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

11 DISTANCE TO WETLANDS (5 acre minimum) (not federally regulated)

ESTUARINE: A. _____ (mi)

OTHER: B. adjacent (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 2.0 (mi)

ENDANGERED SPECIES: Pilea Fontana (Clearweed)

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS PRIME AG LAND	AGRICULTURAL LANDS AG LAND
A. 0 (mi)	B. 2,000 feet	C. > 2 (mi)	D. > 2 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located in the Erie-Ontario lowlands physiographic province. The site is relatively flat, and is a few feet higher in elevation than the surrounding area. The topography of the landfill rises to a mound approximately 5 to 10 feet high in the north end of the landfill. Debris piles observed on northeast part of site between railway spurs.

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D094174554

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	3 7	NYTEST, Port Washington, New York RECRA Environmental, Inc., Amherst, New York	April 1993 October/December 1993
SURFACE WATER	5	NYTEST, Port Washington, New York	April 1993
WASTE (from drum)	1	NYTEST, Port Washington, New York	April 1993
AIR			
RUNOFF			
SPILL			
SOIL	9	NYTEST, Port Washington, New York	April 1993
VEGETATION			
OTHER - sediment	5	NYTEST, Port Washington, New York	April 1993

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Air Monitoring	Photoionization detectors used to monitor ambient air and samples during site inspection/sampling; no volatile organics detected above background concentrations (0 ppm).
Radiation Monitoring	Various radiation detection instruments used to screen site. Radiation levels exceeding > 2X background identified.
Land Surveying	Survey of exploration locations, property lines, elevations.

IV. PHOTOGRAPHS AND MAPS

01 TYPE X GROUND X AERIAL

02 IN CUSTODY OF NYSDEC Niagara County USDA Soil and Water Conservation Service
(Name of organization or individual)

03 MAPS
X YES
_ NO

04 LOCATION OF MAPS

ABB Environmental Services; New York State Department of Environmental Conservation, Region 9; Niagara County Health Department

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

- Surface water, groundwater pH, conductivity, temperature, Eh, turbidity monitored during sampling.
- Dust monitoring performed during drilling, test pitting.
- LEL/O_2 measurements performed during drilling, test pitting.
- Radiation screening of samples.

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

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

EPA

I. IDENTIFICATION	
01 STATE: New York	01 SITE NUMBER: D094174554

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Allegheny Ludum Steel		695 Ohio Street		Lockport	New York	14094

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Guterl Special Steel		695 Ohio Street		Lockport	New York	14095
Simonds Saw and Steel		695 Ohio Street		Lockport	New York	14095

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Niagara County Industrial Development Agency		59 Park Avenue		Lockport	New York	14095

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

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

EPA

I. IDENTIFICATION

01 STATE	01 SITE NUMBER
New York	D094174554

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Allegheny Ludlum Steel	

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

05 CITY	06 STATE	07 ZIP CODE
Lockport	New York	14094

08 YEARS OF OPERATION	09 NAME OF OWNER
1984 - Present	Allegheny Ludlum

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

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

14 CITY	15 STATE	16 ZIP CODE

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

PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Guterl Special Steel			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
695 Ohio Street			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Lockport	New York	14094			

08 YEARS OF OPERATION	09 NAME OF OWNER
1978 - 1983	Guterl Special Steel

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Simonds Saw and Steel			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
695 Ohio Street			

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Lockport	New York	14094			

08 YEARS OF OPERATION	09 NAME OF OWNER
1962 - 1978	Simmonds Saw & Steel

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE New York	01 SITE NUMBER D094174554

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
None currently	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(s)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
None currently			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
None currently			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

EPA

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

I. IDENTIFICATION	
01 STATE	01 SITE NUMBER
New York	D094174554

II. PAST RESPONSE ACTIVITIES

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

01 X F. WASTE REPACKAGED — 02 DATE 1981-1982 — 03 AGENCY _____
04 DESCRIPTION

Nickel and chromium steel buttons reclaimed ("hand-mined") for reuse in 1981-1982 by Guterl.

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

None indicated.

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

Alleged disposal of radioactive materials.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 10 - PAST RESPONSE ACTIVITIES	I. IDENTIFICATION	
		01 STATE New York	01 SITE NUMBER D094174554

II. PAST RESPONSE ACTIVITIES (Continued)

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

None indicated.

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

Landfill surface has been regraded, however it is uncovered, sparsely vegetated, and unlined.

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.

EPA	POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT PART 11 - ENFORCEMENT INFORMATION	I. IDENTIFICATION	
		01 STATE New York	01 SITE NUMBER D094174554

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION X YES _ NO

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

Baghouse Dust/slag sampling performed for NYSDEC, 1979, by Recra Research.

Phase I Investigation performed for NYSDEC, January 1988, by Engineering-Science.

Preliminary Assessment performed for USEPA in May, 1983 by NUS.

Preliminary Site Assessment performed for NYSDEC, August 1990, by E.C. Jordan Co.

Task 3 site assessment (environmental sampling) performed for NYSDEC, October 1992 and January 1993, by ABB Environmental Services (formerly E.C. Jordan Co.)

Groundwater sampling performed by NYSDEC, October 1993 and December 1993.

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

Evaluation Report of Initial Data, March 1994, ABB Environmental Services, and references cited therein.