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**MAIN PLANT AREA  
GROUNDWATER MONITORING PROGRAM  
AL TECH SPECIALTY STEEL CORPORATION FACILITY  
WATERVLIET, NEW YORK**

**PREPARED FOR  
AL TECH SPECIALTY STEEL CORPORATION**

**PREPARED BY  
ENVIRONMENTAL STRATEGIES CORPORATION  
PITTSBURGH, PENNSYLVANIA  
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## **1.0 Introduction**

This groundwater monitoring program for the Main Plant Area has been prepared by Environmental Strategies Corporation (ESC) on behalf of AL Tech Specialty Steel Corporation (AL Tech) for the AL Tech steel manufacturing facility in Watervliet, New York (site). The program, which includes three individual monitoring plans, was developed to:

- monitor general groundwater (and surface water) quality at the site
- evaluate the effectiveness of the Groundwater Interim Corrective Measure (ICM) that was installed in 1994
- evaluate the effectiveness of the Fuel Oil ICM that is to be installed in 1999

The scopes of work have been developed based on current, known groundwater conditions at the site. The work scopes may be modified, as additional information is generated, and with the approval of the New York State Department of Environmental Conservation (NYSDEC).

## **1.1 Background**

The NYSDEC issued a Post-Closure Permit (Permit) for the closed surface impoundment at the facility in accordance with Title 6 of the New York Code, Rules, and Regulations (6 NYCRR) and the Resource Conservation and Recovery Act (RCRA) Corrective Action Program. The Permit (NYSDEC No. 4-1026-11/27/-0) applies to both the Main Plant Area and the Waste Management Area (Figure 1). In August 1996, an Order on Consent (Order) was issued by NYSDEC in a joint effort with AL Tech (NYSDEC No. R4-1467-93-02), to bring both AL Tech's Watervliet and Dunkirk, New York facilities into full compliance with applicable environmental laws and regulations and to provide a mechanism for insuring the funding of actions necessary to meet this objective consistent with the RCRA Corrective Action Program. The Order supplements the requirements established in the Permit.

Pursuant to these requirements, AL Tech has completed the following activities for the site:

- a RCRA Facility Assessment and Report of Current Conditions (McLaren/Hart 1991a and 1991b)
- a Phase I RCRA Facility Investigation (RFI) in 1994 (ESC 1995a)
- a Phase II RFI in 1996/1997 (ESC 1998)

Both phases of the RFI investigated the extent of soil and groundwater potentially affected by the presence of fuel oil in the northern and central portions of the site (observed as early as 1973) and general groundwater quality. With regard to groundwater, the findings indicated:

- limited impact to groundwater quality in areas where fuel oil has been observed as a separate-phase liquid (i.e., LNAPL)
- a well defined area in which potentially applicable groundwater criteria were exceeded as a result of historical releases from the Pickle House
- limited exceedances of potentially applicable groundwater criteria at several locations within facility, likely resulting from a variety of facility operations

AL Tech is required to address the presence of fuel oil and groundwater impacted by historical releases from the Pickle House. ICMs were designed to address both issues. The Groundwater ICM has been operational since December 1994; the Fuel Oil ICM is scheduled for construction in late 1999. A general summary of conditions in the areas impacted by fuel oil and the historical Pickle House releases, and measures taken to date to address these conditions are presented in Section 1.2.1 and 1.2.3. A summary of groundwater conditions throughout the site, inclusive of these areas, is presented in Section 2.0.

Pursuant to the RCRA Corrective Action Program, a corrective measure study (CMS) is to be performed. As it relates to groundwater in the Main Plant Area, the CMS will:

- evaluate the current need for corrective measures for site groundwater and establish action levels for future potential corrective measures for site groundwater

- evaluate the effectiveness of the Fuel Oil ICM design and the effectiveness of the Fuel Oil ICM following its installation
- evaluate the effectiveness of the Groundwater ICM and potential need for system modifications
- establish groundwater cleanup objectives for the site, including points of compliance

## 1.2 Interim Corrective Measures

Sections 1.2.1 and 1.2.2 present generalized summaries of the conditions that necessitated the implementation of corrective measures.

### 1.2.1 Fuel Oil ICM

At least as early as 1973, oil seepage was observed along the western bank of the Kromma Kill (Figure 2). The source of the oil was light, non-aqueous phase liquid (LNAPL) on the groundwater surface. An oil recovery well, RW-2, was installed in the overburden near the Kromma Kill and operated until 1990, when the well went dry. A second recovery well, RW-1, was installed near the former 300,000-gallon above ground fuel oil tank in the early 1980s in response to a localized leak in this area. The well was operated for approximately six months, at which time fuel oil was no longer observed and recovery activities ceased.

In 1989, a third recovery well, RW-3, was installed to address the presence of LNAPL in the center of the facility (Figure 2). Approximately 37,300 gallons of oil has been recovered to date from this well.

LNAPL has also been observed at other onsite locations including: MW-6, MW-B, MW-C, MW-D1, OW-1, OW-2, OW-4, OW-11, OW-13, OW-17, PZ-1, PZ-2, PZ-4, and PZ-8. The sources of the LNAPL at these locations, and in the areas of RW-1, RW-2, RW-3, and RW-4, are believed to be:

- the former fuel supply system (inclusive of the former 300,000-gallon aboveground fuel oil storage tank) that was historically used throughout much of the facility for heating and manufacturing operations (Figure 3)
- the former underground fuel oil storage tanks located in the northwest corner of the facility (Figure 3)

The Permit requires an ICM to prevent uncontrolled migration of LNAPL on or in groundwater along the eastern boundary of the facility adjacent to the Kromma Kill; the Order (Appendix C) also requires implementation of remedy to address LNAPL recovery under Tier II of the Prioritization Schedule. Pursuant to these requirements, a passive interceptor trench was designed to collect LNAPL along the eastern boundary of the site. AL Tech currently anticipates construction of the trench in the fall of 1999.

Currently, monitoring of LNAPL at the facility includes monthly measurements at select site wells. The scope of work presented in Section 3.2 establishes a periodic system to monitor current conditions (i.e., baseline conditions) through the completion of the Fuel Oil ICM, and the effectiveness of the ICM subsequent to its installation.

The CMS will also include an evaluation of the Fuel Oil ICM design and establish cleanup goals.

#### 1.2.2 Groundwater ICM

Impact to groundwater quality was observed at MW-4/MW-4B, on November 14, 1994, during implementation of the Phase I RFI. The source of the impact was identified as historical releases from the pickling operations. Consistent with the requirements of the Permit, the NYSDEC was notified and AL Tech and the NYSDEC jointly formulated an ICM to address groundwater in this area. On November 25, 1994, the NYSDEC signed an Interim Remedial Order on Consent to address these conditions (NYSDEC No. R4-1781-94-11). Appendix C of the Order also requires implementation of a remedy to address conditions in this area under Tier I of the Prioritization Schedule.

The ICM, which initially consisted of groundwater recovery wells in the overburden, went on line on December 2, 1994. A total of five overburden recovery wells were ultimately installed between November 1994 and mid-1995 (RW-5 through RW-9). Due to low recovery volumes or problems with the pumps (due to the groundwater chemistry in this area) only RW-6 is used for recovery in the overburden. Two bedrock recovery wells were installed in 1995 (RW-1B and RW-2B). RW-1B was never used for recovery due to a low recovery volume and absence of impact to bedrock groundwater quality at this location. RW-2B was used briefly, but groundwater recovery in the bedrock is now exclusively from MW-4B.

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Presently, the system recovers approximately 4.5 gallons per minute (gpm) from each location (MW-4B and RW-6) or approximately 13,000 gallons per day (gpd). The recovered water is conveyed to a temporary holding tank and subsequently to the facility's wastewater treatment plant (WWTP) before being discharged through the permitted outfall (#009) (Figure 2).

Data for groundwater samples collected in this area from 1994 through 1997 strongly suggest that water quality has improved significantly and that the ICM has been effective. Exceedances of potentially applicable criteria for groundwater, however, continue to occur. To date, there has been no systematic monitoring of groundwater quality in the area. The scope of work presented in Section 3.3 establishes a periodic system to monitor water quality and the effectiveness of the ICM.

The CMS will include an evaluation of the ICM and establish cleanup goals. Based on the CMS, subsequent modifications to the system may be instituted.

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## 2.0 Site Groundwater Conditions

The Main Plant Area is underlain by two water-bearing zones: overburden and bedrock. General discussions on groundwater flow in these zones are presented in Section 2.1. A summary of the groundwater quality data for the Main Plant Area is presented in Section 2.2.

### 2.1 **Groundwater Flow**

The first continuous water-bearing zone underlying the plant is typically within the alluvium at a depth of 10 to 14 feet below ground surface (ft-bgs). This saturated interval generally extends into the bedrock, although in some locations the clay till unit overlying the bedrock may act as a semi-confining layer.

Depth to water level measurements and groundwater elevations for the period of December 1994 through September 1997 are presented in Table 1. The groundwater elevations for September 22, 1997 were used to generate potentiometric surface maps for the overburden and bedrock in the Main Plant Area. The contour maps have been used to evaluate the direction of groundwater flow and hydraulic gradients for these zones.

#### 2.1.1 Overburden Groundwater Flow

A potentiometric surface map of the overburden for the Main Plant Area for September 22, 1997 is presented in Figure 4. This map indicates conditions similar to that observed during the Phase I RFI.

Within the Main Plant Area, the groundwater flow direction is to the east. Due to the absence of a significant thickness of overburden in the western portion of the plant, the apparently steep hydraulic gradient is not considered significant to overall ground water flow and is not considered further. Based on the apparently significant difference in gradients in the south-southeastern and central portions of the plant, average hydraulic gradients were calculated for both areas. The average hydraulic gradient for the southern portion of the site is estimated to be 0.036 (foot per foot); the average hydraulic gradient in the northern and central areas is estimated to be 0.0060.

The gradient in the north and central portions of the Main Plant Area (i.e., in the vicinity of the Pickle House and to the north) is flat. This is believed to reflect the presence of alluvium in this area and the historical pathway of the Kromma Kill (i.e., this portion of the plant coincides with a historical and current zone of groundwater discharge).

During the Phase I RFI, *in situ* hydraulic conductivity tests (i.e., rising- and falling-head slug tests) were performed to determine the hydraulic conductivity of the overburden materials throughout the Main Plant Area. The calculated conductivity values ranged from  $1.4 \times 10^{-5}$  to  $2.8 \times 10^{-3}$  feet per second (ft/sec) with an average hydraulic conductivity of  $2.1 \times 10^{-4}$  ft/sec.

The following formula was used to estimate the groundwater seepage velocity in the overburden:

$$V = Ki/n$$

where,

- V = seepage velocity:
  - $V_s$  is the velocity for the southern portion of the plant
  - $V_c$  is the velocity for the northern and central portions of the plant
- K = hydraulic permeability ( $2.1 \times 10^{-4}$  ft/sec)
- i = hydraulic gradient:
  - $i_s$  is the gradient for the southern portion of the plant (0.036)
  - $i_c$  is the gradient for the northern and central portions of the plant (0.0016)
- $n_e$  = effective porosity (30 to 40 percent was assumed based on the sandy nature of the overburden)

The estimated seepage velocity of groundwater flow in the overburden underlying the southern portion of the Main Plant Area is 596 to 794 feet per year (ft/yr). The estimated (static) groundwater flow velocity in the northern and central portions of the Main Plant Area is 99 to 132 ft/yr (this calculation does not take into consideration the influence of groundwater recovery in the Pickle House Area).

### 2.1.2 Bedrock Groundwater Flow

A potentiometric surface map for bedrock underlying the Main Plant Area for September 22, 1997 is presented in Figure 5. This map indicates conditions similar to that observed during the Phase I RFI.

The shale bedrock underlying the site is generally believed to be unconfined, although the presence of the clay till unit may cause confined conditions in some areas. The limited vertical gradient data available from the nested well pairs in the plant, however, also indicate a downward hydraulic gradient.

Within the Main Plant Area, the direction of groundwater flow is generally to the east. The average hydraulic gradient in bedrock is generally 0.02, based on the data for these well pairs: MW-1B and MW-2B, MW-9B and MW-6B, MW-22B (in the Waste Management Area; Figure 5) and MW-5B.

*In situ* hydraulic conductivity tests were also performed on the bedrock monitoring wells during the Phase I RFI. The average conductivities for the falling- and rising-head tests were  $1.03 \times 10^{-4}$  cm/sec and  $1.95 \times 10^{-4}$  cm/sec.

Bedrock porosity is believed to be secondary, i.e., along fractures and weathered bedding planes. Based on this type of porosity and the lack of other data on bedrock flow conditions, the bedrock porosity cannot be estimated. Consequently, an accurate estimate of the groundwater flow velocity cannot be calculated.

## 2.2 Groundwater Quality

Table 2 presents a summary of the groundwater quality data generated during implementation of the Phase I and Phase II RFIs and during the development and installation of the Groundwater ICM.<sup>1</sup>

The data have been compared with the following potentially applicable guidances.

- NYSDEC. 1992. "Contained-In Criteria for Environmental Media." Technical Administrative Guidance Memorandum (TAGM) 3028. Revised 1997.
- New York State. 1998. "Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. Division of Water, Technical and Operational Guidance Series (Water Quality Standards for Class GA Water). June.

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<sup>1</sup> Groundwater samples were collected from the site wells during the Phase I RFI, during the installation and development of the Groundwater ICM, and during the Phase II RFI. For a complete description of the monitoring locations and parameters, refer to Remcor 1995a and 1995b, and ESC 1995a, 1995b, 1998, and 1999a.



Exceedances of the TAGM 3028 action levels and Water Quality Standards (NYSWQS) in groundwater samples are shown in bold in Table 2.

Detailed discussions of the comparison findings were presented in the Phase I and Phase II RFI Reports (ESC 1995a and 1998).<sup>2</sup> Summary discussions are presented in Sections 2.2.1 through 2.2.5 for the following:

- target analyte list (TAL) Inorganics plus molybdenum
- miscellaneous parameters
- volatile organic compounds (VOCs)
- semi-volatile organic compounds (SVOCs)
- polychlorinated biphenyls (PCBs)

The comparisons were subsequently used by AL Tech to design appropriate groundwater monitoring plans for the Main Plant Area (Section 3.0). The comparison presented below for metals is based on the evaluation of dissolved metals concentrations in groundwater samples, where available. The monitoring plans presented in Section 3.0 incorporate the results of this comparison and suggestions made by the NYSDEC based on the evaluation of total metals results (NYSDEC 1999a).

#### 2.2.1 TAL Inorganic Plus Molybdenum<sup>3</sup>

Several metals appear to be indicative of impact from general facility operations or from historical releases from the Pickle House. Based on the location of monitoring wells, these metals and their potential source(s) include:

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<sup>2</sup> These documents also compared the groundwater quality data with the U.S. EPA maximum contaminant levels (MCLs) for drinking water. Comparison with these criteria was not used in the development of the Main Plant Area Monitoring Program because groundwater in the vicinity of, and downgradient from, the site is not used for potable water supplies and many of the TAGM 3028 action levels and NYSWQS are similar to, or more stringent than, the MCLs.

<sup>3</sup> Where both total and dissolved sample aliquot data were available, the comparison was performed using the dissolved sample aliquot data. AL Tech believes that the comparison with the dissolved data is appropriate due to the high turbidities in many of the wells during purging and sample collection (i.e., greater than 50 nephelometric units). An effort will be made during implementation of the Main Plant Area Groundwater Monitoring Program to collect total sample aliquots with turbidities below 50 nephelometric units. As requested by the NYSDEC (1999a), the total aliquot results will be compared to the groundwater quality standard in the future.

<u>Metal</u>	<u>Potential Source</u>	
	<u>Facility Operations</u>	<u>Historical Pickle House Operations</u>
aluminum	X	X
beryllium	-	X
cadmium	-	X
chromium	X	X
molybdenum	X	-
nickel	X	X
zinc	-	X

Based on these findings, sampling and analysis for these metals will be performed, as appropriate, as part of the Site-Wide Groundwater Monitoring Plan (Section 3.1) and the Groundwater ICM Monitoring Plan (Section 3.3). Although cadmium has not been identified as being indicative of impact from facility operations, it was detected in one surface soil sample collected from Area of Concern (AOC) 8, EAF Baghouse, at a concentration above the toxicity characteristic (TC) limit. As requested by the NYSDEC (1999), analysis for cadmium will be performed for samples collected from MW-11 as part of the Site-Wide Groundwater Monitoring Plan to evaluate potential impact from the soil in this area on downgradient groundwater quality.

Antimony was detected in groundwater samples collected from some of the site wells at concentrations above the TAGM 3028 action level and NYSWQS of 3  $\mu\text{g/l}$ . The exceedances appear to be more a function of the detection limits for the sample aliquots (which vary between approximately 1 and 27  $\mu\text{g/l}$ ) than indicative of an area of impact or a source area. AL Tech does not believe that subsequent monitoring for antimony is an effective way to evaluate potential impact from facility operations, and that future evaluation of groundwater quality should rely on those metals that more clearly indicate impact from facility operations. However, at the request of the NYSDEC (1999a) analysis for antimony will be performed for samples collected from select site wells as part of the Site-Wide Groundwater Monitoring Plan (Section 3.1). Arsenic was only present at concentrations above the potentially applicable criteria in the groundwater samples collected from MW-4B and MW-D1 during the Phase I RFI, and the groundwater samples collected from MW-D1 and MW-D2 during the Phase II RFI. These findings suggest that arsenic has not had a significant impact to groundwater

quality and that further monitoring is not necessary. As requested by the NYSDEC (1999), however, analysis for arsenic will be performed for samples collected from MW-D2 as part of the Site-Wide Groundwater Monitoring Plan. Analysis will not be performed for samples collected from MW-4B or MW-D1, because:

- MW-4B indicated no impact from arsenic during the Phase II RFI, and is being addressed by the Groundwater ICM
- MW-D1 does not provide for the collection of samples representative of groundwater quality as it is screened across the water table and LNAPL has been observed at the water surface.

Barium has been detected in several site wells at concentrations above the potentially applicable criteria. Whether barium is related to facility operations has not yet been determined. Additional sampling and analysis for barium is included in the Site-Wide Groundwater Monitoring Plan to aid in this determination (Section 3.1).

Lead was present at concentrations above the potentially applicable criteria (15 micrograms per liter [ $\mu\text{g/l}$ ]) only in groundwater samples collected from:

- MW-4B, AP-1, and AP-2 during the Phase I RFI, and from RW-5, RW-6, and RW-7 during development of the Groundwater ICM for the Pickle House in 1994 (reflecting the effectiveness of the subsequently implemented ICM)
- MW-3B during in the Phase II RFI (the total aliquot concentration was  $3.3 \mu\text{g/l}$  and the dissolved aliquot concentration was  $30 \mu\text{g/l}$ ).

These findings suggest that lead has not had a significant impact to groundwater quality at the site and that further monitoring for lead is not necessary. As requested by the NYSDEC (1999a and 1999b), however, analysis for lead will be performed on groundwater samples collected from select site wells as part of the Site-Wide Groundwater Monitoring Plan (Section 3.1):

- MW-5/MW-5B, to measure impact to groundwater quality from lead in soil samples collected from this area at concentrations above the TC limit (ESC 1995a and 1998)
- MW-6/MW-6B (and MW-5/MW-5B) to ensure that there is no downgradient impact to groundwater quality from lead in soil samples collected from AOC 1, Transformer T14, at concentrations above the TC limit (ESC 1998)

- MW-11 to ensure that there is no downgradient impact to groundwater quality from lead in soil samples collected from AOC 8, EAF Baghouse, at concentrations above the TC limit (ESC 1998)
- MW-20, MW-21, and MW-22<sup>4</sup> to evaluate groundwater quality at these new locations

Sampling and analysis will be performed for these metals on a limited basis as requested by the NYSDEC (1999a): copper, magnesium, manganese, and mercury.

- Copper was present at concentrations above the potentially applicable criterion in groundwater samples collected from the Pickle House area: MW-4B, AP-1, AP-2, RW-5, and RW-6.
- Magnesium was present at concentrations above the potentially applicable criterion in groundwater samples collected from all of the background wells during the Phase I RFI and from two of the background wells during the Phase II RFI. The presence of magnesium at concentrations above the criterion in many of the other groundwater samples collected from the site could be indicative of impact from facility operations, particularly the Pickle House operations, but may also be indicative of regional conditions.
- Manganese was present above the potentially applicable criterion in groundwater samples collected during the Phase I and Phase II RFIs from most of the site wells. Manganese was present in samples collected from the background wells (MW-7B, MW-8B, and MW-9B). The presence of manganese is likely indicative of some impact from the facility operations. However, the literature indicates that manganese is often present in the overburden and bedrock in this region at concentrations above the NYSWQS (Arrow 1949 and Simpson 1952).
- Mercury, which was present at concentrations above the potentially applicable criteria in groundwater samples collected from these locations:
  - AP-2 during the Phase I RFI
  - RW-5 and RW-6
  - MW-6 during the Phase II RFI (only a total aliquot was analyzed)

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<sup>4</sup> Installation of MW-20, MW-21, and MW-22 has been proposed to the NYSDEC (ESC 1999b); additional information is presented in Section 3.0, below.

Further evaluation will not be performed for the following metals or cyanide on the basis indicated below.

- Calcium, cobalt, and potassium, for which there are no potentially applicable criteria.
- Silver, which was not present at concentrations above a potentially applicable criterion in any samples.
- Cyanide and vanadium, which were only present at concentrations above the potentially applicable criteria in groundwater samples collected during the Phase I RFI, or development of the Groundwater ICM for the Pickle House in 1994, from these locations:
  - cyanide - AP-1, AP-2, RW-6, and RW-7
  - vanadium - AP-2

Subsequent data for these wells indicate no exceedances (attesting to the effectiveness of the ICM).

- Iron was present above the potentially applicable criterion in groundwater samples collected during the Phase I and Phase II RFIs from most of the site wells. The presence of iron is likely indicative of some impact from the facility operations. However, the literature indicates that iron is often present in the overburden and bedrock in this region at concentrations above the NYSWQS (Arrow 1949 and Simpson 1952).
- Selenium and thallium, which were only present at concentrations above the potentially applicable criteria in groundwater samples collected during the Phase II RFI from these locations:
  - selenium – MW-14 (only a total aliquot was analyzed)
  - thallium – OW-21 (only a total aliquot was analyzed)

In addition, no downgradient impact was observed.

- Sodium, which although present at concentrations above the potentially applicable criterion in many of the groundwater samples collected from the site (including the background wells), it is uncertain whether its presence is representative of background groundwater quality or site operations.
- Mercury, which was present at concentrations above the potentially applicable criteria in groundwater samples collected from these locations:
  - AP-2 during the Phase I RFI
  - RW-5 and RW-6
  - MW-6 during the Phase II RFI (only a total aliquot was analyzed)

- Manganese was present above the potentially applicable criterion in groundwater samples collected during the Phase I and Phase II RFIs from most of the site wells. Manganese was present in samples collected from the background wells (MW-7B, MW-8B, and MW-9B). The presence of manganese is likely indicative of some impact from the facility operations. However, the literature indicates that manganese is often present in the overburden and bedrock in this region at concentrations above the NYSWQS (Arrow 1949 and Simpson 1952).

### 2.2.2 Miscellaneous Parameters

During implementation of the Phase I and Phase II RFIs, several miscellaneous parameters were present in groundwater samples collected from the site at concentrations above the potentially applicable criteria and are believed to be indicative of impact from facility operations. These parameters include:

- ammonia
- chloride
- fluoride
- nitrate
- sulfate
- total petroleum hydrocarbons (TPH)
- pH

#### 2.2.2.1 Ammonia

Ammonia was detected at concentrations above the potentially applicable criteria of 3 milligrams per liter (mg/l) in groundwater samples collected from several wells.

<u>Well</u>	<u>Interval</u>	<u>Ammonia Concentrations (mg/l)</u>				<u>Post-Phase II RFI (a)</u>
		<u>Phase I RFI</u>	<u>Phase II RFI</u>			
			<u>Round 1</u>	<u>Round 2</u>		
MW-1	overburden	0.10 U	2.1	NA (b)	NA	
MW-4B	bedrock	12	4.2	2.1	0.1 U	
MW-9B	bedrock	2.2	1.1	NA	NA	
MW-19B	bedrock	NA	NA	3.6	1.3	
AP-1	overburden	15	2.6	NA	NA	
AP-2	overburden	16	1.6	0.93	NA	
MW-D1	overburden	2.7	1.8	3.2	NA	
<u>MW-D2</u>	<u>overburden</u>	1.5	13	NA	NA	

a/ ESC 1999b.

b/ NA = not analyzed.

Further monitoring for ammonia will be performed as requested by NYSDEC (1999a), for the Site-Wide and Groundwater ICM Monitoring Plans (Section 3.1 and 3.3), although:

- the source of the ammonia (except at MW-1) is believed to be historical releases from the leachate conveyance system and is not a continuing source (Figure 3)
- the source of ammonia at MW-1 is unknown and does not appear to be significant based on the low levels reported
- the concentrations, which have decreased over time, suggest that the Groundwater ICM for the Pickle House is effectively addressing the presence of ammonia
- offsite impact is no longer occurring at concentrations above the criterion

#### 2.2.2.2 Chloride, Fluoride, Nitrate, and Sulfate

Chloride, fluoride, nitrate, and sulfate were intermittently present at concentrations above the potentially applicable criteria (typically on an individual basis) in groundwater samples collected from various locations throughout the site. One or more of these parameters was generally present at concentrations above the potentially applicable criteria in groundwater samples collected from the area impacted by historical releases from the Pickle House, including:

- MW-4
- MW-4B
- MW-19
- MW-19B
- AP-1
- AP-2
- RW-2B
- RW-5
- RW-6
- RW-7
- RW-8

Based on these findings, further analysis for these parameters will be performed as part of the Groundwater ICM Monitoring Plan (Section 3.3).

### 2.2.2.3 Total Petroleum Hydrocarbons

TPH was present in few groundwater samples collected from the site:

Well	TPH Concentrations (mg/l)			
	Phase I RFI	Phase II RFI		Post-Phase II RFI (a)
		Round 1	Round 2	
MW-4	0.33 J	R (b)	0.1 UJ	NA (c)
MW-4B	0.5 J	1 UJ	0.1 UJ	5 U
MW-10B	0.31 J	1 U	NA	NA
AP-1	3.3	R	NA	NA
AP-2	13	1 U	0.49 J	NA
MW-B	12	1 U	0.12 J	NA
MW-C	11	1 U	NA	NA
MW-D1	500	NA	NA	NA
MW-D2	250	NA	NA	NA
TF-1	220	1 U	NA	NA
PH-1	0.5 J	1 U	NA	NA
H-4S	0.11 J	NA	NA	NA
RW-2B	NA	NA	0.2 J	NA
RW-6	NA	NA	0.21 J	NA

a/ ESC 1999b.

b/ R = data rejected.

c/ NA = not analyzed.

All of these wells are located in areas potentially impacted by release of oil from historical underground supply lines (Figure 3), except TF-1 and H-4S. The presence of TPH at these locations is likely related to their locations near other potential sources:

- TF-1 is located immediately adjacent to the former underground fuel oil storage tanks
- H-4S is located near the South Lagoon which was historically used to handle oily facility wastewaters and is located in the Scrap Metal Storage Area, where limited areas of oil have been identified in the shallow subsurface

Although there are no established criteria under TAGM 3028 or NYSWQS for TPH, further monitoring for TPH will be performed as part of the Fuel Oil ICM Monitoring Plan as a gross indicator of impact (refer also to Sections 2.2.3 and 2.2.4).



#### 2.2.2.4 pH

The acceptable range of pH in groundwater, established under the NYSWQS, is 6.5 to 8.5 standard units (s.u.). A pH of greater than 8.5 s.u. was reported in one or more groundwater samples collected from MW-1, MW-2B, MW-3B, and MW-5B. At each of these locations, the pH in groundwater increased between the Phase I RFI and the Phase II RFI. These wells are not located within areas of significant impact and the elevated pH is believed to be indicative of impact from well construction (cement), the nature of the bedrock (shale) (except at MW-1), or both.

A pH of less than 6.5 s.u. was reported in one or more groundwater samples collected from wells located in the area known to be impacted by historical releases from the Pickle House:

- MW-4
- MW-4B
- MW-19B
- AP-1
- AP-2
- MW-D2
- RW-2B
- RW-4
- RW-5
- RW-6
- RW-7
- RW-8

Lower pHs were also reported for the sample collected from MW-6B, PH-1, and H-4D during the Phase I RFI. The pHs recorded were 6.05, 6.19, and 6.38 s.u. Because these readings are near the bottom of the acceptable range (6.5 s.u.) and since they were measured in the field and not confirmed at the laboratory, it is likely that these “low” pH values are not indicative of any impact to groundwater quality at these locations. In addition, none of these wells have indicated impact from other constituents.

Laboratory analysis for pH will be included as part of the Site-Wide Groundwater Monitoring Plan (Section 3.1) as an indicator of general groundwater chemistry and as part of the Groundwater ICM Monitoring Plan (Section 3.3) to evaluate the effectiveness of the ICM.

### 2.2.3 Volatile Organic Compounds

Five target compound list (TCL) VOCs were reported in groundwater samples collected during the Phase I and Phase II RFIs at concentrations above the TAGM 3028 action levels or NYSWQS, or both. As shown in Table 2, these exceedances were limited to the following:

<u>Well</u>	<u>Sampling Event</u>	<u>Constituent</u>
MW-4	Phase I RFI	benzene
MW-5B	Phase I RFI	toluene
MW-7B	Phase I RFI	chloroform
MW-19	Phase II RFI (1) (a)	chloroform
AP-1/AP-2	Phase I RFI	xylenes
MW-D1	Phase I RFI	benzene
MW-D2	Phase I RFI	chloroethane
<u>H-4S</u>	<u>Phase I RFI</u>	benzene

a/ (1) = Round 1 of the Phase II RFI.

Analysis for TCL VOCs will not be performed based on:

- the absence of consistent detection or exceedances of the potentially applicable criteria, reflecting that VOCs are not persistent or wide spread, nor indicators of potential impact to groundwater from facility operations
- the exceedances were typically only slightly above the potentially applicable criteria, because the values were generally reported as estimated concentrations (i.e., below the method detection limits) thus reflecting some uncertainty in their quantification and actual exceedance of the criteria

Specific examples are summarized as follows.

- Benzene was detected at concentrations above a potentially applicable criterion (the TAGM 3028 action level is 0.7  $\mu\text{g/l}$  and the NYSWQS is 1  $\mu\text{g/l}$ ) in only two groundwater samples:
  - MW-D1 (Phase I RFI) at an estimated concentration of 1  $\mu\text{g/l}$
  - H-4S (Phase I RFI) at an estimated concentration of 0.9  $\mu\text{g/l}$
- Toluene was detected at a concentration above the potentially applicable criterion (the TAGM 3028 action level and NYSWQS is 5  $\mu\text{g/l}$ ) in only one groundwater sample: MW-5B (Phase I RFI) at an estimated concentration of 5.2  $\mu\text{g/l}$

- Chloroform was detected at concentrations above the potentially applicable criterion (the TAGM 3028 action level and NYSWQS is 7  $\mu\text{g/l}$ ) in only two groundwater samples:
  - MW-7B (Phase I RFI) at a concentration of 14  $\mu\text{g/l}$
  - MW-19 (Phase II RFI) at an estimated concentration of 19  $\mu\text{g/l}$
- Xylenes were detected at concentrations above the potentially applicable criterion (the TAGM 3028 action level and NYSWQS is 5  $\mu\text{g/l}$ ) in only two groundwater samples:
  - AP-1 (Phase I RFI) at an estimated concentration of 8  $\mu\text{g/l}$
  - AP-2 (Phase I RFI) at an estimated concentration of 6  $\mu\text{g/l}$
- Chloroethane was detected at a concentration above the potentially applicable criterion (the TAGM 3028 action level and NYSWQS is 5  $\mu\text{g/l}$ ) in only one groundwater sample: MW-D2 (Phase I RFI) at an estimated concentration of 6  $\mu\text{g/l}$

VOC tentatively identified compounds (TICs) were present in a limited number of groundwater samples collected from the site (Table 2):

<u>Well</u>	<u>Total VOC TIC Concentrations (<math>\mu\text{g/l}</math>)</u>		
	<u>Phase I RFI</u>	<u>Round 1</u>	<u>Round 2</u>
MW-4	0 (a)	5	0
MW-4B	15	0	0
MW-14	NA (b)	NA	25
MW-17	NA	NA	53
AP-1	13	57	NA
AP-2	9	15	10.6
MW-C	35	66	NA
MW-D1	210	182	834
MW-D2	20	43	74
PH-1	146	40	NA
H-4D	8	NA	NA
RW-1B	NA	83	0
RW-2B	NA	133	0
RW-6	NA	5	0

<u>Well</u>	<u>Total VOC TIC Concentrations (<math>\mu\text{g/l}</math>)</u>		
	<u>Phase I RFI</u>	<u>Phase II RFI</u>	
		<u>Round 1</u>	<u>Round 2</u>
RW-7	NA	16	NA
RW-8	NA	16	0

a/ "0" indicates no TICs were identified.

b/ NA indicates not analyzed.

Further monitoring for VOC TICs will not be performed based on the following:

- there are no criteria established for evaluating VOC TICs under TAGM 3028 or NYSWQS
- a majority of these wells are located within or hydraulically upgradient of the capture zone of the Groundwater ICM, therefore, perceived "impact" is already being addressed
- the highest total VOC TIC concentrations were reported for samples collected from MW-D1; because LNAPL has been observed on the groundwater surface in this well, AL Tech believes that it is possible the data may be representative of the separate phase liquid rather than actual groundwater quality
- the total VOC TIC concentrations reported for MW-D2 (which is screened adjacent to, but lower the MW-D1) are significantly lower than those reported for MW-D1; because of its lower screened interval, the groundwater samples collected from MW-D2 are more representative of groundwater quality and, as such, reflect limited impact from VOCs

#### 2.2.4 Semi-Volatile Organic Compounds

TCL SVOCs were reported in groundwater samples collected during the Phase I and Phase II RFIs from five monitoring wells: AP-1, MW-B, MW-C, MW-D1, and MW-D2. LNAPL has been observed in each of these wells, excluding AP-1. Nine TCL SVOCs were present at concentrations above the TAGM 3028 action levels, or NYSWQS, or both. As shown in Table 2, these exceedances were limited to the following:

<u>Well</u>	<u>Sampling Event</u>	<u>Constituent</u>
AP-1	Phase I RFI	naphthalene
MW-D1	Phase I RFI	acenaphthene
		fluorene
		2-methylnaphthalene
		phenanthrene
		pyrene
		2,4,5-trichlorophenol
	Phase II RFI (2) (a)	acenaphthene
		anthracene
		fluorene
		n-nitrosodiphenylamine
		phenanthrene
		pyrene

a/ (2) = Round 2 of the Phase II RFI.

Further analysis of TCL SVOCs will only be performed for samples collected from select site wells, based on the following:

- the absence of consistent detection the absence of consistent detection or exceedances of the potentially applicable criteria, reflecting that SVOCs are not persistent or wide spread, nor indicators of potential impact to groundwater from facility operations
- the presence of exceedances (except for naphthalene at AP-1) only in samples collected from MW-D1; because LNAPL has been observed on the groundwater surface in this well, AL Tech believes that it is possible the data may be representative of the separate-phase liquid rather than actual groundwater quality

Specific examples are summarized as follows.

- Naphthalene was detected at a concentration above the potentially applicable criterion (the TAGM 3028 action level and NYSWQS of 10  $\mu\text{g/l}$ ) in only one groundwater sample: AP-1 (Phase I RFI) at 12  $\mu\text{g/l}$ . Naphthalene was also detected in the background samples collected during the Phase I RFI from MW-7B (4  $\mu\text{g/l}$ ) and MW-9B (5  $\mu\text{g/l}$ ).

- n-Nitrosodiphenylamine and 2,4,5-trichlorophenol were detected at concentrations above a potentially applicable criteria only in groundwater samples collected from MW-D1:
  - n-nitrosodiphenylamine at 2,300  $\mu\text{g/l}$  (Phase II RFI, Round 2); the TAGM 3028 action level and the NYSWQS is 50  $\mu\text{g/l}$
  - 2,4,5-trichlorophenol at 270  $\mu\text{g/l}$  (Phase I RFI) at 270  $\mu\text{g/l}$ ; the TAGM 3028 action level is 3  $\mu\text{g/l}$  (for total phenolic compounds) and the NYSWQS is 50  $\mu\text{g/l}$

The source of these compounds is not known.

- The remaining SVOCs were only present at concentrations above the potentially applicable criteria in the groundwater samples collected from MW-D1. As discussed previously, the presence of these compounds is believed to be related to the intermittent presence of LNAPL in this well and is, therefore, not representative of groundwater quality. This conclusion is supported by:
  - the detection of only three of these constituents (acenaphthene, fluorene, and pyrene) in the sample collected from MW-D2; the reported concentrations were all below 10  $\mu\text{g/l}$  (the TAGM 3028 action level is 20  $\mu\text{g/l}$  and the NYSWQS is 50  $\mu\text{g/l}$ )
  - the detection of PAHs, also at concentrations below the potentially applicable criteria in the MW-B/MW-C wells (screened similar to MW-D1 and MW-D2); LNAPL is also intermittently detected in MW-B and MW-C

As shown in Table 2, total SVOC TIC concentrations of up to 104  $\mu\text{g/l}$  and 86  $\mu\text{g/l}$  were reported in the background groundwater samples collected during the Phase I and Phase II RFIs. Total SVOC TIC concentrations that exceeded 100  $\mu\text{g/l}$  were reported in one or more samples collected from most of the site wells. Only limited monitoring for SVOC TICs will be performed based on the following:

- there are no criteria established for evaluating SVOC TICs under TAGM 3028 or NYSWQS
- the highest concentrations and most consistent detections were reported in groundwater samples collected in the area addressed by the Groundwater ICM and in the area to be addressed by the Fuel Oil ICM
- potential impact to groundwater quality will be evaluated through analysis for (extractable) TPH as part of the Fuel Oil ICM Monitoring Plan

As requested by NYSDEC (1999a), analysis for TCL SVOCs (including TICs) will be performed on samples collected from MW-1, MW-15, MW-16, MW-18, MW-19/MW-19B, MW-20, MW-21, MW-22, MW-D2, and OW-22.

#### 2.2.5 Polychlorinated Biphenyls

PCBs were detected in groundwater samples collected from MW-1B and H-4S during the Phase I RFI. Aroclor 1254 was detected in the sample collected from MW-1B at a concentration of 1.1  $\mu\text{g/l}$ ; Aroclor 1260 was detected in the sample collected from H-4S at 21  $\mu\text{g/l}$ . The TAGM 3028 action level and NYSWQS for PCBs is 0.1  $\mu\text{g/l}$ . The presence of PCBs in these samples was believed by AL Tech to reflect the presence of suspended solids in the sample aliquots and may not be representative of actual groundwater quality.

During the Phase II RFI, groundwater samples were collected from these wells and other nearby wells (MW-1, MW-2, MW-2B, and H-4S) for analysis of PCBs. The wells were purged in a manner (withdrawal rate) that limited potential interference from suspended solids. PCBs were not detected in the samples at a detection limit of 1.0  $\mu\text{g/l}$ . As indicated by the NYSDEC (1999), the detection limits reported for these samples were above the potentially applicable criteria. The reported detection limits were consistent with the analytical protocols used (U.S. EPA Contract Laboratory Program). Additional samples will be collected from select locations as part of the initial Site-Wide Groundwater Monitoring Plan (Section 3.1) using U.S. EPA SW-846 protocols.<sup>5</sup> Barring matrix interference in the sample aliquots, a method detection limit of 0.1  $\mu\text{g/l}$  should be obtainable.

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<sup>5</sup> U.S. Environmental Protection Agency. 1987. "Test Methods for Evaluating Solid Wastes, Physical Chemical Methods." SW-846, 3rd Edition, with updates.

### **3.0 Main Plant Area Groundwater Monitoring Program**

The Main Plant Area Groundwater Monitoring Program includes three separate monitoring plans that are presented in the following sections:

- Section 3.1 – Site-Wide Monitoring Plan
- Section 3.2 – Fuel Oil ICM Monitoring Plan
- Section 3.3 – Groundwater ICM Monitoring Plan

The Main Plant Area monitoring network currently includes 39 monitoring wells, 21 observation wells, 11 recovery wells, and 16 piezometers (Figure 2). Some of these are to be abandoned. This and all subsequent abandonment activities will be performed consistent with NYSDEC (1996) and with the approval of NYSDEC. Three new overburden monitoring wells (MW-20, MW-21 and MW-22) and one new overburden observation well (OW-22) are to be installed (ESC 1999b). The resulting network (shown in Figure 6) will be used to monitor groundwater levels and water quality in the Main Plant Area as part of one or more of the monitoring plans (Table 3).

Closure of SWMU 7, the South Lagoon, is required under the Order (Appendix C, Tier II). Wells H-4S and H-4D, located immediately southwest of the SWMU, will be used for water-level monitoring and the collection of groundwater samples until the closure activities are initiated. These wells will then be abandoned. Wells MW-2 and MW-2B will, subsequently, be used to monitor water levels and groundwater quality in both the overburden and bedrock in this area. The installation and monitoring of additional wells in this area may be required if PCBs are detected in soil during closure of the South Lagoon at concentrations indicative of potential impact to groundwater quality.

#### **3.1 Site-Wide Groundwater Monitoring Plan**

The purpose of the Site-Wide Groundwater Monitoring Plan is to evaluate potential changes in general groundwater quality (particularly at the downgradient boundary of the site) that may require future corrective measures. The site-wide plan also incorporates an evaluation of surface water quality in the Kromma Kill. The plan



will be implemented on a quarterly basis for the first year and, thereafter, on a semi-annual basis. The findings will be presented in the semi-annual and annual reports for the Main Plant Area.

### 3.1.1 Monitoring Network

The wells to be included in the initial Site-Wide Groundwater Monitoring Plan are identified in Table 3. These locations were selected to:

- provide sufficient areal coverage of the site, particularly along the downgradient boundary (i.e., near Lincoln Avenue)
- provide sufficient vertical coverage (e.g., overburden and bedrock)
- provide data for locations within and downgradient of known or suspected areas of impact

The water quality monitoring network will consist of:

- background locations:
  - MW-7B
  - MW-8B
- perimeter locations:
  - MW-1/MW-1B
  - MW-2/MW-2B
  - MW-3/MW-3B
  - MW-4
  - MW-5/MW-5B
  - MW-6/MW-6B
  - MW-15
  - MW-16
  - MW-17
  - H-4S/H-4D
  - RW-2B
  - OW-16
  - OW-22
- offsite locations
  - MW-18
  - MW-19/MW-19B
- interior locations
  - MW-11
  - MW-14
  - MW-20
  - MW-21
  - MW-22
  - MW-D2
  - TF-1
  - PZ-16

Wells MW-20, MW-21, and MW-22 (ESC 1999b) will be installed to provide locations for monitoring conditions in the central portions of the site, and as potentially impacted from AOC 8 and Transformer T14 (AOC 1).

All site wells and piezometers, except MW-4B and RW-6 that cannot be accessed, will be used to evaluate groundwater flow conditions in the overburden and bedrock.

Surface water samples will be collected from two locations in the Kromma Kill (Figure 6). PSW-1 is located upstream of the Main Plant Area, east of Spring Street Road. PSW-2 is located near MW-6/MW-6B and upstream of the facility's permitted outfall.

### 3.1.2 Analytical Program

The sample locations and analytical program for the Site-Wide Groundwater Monitoring Plan are summarized in Table 4. Except as noted and discussed subsequently, all samples will be analyzed for the following parameters:

- aluminum
- antimony<sup>6</sup>
- barium<sup>7</sup>
- chromium
- molybdenum
- nickel
- pH

Field measurement of pH, specific conductance, dissolved oxygen, turbidity, and temperature will also be performed for all samples.

Additional parameters for which analysis will be performed for samples from select locations include:

- arsenic for samples collected from MW-D2, PSW-1, and PSW-2
- cadmium for samples collected from MW-11, PSW-1, and PSW-2

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<sup>6</sup> At a minimum analysis for antimony will be performed during the first year of the sampling program.

<sup>7</sup> Analysis for barium may be suspended, if its presence is determined not to be related to facility operations.

- lead for samples collected from MW-5/MW-5B, MW-6/MW-6B, MW-11, MW-20, MW-21, MW-22, PSW-1, and PSW-2
- ammonia for groundwater samples collected from MW-1, MW-19B, MW-D2, RW-2B, OW-14, OW-22, and PZ-16
- TCL SVOCs and TICs for groundwater samples collected from MW-1, MW-15, and MW-16

Groundwater samples will be collected for analysis of PCBs from MW-1/MW-1B, MW-2/MW-2B, MW-14, H-4S/H-4D (located near the South Lagoon) and two of the newly installed wells (MW-20; and MW-22), during the first year of the sampling . If these data indicate the absence of PCBs, AL Tech will petition the NYSDEC to eliminate further sampling and analysis for this parameter. If PCBs are present in one or more of the samples, the need for further action will be re-evaluated.

### **3.2 Fuel Oil ICM Evaluation**

The purpose of the Fuel Oil ICM Monitoring Plan is to evaluate the effectiveness of the ICM following its construction. Before the installation of the recovery trench, one round of sampling will be performed to establish baseline conditions. For one year after installation of the trench, the monitoring plan will be implemented on a quarterly basis and the findings presented in the semi-annual and annual reports for the Main Plant Area. Thereafter, sampling and analysis will be implemented on a semi-annual basis and the findings presented in semi-annual and annual reports for the Main Plant Area.

#### **3.2.1 Monitoring Network**

The wells to be included in the monitoring plan are identified in Table 3. These locations were selected to provide:

- information at the groundwater surface to identify the presence of separate-phase liquid (i.e., LNAPL)
- information parallel to the trench
- information within known or suspected areas of impact

The water quality monitoring network will consist of:

- background locations:
  - MW-7B
  - MW-8B
- perimeter locations:
  - MW-4
  - MW-5/MW-5B
  - MW-6/MW-6B
  - MW-12
  - MW-15
  - MW-16
  - MW-17
  - RW-2B
  - OW-16
- offsite location:
  - MW-18
  - MW-19/MW-19B
- interior locations:
  - MW-20
  - MW-21
  - MW-22
  - MW-D2
  - OW-22
  - PZ-16

Wells MW-20 and MW-21 were proposed for installation, adjacent to OW-1 and OW-4, to provide locations for monitoring the potential impact from fuel oil in the central portion of the site (ESC 1999b). These wells will be screened below the seasonal low water table so samples representative of groundwater quality can be obtained.

All of the installations identified for evaluation of groundwater quality will also be used to evaluate groundwater flow and the potential presence of LNAPL. Should LNAPL be observed at a location, it will only be used to evaluate groundwater quality as potentially impacted by inorganic parameters. Depth to water measurements and (potentially) LNAPL thickness will also be evaluated at these locations:

- MW-B
- MW-D1
- OW-1
- OW-2
- OW-3
- OW-4
- OW-11
- OW-13
- OW-17
- OW-18
- OW-19
- OW-22
- PZ-8

Monitoring of water and LNAPL levels at these locations will be performed on a monthly basis until one year after the completion of the fuel oil recovery trench. Thereafter, the monitoring of water and LNAPL levels will be performed on a quarterly basis. The results will be presented in the semi-annual and annual reports for the Main Plant Area.

Observation Well OW-22 was proposed for installation, between the anticipated location of the interceptor trench and the Kromma Kill (ESC 1999b). This well will be screened across the water table and used only for identifying the presence of LNAPL at the groundwater surface. The interceptor trench designed for the Fuel Oil ICM includes ports for the measurement of LNAPL. Following construction of the interceptor trench, monthly monitoring of LNAPL thickness via these ports will be implemented. The results will be included in the semi-annual and annual reports for the Main Plant Area.

### 3.2.2 Analytical Program

The sample locations and analytical program for the Fuel Oil ICM Monitoring Plan are summarized in Table 4. All samples will be analyzed for TPH, except those collected from the background wells. As discussed in Section 2.2.4, analysis for TCL SVOCs including TICs will be performed for groundwater samples collected from MW-18, MW-19/MW-19B, MW-20, MW-21, MW-22, OW-22, and MW-D2. Field measurement of pH, specific conductance, dissolved oxygen, turbidity, and temperature will also be performed for all samples.

### 3.3 **Groundwater ICM Monitoring Plan**

The purpose of the Groundwater ICM Monitoring Plan is to evaluate the effectiveness of the ICM. The plan initially will be implemented on a quarterly basis and the findings presented in a semi-annual and annual reports for the Main Plant Area. Semi-annual sampling and analysis will be implemented once groundwater quality has stabilized, or attained the cleanup goals defined in the CMS.

### 3.3.1 Monitoring Network

The wells to be included in the Groundwater ICM Monitoring Plan are identified in Table 3. These locations were selected to provide both sufficient areal and vertical coverage of the impacted area, background data from areas that are not impacted, and data for areas that may have limited impact.

The water quality monitoring network will consist of:

- background locations:
  - MW-7B
  - MW-8B
- Pickle House area locations:
  - MW-4
  - RW-7
  - RW-1B
  - OW-13
  - RW-2B
  - OW-14
  - RW-5
- offsite locations:
  - MW-19/MW-19B
- nearby locations:
  - MW-6/MW-6B
  - OW-16
  - MW-D2

These installations will also be used to evaluate groundwater flow in the overburden and bedrock. These other installations will be used only to evaluate groundwater flow conditions in the area:

- RW-8
- RW-9
- OW-11
- OW-15
- PZ-9
- PZ-10
- PZ-11
- PZ-12
- PZ-13

All of the installations identified for evaluation of groundwater quality and groundwater flow will also be used to evaluate groundwater flow and the potential presence of LNAPL on a monthly basis for one year and, thereafter, quarterly basis. The results will be presented in the semi-annual and annual report for the Main Plant Area.

### 3.3.2 Analytical Program

The sample locations and analytical program for the Groundwater ICM Monitoring Plan are summarized in Table 4. All samples will be analyzed for the following parameters:

- aluminum
- beryllium
- cadmium
- chromium
- nickel
- zinc
- ammonia
- pH
- chloride
- fluoride
- nitrate
- sulfate

Analysis for antimony, barium, copper, lead, magnesium, manganese, mercury, and molybdenum will be performed for groundwater samples collected during the first round of sampling for the Groundwater ICM Monitoring Plan. Thereafter, monitoring of these constituents will be performed on biennial basis. Analysis for arsenic will be performed for groundwater samples collected from RW-2B during the first round of sampling. Thereafter, monitoring for arsenic will be performed on a biennial basis. Field measurement of pH, specific conductance, dissolved oxygen, turbidity, and temperature will also be performed for all samples.

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#### **4.0 Field Procedures**

Field activities will be performed in accordance with the procedures outlined in the following sections:

- Section 4.1 addresses pre-sampling and miscellaneous field activities and procedures
- Section 4.2 addresses groundwater sampling procedures
- Section 4.3 addresses surface water sampling procedures
- Section 4.4 addresses the well and surface water records (event documentation)

All personnel performing sampling and associated activities shall be technical or professional staff that is trained in the implementation of the Main Plant Area Groundwater Quality Monitoring Program. A copy of the work plan shall be available to sampling personnel during sampling activities. As stated in the introduction of the plan, no modification of any part of the program shall be made without approval from the NYSDEC.

A site-specific health and safety plan (HASP), prepared in accordance with appropriate corporate policies by the selected contractor, is to be used for the sampling activities. It is anticipated that the field activities can be implemented in standard Level D personal protective equipment (PPE). In addition to the requirements of the HASP, clean disposable latex gloves will be worn during pre-sampling and sampling activities and new latex gloves will be worn for sampling at each monitoring well and surface water location.

#### **4.1 Procedures for Miscellaneous and Pre-Sampling Activities**

The protocols for miscellaneous field requirements and activities, to be performed or adhered to for each sampling event, are presented in the following sections.



#### 4.1.1 Field Logbooks

Bound, survey field logbooks will be used to record pertinent observations and information. Sufficient information is to be recorded such that the sampling events can be adequately reconstructed. This information will include, at a minimum, the following:

- field equipment used
- field measurements, including water levels, LNAPL thickness, and well depths
- sample equipment (e.g., pumps and tubing)
- measurement, purging, and sample collection times
- purge volumes
- visual observations (e.g., water color/odor)
- physical condition of wells
- physical description of surface water location
- purge/decontamination water handling
- sample identification numbers (including quality assurance/quality control samples)
- sample parameters
- sample collection time
- sample personnel
- weather conditions

All entries in the field notebooks will be made with indelible ink. If an incorrect entry is made, the information will be crossed out with a single strike mark and initialed.

#### 4.1.2 Equipment Selection, Calibration, and Maintenance

Field instruments will be used to measure pH, temperature, specific conductivity, turbidity, static water levels, LNAPL thickness, and total well depths. An equipment calibration and maintenance program will be implemented to ensure all field instruments are operating properly and that data produced from such instruments are accurate and reliable. Field instrument manuals describing calibration, maintenance, and field operating procedures will accompany the instruments in the field.

Groundwater temperature, pH, specific conductivity and turbidity will be measured using a Horiba U-10 water quality meter, or equivalent measuring devices. Temperature will be measured in degrees Celsius ( $^{\circ}\text{C}$ ), pH will be measured in standard units, specific conductivity will be measured in micro-ohms per centimeter, and turbidity will be measured in nephelometric units (NTUs). The temperature, pH, specific conductivity, and turbidity meter will be calibrated in accordance with the manufacturer's recommended procedures included with the meter. Factory-prepared solutions for pH, specific conductance, and turbidity will be used to calibrate the meter.

Static water levels and total well depths will be measured with an electronic water-level indicator capable of measurement to the nearest 0.01-foot. An oil/water interface probe will be used to determine the presence and measure the thickness of LNAPL in areas that are known or suspected to have separate-phase liquid at the water surface. The interface probe will also be capable of measurement to the nearest 0.01-foot. The indicators/probes will be submerged in tap water to ensure that the meters are responding to water before field use. The cables and reels will be inspected for kinks, twists, or damage that could influence measurements.

#### 4.1.3 Measuring Techniques

Static groundwater levels, LNAPL thickness, and total well depths will be measured using the water-level indicator or oil/water interface probe, as appropriate. The measurements will be made from the surveyed top-of-casing (typically the inside polyvinyl chloride [PVC] casing) to the nearest 0.01-foot. The measurements (and time of measurement) will be recorded in the field logbook and later transcribed to the well record sheet (Section 4.3). The water-level indicator and oil/water interface cables and

probes will be decontaminated with a distilled water wash before and after use in each well.

Stream depth will be measured with a folding rule, or equivalent measuring device, capable of measurement to the nearest 0.01 foot.

#### 4.1.4 Well Inspection and Maintenance

The wells will be inspected for corrosion, damage to the lock, positive drainage (damage to the concrete apron, if applicable) and general integrity each time samples are collected. Total well depths will be measured during each sampling event to determine the need for well redevelopment due to a build-up of silt. Any well which is in-filled with silt in excess of ten percent of the screened or open interval will be redeveloped before the next sampling round. Well numbers will be checked for legibility, and relabeled as necessary. Wells which are damaged beyond repair, or which become unusable for some other reason, will be replaced, or an alternate well will be designated. The physical condition of the well will be noted in the field logbook and later transcribed to the well record sheet (Appendix A) for that sampling round. If it becomes apparent that a well is not capable of providing representative samples, AL Tech will (in concurrence with the NYDEC) take appropriate action.

#### 4.1.5 Well Purging

All of the wells will be purged before sample collection. Static water levels and total well depth measurements will be used to calculate the water column in each well and determine the volume of water to be purged. Purging will be accomplished using submersible pumps (Grundfos or equivalent). *In situ* water quality parameters (pH, specific conductance, temperature, and turbidity) will be measured before and after purging. Purging will be considered complete when three volumes or more have been removed and measurements for two consecutive volumes have stabilized to within 10 percent. Wells evacuated to dryness before the removal of three well volumes will be considered purged.

The *in situ* values will be recorded, along with elapsed purge time, actual purge volume, recharge characteristics, sample time, depth to water and total depth

measurements, and related field observations, in the field logbook and on the well record sheets.

Plastic sheeting will be placed around all wells before initiating purging activities, to prevent the sampling equipment from contacting the ground surface.

Dedicated lengths of polyvinyl chloride or tygon tubing will be used for each well. Where possible, the tubing will be suspended in the wells for use during subsequent monitoring events. The submersible pumps will be decontaminated between sampling locations using the following procedures:

- when inorganic constituents are being analyzed:
  - 1) wash pump with non-phosphate detergent
  - 2) rinse pump with tap water
  - 3) rinse pump with dilute (0.1N) nitric acid
  - 4) rinse pump with distilled water
  
- when inorganic constituents are being analyzed:
  - 1) wash pump with non-phosphate detergent
  - 2) rinse pump with tap water
  - 3) rinse pump with pesticide grade hexane
  - 4) rinse pump with distilled water
  
- when both inorganic and organic constituents are being analyzed:
  - 1) wash pump with non-phosphate detergent
  - 2) rinse pump with tap water
  - 3) rinse pump with dilute (0.1N) nitric acid
  - 4) rinse pump with distilled water
  - 5) rinse pump with pesticide grade hexane
  - 6) rinse pump with distilled water

Purge and decontamination water will be contained and subsequently transported, by AL Tech, to the WWTP or the API Separator, discharged directly to the WWTP (via a temporary holding tank), or discharged directly to the ground surface. Handling of the purge water will be dependent on the well location and groundwater quality, as follows:

- containment with conveyance to the WWTP - MW-1/MW-1B, MW-2/MW-2B, MW-3/MW-3B, MW-11, MW-14, and MW-19/MW-19B
  
- containment with conveyance to the API separator - MW-5/MW-5B, MW-6/MW-6B, MW-15, MW-16, MW-17, MW-18, MW-20, MW-21, MW-D2, OW-16, and PZ-16,

- discharge to WWTP (via temporary containment) - MW-1B, MW-4, RW-2B, RW-5, and RW-7
- discharge to ground surface - MW-7B, MW-8B, MW-11, MW-12, MW-14, and H-4S/H-4D

Results from the previous sampling event will be reviewed to verify that the appropriate disposal method for the purge water from each well is being used. If oil or an oil sheen is noted in water generated from any well, the water will be contained and conveyed to the API separator.

#### **4.2 Groundwater Sampling Procedures**

Groundwater samples will be collected immediately after purging using the submersible pump (Grundfos or equivalent). Wells that are purged to dryness will be sampled after sufficient recovery has occurred.

Sample aliquots will be discharged directly from the tubing into the appropriate sample bottles. Sample aliquots requiring filtering will be collected in dedicated transfer bottles and filtered in the field into appropriately preserved sample bottles. The sample requirements and handling procedures are discussed in Section 5.0.

Groundwater samples will be collected from the most upgradient wells (e.g., MW-7B and MW-8B) first. Samples will subsequently be collected from locations with progressively impacted water quality.

#### **4.3 Surface Water Sampling Procedures**

Surface water samples will first be collected from the downstream location (PSW-2) and therefrom the upstream location (PSW-1). The samples will be collected by placing the sample containers directly into the stream, with the bottle opening facing upstream. Sampling personnel will be located downstream of the sample collection location to avoid introducing unwanted sediment or other material into the surface water sample.

Field parameters (pH, temperature, specific conductivity, and turbidity) will be measured after sampling is complete. Field parameters will be determined from a volume of water separate from the actual sample volume. Field parameter readings will be

recorded in a field notebook and later transcribed to the surface water record data sheets (described below). The equipment calibration and maintenance program and storage and handling of equipment, discussed in Section 4.1.2, will also be applicable to the surface water sampling program

#### 4.4 Field Records

Pertinent information for each well and surface water sample location will be recorded in the field logbook. Subsequently, record sheets will be completed and incorporated into the respective records to document the following:

- wells
  - physical characteristics of the well construction (total depth and well integrity)
  - water and LNAPL measurements
  - purging time and volume
  - sample collection time
  - sample identification
  - field observations (groundwater appearance and odor)
  - field monitoring data
  - names of sampling personnel
  - weather conditions
  - any obvious field conditions possibly affecting the groundwater sample
  
- surface water locations
  - approximate depth of water
  - approximate width of stream
  - sample collection time
  - field parameters
  - sample personnel
  - weather conditions
  - physical description of sample location
  - other field observations (e.g. water appearance, color, odor, flow rate)

Pertinent well and piezometer construction information is summarized in Table 5. Well and surface water record sheets are provided in Appendix A.

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## **5.0 Sampling and Analytical Requirements**

The laboratory quality assurance/quality control (QA/QC) program will be implemented in accordance with the NYSDEC approved Quality Assurance Project Plan implemented in the Phase I RFI Investigation (McClaren/Hart 1993).

Sampling requirements are addressed in Section 5.1 through 5.3. The laboratory analytical program requirements and data validation requirements are addressed in Section 5.4 and Section 5.5.

### **5.1 Sample Containers**

All sample containers will be pre-cleaned and prepared with the proper preservatives by the analytical laboratory. Upon receipt in the field, sampling personnel will inspect the sample containers for integrity and completeness. Where necessary, replacement or additional sample containers will be requested from the laboratory.

Sample containers and required preservatives are identified in Table 6.

### **5.2 Sample Labeling, Handling, and Chain of Custody**

Samples will be placed directly into appropriate, uniquely labeled sample bottles following collection. The sample container labels will include the following information:

- sample matrix
- sample identification number sampling/job location
- name of sampling personnel
- name of sampling organization
- date and time of sample collection
- the preservative, if any
- analysis required

The labels will be completed in indelible ink and covered with clear, waterproof, plastic tape to preserve label integrity.

The unique sample identification numbers will indicate the facility, sample matrix, well location, and sample event. For example: WAT-GW-MW1B-0103 indicates:

- WAT = Watervliet
- GW = groundwater (SW = surface water)
- MW1B = MW-1B (PSW1 = PSW-1)
- 0103 = Year 1, Round 3

For groundwater samples collected for analysis of metals with turbidities greater than 50 NTUs, two sample aliquots will be prepared: one for total (unfiltered) metals and one for dissolved (filtered metals). The total aliquots will be placed directly into the pre-preserved sample bottles. The dissolved aliquots will be placed into unpreserved transfer bottles and filtered in the field through a 0.45-micron filter into preserved sample bottles.

The filled sample bottles will be placed into coolers chilled to approximately 4°C with bagged ice. The sample containers will subsequently be packed before shipping, with ice and vermiculite, foam rubber, or another comparable packaging material to protect the sample containers.

A chain-of-custody record identifying the contents of the shipment will accompany each sample shipment. A chain-of-custody record is used to document the possession of environmental samples from the time of collection until analytical data are introduced as evidence in legal proceedings (if necessary). Each chain-of-custody form will identify:

- the unique sample identification number
- the sample matrix
- the date and time of sample collection
- the sampling location
- the project site
- the analyses requested

A sample is considered under custody if:

- the sample is in your possession, or
- the sample is in your view after being in your possession, or
- the sample was in your possession and you locked it up, or
- the sample is in a designated, secure area

The field sampler is personally responsible for the care and custody of the samples until they are properly transferred or dispatched. When transferring the possession of samples, the individuals relinquishing and receiving the samples will sign, date, and note the time on a chain-of-custody form. These records document sample



custody transfer from the sampler to the analyst in the laboratory. One copy of the completed chain-of-custody will be retained by the sampling team and retained in the project file. The other copy of the completed chain-of-custody form will accompany the samples to the laboratory. For samples sent via commercial shipping (i.e., air freight), custody seals will be placed on each sample cooler or individual sample containers to indicate if the sample coolers or containers were opened or tampered with during shipping.

When samples are split with third party personnel or a government agency, a separate chain-of-custody form will be prepared for those samples and marked to indicate with whom the samples are being split. The person relinquishing the split samples to the third party personnel or government agency will request the signature of the receiving party. If the receiving party is unavailable or refuses to sign, the situation will be noted in the "Received by" space. When appropriate, as in the case where the third party representative is unavailable, the chain-of-custody form will contain a statement that the split samples were delivered to the designated location at the designated time.

### **5.3 Laboratory Sample Handling**

The sample cooler temperature, integrity of the sample containers, and the pH of preserved samples will be checked and documented by the laboratory representative upon receipt. To check for completeness of the sample shipment, samples received by the laboratory will be compared to those samples identified on the accompanying chain-of-custody form. Sample custody within the laboratory will include the following.

- Identification of responsible party to as sample custodian who is authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records.
- Provision for a laboratory sample custody log consisting of serially-numbered, standard, lab-tracking report sheets.
- Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.

Samples will be protected from light and refrigerated at or below 4°C until extraction or analysis. Holding times for the samples are provided in Table 6. Samples for inorganic analyses will be retained by the laboratory for three months after analysis, or until permission to discard the samples is granted by AL Tech, or an authorized representative, whichever occurs first.

## **5.4 Laboratory Analytical Program**

The requirements for the selected laboratory and the analytical program itself are presented in Section 5.4.1. Field QA/QC requirements are described in Section 5.4.2.

### **5.4.1 Analytical Laboratory Requirements**

The laboratory selected to conduct analyses of groundwater and surface water samples collected as part of the monitoring programs for the Main Plant Area will be certified to analyze samples under the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) for hazardous waste. Analysis will be performed in accordance with the NYSDEC Analytical Services Protocol (ASP) and the following.

- U.S. Environmental Protection Agency, 1987, "Test Methods for Evaluating Solid Wastes, Physical Chemical Methods," SW-846, 3rd Edition, with updates.
- U.S. Environmental Protection Agency, 1983, "Methods for Chemical Analysis of Water and Wastes," EPA 600/4-79-020.

The laboratory will have documented QA programs that comply with U.S. EPA guidance. The laboratory further will be responsible for documenting in each data package that both initial and ongoing instrument and analytical QC functions have been met. The laboratory will reanalyze any samples analyzed in non-conformance with QC criteria when sufficient sample volume is available and the allowed holding time is not exceeded.

Table 6 identifies the analytical and field parameters, and the analytical methods, sample bottle requirements, preservation requirements, and holding times for each parameter.

#### 5.4.2 QA/QC Samples

Field QA/QC samples will be prepared to:

- detect potential cross-contamination between samples during sampling or sample transportation
- characterize site conditions during groundwater sampling that potentially influence sample results
- provide checks of laboratory results.

QA/QC samples will be collected at a frequency of 5 percent (i.e., one for each 20 samples collected during each round). The QA/QC samples will include:

- duplicates
- equipment blanks
- matrix spikes (MS)

Matrix spike duplicates (MSDs) will be prepared for chloroform and PCBs, and trip blanks will accompany the chloroform sample aliquots. All information pertaining to the collection of the QA/QC samples will be recorded in the field logbooks.

The duplicates, MS, and MSDs will be collected by alternately filling the original and replicate sample containers.

Equipment blanks may be collected if non-dedicated sampling equipment is used. The equipment blanks will be collected by pouring laboratory-prepared, deionized water through the non-dedicated, decontaminated sample bailer into laboratory-supplied sample containers. The equipment blank will be analyzed for the full list of parameters.

As appropriate, the duplicate, MS, and MSDs will be prepared as follows for the three sampling plans:

- Site-Wide Groundwater Monitoring Plan<sup>8</sup>
  - RW-2B (aluminum, antimony, barium, chromium, molybdenum, nickel, ammonia and pH)
  - MW-11 (aluminum, antimony, barium, chromium, lead, molybdenum, nickel, and pH)
  - MW-D2 (arsenic)
  - MW-16 (SVOCs and PCBs)

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<sup>8</sup> QA/QC samples for cadmium (MW-11), will be collected via the Groundwater ICM Monitoring Plan.

- PSW-2 (aluminum, antimony, arsenic, barium, cadmium, chromium, lead, molybdenum, nickel, and pH)
- Fuel Oil ICM Monitoring Plan
  - MW-D2 (TPH and SVOCs)
  - PSW-2 (TPH)
- Groundwater ICM Monitoring Plan
  - RW-2B (aluminum, beryllium, cadmium, chromium, nickel, zinc, other metals<sup>9</sup>, ammonia, pH, chloride, fluoride, nitrate, and sulfate)

## 5.5 Data Reduction, Validation, and Reporting

The analytical laboratory will generate, review, and report appropriate QC data to document the validity of the analytical results. The analytical laboratory will prepare and retain full analytical and QC documentation. Such documentation need not be hard copy, but may be on other storage media (e.g., magnetic tape).

The analytical laboratory will provide the following information to AL Tech or an authorized representative.

- Analytical test methods and results for submitted samples, with appropriate data quality notations.
- Narrative of samples received and an explanation of qualifications regarding data quality and other significant items encountered during analysis. This narrative should discuss any QA/QC deficiencies or problems such as calibration or tuning criteria problems, if present. The minimum QC requirements to be provided to NYSDEC on a routine basis will include:
  - preparation/method blanks
  - spike sample
  - duplicate sample
  - laboratory control sample
  - calibration curve and verification
  - sample summary forms
  - detection limits data for samples

The NYSDEC will be provided with additional QC data upon request.

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<sup>9</sup> Other metals include ammonia, pH, chloride, fluoride, nitrate, and sulfate.

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- Data points beyond control limits and data omissions will be identified and attempts will be made with the laboratory to correct such data deficiencies. If the data deficiency is the direct result of sampling or analytical error, then the sample(s) will be recollected and analyzed. Otherwise, the need for resampling will be evaluated based on the magnitude and the significance of the data deficiencies in the overall monitoring program.

It is anticipated that the analytical data will be incorporated into a computer database designed to facilitate data review and evaluation. The computerized data set will include the data flags provided by the laboratory, as well as additional comments by only third-party data reviewer. The laboratory data flags will include such items as:

- concentrations below practical quantitation limit
- estimated concentration due to poor spike recovery
- concentration of chemical also found in laboratory blanks

Additional comments will identify the data as:

- usable as a quantitative concentration
- usable with caution as an estimated concentration
- not usable due to QA/QC results beyond control limits

## 6.0 Reporting

The monitoring plans for the Main Plan Area will be implemented on the following schedule:

- the Site-Wide Groundwater Monitoring Plan will initially be performed on a quarterly basis and, subsequently, on a semi-annual basis
- the Fuel Oil ICM Monitoring Plan will be performed once before installation of the trench, on a quarterly basis for one year after installation and, subsequently, on a semi-annual basis
- the Groundwater ICM Monitoring Plan will be initially performed on a quarterly basis, semi-annual sampling will be implemented once groundwater quality has stabilized or attained the cleanup goals defined in the CMS

Data generated during the first and second quarters of each year will be compiled and presented in the semi-annual reports for the Main Plant Area. The semi-annual reports will be submitted to the NYSDEC by September 1 of that year. These reports will include the following information:

- A summary of analytical data collected during the first six months of the calendar year.
- Groundwater elevation data expressed in tabulated form. Potentiometric contour maps will be prepared for each monitoring event performed during the first six months of the calendar year. If applicable, the maps will include a delineation of the zone of capture. If applicable, product thickness measurements and an associated figure indicating the horizontal and vertical distribution of the product layer will be included.
- An evaluation of contaminant migration. Maps that illustrate the concentration of contaminants at the various monitoring wells and surface water sampling locations will be included. Groundwater isopleth maps may be prepared semi-annually for all significant contaminants.
- Well maintenance activities planned or performed.
- Summary of plans for installation of additional wells, if any. (Existing work plans may be referenced.)

- Summary of well installation activities performed during the first six months of the calendar year, if any. Well logs, construction details, field data collected and surveyed well locations will be included. (Existing reports may be referenced.)
- Pumping/extraction well rates and volumes and description of time in operation for the first 6 months of the calendar year (if applicable).
- Contaminant recovery levels and/or product recovery volumes (if applicable).
- Any other problems, activities planned.

An annual report shall be compiled and submitted by March 1 of each year. This document will report all monitoring results received and all environmental monitoring activities performed during the preceding calendar year. The annual reports must include the following information:

- A summary of all analytical results generated during the preceding calendar year.
- Supporting QA/QC documentation, in accordance with the approved "Quality Assurance Project Plan," for environmental sampling analytical results.
- Groundwater elevation data expressed in tabulated form. Potentiometric contour maps will be prepared for each monitoring event. If applicable, the maps will include a delineation of the zone of capture. In addition, the groundwater flow rate and direction will be determined at least annually in accordance with 6NYCRR 373.2.6(I)(5). If applicable, include product thickness measurements and an associated figure that indicates the horizontal and vertical distribution of the product layer will be included.
- An evaluation of contaminant migration. Maps that illustrate the concentration of contaminants at the various monitoring wells and surface water sampling locations will be included. Groundwater isopleth maps may be prepared for each sampling events for all significant contaminants.
- Trend line plots, or an alternative method (approved by the NYSDEC) for demonstrating the long-term effectiveness of implemented corrective measures.<sup>10</sup>
- Well maintenance activities planned or performed.

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<sup>10</sup> Trend line plots for chromium will be included for the Groundwater ICM.

- Summary of plans for installation of additional wells, if any. (Existing work plans may be referenced.)
- Summary of well installation activities performed in the last calendar year. Well logs, construction details, field data collected and surveyed well locations, if any, will be included. (Existing reports may be referenced.)
- Pumping/extraction well rates and volumes and description of time in operation (if applicable).
- Contaminant recovery levels and/or product recovery volumes (if applicable).
- Treatment efficiency data (if applicable).
- Any other problems, activities planned.
- An evaluation of the progress of the corrective measures or monitoring Program based on information provided above.

Historical groundwater data (i.e., water and LNAPL levels, constituent concentrations) will be incorporated into to a database, so that is may be used to evaluate the long-term progress of corrective measures and constituent concentration trends. The database will be updated semi-annually and submitted with the semi-annual and annual reports in an NYSDEC-approved electronic format.

Specific information that will be presented for the Fuel Oil ICM and Groundwater ICM Monitoring Plans will include:

- Fuel Oil ICM
  - a description of the current status of the corrective measure.
  - measurements of LNAPL thickness
  - product recovery rate
  - volume of product/groundwater recovered
  - an evaluation of the progress of corrective measures and/or monitoring program
  - contaminant recovery levels (if applicable)
  - treatment efficiency data (if applicable)
  - operation and/or maintenance activities performed or planned
  - tabulated summaries of the TPH data (including historical data)



- Groundwater ICM
  - a description of the current status of the corrective measure
  - pumping/extraction well rates and volumes and a description of time in operation.
  - volume of groundwater recovered
  - tabulated summaries of the analytical data (including historical data)
    - the metals and miscellaneous parameter data will be tabulated for individual analytes and parameters (i.e., one table will be used to present all of the site data for chromium)
  - trendline plots for MW-4, MW-19, MW-19B, RW-2B, and RW-5, for cadmium, nickel, chloride, fluoride, nitrate, sulfate, and pH
  - an evaluation of the progress of corrective measures and/or monitoring program
  - capture zones in the overburden and bedrock
  - contaminant recovery levels (if applicable)
  - treatment efficiency data (if applicable)
  - operation and/or maintenance activities performed or planned

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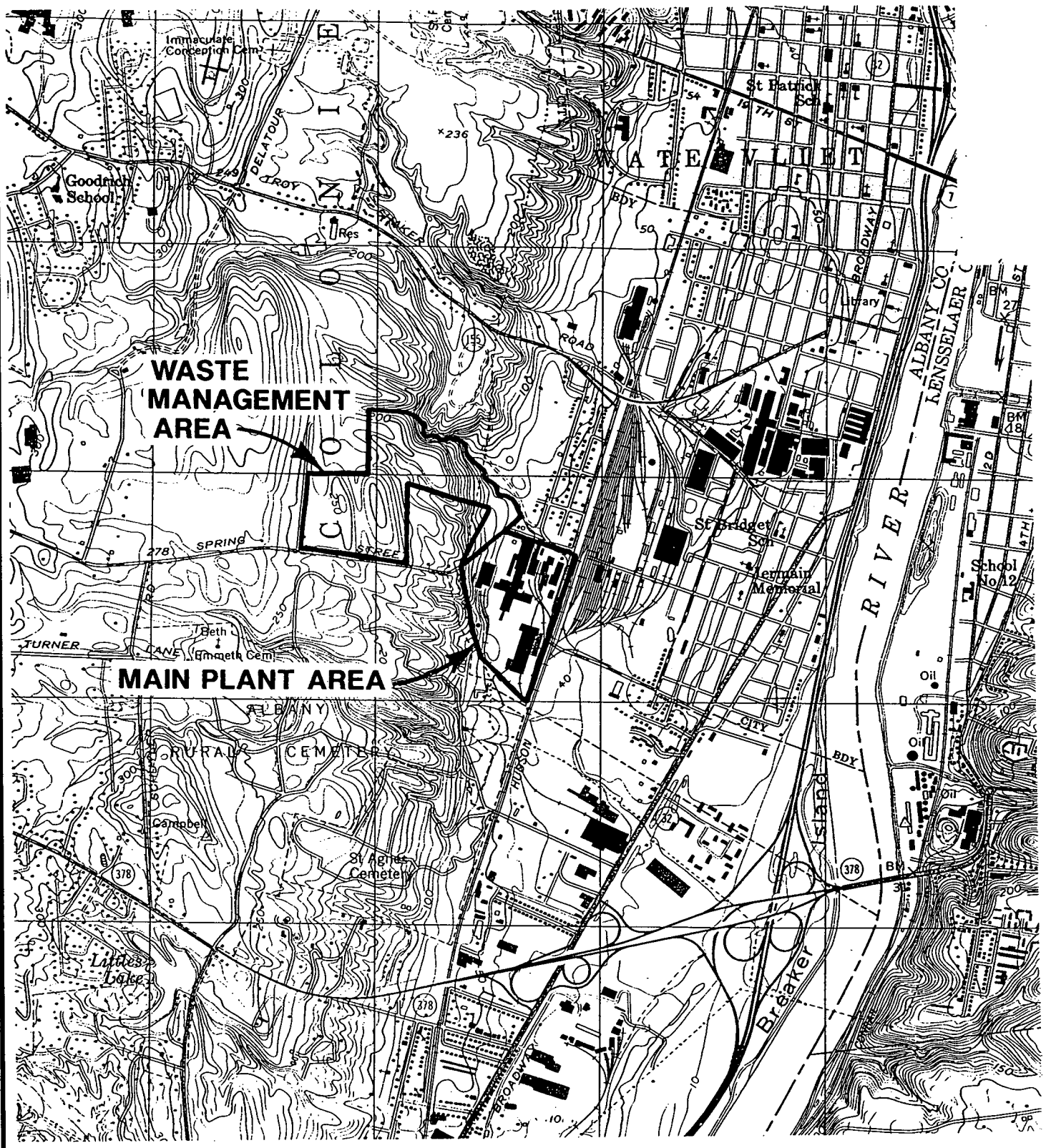
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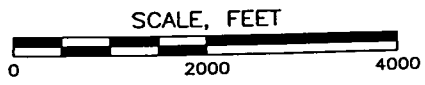
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Figures

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Figure 1  
 SITE LOCATION MAP

**MAIN PLANT AREA  
 GROUNDWATER MONITORING PROGRAM**  
 PREPARED FOR  
 AL TECH SPECIALTY STEEL CORPORATION  
 WATERVLIET, NEW YORK

**SOLID WASTE MANAGEMENT UNITS**

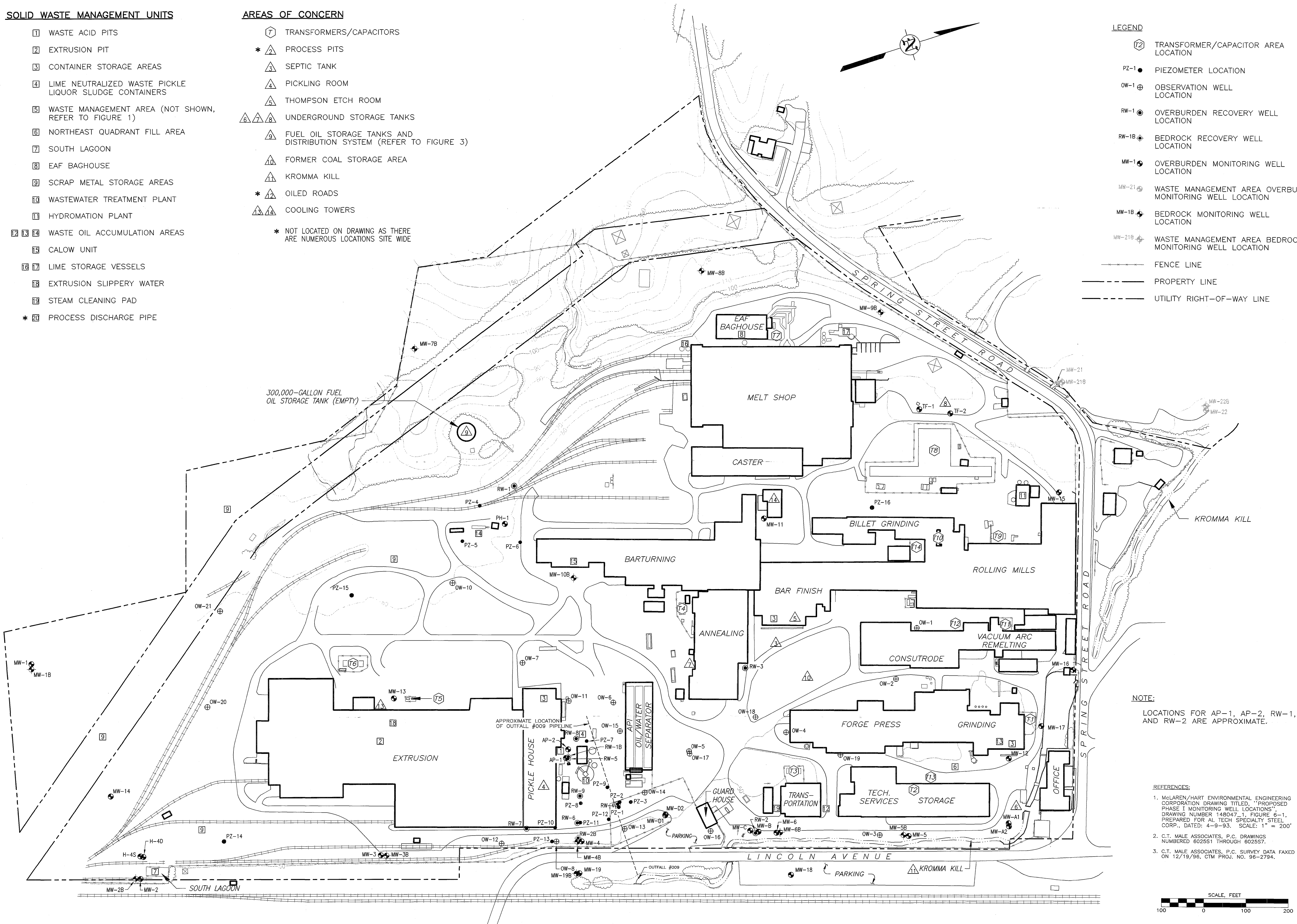
- 1 WASTE ACID PITS
- 2 EXTRUSION PIT
- 3 CONTAINER STORAGE AREAS
- 4 LIME NEUTRALIZED WASTE PICKLE LIQUOR SLUDGE CONTAINERS
- 5 WASTE MANAGEMENT AREA (NOT SHOWN, REFER TO FIGURE 1)
- 6 NORTHEAST QUADRANT FILL AREA
- 7 SOUTH LAGOON
- 8 EAF BAGHOUSE
- 9 SCRAP METAL STORAGE AREAS
- 10 WASTEWATER TREATMENT PLANT
- 11 HYDRINATION PLANT
- 12 13 14 WASTE OIL ACCUMULATION AREAS
- 15 CALOW UNIT
- 16 17 LIME STORAGE VESSELS
- 18 EXTRUSION SLIPPERY WATER
- 19 STEAM CLEANING PAD
- \* 20 PROCESS DISCHARGE PIPE

**AREAS OF CONCERN**

- 7 TRANSFORMERS/CAPACITORS
- \* 1 PROCESS PITS
- 2 SEPTIC TANK
- 3 PICKLING ROOM
- 4 THOMPSON ETCH ROOM
- 5 6 7 8 UNDERGROUND STORAGE TANKS
- 9 FUEL OIL STORAGE TANKS AND DISTRIBUTION SYSTEM (REFER TO FIGURE 3)
- 10 FORMER COAL STORAGE AREA
- 11 KROMMA KILL
- \* 12 OILED ROADS
- 13 14 COOLING TOWERS
- \* NOT LOCATED ON DRAWING AS THERE ARE NUMEROUS LOCATIONS SITE WIDE

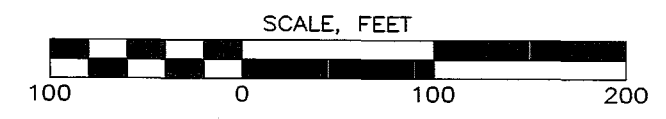
**LEGEND**

- 72 TRANSFORMER/CAPACITOR AREA LOCATION
- PZ-1 ● PIEZOMETER LOCATION
- OW-1 ⊕ OBSERVATION WELL LOCATION
- RW-1 ● OVERBURDEN RECOVERY WELL LOCATION
- RW-1B ⊕ BEDROCK RECOVERY WELL LOCATION
- MW-1 ● OVERBURDEN MONITORING WELL LOCATION
- MW-21 ⊕ WASTE MANAGEMENT AREA OVERBURDEN MONITORING WELL LOCATION
- MW-1B ⊕ BEDROCK MONITORING WELL LOCATION
- MW-21B ⊕ WASTE MANAGEMENT AREA BEDROCK MONITORING WELL LOCATION
- FENCE LINE
- - - PROPERTY LINE
- - - UTILITY RIGHT-OF-WAY LINE



**NOTE:**  
LOCATIONS FOR AP-1, AP-2, RW-1, AND RW-2 ARE APPROXIMATE.

- REFERENCES:**
- McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION DRAWING TITLED, "PROPOSED PHASE I MONITORING WELL LOCATIONS", DRAWING NUMBER 148047-1, FIGURE 6-1, PREPARED FOR AL TECH SPECIALTY STEEL CORP., DATED: 4-9-93. SCALE: 1" = 200'
  - C.T. MALE ASSOCIATES, P.C. DRAWINGS NUMBERED 802551 THROUGH 802557.
  - C.T. MALE ASSOCIATES, P.C. SURVEY DATA FAXED ON 12/19/98. CTM PROJ. NO. 98-2794.



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<b>CURRENT SITE LAYOUT</b> <b>MAIN PLANT AREA</b> <b>GROUNDWATER MONITORING PROGRAM</b> PREPARED FOR <b>AL Tech Specialty Steel Corporation</b> Watervliet, New York					
<b>ENVIRONMENTAL STRATEGIES CORPORATION</b> Four Penn Center West Suite 315 Pittsburgh, PA 15276 (412) 787-5100					
<b>Figure 2</b> Drawing Number <b>193052-D02</b>					

TMB 15: D:\P\1901\193052\193052.dwg - Oct 28, 1999 12:46 pm



**SOLID WASTE MANAGEMENT UNITS**

- 1 WASTE ACID PITS
- 2 EXTRUSION PIT
- 3 CONTAINER STORAGE AREAS
- 4 LIME NEUTRALIZED WASTE PICKLE LIQUOR SLUDGE CONTAINERS
- 5 WASTE MANAGEMENT AREA (NOT SHOWN, REFER TO FIGURE 1)
- 6 NORTHEAST QUADRANT FILL AREA
- 7 SOUTH LAGOON
- 8 EAF BAGHOUSE
- 9 SCRAP METAL STORAGE AREAS
- 10 WASTEWATER TREATMENT PLANT
- 11 HYDRINATION PLANT
- 12 13 14 WASTE OIL ACCUMULATION AREAS
- 15 CALOW UNIT
- 16 17 LIME STORAGE VESSELS
- 18 EXTRUSION SLIPPERY WATER
- 19 STEAM CLEANING PAD
- \* 20 PROCESS DISCHARGE PIPE

**AREAS OF CONCERN**

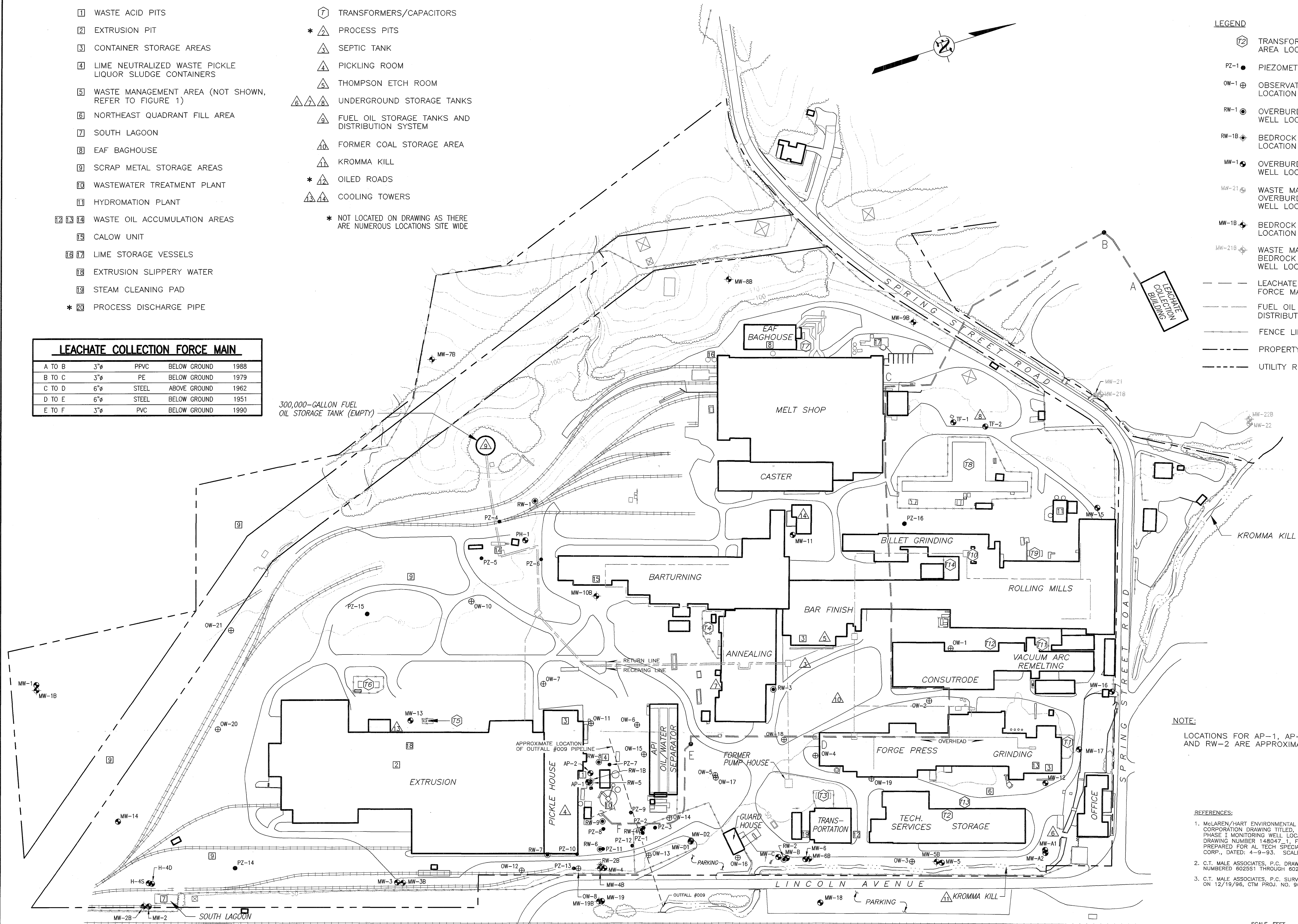
- 1 TRANSFORMERS/CAPACITORS
- \* 2 PROCESS PITS
- 3 SEPTIC TANK
- 4 PICKLING ROOM
- 5 THOMPSON ETCH ROOM
- 6 7 8 UNDERGROUND STORAGE TANKS
- 9 FUEL OIL STORAGE TANKS AND DISTRIBUTION SYSTEM
- 10 FORMER COAL STORAGE AREA
- 11 KROMMA KILL
- \* 12 OILED ROADS
- 13 14 COOLING TOWERS
- \* NOT LOCATED ON DRAWING AS THERE ARE NUMEROUS LOCATIONS SITE WIDE

**LEGEND**

- 172 TRANSFORMER/CAPACITOR AREA LOCATION
- PZ-1 ● PIEZOMETER LOCATION
- OW-1 ⊕ OBSERVATION WELL LOCATION
- RW-1 ⊙ OVERBURDEN RECOVERY WELL LOCATION
- RW-18 ⊕ BEDROCK RECOVERY WELL LOCATION
- MW-1 ⊕ OVERBURDEN MONITORING WELL LOCATION
- MW-21 ⊕ WASTE MANAGEMENT AREA OVERBURDEN MONITORING WELL LOCATION
- MW-18 ⊕ BEDROCK MONITORING WELL LOCATION
- MW-21B ⊕ WASTE MANAGEMENT AREA BEDROCK MONITORING WELL LOCATION
- LEACHATE COLLECTION FORCE MAIN
- FUEL OIL DISTRIBUTION LINES
- FENCE LINE
- PROPERTY LINE
- UTILITY RIGHT-OF-WAY LINE

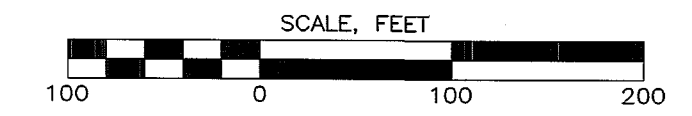
LEACHATE COLLECTION FORCE MAIN				
A TO B	3"	PPVC	BELOW GROUND	1988
B TO C	3"	PE	BELOW GROUND	1979
C TO D	6"	STEEL	ABOVE GROUND	1962
D TO E	6"	STEEL	BELOW GROUND	1951
E TO F	3"	PVC	BELOW GROUND	1990

300,000-GALLON FUEL OIL STORAGE TANK (EMPTY)



NOTE: LOCATIONS FOR AP-1, AP-2, RW-1, AND RW-2 ARE APPROXIMATE.

- REFERENCES:
- McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION DRAWING TITLED, "PROPOSED PHASE I MONITORING WELL LOCATIONS", PHASE I MONITORING WELL LOCATIONS, DRAWING NUMBER 145047-1, FIGURE 6-1, PREPARED FOR AL TECH SPECIALTY STEEL CORP., DATED: 4-9-93. SCALE: 1" = 200'
  - C.T. MALE ASSOCIATES, P.C. DRAWINGS NUMBERED 602551 THROUGH 602557.
  - C.T. MALE ASSOCIATES, P.C. SURVEY DATA FAXED ON 12/19/96, CTM PROJ. NO. 96-2794.



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**FUEL OIL DISTRIBUTION AND LEACHATE CONVEYANCE SYSTEMS**  
 MAIN PLANT AREA  
 GROUNDWATER MONITORING PROGRAM  
 PREPARED FOR  
**AL Tech Specialty Steel Corporation**  
 Watervliet, New York

**ENVIRONMENTAL STRATEGIES CORPORATION**  
 Four Penn Center West  
 Suite 315  
 Pittsburgh, PA 15276  
 (412) 787-5100

**Figure 3**  
 Drawing Number  
**193052-D03**

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**SOLID WASTE MANAGEMENT UNITS**

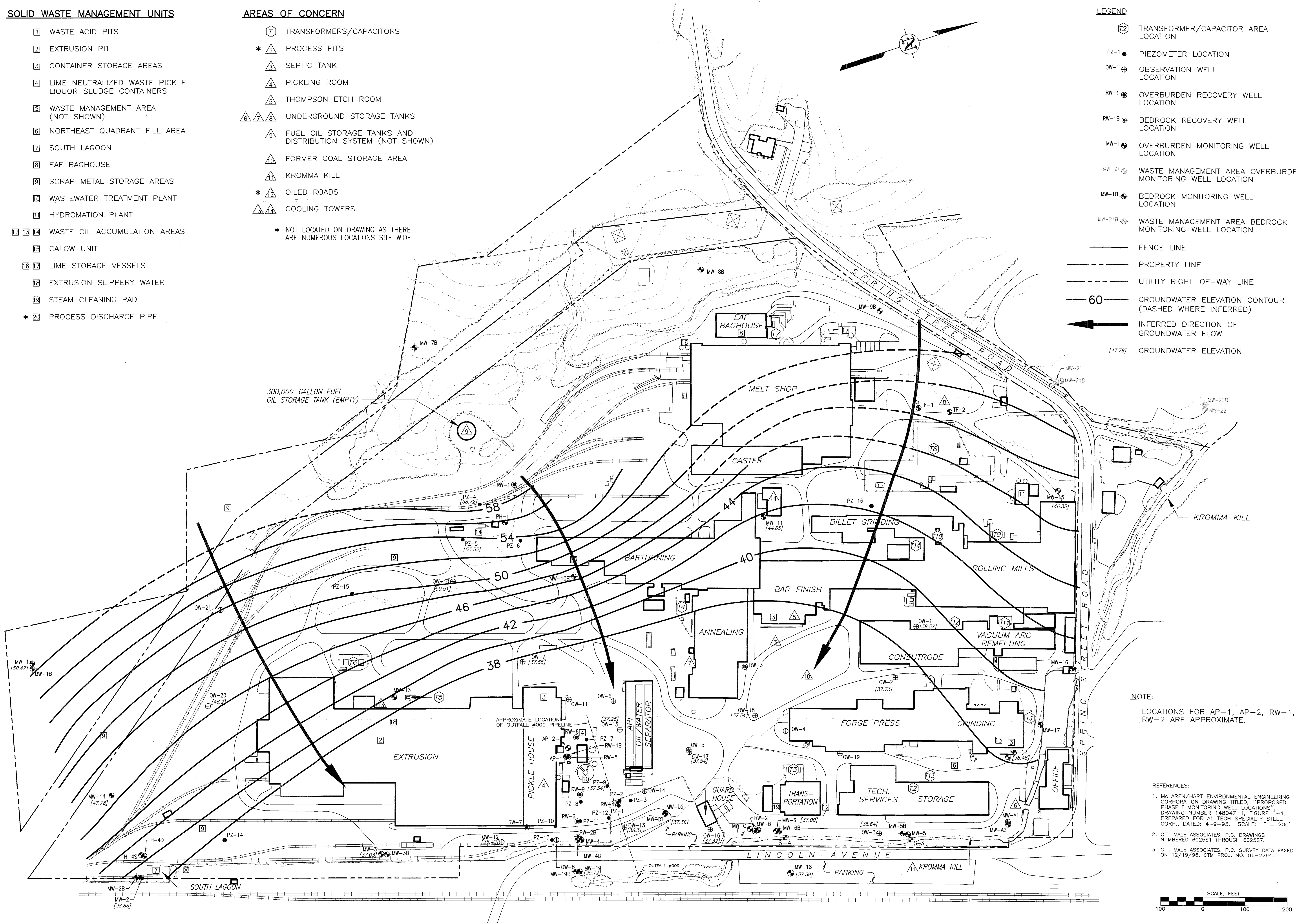
- 1 WASTE ACID PITS
- 2 EXTRUSION PIT
- 3 CONTAINER STORAGE AREAS
- 4 LIME NEUTRALIZED WASTE PICKLE LIQUOR SLUDGE CONTAINERS
- 5 WASTE MANAGEMENT AREA (NOT SHOWN)
- 6 NORTHEAST QUADRANT FILL AREA
- 7 SOUTH LAGOON
- 8 EAF BAGHOUSE
- 9 SCRAP METAL STORAGE AREAS
- 10 WASTEWATER TREATMENT PLANT
- 11 HYDROMATION PLANT
- 12 13 14 WASTE OIL ACCUMULATION AREAS
- 15 CALOW UNIT
- 16 17 LIME STORAGE VESSELS
- 18 EXTRUSION SLIPPERY WATER
- 19 STEAM CLEANING PAD
- \* 20 PROCESS DISCHARGE PIPE

**AREAS OF CONCERN**

- 7 TRANSFORMERS/CAPACITORS
- \* 1 PROCESS PITS
- 2 SEPTIC TANK
- 3 PICKLING ROOM
- 4 THOMPSON ETCH ROOM
- 5 6 8 UNDERGROUND STORAGE TANKS
- 9 FUEL OIL STORAGE TANKS AND DISTRIBUTION SYSTEM (NOT SHOWN)
- 10 FORMER COAL STORAGE AREA
- 11 KROMMA KILL
- \* 12 OILED ROADS
- 13 14 COOLING TOWERS
- \* NOT LOCATED ON DRAWING AS THERE ARE NUMEROUS LOCATIONS SITE WIDE

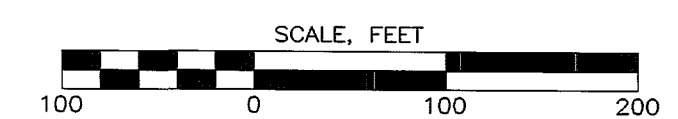
**LEGEND**

- 12 TRANSFORMER/CAPACITOR AREA LOCATION
- PZ-1 ● PIEZOMETER LOCATION
- OW-1 ⊕ OBSERVATION WELL LOCATION
- RW-1 ⊕ OVERBURDEN RECOVERY WELL LOCATION
- RW-1B ⊕ BEDROCK RECOVERY WELL LOCATION
- MW-1 ⊕ OVERBURDEN MONITORING WELL LOCATION
- MW-21 ⊕ WASTE MANAGEMENT AREA OVERBURDEN MONITORING WELL LOCATION
- MW-1B ⊕ BEDROCK MONITORING WELL LOCATION
- MW-21B ⊕ WASTE MANAGEMENT AREA BEDROCK MONITORING WELL LOCATION
- FENCE LINE
- - - PROPERTY LINE
- - - UTILITY RIGHT-OF-WAY LINE
- 60- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- ← INFERRED DIRECTION OF GROUNDWATER FLOW
- [47.78] GROUNDWATER ELEVATION



**NOTE:**  
LOCATIONS FOR AP-1, AP-2, RW-1, RW-2 ARE APPROXIMATE.

- REFERENCES:**
1. McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION DRAWING TITLED, "PROPOSED PHASE I MONITORING WELL LOCATIONS", DRAWING NUMBER 148047-1, FIGURE 4-1, PREPARED FOR AL TECH SPECIALTY STEEL CORP., DATED: 4-9-93. SCALE: 1" = 200'
  2. C.T. MALE ASSOCIATES, P.C. DRAWINGS NUMBERED 6025S1 THROUGH 6025S7.
  3. C.T. MALE ASSOCIATES, P.C. SURVEY DATA FAXED ON 12/19/96, CTM PROJ. NO. 96-2794.



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**POTENTIOMETRIC SURFACE MAP - OVERBURDEN (SEPTEMBER 22, 1997)**  
 MAIN PLANT AREA  
 GROUNDWATER MONITORING PROGRAM  
 PREPARED FOR  
**AL Tech Specialty Steel Corporation**  
 Watervliet, New York

**ENVIRONMENTAL STRATEGIES CORPORATION**  
 Four Penn Center West  
 Suite 315  
 Pittsburgh, PA 15276  
 (412) 787-5100

**Figure 4**  
 Drawing Number  
**193052-D04**

TMB, X:\DWG\100\193052\DWG.dwg, 28, 1999 12:49 pm



**SOLID WASTE MANAGEMENT UNITS**

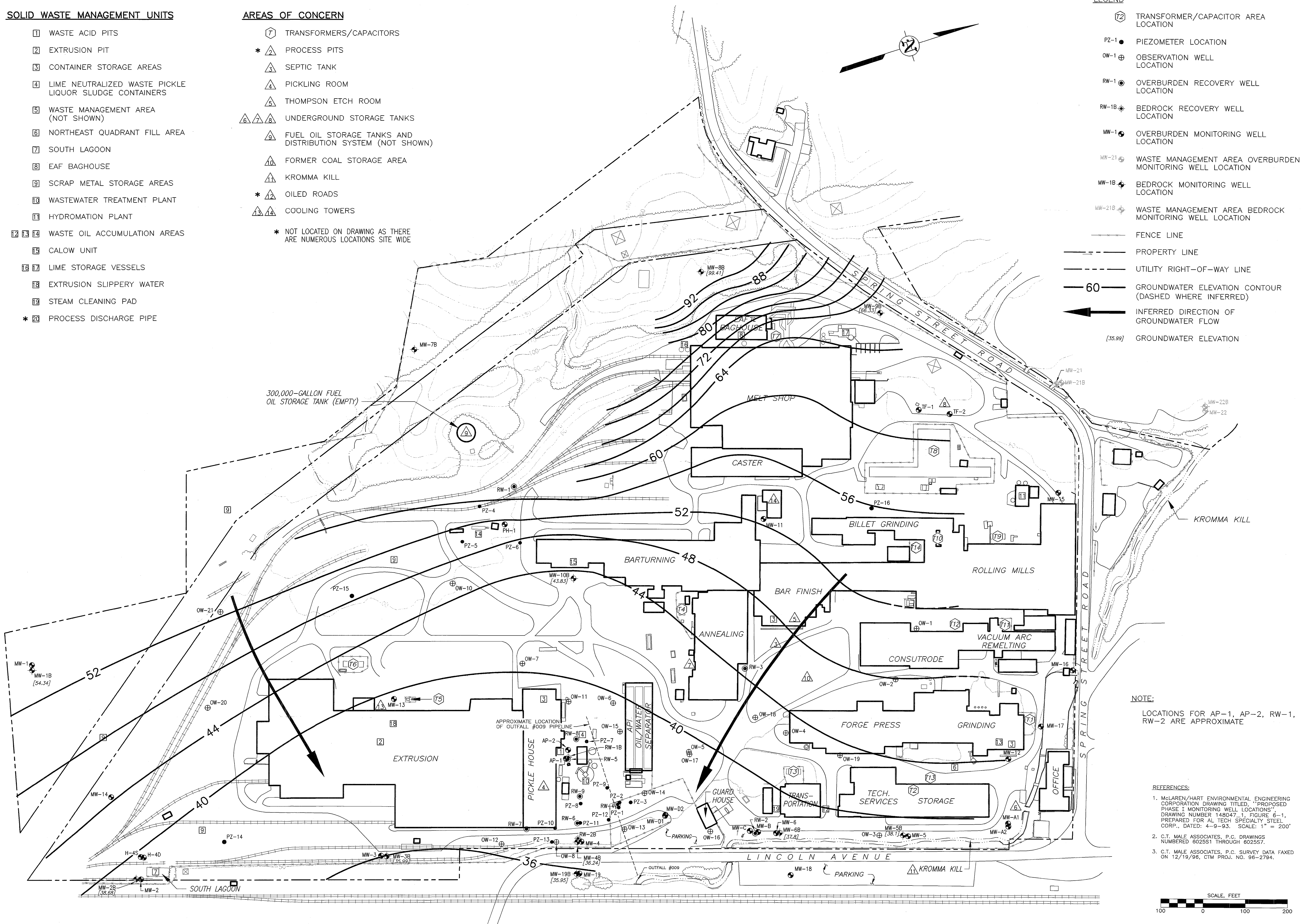
- 1 WASTE ACID PITS
- 2 EXTRUSION PIT
- 3 CONTAINER STORAGE AREAS
- 4 LIME NEUTRALIZED WASTE PICKLE LIQUOR SLUDGE CONTAINERS
- 5 WASTE MANAGEMENT AREA (NOT SHOWN)
- 6 NORTHEAST QUADRANT FILL AREA
- 7 SOUTH LAGOON
- 8 EAF BAGHOUSE
- 9 SCRAP METAL STORAGE AREAS
- 10 WASTEWATER TREATMENT PLANT
- 11 HYDROMATION PLANT
- 12 13 14 WASTE OIL ACCUMULATION AREAS
- 15 CALOW UNIT
- 16 17 LIME STORAGE VESSELS
- 18 EXTRUSION SLIPPERY WATER
- 19 STEAM CLEANING PAD
- \* 20 PROCESS DISCHARGE PIPE

**AREAS OF CONCERN**

- 7 TRANSFORMERS/CAPACITORS
- \* 1 PROCESS PITS
- 2 SEPTIC TANK
- 3 PICKLING ROOM
- 4 THOMPSON ETCH ROOM
- 5 6 UNDERGROUND STORAGE TANKS
- 7 FUEL OIL STORAGE TANKS AND DISTRIBUTION SYSTEM (NOT SHOWN)
- 8 FORMER COAL STORAGE AREA
- 9 KROMMA KILL
- \* 10 OILED ROADS
- 11 COOLING TOWERS
- \* NOT LOCATED ON DRAWING AS THERE ARE NUMEROUS LOCATIONS SITE WIDE

**LEGEND**

- 72 TRANSFORMER/CAPACITOR AREA LOCATION
- PZ-1 ● PIEZOMETER LOCATION
- OW-1 ⊕ OBSERVATION WELL LOCATION
- RW-1 ⊕ OVERBURDEN RECOVERY WELL LOCATION
- RW-18 ⊕ BEDROCK RECOVERY WELL LOCATION
- MW-1 ⊕ OVERBURDEN MONITORING WELL LOCATION
- MW-21 ⊕ WASTE MANAGEMENT AREA OVERBURDEN MONITORING WELL LOCATION
- MW-18 ⊕ BEDROCK MONITORING WELL LOCATION
- MW-21B ⊕ WASTE MANAGEMENT AREA BEDROCK MONITORING WELL LOCATION
- FENCE LINE
- - - PROPERTY LINE
- - - UTILITY RIGHT-OF-WAY LINE
- 60 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- ← INFERRED DIRECTION OF GROUNDWATER FLOW
- [35.99] GROUNDWATER ELEVATION



**NOTE:**  
LOCATIONS FOR AP-1, AP-2, RW-1, RW-2 ARE APPROXIMATE

- REFERENCES:**
1. McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION DRAWING TITLED, "PROPOSED PHASE I MONITORING WELL LOCATIONS", DRAWING NUMBER 148047-1, FIGURE 6-1, PREPARED FOR AL TECH SPECIALTY STEEL CORP., DATED: 4-9-93. SCALE: 1" = 200'
  2. C.T. MALE ASSOCIATES, P.C. DRAWINGS NUMBERED 6025S1 THROUGH 6025S7.
  3. C.T. MALE ASSOCIATES, P.C. SURVEY DATA FAXED ON 12/19/96, CTM PROJ. NO. 96-2794.

DATE	DESCRIPTION

**POTENTIOMETRIC SURFACE MAP - BEDROCK (SEPTEMBER 22, 1997)**  
**MAIN PLANT AREA**  
**GROUNDWATER MONITORING PROGRAM**  
 PREPARED FOR  
**AL Tech Specialty Steel Corporation**  
 Watervliet, New York

**ENVIRONMENTAL STRATEGIES CORPORATION**  
 Four Penn Center West  
 Suite 315  
 Pitsburgh, PA 15276  
 (412) 787-5100

**Figure 5**  
 Drawing Number  
**193052-D05**

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**SOLID WASTE MANAGEMENT UNITS**

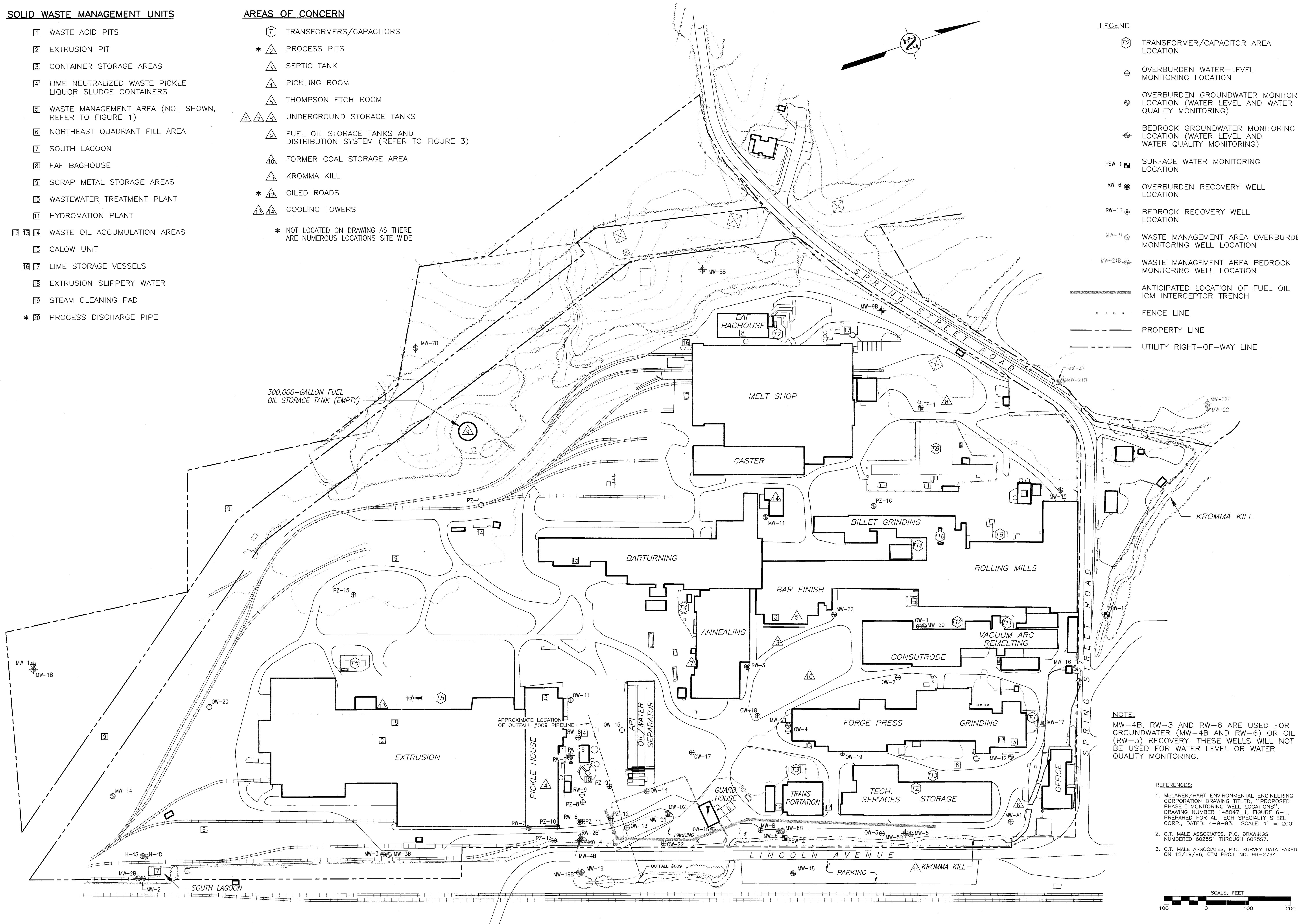
- 1 WASTE ACID PITS
- 2 EXTRUSION PIT
- 3 CONTAINER STORAGE AREAS
- 4 LIME NEUTRALIZED WASTE PICKLE LIQUOR SLUDGE CONTAINERS
- 5 WASTE MANAGEMENT AREA (NOT SHOWN, REFER TO FIGURE 1)
- 6 NORTHEAST QUADRANT FILL AREA
- 7 SOUTH LAGOON
- 8 EAF BAGHOUSE
- 9 SCRAP METAL STORAGE AREAS
- 10 WASTEWATER TREATMENT PLANT
- 11 HYDRIMATION PLANT
- 12 13 14 WASTE OIL ACCUMULATION AREAS
- 15 CALOW UNIT
- 16 17 LIME STORAGE VESSELS
- 18 EXTRUSION SLIPPERY WATER
- 19 STEAM CLEANING PAD
- \* 20 PROCESS DISCHARGE PIPE

**AREAS OF CONCERN**

- 1 TRANSFORMERS/CAPACITORS
- \* 2 PROCESS PITS
- 3 SEPTIC TANK
- 4 PICKLING ROOM
- 5 THOMPSON ETCH ROOM
- 6 7 8 UNDERGROUND STORAGE TANKS
- 9 FUEL OIL STORAGE TANKS AND DISTRIBUTION SYSTEM (REFER TO FIGURE 3)
- 10 FORMER COAL STORAGE AREA
- 11 KROMMA KILL
- \* 12 OILED ROADS
- 13 14 COOLING TOWERS
- \* NOT LOCATED ON DRAWING AS THERE ARE NUMEROUS LOCATIONS SITE WIDE

**LEGEND**

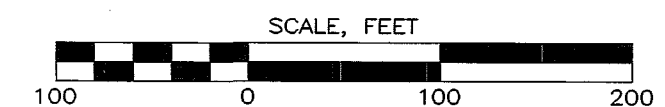
- 12 TRANSFORMER/CAPACITOR AREA LOCATION
- 13 OVERBURDEN WATER-LEVEL MONITORING LOCATION
- 14 OVERBURDEN GROUNDWATER MONITORING LOCATION (WATER LEVEL AND WATER QUALITY MONITORING)
- 15 BEDROCK GROUNDWATER MONITORING LOCATION (WATER LEVEL AND WATER QUALITY MONITORING)
- PSW-1 SURFACE WATER MONITORING LOCATION
- RW-6 OVERBURDEN RECOVERY WELL LOCATION
- RW-18 BEDROCK RECOVERY WELL LOCATION
- RW-21 WASTE MANAGEMENT AREA OVERBURDEN MONITORING WELL LOCATION
- MW-21B WASTE MANAGEMENT AREA BEDROCK MONITORING WELL LOCATION
- ANTICIPATED LOCATION OF FUEL OIL ICM INTERCEPTOR TRENCH
- FENCE LINE
- PROPERTY LINE
- UTILITY RIGHT-OF-WAY LINE



**NOTE:**  
MW-4B, RW-3 AND RW-6 ARE USED FOR GROUNDWATER (MW-4B AND RW-6) OR OIL (RW-3) RECOVERY. THESE WELLS WILL NOT BE USED FOR WATER LEVEL OR WATER QUALITY MONITORING.

**REFERENCES:**

1. McLAREN/HART ENVIRONMENTAL ENGINEERING CORPORATION DRAWING TITLED, "PROPOSED PHASE I MONITORING WELL LOCATIONS", DRAWING NUMBER 148047\_1, FIGURE 6-1, PREPARED FOR AL TECH SPECIALTY STEEL CORP., DATED: 4-9-93. SCALE: 1" = 200'
2. C.T. MALE ASSOCIATES, P.C. DRAWINGS NUMBERED 602551 THROUGH 602557.
3. C.T. MALE ASSOCIATES, P.C. SURVEY DATA FAXED ON 12/19/95, CTM PROJ. NO. 95-2794.



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**GROUNDWATER MONITORING NETWORK**  
 MAIN PLANT AREA  
 GROUNDWATER MONITORING PROGRAM  
 PREPARED FOR  
**AL Tech Specialty Steel Corporation**  
 Watervliet, New York

**ENVIRONMENTAL STRATEGIES CORPORATION**  
 Four Penn Center West  
 Suite 315  
 Pittsburgh, PA 15276  
 (412) 787-5100

**Figure 6**  
 Drawing Number  
**193052-D07**

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Tables

Table 1

Summary of Groundwater Elevations  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations								
				December 9 - 12, 1994			December 14 - 15, 1994			March 4, 1995		
				Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches) (b)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
RFI Monitoring Wells												
MW-1	987342.74	663838.10	67.18	11.86	55.32	0	12.09	55.09	0	10.79	56.39	0
MW-1B	987339.14	663850.05	66.90	11.91	54.99	0	11.90	55.00	0	11.91	54.99	0
MW-2	987431.61	664403.92	53.69	12.53	41.16	0	12.01	41.68	0	12.55	41.14	0
MW-2B	987420.77	664399.99	53.72	12.71	41.01	0	12.40	41.32	0	12.98	40.74	0
MW-3	987990.65	664527.23	54.64	17.04	37.60	0	16.91	37.73	0	16.91	37.73	0
MW-3B	988002.93	664532.32	54.31	18.00	36.31	0	18.32	35.99	0	17.02	37.29	0
MW-4	988452.56	664642.14	53.26	15.94	37.32	0	15.90	37.36	0	16.26	37.00	0
MW-4B	988442.77	664639.82	53.55	16.71	36.84	0	16.75	36.80	0	16.97	36.58	0
MW-5	989194.43	664867.51	51.35	9.35	42.00	0	9.29	42.06	0	9.43	41.92	0
MW-5B	989183.40	664861.55	51.25	12.98	38.27	0	12.91	38.34	0	12.84	38.41	0
MW-6	988898.84	664764.52	51.21	13.16	38.05	0	12.95	38.26	0.72	12.93	38.28	0.48
MW-6B	988907.16	664766.71	51.80	13.78	38.02	0	13.71	38.09	0	13.69	38.11	0
MW-7B	988434.62	663409.98	115.08	16.97	98.11	0	16.80	98.28	0	14.74	100.34	0
MW-8B	989138.15	663444.86	120.31	22.16	98.15	0	21.99	98.32	0	20.45	99.86	0
MW-9B	989511.80	663667.57	87.32	21.58	65.74	0	21.71	65.61	0	21.68	65.64	0
MW-10B	988626.56	664042.08	50.32	6.28	44.04	0	6.60	43.72	0	5.97	44.35	0
MW-11	989098.81	664047.86	53.45	11.68	41.77	0	11.62	41.83	0	11.38	42.07	0
MW-12	989476.43	664766.32	50.96	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-13	988134.07	664182.38	55.10	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-14	987424.37	664195.25	56.93	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-15	989782.70	664202.04	55.01	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-16	989686.07	664612.02	50.16	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-17	989573.47	664716.45	49.45	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-18	988900.78	664870.73	47.17	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-19	988424.44	664713.10	48.03	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-19B	988417.65	664711.64	48.16	-(c)	-	-	-(c)	-	-	-(c)	-	-

Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations								
	Northing	Easting		December 1996			February 12 & 13, 1997			September 22, 1997		
				Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>RFI Monitoring Wells (continued)</b>												
MW-1	987342.74	663838.10	67.18	8.65	58.53	0	9.09	58.09	0	8.71	58.47	0
MW-1B	987339.14	663850.05	66.90	10.98	55.92	0	12.11	54.79	0	12.56	54.34	0
MW-2	987431.61	664403.92	53.69	10.11	43.58	0	13.11	40.58	0	14.81	38.88	0
MW-2B	987420.77	664399.99	53.72	11.29	42.43	0	13.61	40.11	0	15.04	38.68	0
MW-3	987990.65	664527.23	54.64	15.86	38.78	0	15.96	38.68	0	17.61	37.03	0
MW-3B	988002.93	664532.32	54.31	16.67	37.64	0	16.95	37.36	0	18.32	35.99	0
MW-4	988452.56	664642.14	53.26	15.12	38.14	0	14.71	38.55	0	16.36	36.90	0
MW-4B	988442.77	664639.82	53.55	15.88	37.67	0	15.45	38.10	0	17.31	36.24	0
MW-5	989194.43	664867.51	51.35	8.92	42.43	0	9.06	42.29	0	9.77	41.58	0
MW-5B	989183.40	664861.55	51.25	11.87	39.38	0	11.31	39.94	0	13.15	38.10	0
MW-6	988898.84	664764.52	51.21	12.09	39.12	0	10.77	40.44	0	13.21	38.00	0.33
MW-6B	988907.16	664766.71	51.80	12.86	38.94	0	11.90	39.90	0	14.00	37.80	0
MW-7B	988434.62	663409.98	115.08	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-8B	989138.15	663444.86	120.31	-(c)	-	-	20.2	100.11	0	20.90	99.41	0
MW-9B	989511.80	663667.57	87.32	20.33	66.99	0	21.36	65.96	0	20.99	66.33	0
MW-10B	988626.56	664042.08	50.32	7.90	42.42	0	-(c)	-	-	6.49	43.83	0
MW-11	989098.81	664047.86	53.45	10.48	42.97	0	10.87	42.58	0	11.8	41.65	0
MW-12	989476.43	664766.32	50.96	11.17	39.79	0	10.80	40.16	0	12.48	38.48	0
MW-13	988134.07	664182.38	55.10	15.11	39.99	0	-(c)	-	-	-(c)	-	-
MW-14	987424.37	664195.25	56.93	5.76	51.17	0	7.89	49.04	0	9.15	47.78	0
MW-15	989782.70	664202.04	55.01	5.87	49.14	0	7.24	47.77	0	8.66	46.35	0
MW-16	989686.07	664612.02	50.16	-(c)	-	-	3.91	46.25	0	3.77	46.39	0
MW-17	989573.47	664716.45	49.45	-(c)	-	-	-(c)	-	-	-(c)	-	-
MW-18	988900.78	664870.73	47.17	-(c)	-	-	-(c)	-	-	9.58	37.59	0
MW-19	988424.44	664713.10	48.03	-(c)	-	-	-(c)	-	-	12.31	35.72	0
MW-19B	988417.65	664711.64	48.16	-(c)	-	-	-(c)	-	-	12.21	35.95	0

Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations								
				December 9 - 12, 1994			December 14 - 15, 1994			March 4, 1995		
	Northing	Easting		Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>Site Monitoring Wells</b>												
MW-A1	989429.08	664911.57	48.96	6.75	42.21	0	9.06	39.90	0	9.57	39.39	0
MW-A2	989427.67	664918.47	48.70	10.20	38.50	0	10.20	38.50	0	10.13	38.57	0
MW-B	988859.18	664749.21	48.40	10.26	38.14	2.28	10.21	38.19	1.68	10.19	38.21	0.72
MW-C	988841.22	664740.63	48.27	10.15	38.12	1.44	10.10	38.17	1.44	1.08	47.19	0.12
MW-D1	988660.04	664664.52	49.98	12.41	37.57	0	- (c)	-	-	12.21	37.77	5.28
MW-D2	988661.58	664642.7	49.70	11.98	37.72	0	- (c)	-	-	11.93	37.77	0
AP-1	- (d)	- (d)	51.85	14.28	37.57	0	14.82	37.03	0	14.48	37.37	0
AP-2	- (d)	- (d)	51.93	14.42	37.51	0	14.78	37.15	0	14.59	37.34	0
TF-1	989528.74	663913.79	62.22	6.01	56.21	0	14.94	47.28	0	5.93	56.29	0
TF-2 (e)	989595.50	663945.36	63.52	- (c)	-	-	- (c)	-	-	- (c)	-	-
PH-1	988510.66	663871.09	65.19	4.72	60.47	0	15.33	49.86	0	- (c)	-	-
H-4S	987447.77	664352.38	55.27	10.82	44.45	0	9.92	45.35	0	11.00	44.27	0
H-4D	988482.07	664355.97	55.36	12.16	43.20	0	10.57	44.79	0	12.23	43.13	0
<b>Recovery Wells</b>												
RW-1	- (d)	- (d)	58.62	- (c)	-	-	- (c)	-	-	- (c)	-	-
RW-2	988851.59	664750.04	48.82	- (c)	-	-	- (c)	-	-	- (c)	-	-
RW-3	- (d)	- (d)	52.19	- (c)	-	-	- (c)	-	-	14.49	37.70	17.04
RW-4	988560.97	664584.77	50.34	- (c)	-	-	- (c)	-	-	12.72	37.62	4.68
RW-5	988481.93	664446.30	55.15	- (c)	-	-	- (c)	-	-	17.85	37.30	0
RW-6	988456.49	664597.04	54.12	- (c)	-	-	- (c)	-	-	- (c)	-	-
RW-7	988337.97	664572.69	56.31	- (c)	-	-	- (c)	-	-	- (c)	-	-
RW-8	988515.42	664407.69	54.14	- (c)	-	-	- (c)	-	-	- (c)	-	-
RW-9	988482.07	664539.38	54.30	- (c)	-	-	- (c)	-	-	- (c)	-	-

Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane		TOC Elevation	Depth to Water and Groundwater Elevations								
	Coordinates			December 1996			February 12 & 13, 1997			September 22, 1997		
	Northing	Easting		Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>Site Monitoring Wells (continued)</b>												
MW-A1	989429.08	664911.57	48.96	4.81	44.15	0	-(c)	-	-	9.45	39.51	0
MW-A2	989427.67	664918.47	48.70	3.91	44.79	0	-(c)	-	-	10.4	38.30	0
MW-B	988859.18	664749.21	48.40	9.35	39.05	0	-(c)	-	-	10.44	37.96	trace
MW-C	988841.22	664740.63	48.27	9.21	39.06	0	-(c)	-	-	6.49	41.78	trace
MW-D1	988660.04	664664.52	49.98	11.16	38.82	0	10.64	39.34	0	12.62	37.36	3.2
MW-D2	988661.58	664642.7	49.70	11.42	38.28	0	-(c)	-	-	12.23	37.47	0
AP-1	-(d)	-(d)	51.85	13.62	38.23	0	-(c)	-	-	17.93	33.92	0
AP-2	-(d)	-(d)	51.93	13.77	38.16	0	-(c)	-	-	-(c)	-	-
TF-1	989528.74	663913.79	62.22	2.78	59.44	0	6.04	56.18	0	-(c)	-	-
TF-2	989595.50	663945.36	63.52	-(c)	-	-	-(c)	-	-	-(c)	-	-
PH-1	988510.66	663871.09	65.19	-(c)	-	-	5.50	59.69	0	6.19	59.00	0
H-4S	987447.77	664352.38	55.27	8.63	46.64	0	11.98	43.29	0	14.05	41.22	0
H-4D	988482.07	664355.97	55.36	10.41	44.95	0	13.40	41.96	0	14.86	40.50	0
<b>Recovery Wells</b>												
RW-1	-(d)	-(d)	58.62	-(c)	-	-	-(c)	-	-	-(c)	-	-
RW-2	988851.59	664750.04	48.82	9.26	39.56	0	-(c)	-	-	-(c)	-	-
RW-3	-(d)	-(d)	52.19	14.42	37.77	trace	-(c)	-	-	-(c)	-	-
RW-4	988560.97	664584.77	50.34	15.12	35.22	0	-(c)	-	-	-(c)	-	-
RW-5	988481.93	664446.30	55.15	16.97	38.18	0	16.4	38.75	0	-(c)	-	-
RW-6	988456.49	664597.04	54.12	16.08	38.04	0	-(c)	-	-	-(c)	-	-
RW-7	988337.97	664572.69	56.31	-(c)	-	-	-(c)	-	-	-(c)	-	-
RW-8	988515.42	664407.69	54.14	15.81	38.33	0	14.36	39.78	0	-(c)	-	-
RW-9	988482.07	664539.38	54.30	16.20	38.10	0	15.81	38.49	0	-(c)	-	-

Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations								
				December 9 - 12, 1994			December 14 - 15, 1994			March 4, 1995		
				Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>Observation Wells</b>												
OW-1	989364.29	664404.73	54.17	15.51	38.66	0	15.49	38.68	0	15.34	38.83	0.12
OW-2	989280.20	664504.39	55.08	16.81	38.27	1.44	16.72	38.36	1.56	16.68	38.40	0.84
OW-3	989130.00	664844.45	52.05	13.23	38.82	0	13.23	38.82	0	13.19	38.86	0
OW-4	988993.18	664546.01	51.91	13.72	38.19	1.20	13.72	38.19	0.96	13.66	38.25	0
OW-5	988759.99	664517.80	53.72	15.68	38.04	0	-(c)	-	-	15.63	38.09	0
OW-6	988625.10	664352.09	54.76	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-7	988449.39	664196.39	56.46	18.35	38.11	0	18.31	38.15	0	-	-	-
OW-8	988395.82	664624.25	53.86	-(c)	-	-	16.47	37.39	0	16.74	37.12	0
OW-9 (e)	-(d)	-(d)	62.26	-	-	-	-	-	-	-	-	-
OW-10	988350.30	663965.04	65.18	14.24	50.94	0	14.09	51.09	0	14.02	51.16	0
OW-11	988526.19	664316.41	55.46	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-12	988271.25	664589.32	53.80	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-13	988559.24	664645.56	52.69	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-14	988630.37	664579.06	52.91	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-15	988619.53	664422.49	53.37	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-16	988751.79	664713.03	47.17	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-17	988759.61	664523.93	54.21	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-18	988935.75	664488.75	50.86	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-19	989099.24	664635.81	48.42	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-20	987707.10	664064.63	58.68	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-21	987805.58	663857.91	60.87	-(c)	-	-	-(c)	-	-	-(c)	-	-



Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane		TOC Elevation	Depth to Water and Groundwater Elevations								
	Coordinates			December 1996			February 12 & 13, 1997			September 22, 1997		
	Northing	Easting		Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>Observation Wells</b>												
OW-1	989364.29	664404.73	54.17	15.06	39.11	0	14.23	39.94	0	15.60	38.57	trace
OW-2	989280.20	664504.39	55.08	16.30	38.78	0.22	15.51	39.57	0.2	17.35	37.73	0.02
OW-3	989130.00	664844.45	52.05	12.13	39.92	0	9.76	42.29	0.01	13.41	38.64	0
OW-4	988993.18	664546.01	51.91	13.48	38.43	0.36	13.31	38.60	1.51	dry	-	trace
OW-5	988759.99	664517.80	53.72	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-6	988625.10	664352.09	54.76	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-7	988449.39	664196.39	56.46	18.70	37.76	0	17.10	39.36	0	18.91	37.55	0
OW-8	988395.82	664624.25	53.86	15.35	38.51	0	15.05	38.81	0	16.63	37.23	0
OW-9 (e)	-(d)	-(d)	62.26	-(c)	-	-	-(c)	-	-	-(c)	-	-
OW-10	988350.30	663965.04	65.18	15.46	49.72	0	14.00	51.18	0	14.67	50.51	0
OW-11	988526.19	664316.41	55.46	17.12	38.34	0	16.11	39.35	0	19.11	36.35	0
OW-12	988271.25	664589.32	53.80	15.67	38.13	0	15.31	38.49	0	16.88	36.92	0
OW-13	988559.24	664645.56	52.69	14.29	38.40	0	13.88	38.81	0	16.39	36.30	trace
OW-14	988630.37	664579.06	52.91	14.45	38.46	0	13.80	39.11	0	15.74	37.17	0
OW-15	988619.53	664422.49	53.37	14.95	38.42	0	14.15	39.22	0	16.11	37.26	0
OW-16	988751.79	664713.03	47.17	8.36	38.81	0	7.36	39.81	0	9.45	37.72	0
OW-17	988759.61	664523.93	54.21	15.65	38.56	0	14.64	39.57	0.01	16.67	37.54	0
OW-18	988935.75	664488.75	50.86	12.35	38.51	0	11.37	39.49	0	13.32	37.54	0
OW-19	989099.24	664635.81	48.42	9.31	39.11	0	7.87	40.55	0	-(c)	-	-
OW-20	987707.10	664064.63	58.68	10.23	48.45	0	11.64	47.04	0	12.48	46.20	0
OW-21	987805.58	663857.91	60.87	10.30	50.57	0	11.61	49.26	0	12.68	48.19	0

Table 1 (continued)

Summary of Groundwater Elevations  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations								
				December 9 - 12, 1994			December 14 - 15, 1994			March 4, 1995		
	Northing	Easting		Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)
<b>Piezometers</b>												
PZ-1	988561.26	664592.25	50.08	- (c)	-	-	12.44	37.64	5.52	12.50	37.58	6.12
PZ-2	988566.13	664582.95	50.07	- (c)	-	-	12.37	37.70	3.96	- (c)	-	-
PZ-3	988591.94	664589.62	49.81	- (c)	-	-	12.03	37.78	0	11.71	38.10	0
PZ-4	988467.02	663812.13	64.38	- (c)	-	-	5.31	59.07	0	4.59	59.79	0
PZ-5	988402.59	663878.85	64.85	- (c)	-	-	10.10	54.75	0	10.04	54.81	0
PZ-6	988531.97	663923.58	53.92	- (c)	-	-	4.53	49.39	0	4.46	49.46	0
PZ-7	988517.12	664420.63	51.18	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-8	988478.73	664556.29	53.81	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-9	988550.00	664540.18	50.14	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-10	988403.42	664592.14	54.43	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-11	988463.98	664599.24	53.67	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-12	988529.93	664612.87	53.40	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-13	988385.98	664621.40	53.42	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-14	987646.48	664379.91	53.61	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-15	988114.16	663918.94	62.89	- (c)	-	-	- (c)	-	-	- (c)	-	-
PZ-16	989350.40	664101.56	53.21	- (c)	-	-	- (c)	-	-	- (c)	-	-

Table 1 (continued)

Summary of Groundwater Elevations  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well	New York State Plane Coordinates		TOC Elevation	Depth to Water and Groundwater Elevations									
				December 1996			February 12 & 13, 1997			September 22, 1997			
				Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	Depth to Water (feet)	Groundwater Elevation (ft-msl)	LNAPL Thickness (inches)	
<b>Piezometers (continued)</b>													
PZ-1	988561.26	664592.25	50.08	- (c)	-	-	- (c)	-	-	-	- (c)	-	-
PZ-2	988566.13	664582.95	50.07	- (c)	-	-	- (c)	-	-	-	- (c)	-	-
PZ-3	988591.94	664589.62	49.81	- (c)	-	-	- (c)	-	-	-	- (c)	-	-
PZ-4	988467.02	663812.13	64.38	4.11	60.27	0.07	5.05	59.33	0	5.66	58.72	0	0
PZ-5	988402.59	663878.85	64.85	8.81	56.04	0	10.07	54.78	0	11.32	53.53	0	0
PZ-6	988531.97	663923.58	53.92	4.63	49.29	0	4.67	49.25	0	5.02	48.90	0	0
PZ-7	988517.12	664420.63	51.18	3.50	47.68	0	- (c)	-	-	- (c)	-	-	-
PZ-8	988478.73	664556.29	53.81	15.63	38.18	0	15.16	38.65	0	16.98	36.83	0	0
PZ-9	988550.00	664540.18	50.14	- (c)	-	-	- (c)	-	-	12.80	37.34	0	0
PZ-10	988403.42	664592.14	54.43	16.35	38.08	0	15.91	38.52	0	17.52	36.91	0	0
PZ-11	988463.98	664599.24	53.67	15.57	38.10	0	15.16	38.51	0	16.98	36.69	0	0
PZ-12	988529.93	664612.87	53.40	15.10	38.30	0	14.59	38.81	0	16.31	37.09	0	0
PZ-13	988385.98	664621.40	53.42	- (c)	-	-	14.93	38.49	0	- (c)	-	-	-
PZ-14	987646.48	664379.91	53.61	- (c)	-	-	11.57	42.04	0	- (c)	-	-	-
PZ-15	988114.16	663918.94	62.89	- (c)	-	-	- (c)	-	-	- (c)	-	-	-
PZ-16	989350.40	664101.56	53.21	- (c)	-	-	7.21	46.00	0	- (c)	-	-	-

a/ TOC = top-of-casing. The surveyed elevation is for the marked top-of-casing for PVC riser, if present, or in the absence of PVC, the surveyed TOC is the steel well casing.

At RW-8, RW-9, OW-13, OW-14, OW-15 and PZ-13, a well and piezometer were both installed within the same borehole and are screened at similar depths.

The TOC shown in the table represents that for the "piezometer" at each location.

Depth to water measurements from the marked top-of-casing. All elevations are presented in feet above mean sea level (ft-msl).

b/ Light non-aqueous phase liquid (LNAPL) was detected at several locations; water levels presented have been corrected to account for the measured oil present using

a specific gravity of C W Lc = corrected water level in feet

W Lm = measured water level in feet

Ta = apparent thickness of LNAPL

S G o = specific gravity of LNAPL (assume 0.82 for No. 2 fuel oil).

c/ Water levels were not collected.

d/ Surveyed coordinates were not generated/available for these locations.

e/ TF-2 is damaged and inaccessible; OW-9 has not been located since the initiation of the Phase I RFI.

Table 2

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
A.I. Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-1				Well MW-1B			
	Phase I		Phase II		Phase I		Phase II	
	RAT-GW-MW1-1210		WAT-GW-MW1-1296		RAT-GW-MW1B-1210		WAT-GW-MW1B-1296	
	9412-1187 94-5076 12/10/94		9612-1204 96-5897 12/10/96		9412-1188 94-5076 12/10/94		9412-1189 94-5076 12/10/94	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	5 U (b)	-	5 U	-	5 U	-	5 U	-
Aluminum	4790	33.4	-	-	1310	33.4 U	1350	1350
Antimony	28.7 U	28.7 U	-	-	46.9	28.7 U	46.9	28.7
Arsenic	1.90	1.00 U	-	4.8 J	1.00 U	1.0 U	1.00 U	1.20 U
Barium	178	9.80	517	63.1 J	2690	2670	2710	2710
Beryllium	1.80	0.890	4.5 J	1.1 J	1.40	0.910	1.40	1.00
Cadmium	3.70 U	3.70 U	5.5	2.2 U	3.70 U	3.70 U	3.70 U	3.70 U
Calcium	65200	48900	-	-	58900	65200	58600	56900
Chromium	29.8	8.30 U	347	67.2	8.30 U	8.30 U	9.70	8.30 U
Cobalt	14.9	5.80 U	-	-	8.00	5.80 U	6.50	5.80 U
Copper	25.1	12.4	-	-	8.40	6.10	7.20	6.70
Iron	9230	69.3	-	45.8 J	2690	61.2	2740	51.3
Lead	13.1	1.40	-	-	3.10	1.00 U	1.00 U	3.60
Magnesium	17100	13600	12300	320 U	17000	15900	17000	16100
Manganese	878	150.0	-	-	269	154	273	147
Mercury	0.200 U	0.200 U	-	-	0.200 U	0.200 U	0.200 U	0.200 U
Molybdenum	189	250	1100	1580	12.0 U	12.0 U	12.0 U	12.0 U
Nickel	26.8	17.3	254	15.1 J	14.3	9.80 U	12.9	19.9
Potassium	7650	6680	-	-	4480	4430	4540	4460
Selenium	2.30	2.60	-	-	1.00 U	1.00 U	1.00 U	1.00 U
Silver	5.80 U	5.80 U	-	-	5.80 U	5.80 U	5.80 U	5.80 U
Sodium	23600	23500	-	-	52900	53700	53300	53900
Thallium	1.90 U	1.90 U	-	-	1.90 U	1.90 U	1.90 U	1.90 U
Vanadium	14.1	6.90 U	-	-	8.70	6.90 U	6.90	6.90 U
Zinc	57.7	13.4	-	-	24.7	11.2	27.6	11.9
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	0.10 U	-	2.1	-	0.42	-	0.51	-
Alkalinity	-	-	157	-	-	-	-	260
Biological Oxygen Demand (5-day) (mg/l)	1.3	-	-	-	1.1	-	-	-
Chemical Oxygen Demand (mg/l)	5.0 U	-	-	-	5.0 U	-	-	-
Chloride (mg/l)	20	-	-	-	27	-	29	-
Fluoride (mg/l)	0.68	-	-	-	0.55	-	0.63	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.10	-	-	-	0.10	-	0.10 U	-
Total Phenols (mg/l)	0.0050 U	-	0.005 U	-	0.0050 U	-	0.0050 U	-
Sulfate (mg/l)	60	-	-	-	16	-	14	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1 U	-	1.0 U	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	230	-	-	-	220	-	-	-
pH (standard units) (FIELD) (c)	8.42	-	11.57	-	7.28	-	-	7.83
Specific Conductance (µmhos/cm) (FIELD) (c)	380	-	781	-	660	-	-	721
Temperature (°C) (FIELD)	-	-	8.7	-	-	-	-	-
Turbidity (NTU) (FIELD)	>200	-	10	-	138	-	-	-

Bold values indicate exceedance of TAGM 3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-2								Well MW-2B	
	Phase I				Phase II				Phase I	
	RAT-GW-MW2-1209		RAT-GW-MW2-1209D		WAT-GW-MW2-1296		WAT-GW-MW2-1296D		RAT-GW-MW2B-1209	
	9412-1095 94-5064 12/09/94		9412-1097 94-5064 12/09/94		9612-1214 96-5897 12/10/96		9612-1215 96-5897 12/10/96		9412-1096 94-5064 12/09/94	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	-	-	-	-	5 U	-
Aluminum	1463	40.8 J	1462	21.0 U	-	-	-	-	5570	61.3 J
Antimony	27.0 U	27.0 U	27.0 U	27.0 U	-	-	-	-	27.0 U	27.0 U
Arsenic	1.00 U	1.00 U	1.00 U	1.00 U	-	-	-	-	5.90 J	3.60 J
Barium	97.4 J	86.5 J	98.0 J	84.6 J	60.8 J	-	-	-	2390	1430
Beryllium	1.65 J	1.71 J	1.52 J	1.39 J	-	-	-	-	2.40 J	0.300 U
Cadmium	3.00 U	3.00 U	3.00 U	3.00 U	-	-	-	-	3.30 J	3.00 U
Calcium	-	-	67010	66984	-	-	-	-	48300	11100
Chromium	6.60 U	6.60 U	6.60 U	6.60 U	-	-	-	-	6.60 U	6.60 U
Cobalt	7.42 J	13.5 J	7.66 J	5.60 U	-	-	-	-	28.1 J	5.60 U
Copper	16.3 J	20.5 J	15.5 J	20.1 J	-	-	-	-	58.9	9.70 J
Iron	1360	51.5 J	1365	52.1 J	-	-	-	-	16700	83.1 J
Lead	1.67 J	1.00 U	1.70 J	1.34 J	-	-	-	-	29.3	1.00 U
Magnesium	-	-	19869	19565	15100	-	-	-	12700	3170 J
Manganese	4016	4058	4010	4008	-	-	-	-	1740	17.1
Mercury	0.200 U	0.200 U	0.200 U	0.200 U	-	-	-	-	0.200 U	0.200 U
Molybdenum	12 U	12 U	10.6	10.6	20.8	-	-	-	14.6	11.1
Nickel	20.9 J	25.6 J	24.8 J	20.9 J	-	-	-	-	36.0 J	15.80 U
Potassium	-	-	1751 J	1416 J	-	-	-	-	6950	5950
Selenium	1.75 J	3.01 J	3.04 J	1.29 J	-	-	-	-	1.10 U	1.10 U
Silver	6.90 U	6.90 U	6.90 U	6.90 U	-	-	-	-	6.90 U	6.90 U
Sodium	-	-	56308	56485	-	-	-	-	141000	142000
Thallium	2.30 U	2.30 U	2.30 U	2.30 U	-	-	-	-	2.30 U	2.30 U
Vanadium	8.20 U	8.20 U	8.20 U	8.20 U	-	-	-	-	17.2 J	8.20 U
Zinc	88.4	75.0	87.4	73.1	-	-	-	-	122	11.9 J
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.10 U	-	0.10 U	-	0.1 U	-	-	-	1.4	-
Alkalinity	-	-	-	-	157	-	-	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	19	-	-	-	-	-	-	-	94	-
Chemical Oxygen Demand (mg/l)	5.0 U	-	-	-	-	-	-	-	37	-
Chloride (mg/l)	94	-	43	-	-	-	-	-	97	-
Fluoride (mg/l)	0.17	-	0.19	-	-	-	-	-	0.45	-
Nitrate (mg/l NO <sub>3</sub> -N)	9.8	-	0.10 U	-	-	-	-	-	4.2	-
Total Phenols (mg/l)	0.0050 U	-	0.0050 U	-	0.005 U	-	-	-	0.0050 U	-
Sulfate (mg/l)	82	-	86	-	-	-	-	-	19	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1.0 U	-	1 U	-	R	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	250	-	-	-	-	-	-	-	170	-
pH (standard units) (FIELD) (c)	6.58	-	-	-	6.68	-	-	-	8.87	-
Specific Conductance (µmhos/cm) (FIELD) (c)	600	-	-	-	538	-	-	-	760	-
Temperature (°C) (FIELD)	-	-	-	-	13.2	-	-	-	-	-
Turbidity (NTU) (FIELD)	161	-	-	-	<10	-	-	-	>200	-

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-2B (continued)		Well MW-3				Well MW-3B			
	Phase II		Phase I		Phase II		Phase I		Phase II	
	WAT-GW-MW2B-1296		RAT-GW-MW3-1209		WAT-GW-MW3-1296		RAT-GW-MW3B-1210		WAT-GW-MW3B-1296	
	9612-1216 96-5897 12/10/96		9412-1100 94-5064 12/09/94		9612-1348 96-5919 12/11/96		9412-1192 94-5076 12/10/94		9612-1337 96-5919 12/11/96	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	5 U	-	5 U	-	5 U	-
Aluminum	-	-	1690	32.2 J	-	-	3560	87.6	-	-
Antimony	-	-	2.7 U	2.70 U	-	-	28.7 U	28.7 U	-	-
Arsenic	-	-	1.00 U	1.0 U	1.8 U	-	25.5	16.9	9.4 J	10.7
Barium	1830	1420	93.0 J	80.7 J	77.8 J	-	586	227	1330	742
Beryllium	-	-	1.30 J	1.30 J	1.2 J	-	0.440	0.400 U	0.82 J	0.6 U
Cadmium	-	-	3.00 U	3.00 U	3.6 J	-	3.70 U	3.70 U	2.2 U	2.2 U
Calcium	-	-	59500	61300	-	-	18200	7560	-	-
Chromium	-	-	7.50 J	7.00 J	17.2 J	-	23.9	13.1	29.9	9.8 J
Cobalt	-	-	28.1 J	16.0 J	-	-	16.0	5.80 U	-	-
Copper	-	-	12.3 J	15.2 J	-	-	17.7	8.70	-	-
Iron	-	-	2270	59.9 J	513	-	6600	84.7	8180	203
Lead	-	-	3.50	2.20 J	-	-	27.1	1.00 U	3.3	30
Magnesium	8600	4470 J	17700	17900	15000	-	3580	814	4550 J	709 J
Manganese	-	-	129	54.4	-	-	366	1.50 U	-	-
Mercury	-	-	0.200 U	0.200 U	0.2 U	-	0.200 U	0.200 U	0.20 U	0.2 U
Molybdenum	10.3	10.3	10.6	11.2	12.4	-	27.6	39.0	10.8	18
Nickel	-	-	15.80 U	15.8 U	38 J	-	32.0	9.80 U	70.3	19.5 J
Potassium	-	-	6240	6120	-	-	5260	4580	-	-
Selenium	-	-	1.10 U	1.10 U	-	-	2.10	2.00	-	-
Silver	-	-	6.90 U	6.90 U	-	-	5.80 U	5.80 U	-	-
Sodium	-	-	79100	82100	-	-	138000	135000	-	-
Thallium	-	-	2.30 U	2.30 U	-	-	1.90 U	1.90 U	-	-
Vanadium	-	-	8.20 U	8.20 U	-	-	17.3	11.2	-	-
Zinc	-	-	82.1	80.1	-	-	152	30.2	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.68	-	0.16	-	0.10 U	-	0.93	-	0.51	-
Alkalinity	179	-	-	-	180	-	-	-	231	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	28	-	-	-	1.0 U	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	5.0 U	-	-	-	6.6	-	-	-
Chloride (mg/l)	-	-	130	-	80	-	64	-	65	-
Fluoride (mg/l)	-	-	0.11	-	0.17	-	0.81	-	1.3	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	1.0	-	1.9	-	0.10 U	-	0.47	-
Total Phenols (mg/l)	0.0050 U	-	0.0050 U	-	0.005 U	-	0.0050 U	-	0.005 U	-
Sulfate (mg/l)	-	-	64	-	68	-	13	-	1 U	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1.0 U	-	1 U	-	1.0 U	-	R	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	220	-	-	-	60	-	-	-
pH (standard units) (FIELD) (c)	9.20	-	6.76	-	6.64	-	8.07	-	8.98	-
Specific Conductance (µmhos/cm) (FIELD) (c)	780	-	800	-	685	-	500	-	640	-
Temperature (°C) (FIELD)	10.5	-	-	-	15.4	-	-	-	14.6	-
Turbidity (NTU) (FIELD)	>999	-	>200	-	<10	-	>200	-	230	-

Bold values indicate exceedance of TAGM 302B Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well ID: Investigation: Sample ID: Laboratory Sample ID: Laboratory Project No.: Sample Date:	Well MW-4						Well MW-4B					
	Phase I		Phase II				Phase I		Phase II			
	RAT-GW-MW4-1210		WAT-GW-MW4-1296		WAT-GW-MW4-0997		RAT-GW-MW4B-1210		WAT-GW-MW4B-1296			
	9412-1326 94-5101 12/10/94		9612-1339 96-5919 12/11/96		9709-3150 97-4115 09/23/97		9412-1327 94-5101 12/10/94		9612-1340 96-5919 12/11/96			
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>												
Cyanide	6	-	5 U	-	5 U	-	7	-	5 U	-		
Aluminum	64400	59900	-	-	5000	-	942000	926000	-	-		
Antimony	27.0 U	37.5 J	-	-	5 U	-	459	169	-	-		
Arsenic	5.60 J	5.00 J	1.8 U	-	2 U	-	65.4	66.9	25.5	1.8 U		
Barium	130 J	110 J	16.1 J	-	160	-	589.0	571	200	184 J		
Beryllium	9.00	8.30	0.6 U	-	1 U	-	139	139	41	31.3		
Cadmium	3.40 J	4.70 J	2.2 U	-	1 U	-	74.2	71.3	37	31		
Calcium	64900	61400	-	-	91000	-	3540000	3420000	-	-		
Chromium	23.5	20.9	7.8 U	-	22	-	86500	85700	4600 U	2860		
Cobalt	102	92.6	-	-	24	-	4260	4260	-	-		
Copper	13.5 J	15.4 J	-	-	5	-	5270	5010	-	-		
Iron	1440	113	144	-	2900	-	681000	658000	54000	-		
Lead	1.90 J	1.90 J	1.7 U	-	4	-	30.8	30.6	18	1.7 U		
Magnesium	28600	26800	5130	-	63000	-	1300000	1260000	3380	371000		
Manganese	12900	12100	-	-	7900	-	245000	232000	-	-		
Mercury	0.200 U	0.200 U	0.2 U	-	0.20 U	-	0.200 U	0.200 U	0.24	0.20 U		
Molybdenum	10.6	10.6	10.3	-	30	-	264.0	256	53	41.4		
Nickel	3460	3270	185	-	1000	-	334000	321000	82000	80700		
Potassium	21500	20100	-	-	17000	-	668000	658000	-	-		
Selenium	1.10 U	1.10 U	-	-	9	-	5.5 U	5.5 U	-	-		
Silver	8.80 J	8.20 J	-	-	1 UJ	-	20.4	19.1	-	-		
Sodium	103000	97900	-	-	100000 J	-	594000	586000	-	-		
Thallium	2.30 U	2.30 U	-	-	4 U	-	2.30 U	2.30 U	-	-		
Vanadium	9.30 J	8.20 U	-	-	3	-	94.4	99.9	-	-		
Zinc	75.6	94.5	-	-	29 J	-	11800	11700	-	-		
<b>Miscellaneous</b>												
Ammonia (mg/l NH <sub>3</sub> -N)	1.1	-	0.4	-	0.1 U	-	12	-	4.2	-		
Alkalinity	-	-	273	-	-	-	-	-	42.2	-		
Biological Oxygen Demand (5-day) (mg/l)	5.1	-	-	-	-	-	40	-	-	-		
Chemical Oxygen Demand (mg/l)	58	-	-	-	-	-	5 U	-	-	-		
Chloride (mg/l)	40	-	140	-	74	-	64	-	160	-		
Fluoride (mg/l)	120	-	23	-	31	-	4.3	-	250	-		
Nitrate (mg/l NO <sub>3</sub> -N)	48	-	1.3	-	1.5	-	2900	-	1200	-		
Total Phenols (mg/l)	0.0050 U	-	0.011	-	-	-	0.013	-	0.005 U	-		
Sulfate (mg/l)	210	-	350	-	18	-	1300	-	10400	-		
Total Petroleum Hydrocarbons (mg/l)	0.33 J	-	R	-	0.1 UJ	-	0.5 J	-	1 UJ	-		
Hardness (mg/l CaCO <sub>3</sub> )	280	-	-	-	-	-	14000	-	-	-		
pH (standard units) (FIELD) (c)	6.20	-	6.27	-	6.72	-	4.09	-	5.25	-		
Specific Conductance (µmhos/cm) (FIELD) (c)	1100	-	1490	-	1450	-	30100	-	10400	-		
Temperature (°C) (FIELD)	-	-	16.3	-	15.4	-	-	-	15.4	-		
Turbidity (NTU) (FIELD)	47	-	<10	-	70	-	31	-	99	-		

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Altch/191052/Monitoring Plan/IWmetals.xls  
gw-inorganics (2)

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-4B (continued)						Well MW-5			
	Phase II		Post-Phase II		Phase I		Phase II			
	WAT-GW-MW4B-1296D	WAT-GW-MW4B-0997	WAT-GW-MW4B-1298	RA1-GW-MW5-1209	WAT-GW-MW5-1296					
	9612-1343	9709-3151	9812-2735	9412-1101	9612-1206					
	96-5919	97-4115	98-7398	94-5064	96-5897					
	12/11/96	09/23/97	12/22/98	12/09/94	12/10/96					
	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	-	-	5 U	-	5 U	-
Aluminum	-	-	32000	-	28000	20000	97.6 J	21.0 J	-	-
Antimony	-	-	5 U	-	6	5 U	27.0 U	27.0 U	-	-
Arsenic	27	24	7	-	3	11	2.00 J	1.20 J	-	3 J
Barium	190	180	85	-	110	95	90.0 J	91.7 J	101 J	-
Beryllium	38	38	3	-	5	4	1.10 J	1.10 J	-	-
Cadmium	34	31	1	-	1	2	3.00 U	3.00 U	-	-
Calcium	-	-	280000	-	310000	280000	48800	51900	-	-
Chromium	4400	2700	920	-	1300	260	11.5	6.60 U	7.8 U	-
Cobalt	-	-	250	-	220	190	15.7 J	5.60 U	-	-
Copper	-	-	46	-	46	32	10.2 J	13.4 J	-	-
Iron	60000	-	13000	-	14000	3800	1490	982	2490	-
Lead	29	140	12	-	37	21	6.00	4.40	1.7 U	-
Magnesium	360	353000	110000	-	130000	110000	10800	11600	10700	-
Manganese	-	-	19000	-	21000	20000	462	491	-	-
Mercury	0.20 U	0.20 U	0.20 U	-	0.2 U	0.2 U	0.200 U	0.200 U	-	-
Molybdenum	45	78	10 U	-	10 U	10 U	47.3	50.6	35.5	-
Nickel	79000	77000	18000	-	16000	14000	15.80 U	15.80 U	10.1 U	-
Potassium	-	-	68000	-	71000	64000	2220 J	2540 J	-	-
Selenium	-	-	3 U	-	2 U	2 U	2.50 J	1.50 J	-	-
Silver	-	-	1 U	-	1	1	6.90 U	6.90 U	-	-
Sodium	-	-	170000 J	-	210000	190000	35600	39100	-	-
Thallium	-	-	4 U	-	4 U	4 U	2.30 U	2.30 U	-	-
Vanadium	-	-	1 U	-	5 U	5 U	8.20 U	8.20 U	-	-
Zinc	-	-	860 J	-	2300	1600	42.0	21.1	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	-	-	2.1	-	0.10 U	-	0.1	-	0.1 U	-
Alkalinity	-	-	-	-	226	-	-	-	136	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	30	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	5.0 U	-	-	-
Chloride (mg/l)	-	-	340	-	130	-	60	-	-	-
Fluoride (mg/l)	-	-	30	-	34	-	0.33	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	470	-	300	-	0.12	-	-	-
Total Phenols (mg/l)	-	-	-	-	0.072	-	0.0050 U	-	0.005 U	-
Sulfate (mg/l)	-	-	310	-	380	-	33	-	-	-
Total Petroleum Hydrocarbons (mg/l)	-	-	0.1 U	-	5 U	-	1.0 U	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	170	-	-	-
pH (standard units) (FIELD) (c)	-	-	5.79	-	NA (g)	-	6.87	-	7.37	-
Specific Conductance (µmhos/cm) (FIELD) (c)	-	-	4030	-	NA	-	500	-	495	-
Temperature (°C) (FIELD)	-	-	14.8	-	NA	-	-	-	11.4	-
Turbidity (NTU) (FIELD)	-	-	13	-	NA	-	110	-	10	-

Bold values indicate exceedance of TAGM 3028 Action Levels, or NYSWQS, or both



Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

	Well MW-5B				Well MW-6			
	Phase I		Phase II		Phase I		Phase II	
	RAT-GW-MW5B-1209	WAT-GW-MW5B-1296	RAT-GW-MW6-1210	WAT-GW-MW6-1296	RAT-GW-MW6-1210	WAT-GW-MW6-1296	WAT-GW-MW6-0997	
Investigation:	9412-1198		9612-1205		9412-1328		9612-1205	
Sample I.D.:	94-5077		96-5897		94-5101		96-5897	
Laboratory Sample I.D.:	12/09/94		12/10/96		12/10/94		12/10/96	
Laboratory Project No.:							97-4115	
Sample Date:							09/23/97	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	5 U	-	-	-	5 U	-	5 U	-
Aluminum	4510	33.4 U	-	-	2430	955	-	770
Antimony	28.7 U	28.7 U	-	-	27.0 U	27.0 U	-	5 U
Arsenic	5.90	4.30	1.8 U	1.8 U	8.50 J	9.50 J	10.3	10
Barium	143	188	238	294	100.0 J	76.0 J	189 J	93
Beryllium	1.20	0.400 U	-	-	1.30 J	1.10 J	1.6 J	1 U
Cadmium	3.70 U	3.70 U	-	-	3.00 U	4.30 J	3.3 J	1 U
Calcium	36000	19300	-	-	44900	46700	-	28000
Chromium	47.6	8.30 U	25	8 J	25.90	118.0	7.8 U	3
Cobalt	12.5	5.80 U	-	-	5.60 U	5.6 U	-	1 U
Copper	30.4	6.40	-	-	15.9 J	17.6 J	-	8
Iron	6890	39.7	15600	226	8670	5680	16000	5900
Lead	10.6	1.00 U	4.1	1.7 U	4.10	2.50 J	2.8 J	5
Magnesium	8250	5260	7790	1990 J	10400	10700	16400	6100
Manganese	419	28.4	-	-	2050	2130	-	1000
Mercury	0.200 U	0.200 U	-	-	0.200 U	0.200 U	0.2 U	0.9 J
Molybdenum	12.0 U	12.0 U	11	10.3	53.6	56.2	56.6	24
Nickel	82.6	13.8	41.9	10.1 U	48.2	344.0	21.5 J	9
Potassium	9630	8810	-	-	3420 J	3540 J	-	2100 U
Selenium	1.00 U	1.00 U	-	-	1.10 U	1.10 U	-	3 U
Silver	5.80 U	5.80 U	-	-	6.90 U	7.90 J	-	1 UJ
Sodium	306000	316000	-	-	29300	29300	-	22000 J
Thallium	1.90 U	1.90 U	-	-	2.30 U	2.30 U	-	4 U
Vanadium	23.4	6.90 U	-	-	22.9 J	9.00 J	-	11
Zinc	173	9.40	-	-	24.0	44.3	-	15 J
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	1.7	-	1.6	-	0.22	-	0.1 U	0.22
Alkalinity	-	-	339	-	-	-	238	-
Biological Oxygen Demand (5-day) (mg/l)	4.8	-	-	-	3.4	-	-	-
Chemical Oxygen Demand (mg/l)	130	-	-	-	81	-	-	-
Chloride (mg/l)	53	-	-	-	50	-	59	-
Fluoride (mg/l)	0.22	-	-	-	0.72	-	0.68	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.20	-	-	-	0.29	-	0.1 UJ	0.13
Total Phenols (mg/l)	0.0050 U	-	0.005 U	-	0.0050 U	-	0.11	0.1 U
Sulfate (mg/l)	430	-	-	-	25	-	21	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1 U	-	1.0 U	-	1 U	-
Hardness (mg/l CaCO <sub>3</sub> )	120	-	-	-	150	-	-	-
pH (standard units) (FIELD) (c)	7.87	-	9.14	-	6.67	-	6.98	7.29
Specific Conductance (µmhos/cm) (FIELD) (c)	1620	-	1410	-	470	-	698	2710
Temperature (°C) (FIELD)	-	-	12.6	-	-	-	12.6	20.3
Turbidity (NTU) (FIELD)	175	-	999	-	151	-	10	10

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well ID: Investigation: Sample ID: Laboratory Sample ID: Laboratory Project No.: Sample Date:	Well MW-6B				Well MW-7B				Well MW-8B	
	Phase I		Phase II		Phase I		Phase II		Phase I	
	RAT-GW-MW6B-1210		ALT-GW-MW6B-1296		RAT-GW-MW7B-1210		WAT-GW-MW7B-1296		RAT-GW-MW8B-1210	
	9412-1329		9612-1207		9412-1193		9612-0974		9412-1194	
	94-5101		96-5897		94-5076		96-5860		94-5076	
	12/10/94		12/10/96		12/10/94		12/09/96		12/10/94	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-
Aluminum	12100	44.2 J	-	-	478	33.4 U	-	-	1310	33.4
Antimony	27.0 U	27.0 U	-	-	28.7 U	65.0	-	-	28.7 U	35.1
Arsenic	4.00 J	2.10 J	1.8 U	1.8 U	1.00 U	1.00 U	1.8 U	-	1.00 U	1.00 U
Barium	2330	2130	2490	2470	245	359	47.9 J	-	95.4	92.8
Beryllium	2.30 J	1.30 J	1.7 J	1.7	3.10	2.60	1.3 J	-	2.50	2.40
Cadmium	4.20 J	8.00	2.2 U	2.2 U	3.70 U	3.70 U	2.2 U	-	3.70 U	3.70 U
Calcium	59300	53700	-	-	123000	115000	-	-	103000	105000
Chromium	58.7	12.7	10	9.3 J	8.30 U	8.30 U	7.8 U	-	15.8	8.30 U
Cobalt	16.0 J	5.60 U	-	-	5.80 U	5.80 U	-	-	18.3	9.20
Copper	28.2	14.1 J	-	-	33.8	23.9	-	-	17.9	17.3
Iron	15000	83.9 J	1760	49 J	1080	23.6	-	-	2360	87.0
Lead	65.2	14.7	2.6 J	1.7 U	1.00 U	3.20	4.1 J	-	9.80	1.00 U
Magnesium	21700	16600	25000	24700	46300	42500	24900	-	58900	60700
Manganese	625	308	-	-	464	349	-	-	377	308
Mercury	0.200 U	0.200 U	0.20 U	0.20 U	0.200 U	0.200 U	0.20 U	-	0.200 U	0.200 U
Molybdenum	10.8	10.6	10.3	10.3	12.0 U	12.0 U	20.1	-	21.0	17.0
Nickel	71.7	35.4 J	12.3 J	10.1	13.0	19.9	10.1	-	15.7	9.80 U
Potassium	10500	7450	-	-	6880	8090	-	-	6770	6560
Selenium	1.10 U	1.10 U	-	-	1.00 U	1.00 U	-	-	1.00 U	1.00 U
Silver	8.40 J	9.10 J	-	-	5.80 U	5.80 U	-	-	5.80 U	5.80 U
Sodium	159000	166000	-	-	40600	51900	-	-	88900	89900
Thallium	2.30 U	2.30 U	-	-	1.90 U	1.90 U	-	-	1.90 U	1.90 U
Vanadium	31.5 J	8.20 U	-	-	6.90 U	6.90 U	-	-	6.90 U	6.90 U
Zinc	84.5	27.0	-	-	65.7	14.1 U	-	-	162	41.0
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	1.4	-	1.4	-	0.75	-	0.16	-	0.89	-
Alkalinity	-	-	340	-	-	-	146	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	2.6	-	-	-	1.2	-	-	-	1.0 U	-
Chemical Oxygen Demand (mg/l)	19	-	-	-	5.0 U	-	-	-	5.0 U	-
Chloride (mg/l)	180	-	260	-	11	-	0.5 U	-	49	-
Fluoride (mg/l)	0.39	-	0.32	-	0.15	-	0.12	-	0.30	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.25	-	0.1 UJ	-	0.21	-	0.1 UJ	-	0.10 U	-
Total Phenols (mg/l)	0.0050 U	-	0.005 U	-	0.0050 U	-	0.005 U	-	0.0050 U	-
Sulfate (mg/l)	9.3	-	5.9	-	170	-	110	-	280	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1 U	-	1.0 U	-	1 U	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	240	-	-	-	500	-	-	-	500	-
pH (standard units) (FIELD) (c)	6.05	-	7.34	-	7.25	-	7.02	-	7.30	-
Specific Conductance (µmhos/cm) (FIELD) (c)	1280	-	1330	-	1000	-	533	-	1350	-
Temperature (°C) (FIELD)	-	-	13.4	-	-	-	10.2	-	-	-
Turbidity (NTU) (FIELD)	77	-	245	-	112	-	10	-	158	-

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Page 8 of 75

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-8B (continued)		Well MW-9B				MW-10B			
	Phase II		Phase I		Phase II		Phase I		Phase II	
	WAT-GW-MW8B-1296		RAT-GW-MW9B-1210		ALT-GW-MW9B-1296		RAT-GW-MW10-1210		ALT-GW-MW10B-1296	
	9612-0975		9412-1195		9612-0973		9412-1330		9612-1349	
	96-5860		94-5076		96-5860		94-5101		96-5919	
	12/09/96		12/10/94		12/09/96		12/10/94		12/11/96	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	5 U	-	5 U	-	-	-
Aluminum	-	-	257	33.4 U	-	-	3380	79.9 J	-	-
Antimony	-	-	28.7 U	35.8	-	-	27.0 U	2.70 U	-	-
Arsenic	1.8 U	-	1.00 U	1.20	8.6 J	1.8 J	1.20 J	1.00 U	-	-
Barium	32.1 J	-	89.5	159	131 J	54 J	1010	1090	451	-
Beryllium	2.6	-	1.30	3.20	6.4	4.1 J	1.70 J	1.30 J	-	-
Cadmium	2.7 J	-	3.70 U	3.70 U	8	3.1 J	3.00 U	3.00 U	-	-
Calcium	-	-	67200	143000	-	-	57000	53200	-	-
Chromium	9.9 J	-	9.80	8.30 U	225	12.1	29.4	21.1	-	-
Cobalt	-	-	5.80 U	5.80 U	-	-	5.60 U	5.60 U	-	-
Copper	-	-	6.20	16.6	-	-	8.50 J	17.0 J	-	-
Iron	-	-	455	29.0	-	-	5550	119	-	-
Lead	3	-	1.60	1.00 U	38	1.7 U	3.00	2.40 J	-	-
Magnesium	72800	-	19700	67400	85800	76400	21900	19200	17500	-
Manganese	-	-	3990	539	-	-	548	339	-	-
Mercury	0.20 U	-	0.200 U	0.200 U	0.20 U	0.20 U	0.200 U	0.200 U	-	-
Molybdenum	10.3 U	-	12.0 U	32.0	49.5	39.4	50.7	66.1	57.2	-
Nickel	10.6	-	21.4	23.9	311	54.1	40.9	40.2	-	-
Potassium	-	-	1280	22400	-	-	8510	7150	-	-
Selenium	-	-	2.40	1.00 U	-	-	1.10 U	1.10 U	-	-
Silver	-	-	5.80 U	5.80 U	-	-	6.90 U	11.5	-	-
Sodium	-	-	56300	53600	-	-	87000	84400	-	-
Thallium	-	-	1.90 U	1.90 U	-	-	2.30 U	2.30 U	-	-
Vanadium	-	-	6.90 U	6.90 U	-	-	11.2 J	8.90 J	-	-
Zinc	-	-	59.3	14.0	-	-	37.8	27.1	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.74	-	2.2	-	1.1	-	0.62	-	0.26	-
Alkalinity	380	-	-	-	277	-	-	-	251	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	1.0	-	-	-	4.7	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	150.0	-	-	-	22	-	-	-
Chloride (mg/l)	-	-	150	-	-	-	89	-	-	-
Fluoride (mg/l)	-	-	0.23	-	-	-	0.46	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.1 U	-	0.18	-	-	-	0.28	-	-	-
Total Phenols (mg/l)	0.005 U	-	0.0060	-	0.005 U	-	0.020	-	0.005 U	-
Sulfate (mg/l)	-	-	250	-	-	-	43	-	-	-
Total Petroleum Hydrocarbons (mg/l)	1 U	-	-	-	1 U	-	0.31 J	-	1 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	250	-	-	-	230	-	-	-
pH (standard units) (FIELD) (e)	7.18	-	7.10	-	7.46	-	7.64	-	7.54	-
Specific Conductance (µmhos/cm) (FIELD) (c)	1420	-	1480	-	1690	-	860	-	746	-
Temperature (°C) (FIELD)	8.8	-	-	-	12.1	-	-	-	13.8	-
Turbidity (NTU) (FIELD)	10	-	>200	-	>999	-	51	-	97	-

Bold values indicate exceedance of TADM  
3025 Action Levels, or NYSWQS, or both

Altex\191032\Monitoring Plant\GW\wxtala.xls  
gw-inorganics (2)

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-10B (continued)		Well MW-11				Well MW-12			
	Phase II (continued)		Phase I		Phase II		Phase II		Phase II	
	WAT-GW-MW10B-1296D		RAT-GW-MW11-1210		WAT-GW-MW11-1296		ALT-GW-MW12-1296		WAT-GW-MW12-1296D	
	9612-1350 96-5919 12/11/96		9412-1331 94-5101 12/10/94		9612-0972 96-5860 12/09/96		9612-1354 96-5919 12/11/96		9612-1355 96-5919 12/11/96	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	-	-	5 U	-	-	-
Aluminum	-	-	16400	172 J	-	-	8460	57.7 U	-	-
Antimony	-	-	27.0 U	27.0 U	-	-	1.6 U	1.6 U	-	-
Arsenic	-	-	6.10 J	3.70 J	-	1.8 U	3.1 J	1.8 U	-	-
Barium	-	-	310	83.9 J	117 J	70.8 J	156 J	74.9 J	-	-
Beryllium	-	-	2.90 J	0.990 J	1.4 J	1.1 J	1.3 J	0.93 J	-	-
Cadmium	-	-	5.00	3.00 U	3.6 J	3 J	5.7	4.5 J	-	-
Calcium	-	-	55600	40300	-	-	38300	39600	-	-
Chromium	-	-	57.3	24.0	11.7	14.3	25.7	14.5	-	-
Cobalt	-	-	20.2 J	5.60 U	-	-	17.3 J	10.2 J	-	-
Copper	-	-	75.7	13.5 J	-	-	21 J	11.7 J	-	-
Iron	-	-	23800	119	-	-	7930	63.8 J	-	-
Lead	-	-	32.4	2.50 J	-	-	4.9	1.7 J	-	-
Magnesium	-	-	22700	13600	18900	17500	18200	17400	-	-
Manganese	-	-	2380	971	-	-	6000	5820	-	-
Mercury	-	-	0.200 U	0.200 U	-	-	0.20 U	0.20 U	-	-
Molybdenum	-	-	3580	5070	2760	3060	14.7	19.4	-	-
Nickel	-	-	124	59.8	25.9 J	30.1 J	57.2	48.1	-	-
Potassium	-	-	4170 J	1200 J	-	-	3710	1120 J	-	-
Selenium	-	-	1.10 U	1.10 U	-	-	28.8 J	2.7 U	-	-
Silver	-	-	6.90 U	6.90 U	-	-	11.6	11.8	-	-
Sodium	-	-	116000	120000	-	-	110000	116000	-	-
Thallium	-	-	2.30 U	2.30 U	-	-	2.3 U	2.3 U	-	-
Vanadium	-	-	8.20 U	8.20 U	-	-	22.9 J	9.6 J	-	-
Zinc	-	-	140	30.8	-	-	62.6	31.4	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	-	-	0.14	-	0.1 U	-	0.1 U	-	-	-
Alkalinity	-	-	-	-	211	-	237	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	4.7	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	21	-	-	-	-	-	-	-
Chloride (mg/l)	-	-	96	-	-	-	110	-	-	-
Fluoride (mg/l)	-	-	4.4	-	-	-	0.3	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	0.10 U	-	-	-	0.95	-	-	-
Total Phenols (mg/l)	0.005 U	-	0.0050 U	-	0.005 U	-	0.005 U	-	0.005 U	-
Sulfate (mg/l)	-	-	73	-	-	-	48	-	-	-
Total Petroleum Hydrocarbons (mg/l)	-	-	1.0 U	-	1 U	-	R	-	1 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	230	-	-	-	-	-	-	-
pH (standard units) (FIELD) (e)	-	-	7.88	-	7.54	-	6.64	-	-	-
Specific Conductance (µmhos/cm) (FIELD) (c)	-	-	970	-	867	-	840	-	-	-
Temperature (°C) (FIELD)	-	-	-	-	15.5	-	14.9	-	-	-
Turbidity (NTU) (FIELD)	-	-	>200	-	>1000	-	276	-	-	-

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-14		Well MW-15		Well MW-16		Well MW-17		Well MW-18	
	Phase II		Phase II		Phase II		Phase II		Phase II	
	WAT-GW-MW14-1296		WAT-GW-MW15-1296		WAT-GW-MW16-1296		WAT-GW-MW17-1296		WAT-GW-MW18-0997	
	9612-1353		9612-1336		9612-1335		9612-1351		9709-3153	
	96-5919		96-5919		96-5919		96-5919		97-5144	
	12/11/96		12/11/96		12/11/96		12/11/96		09/23/97	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-
Aluminum	1120	-	107 J	-	1490	57.7 U	1630	71.6 J	640	200
Antimony	1.6 U	-	1.6 U	-	1.6 U	1.6 U	1.6 U	1.6 U	5 U	5 U
Arsenic	1.8 U	-	1.8 U	-	1.8 U	1.8 U	1.8 U	1.8 U	2 U	2 U
Barium	1260	-	120 J	-	187 J	166 J	91.7 J	48.5	140	140
Beryllium	0.68 J	-	2.9 J	-	2.3 J	2.3 J	1.1 J	1 J	1 U	1 U
Cadmium	4 J	-	2.2 U	-	2.2 U	2.2 U	4.6 J	4.4 J	1 U	1 U
Calcium	29300	-	124000	-	91600	95300	40800	42100	73000	83000
Chromium	69.4	-	9.8 J	-	8.2 J	12.3	14.6	14.7	2	1
Cobalt	9.1 J	-	5.6 U	-	5.6 U	5.6 U	6.3 J	10.4 J	1 U	1 U
Copper	12.6 J	-	17.4 J	-	21.4 J	14.7 J	16.7 J	12.6 J	8	3
Iron	1150	-	187	-	1270	60.3 J	1690	121	6300	6200
Lead	1.7 U	-	1.7 U	-	6.3	1.9 J	4.9	1.7 U	7	4
Magnesium	9380	-	40600	-	15500	15800	10400	10400	27000	30000
Manganese	75.1	-	252	-	650	600	891	764	7000	6300
Mercury	0.20 U	-	0.2 U	-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Molybdenum	549	-	86.3	-	176	231	48.9	73.9	10 U	10 U
Nickel	29.6 J	-	20.8	-	23.6	13.4 J	25.8 J	22.3 J	2	1 U
Potassium	3600 J	-	1070	-	4710 J	4810	3340	3350	1800 U	2600
Selenium	12	-	4.9 J	-	7.1	3.9 J	4.8 J	4.8 J	3 U	3 U
Silver	8.5 J	-	8.3 U	-	8.3 U	8.3 U	10	10.8	1 UJ	1 UJ
Sodium	14100	-	229000	-	314000	328000	74300	37000	34000 J	38000 J
Thallium	2.3 U	-	2.3 U	-	2.3 U	2.3 U	2.3 U	2.3 U	4 U	4 U
Vanadium	30.3 J	-	5.4 U	-	6.1 J	5.8 J	11.4 J	9.6 J	1 U	1 U
Zinc	10.6 J	-	96.7	-	51.2	38.1	43.3	27.2	160 J	140 J
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.1 U	-	0.1 U	-	0.1 U	-	0.1 U	-	0.69	-
Alkalinity	123	-	267	-	309	-	100	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-	-	-
Chloride (mg/l)	18	-	510	-	410	-	93	-	82	-
Fluoride (mg/l)	4.9	-	0.26	-	1.3	-	0.57	-	0.45	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.75	-	0.26	-	0.1 U	-	0.41	-	0.1 U	-
Total Phenols (mg/l)	0.005 U	-	0.005 U	-	0.005 U	-	0.005 U	-	-	-
Sulfate (mg/l)	25	-	83	-	46	-	100	-	33	-
Total Petroleum Hydrocarbons (mg/l)	1 U	-	1 U	-	R	-	R	-	1 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	7.45	-	6.78	-	7.04	-	7.54	-	6.67	-
Specific Conductance (µmhos/cm) (FIELD) (c)	299	-	2050	-	2040	-	664	-	938	-
Temperature (°C) (FIELD)	10.4	-	10.6	-	9.6	-	10.2	-	17.6	-
Turbidity (NTU) (FIELD)	<10	-	10	-	141	-	626	-	625	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-18 (continued)		Well MW-19				Well MW-19B			
	Post-Phase II		Phase II		Post-Phase II		Phase II		Post-Phase II	
	Investigation:	Sample I.D.:	Investigation:	Sample I.D.:	Investigation:	Sample I.D.:	Investigation:	Sample I.D.:	Investigation:	Sample I.D.:
Laboratory Sample I.D.:	9812-2734	9709-3154	9812-2733	9709-3152	9709-3152	9812-2729	9709-3152	97-4115	98-7398	98-7398
Laboratory Project No.:	98-7398	97-5144	98-7398	97-5144	98-7398	97-4115	97-4115	98-7398	98-7398	98-7398
Sample Date:	12/21/98	09/23/97	12/21/98	09/23/97	12/21/98	09/23/97	09/23/97	12/21/98	12/21/98	12/21/98
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	-	-	5 U	-	-	-
Aluminum	140	-	7300	730	3800	510	30000	-	12000	-
Antimony	7	-	5 U	5 U	5	5 U	5 U	-	21	-
Arsenic	2 U	-	2	2 U	2 U	2 U	10	-	8	-
Barium	120	-	130	100	110	100	660	-	270	-
Beryllium	1 U	-	1 U	1 U	1 U	1 U	7	-	6	-
Cadmium	1 U	-	1 U	1 U	1 U	1 U	3	-	1 U	-
Calcium	70000	-	160000	150000	120000	110000	610000	-	330000	-
Chromium	3	-	6	2	11	4	11	-	6	-
Cobalt	5 U	-	32	19	9	6	630	-	150	-
Copper	5 U	-	22	4	7	16	2	-	5 U	-
Iron	2900	-	5100	88	5100	180	9000	-	480	-
Lead	2 U	-	18	4	10	7	9	-	14	-
Magnesium	26000	-	64000	62800	42000	39000	200000	-	120000	-
Manganese	6900	-	11000	10000	5400	5000	39000	-	17000	-
Mercury	0.2 U	-	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	-	0.3	-
Molybdenum	10 U	-	22	22	22	28	10 U	-	10 U	-
Nickel	10 U	-	1000	790	390	340	31000	-	9700	-
Potassium	2500	-	18000	18000	13000	12000	54000	-	50000	-
Selenium	2 U	-	3 U	3 U	2 U	2 U	3 U	-	2 U	-
Silver	1 U	-	1 UJ	1 UJ	1 U	1	1 UJ	-	2	-
Sodium	40000	-	96000 J	100000 J	120000	110000	230000 J	-	200000	-
Thallium	4 U	-	4 U	4 U	4 U	4 U	4 U	-	7	-
Vanadium	5 U	-	8	1 U	5 U	5 U	1 U	-	5 U	-
Zinc	18	-	53 J	65 J	42	40	570 J	-	120	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.44	-	1.6	-	0.3	-	3.6	-	1.3	-
Alkalinity	160	-	-	-	370	-	-	-	356	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-	-	-
Chloride (mg/l)	140	-	70	-	110	-	70	-	140	-
Fluoride (mg/l)	0.39	-	18	-	16	-	22	-	38	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.1 U	-	94	-	0.36	-	1100	-	160	-
Total Phenols (mg/l)	5 U	-	-	-	0.0050 U	-	-	-	0.005 U	-
Sulfate (mg/l)	31	-	360	-	110	-	510	-	640	-
Total Petroleum Hydrocarbons (mg/l)	5 U	-	1 UJ	-	5 U	-	0.1 UJ	-	5 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	NA	-	6.62	-	NA	-	6.01	-	NA	-
Specific Conductance (µmhos/cm) (FIELD) (c)	NA	-	2380	-	NA	-	7380	-	NA	-
Temperature (°C) (FIELD)	NA	-	14.9	-	NA	-	14.5	-	NA	-
Turbidity (NTU) (FIELD)	NA	-	>1000	-	NA	-	10	-	NA	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Altch/193052/Monitoring Plan/GWmetals.xls  
gw-inorganics (2)

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-19B (continued)		Observation Well OW-20		Observation Well OW-21		Well AP-1			
	Post-Phase II (continued)		Phase II		Phase II		Phase I		Phase II	
	ALT-GW-MW19B-1298D		WAT-GW-OW20-1296		WAT-GW-OW21-1296		RAT-GW-AP1-1211		WAT-GW-AP1-1296	
	9812-2730 98-7398 12/21/98		9612-1345 96-5919 12/11/96		9612-1344 96-5919 12/11/96		9412-1344 94-5105 12/11/94		9612-1502 96-5944 12/12/96	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	5 U	-	180	-	5 U	-
Aluminum	12000	-	511	-	524	-	312000	437000	-	-
Antimony	14	-	1.6 U	-	1.6 U	-	28.7 U	150	-	-
Arsenic	7	-	1.8 U	-	3.2 J	-	12.4 J	10.5 J	1.8 U	-
Barium	260	-	76.6 J	-	120 J	-	576	914	71.1 J	-
Beryllium	6	-	1.5 J	-	2.1 J	-	12.1	16.8	4.9 J	-
Cadmium	1	-	3.9 J	-	4.2 J	-	68.2	97.5	11.2	-
Calcium	320000	-	63500	-	83800	-	93800	121000	-	-
Chromium	6	-	12.7	-	16.4	-	72600	118000	2380	-
Cobalt	150	-	11	-	12.5 J	-	583	893	-	-
Copper	5 U	-	13.6 J	-	16.3 J	-	6280	4190	-	-
Iron	460	-	1330	-	773	-	738000	504000	17300	-
Lead	13	-	1.7 U	-	0.17 U	-	71.2	39.6	1.7 U	-
Magnesium	120000	-	22900	-	30200	-	114000	84200	32500	-
Manganese	17000	-	5010	-	1550	-	22700	15800	-	-
Mercury	0.3	-	0.2 U	-	0.2 U	-	0.200 U	0.320	0.2 U	-
Molybdenum	10 U	-	112	-	14	-	494	1260	412	-
Nickel	9700	-	54	-	65.2	-	56500	90600	6580	-
Potassium	49000	-	5270	-	5250	-	123000	176000	-	-
Selenium	2 U	-	4.1 J	-	2.7 U	-	5.50 U	5.50 U	-	-
Silver	2	-	9.1 J	-	8.9 J	-	13.10	9.3 J	-	-
Sodium	200000	-	49400	-	58700	-	168000	226000	-	-
Thallium	7	-	2.3 U	-	2.6 J	-	2.30 U	2.30 U	-	-
Vanadium	5 U	-	8.3 J	-	10.8 J	-	120	167	-	-
Zinc	120	-	9.9 J	-	11.6 J	-	1130	1490	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	1.2	-	0.1 U	-	0.69	-	15	-	2.6	-
Alkalinity	356	-	247	-	311	-	-	-	20.1	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	6.7	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	54	-	-	-
Chloride (mg/l)	140	-	53	-	58	-	84	-	89	-
Fluoride (mg/l)	38	-	1.8	-	0.46	-	720	-	160	-
Nitrate (mg/l NO <sub>3</sub> -N)	160	-	0.1 U	-	0.17	-	690	-	84 J	-
Total Phenols (mg/l)	0.005 U	-	0.005 U	-	0.005 U	-	0.023	-	0.005 U	-
Sulfate (mg/l)	650	-	64	-	58	-	500	-	130	-
Total Petroleum Hydrocarbons (mg/l)	5 U	-	1 U	-	1 UJ	-	3.3	-	R	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	800	-	-	-
pH (standard units) (FIELD) (c)	NA	-	6.79	-	7.07	-	2.71	-	5.27	-
Specific Conductance (µmhos/cm) (FIELD) (c)	NA	-	717	-	868	-	18000	-	1340	-
Temperature (°C) (FIELD)	NA	-	12.4	-	12.9	-	-	-	14.6	-
Turbidity (NTU) (FIELD)	NA	-	41	-	<10	-	>200	-	10	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Altch/193052/Monitoring Plan/GWmetals.xls  
gw-inorganics (2)

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Page 13 of 75

	Well AP-1 (continued)		Well AP-2				Well MW-A1	
	Phase II		Phase I		Phase II		Phase I	
	WAT-GW-AP1-1296D	RAT-GW-AP2-1211	WAT-GW-AP2-1296	ALT-GW-AP2-0997	RAT-GW-MWA1-1212			
Well I.D.:								
Investigation:								
Sample I.D.:	9612-1503	9412-1345	9612-1338	9709-3398	9412-1361			
Laboratory Sample I.D.:	96-5944	94-5105	96-5919	97-4145	94-5107			
Laboratory Project No.:								
Sample Date:	12/12/96	12/11/94	12/11/96	09/24/97	12/12/94			
	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>	<b>Total</b>	<b>Dissolved</b>
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	-	-	105	-	5 U	-	5 U	-
Aluminum	-	-	1290000	1280000	-	-	18000 J	-
Antimony	-	-	287 U	621	-	-	5 U	-
Arsenic	-	-	25.2 J	17.6 J	1.8 U	1.8 U	2 U	-
Barium	-	-	1420	1110	78.6 J	76.6 J	23	-
Beryllium	-	-	49.4	50.4	6.2	6.3	1	-
Cadmium	-	-	284	276	8	9.3	1 U	-
Calcium	-	-	385000	232000	-	-	38000 J	-
Chromium	-	-	432000	464000	2460	2210	1000	-
Cobalt	-	-	2540	5.6 U	-	-	63	-
Copper	-	-	9490	10700	-	-	74	-
Iron	-	-	2200000	2090000	21100	-	71000 J	-
Lead	-	-	145	61.3	1.74	11	10 J	-
Magnesium	-	-	262000	253000	37800	38000	24000 J	-
Manganese	-	-	56100	56600	-	-	5200 J	-
Mercury	-	-	2.80	3.50	0.2 U	0.2 U	0.4 U	-
Molybdenum	-	-	1260	114	239	10.3	62	-
Nickel	-	-	269000	287000	8890	9040	4100	-
Potassium	-	-	303000	311000	-	-	17000	-
Selenium	-	-	5.50 U	5.50 U	-	-	3 U	-
Silver	-	-	24.7	20.8	-	-	1 U	-
Sodium	-	-	306000	325000	-	-	110000 J	-
Thallium	-	-	11.50 U	11.50 U	-	-	4 U	-
Vanadium	-	-	619	415	-	-	1 U	-
Zinc	-	-	4310	4340	-	-	110 U	-
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	-	-	16	-	1.6	-	0.93	-
Alkalinity	18.3	-	-	-	2 U	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	1.0 U	-	-	-	-	2.7
Chemical Oxygen Demand (mg/l)	-	-	5.0 U	-	-	-	-	5.0 U
Chloride (mg/l)	90	-	73	-	84	-	61	-
Fluoride (mg/l)	160	-	1800	-	170	-	58	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	1000	-	96	-	37	-
Total Phenols (mg/l)	-	-	0.016	-	0.005 U	-	-	0.0050 U
Sulfate (mg/l)	130	-	81	-	82	-	84	-
Total Petroleum Hydrocarbons (mg/l)	-	-	13	-	1 U	-	0.49 J	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	2000	-	-	-	-	250
pH (standard units) (FIELD) (c)	5.21	-	4.65	-	4.16	-	4.26	-
Specific Conductance (µmhos/cm) (FIELD) (c)	1350	-	1050	-	1360	-	1010	-
Temperature (°C) (FIELD)	-	-	-	-	16.4	-	16.7	-
Turbidity (NTU) (FIELD)	-	-	>200	-	174	-	148	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Altex/193052/Monitoring Plan/GWresults.xls  
gw-inorganics (2)



Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
A.I. Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-A1 (continued)		Well MW-A2				Well MW-B			
	Phase II		Phase I		Phase II		Phase I		Phase II	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
	WAT-GW-MWA1-1296		RAT-GW-MWA2-1212		WAT-GW-MWA2-1296		RAT-GW-MWB-1211		WAT-GW-MWB-1296	
	9612-1208		9412-1362		9612-1209		9412-1349		9612-1493	
	96-5897		94-5107		96-5897		94-5105		96-5944	
	12/10/96		12/12/94		12/10/96		12/11/94		12/12/96	
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	-	-	5 U	-	5 U	-
Aluminum	-	-	660	36.9 J	-	-	173000	21.0 U	-	-
Antimony	-	-	27.0 U	27.0 U	-	-	65.5	40.1 J	-	-
Arsenic	-	-	3.10 J	1.80 J	-	-	7.10 J	4.20 J	11.5	-
Barium	89.60 J	-	467	602	441	-	416	147 J	165 J	-
Beryllium	-	-	3.50 J	3.20 J	-	-	7.00	0.600 J	0.96 J	-
Cadmium	-	-	3.00 U	3.00 U	-	-	38.6	3.00 U	6.1	-
Calcium	-	-	136000	130000	-	-	65100	34500	-	-
Chromium	-	-	8.60 J	6.60 U	-	-	39700	6.60 U	12.7	-
Cobalt	-	-	11.0 J	11.0 J	-	-	323	5.60 U	-	-
Copper	-	-	17.9 J	12.5 J	-	-	2220	11.6 J	-	-
Iron	-	-	8620	6400	-	-	277000	8800	20000	-
Lead	-	-	3.10	1.00 U	-	-	47.6	1.00 U	7.8	-
Magnesium	14300	-	36100	35000	38100	-	46600	9800	10700	-
Manganese	-	-	8440	8050	-	-	10000	3830	-	-
Mercury	-	-	0.200 U	0.200 U	-	-	0.200 U	0.200 U	0.2 U	-
Molybdenum	10.3	-	10.6	10.6	10.3	-	714	57.2	48.7	-
Nickel	10.1 U	-	33.7 J	31.0 J	53.9	-	31100	35.5 J	65.5	-
Potassium	-	-	3470 J	3220 J	-	-	67200	2670 J	-	-
Selenium	-	-	1.10 U	1.10 U	-	-	1.10 U	1.10 U	-	-
Silver	-	-	6.90 U	6.9 U	-	-	9.90 J	6.90 U	-	-
Sodium	-	-	138000	135000	-	-	102000	23500	-	-
Thallium	10 U	-	16.30	2.30 U	-	-	2.30 U	2.30 U	-	-
Vanadium	-	-	8.20 U	8.20 U	-	-	75.7	8.20 U	-	-
Zinc	-	-	25.6	23.8	-	-	660	13.6 B	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.1 U	-	0.10 U	-	0.24	-	0.77	-	0.75	-
Alkalinity	215	-	-	-	263	-	-	-	30.3	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	2.1	-	-	-	5.6	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	5.0 U	-	-	-	89	-	-	-
Chloride (mg/l)	-	-	310	-	-	-	53	-	57	-
Fluoride (mg/l)	-	-	0.15	-	-	-	1.2	-	1.4	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	0.10 U	-	-	-	0.10 U	-	0.1 UJ	-
Total Phenols (mg/l)	0.005 U	-	0.0050 U	-	0.005 U	-	0.030	-	0.005 U	-
Sulfate (mg/l)	-	-	83	-	-	-	18	-	26	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	1.0 U	-	1.0 U	-	12	-	1 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	490	-	-	-	350	-	-	-
pH (standard units) (FIELD) (e)	6.99	-	6.91	-	6.74	-	7.19	-	6.65	-
Specific Conductance (µmhos/cm) (FIELD) (e)	543	-	1020	-	1980	-	2000	-	430	-
Temperature (°C) (FIELD)	10.2	-	-	-	12.3	-	-	-	14.6	-
Turbidity (NTU) (FIELD)	10	-	67	-	18	-	>200	-	<10	-

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

	Well MW-B (continued)		Well MW-C				Well MW-D1	
	Phase II (continued)		Phase I		Phase II		Phase I	
	WAT-GW-MWB-1296D	ALT-GW-MWB-0997	RAT-GW-MWC-1211		WAT-GW-MWC-1296		RAT-GW-MWD1-1211	
Investigation:								
Sample I.D.:	9612-1493A	9709-3397	9412-1346		9612-1514		9412-1347	
Laboratory Sample I.D.:	96-5944	97-4145	94-5105		96-5944		94-5105	
Laboratory Project No.:								
Sample Date:	12/12/96	09/24/97	12/11/94		12/12/96		12/11/94	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	-	-	5 U	-	5 U	-	5 U	-
Aluminum	-	-	2900 J	50 U	482	541	57.7 U	18000
Antimony	-	-	5 U	5 U	27.0 U	27.0 U	1.7 U	27.0 U
Arsenic	-	-	6	10	6.90 J	2.50 J	11.8	54.7
Barium	-	-	160	140	147 J	115 J	141 J	880
Beryllium	-	-	1 U	1 U	0.690 J	0.820 J	-	4.80 J
Cadmium	-	-	1 U	1 U	3.00 U	3.00 U	4.5 J	17.8
Calcium	-	-	26000 J	28000 J	35600	35800	28900	92000
Chromium	-	-	9	1 U	139	203	7.8 U	30.9
Cobalt	-	-	5	1	5.60 U	6.90 J	7.4 U	29.4 J
Copper	-	-	9	2 U	21.8 J	17.0 J	7 J	123
Iron	-	-	19000 J	13000 J	14100	5190	14400	111000
Lead	-	-	9 J	2 U	3.40	1.20 J	1.7 U	43.7
Magnesium	-	-	8900 J	8800 J	9810	9900	8770	36400
Manganese	-	-	3900	3900	3500	3440	3500	9610
Mercury	-	-	0.3 U	0.3 J	0.200 U	0.200 U	0.2 U	0.200 U
Molybdenum	-	-	70	10 U	44.9	42.7	53.2	10.6
Nickel	-	-	42	8	123	158	47.8	105
Potassium	-	-	4100	5000	2150 J	2180 J	2840	8160
Selenium	-	-	3 U	3 U	1.10 U	1.80 J	-	2.00 J
Silver	-	-	1 U	1 U	6.90 U	6.90 U	8.34	7.20 J
Sodium	-	-	24000 J	27000 J	30000	30300	25200	159000
Thallium	-	-	4 U	4 U	2.30 U	2.30 U	-	2.30 U
Vanadium	-	-	4	1 U	10.9 J	8.20 U	5.44	79.8
Zinc	-	-	64 U	15 U	67.7	15.8 J	90.0	966
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	58	-	0.81	-	0.67	-	0.76	2.7
Alkalinity	1.5	-	-	-	-	-	2 U	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	3.7	-	-	740
Chemical Oxygen Demand (mg/l)	-	-	-	-	26	-	-	120
Chloride (mg/l)	27	-	20	-	56	-	52	400
Fluoride (mg/l)	-	-	2.3	-	4.3	-	1.9	0.90
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	0.1 U	-	0.10 U	-	0.1 UJ	0.10 U
Total Phenols (mg/l)	-	-	-	-	0.013	-	0.005 U	0.18
Sulfate (mg/l)	-	-	27	-	15	-	7.8	1.8
Total Petroleum Hydrocarbons (mg/l)	-	-	0.12 J	-	11	-	1 U	500
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	130	-	-	380
pH (standard units) (FIELD) (c)	-	-	6.66	-	7.22	-	6.82	7.59
Specific Conductance (µmhos/cm) (FIELD) (c)	-	-	357	-	1120	-	396	1050
Temperature (°C) (FIELD)	-	-	17.4	-	-	-	13.9	-
Turbidity (NTU) (FIELD)	-	-	257	-	>200	-	<10	>200

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.:	Well MW-D1 (continued)				Well MW-D2				Well TF-1	
	Phase II		Phase I		Phase II		Phase I		Phase I	
	WAT-GW-MWD1-1296	ALT-GW-MWD1-0997	RAT-GW-MWD2-1211	WAT-GW-MWD2-1296	RAT-GW-TF1-1211					
Investigation:										
Sample I.D.:										
Laboratory Sample I.D.:										
Laboratory Project No.:										
Sample Date:										
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	5 U	-	5 U	-	5 U	-
Aluminum	-	-	50 U	-	1300	865	-	-	16500	21.0 U
Antimony	-	-	5 U	-	27.0 U	27.0 U	-	-	52.0 J	27.0 U
Arsenic	32.9	-	61	-	20.8	9.60 J	53.4	-	3.1 J	1.30 J
Barium	529	-	470	-	763	543	361	-	400	123 J
Beryllium	1.9 J	-	1 U	-	1.60 J	1.50 J	2.2 J	-	5.40	3.00 J
Cadmium	7.7	-	1 U	-	4.10 J	3.00 U	9.3	-	5.5	3.00 U
Calcium	-	-	88000 J	-	64700	62000	-	-	127000	118000
Chromium	12	-	2	-	20.0	299	13.6	-	81.1	9.90 J
Cobalt	-	-	1 U	-	6.80 J	9.70 J	-	-	60.3	7.10 J
Copper	-	-	5	-	24.0 J	20.3 J	-	-	120	19.2 J
Iron	27300	-	52000 J	-	32600	14500	47400	-	23400	48.2 J
Lead	1.7 U	-	2 U	-	9.70	1.20 J	1.7 U	-	42.9	1.00 U
Magnesium	36900	-	55000 J	-	21900	21300	54000	-	49400	42000
Manganese	-	-	3900	-	2330	1900	-	-	2140	793
Mercury	0.2 U	-	0.2 U	-	0.200 U	0.200 U	0.2 U	-	0.200 U	0.200 U
Molybdenum	19.8	-	10 U	-	10.6	10.6	15.8	-	48.7	194
Nickel	31.3 J	-	7	-	63.8	200	38.4 J	-	117	15.8 U
Potassium	-	-	7000	-	5600	5320	-	-	8030	5680
Selenium	-	-	3 U	-	1.40 J	1.60 J	-	-	1.10 J	3.0 J
Silver	-	-	1 U	-	6.90 U	6.90 U	-	-	7.90 J	8.50 J
Sodium	-	-	170000 J	-	200000	194000	-	-	231000	226000
Thallium	-	-	4 U	-	2.30 U	2.30 U	-	-	2.30 U	2.30 U
Vanadium	-	-	1 U	-	17.8 J	9.10 J	-	-	65.2	11.6 J
Zinc	-	-	35 U	-	140	23.8	-	-	190	6.30 J
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	1.8	-	3.2	-	1.5	-	13.0	-	0.10 U	-
Alkalinity	80.3	-	-	-	-	-	72.5	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	6.7	-	-	-	3.6	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	41	-	-	-	5.0 U	-
Chloride (mg/l)	200	-	86	-	210	-	180	-	330	-
Fluoride (mg/l)	0.86	-	27	-	0.62	-	1.2	-	2.4	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.1 U	-	0.1 U	-	0.10 U	-	0.1 U	-	0.10 U	-
Total Phenols (mg/l)	0.021	-	-	-	0.037	-	0.054	-	0.0060	-
Sulfate (mg/l)	4.9	-	88	-	5.1	-	4 U	-	120	-
Total Petroleum Hydrocarbons (mg/l)	1 U	-	200 J	-	1.2 J	-	1 U	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	250	-	-	-	220	-
pH (standard units) (FIELD) (c)	6.85	-	6.71	-	6.90	-	5.76	-	6.83	-
Specific Conductance (µmhos/cm) (FIELD) (c)	1250	-	1440	-	850	-	1120	-	1950	-
Temperature (°C) (FIELD)	15.1	-	17.1	-	-	-	14.7	-	-	-
Turbidity (NTU) (FIELD)	<10	-	10	-	110	-	<10	-	>200	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well TF-1 (continued)		Well PH-1				Well H-4D			
	Phase II		Phase I		Phase II		Phase I		Phase II	
	Investigation:	WAT-GW-TF1-1296	RAT-GW-PH1-1211		WAT-GW-PH1-1296		RAT-GW-H4D-1211		WAT-GW-H4D-1296	
Sample I.D.:	9612-1346	9412-1352	9612-1347	9412-1350	96-5919	94-5105	96-5897	96-5919	94-5105	96-5897
Laboratory Sample I.D.:	96-5919	94-5105	96-5919	94-5105	96-5919	94-5105	96-5897	96-5919	94-5105	96-5897
Laboratory Project No.:	96-5919	94-5105	96-5919	94-5105	96-5919	94-5105	96-5897	96-5919	94-5105	96-5897
Sample Date:	12/11/96	12/11/94	12/11/96	12/11/94	12/11/96	12/11/94	12/11/96	12/11/96	12/11/94	12/10/96
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	5 U	-	5 U	-	-	-
Aluminum	-	-	99.7 J	21.0 U	-	-	95.5 J	101.0 J	-	-
Antimony	-	-	27.0 U	27.0 U	-	-	29.0 J	37.3 J	-	-
Arsenic	-	-	3.00 J	3.00 J	-	-	1.00 U	1.00 U	-	-
Barium	95.4 J	-	374	358	405	-	191 J	198 J	160 J	-
Beryllium	-	-	2.00 J	2.10 J	-	-	3.00 J	3.20 J	-	-
Cadmium	-	-	3.00 U	3.00 U	-	-	3.00 U	3.00 U	-	-
Calcium	-	-	85000	85800	-	-	121000	121000	-	-
Chromium	-	-	6.60 U	6.60 U	-	-	11.7	20.5	-	-
Cobalt	-	-	8.10 J	10.0 J	-	-	8.50 J	5.60 U	-	-
Copper	-	-	9.90 J	13.3 J	-	-	10.8 J	19.7 J	-	-
Iron	-	-	4680	2600	-	-	358	849	-	-
Lead	-	-	1.60 J	1.00 U	-	-	1.00 U	1.00 U	-	-
Magnesium	32000	-	29700	30300	23800	-	36200	36100	32100	-
Manganese	-	-	5390	5470	-	-	586	556	-	-
Mercury	-	-	0.200 U	0.200 U	-	-	0.200 U	0.200 U	-	-
Molybdenum	239	-	99.1	92.5	49.8	-	10.6	10.6	10.3	-
Nickel	-	-	45.7	37.9 J	-	-	15.8 U	16.00 J	11.8 J	-
Potassium	-	-	3650 J	3560 J	-	-	950 J	1120 J	-	-
Selenium	-	-	1.10 U	1.10 U	-	-	1.10 U	1.40 J	-	-
Silver	-	-	6.90 U	6.90 U	-	-	6.90 U	8.10 J	-	-
Sodium	-	-	28500	29100	-	-	103000	105000	-	-
Thallium	-	-	2.30 U	2.30 U	-	-	2.30 U	2.30 U	-	-
Vanadium	-	-	8.20 U	8.20 U	-	-	8.20	8.20 U	-	-
Zinc	-	-	43.3	16.3 J	-	-	22.7	24.6	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	0.15	-	0.10 U	-	0.11	-	0.10 U	-	0.1 U	-
Alkalinity	368	-	-	-	291	-	-	-	128	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	7.4	-	-	-	2.4	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	35	-	-	-	13	-	-	-
Chloride (mg/l)	-	-	34	-	65	-	240	-	-	-
Fluoride (mg/l)	-	-	0.90	-	170	-	0.087 J	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	-	-	0.10 U	-	96	-	0.25	-	-	-
Total Phenols (mg/l)	0.005 U	-	0.0050 U	-	0.0050 U	-	0.0050 U	-	0.0050 U	-
Sulfate (mg/l)	-	-	18	-	82	-	47	-	-	-
Total Petroleum Hydrocarbons (mg/l)	1.0 U	-	0.50 J	-	1.0 U	-	1.0 U	-	1.0 U	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	330	-	-	-	450	-	-	-
pH (standard units) (FIELD) (c)	7.60	-	6.19	-	6.46	-	6.38	-	6.70	-
Specific Conductance (µmhos/cm) (FIELD) (c)	1630	-	580	-	623	-	1380	-	1360	-
Temperature (°C) (FIELD)	9.2	-	-	-	8.5	-	-	-	12.5	-
Turbidity (NTU) (FIELD)	2	-	22	-	10	-	40	-	<10	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Attach193052/Monitoring Plan/GWresults.xls  
gw-inorganics (2)

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well II-4S				Well RW-1B			
	Phase I		Phase II		Phase I		Phase II	
	RAT-GW-II4S-1211	WAT-GW-II4S-1296	WAT-GW-RW1B-1296	ALT-GW-RW1B-0997	ALT-GW-RW1B-0997D			
	9412-1351	9612-1201	9612-1504	9709-3401	9709-3401			
94-5105	96-5897	96-5944	97-4145	97-4145				
12/11/94	12/10/96	12/12/96	09/24/97	09/24/97				
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	5 U	-	-	-	5 U	-	5 U	-
Aluminum	3970	142	-	-	850 J	-	1500 J	-
Antimony	27.0 U	55.8	-	-	5 U	-	5 U	-
Arsenic	1.20 J	1.10	-	-	1.8 U	-	2	-
Barium	111 J	36.0	53.3 J	-	1150	-	1300	-
Beryllium	1.20 J	0.830	-	-	1.2 J	-	1 U	-
Cadmium	3.00 U	3.80	-	-	4.2 J	-	1 U	-
Calcium	45300	43200	-	-	-	-	63000 J	-
Chromium	22.4	49.5	-	-	14.3	-	2	-
Cobalt	17.8 J	6.30	-	-	-	-	1 U	-
Copper	20.5 J	20.8	-	-	-	-	2 U	-
Iron	5360	298	-	-	522	-	1500 J	-
Lead	8.40	5.00	-	-	1.7 U	-	3 J	-
Magnesium	16800	15200	-	-	14900	-	23000 J	-
Manganese	850	301	14400	-	-	-	340	-
Mercury	0.200 U	0.200 U	-	-	0.2 U	-	0.2 U	-
Molybdenum	10.6	12.0 U	10.3	-	21.9	-	10 U	-
Nickel	81.3	66.6	19.6 J	-	15.6 J	-	5	-
Potassium	2060 J	1260	-	-	-	-	6800	-
Selenium	1.10 U	1.00 U	-	-	-	-	3 U	-
Silver	6.90 U	7.10	10	-	-	-	1 U	-
Sodium	41700	39800	-	-	-	-	200000 J	-
Thallium	2.30 U	1.90 U	20 U	-	-	-	4 U	-
Vanadium	14.8 J	8.40	-	-	-	-	2	-
Zinc	145	119	-	-	-	-	15 U	-
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	0.10 U	-	0.10 U	-	0.88	-	1.0	-
Alkalinity	-	-	132	-	67.3	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	2.0	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	14	-	-	-	-	-	-	-
Chloride (mg/l)	41	-	-	-	200	-	100	-
Fluoride (mg/l)	0.20	-	-	-	1.4	-	2.7	-
Nitrate (mg/l NO <sub>3</sub> -N)	0.10 U	-	-	-	0.1 UJ	-	0.92	-
Total Phenols (mg/l)	0.044	-	0.0050 U	-	0.0087	-	-	-
Sulfate (mg/l)	54	-	-	-	31	-	31	-
Total Petroleum Hydrocarbons (mg/l)	0.11 J	-	-	-	1 U	-	0.1 UJ	-
Hardness (mg/l CaCO <sub>3</sub> )	180	-	-	-	-	-	-	-
pH (standard units) (FIELD) (e)	6.90	-	6.59	-	7.69	-	7.56	-
Specific Conductance (µmhos/cm) (FIELD) (e)	1050	-	528	-	1260	-	1480	-
Temperature (°C) (FIELD)	-	-	12.4	-	-	-	16.2	-
Turbidity (NTU) (FIELD)	>200	-	<10	-	-	-	45	-

Bold values indicate exceedance of TAGM 3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well RW-2B								Well RW-4	
	Groundwater ICM		Phase II						Groundwater ICM	
	ALT-GW-RW2B-0722		WAT-GW-RW2B-1296		WAT-GW-RW2B-1296D		ALT-GW-RW2B-0997		RAT-GW-RW4-1228	
	950512-04		9612-1511		9612-1511		9709-3405		9412-2845	
	950512		96-5944		96-5944		97-4145			
	07/22/95		12/12/96		12/12/96		09/24/97		12/28/94	
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	5 U	-	-	-	5 U	-	5.0	-
Aluminum	-	-	-	-	-	-	22000 J	13000 J	63000	-
Antimony	-	-	-	-	-	-	5 U	5 U	100 U	-
Arsenic	-	-	3.1 J	-	-	-	2 U	2 U	24	-
Barium	-	-	77.7 J	-	-	-	140	100	1200	-
Beryllium	-	-	11.8	-	-	-	2	1	12	-
Cadmium	-	-	10.3	-	-	-	1 U	1 U	130	-
Calcium	-	-	-	-	-	-	13000 J	120000 J	230000	-
Chromium	-	-	228	-	-	-	380	41	460	-
Cobalt	-	-	-	-	-	-	82	73	280	-
Copper	-	-	-	-	-	-	190	26	130	-
Iron	2000	-	938	-	-	-	5700 J	720 J	470000	-
Lead	-	-	7.8	-	-	-	9 J	2 U	250	-
Magnesium	-	-	93900	-	-	-	52000 J	46000 J	110000	-
Manganese	-	-	-	-	-	-	12000	9800	46000	-
Mercury	-	-	0.2 U	-	-	-	0.20 U	0.20 U	0.20	-
Molybdenum	-	-	42.1	-	-	-	10 U	10 U	59	-
Nickel	-	-	14300	-	-	-	5000	4500	1200	-
Potassium	-	-	-	-	-	-	26000	23000	8600	-
Selenium	-	-	-	-	-	-	3 U	3 U	1.0 U	-
Silver	-	-	-	-	-	-	1 U	1 U	14	-
Sodium	-	-	-	-	-	-	120000 J	100000 J	170000	-
Thallium	-	-	-	-	-	-	4 U	4 U	4.0 U	-
Vanadium	-	-	-	-	-	-	1	1 U	160	-
Zinc	-	-	-	-	-	-	130 U	97 U	3400	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	-	-	0.49	-	0.7	-	0.76	-	-	-
Alkalinity	-	-	90.3	-	-	-	-	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-	-	-
Chloride (mg/l)	-	-	150	-	-	-	46	-	-	-
Fluoride (mg/l)	17.0	-	43	-	-	-	0.1 U	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	666	-	210	-	210	-	59	-	0.97	-
Total Phenols (mg/l)	-	-	0.005 U	-	-	-	-	-	-	-
Sulfate (mg/l)	-	-	440	-	-	-	220	-	-	-
Total Petroleum Hydrocarbons (mg/l)	-	-	1 U	-	-	-	0.2 J	-	-	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	6.29	-	6.32	-	-	-	6.28	-	4.38	-
Specific Conductance (µmhos/cm) (FIELD) (c)	-	-	3360	-	-	-	1350	-	-	-
Temperature (°C) (FIELD)	-	-	14.6	-	-	-	16.4	-	-	-
Turbidity (NTU) (FIELD)	-	-	10	-	-	-	268	-	-	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

	Well RW-5				Well RW-6					
	Groundwater ICM				Groundwater ICM					
	RAT-GW-RW5-1202		RAT-GW-RW5-1228		RAT-GW-RW6-1202		RAT-GW-RW6-1228		ALT-GW-RW6-0718	
	9412-0338		9412-2846		9412-0339		9412-2847		950512-01	
Laboratory Project No.:		950512		950512		950512		950512		
Sample Date:		12/02/94		12/28/94		12/02/94		12/28/94		07/18/95
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	-	-	-	-	-	-	65	-	-	-
Aluminum	600000	-	780000	-	1300000	-	500000	-	-	-
Antimony	100 U	-	100 U	-	100 U	-	100 U	-	-	-
Arsenic	1.0 U	-	1.0 U	-	12	-	1.0 U	-	-	-
Barium	1100	-	2200	-	3300	-	880	-	-	-
Beryllium	22	-	36	-	82	-	30	-	-	-
Cadmium	140	-	130	-	21	-	15	-	-	-
Calcium	140000	-	330000	-	430000	-	140000	-	-	-
Chromium	140000	-	130000	-	940	-	920	-	-	-
Cobalt	1000	-	1400	-	3800	-	1200	-	-	-
Copper	7700	-	14000	-	7300	-	2100	-	-	-
Iron	810000	-	450000	-	19000	-	44000	-	1900	-
Lead	44	-	570	-	13	-	270	-	-	-
Magnesium	140000	-	220000	-	420000	-	150000	-	-	-
Manganese	24000	-	35000	-	340000	-	98000	-	-	-
Mercury	11	-	29	-	0.90	-	8.0	-	-	-
Molybdenum	-	-	320	-	-	-	140	-	-	-
Nickel	100000	-	130000	-	150000	-	53000	-	-	-
Potassium	220000	-	240000	-	340000	-	150000	-	-	-
Selenium	1.0 U	-	1.0 U	-	1.0 U	-	1.0 U	-	-	-
Silver	10 U	-	20	-	22	-	18	-	-	-
Sodium	230000	-	270000	-	300000	-	200000	-	-	-
Thallium	4.0 U	-	4.0 U	-	4.0 U	-	4.0 U	-	-	-
Vanadium	96	-	140	-	50 U	-	50 U	-	-	-
Zinc	1900	-	5700	-	6600	-	2100	-	-	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	-	-	-	-	-	-	-	-	-	-
Alkalinity	-	-	-	-	-	-	-	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-	-	-
Chloride (mg/l)	-	-	-	-	-	-	-	-	-	-
Fluoride (mg/l)	-	-	-	-	-	-	-	-	710	-
Nitrate (mg/l NO <sub>3</sub> -N)	1100	-	1500	-	1800	-	740	-	976	-
Total Phenols (mg/l)	-	-	-	-	-	-	-	-	-	-
Sulfate (mg/l)	-	-	-	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (mg/l)	-	-	-	-	-	-	-	-	-	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	2.46	-	2.06	-	4.39	-	4.35	-	4.94	-
Specific Conductance (µmhos/cm) (FIELD) (c)	-	-	-	-	-	-	-	-	-	-
Temperature (°C) (FIELD)	-	-	-	-	-	-	-	-	-	-
Turbidity (NTU) (FIELD)	-	-	-	-	-	-	-	-	-	-

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.:	Well RW-6 (continued)						Well RW-7			
	Phase II						Groundwater ICM			
	WAT-GW-RW6-1296		WAT-GW-RW6-1296D		ALT-GW-RW6-0997		RAT-GW-RW7-1202		RAT-GW-RW7-1228	
	9612-1499		9612-1499		RW6-0997		9412-0340		9412-2848	
Laboratory Sample I.D.:		96-5944		97-4145		12/02/94		12/28/94		
Laboratory Project No.:		12/12/96		09/24/97						
Sample Date:										
	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>										
Cyanide	5 U	-	5 U	-	5 U	-	-	-	25	-
Aluminum	-	-	-	-	37000 J	-	110000	-	47000	-
Antimony	-	-	-	-	5 U	-	100 U	-	100 U	-
Arsenic	6.3 J	-	6.8	-	2 U	-	7.0	-	6.0	-
Barium	87.2	-	92	-	91	-	650	-	170	-
Beryllium	12.7	-	13	-	2	-	10	-	3.0	-
Cadmium	12.7	-	15	-	1 U	-	10 U	-	10	-
Calcium	-	-	-	-	84000 J	-	89000	-	48000	-
Chromium	363	-	410	-	190	-	19	-	32	-
Cobalt	-	-	-	-	75	-	540	-	210	-
Copper	-	-	-	-	56	-	60	-	31	-
Iron	1170	-	580	-	2200 J	-	18000	-	690	-
Lead	1.7 U	-	1.7 U	-	2 U	-	2.0	-	100 U	-
Magnesium	84700	-	81000	-	38000 J	-	81000	-	46000	-
Manganese	-	-	-	-	14000	-	320000	-	25000	-
Mercury	0.2 U	-	0.2 U	-	0.2 U	-	0.20 U	-	0.20 U	-
Molybdenum	34.9	-	32	-	10 U	-	-	-	50 U	-
Nickel	15400	-	16000	-	4200	-	15000	-	7300	-
Potassium	-	-	-	-	27000	-	40000	-	20000	-
Selenium	-	-	-	-	3 U	-	1.0 U	-	1.3 U	-
Silver	-	-	-	-	1 U	-	10 U	-	13	-
Sodium	-	-	-	-	93000 J	-	160000	-	110000	-
Thallium	-	-	-	-	4 U	-	4.0 U	-	4.0 U	-
Vanadium	-	-	-	-	1 U	-	50 U	-	50 U	-
Zinc	-	-	-	-	97 U	-	490	-	230	-
<b>Miscellaneous</b>										
Ammonia (mg/l NH <sub>3</sub> -N)	1.1	-	-	-	0.85	-	-	-	-	-
Alkalinity	15.1	-	-	-	-	-	-	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-	-	-
Chloride (mg/l)	180	-	-	-	13	-	-	-	-	-
Fluoride (mg/l)	250	-	-	-	0.24	-	-	-	-	-
Nitrate (mg/l NO <sub>3</sub> -N)	220 J	-	-	-	43	-	230	-	100	-
Total Phenols (mg/l)	0.0050 U	-	-	-	-	-	-	-	-	-
Sulfate (mg/l)	340	-	-	-	110	-	-	-	-	-
Total Petroleum Hydrocarbons (mg/l)	1 U	-	-	-	0.21 J	-	-	-	-	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	5.70	-	-	-	6.36	-	5.70	-	5.85	-
Specific Conductance (µmhos/cm) (FIELD) (c)	3120	-	-	-	1440	-	-	-	-	-
Temperature (°C) (FIELD)	14.1	-	-	-	17.5	-	-	-	-	-
Turbidity (NTU) (FIELD)	10	-	-	-	10	-	-	-	-	-



Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well ID.:	Well RW-7 (continued)				Well RW-8		Well RW-9	
	Phase II				Phase II		Groundwater ICM	
Investigation:	WAT-GW-RW7-1296		WAT-GW-RW7-1296D		WAT-GW-RW8-1296		ALT-GW-RW9-0721	
Sample ID.:	9612-1495		9612-1498		9612-1518		950512-04	
Laboratory Sample ID.:	96-5944		96-5944		96-5944		950512	
Laboratory Project No.:	12/12/96		12/12/96		12/12/96		07/22/95	
Sample Date:	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
<b>TAL Inorganics Plus Molybdenum (µg/l)</b>								
Cyanide	9	-	-	-	5 U	-	-	-
Aluminum	-	-	-	-	3120	1320	-	-
Antimony	-	-	-	-	1.6 U	1.6 U	-	-
Arsenic	2.2 J	-	-	-	5 J	3.8 J	-	-
Barium	83 J	-	-	-	145 J	107 J	-	-
Beryllium	2.2 J	-	-	-	6.4	6.3	-	-
Cadmium	4.2 J	-	-	-	6.0	4.6 J	-	-
Calcium	-	-	-	-	156000	161000	-	-
Chromium	15.6	-	-	-	39.2	7.8 U	-	-
Cobalt	-	-	-	-	23.5	29.9 J	-	-
Copper	-	-	-	-	27.2	20.9 J	-	-
Iron	9.0 U	-	-	-	10100	4760	800	-
Lead	1.7 J	-	-	-	3.9	1.7 U	-	-
Magnesium	13100	-	-	-	35600	35300	-	-
Manganese	-	-	-	-	3210	3290	-	-
Mercury	0.2 U	-	-	-	0.2 U	0.2 U	-	-
Molybdenum	37.1	-	-	-	814	832	-	-
Nickel	1640	-	-	-	645	647	-	-
Potassium	-	-	-	-	6270	5340	-	-
Selenium	-	-	-	-	2.7 U	2.7 U	-	-
Silver	-	-	-	-	8.3 U	8.3 U	-	-
Sodium	-	-	-	-	86100	88900	-	-
Thallium	-	-	-	-	2.3 U	2.3 U	-	-
Vanadium	-	-	-	-	19.6 J	11.3 J	-	-
Zinc	-	-	-	-	67.1	39.7	-	-
<b>Miscellaneous</b>								
Ammonia (mg/l NH <sub>3</sub> -N)	0.30	-	0.32	-	0.82	-	-	-
Alkalinity	34.1	-	-	-	101	-	-	-
Biological Oxygen Demand (5-day) (mg/l)	-	-	-	-	-	-	-	-
Chemical Oxygen Demand (mg/l)	-	-	-	-	-	-	-	-
Chloride (mg/l)	86	-	-	-	290	-	-	-
Fluoride (mg/l)	41	-	-	-	31	-	570	-
Nitrate (mg/l NO <sub>3</sub> -N)	25 J	-	24	-	0.28	-	1550	-
Total Phenols (mg/l)	0.005 U	-	-	-	0.005 U	-	-	-
Sulfate (mg/l)	82	-	-	-	88	-	-	-
Total Petroleum Hydrocarbons (mg/l)	1 U	-	-	-	1 U	-	-	-
Hardness (mg/l CaCO <sub>3</sub> )	-	-	-	-	-	-	-	-
pH (standard units) (FIELD) (c)	6.40	-	-	-	6.64	-	5.14	-
Specific Conductance (µmhos/cm) (FIELD) (c)	960	-	-	-	1370	-	-	-
Temperature (°C) (FIELD)	16.3	-	-	-	15.1	-	-	-
Turbidity (NTU) (FIELD)	5	-	-	-	8.54	-	-	-

Bold values indicate exceedance of TAGM  
3028 Action Levels, or NYSWQS, or both

Table 2 (continued)

**Summary of Groundwater Sample Results**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

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Well LD.:	Well MW-1		Well MW-1B	
	Phase I	Phase II	Phase I	Phase II
Investigation:	RAT-GW-MW1-1210	WAT-GW-MW1-1296	RAT-GW-MW1B-1210	WAT-GW-MW1B-1296
Sample I.D.:				
Laboratory Sample I.D.:	9412-1187	9612-1204	9412-1188	9612-1211
Laboratory Project No.:	94-5076	96-5897	94-5076	96-5897
Sample Date:	12/10/94	12/10/96	12/10/94	12/10/96
<b>TCL Volatile Organic Compounds (µg/l)</b>				
Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-2		Well MW-2B	
	Phase I	Phase II	Phase I	Phase II
	RAT-GW-MW2-1209	WAT-GW-MW2-1296	RAT-GW-MW2B-1209	WAT-GW-MW2B-1296
	9412-5064	9612-1214	9412-1096	9612-1216
	94-5064	96-5897	94-5064	96-5897
	12/09/94	12/10/96	12/09/94	12/10/96

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 UJ	10 U	10 UJ	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

**Summary of Groundwater Sample Results**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

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Well I.D.:	Well MW-3		Well MW-3B		Well MW-4	
	Phase I		Phase I		Phase I	Phase II
Investigation:	RAT-GW-MW3-1209		RAT-GW-MW3B-1210		RAT-GW-MW4-1210	
Sample I.D.:	9412-1100		9412-1192		9412-1326	
Laboratory Sample I.D.:	94-5064		94-5076		94-5101	
Laboratory Project No.:	12/09/94		12/10/94		12/10/94	
Sample Date:					12/11/96	

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	<b>0.80 J</b>	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 UJ	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	1.0 J	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	0.60 J	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	1.0 J	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	4.0 J	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unknown	8 NJ	Unknown	10 NJ
Unknown	7 NJ	Unknown	5 NJ
Unknown	40 NJ	Unk. Aromatic	
Unknown	10 NJ	Hydrocarbon	5 NJ
Unk. Aromatic	20 NJ		

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-4 (continued)		Well MW-4B	
	Phase II		Phase I	Phase II
	WAT-GW-MW4-1296D	WAT-GW-MW4-0997	RAT-GW-MW4B-1210	WAT-GW-MW4B-1296
	9612-1339	9709-3150	9412-1327	9612-1340
	96-5919	97-4115	94-5101	96-5919
	12/11/96	09/23/97	12/10/94	12/11/96

TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	100 U	56	10 UB
Benzene	10 U	5 U	10 U	10 U
Bromodichloromethane	10 U	5 U	10 U	10 U
Bromoform	10 U	5 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	5 U	10 UJ	10 U
Carbon Tetrachloride	10 U	5 U	10 U	10 U
Chlorobenzene	10 U	5 U	10 U	10 U
Chlorodibromomethane	10 U	5 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	5 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	5 U	10 U	10 U
1,2-Dichloroethane	10 U	5 U	10 U	10 U
1,1-Dichloroethene	10 U	5 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	5 U	10 U	10 U
1,2-Dichloropropane	10 U	5 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	5 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	5 U	10 U	10 U
Ethylbenzene	10 U	5 U	10 U	10 U
2-Hexanone	10 U	5 U	10 U	10 U
Methylene Chloride	10 U	5 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	50 U	10 U	10 U
Styrene	10 U	5 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	5 U	10 U	10 U
Tetrachlorethene	10 U	5 U	10 U	10 U
Toluene	10 U	5 U	10 U	10 U
1,1,1-Trichloroethane	10 U	5 U	10 U	10 U
1,1,2-Trichloroethane	10 U	5 U	10 U	10 U
Trichloroethene	10 U	5 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	5 U	10 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Aromatic 8 NJ  
 Unk. Aromatic 7 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-4B (continued)	Well MW-5		Well MW-5B
	Phase II (continued)	Phase I	Phase II	Phase I
Investigation:	ALT-GW-MW4B-0997	RAT-GW-MW5-1209	WAT-GW-MW5-1296	RAT-GW-MW5B-1210
Sample I.D.:				
Laboratory Sample I.D.:	9709-3151	9412-1101	9612-1206	9412-1198
Laboratory Project No.:	97-4115	94-5064	96-5897	94-5077
Sample Date:	09/23/97	12/09/94	12/10/96	12/09/94

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	100 U	10 U	10 U	10 U
Benzene	5 U	10 U	10 U	10 U
Bromodichloromethane	5 U	10 U	10 U	10 U
Bromoform	5 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	21
Carbon Disulfide	5 U	10 UJ	10 U	10 U
Carbon Tetrachloride	5 U	10 U	10 U	10 U
Chlorobenzene	5 U	10 U	10 U	10 U
Chlorodibromomethane	5 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	5 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5 U	10 U	10 U	10 U
1,2-Dichloroethane	5 U	10 U	10 U	10 U
1,1-Dichloroethene	5 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	5 U	10 U	10 U	10 U
1,2-Dichloropropane	5 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	5 U	10 U	10 U	10 U
Ethylbenzene	5 U	10 U	10 U	10 U
2-Hexanone	5 U	10 U	10 U	10 U
Methylene Chloride	5 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	50 U	10 U	10 U	10 U
Styrene	5 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5 U	10 U	10 U	10 U
Tetrachlorethene	5 U	10 U	10 U	10 U
Toluene	5 U	10 U	10 U	5.2 J
1,1,1-Trichloroethane	5 U	10 U	10 U	10 U
1,1,2-Trichloroethane	5 U	10 U	10 U	10 U
Trichloroethene	5 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	5 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-5B (continued)		Well MW-6	
	Phase II	Phase I	Phase II	Phase II
Investigation:	WAT-GW-MW5B-1296	RAT-GW-MW6-1210	WAT-GW-MW6-1296	ALT-GW-MW6-0997
Sample I.D.:	9612-1203	9412-1328	9612-1205	9709-3155
Laboratory Sample I.D.:	96-5897	94-5101	96-5897	97-4115
Laboratory Project No.:	12/10/96	12/10/94	12/10/96	09/23/97
Sample Date:				

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	100 U
Benzene	10 U	10 U	10 U	5 U
Bromodichloromethane	10 U	10 U	10 U	5 U
Bromoform	10 U	10 U	10 U	5 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 UJ	10 U	5 U
Carbon Tetrachloride	10 U	10 U	10 U	5 U
Chlorobenzene	10 U	10 U	10 U	5 U
Chlorodibromomethane	10 U	10 U	10 U	5 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	5 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	5 U
1,2-Dichloroethane	10 U	10 U	10 U	5 U
1,1-Dichloroethene	10 U	10 U	10 U	5 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	5 U
1,2-Dichloropropane	10 U	10 U	10 U	5 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	5 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	5 U
Ethylbenzene	10 U	10 U	10 U	5 U
2-Hexanone	10 U	10 U	10 U	5 U
Methylene Chloride	10 U	10 U	10 U	5 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	50 U
Styrene	10 U	10 U	10 U	5 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	5 U
Tetrachlorethene	10 U	10 U	10 U	5 U
Toluene	10 U	10 U	10 U	5 U
1,1,1-Trichloroethane	10 U	10 U	10 U	5 U
1,1,2-Trichloroethane	10 U	10 U	10 U	5 U
Trichloroethene	10 U	10 U	10 U	5 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	5 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Aromatic 9 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-6B		Well MW-7B	
	Phase I	Phase II	Phase I	Phase II
Investigation:	RAT-GW-MW6B-1210	WAT-GW-MW6B-1296	RAT-GW-MW7B-1210	WAT-GW-MW7B-1296
Sample I.D.:				
Laboratory Sample I.D.:	9412-1329	9612-1207	9412-1193	9412-1193
Laboratory Project No.:	94-5101	96-5897	94-5076	96-5860
Sample Date:	12/10/94	12/10/96	12/10/94	12/09/96

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 UJ	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	14	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs



Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-8B			Well MW-9B
	Phase I	Phase II		-Phase I
	RAT-GW-MW8B-1210	WAT-GW-MW8B-1296	WAT-GW-MW8B-1296	RAT-GW-MW9B-1210
	9412-1194	9612-0975	9612-0975	9412-1195
	94-5076	96-5860	96-5860	94-5076
	12/10/94	12/09/96	12/09/96	12/10/94

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	5.9 J	10 U	10 U	4.5 J
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

**Summary of Groundwater Sample Results**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

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Well I.D.:	Well MW-10B		Well MW-11		Well MW-12	
	Phase I		Phase I		Phase II	
	RAT-GW-MW10-1210	RAT-GW-MW11-1210	WAT-GW-MW12-1296	WAT-GW-MW12-1296D		
Investigation:						
Sample I.D.:						
Laboratory Sample I.D.:	9412-1330	9412-1331	9612-1354	9612-1354		
Laboratory Project No.:	94-5101	94-5101	96-5919	96-5919		
Sample Date:	12/10/94	12/10/94	12/11/96	12/11/96		

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 UJ	10 UJ	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	1 J	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well ID.:	Well MW-14	Well MW-15	Well MW-16	Well MW-17
Investigation:	Phase II	Phase II	Phase II	Phase II--
Sample I.D.:	WAT-GW-MW14-1296	WAT-GW-MW15-1296	WAT-GW-MW16-1296	WAT-GW-MW17-1296
Laboratory Sample I.D.:	9612-1353	9612-1336	9612-1335	9612-1351
Laboratory Project No.:	96-5919	96-5919	96-5919	96-5919
Sample Date:	12/11/96	12/11/96	12/11/96	12/11/96

TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unknown 10 NJ  
 Unknown 10 NJ  
 Unknown 5 NJ

Unknown 9 NJ  
 Unknown 20 NJ  
 Unknown 10 NJ  
 Unknown 8 NJ  
 Unk. Aromatic Hydrocarbon 6 NJ

Table 2 (continued)

**Summary of Groundwater Sample Results**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech SPecialty Steel Corporation Facility**  
**Watervliet, New York**

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Well I.D.:	Well MW-18	Well MW-19	Well MW-19B	Well OW-20
	Phase II	Phase II	Phase II	Phase II
Investigation:	ALT-GW-MW18-0997	ALT-GW-MW19-0997	ALT-GW-MW19B-0997	WAT-GW-OW20-1296
Sample I.D.:				
Laboratory Sample I.D.:	9709-3154	9709-3153	9709-3152	9612-1345
Laboratory Project No.:	97-4115	97-4115	97-4115	96-5919
Sample Date:	09/23/97	09/23/97	09/23/97	12/11/96

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	100 U	100 U	100 U	10 U
Benzene	5 U	5 U	5 U	10 U
Bromodichloromethane	5 U	5 U	5 U	10 U
Bromoform	5 U	5 U	5 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	5 U	5 U	5 U	10 U
Carbon Tetrachloride	5 U	5 U	5 U	10 U
Chlorobenzene	5 U	5 U	5 U	10 U
Chlorodibromomethane	5 U	5 U	5 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	5 U	21 J	5 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5 U	5 U	5 U	10 U
1,2-Dichloroethane	5 U	5 U	5 U	10 U
1,1-Dichloroethene	5 U	5 U	5 U	10 U
1,2-Dichloroethene (total)	5 U	5 U	5 U	10 U
1,2-Dichloropropane	5 U	5 U	5 U	10 U
cis-1,3-Dichloropropene	5 U	5 U	5 U	10 U
trans-1,3-Dichloropropene	5 U	5 U	5 U	10 U
Ethylbenzene	5 U	5 U	5 U	10 U
2-Hexanone	5 U	5 U	5 U	10 U
Methylene Chloride	5 U	5 U	5 U	10 U
4-Methyl-2-pentanone (MIBK)	50 U	50 U	50 U	10 U
Styrene	5 U	5 U	5 U	10 U
1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	10 U
Tetrachlorethene	5 U	5 U	5 U	10 U
Toluene	5 U	5 U	5 U	10 U
1,1,1-Trichloroethane	5 U	5 U	5 U	10 U
1,1,2-Trichloroethane	5 U	5 U	5 U	10 U
Trichloroethene	5 U	5 U	5 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	5 U	5 U	5 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well OW-21	Well AP-1		Well AP-2
	Phase II	Phase I	Phase II	Phase I
	WAT-GW-OW21-1296	RAT-GW-AP1-1211	WAT-GW-AP1-1296	RAT-GW-AP2-1211
	9612-1344	9412-1344	9612-1502	9412-1345
	96-5919	94-5105	96-5944	94-5105
	12/11/96	12/11/94	12/12/96	12/11/94

## TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	36	21 B	300
Benzene	10 U	0.30 J	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	2.0 J	10 U	2.0 J
2-Hexanone	10 U	10 U	10 U	1.0 J
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	2.0 J
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	8.0 J	10 U	6.0 J

## VOC TICs

## VOC TICs

## VOC TICs

## VOC TICs

Unk. Aromatic	6 J	Unk. Aromatic	Unknown	9 J
Unk. Aromatic	7 J	Hydrocarbon	10 NJ	
		Unk. Aromatic		
		Hydrocarbon	9 NJ	
		Unk. Aromatic		
		Hydrocarbon	10 NJ	
		Unk. Aromatic		
		Hydrocarbon	20 NJ	
		Unknown	8 NJ	

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well ID: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well AP-2 (continued)		Well MW-A1	Well MW-A2
	Phase II		Phase I	Phase I
	WAT-GW-AP2-1296	ALT-GW-AP2-0997	RAT-GW-MWA1-1212	RAT-GW-MWA2-1212
	9612-1338	9709-3398	9412-1361	9412-1362
	96-5919	97-4145	94-5107	94-5107
	12/11/96	09/24/97	12/12/94	12/12/94

TCL Volatile Organic Compounds (µg/l)

Acetone	10 UB	100 U	10 U	10 U
Benzene	10 U	5 U	10 U	10 U
Bromodichloromethane	10 U	5 U	10 U	10 U
Bromoform	10 U	5 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	5 U	10 U	10 U
Carbon Tetrachloride	10 U	5 U	10 U	10 U
Chlorobenzene	10 U	5 U	10 U	10 U
Chlorodibromomethane	10 U	5 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	5 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	5 U	10 U	10 U
1,2-Dichloroethane	10 U	5 U	10 U	10 U
1,1-Dichloroethene	10 U	5 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	5 U	10 U	10 U
1,2-Dichloropropane	10 U	5 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	5 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	5 U	10 U	10 U
Ethylbenzene	10 U	5 U	10 U	10 U
2-Hexanone	10 U	5 U	10 U	10 U
Methylene Chloride	10 U	5 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	50 U	10 U	10 U
Styrene	10 U	5 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	5 U	10 U	10 U
Tetrachlorethene	10 U	5 U	10 U	10 U
Toluene	10 U	5 U	10 U	10 U
1,1,1-Trichloroethane	10 U	5 U	10 U	10 U
1,1,2-Trichloroethane	10 U	5 U	10 U	10 U
Trichloroethene	10 U	5 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	5 U	10 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Aromatic Hydrocarbon	8 NJ	1,2,4-trimethyl-benzene	5
Unk. Aromatic Hydrocarbon	7 NJ	Unk. Aromatic	5.2
		Unk. Aromatic	5.4

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-B			Well MW-C
	Phase I	Phase II		Phase I
	RAT-GW-MWB-1211	WAT-GW-MWB-1296	ALT-GW-MWB-0997	RAT-GW-MWC-1211
	9412-1349	9612-1493	9709-3397	9412-1346
	94-5105	96-5944	97-4145	94-5105
	12/11/94	12/12/96	09/24/97	12/11/94

## TCL Volatile Organic Compounds (µg/l)

Acetone	6.0 J	10 UB	100 U	10 U
Benzene	10 U	10 U	5 U	10 U
Bromodichloromethane	10 U	10 U	5 U	10 U
Bromoform	10 U	10 U	5 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	5 U	10 U
Carbon Tetrachloride	10 U	10 U	5 U	10 U
Chlorobenzene	10 U	10 U	5 U	10 U
Chlorodibromomethane	10 U	10 U	5 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	5 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	3.0 J	10 U	5 U	3.0 J
1,2-Dichloroethane	10 U	10 U	5 U	10 U
1,1-Dichloroethene	10 U	10 U	5 U	10 U
1,2-Dichloroethene (total)	0.90 J	10 U	5 U	0.60 J
1,2-Dichloropropane	10 U	10 U	5 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	5 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	5 U	10 U
Ethylbenzene	10 U	10 U	5 U	10 U
2-Hexanone	10 U	10 U	5 U	10 U
Methylene Chloride	10 U	10 U	5 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	50 U	10 U
Styrene	10 U	10 U	5 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	5 U	10 U
Tetrachlorethene	10 U	10 U	5 U	10 U
Toluene	10 U	10 U	5 U	10 U
1,1,1-Trichloroethane	10 U	10 U	5 U	10 U
1,1,2-Trichloroethane	10 U	10 U	5 U	10 U
Trichloroethene	10 U	10 U	5 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	0.30 J	10 U	5 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Aromatic 10 J  
Unknown 9 J  
Unknown 9 J  
Unk. Aromatic 7 J

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.:	Well MW-C (continued)		Well MW-D1	
	Phase II		Phase I	Phase II
Investigation:	WAT-GW-MWC-1296	WAT-GW-MWC-1296D	RAT-GW-MWD1-1211	WAT-GW-MWD1-1296
Sample I.D.:	9612-1514	9612-1514	9412-1347	9612-1508
Antech Sample I.D.:	96-5944	96-5944	94-5105	96-5944
Antech Project No.:	12/12/96	12/12/96	12/11/94	12/12/96
Sample Date:				

TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	10 U	19	10 U
Benzene	10 U	10 U	1.0 J	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	2.0 J	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	0.40 J	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	0.90 J	10 U

VOC TICs		VOC TICs		VOC TICs		VOC TICs	
Unknown	5 NJ	Unk. Hydrocarbon	10 J	Unknown	7 NJ	Unk. Hydrocarbon	10 J
Unknown	6 NJ	Unk. Hydrocarbon	10 J	Unknown	30 NJ	Unknown	20 J
Unknown	20 NJ	Unknown	20 J	Unknown	9 NJ	Unk. Hydrocarbon	20 J
Unknown	10 NJ	Unk. Hydrocarbon	20 J	Unknown	70 NJ	Unk. Hydrocarbon	20 J
Unknown	5 NJ	Unk. Hydrocarbon	30 J	Unknown	10 NJ	Unk. Hydrocarbon	30 J
Unknown	10 NJ	Unknown	40 J	Unknown	30 NJ	Unk. Aromatic	40 J
		Unk. Hydrocarbon	20 J	Hydrocarbon	6 NJ	Unk. Hydrocarbon	20 J
		Unk. Hydrocarbon	20 J	Unk. Aromatic		Unk. Hydrocarbon	20 J
		Unknown	20 J	Hydrocarbon	20 NJ	Unknown	20 J



Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.:	Well MW-D1 (continued)	Well MW-D2		Well TF-1
Investigation:	Phase II	Phase I	Phase II	Phase I
Sample I.D.:	ALT-GW-MWD1-0997	RAT-GW-MWD2-1211	WAT-GW-MWD2-1296	RAT-GW-TF1-1211
Antech Sample I.D.:	9709-3406	9412-1348	9612-1505	9412-1353
Antech Project No.:	97-4145	94-5105	96-5944	94-5105
Sample Date:	09/24/97	12/11/94	12/12/96	12/11/94

TCL Volatile Organic Compounds (µg/l)

Acetone	100 U	2.0 J	12 B	2.0 J
Benzene	5 U	0.70 J	10 U	10 U
Bromodichloromethane	5 U	10 U	10 U	10 U
Bromoform	5 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	12 J	10 U	15	10 U
Carbon Disulfide	5 U	10 U	10 U	10 U
Carbon Tetrachloride	5 U	10 U	10 U	10 U
Chlorobenzene	5 U	10 U	10 U	10 U
Chlorodibromomethane	5 U	10 U	10 U	10 U
Chloroethane	10 U	6.0 J	10 U	10 U
Chloroform	5 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5 U	10 U	10 U	10 U
1,2-Dichloroethane	5 U	10 U	10 U	10 U
1,1-Dichloroethene	5 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	5 U	10 U	10 U	10 U
1,2-Dichloropropane	5 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	5 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	5 U	10 U	10 U	10 U
Ethylbenzene	5 U	10 U	10 U	10 U
2-Hexanone	5 U	10 U	10 U	10 U
Methylene Chloride	5 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	50 U	10 U	10 U	10 U
Styrene	5 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	5 U	10 U	10 U	10 U
Tetrachlorethene	5 U	10 U	10 U	10 U
Toluene	5 U	0.40 J	10 U	10 U
1,1,1-Trichloroethane	5 UJ	10 U	10 U	10 U
1,1,2-Trichloroethane	5 U	10 U	10 U	10 U
Trichloroethene	5 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	5 U	10 U	10 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Hydrocarbon	13	Unknown	5 J	Unknown	10 NJ	Unk. Aromatic	20 J
Unk. Hydrocarbon	9	Unknown	5 J	Unknown	20 NJ	Unk. Aromatic	9 J
Unk. Hydrocarbon	14	Unk. Aromatic	10 J	Unknown	6 NJ	Unknown	7 J
Unk. Hydrocarbon	9			Unk. Aromatic		Unknown	30 J
Unk. Hydrocarbon	9			Hydrocarbon	7 NJ	Unk. Aromatic	8 J
Unk. Hydrocarbon	21						
Unk. Hydrocarbon	42						
Unk. Hydrocarbon	41						
Unk. Aromatic	37						
Unknown	100						
Unk. Hydrocarbon	17						
Unk. Hydrocarbon	85						
Unk. Hydrocarbon	37						
Unk. Hydrocarbon	21						
Unk. Hydrocarbon	63						
Unk. Hydrocarbon	149						
Unknown	41						
Unk. Hydrocarbon	43						
Unk. Hydrocarbon	45						
Unknown	38						

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.:	Well TF-1 (continued)	Well PH-1		Well H-4D
	Phase II	Phase I	Phase II	Phase I
Investigation:	WAT-GW-TF1-1296	RAT-GW-PH1-1211	WAT-GW-PH1-1296	RAT-GW-H4D-1211
Sample I.D.:	9612-1346	9412-1352	9612-1347	9412-1350
Antech Sample I.D.:	96-5919	94-5105	96-5919	94-5105
Antech Project No.:	12/11/96	12/11/94	12/11/96	12/11/94
Sample Date:				

TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	5.0 J	10 U	2.0 J
Benzene	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unk. Aromatic	7 J	Unk. Aromatic		Unknown	1 J
Unknown	6 J	Hydrocarbon	20 NJ	Unk. Aromatic	7 J
Unknown	10 J	Unk. Aromatic			
Unknown	9 J	Hydrocarbon	20 NJ		
Unknown	20 J				
Unknown	40 J				
Unknown	5 J				
Unknown	20 J				
Unk. Aromatic	20 J				
Unknown	9 J				

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well H-4D (continued)	Well H-4S		Well RW-1B
	Phase II	Phase I	Phase II	Phase II
Investigation:	WAT-GW-H4D-1296	RAT-GW-H4S-1211	WAT-GW-H4S-1296	WAT-GW-RW1B-1296
Sample I.D.:	9612-1202	9412-1351	9612-1201	9612-1504
Antech Sample I.D.:	96-5897	94-5105	96-5897	96-5944
Antech Project No.:	12/10/96	12/11/94	12/10/96	12/12/96
Sample Date:				

## TCL Volatile Organic Compounds (µg/l)

Acetone	10 U	10 U	10 U	10 U
Benzene	10 U	0.90 J	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	10 U	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U
Methylene Chloride	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U
Tetrachlorethene	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	10 U
	VOC TICs	VOC TICs	VOC TICs	VOC TICs
				Unknown 10 NJ
				Unknown 20 NJ
				Unknown 8 NJ
				Unknown 10 NJ
				Unknown 10 NJ
				Unk. Aromatic Hydrocarbon 10 NJ
				Unk. Aromatic Hydrocarbon 6 NJ
				Unk. Aromatic Hydrocarbon 9 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
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Well I.D.:	Well RW-1B (continued)		Well RW-2B	
	Phase II (continued)		Phase II	
	ALT-GW-RW1B-0997	ALT-GW-RW1B-0997D	WAT-GW-RW2B-1296	ALT-GW-RW2B-0997
Investigation:				
Sample I.D.:	ALT-GW-RW1B-0997	ALT-GW-RW1B-0997D	WAT-GW-RW2B-1296	ALT-GW-RW2B-0997
Antech Sample I.D.:	9709-3401	9709-3402	9612-1511	9709-3405
Antech Project No.:	97-4145	97-4145	96-5944	97-4145
Sample Date:	09/24/97	09/24/97	12/12/96	09/24/97

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	100 U	100 U	10 U	100 U
Benzene	5 U	5 U	10 U	5 U
Bromodichloromethane	5 U	5 U	10 U	5 U
Bromoform	5 U	5 U	10 U	5 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	5 U	5 U	10 U	5 U
Carbon Tetrachloride	5 U	5 U	10 U	5 U
Chlorobenzene	5 U	5 U	10 U	5 U
Chlorodibromomethane	5 U	5 U	10 U	5 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	5 U	5 U	10 U	5 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	5 U	5 U	10 U	5 U
1,2-Dichloroethane	5 U	5 U	10 U	5 U
1,1-Dichloroethene	5 U	5 U	10 U	5 U
1,2-Dichloroethene (total)	5 U	5 U	10 U	5 U
1,2-Dichloropropane	5 U	5 U	10 U	5 U
cis-1,3-Dichloropropene	5 U	5 U	10 U	5 U
trans-1,3-Dichloropropene	5 U	5 U	10 U	5 U
Ethylbenzene	5 U	5 U	10 U	5 U
2-Hexanone	5 U	5 U	10 U	5 U
Methylene Chloride	5 U	5 U	10 U	5 U
4-Methyl-2-pentanone (MIBK)	50 U	50 U	10 U	50 U
Styrene	5 U	5 U	10 U	5 U
1,1,2,2-Tetrachloroethane	5 U	5 U	10 U	5 U
Tetrachlorethene	5 U	5 U	10 U	5 U
Toluene	5 U	5 U	10 U	5 U
1,1,1-Trichloroethane	5 U	5 U	10 U	5 U
1,1,2-Trichloroethane	5 U	5 U	10 U	5 U
Trichloroethene	5 U	5 U	10 U	5 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	5 U	5 U	10 U	5 U

VOC TICs

VOC TICs

VOC TICs

VOC TICs

Unknown	10
Unknown	30
Unknown	20
Unknown	20
Unknown	8
Unknown	10
Unknown	10
Unknown	20
Unk. Aromatic Hydrocarbon	5

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well RW-6		Well RW-7	Well RW-8
	Phase II		Phase II	Phase II
Investigation:	WAT-GW-RW6-1296	WAT-GW-RW6-0997	WAT-GW-RW7-1296	WAT-GW-RW8-1296
Sample I.D.:				
Antech Sample I.D.:	9612-1499	9709-3404	9612-1495	9612-1518
Antech Project No.:	96-5944	97-4145	96-5944	96-5944
Sample Date:	12/12/96	09/24/97	12/12/96	12/12/96

TCL Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acetone	10 UB	100 U	10 UB	10 U
Benzene	10 U	5 U	10 U	10 U
Bromodichloromethane	10 U	5 U	10 U	10 U
Bromoform	10 U	5 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U
2-Butanone (MEK)	10 U	10 U	10 U	10 U
Carbon Disulfide	10 U	5 U	10 U	10 U
Carbon Tetrachloride	10 U	5 U	10 U	10 U
Chlorobenzene	10 U	5 U	10 U	10 U
Chlorodibromomethane	10 U	5 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U
Chloroform	10 U	5 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	5 U	10 U	10 U
1,2-Dichloroethane	10 U	5 U	10 U	10 U
1,1-Dichloroethene	10 U	5 U	10 U	10 U
1,2-Dichloroethene (total)	10 U	5 U	10 U	10 U
1,2-Dichloropropane	10 U	5 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	5 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	5 U	10 U	10 U
Ethylbenzene	10 U	5 U	10 U	10 U
2-Hexanone	10 U	5 U	10 U	10 U
Methylene Chloride	10 U	5 U	10 U	10 U
4-Methyl-2-pentanone (MIBK)	10 U	50 U	10 U	10 U
Styrene	10 U	5 U	10 U	10 U
1,1,2-Tetrachloroethane	10 U	5 U	10 U	10 U
Tetrachlorethene	10 U	5 U	10 U	10 U
Toluene	10 U	5 U	10 U	10 U
1,1,1-Trichloroethane	10 U	5 UJ	10 U	10 U
1,1,2-Trichloroethane	10 U	5 U	10 U	10 U
Trichloroethene	10 U	5 U	10 U	10 U
Vinyl Chloride	10 U	10 U	10 U	10 U
Total Xylenes	10 U	5 U	10 U	10 U

## VOC TICs

## VOC TICs

## VOC TICs

## VOC TICs

Unk. Aromatic  
Hydrocarbon 5 NJ

Unknown 9 NJ  
Unknown 7 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
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Well I.D.:	Well MW-1		Well MW-1B		Well MW-2
	Phase I	Phase II	Phase I	Phase II	Phase I
Investigation:	RAT-GW-MW1-1210	GW-MW1-1296	RAT-GW-MW1B-1210	GW-MW1B-1296	RAT-GW-MW2-1209
Sample I.D.:	9412-1187	9612-1204	9412-1188	9612-1211	9412-1095
Laboratory Sample I.D.:	94-5076	96-5897	94-5076	96-5897	94-5064
Laboratory Project No.:					
Sample Date:	12/10/94	12/10/96	12/10/94	12/10/96	12/09/94
TCL Semi-Volatile Organic Compounds (µg/l)					
Acenaphthene	11 U	10 U	11 U	10 U	11 U
Acenaphthylene	11 U	10 U	11 U	10 U	11 U
Anthracene	11 U	10 U	11 U	10 U	11 U
Bis(2-chloroethyl)ether	11 U	10 U	11 U	10 U	11 U
Bis(2-chloroethoxy)methane	11 U	10 U	11 U	10 U	11 U
Bis(2-chloroisopropyl)ether	11 U	10 U	11 U	10 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	10 U	11 U	10 U	11 U
Benzo(a)pyrene	11 U	10 U	11 U	10 U	11 U
Benzo(a)anthracene	11 U	10 U	11 U	10 U	11 U
Benzo(b)fluoranthene	11 U	10 U	11 U	10 U	11 U
Benzo(g,h,i)perylene	11 U	10 U	11 U	10 U	11 U
Benzo(k)fluoranthene	11 U	10 U	11 U	10 U	11 U
4-Bromophenyl phenyl ether	11 U	10 U	11 U	10 U	11 U
Butyl benzyl phthalate	11 U	10 U	11 U	10 U	11 U
Carbazole	11 U	10 U	11 U	10 U	11 U
Chrysene	11 U	10 U	11 U	10 U	11 U
4-Chloroaniline	11 U	10 U	11 U	10 U	11 U
2-Chloronaphthalene	11 U	10 U	11 U	10 U	11 U
2-Chlorophenol	11 U	R	11 U	10 U	11 U
4-Chlorophenyl phenyl ether	11 U	10 U	11 U	10 U	11 U
o-Cresol	11 U	R	11 U	10 U	11 U
p-Cresol	11 U	R	11 U	10 U	11 U
Dibenz(a,h)anthracene	11 U	10 U	11 U	10 U	11 U
Dibenzofuran	11 U	10 U	11 U	10 U	11 U
2,4-Dichlorophenol	11 U	R	11 U	10 U	11 U
1,2-Dichlorobenzene	11 U	10 U	11 U	10 U	11 U
1,3-Dichlorobenzene	11 U	10 U	11 U	10 U	11 U
1,4-Dichlorobenzene	11 U	10 U	11 U	10 U	11 U
3,3-Dichlorobenzidine	11 U	10 U	11 U	10 U	11 U
Diethyl phthalate	11 U	10 U	11 U	10 U	11 U
Dimethyl phthalate	11 U	10 U	11 U	10 U	11 U
2,4-Dimethylphenol	11 U	R	11 U	10 U	11 U
Di-n-butyl phthalate	27 U	10 U	6 J	10 U	11 U
4,6-Dinitro-o-cresol	11 U	R	27 U	26 U	28 U
2,4-Dinitrotoluene	11 U	10 U	11 U	10 U	11 U
2,6-Dinitrotoluene	11 U	10 U	11 U	10 U	11 U
Di-n-octyl phthalate	11 U	10 U	11 U	10 U	11 U
2,4-Dinitrophenol	27 U	R	27 U	R	28 U
Fluoranthene	11 U	10 U	11 U	10 U	11 U
Fluorene	11 U	10 U	11 U	10 U	11 U
Hexachlorocyclopentadiene	11 U	10 UJ	11 U	10 UJ	11 U
Hexachlorobenzene	11 U	10 U	11 U	10 U	11 U
Hexachlorobutadiene	11 U	10 U	11 U	10 U	11 U
Hexachloroethane	11 U	10 U	11 U	10 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	10 U	11 U	10 U	11 U
Isophorone	11 U	10 U	11 U	10 U	11 U
2-Methylnaphthalene	11 U	10 U	11 U	10 U	11 U
N-nitrosodiphenylamine	11 U	10 U	11 U	10 U	11 U
N-nitro-di-n-propylamine	11 U	10 U	11 U	10 U	11 U
Naphthalene	5 J	10 U	11 U	10 U	11 U
2-Nitroaniline	27 U	25 U	27 U	26 U	28 U
3-Nitroaniline	27 U	25 U	27 U	26 U	28 U
4-Nitroaniline	27 U	25 U	27 U	26 U	28 U
Nitrobenzene	11 U	10 U	11 U	10 U	11 U
2-Nitrophenol	11 U	R	11 U	10 U	11 U
4-Nitrophenol	27 U	R	27 U	26 U	28 U
p-Chloro-m-cresol	11 U	R	11 U	10 U	11 U
Pentachlorophenol	27 U	R	27 U	26 U	28 U
Phenanthrene	11 U	10 U	11 U	10 U	11 U
Phenol	11 U	R	11 U	10 U	11 U
Pyrene	11 U	10 U	11 U	10 U	11 U
1,2,4-Trichlorobenzene	11 U	10 U	11 U	10 U	11 U
2,4,5-Trichlorophenol	27 U	R	27 U	26 U	28 U
2,4,6-Trichlorophenol	11 U	R	11 U	10 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-1		Well MW-1B		Well MW-2
	Phase I	Phase II	Phase I	Phase II	Phase I
	RAT-GW-MW1-1210	GW-MW1-1296	RAT-GW-MW1B-1210	GW-MW1B-1296	RAT-GW-MW2-1209
	9412-1187	9612-1204	9412-1188	9612-1211	9412-1095
	94-5076	96-5897	94-5076	96-5897	94-5064
	12/10/94	12/10/96	12/10/94	12/10/96	12/09/94

SVOC TICs (µg/l)

Unknown Aromatic	6 J	Unknown	34 NJ	Unknown Hydrocarbon	7 J	Unknown	R	Unknown Hydrocarbon	20 NJ
Unknown Hydrocarbon	7 J	Unknown	200 NJ	Unknown Hydrocarbon	4 J	Unknown	R	Unknown Hydrocarbon	6 NJ
Unknown Aromatic	9 J	Unknown	290 NJ	Unknown Hydrocarbon	10 J	Unknown	R	Unknown Hydrocarbon	6 NJ
Unknown Aromatic	6 J	Unknown	54 NJ			Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 NJ
Unknown Aromatic	10 J	Unknown	97 NJ			Unknown	R		
Unknown Hydrocarbon	5 J	Unknown	R			Unknown	R		
Unknown Aromatic	10 J	Unknown	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	20 J	Unknown	34 NJ			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	4 J	Unknown	32 NJ			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	6 J	Unknown	23 NJ			Unknown	R		
Unknown Hydrocarbon	4 J	Unknown	280 NJ			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	50 J	Unknown	2000 NJ			Unknown Hydrocarbon	27 NJ		
		Unknown	390 NJ			Unknown Hydrocarbon	R		
		Unknown	R			Unknown	18 NJ		

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-2 (continued)		Well MW-2B		Well MW-3
	Phase II		Phase I	Phase II	Phase I
	GW-MW2-1296	GW-MW2-1296D	RAT-GW-MW2B-1209	GW-MW2B-1296	RAT-GW-MW3-1209
	9612-1214	9612-1215	9412-1096	9612-1216	9412-1100
	96-5897	96-5897	94-5064	96-5897	94-5064
	12/10/96	12/10/96	12/09/94	12/10/96	12/09/94
<b>TCL Semi-Volatile Organic Compounds (µg/l)</b>					
Acenaphthene	11 U	R	11 U	11 U	11 U
Acenaphthylene	11 U	R	11 U	11 U	11 U
Anthracene	11 U	R	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	R	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	R	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	R	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	100 J	R	11 U	11 U	11 U
Benzo(a)pyrene	11 U	R	11 U	11 U	11 U
Benzo(a)anthracene	11 U	R	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	R	11 U	11 U	11 U
Benzo(g,h,i)perylene	11 U	R	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	R	11 U	11 U	11 U
4-Bromophenyl phenyl ether	11 U	R	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	R	11 U	11 U	11 U
Carbazole	11 U	R	11 U	11 U	11 U
Chrysene	11 U	R	11 U	11 U	11 U
4-Chloroaniline	11 U	R	11 U	11 U	11 U
2-Chloronaphthalene	11 U	R	11 U	11 U	11 U
2-Chlorophenol	11 U	R	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	R	11 U	11 U	11 U
o-Cresol	11 U	R	11 U	11 U	11 U
p-Cresol	11 U	R	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	R	11 U	11 U	11 U
Dibenzofuran	11 U	R	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	R	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	R	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	R	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	R	11 U	11 U	11 U
3,3-Dichlorobenzidine	11 U	R	11 U	11 U	11 U
Diethyl phthalate	11 U	R	11 U	11 U	11 U
Dimethyl phthalate	11 U	R	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	R	11 U	11 U	11 U
Di-n-butyl phthalate	11 U	R	11 U	11 U	11 U
4,6-Dinitro-o-cresol	27 U	R	28 U	27 U	28 U
2,4-Dinitrotoluene	11 U	R	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	R	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	R	11 U	11 U	11 U
2,4-Dinitrophenol	R	R	28 U	R	28 U
Fluoranthene	11 U	R	11 U	11 U	11 U
Fluorene	11 U	R	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 UJ	R	11 U	11 UJ	11 U
Hexachlorobenzene	11 U	R	11 U	11 U	11 U
Hexachlorobutadiene	11 U	R	11 U	11 U	11 U
Hexachloroethane	11 U	R	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	R	11 U	11 U	11 U
Isophorone	11 U	R	11 U	11 U	11 U
2-Methylnaphthalene	11 U	R	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	R	11 U	11 U	11 U
N-nitro-di-n-propylamine	11 U	R	11 U	11 U	11 U
Naphthalene	11 U	R	11 U	11 U	11 U
2-Nitroaniline	27 U	R	28 U	27 U	28 U
3-Nitroaniline	27 U	R	28 U	27 U	28 U
4-Nitroaniline	27 U	R	28 U	27 U	28 U
Nitrobenzene	11 U	R	11 U	11 U	11 U
2-Nitrophenol	11 U	R	11 U	11 U	11 U
4-Nitrophenol	27 U	R	28 U	27 U	28 U
p-Chloro-m-cresol	11 U	R	11 U	11 U	11 U
Pentachlorophenol	27 U	R	28 U	27 U	28 U
Phenanthrene	11 U	R	11 U	11 U	11 U
Phenol	11 U	R	11 U	11 U	11 U
Pyrene	11 U	R	11 U	11 U	11 U
1,2,4-Trichlorobenzene	11 U	R	11 U	11 U	11 U
2,4,5-Trichlorophenol	27 U	R	28 U	27 U	28 U
2,4,6-Trichlorophenol	11 U	R	11 U	11 U	11 U



Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-2 (continued)		Well MW-2B			Well MW-3
	Phase II		Phase I	Phase II		Phase I
	GW-MW2-1296	GW-MW2-1296D	RAT-GW-MW2B-1209	GW-MW2B-1296		RAT-GW-MW3-1209
	9612-1214	A12-1215	9412-1096	9612-1216		9412-1100
	96-5897	96-5897	94-5064	96-5897		94-5064
	12/10/96	12/11/96	12/09/94	12/10/96		12/09/94

SVOC TICs (µg/l)

Unknown	R	Unknown	R	Unknown Aromatic	10 NJ	Unknown	R	Unknown Hydrocarbon	30 NJ
Unknown Hydrocarbon	R	Unknown	R	Unknown Hydrocarbon	10 NJ	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 NJ
Unknown Hydrocarbon	23 NJ	Unknown	R			Unknown	R	Unknown Hydrocarbon	7 NJ
Unknown	R	Unknown Hydrocarbon	R			Unknown	R	Unknown Hydrocarbon	30 NJ
Unknown	R	Unknown	R			Unknown	R		
Unknown	R	Unknown Hydrocarbon	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	R	Unknown Hydrocarbon	R			Unknown	33 NJ		
Unknown	14 NJ	Unknown Phthalate	R			Unknown	120 NJ		
Unknown	56 NJ	Unknown Hydrocarbon	R			Unknown	R		
Unknown	23 NJ	Unknown	R			Unknown Hydrocarbon	23 NJ		
Unknown	R	Unknown	R			Unknown Hydrocarbon	R		
Unknown	R	Unknown Hydrocarbon	R			Unknown	R		
Unknown	R	Unknown Hydrocarbon	R			Unknown	R		
Unknown	R	Unknown Hydrocarbon	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	R	Unknown Hydrocarbon	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	R	Unknown Hydrocarbon	R			Unknown Hydrocarbon	R		
Unknown	42 NJ	Unknown	R						

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
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Well I.D.:	Well MW-3B		Well MW-4		Well MW-4B	
	Phase I		Phase I	Phase II	Phase I	
Investigation:	RAT-GW-MW3B-1210		RAT-GW-MW4-1210	WAT-GW-MW4-1296	ALT-GW-MW4-0997	RAT-GW-MW4B-1210
Sample I.D.:	9412-1192		9412-1326	9612-1339	9709-3150	9412-1327
Laboratory Sample I.D.:	94-5076		94-5101	96-5919	97-4115	94-5101
Laboratory Project No.:	12/10/94		12/10/94	12/11/96	09/23/97	12/10/94

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	11 U	11 U	11 U	12 U	11 U
Acenaphthylene	11 U	11 U	11 U	12 U	11 U
Anthracene	11 U	11 U	11 U	12 U	11 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	12 U	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	12 U	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	11 U	12 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	10 J	12 U	11 U
Benzo(a)pyrene	11 U	11 U	11 U	12 U	11 U
Benzo(a)anthracene	11 U	11 U	11 U	12 U	11 U
Benzo(b)fluoranthene	11 U	11 U	11 U	12 U	11 U
Benzo(g,h,i)perylene	11 U	11 U	11 U	12 U	11 U
Benzo(k)fluoranthene	11 U	11 U	11 U	12 U	11 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	12 U	11 U
Butyl benzyl phthalate	11 U	11 U	11 U	12 U	11 U
Carbazole	11 U	11 U	11 U	12 U	11 U
Chrysene	11 U	11 U	11 U	12 U	11 U
4-Chloroaniline	11 U	11 U	11 U	12 U	11 U
2-Chloronaphthalene	11 U	11 U	11 U	12 U	11 U
2-Chlorophenol	11 U	11 U	11 U	12 U	R
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	12 U	11 U
o-Cresol	11 U	11 U	11 U	12 U	R
p-Cresol	11 U	11 U	11 U	12 U	R
Dibenz(a,h)anthracene	11 U	11 U	11 U	12 U	11 U
Dibenzofuran	11 U	11 U	11 U	12 U	11 U
2,4-Dichlorophenol	11 U	11 U	11 U	12 U	R
1,2-Dichlorobenzene	11 U	11 U	11 U	12 U	11 U
1,3-Dichlorobenzene	11 U	11 U	11 U	12 U	11 U
1,4-Dichlorobenzene	11 U	11 U	11 U	12 U	11 U
3,3-Dichlorobenzidine	11 U	11 U	11 U	12 U	11 U
Diethyl phthalate	11 U	11 U	11 U	12 U	11 U
Dimethyl phthalate	11 U	11 U	11 U	12 U	11 U
2,4-Dimethylphenol	11 U	11 U	11 U	12 U	11 U
Di-n-butyl phthalate	11 U	11 U	11 U	40 U	11 U
4,6-Dinitro-o-cresol	27 U	27 U	R	29 U	27 U
2,4-Dinitrotoluene	11 U	11 U	11 U	12 U	11 U
2,6-Dinitrotoluene	11 U	11 U	11 U	12 U	11 U
Di-n-octyl phthalate	11 U	11 U	11 U	12 U	11 U
2,4-Dinitrophenol	27 U	27 UJ	R	R	R
Fluoranthene	11 U	11 U	11 U	12 U	11 U
Fluorene	11 U	11 U	11 U	12 U	11 U
Hexachlorocyclopentadiene	11 U	11 U	11 UJ	12 UJ	11 U
Hexachlorobenzene	11 U	11 U	11 U	12 U	11 U
Hexachlorobutadiene	11 U	11 U	11 U	12 U	11 U
Hexachloroethane	11 U	11 U	11 U	12 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	12 U	11 U
Isophorone	11 U	11 U	11 U	12 U	11 U
2-Methylnaphthalene	11 U	11 J	11 U	12 U	11 U
N-nitrosodiphenylamine	11 U	11 U	11 U	12 U	11 U
N-nitro-di-n-propylamine	11 U	11 U	11 U	12 U	11 U
Naphthalene	11 U	8 J	11 U	12 U	11 U
2-Nitroaniline	27 U	27 U	29 U	29 U	27 U
3-Nitroaniline	27 U	27 U	29 U	29 U	27 U
4-Nitroaniline	27 U	27 U	29 U	29 U	27 U
Nitrobenzene	11 U	11 U	11 U	12 U	11 U
2-Nitrophenol	11 U	11 U	11 U	12 U	R
4-Nitrophenol	27 U	27 U	29 U	29 U	27 U
p-Chloro-m-cresol	11 U	11 U	11 U	12 U	11 U
Pentachlorophenol	27 U	27 U	29 U	29 U	R
Phenanthrene	11 U	11 U	11 U	12 U	11 U
Phenol	11 U	11 U	11 U	12 U	R
Pyrene	11 U	11 U	11 U	12 U	11 U
1,2,4-Trichlorobenzene	11 U	11 U	11 U	12 U	11 U
2,4,5-Trichlorophenol	27 U	27 U	29 U	29 U	R
2,4,6-Trichlorophenol	11 U	11 U	11 U	12 U	R

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-3B		Well MW-4				Well MW-4B			
	Phase I		Phase I		Phase II		Phase I			
	RAT-GW-MW3B-1210		RAT-GW-MW4-1210		WAT-GW-MW4-1296		ALT-GW-MW4-0997			
	9412-1192		9412-1326		9612-1339		9709-3150			
	94-5076		94-5101		96-5919		97-4115			
	12/10/94		12/10/94		12/11/96		09/23/97			
SVOC TICs (µg/l)	Unknown Hydrocarbon	6 NJ	Unknown Hydrocarbon	10 NJ	Unknown	R	Unknown	8	Unknown Hydrocarbon	5 NJ
	Unknown Hydrocarbon	10 NJ	Unknown Hydrocarbon	7 NJ	Unknown Hydrocarbon	R	Unknown	100	Unknown Hydrocarbon	4 NJ
			Unknown Hydrocarbon	10 NJ	Unknown	R	Unknown Hydrocarbon	7	Unknown Hydrocarbon	10 NJ
			Unknown Aromatic	20 NJ	Unknown	R	Unknown Hydrocarbon	24	Unknown Hydrocarbon	20 NJ
			Unknown Aromatic	10 NJ	Unknown	13 NJ	Unknown Hydrocarbon	6	Unknown Hydrocarbon	30 NJ
			Unknown Aromatic	9 NJ	Unknown	35 NJ	Unknown Hydrocarbon	7	Unknown Hydrocarbon	70 NJ
			Unknown Hydrocarbon	10 NJ	Unknown	24 NJ	Unknown Hydrocarbon	7	Unknown Hydrocarbon	10 NJ
			Unknown Hydrocarbon	30 NJ	Unknown Hydrocarbon	25 NJ	Unknown	7	Unknown Hydrocarbon	50 NJ
			Unknown Hydrocarbon	10 NJ	Unknown Hydrocarbon	21 NJ	Unknown Hydrocarbon	15	Unknown Hydrocarbon	R
			Unknown Hydrocarbon	9 NJ	Unknown Hydrocarbon	20 NJ	Unknown	120		
			Unknown Hydrocarbon	40 NJ	Unknown Hydrocarbon	19 NJ	Unknown	7		
			Unknown Hydrocarbon	10 NJ	Unknown Hydrocarbon	17 NJ	Unknown	100		
			Unknown Hydrocarbon	20 NJ	Unknown Hydrocarbon	11 NJ				
			Unknown Hydrocarbon	10 NJ						
			Unknown Hydrocarbon	R						
			Unknown Hydrocarbon	R						

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-4B (continued)		Well MW-5		Well MW-5B
	Phase II		Phase I	Phase II	Phase I
Investigation:	WAT-GW-MW4B-1296	ALT-GW-MW4B-0997	RAT-GW-MW5-1209	GW-MW5-1296	RAT-GW-MW5B-1209
Sample I.D.:	9612-1340	9709-3151	9412-1101	9612-1206	9412-1198
Laboratory Sample I.D.:	96-5919	97-4115	94-5064	96-5897	94-5077
Laboratory Project No.:	12/11/96	09/23/97	12/09/94	12/10/96	12/09/94
Sample Date:					

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	R	12 U	11 U	11 U	11 U
Acenaphthylene	R	12 U	11 U	11 U	11 U
Anthracene	R	12 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	R	12 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	R	12 U	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	R	12 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	R	12 U	11 U	21	11 U
Benzo(a)pyrene	R	12 U	11 U	11 U	11 U
Benzo(a)anthracene	R	12 U	11 U	11 U	11 U
Benzo(b)fluoranthene	R	12 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	R	12 U	11 U	11 U	11 U
Benzo(k)fluoranthene	R	12 U	11 U	11 U	11 U
4-Bromophenyl phenyl ether	R	12 U	11 U	11 U	11 U
Butyl benzyl phthalate	R	12 U	11 U	11 U	11 U
Carbazole	R	12 U	11 U	11 U	11 U
Chrysene	R	12 U	11 U	11 U	11 U
4-Chloroaniline	R	12 U	11 U	11 U	11 U
2-Chloronaphthalene	R	12 U	11 U	11 U	11 U
2-Chlorophenol	R	12 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	R	12 U	11 U	11 U	11 U
o-Cresol	R	12 U	11 U	11 U	11 U
p-Cresol	R	12 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	R	12 U	11 U	11 U	11 U
Dibenzofuran	R	12 U	11 U	11 U	11 U
2,4-Dichlorophenol	R	12 U	11 U	11 U	11 U
1,2-Dichlorobenzene	R	12 U	11 U	11 U	11 U
1,3-Dichlorobenzene	R	12 U	11 U	11 U	11 U
1,4-Dichlorobenzene	R	12 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	R	12 U	11 U	11 U	11 U
Diethyl phthalate	R	12 U	11 U	11 U	11 U
Dimethyl phthalate	R	12 U	11 U	11 U	11 U
2,4-Dimethylphenol	R	12 U	11 U	11 U	11 U
Di-n-butyl phthalate	R	50 U	4 J	11 U	5 J
4,6-Dinitro-o-cresol	R	30 U	28 U	27 U	27 U
2,4-Dinitrotoluene	R	12 U	11 U	11 U	11 U
2,6-Dinitrotoluene	R	12 U	11 U	11 U	11 U
Di-n-octyl phthalate	R	12 U	11 U	11 U	11 U
2,4-Dinitrophenol	R	R	28 U	R	27 U
Fluoranthene	R	12 U	11 U	11 U	11 U
Fluorene	R	12 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	R	12 UJ	11 U	11 UJ	11 U
Hexachlorobenzene	R	12 U	11 U	11 U	11 U
Hexachlorobutadiene	R	12 U	11 U	11 U	11 U
Hexachloroethane	R	12 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	R	12 U	11 U	11 U	11 U
Isophorone	R	12 U	11 U	11 U	11 U
2-Methylnaphthalene	R	12 U	11 U	11 U	11 U
N-nitrosodiphenylamine	R	12 U	11 U	11 U	11 U
N-nitro-di-n-propylamine	R	12 U	11 U	11 U	11 U
Naphthalene	R	12 U	11 U	11 U	11 U
2-Nitroaniline	R	30 U	28 U	27 U	27 U
3-Nitroaniline	R	30 U	28 U	27 U	27 U
4-Nitroaniline	R	30 U	28 U	27 U	27 U
Nitrobenzene	R	12 U	11 U	11 U	11 U
2-Nitrophenol	R	12 U	11 U	11 U	11 U
4-Nitrophenol	R	30 U	28 U	27 U	27 U
p-Chloro-m-cresol	R	12 U	11 U	11 U	11 U
Pentachlorophenol	R	30 U	28 U	27 U	27 U
Phenanthrene	R	12 U	11 U	11 U	11 U
Phenol	R	12 U	11 U	11 U	11 U
Pyrene	R	12 U	11 U	11 U	11 U
1,2,4-Trichlorobenzene	R	12 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	R	30 U	28 U	27 U	27 U
2,4,6-Trichlorophenol	R	12 U	11 U	11 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well ID: Investigation: Sample ID: Laboratory Sample ID: Laboratory Project No.: Sample Date:	Well MW-4B (continued)		Well MW-5		Well MW-5B				
	Phase II		Phase I	Phase II	Phase I				
	WAT-GW-MW4B-1296	ALT-GW-MW4B-0997	RAT-GW-MW5-1209	GW-MW5-MW5B-1209	RAT-GW-MW5B-1209				
	9612-1340	9709-3151	9412-1101	9612-1206	9412-1198				
	96-5919	97-4115	94-5064	96-5897	94-5077				
	12/11/96	09/23/97	12/09/94	12/10/96	12/09/94				
SVOC TICs (µg/l)	Unknown	R Unknown	50	Unknown Hydrocarbon	20 NJ	Unknown	R	Unknown Aromatic	8 J
	Unknown	R Unknown	13	Unknown Hydrocarbon	7 NJ	Unknown	R	Unknown Hydrocarbon	20 J
	Unknown	R Unknown	10	Unknown Hydrocarbon	10 NJ	Unknown	R	Unknown Hydrocarbon	6 J
	Unknown	R Unknown Hydrocarbon	22	Unknown Hydrocarbon	30 NJ	Unknown Hydrocarbon	R	Unknown Hydrocarbon	10 J
	Unknown Hydrocarbon	R Unknown Hydrocarbon	5			Unknown	34 NJ	Unknown Hydrocarbon	20 J
	Unknown	R Unknown Hydrocarbon	6			Unknown	R		
	Unknown Hydrocarbon	R Unknown Hydrocarbon	9			Unknown	70 NJ		
	Unknown	R Unknown	75			Unknown Hydrocarbon	18 NJ		
	Unknown Hydrocarbon	R Unknown	7			Unknown	R		
	Unknown	R Unknown	110			Unknown	R		
	Unknown	R				Unknown Hydrocarbon	R		
	Unknown Hydrocarbon	R				Unknown Hydrocarbon	29 NJ		
	Unknown Hydrocarbon	R				Unknown Hydrocarbon	22 NJ		
	Unknown Hydrocarbon	R				Unknown Hydrocarbon	19 NJ		
	Unknown Hydrocarbon	R				Unknown Hydrocarbon	18 NJ		
	Unknown Hydrocarbon	R							
	Unknown Hydrocarbon	R							
	Unknown	R							
	Unknown	R							

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-5B (continued)		Well MW-6		Well MW-6B
	Phase II	Phase I	Phase II	Phase I	Phase I
Investigation:					
Sample I.D.:	GW-MW5B-1296	RAT-GW-MW6-1209	GW-MW6-1296	ALT-GW-MW6-0997	RAT-GW-MW6B-1210
Laboratory Sample I.D.:	9612-1203	9412-1328	9612-1205	9709-3155	9412-1329
Laboratory Project No.:	96-5897	94-5101	96-5897	97-4115	94-5101
Sample Date:	12/10/96	12/10/94	12/10/96	09/23/97	12/10/94
TCL Semi-Volatile Organic Compounds (µg/l)					
Acenaphthene	11 U	11 U	11 U	11 U	11 U
Acenaphthylene	11 U	11 U	11 U	11 U	11 U
Anthracene	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	18	11 U	11 U
Benzo(a)pyrene	11 U	11 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	11 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	11 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	11 U	11 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	11 U	11 U	11 U	11 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	11 U	11 U	11 U	11 U
Carbazole	11 U	11 U	11 U	11 U	11 U
Chrysene	11 U	11 U	11 U	11 U	11 U
4-Chloroaniline	11 U	11 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	11 U	11 U	11 U	11 U
2-Chlorophenol	11 U	11 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	11 U	11 U
o-Cresol	11 U	11 U	11 U	11 U	11 U
p-Cresol	11 U	11 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	11 U	11 U	11 U	11 U
Dibenzofuran	11 U	11 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	11 U	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	11 U	11 U	11 U	11 U	11 U
Diethyl phthalate	11 U	11 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	11 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	11 U	11 U	11 U	11 U
Di-n-butyl phthalate	11 U	11 U	11 U	30 U	11 U
4,6-Dinitro-o-cresol	27 U	28 U	27 U	27 U	28 U
2,4-Dinitrotoluene	11 U	11 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	11 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	R	28 UJ	R	R	28 UJ
Fluoranthene	11 U	11 U	11 U	11 U	11 U
Fluorene	11 U	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 UJ	11 UJ	11 UJ	11 UJ	11 U
Hexachlorobenzene	11 U	11 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	11 U	11 U	11 U	11 U
Hexachloroethane	11 U	11 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	11 U	11 U
Isophorone	11 U	11 U	11 U	11 U	11 U
2-Methylnaphthalene	11 U	11 U	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	11 U	11 U	11 U	11 U
N-nitro-di-n-propylamine	11 U	11 U	11 U	11 U	11 U
Naphthalene	11 U	11 U	11 U	11 U	11 U
2-Nitroaniline	27 U	28 U	27 U	27 U	28 U
3-Nitroaniline	27 U	28 U	27 U	27 U	28 U
4-Nitroaniline	27 U	28 U	27 U	27 U	28 U
Nitrobenzene	11 U	11 U	11 U	11 U	11 U
2-Nitrophenol	11 U	11 U	11 U	11 U	11 U
4-Nitrophenol	27 U	28 U	27 U	27 U	28 U
p-Chloro-m-cresol	11 U	11 U	11 U	11 U	11 U
Pentachlorophenol	27 U	28 U	27 U	27 U	28 U
Phenanthrene	11 U	11 U	11 U	11 U	11 U
Phenol	11 U	11 U	11 U	11 U	11 U
Pyrene	11 U	11 U	11 U	11 U	11 U
1,2,4-Trichlorobenzene	11 U	11 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	27 U	28 U	27 U	27 U	28 U
2,4,6-Trichlorophenol	11 U	11 U	11 U	11 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-5B (continued)		Well MW-6				Well MW-6B			
	Phase II		Phase I		Phase II		Phase I			
	GW-MW5B-1296		RAT-GW-MW6-1210		GW-MW6-1296		ALT-GW-MW6-0997		RAT-GW-MW6B-1210	
	9612-1203		9412-1328		9612-1205		9709-3155		9412-1329	
	96-5897		94-5101		96-5897		97-4115		94-5101	
	12/10/96		12/10/94		12/10/96		09/23/97		12/10/94	
SVOC TICs (µg/l)	Unknown	R	Unknown Hydrocarbon	R	Unknown	R	Unknown	110	Unknown Hydrocarbon	R
	Unknown	R	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R	Unknown Hydrocarbon	8	Unknown Hydrocarbon	R
	Unknown Hydrocarbon	R	Unknown Hydrocarbon	6 NJ	Unknown	R	Unknown Hydrocarbon	30	Unknown Hydrocarbon	R
	Unknown	28 NJ	Unknown Hydrocarbon	R	Unknown	R	Unknown Hydrocarbon	6		
	Unknown	R			Unknown	26 NJ	Unknown Hydrocarbon	5		
	Unknown	R			Unknown	R	Unknown Hydrocarbon	5		
	Unknown	R			Unknown Hydrocarbon	R	Unknown Hydrocarbon	14		
	Unknown	R			Unknown	45 NJ	Unknown	93		
	Unknown	R			Unknown	46 NJ	Unknown	76		
	Unknown Hydrocarbon	37 NJ			Unknown	R				
	Unknown Hydrocarbon	R			Unknown	R				
	Unknown Hydrocarbon	28 NJ			Unknown	R				
	Unknown Hydrocarbon	24 NJ			Unknown	R				
					Unknown Hydrocarbon	R				
					Unknown Hydrocarbon	R				
					Unknown Hydrocarbon	R				
					Unknown Hydrocarbon	29 NJ				
					Unknown Hydrocarbon	26 NJ				

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
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Well I.D.:	Well MW-6B (continued)		Well MW-7B		Well MW-8B	
	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I
Investigation:	GW-MW6B-1296	RAT-GW-MW7B-1210	WAT-GW-MW7B-1296	RAT-GW-MW8B-1210	WAT-GW-MW8B-1296	
Sample I.D.:	9612-1207	9412-1193	9612-0974	9412-1194	9612-0975	
Laboratory Sample I.D.:	96-5897	94-5076	96-5860	94-5076	96-5860	
Laboratory Project No.:						
Sample Date:	12/10/96	12/10/94	12/10/96	12/10/94	12/09/96	
<b>TCL Semi-Volatile Organic Compounds (µg/l)</b>						
Acenaphthene	11 U	11 U	10 UJ	11 U	11 U	
Acenaphthylene	11 U	11 U	10 UJ	11 U	11 U	
Anthracene	11 U	11 U	10 UJ	11 U	11 U	
Bis(2-chloroethyl)ether	11 U	11 U	10 UJ	11 U	11 U	
Bis(2-chloroethyl)oxy methane	11 U	11 U	10 UJ	11 U	11 U	
Bis(2-chloroisopropyl)ether	11 U	11 U	10 UJ	11 U	11 U	
Bis(2-ethylhexyl)phthalate	11 U	11 U	10 UJ	11 U	11 UJ	
Benzo(a)pyrene	11 U	11 U	10 UJ	11 U	11 U	
Benzo(a)anthracene	11 U	11 U	10 UJ	11 U	11 U	
Benzo(b)fluoranthene	11 U	11 U	10 UJ	11 U	11 U	
Benzo(g,h,i)perylene	11 U	11 U	10 UJ	11 U	11 U	
Benzo(k)fluoranthene	11 U	11 U	10 UJ	11 U	11 U	
4-Bromophenyl phenyl ether	11 U	11 U	10 UJ	11 U	11 U	
Butyl benzyl phthalate	11 U	11 U	10 UJ	11 U	11 U	
Carbazole	11 U	11 U	10 UJ	11 U	11 U	
Chrysene	11 U	11 U	10 UJ	11 U	11 U	
4-Chloroaniline	11 U	11 U	10 UJ	11 U	11 U	
2-Chloronaphthalene	11 U	11 U	10 UJ	11 U	11 U	
2-Chlorophenol	11 U	11 U	10 UJ	11 U	11 UJ	
4-Chlorophenyl phenyl ether	11 U	11 U	10 UJ	11 U	11 U	
o-Cresol	11 U	11 U	10 UJ	11 U	11 UJ	
p-Cresol	11 U	11 U	10 UJ	11 U	11 UJ	
Dibenz(a,h)anthracene	11 U	11 U	10 UJ	11 U	11 U	
Dibenzofuran	11 U	11 U	10 UJ	11 U	11 U	
2,4-Dichlorophenol	11 U	11 U	10 UJ	11 U	11 U	
1,2-Dichlorobenzene	11 U	11 U	10 UJ	11 U	11 U	
1,3-Dichlorobenzene	11 U	11 U	10 UJ	11 U	11 U	
1,4-Dichlorobenzene	11 U	11 U	10 UJ	11 U	11 U	
3,3-Dichlorobenzidine	11 U	11 U	10 UJ	11 U	11 U	
Diethyl phthalate	11 U	11 U	10 UJ	11 U	11 U	
Dimethyl phthalate	11 U	11 U	10 UJ	11 U	11 U	
2,4-Dimethylphenol	11 U	11 U	10 UJ	11 U	11 UJ	
Di-n-butyl phthalate	11 U	4 J	10 UJ	11 U	11 U	
4,6-Dinitro-o-cresol	27 U	28 U	26 UJ	28 U	27 UJ	
2,4-Dinitrotoluene	11 U	11 U	10 UJ	11 U	11 U	
2,6-Dinitrotoluene	11 U	11 U	10 UJ	11 U	11 U	
Di-n-octyl phthalate	11 U	11 U	10 UJ	11 U	11 U	
2,4-Dinitrophenol	R	28 U	R	28 U	27 UJ	
Fluoranthene	11 U	11 U	10 UJ	11 U	11 U	
Fluorene	11 U	11 U	10 UJ	11 U	11 U	
Hexachlorocyclopentadiene	11 UJ	11 U	10 UJ	11 U	11 U	
Hexachlorobenzene	11 U	11 U	10 UJ	11 U	11 U	
Hexachlorobutadiene	11 U	11 U	10 UJ	11 U	11 U	
Hexachloroethane	11 U	11 U	10 UJ	11 U	11 U	
Indeno(1,2,3-cd)pyrene	11 U	11 U	10 UJ	11 U	11 U	
Isophorone	11 U	11 U	10 UJ	11 U	11 U	
2-Methylnaphthalene	11 U	11 U	10 UJ	11 U	11 U	
N-nitrosodiphenylamine	11 U	11 U	10 UJ	11 U	11 U	
N-nitro-di-n-propylamine	11 U	11 U	10 UJ	11 U	11 U	
Naphthalene	11 U	4 J	10 UJ	11 U	11 U	
2-Nitroaniline	27 U	28 U	26 UJ	28 U	27 U	
3-Nitroaniline	27 U	28 U	26 UJ	28 U	27 U	
4-Nitroaniline	27 U	28 U	26 UJ	28 U	27 U	
Nitrobenzene	11 U	11 U	10 UJ	11 U	11 U	
2-Nitrophenol	11 U	11 U	10 UJ	11 U	11 UJ	
4-Nitrophenol	27 U	28 U	26 UJ	28 U	27 UJ	
p-Chloro-m-cresol	11 U	11 U	10 UJ	11 U	11 UJ	
Pentachlorophenol	27 U	28 U	26 UJ	28 U	27 UJ	
Phenanthrene	11 U	11 U	10 UJ	11 U	11 U	
Phenol	11 U	11 U	10 UJ	11 U	11 UJ	
Pyrene	11 U	11 U	10 UJ	11 U	11 U	
1,2,4-Trichlorobenzene	11 U	11 U	10 UJ	11 U	11 U	
2,4,5-Trichlorophenol	27 U	28 U	26 UJ	28 U	27 UJ	
2,4,6-Trichlorophenol	11 U	11 U	10 UJ	11 U	11 UJ	





Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-9B		Well MW-10B	Well MW-11	
	Phase I	Phase II	Phase I	Phase I	Phase II
Investigation:	RAT-GW-MW9B-1210	WAT-GW-MW9B-1296	RAT-GW-MW10-1210	RAT-GW-MW11-1210	WAT-GW-MW11-1296
Sample I.D.:	9412-1195	9612-0973	9412-1330	9412-1331	9612-0972
Laboratory Sample I.D.:	94-5076	94-5860	94-5101	94-5101	96-5860
Laboratory Project No.:	12/10/94	12/09/96	12/10/94	12/10/94	12/09/96

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	11 U	12 U	11 U	11 U	11 U
Acenaphthylene	11 U	12 U	11 U	11 U	11 U
Anthracene	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	12 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	12 U	11 U	4 J	11 U
Benzo(a)pyrene	11 U	12 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	12 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	12 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	11 U	12 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	12 U	11 U	11 U	11 U
4-Bromophenyl phenyl ether	11 U	12 U	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	12 U	11 U	11 U	11 U
Carbazole	11 U	12 U	11 U	11 U	11 U
Chrysene	11 U	12 U	11 U	11 U	11 U
4-Chloroaniline	11 U	12 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	12 U	11 U	11 U	11 U
2-Chlorophenol	11 U	12 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	12 U	11 U	11 U	11 U
o-Cresol	11 U	12 U	11 U	11 U	11 U
p-Cresol	11 U	12 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	12 U	11 U	11 U	11 U
Dibenzofuran	11 U	12 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	12 U	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	12 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	12 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	12 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	11 U	12 U	11 U	11 U	11 U
Diethyl phthalate	11 U	12 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	12 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	12 U	11 U	11 U	11 U
Di-n-butyl phthalate	5 J	12 U	11 U	11 U	11 U
4,6-Dinitro-o-cresol	27 U	29 UJ	28 U	27 U	28 UJ
2,4-Dinitrotoluene	11 U	12 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	12 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	12 U	11 U	11 U	11 U
2,4-Dinitrophenol	27 U	R	28 UJ	27 UJ	R
Fluoranthene	11 U	12 U	11 U	11 U	11 U
Fluorene	11 U	12 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	12 U	11 U	11 U	11 U
Hexachlorobenzene	11 U	12 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	12 U	11 U	11 U	11 U
Hexachloroethane	11 U	12 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	12 U	11 U	11 U	11 U
Isophorone	11 U	12 U	11 U	11 U	11 U
2-Methylnaphthalene	11 U	12 U	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	12 U	11 U	11 U	11 U
N-nitro-di-n-propylamine	11 U	12 U	11 U	11 U	11 U
Naphthalene	5 J	12 U	11 U	11 U	11 U
2-Nitroaniline	27 U	29 U	28 U	27 U	28 U
3-Nitroaniline	27 U	29 U	28 U	27 U	28 U
4-Nitroaniline	27 U	29 U	28 U	27 U	28 U
Nitrobenzene	11 U	12 U	11 U	11 U	11 U
2-Nitrophenol	11 U	12 U	11 U	11 U	11 U
4-Nitrophenol	27 U	29 U	28 U	27 U	28 U
p-Chloro-m-cresol	11 U	12 U	11 U	11 U	11 U
Pentachlorophenol	27 U	29 U	28 U	27 U	28 U
Phenanthrene	11 U	12 U	11 U	11 U	11 U
Phenol	11 U	12 U	11 U	11 U	11 U
Pyrene	11 U	12 U	11 U	11 U	11 U
1,2,4-Trichlorobenzene	11 U	12 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	27 U	29 U	28 U	27 U	28 U
2,4,6-Trichlorophenol	11 U	12 U	11 U	11 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-9B		Well MW-10B		Well MW-11	
	Phase I	Phase II	Phase I	Phase I	Phase II	
	RAT-GW-MW9B-1210	WAT-GW-MW9B-1296	RAT-GW-MW10-1210	RAT-GW-MW11-1210	WAT-GW-MW11-1296	
9412-1195		9412-1330	9412-1331	9612-0972		
94-5076	96-5860	94-5101	94-5101	96-5860		
12/10/94	12/10/96	12/10/94	12/10/94	12/09/96		

SVOC TICs (µg/l)

Unknown Aromatic	6 J	Unknown	10 J	Unknown Hydrocarbon	7 J	Unknown Hydrocarbon	5 J	Unknown	7 NJ
Unknown Hydrocarbon	8 J	Unknown Hydrocarbon	10 J	Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	5 J	Unknown	8 NJ
Unknown Hydrocarbon	10 J	Unknown	10 J	Unknown Hydrocarbon	6 J	Unknown Aromatic	10 J	Unknown Hydrocarbon	5 NJ
Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	5 J	Unknown Hydrocarbon	10 J	Unknown	5 NJ
Unknown Hydrocarbon	10 J	Unknown	9 J	Unknown Hydrocarbon	8 J	Unknown Hydrocarbon	5 J	Unknown	10 NJ
		Unknown	9 J	Unknown Hydrocarbon	5 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	12 NJ
		Unknown	5 J	Unknown Aromatic	7 J	Unknown Hydrocarbon	R	Unknown	5 NJ
		Unknown Phthalate	11 J	Unknown Hydrocarbon	5 J	Unknown Hydrocarbon	R	Unknown	R
		Unknown	R	Unknown Aromatic	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R	Unknown Aromatic	7 J			Unknown	R
		Unknown	R	Unknown Aromatic	5 J			Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R	Unknown Aromatic	5 J			Unknown	R
		Unknown	R	Unknown Hydrocarbon	8 J			Unknown Hydrocarbon	R
		Unknown	R	Unknown Hydrocarbon	20 J			Unknown	R
		Unknown Hydrocarbon	R	Unknown Hydrocarbon	7 J			Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R	Unknown Hydrocarbon	10 J			Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R	Unknown Hydrocarbon	R			Unknown	R
		Unknown	R					Unknown	R
		Unknown Hydrocarbon	R					Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R					Unknown Hydrocarbon	R
		Unknown	R					Unknown	R
		Unknown Hydrocarbon	R					Unknown Hydrocarbon	R
		Unknown Hydrocarbon	R					Unknown Hydrocarbon	R
		Unknown Hydrocarbon	16 J						

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-12	Well MW-14	Well MW-15	Well MW-16	Well MW-17
	Phase II	Phase II	Phase II	Phase II	Phase II
Investigation:					
Sample I.D.:	WAT-GW-MW12-1296	WAT-GW-MW14-1296	WAT-GW-MW15-1296	WAT-GW-MW16-1296	WAT-GW-MW17-1296
Laboratory Sample I.D.:	9612-1354	9612-1353	9612-1336	9612-1335	9612-1351
Laboratory Project No.:	96-5919	96-5919	96-5919	96-5919	96-5919
Sample Date:	12/11/96	12/11/96	12/11/96	12/11/96	12/11/96
TCL Semi-Volatile Organic Compounds (µg/l)					
Acenaphthene	11 U	11 U	11 U	R	11 U
Acenaphthylene	11 U	11 U	11 U	R	11 U
Anthracene	11 U	11 U	11 U	R	11 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	R	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	R	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	11 U	R	11 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	11 U	R	11 U
Benzo(a)pyrene	11 U	11 U	11 U	R	11 U
Benzo(a)anthracene	11 U	11 U	11 U	R	11 U
Benzo(b)fluoranthene	11 U	11 U	11 U	R	11 U
Benzo(g,h,i)perylene	11 U	11 U	11 U	R	11 U
Benzo(k)fluoranthene	11 U	11 U	11 U	R	11 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	R	11 U
Butyl benzyl phthalate	11 U	11 U	11 U	R	11 U
Carbazole	11 U	11 U	11 U	R	11 U
Chrysene	11 U	11 U	11 U	R	11 U
4-Chloroaniline	11 U	11 U	11 U	R	11 U
2-Chloronaphthalene	11 U	11 U	11 U	R	11 U
2-Chlorophenol	11 U	11 U	11 U	R	11 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	R	11 U
o-Cresol	11 U	11 U	11 U	R	11 U
p-Cresol	11 U	11 U	11 U	R	11 U
Dibenz(a,h)anthracene	11 U	11 U	11 U	R	11 U
Dibenzofuran	11 U	11 U	11 U	R	11 U
2,4-Dichlorophenol	11 U	11 U	11 U	R	11 U
1,2-Dichlorobenzene	11 U	11 U	11 U	R	11 U
1,3-Dichlorobenzene	11 U	11 U	11 U	R	11 U
1,4-Dichlorobenzene	11 U	11 U	11 U	R	11 U
3,3-Dichlorobenzidine	11 U	11 U	11 U	R	11 U
Diethyl phthalate	11 U	11 U	11 U	R	11 U
Dimethyl phthalate	11 U	11 U	11 U	R	11 U
2,4-Dimethylphenol	11 U	11 U	11 U	R	11 U
Di-n-butyl phthalate	11 U	11 U	11 U	R	11 U
4,6-Dinitro-o-cresol	R	R	R	R	R
2,4-Dinitrotoluene	11 U	11 U	11 U	R	11 U
2,6-Dinitrotoluene	11 U	11 U	11 U	R	11 U
Di-n-octyl phthalate	11 U	11 U	11 U	R	11 U
2,4-Dinitrophenol	R	R	R	R	R
Fluoranthene	11 U	11 U	11 U	R	11 U
Fluorene	11 U	11 U	11 U	R	11 U
Hexachlorocyclopentadiene	11 UJ	11 UJ	11 UJ	R	11 UJ
Hexachlorobenzene	11 U	11 U	11 U	R	11 U
Hexachlorobutadiene	11 U	11 U	11 U	R	11 U
Hexachloroethane	11 U	11 U	11 U	R	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	R	11 U
Isophorone	11 U	11 U	11 U	R	11 U
2-Methylnaphthalene	11 U	11 U	11 U	R	11 U
N-nitrosodiphenylamine	11 U	11 U	11 U	R	11 U
N-nitro-di-n-propylamine	11 U	11 U	11 U	R	11 U
Naphthalene	11 U	11 U	11 U	R	11 U
2-Nitroaniline	27 U	28 U	27 U	R	28 U
3-Nitroaniline	27 U	28 U	27 U	R	28 U
4-Nitroaniline	27 U	28 U	27 U	R	28 U
Nitrobenzene	11 U	11 U	11 U	R	11 U
2-Nitrophenol	11 U	11 U	11 U	R	11 U
4-Nitrophenol	27 U	28 U	27 U	R	28 U
p-Chloro-m-cresol	11 U	11 U	11 U	R	11 U
Pentachlorophenol	27 U	28 U	27 U	R	28 U
Phenanthrene	11 U	11 U	11 U	R	11 U
Phenol	11 U	11 U	11 U	R	11 U
Pyrene	11 U	11 U	11 U	R	11 U
1,2,4-Trichlorobenzene	11 U	11 U	11 U	R	11 U
2,4,5-Trichlorophenol	27 U	28 U	27 U	R	28 U
2,4,6-Trichlorophenol	11 U	11 U	11 U	R	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

	Well MW-12	Well MW-14	Well MW-15	Well MW-16	Well MW-17
Investigation:	Phase II				
Sample I.D.:	WAT-GW-MW12-1296	WAT-GW-MW14-1296	WAT-GW-MW15-1296	WAT-GW-MW16-1296	WAT-GW-MW17-1296
Laboratory Sample I.D.:	9612-1354		9612-1336	9612-1335	9612-1351
Laboratory Project No.:	96-5919	96-5919	96-5919	96-5919	96-5919
Sample Date:	12/11/96	12/12/96	12/11/96	12/11/96	12/11/96

SVOC TICs (µg/l)

Unknown	19 NJ	Unknown	14 NJ	Unknown	720 NJ	Unknown	R	Unknown	14 NJ
Unknown Hydrocarbon	20 NJ	Unknown	13 NJ	Unknown	R	Unknown	R	Unknown Hydrocarbon	16 NJ
Unknown Hydrocarbon	23 NJ	Unknown	18 NJ	Unknown	R	Unknown	R	Unknown Hydrocarbon	15 NJ
Unknown Hydrocarbon	22 NJ	Unknown	R	Unknown Hydrocarbon	R	Unknown	R	Unknown Hydrocarbon	21 NJ
Unknown	18 NJ	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R	Unknown	R	Unknown	18 NJ
Unknown	17 NJ	Unknown	R	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R	Unknown	R
Unknown	R	Unknown	37 NJ	Unknown	R	Unknown	R	Unknown	R
Unknown Hydrocarbon	R	Unknown	12 NJ	Unknown	R	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R
Unknown	43 NJ	Unknown	R	Unknown Hydrocarbon	R	Unknown	R	Unknown	39 NJ
Unknown	16 NJ	Unknown	R	Unknown	R	Unknown	R	Unknown	15 NJ
Unknown	R	Unknown	R	Unknown Hydrocarbon	R	Unknown	R	Unknown	R
Unknown	R	Unknown	R	Unknown Hydrocarbon	R	Unknown	R	Unknown	R
Unknown	R	Unknown	R	Unknown	R	Unknown	R	Unknown	R
Unknown	R	Unknown	R	Unknown Hydrocarbon	6 NJ	Unknown Hydrocarbon	R	Unknown	R
Unknown	R		Unknown	Unknown	R	Unknown Hydrocarbon	R		
			Unknown	Unknown	R	Unknown	R		
				Unknown		Unknown	R		
						Unknown Hydrocarbon	R		
						Unknown	R		
						Unknown Hydrocarbon	R		
						Unknown Hydrocarbon	R		
						Unknown Hydrocarbon	R		
						Unknown Hydrocarbon	R		
						Unknown	R		
						Unknown	R		

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-17 (continued)	Well MW-18	Well MW-19	Well MW-19B	Well OW-20
Investigation:	Phase II (continued)	Phase II	Phase II	Phase II	Phase II
Sample I.D.:	WAT-GW-MW17-1296D	ALT-GW-MW18-0997	ALT-GW-MW19-0997	ALT-GW-MW19B-0997	WAT-GW-OW20-1296
Laboratory Sample I.D.:	9612-1352	9709-3154	9709-3153	9709-3152	9612-1345
Laboratory Project No.:	96-5919	97-4115	97-4115	97-4115	96-5919
Sample Date:	12/11/96	09/23/97	09/23/97	09/23/97	12/11/96

TCL Semi-Volatile Organic Compounds ( $\mu\text{g/l}$ )

Acenaphthene	12 U	11 U	11 U	12 U	11 U
Acenaphthylene	12 U	11 U	11 U	12 U	11 U
Anthracene	12 U	11 U	11 U	12 U	11 U
Bis(2-chloroethyl)ether	12 U	11 U	11 U	12 U	11 U
Bis(2-chloroethoxy)methane	12 U	11 U	11 U	12 U	11 U
Bis(2-chloroisopropyl)ether	12 U	11 U	11 U	12 U	11 U
Bis(2-ethylhexyl)phthalate	17	11 U	11 U	12 U	11 U
Benzo(a)pyrene	12 U	11 U	11 U	12 U	11 U
Benzo(a)anthracene	12 U	11 U	11 U	12 U	11 U
Benzo(b)fluoranthene	12 U	11 U	11 U	12 U	11 U
Benzo(g,h,i)perylene	12 U	11 U	11 U	12 U	11 U
Benzo(k)fluoranthene	12 U	11 U	11 U	12 U	11 U
4-Bromophenyl phenyl ether	12 U	11 U	11 U	12 U	11 U
Butyl benzyl phthalate	12 U	11 U	11 U	12 U	11 U
Carbazole	12 U	11 U	11 U	12 U	11 U
Chrysene	12 U	11 U	11 U	12 U	11 U
4-Chloroaniline	12 U	11 U	11 U	12 U	11 U
2-Chloronaphthalene	12 U	11 U	11 U	12 U	11 U
2-Chlorophenol	12 U	11 U	11 U	12 U	11 U
4-Chlorophenyl phenyl ether	12 U	11 U	11 U	12 U	11 U
o-Cresol	12 U	11 U	11 U	12 U	11 U
p-Cresol	12 U	11 U	11 U	12 U	11 U
Dibenz(a,h)anthracene	12 U	11 U	11 U	12 U	11 U
Dibenzofuran	12 U	11 U	11 U	12 U	11 U
2,4-Dichlorophenol	12 U	11 U	11 U	12 U	11 U
1,2-Dichlorobenzene	12 U	11 U	11 U	12 U	11 U
1,3-Dichlorobenzene	12 U	11 U	11 U	12 U	11 U
1,4-Dichlorobenzene	12 U	11 U	11 U	12 U	11 U
3,3-Dichlorobenzidine	12 U	11 U	11 U	12 U	11 U
Diethyl phthalate	12 U	11 U	11 U	12 U	11 U
Dimethyl phthalate	12 U	11 U	11 U	12 U	11 U
2,4-Dimethylphenol	12 U	11 U	11 U	12 U	11 U
Di-n-butyl phthalate	12 U	22 U	11 U	38 U	11 U
4,6-Dinitro-o-cresol	R	27 U	28 U	30 U	R
2,4-Dinitrotoluene	12 U	11 U	11 U	12 U	11 U
2,6-Dinitrotoluene	12 U	11 U	11 U	12 U	11 U
Di-n-octyl phthalate	12 U	11 U	11 U	12 U	11 U
2,4-Dinitrophenol	R	R	R	R	R
Fluoranthene	12 U	11 U	11 U	12 U	11 U
Fluorene	12 U	11 U	11 U	12 U	11 U
Hexachlorocyclopentadiene	12 UJ	11 UJ	11 UJ	12 UJ	11 UJ
Hexachlorobenzene	12 U	11 U	11 U	12 U	11 U
Hexachlorobutadiene	12 U	11 U	11 U	12 U	11 U
Hexachloroethane	12 U	11 U	11 U	12 U	11 U
Indeno(1,2,3-cd)pyrene	12 U	11 U	11 U	12 U	11 U
Isophorone	12 U	11 U	11 U	12 U	11 U
2-Methylnaphthalene	12 U	11 U	11 U	12 U	11 U
N-nitrosodiphenylamine	12 U	11 U	11 U	12 U	11 U
N-nitro-di-n-propylamine	12 U	11 U	11 U	12 U	11 U
Naphthalene	12 U	11 U	11 U	12 U	11 U
2-Nitroaniline	30 U	27 U	28 U	30 U	27 U
3-Nitroaniline	30 U	27 U	28 U	30 U	27 U
4-Nitroaniline	30 U	27 U	28 U	30 U	27 U
Nitrobenzene	12 U	11 U	11 U	12 U	11 U
2-Nitrophenol	12 U	11 U	11 U	12 U	11 U
4-Nitrophenol	30 U	27 U	28 U	30 U	27 U
p-Chloro-m-cresol	12 U	11 U	11 U	12 U	11 U
Pentachlorophenol	30 U	27 U	28 U	30 U	27 U
Phenanthrene	12 U	11 U	11 U	12 U	11 U
Phenol	12 U	11 U	11 U	12 U	11 U
Pyrene	12 U	11 U	11 U	12 U	11 U
1,2,4-Trichlorobenzene	12 U	11 U	11 U	12 U	11 U
2,4,5-Trichlorophenol	30 U	27 U	28 U	30 U	27 U
2,4,6-Trichlorophenol	12 U	11 U	11 U	12 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

	Well MW-17 (continued)		Well MW-18		Well MW-19		Well MW-19B		Well OW-20	
	Phase II (continued)		Phase II		Phase II		Phase II		Phase II	
Well I.D.:	WAT-GW-MW17-1296D		ALT-GW-MW18-0997		ALT-GW-MW19-0997		ALT-GW-MW19-0997		WAT-GW-OW20-1296	
Investigation:										
Sample I.D.:	9612-1352		9709-3154		9709-3153		9709-3152		9612-1345	
Laboratory Sample I.D.:	96-5919		97-4115		97-4115		97-4115		96-5919	
Laboratory Project No.:	12/11/96		09/23/97		09/23/97		09/23/97		12/11/96	
Sample Date:										
<b>SVOC TICs (µg/l)</b>										
Unknown	R	Unknown	88	Unknown	110	Unknown	70	Unknown		R
Unknown	R	Unknown	4	Unknown	17	Unknown	38	Unknown Hydrocarbon		R
Unknown	R	Unknown Hydrocarbon	7	Unknown Hydrocarbon	9	Unknown	5	Unknown Hydrocarbon		R
		Unknown Hydrocarbon	7	Unknown	15	Unknown Hydrocarbon	6	Unknown		R
		Unknown	12	Unknown	50	Unknown Hydrocarbon	12	Unknown Hydrocarbon		R
		Unknown	52			Unknown	10	Unknown		R
						Unknown	5	Unknown Hydrocarbon		R
						Unknown	96	Unknown		38 NJ
								Unknown		26 NJ
								Unknown		23 NJ
								Unknown Hydrocarbon		19 NJ
								Unknown Hydrocarbon		19 NJ
								Unknown Hydrocarbon		22 NJ
								Unknown Hydrocarbon		20 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well OW-21		Well AP-1		Well AP-2	
	Phase II	Phase I	Phase II	Phase I	Phase II	Phase I
Investigation:	WAT-GW-OW21-1296		RAT-GW-AP1-1211		RAT-GW-AP2-1211	
Sample I.D.:	9612-1344		9412-1344		9612-1338	
Laboratory Sample I.D.:	96-5919		94-5105		96-5919	
Laboratory Project No.:	12/11/96		12/11/94		12/11/94	
Sample Date:	12/11/96		12/11/94		12/11/96	

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	11 U	11 U	R	11 U	11 U
Acenaphthylene	11 U	11 U	R	11 U	11 U
Anthracene	11 U	11 U	R	11 U	11 U
Bis(2-chloroethyl)ether	11 U	11 U	R	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	R	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	R	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	R	11 U	11 U
Benzo(a)pyrene	11 U	11 U	R	11 U	11 U
Benzo(a)anthracene	11 U	11 U	R	11 U	11 U
Benzo(b)fluoranthene	11 U	11 U	R	11 U	11 U
Benzo(g,h,i)perylene	11 U	11 U	R	11 U	11 U
Benzo(k)fluoranthene	11 U	11 U	R	11 U	11 U
4-Bromophenyl phenyl ether	11 U	11 U	R	11 U	11 U
Butyl benzyl phthalate	11 U	11 U	R	11 U	11 U
Carbazole	11 U	11 U	R	11 U	11 U
Chrysene	11 U	11 U	R	11 U	11 U
4-Chloroaniline	11 U	11 U	R	11 U	11 U
2-Chloronaphthalene	11 U	11 U	R	11 U	11 U
2-Chlorophenol	11 U	11 U	R	11 U	R
4-Chlorophenyl phenyl ether	11 U	11 U	R	11 U	11 U
o-Cresol	11 U	11 U	R	11 U	R
p-Cresol	11 U	11 U	R	11 U	R
Dibenz(a,h)anthracene	11 U	11 U	R	11 U	11 U
Dibenzofuran	11 U	11 U	R	11 U	11 U
2,4-Dichlorophenol	11 U	11 U	R	11 U	R
1,2-Dichlorobenzene	11 U	11 U	R	11 U	11 U
1,3-Dichlorobenzene	11 U	11 U	R	11 U	11 U
1,4-Dichlorobenzene	11 U	11 U	R	11 U	11 U
3,3-Dichlorobenzidine	11 U	11 U	R	11 U	11 U
Diethyl phthalate	11 U	11 U	R	11 U	11 U
Dimethyl phthalate	11 U	11 U	R	11 U	11 U
2,4-Dimethylphenol	11 U	11 U	R	11 U	R
Di-n-butyl phthalate	11 U	6 J	R	11 U	11 U
4,6-Dinitro-o-cresol	R	28 U	R	28 U	R
2,4-Dinitrotoluene	11 U	11 U	R	11 U	11 U
2,6-Dinitrotoluene	11 U	11 U	R	11 U	11 U
Di-n-octyl phthalate	11 U	11 U	R	11 U	11 U
2,4-Dinitrophenol	R	28 U	R	28 U	R
Fluoranthene	11 U	11 U	R	11 U	11 U
Fluorene	11 U	11 U	R	11 U	11 U
Hexachlorocyclopentadiene	11 UJ	11 U	R	11 U	11 UJ
Hexachlorobenzene	11 U	11 U	R	11 U	11 U
Hexachlorobutadiene	11 U	11 U	R	11 U	11 U
Hexachloroethane	11 U	11 U	R	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	R	11 U	11 U
Isophorone	11 U	11 U	R	11 U	11 U
2-Methylnaphthalene	11 U	25	R	11 U	11 U
N-nitrosodiphenylamine	11 U	11 U	R	11 U	11 U
N-nitro-di-n-propylamine	11 U	11 U	R	11 U	11 U
Naphthalene	11 U	12	R	11 U	11 U
2-Nitroaniline	27 U	28 U	R	28 U	28 U
3-Nitroaniline	27 U	28 U	R	28 U	28 U
4-Nitroaniline	27 U	28 U	R	28 U	28 U
Nitrobenzene	11 U	11 U	R	11 U	11 U
2-Nitrophenol	11 U	11 U	R	11 U	R
4-Nitrophenol	27 U	28 U	R	28 U	R
p-Chloro-m-cresol	11 U	11 U	R	11 U	R
Pentachlorophenol	27 U	28 U	R	28 U	R
Phenanthrene	11 U	4 J	R	11 U	11 U
Phenol	11 U	11 U	R	11 U	R
Pyrene	11 U	11 U	R	11 U	11 U
1,2,4-Trichlorobenzene	11 U	11 U	R	11 U	11 U
2,4,5-Trichlorophenol	27 U	28 U	R	28 U	R
2,4,6-Trichlorophenol	11 U	11 U	R	11 U	R



Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well OW-21		Well AP-1			Well AP-2				
	Phase II		Phase I	Phase II		Phase I	Phase II			
	WAT-GW-OW21-1296		RAT-GW-AP1-1211	GW-AP1-1296RE		RAT-GW-AP2-1211	WAT-GW-AP2-1296			
	9612-1344		9412-1344	9612-1502		9412-1345	9612-1338			
	96-5919		94-5105	97-5944		94-5105	96-5919			
	12/11/96		12/11/94	12/12/96		12/11/94	12/11/96			
<b>SVOC TICs (µg/l)</b>										
Unknown		R	Unknown Hydrocarbon	10 J	Unknown	R	Unknown Hydrocarbon	40 J	Unknown	21 NJ
Unknown Hydrocarbon		R	Unknown Hydrocarbon	30 J	Unknown	R	Unknown Hydrocarbon	20 J	Unknown	R
Unknown Hydrocarbon		R	Unknown Hydrocarbon	9 J	Unknown	R	Unknown Hydrocarbon	50 J	Unknown	14 NJ
Unknown Hydrocarbon		R	Unknown Hydrocarbon	10 J	Unknown	R	Unknown Hydrocarbon	40 J	Unknown Hydrocarbon	R
Unknown		R	Unknown Hydrocarbon	10 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	7 J	Unknown	R
Unknown		R	Unknown Hydrocarbon	10 J	Unknown	R	Unknown Hydrocarbon	30 J	Unknown	R
Unknown		R	Unknown Hydrocarbon	10 J	Unknown	R	Unknown Hydrocarbon	10 J	Unknown	11 NJ
Unknown		R	Unknown Aromatic	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	70 J	Unknown	R
Unknown		R	Unknown Hydrocarbon	8 J	Unknown	R	Unknown Hydrocarbon	10 J	Unknown Hydrocarbon	R
Unknown		R	Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	10 J	Unknown	R
Unknown	17 NJ		Unknown Aromatic	50 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J	Unknown	15 NJ
Unknown	37 NJ		Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J	Unknown	16 NJ
Unknown	29 NJ		Unknown Aromatic	100 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J	Unknown	28 NJ
Unknown	29 NJ		Unknown Hydrocarbon	50 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J	Unknown	21 NJ
			Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	40 J	Unknown	18 NJ
			Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	30 J		
			Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J		
			Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R	Unknown Aliphatic Hydrocarbon	30 J		

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well AP-2 (continued)	Well MW-A1	Well MW-A2	Well MW-B	
	Phase II (continued)	Phase I	Phase I	Phase I	Phase II
Investigation:	ALT-GW-AP2-0997	RAT-GW-MWA1-1212	RAT-GW-MWA2-1212	RAT-GW-MWB-1211	GW-MWB-1296
Sample I.D.:	ALT-GW-AP2-0997	RAT-GW-MWA1-1212	RAT-GW-MWA2-1212	RAT-GW-MWB-1211	GW-MWB-1296
Laboratory Sample I.D.:	9709-3398	9412-1361	9412-1362	9412-1349	9612-1493
Laboratory Project No.:	97-4145	94-5107	94-5107	94-5105	97-5944
Sample Date:	09/24/97	12/12/94	12/12/94	12/11/94	12/12/96

TCL Semi-Volatile Organic Compounds (µg/l)						
Acenaphthene	11 U	11 U	11 U	11 U	12 U	12 U
Acenaphthylene	11 U	11 U	11 U	11 U	12 U	12 U
Anthracene	11 U	11 U	11 U	11 U	12 U	12 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	11 U	12 U	12 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	11 U	12 U	12 U
Bis(2-chloroisopropyl)ether	11 U	11 U	11 U	11 U	12 U	12 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	11 U	11 U	12 U	12 U
Benzo(a)pyrene	11 U	11 U	11 U	11 U	12 U	12 U
Benzo(a)anthracene	11 U	11 U	11 U	11 U	12 U	12 U
Benzo(b)fluoranthene	11 U	11 U	11 U	11 U	12 U	12 U
Benzo(g,h,i)perylene	11 U	11 U	11 U	11 U	12 U	12 U
Benzo(k)fluoranthene	11 U	11 U	11 U	11 U	12 U	12 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	11 U	12 U	12 U
Butyl benzyl phthalate	11 U	11 U	11 U	11 U	12 U	12 U
Carbazole	11 U	11 U	11 U	11 U	12 U	12 U
Chrysene	11 U	11 U	11 U	11 U	12 U	12 U
4-Chloroaniline	11 U	11 U	11 U	11 U	12 U	12 U
2-Chloronaphthalene	11 U	11 U	11 U	11 U	12 U	12 U
2-Chlorophenol	11 U	11 U	11 U	11 U	12 U	12 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	11 U	12 U	12 U
o-Cresol	11 U	11 U	11 U	11 U	12 U	12 U
p-Cresol	11 U	11 U	11 U	11 U	12 U	12 U
Dibenz(a,h)anthracene	11 U	11 U	11 U	11 U	12 U	12 U
Dibenzofuran	11 U	11 U	11 U	11 U	12 U	12 U
2,4-Dichlorophenol	11 U	11 U	11 U	11 U	12 U	12 U
1,2-Dichlorobenzene	11 U	11 U	11 U	11 U	12 U	12 U
1,3-Dichlorobenzene	11 U	11 U	11 U	11 U	12 U	12 U
1,4-Dichlorobenzene	11 U	11 U	11 U	11 U	12 U	12 U
3,3-Dichlorobenzidine	11 U	11 U	11 U	11 U	12 U	12 U
Diethyl phthalate	11 U	11 U	11 U	11 U	12 U	12 U
Dimethyl phthalate	11 U	11 U	11 U	11 U	12 U	12 U
2,4-Dimethylphenol	11 U	11 U	11 U	11 U	12 U	12 U
Di-n-butyl phthalate	40 U	11 U	11 U	11 U	12 U	12 U
4,6-Dinitro-o-cresol	27 U	28 U	28 U	27 U	R	R
2,4-Dinitrotoluene	11 U	11 U	11 U	11 U	12 U	12 U
2,6-Dinitrotoluene	11 U	11 U	11 U	11 U	12 U	12 U
Di-n-octyl phthalate	11 U	11 U	11 U	11 U	12 U	12 U
2,4-Dinitrophenol	R	28 U	28 U	27 U	R	R
Fluoranthene	11 U	11 U	11 U	11 U	12 U	12 U
Fluorene	11 U	11 U	11 U	5 J	12 U	12 U
Hexachlorocyclopentadiene	11 UJ	11 U	11 U	11 U	12 UJ	12 UJ
Hexachlorobenzene	11 U	11 U	11 U	11 U	12 U	12 U
Hexachlorobutadiene	11 U	11 U	11 U	11 U	12 U	12 U
Hexachloroethane	11 U	11 U	11 U	11 U	12 U	12 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	11 U	12 U	12 U
Isophorone	11 U	11 U	11 U	11 U	12 U	12 U
2-Methylnaphthalene	11 U	11 U	11 U	11 U	12 U	12 U
N-nitrosodiphenylamine	11 U	11 U	11 U	11 U	12 U	12 U
N-nitro-di-n-propylamine	11 U	11 U	11 U	11 U	12 U	12 U
Naphthalene	11 U	11 U	11 U	11 U	12 U	12 U
2-Nitroaniline	27 U	28 U	28 U	27 U	29 U	29 U
3-Nitroaniline	27 U	28 U	28 U	27 U	29 U	29 U
4-Nitroaniline	27 U	28 U	28 U	27 U	29 U	29 U
Nitrobenzene	11 U	11 U	11 U	11 U	12 U	12 U
2-Nitrophenol	11 U	11 U	11 U	11 U	12 U	12 U
4-Nitrophenol	27 U	28 U	28 U	27 U	29 U	29 U
p-Chloro-m-cresol	11 U	11 U	11 U	11 U	12 U	12 U
Pentachlorophenol	27 U	28 U	28 U	27 U	29 U	29 U
Phenanthrene	11 U	11 U	11 U	8 J	12 U	12 U
Phenol	11 U	11 U	11 U	11 U	12 U	12 U
Pyrene	11 U	11 U	11 U	11 U	12 U	12 U
1,2,4-Trichlorobenzene	11 U	11 U	11 U	11 U	12 U	12 U
2,4,5-Trichlorophenol	27 U	28 U	28 U	27 U	29 U	29 U
2,4,6-Trichlorophenol	11 U	11 U	11 U	11 U	12 U	12 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well ID:	Well AP-2 (continued)	Well MW-A1	Well MW-A2	Well MW-B	
Investigation:	Phase II (continued)	Phase I	Phase I	Phase I	Phase II
Sample I.D.:	ALT-GW-AP2-0997	RAT-GW-MWA1-1212	RAT-GW-MWA2-1212	RAT-GW-MWB-1211	RAT-GW-MWB-1296
Laboratory Sample I.D.:	9709-3398	9412-1361	9412-1362	9412-1349	9612-1493
Laboratory Project No.:	97-4145	94-5107	94-5107	94-5105	96-5944
Sample Date:	09/24/97	12/12/94	12/12/94	12/11/94	12/12/96

SVOC TICs (µg/l)

Unknown	7	Unknown Aromatic	10 J	Unknown Hydrocarbon	5 J	Unknown Hydrocarbon	50 J	Unknown	R
Unknown	4	Unknown Hydrocarbon	10 J	Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	80 J	Unknown Hydrocarbon	R
Unknown	3					Unknown Hydrocarbon	100 J	Unknown	R
Unknown	1					Unknown Hydrocarbon	100 J	Unknown Hydrocarbon	R
Unknown	1					Unknown Hydrocarbon	50 J	Unknown Hydrocarbon	R
Unknown	1					Unknown Aromatic	60 J	Unknown Hydrocarbon	R
Unknown	1					Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	R
Unknown	5					Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	R
						Unknown Aromatic	20 J	Unknown	R
						Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	R
						Unknown Hydrocarbon	10 J	Unknown	R
						Unknown Aromatic	10 J	Unknown	R
						Unknown Hydrocarbon	10 J	Unknown	22 NJ
						Unknown Hydrocarbon	30 J	Unknown	14 NJ
						Unknown Aromatic	20 J	Unknown	110 NJ
						Unknown Aromatic	40 J	Unknown	33 NJ
						Unknown Aromatic	10 J	Unknown	17 NJ
						Unknown Hydrocarbon	9 J	Unknown	40 NJ
						Unknown Aliphatic Hydrocarbon	80 J		

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-B (continued)	Well MW-C		Well MW-D1		
	Phase II (continued)	Phase I	Phase II	Phase I	Phase II	
Investigation:	ALT-GW-MWB-0997	RAT-GW-MWC-1211	GW-MWC-1296RE (g)	RAT-GW-MWD1-1211	GW-MWD1-1296	
Sample I.D.:	9709-3397	9412-1346	9612-1514	9412-1347	9612-1508	
Laboratory Sample I.D.:	97-4145	94-5105	97-5944	94-5105	97-5944	
Laboratory Project No.:	09/24/97	12/11/94	12/12/96	12/11/94	12/12/96	
Sample Date:						
TCL Semi-Volatile Organic Compounds (µg/l)						
Acenaphthene	11 U	11 U	R	490	5.6 J	
Acenaphthylene	11 U	11 U	R	110 U	11 U	
Anthracene	11 U	11 U	R	110 U	11 U	
Bis(2-chloroethyl)ether	11 U	11 U	R	110 U	11 U	
Bis(2-chloroethoxy)methane	11 U	11 U	R	110 U	11 U	
Bis(2-chloroisopropyl)ether	11 U	11 U	R	110 U	11 U	
Bis(2-ethylhexyl)phthalate	11 U	11 U	R	110 U	11 U	
Benzo(a)pyrene	11 U	11 U	R	110 U	11 U	
Benzo(a)anthracene	11 U	11 U	R	110 U	11 U	
Benzo(b)fluoranthene	11 U	11 U	R	110 U	11 U	
Benzo(g,h,i)perylene	11 U	11 U	R	110 U	11 U	
Benzo(k)fluoranthene	11 U	11 U	R	110 U	11 U	
4-Bromophenyl phenyl ether	11 U	11 U	R	110 U	11 U	
Butyl benzyl phthalate	11 U	11 U	R	110 U	11 U	
Carbazole	11 U	11 U	R	110 U	11 U	
Chrysene	11 U	11 U	R	110 U	11 U	
4-Chloroaniline	11 U	11 U	R	110 U	11 U	
2-Chloronaphthalene	11 U	11 U	R	110 U	11 U	
2-Chlorophenol	11 U	11 U	R	110 U	11 U	
4-Chlorophenyl phenyl ether	11 U	11 U	R	110 U	11 U	
o-Cresol	11 U	11 U	R	110 U	11 U	
p-Cresol	11 U	11 U	R	110 U	11 U	
Dibenz(a,h)anthracene	11 U	11 U	R	110 U	11 U	
Dibenzofuran	11 U	11 U	R	110 U	11 U	
2,4-Dichlorophenol	11 U	11 U	R	110 U	11 U	
1,2-Dichlorobenzene	11 U	11 U	R	110 U	11 U	
1,3-Dichlorobenzene	11 U	11 U	R	110 U	11 U	
1,4-Dichlorobenzene	11 U	11 U	R	110 U	11 U	
3,3-Dichlorobenzidine	11 U	11 U	R	110 U	11 U	
Diethyl phthalate	11 U	11 U	R	110 U	11 U	
Dimethyl phthalate	11 U	11 U	R	110 U	11 U	
2,4-Dimethylphenol	11 U	11 U	R	110 U	11 U	
Di-n-butyl phthalate	50 U	3 J	R	110 U	11 U	
4,6-Dinitro-o-cresol	28 U	29 U	R	270 U	R	
2,4-Dinitrotoluene	11 U	11 U	R	110 U	11 U	
2,6-Dinitrotoluene	11 U	11 U	R	110 U	11 U	
Di-n-octyl phthalate	11 U	11 U	R	110 U	11 U	
2,4-Dinitrophenol	R	29 U	R	270 U	R	
Fluoranthene	11 U	11 U	R	43 J	11 U	
Fluorene	11 U	16	R	790	6 J	
Hexachlorocyclopentadiene	11 UJ	11 U	R	110 U	11 UJ	
Hexachlorobenzene	11 U	11 U	R	110 U	11 U	
Hexachlorobutadiene	11 U	11 U	R	110 U	11 U	
Hexachloroethane	11 U	11 U	R	110 U	11 U	
Indeno(1,2,3-cd)pyrene	11 U	11 U	R	110 U	11 U	
Isophorone	11 U	11 U	R	110 U	11 U	
2-Methylnaphthalene	11 U	11 U	R	150	59	
N-nitrosodiphenylamine	11 U	11 U	R	110 U	11 U	
N-nitro-di-n-propylamine	11 U	11 U	R	110 U	11 U	
Naphthalene	12 U	11 U	R	110 U	11 U	
2-Nitroaniline	28 U	29 U	R	270 U	28 U	
3-Nitroaniline	28 U	29 U	R	270 U	28 U	
4-Nitroaniline	28 U	29 U	R	270 U	28 U	
Nitrobenzene	11 U	11 U	R	110 U	11 U	
2-Nitrophenol	11 U	11 U	R	110 U	11 U	
4-Nitrophenol	28 U	29 U	R	270 U	28 U	
p-Chloro-m-cresol	11 U	11 U	R	110 U	11 U	
Pentachlorophenol	28 U	29 U	R	270 U	28 U	
Phenanthrene	11 U	36	R	2200	6.1 J	
Phenol	11 U	11 U	R	110 U	11 U	
Pyrene	11 U	11 U	R	95 J	11 U	
1,2,4-Trichlorobenzene	11 U	11 U	R	110 U	11 U	
2,4,5-Trichlorophenol	28 U	29 U	R	270 J	28 U	
2,4,6-Trichlorophenol	11 U	11 U	R	110 U	11 U	

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well MW-B (continued)		Well MW-C		Well MW-D1				
	Phase II (continued)		Phase I	Phase II	Phase I		Phase II		
	ALT-GW-MWB-0997		RAT-GW-MWC-1211	RAT-GW-MWC-1296	RAT-GW-MWD1-1211		RAT-GW-MWD1-1296		
	9709-3397		9412-1346	9612-1514	9412-1347		9612-1508		
	97-4143		94-5105	96-5944	94-5105		96-5944		
	09/24/97		12/11/94	12/12/96	12/11/94		12/12/96		
<b>SVOC TICs (µg/l)</b>									
Unknown	11	Unknown Hydrocarbon	90 J	Unknown	R	Unknown Hydrocarbon	400 J	Unknown	R
Unknown Hydrocarbon	1	Unknown Hydrocarbon	200 J	Unknown	R	Unknown Hydrocarbon	600 J	Unknown	R
Unknown Hydrocarbon	1	Unknown Hydrocarbon	200 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	600 J	Unknown Hydrocarbon	R
Unknown	1	Unknown Hydrocarbon	90 J	Unknown Hydrocarbon	R	Unknown Aromatic	600 J	Unknown Hydrocarbon	R
Unknown	3	Unknown Hydrocarbon	300 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	800 J	Unknown Hydrocarbon	R
Unknown Hydrocarbon	1	Unknown Hydrocarbon	90 J	Unknown Hydrocarbon	R	Unknown Aromatic	500 J	Unknown Hydrocarbon	R
Unknown Hydrocarbon	1	Unknown Aromatic	200 J	Unknown Hydrocarbon	R	Unknown Aromatic	900 J	Unknown	10 NJ
Unknown Hydrocarbon	1	Unknown Hydrocarbon	100 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	1000 J	Unknown	15 NJ
Unknown	1	Unknown Hydrocarbon	20 J	Unknown	R	Unknown Aromatic	400 J	Unknown	24 NJ
Unknown	4	Unknown Hydrocarbon	100 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	500 J	Unknown	R
		Unknown Hydrocarbon	90 J	Unknown Hydrocarbon	R	Unknown Aromatic	900 J	Unknown	R
		Unknown Hydrocarbon	200 J	Unknown Hydrocarbon	R	Unknown Aromatic	800 J	Unknown Hydrocarbon	R
		Unknown Aromatic	200 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	400 J	Unknown Hydrocarbon	R
		Unknown Hydrocarbon	300 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	900 J	Unknown	R
		Unknown Hydrocarbon	500 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	2000 J	Unknown	16 NJ
		Unknown Hydrocarbon	90 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	900 J	Unknown	47 NJ
		Unknown Hydrocarbon	200 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	2000 J	Unknown	18 NJ
								Unknown	11 NJ
								Unknown	R
								Unknown	16 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well MW-D1 (continued)		Well MW-D2		Well TF-1	
	Phase II (continued)		Phase I	Phase II	Phase I	Phase II
	Investigation:	Sample I.D.:	RAT-GW-MWD2-1211	GW-MWD2-1296	RAT-GW-TF1-1211	WAT-GW-TF1-1296
Laboratory Sample I.D.:	9709-3406	9412-1348	9612-1505	9412-1353	9612-1346	
Laboratory Project No.:	97-4145	94-5105	97-5944	94-5105	96-5919	
Sample Date:	09/24/97	12/11/94	12/12/96	12/11/94	12/11/96	
TCL Semi-Volatile Organic Compounds (µg/l)						
Acenaphthene	420	11 U	8.9 J	11 U	11 U	11 U
Acenaphthylene	11 U	11 U	12 U	11 U	11 U	11 U
Anthracene	69	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	12 U	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	12 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	5100	11 U	12 U	11 U	11 U	11 U
Benzo(a)pyrene	11 U	11 U	12 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	11 U	12 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	11 U	12 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	11 U	11 U	12 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	11 U	12 U	11 U	11 U	11 U
4-Bromophenyl phenyl ether	11 U	11 U	12 U	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	11 U	12 U	11 U	11 U	11 U
Carbazole	11 U	11 U	12 U	11 U	11 U	11 U
Chrysene	11 U	11 U	12 U	11 U	11 U	11 U
4-Chloroaniline	11 U	11 U	12 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	11 U	12 U	11 U	11 U	11 U
2-Chlorophenol	11 U	11 U	12 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	11 U	12 U	11 U	11 U	11 U
o-Cresol	11 U	11 U	12 U	11 U	11 U	11 U
p-Cresol	11 U	11 U	12 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	11 U	12 U	11 U	11 U	11 U
Dibenzofuran	11 U	11 U	12 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	11 U	12 U	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	11 U	12 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	11 U	12 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	11 U	12 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	11 U	11 U	12 U	11 U	11 U	11 U
Diethyl phthalate	11 U	11 U	12 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	11 U	12 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	11 U	12 U	11 U	11 U	11 U
Di-n-butyl phthalate	11 U	4 J	12 U	11 U	11 U	11 U
4,6-Dinitro-o-cresol	27 U	28 U	R	27 U	R	R
2,4-Dinitrotoluene	11 U	11 U	12 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	11 U	12 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	11 U	12 U	11 U	11 U	11 U
2,4-Dinitrophenol	R	28 U	R	27 U	R	R
Fluoranthene	27 U	11 U	12 U	11 U	11 U	11 U
Fluorene	310	11 U	8.5 J	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 UJ	11 U	12 UJ	11 U	11 UJ	11 UJ
Hexachlorobenzene	11 U	11 U	12 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	11 U	12 U	11 U	11 U	11 U
Hexachloroethane	11 U	11 U	12 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	12 U	11 U	11 U	11 U
Isophorone	11 U	11 U	12 U	11 U	11 U	11 U
2-Methylnaphthalene	11 U	11 U	12 U	11 U	11 U	11 U
N-nitrosodiphenylamine	2300	11 U	12 U	11 U	11 U	11 U
N-nitro-di-n-propylamine	11 U	11 U	12 U	11 U	11 U	11 U
Naphthalene	11 U	11 U	12 U	11 U	11 U	11 U
2-Nitroaniline	27 U	28 U	30 U	27 U	28 U	28 U
3-Nitroaniline	27 U	28 U	30 U	27 U	28 U	28 U
4-Nitroaniline	27 U	28 U	30 U	27 U	28 U	28 U
Nitrobenzene	11 U	11 U	12 U	11 U	11 U	11 U
2-Nitrophenol	11 U	11 U	12 U	11 U	11 U	11 U
4-Nitrophenol	27 U	28 U	30 U	27 U	28 U	28 U
p-Chloro-m-cresol	11 U	11 U	12 U	11 U	11 U	11 U
Pentachlorophenol	27 U	28 U	30 U	27 U	28 U	28 U
Phenanthrene	770	11 U	8.8 J	11 U	11 U	11 U
Phenol	11 U	11 U	12 U	11 U	11 U	11 U
Pyrene	56	11 U	12 U	11 U	11 U	11 U
1,2,4-Trichlorobenzene	11 U	11 U	12 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	27 U	28 U	30 U	27 U	28 U	28 U
2,4,6-Trichlorophenol	11 U	11 U	12 U	11 U	11 U	11 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.:	Well MW-D1 (continued)		Well MW-D2		Well TF-1	
	Phase II (continued)		Phase I	Phase II	Phase I	Phase II
Investigation:	ALT-GW-MWD1-0997		RAT-GW-MWD2-1211	GW-MWD2-1296	RAT-GW-TF1-1211	WAT-GW-TF1-1296
Sample I.D.:	9709-3406	9412-1348	9612-1505	9412-1353	9612-1346	
Laboratory Sample I.D.:	97-4145	94-5105	97-5944	94-5105	96-5919	
Laboratory Project No.:	09/24/97	12/11/94	12/12/96	12/11/94	12/11/96	
Sample Date:						

SVOC TICs (µg/l)

Unknown	2	Unknown Aromatic	5 J	Unknown	R	Unknown Aromatic	10 J	Unknown Hydrocarbon	R
Unknown Hydrocarbon	2	Unknown Aromatic	6 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	20 J	Unknown	R
Unknown	2	Unknown Aromatic	9 J	Unknown	19 NJ	Unknown Hydrocarbon	7 J	Unknown	R
Unknown	3	Unknown Hydrocarbon	8 J	Unknown	29 NJ	Unknown Hydrocarbon	10 J	Unknown	R
Unknown Hydrocarbon	4	Unknown Hydrocarbon	10 J	Unknown	45 NJ	Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	R
Unknown Hydrocarbon	2	Unknown Hydrocarbon	8 J	Unknown	R	Unknown Hydrocarbon		Unknown Hydrocarbon	R
Unknown Hydrocarbon	2	Unknown Aromatic	40 J	Unknown	R	Unknown		Unknown	R
Unknown Hydrocarbon	9	Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	R	Unknown		Unknown	R
Unknown Hydrocarbon	2	Unknown Aromatic	10 J	Unknown Hydrocarbon	R	Unknown		Unknown	49 NJ
Unknown	3	Unknown Hydrocarbon	30 J	Unknown	36 NJ	Unknown		Unknown	35 NJ
Unknown	23	Unknown Aromatic	10 J	Unknown	81 NJ	Unknown		Unknown	29 NJ
Unknown	5	Unknown Aromatic	9 J	Unknown	19 NJ	Unknown		Unknown	12 NJ
Unknown	3	Unknown Aromatic	8 J	Unknown Hydrocarbon	36 NJ	Unknown		Unknown	13 NJ
Unknown Hydrocarbon	5	Unknown Aromatic	8 J	Unknown	42 NJ	Unknown			
Unknown Hydrocarbon	6	Unknown Hydrocarbon	7 J	Unknown	35 NJ	Unknown			
Unknown Hydrocarbon	2	Unknown Aromatic	8 J	Unknown	28 NJ	Unknown			
Unknown	5	Unknown Hydrocarbon	6 J	Unknown	48 NJ				
Unknown	9	Unknown Hydrocarbon	20 J						
Unknown Hydrocarbon	7	Unknown Hydrocarbon	20 J						
Unknown	2	Unknown Hydrocarbon	30 J						
Unknown	2								
Unknown Hydrocarbon	2								
Unknown	2								
Unknown Hydrocarbon	2								
Unknown Hydrocarbon	2								
Unknown	4								
Unknown	4								
Unknown	3								
Unknown	3								
Unknown	2								

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well PH-1		Well H-4D		Well H-4S
	Phase I	Phase II	Phase I	Phase II	Phase I
	RAT-GW-PH1-1211	RAT-GW-PH1-1296	RAT-GW-H4D-1211	GW-H4D-1296	RAT-GW-H4S-1211
	9412-1352	9612-1347	9412-1350	9612-1202	9412-1351
	94-5105	96-5919	94-5105	96-5897	94-5105
	12/11/94	12/11/96	12/11/94	12/10/96	12/11/94

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	11 U	11 U	11 U	11 U	11 U
Acenaphthylene	11 U	11 U	11 U	11 U	11 U
Anthracene	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	11 U	11 U
Bis(2-chloroisopropyl)ether	11 U	11 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	11 U	11 U	11 U
Benzo(a)pyrene	11 U	11 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	11 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	11 U	11 U	11 U	11 U
Benzo(g,h,i)perylene	11 U	11 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	11 U	11 U	11 U	11 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	11 U	11 U	11 U	11 U
Carbazole	11 U	11 U	11 U	11 U	11 U
Chrysene	11 U	11 U	11 U	11 U	11 U
4-Chloroaniline	11 U	11 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	11 U	11 U	11 U	11 U
2-Chlorophenol	11 U	11 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	11 U	11 U
o-Cresol	11 U	11 U	11 U	11 U	11 U
p-Cresol	11 U	11 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	11 U	11 U	11 U	11 U
Dibenzofuran	11 U	11 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	11 U	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	11 U	11 U	11 U	11 U
3,3-Dichlorobenzidine	11 U	11 U	11 U	11 U	11 U
Diethyl phthalate	11 U	11 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	11 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	11 U	11 U	11 U	11 U
Di-n-butyl phthalate	8 J	11 U	8 J	11 U	11 U
4,6-Dinitro-o-cresol	27 U	R	28 U	28 U	28 U
2,4-Dinitrotoluene	11 U	11 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	11 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	27 U	R	28 U	R	28 U
Fluoranthene	11 U	11 U	11 U	11 U	11 U
Fluorene	11 U	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	11 UJ	11 U	11 UJ	11 U
Hexachlorobenzene	11 U	11 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	11 U	11 U	11 U	11 U
Hexachloroethane	11 U	11 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	11 U	11 U
Isophorone	11 U	11 U	11 U	11 U	11 U
2-Methylnaphthalene	11 U	11 U	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	11 U	11 U	11 U	11 U
N-nitro-di-n-propylamine	11 U	11 U	11 U	11 U	11 U
Naphthalene	11 U	11 U	11 U	11 U	11 U
2-Nitroaniline	27 U	28 U	28 U	28 U	28 U
3-Nitroaniline	27 U	28 U	28 U	28 U	28 U
4-Nitroaniline	27 U	28 U	28 U	28 U	28 U
Nitrobenzene	11 U	11 U	11 U	11 U	11 U
2-Nitrophenol	11 U	11 U	11 U	11 U	11 U
4-Nitrophenol	27 U	28 U	28 U	28 U	28 U
p-Chloro-m-cresol	11 U	11 U	11 U	11 U	11 U
Pentachlorophenol	27 U	28 U	28 U	28 U	28 U
Phenanthrene	11 U	11 U	11 U	11 U	11 U
Phenol	11 U	11 U	11 U	11 U	11 U
Pyrene	11 U	11 U	11 U	11 U	11 U
1,2,4-Trichlorobenzene	11 U	11 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	27 U	28 U	28 U	28 U	28 U
2,4,6-Trichlorophenol	11 U	11 U	11 U	11 U	11 U



Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well PH-1		Well H-4D		Well H-4S
	Phase I	Phase II	Phase I	Phase II	Phase I
	RAT-GW-PH1-1211	WAT-GW-PH1-1296	RAT-GW-H4D-1211	GW-H4D-1296	RAT-GW-H4S-1211
	9412-1352	9612-1347	9412-1350	9612-1202	9412-1351
	94-5105	96-5919	94-5105	96-5897	94-5105
	12/11/94	12/12/96	12/11/94	12/10/96	12/11/94

SVOC TICs (µg/l)

Unknown Aromatic	10 J	Unknown	R	Unknown Hydrocarbon	7 J	Unknown	18 NJ	Unknown Hydrocarbon	10 J
Unknown Aromatic	6 J	Unknown	R	Unknown Hydrocarbon	30 J	Unknown Hydrocarbon	20 NJ	Unknown Hydrocarbon	7 J
Unknown Hydrocarbon	5 J	Unknown Hydrocarbon	R	Unknown Hydrocarbon	8 J	Unknown	21 NJ	Unknown Hydrocarbon	10 J
Unknown Hydrocarbon	6 J	Unknown	R	Unknown Hydrocarbon	30 J	Unknown	R	Unknown Hydrocarbon	5 J
Unknown Aromatic	20 J	Unknown	R	Unknown Hydrocarbon	70 J	Unknown	R	Unknown Hydrocarbon	30 J
Unknown Hydrocarbon	5 J	Unknown	R			Unknown	R		
Unknown Hydrocarbon	5 J	Unknown	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	6 J	Unknown	R			Unknown	R		
Unknown Hydrocarbon	6 J	Unknown	R			Unknown	R		
Unknown Hydrocarbon	10 J	Unknown Hydrocarbon	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	5 J	Unknown	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	7 J	Unknown	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	5 J	Unknown	R			Unknown Hydrocarbon	R		
Unknown Hydrocarbon	20 J	Unknown Hydrocarbon	R			Unknown Hydrocarbon	17 NJ		
Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	R						
Unknown Hydrocarbon	6 J	Unknown Hydrocarbon	R						
Unknown Hydrocarbon	50 J	Unknown Hydrocarbon	R						
		Unknown Hydrocarbon	R						
		Unknown	25 NJ						
		Unknown	20 NJ						
		Unknown	45 NJ						
		Unknown	22 NJ						
		Unknown	84 NJ						
		Unknown	66 NJ						
		Unknown	42 NJ						
		Unknown	21 NJ						

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.:	Well H-4S (continued)		Well RW-1B		Well RW-2B
	Phase II		Phase II		Phase II
Investigation:					
Sample I.D.:	GW-H4S-1296	GW-RW1B-1296	ALT-GW-RW1B-0997	ALT-GW-RW1B-0997D	GW-RW2B-1296
Laboratory Sample I.D.:	9612-1201	9612-1504	9709-3401	9709-3402	9612-1511
Laboratory Project No.:	96-5897	97-5944	97-4145	97-4145	97-5944
Sample Date:	12/10/96	12/12/96	09/24/97	09/24/97	12/12/96

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	11 U	12 U	11 U	10 U	12 U
Acenaphthylene	11 U	12 U	11 U	10 U	12 U
Anthracene	11 U	12 U	11 U	10 U	12 U
Bis(2-chloroethyl)ether	11 U	12 U	11 U	10 U	12 U
Bis(2-chloroethoxy)methane	11 U	12 U	11 U	10 U	12 U
Bis(2-chloroisopropyl)ether	11 U	12 U	11 U	10 U	12 U
Bis(2-ethylhexyl)phthalate	11 U	12 U	11 U	10 U	12 U
Benzo(a)pyrene	11 U	12 U	11 U	10 U	12 U
Benzo(a)anthracene	11 U	12 U	11 U	10 U	12 U
Benzo(b)fluoranthene	11 U	12 U	11 U	10 U	12 U
Benzo(g,h,i)perylene	11 U	12 U	11 U	10 U	12 U
Benzo(k)fluoranthene	11 U	12 U	11 U	10 U	12 U
4-Bromophenyl phenyl ether	11 U	12 U	11 U	10 U	12 U
Butyl benzyl phthalate	11 U	12 U	11 U	10 U	12 U
Carbazole	11 U	12 U	11 U	10 U	12 U
Chrysene	11 U	12 U	11 U	10 U	12 U
4-Chloroaniline	11 U	12 U	11 U	10 U	12 U
2-Chloronaphthalene	11 U	12 U	11 U	10 U	12 U
2-Chlorophenol	11 U	12 U	11 U	10 U	12 U
4-Chlorophenyl phenyl ether	11 U	12 U	11 U	10 U	12 U
o-Cresol	11 U	12 U	11 U	10 U	12 U
p-Cresol	11 U	12 U	11 U	10 U	12 U
Dibenz(a,h)anthracene	11 U	12 U	11 U	10 U	12 U
Dibenzofuran	11 U	12 U	11 U	10 U	12 U
2,4-Dichlorophenol	11 U	12 U	11 U	10 U	12 U
1,2-Dichlorobenzene	11 U	12 U	11 U	10 U	12 U
1,3-Dichlorobenzene	11 U	12 U	11 U	10 U	12 U
1,4-Dichlorobenzene	11 U	12 U	11 U	10 U	12 U
3,3-Dichlorobenzidine	11 U	12 U	11 U	10 U	12 U
Diethyl phthalate	11 U	12 U	11 U	10 U	12 U
Dimethyl phthalate	11 U	12 U	11 U	10 U	12 U
2,4-Dimethylphenol	11 U	12 U	11 U	10 U	12 U
Di-n-butyl phthalate	11 U	12 U	76 U	99 U	12 U
4,6-Dinitro-o-cresol	28 U	R	27 U	26 U	R
2,4-Dinitrotoluene	11 U	12 U	11 U	10 U	12 U
2,6-Dinitrotoluene	11 U	12 U	11 U	10 U	12 U
Di-n-octyl phthalate	11 U	12 U	11 U	10 U	12 U
2,4-Dinitrophenol	R	R	R	R	R
Fluoranthene	11 U	12 U	11 U	10 U	12 U
Fluorene	11 U	12 U	11 U	10 U	12 U
Hexachlorocyclopentadiene	11 UJ	12 UJ	11 UJ	10 UJ	12 UJ
Hexachlorobenzene	11 U	12 U	11 U	10 U	12 U
Hexachlorobutadiene	11 U	12 U	11 U	10 U	12 U
Hexachloroethane	11 U	12 U	11 U	10 U	12 U
Indeno(1,2,3-cd)pyrene	11 U	12 U	11 U	10 U	12 U
Isophorone	11 U	12 U	11 U	10 U	12 U
2-Methylnaphthalene	11 U	12 U	11 U	10 U	12 U
N-nitrosodiphenylamine	11 U	12 U	11 U	10 U	12 U
N-nitro-di-n-propylamine	11 U	12 U	11 U	10 U	12 U
Naphthalene	11 U	12 U	11 U	10 U	12 U
2-Nitroaniline	28 U	12 U	27 U	26 U	30 U
3-Nitroaniline	28 U	30 U	27 U	26 U	30 U
4-Nitroaniline	28 U	30 U	27 U	26 U	30 U
Nitrobenzene	11 U	12 U	11 U	10 U	12 U
2-Nitrophenol	11 U	12 U	11 U	10 U	12 U
4-Nitrophenol	28 U	30 U	27 U	26 U	30 U
p-Chloro-m-cresol	11 U	12 U	11 U	10 U	12 U
Pentachlorophenol	28 U	30 U	27 U	26 U	30 U
Phenanthrene	11 U	12 U	11 U	11 U	12 U
Phenol	11 U	12 U	11 U	11 U	12 U
Pyrene	11 U	12 U	11 U	11 U	12 U
1,2,4-Trichlorobenzene	11 U	12 U	11 U	11 U	12 U
2,4,5-Trichlorophenol	28 U	30 U	27 U	26 U	30 U
2,4,6-Trichlorophenol	11 U	12 U	11 U	11 U	12 U

Table 2 (continued)

Summary of Groundwater Sample Results  
 Main Plant Area Groundwater Monitoring Program  
 AL Tech Specialty Steel Corporation Facility  
 Watervliet, New York

Well I.D.:	Well H-4S (continued)	Well RW-1B				Well RW-2B
Investigation:	Phase II	Phase II	Phase II		Phase II	
Sample I.D.:	GW-H4S-1296	WAT-GW-RW1B-1296	ALT-GW-RW1B-0997	ALT-GW-RW1B-0997D	GW-RW2B-1296	
Laboratory Sample I.D.:	9612-1201	9612-1504	9709-3401	9709-3402	9612-1511	
Laboratory Project No.:	96-5897	97-5944	97-4145	97-4145	97-5944	
Sample Date:	12/10/96	12/12/96	09/24/97	09/24/97	12/12/96	

SVOC TICs (µg/l)

Unknown	53 NJ	Unknown	5 NJ	Unknown	1	Unknown	16	Unknown	R
Unknown Hydrocarbon	21 NJ	Unknown	R	Unknown	4	Unknown Hydrocarbon	1	Unknown	R
Unknown	20 NJ	Unknown	R	Unknown Hydrocarbon	1	Unknown	1	Unknown Hydrocarbon	R
Unknown	24 NJ	Unknown Hydrocarbon	R	Unknown Hydrocarbon	1	Unknown	3	Unknown Hydrocarbon	R
Unknown	22 NJ	Unknown Hydrocarbon	R	Unknown	1	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R
Unknown Hydrocarbon	27 NJ	Unknown Hydrocarbon	R	Unknown	1	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R
Unknown	45 NJ	Unknown Hydrocarbon	R	Unknown	9	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R
Unknown	R	Unknown Hydrocarbon	R	Unknown Hydrocarbon	1	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R
Unknown	R	Unknown Hydrocarbon	R	Unknown	6	Unknown	1	Unknown	R
Unknown Hydrocarbon	R	Unknown Hydrocarbon	R	Unknown	1	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R
Unknown	R	Unknown	R	Unknown	1	Unknown	1	Unknown	R
Unknown	R	Unknown	R	Unknown	20	Unknown Hydrocarbon	14	Unknown Hydrocarbon	14 NJ
Unknown Hydrocarbon	R	Unknown	R	Unknown	1	Unknown	15	Unknown	15 NJ
Unknown Hydrocarbon	R	Unknown	97 NJ	Unknown	1	Unknown	12	Unknown	12 NJ
Unknown Hydrocarbon	R	Unknown	6 NJ	Unknown	1	Unknown	30	Unknown	30 NJ
Unknown Hydrocarbon	R	Unknown	15 NJ	Unknown	1	Unknown	10	Unknown	10 NJ
Unknown Hydrocarbon	25 NJ	Unknown	11 NJ	Unknown	1	Unknown	10	Unknown	10 NJ
		Unknown	8 NJ	Unknown	1	Unknown	10	Unknown	10 NJ
		Unknown	6 NJ	Unknown	1	Unknown	10	Unknown	10 NJ

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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Well I.D.: Investigation: Sample I.D.: Laboratory Sample I.D.: Laboratory Project No.: Sample Date:	Well RW-2B (continued)	Well RW-6		Well RW-7	Well RW-8
	Phase II (continued)	Phase II		Phase II	Phase II
	ALT-GW-RW2B-0997	GW-RW6-1296	ALT-GW-RW6-0997	GW-RW7-1296	GW-RW8-1296
	9709-3405	9612-1499	9709-3403	9612-1495	9612-1518
	97-4145	97-5944	97-4145	97-5944	97-5944
	09/24/97	12/12/96	09/24/97	12/12/96	12/12/96

## TCL Semi-Volatile Organic Compounds (µg/l)

Acenaphthene	10 U	12 U	11 U	11 U	12 U
Acenaphthylene	10 U	12 U	11 U	11 U	12 U
Anthracene	10 U	12 U	11 U	11 U	12 U
Bis(2-chloroethyl)ether	10 U	12 U	11 U	11 U	12 U
Bis(2-chloroethoxy)methane	10 U	12 U	11 U	11 U	12 U
Bis(2-chloroisopropyl)ether	10 U	12 U	11 U	11 U	12 U
Bis(2-ethylhexyl)phthalate	10 U	12 U	11 U	11 U	12 U
Benzo(a)pyrene	10 U	12 U	11 U	11 U	12 U
Benzo(a)anthracene	10 U	12 U	11 U	11 U	12 U
Benzo(b)fluoranthene	10 U	12 U	11 U	11 U	12 U
Benzo(g,h,i)perylene	10 U	12 U	11 U	11 U	12 U
Benzo(k)fluoranthene	10 U	12 U	11 U	11 U	12 U
4-Bromophenyl phenyl ether	10 U	12 U	11 U	11 U	12 U
Butyl benzyl phthalate	10 U	12 U	11 U	11 U	12 U
Carbazole	10 U	12 U	11 U	11 U	12 U
Chrysene	10 U	12 U	11 U	11 U	12 U
4-Chloroaniline	10 U	12 U	11 U	11 U	12 U
2-Chloronaphthalene	10 U	12 U	11 U	11 U	12 U
2-Chlorophenol	10 U	R	11 U	11 U	12 U
4-Chlorophenyl phenyl ether	10 U	12 U	11 U	11 U	12 U
o-Cresol	10 U	R	11 U	11 U	12 U
p-Cresol	10 U	R	11 U	11 U	12 U
Dibenz(a,h)anthracene	10 U	12 U	11 U	11 U	12 U
Dibenzofuran	10 U	12 U	11 U	11 U	12 U
2,4-Dichlorophenol	10 U	R	11 U	11 U	12 U
1,2-Dichlorobenzene	10 U	12 U	11 U	11 U	12 U
1,3-Dichlorobenzene	10 U	12 U	11 U	11 U	12 U
1,4-Dichlorobenzene	10 U	12 U	11 U	11 U	12 U
3,3-Dichlorobenzidine	10 U	12 U	11 U	11 U	12 U
Diethyl phthalate	10 U	12 U	11 U	11 U	12 U
Dimethyl phthalate	10 U	12 U	11 U	11 U	12 U
2,4-Dimethylphenol	10 U	R	11 U	11 U	12 U
Di-n-butyl phthalate	10 U	12 U	57 U	11 U	12 U
4,6-Dinitro-o-cresol	26 U	R	27 U	R	R
2,4-Dinitrotoluene	10 U	12 U	11 U	11 U	12 U
2,6-Dinitrotoluene	10 U	12 U	11 U	11 U	12 U
Di-n-octyl phthalate	10 U	12 U	11 U	11 U	12 U
2,4-Dinitrophenol	R	R	R	R	R
Fluoranthene	10 U	12 U	11 U	11 U	12 U
Fluorene	10 U	12 U	11 U	11 U	12 U
Hexachlorocyclopentadiene	10 UJ	12 UJ	11 UJ	11 UJ	12 UJ
Hexachlorobenzene	10 U	12 U	11 U	11 U	12 U
Hexachlorobutadiene	10 U	12 U	11 U	11 U	12 U
Hexachloroethane	10 U	12 U	11 U	11 U	12 U
Indeno(1,2,3-cd)pyrene	10 U	12 U	11 U	11 U	12 U
Isophorone	10 U	12 U	11 U	11 U	12 U
2-Methylnaphthalene	10 U	12 U	11 U	11 U	12 U
N-nitrosodiphenylamine	10 U	12 U	11 U	11 U	12 U
N-nitro-di-n-propylamine	10 U	12 U	11 U	11 U	12 U
Naphthalene	10 U	12 U	11 U	11 U	12 U
2-Nitroaniline	26 U	30 U	27 U	28 U	30 U
3-Nitroaniline	26 U	30 U	27 U	28 U	30 U
4-Nitroaniline	26 U	30 U	27 U	28 U	30 U
Nitrobenzene	10 U	12 U	11 U	11 U	12 U
2-Nitrophenol	10 U	R	11 U	11 U	12 U
4-Nitrophenol	26 U	R	27 U	28 U	30 U
p-Chloro-m-cresol	10 U	R	11 U	11 U	12 U
Pentachlorophenol	26 U	R	27 U	28 U	30 U
Phenanthrene	10 U	12 U	11 U	11 U	12 U
Phenol	10 U	R	11 U	11 U	12 U
Pyrene	10 U	12 U	11 U	11 U	12 U
1,2,4-Trichlorobenzene	10 U	12 U	11 U	11 U	12 U
2,4,5-Trichlorophenol	26 U	R	27 U	28 U	30 U
2,4,6-Trichlorophenol	10 U	R	11 U	11 U	12 U

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Well I.D.:	Well RW-2B (continued)	Well RW-6		Well RW-7	Well RW-8
Investigation:	Phase II (continued)	Phase II		Phase II	Phase II
Sample I.D.:	ALT-GW-RW2B-0997	GW-RW6-1296	ALT-GW-RW6-0997	GW-RW7-1296	GW-RW8-1296
Laboratory Sample I.D.:	9709-3405	9612-1499	9709-3403	9612-1495	9612-1518
Laboratory Project No.:	97-4145	97-5944	97-4145	97-5944	97-5944
Sample Date:	09/24/97	12/12/96	09/24/97	12/12/96	12/12/96

SVOC TICs (µg/l)

Unknown	1	Unknown	9 NJ	Unknown	3	Unknown	R	Unknown Hydrocarbon	17 NJ
Unknown	3	Unknown	7 NJ	Unknown	10	Unknown	R	Unknown	17 NJ
Unknown	8	Unknown	22 NJ	Unknown	3	Unknown	R	Unknown	18 NJ
Unknown	4	Unknown	20 NJ	Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	17 NJ
Unknown	1	Unknown	5 NJ	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R	Unknown Hydrocarbon	R
Unknown	1	Unknown	87 NJ	Unknown Hydrocarbon	1	Unknown Hydrocarbon	R	Unknown	R
Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	R
Unknown Hydrocarbon	2	Unknown	R	Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	R
Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	R
Unknown Hydrocarbon	1	Unknown	R	Unknown Hydrocarbon	1	Unknown	R	Unknown	R
Unknown	1	Unknown	R	Unknown	1	Unknown	9 NJ	Unknown Hydrocarbon	R
Unknown	1	Unknown	11 NJ	Unknown Hydrocarbon	1	Unknown Hydrocarbon	9 NJ	Unknown Hydrocarbon	R
Unknown	1	Unknown	12 NJ	Unknown	1	Unknown	31 NJ	Unknown	R
Unknown	2	Unknown	R	Unknown	11	Unknown	24 NJ	Unknown	R
Unknown	2	Unknown	R	Unknown		Unknown	16 NJ	Unknown Hydrocarbon	R
Unknown	1	Unknown	R	Unknown		Unknown	10 NJ	Unknown Hydrocarbon	R
Unknown	1	Unknown	11 NJ	Unknown		Unknown	7 NJ	Unknown Hydrocarbon	R
Unknown	12	Unknown	5 NJ	Unknown		Unknown	26 NJ	Unknown Hydrocarbon	R

Table 2 (continued)

Summary of Groundwater Sample Results  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

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a/ D = duplicate; "-" indicates analysis not performed or not applicable.

$\mu\text{g/l}$  = micrograms per liter;  $\text{mg/l}$  = milligrams per liter;  $\text{NH}_3\text{-N}$  = ammonia as nitrogen;  $\text{NO}_3\text{-N}$  = nitrate as nitrogen;  $\text{CaCO}_3$  = calcium carbonate;  
 $\mu\text{mhos/cm}$  = microhoms per centimeter;  $^\circ\text{C}$  = degrees Celsius; NTU = nephelometric unit.

b/ Data Qualifiers:

U = constituent not detected at the noted detection limit.

UJ = constituent not detected at the estimated detection limit noted.

J = constituent detected at an estimated concentration.

R = data rejected.

B = constituent also detected in an associated blank.

UB = constituent not detected at the noted detection limit; constituent also detected in an associated blank.

c/ Where available, laboratory results for pH and specific conductance have been used in lieu of field results.

Table 3

**Well and Piezometer Usage**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

<u>Well</u>	<u>Usage</u>				
	<u>Water Level Monitoring</u>	<u>Monitoring Plan</u>			<u>Abandonment</u>
		<u>Site-Wide</u>	<u>Fuel Oil ICM</u>	<u>Groundwater ICM</u>	
<b>RFI Monitoring Wells</b>					
MW-1	X	X	-	-	-
MW-1B	X	X	-	-	-
MW-2	X	X	-	-	-
MW-2B	X	X	-	-	-
MW-3	X	X	-	-	-
MW-3B	X	X	-	-	-
MW-4	X	X	X	X	-
MW-4B (a)	-	-	-	-	-
MW-5	X	X	X	-	-
MW-5B	X	X	X	-	-
MW-6	X	X	X	X	-
MW-6B	X	X	X	X	-
MW-7B	X	X	-	X	-
MW-8B	X	X	-	X	-
MW-9B	X	-	-	-	-
MW-10B	-	-	-	-	X
MW-11	X	X	-	-	-
MW-12	X	-	X	-	-
MW-13	-	-	-	-	X
MW-14	X	X	-	-	-
MW-15	X	X	X	-	-
MW-16	X	X	X	-	-
MW-17	X	X	X	-	-
MW-18	X	X	X	-	-
MW-19	X	X	X	X	-
MW-19B	X	X	X	X	-
MW-20	X	X	X	-	-
MW-21	X	X	X	-	-
MW-22	X	X	X	-	-
<b>Pre-RFI Monitoring Wells</b>					
AP-1	-	-	-	-	X
AP-2	-	-	-	-	X
MW-A1	X	-	-	-	-
MW-A2	-	-	-	-	X
MW-B	X	-	-	-	-
MW-C	-	-	-	-	X
MW-D1	X	-	-	-	-
MW-D2	X	X	X	X	-

Table 3 (continued)

**Well and Piezometer Usage**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

<u>Well</u>	<u>Usage</u>					<u>Abandonment</u>
	<u>Water Level Monitoring</u>	<u>Monitoring Plan</u>			<u>Groundwater ICM</u>	
		<u>Site-Wide</u>	<u>Fuel Oil ICM</u>			
<b>Pre-RFI Monitoring Wells (continued)</b>						
TF-1	X	X	X	-	-	
TF-2	-	-	-	-	X	
PH-1	-	-	-	-	X	
H-4S (b)	X	X	-	-	X	
H-4D (b)	X	X	-	-	X	
<b>Recovery Wells</b>						
RW-1	-	-	-	-	X	
RW-1B	X	-	-	X	-	
RW-2	-	-	-	-	X	
RW-2B (b)	X	X	X	X	-	
RW-3 (c)	-	-	-	-	-	
RW-4	-	-	-	-	X	
RW-5	X	-	-	X	-	
RW-6 (a)	-	-	-	-	-	
RW-7 (d)	X	-	-	X	-	
RW-8	X	-	-	-	-	
RW-9	X	-	-	-	-	
<b>Observation Wells</b>						
OW-1	X	-	-	-	-	
OW-2	X	-	-	-	-	
OW-3	X	-	-	-	-	
OW-4	X	-	-	-	-	
OW-5	-	-	-	-	X	
OW-6	-	-	-	-	X	
OW-7	-	-	-	-	X	
OW-8	-	-	-	-	X	
OW-10	-	-	-	-	X	
OW-11	X	-	-	-	-	
OW-12	-	-	-	-	X	
OW-13	X	-	-	X	-	
OW-14	X	X	-	X	-	
OW-15	X	-	-	-	-	
OW-16	X	X	X	X	-	
OW-17	X	-	-	-	-	
OW-18	X	-	-	-	-	



Table 3 (continued)

**Well and Piezometer Usage  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York**

<u>Well</u>	<u>Usage</u>				
	<u>Water Level Monitoring</u>	<u>Monitoring Plan</u>			<u>Abandonment</u>
		<u>Site-Wide</u>	<u>Fuel Oil ICM</u>	<u>Groundwater ICM</u>	
<b>Observation Wells (continued)</b>					
OW-19	X	-	-	-	-
OW-20	X	-	-	-	-
OW-21	-	-	-	-	X
OW-22	X	X	X	-	-
<b>Piezometers</b>					
PZ-1	-	-	-	-	X
PZ-2	-	-	-	-	X
PZ-3	-	-	-	-	X
PZ-4	X	-	-	-	-
PZ-5	-	-	-	-	X
PZ-6B	-	-	-	-	X
PZ-7	-	-	-	-	X
PZ-8	X	-	-	-	-
PZ-9	X	-	-	-	-
PZ-10	X	-	-	-	-
PZ-11	X	-	-	-	-
PZ-12	X	-	-	-	-
PZ-13	X	-	-	-	-
PZ-14	-	-	-	-	X
PZ-15	X	-	-	-	-
PZ-16	X	X	X	-	-

- a/ MW-4B and RW-6 are currently used for groundwater recovery. Neither well is accessible for the collection of individual samples or measurement of water-levels. Water-level monitoring will be performed using adjacent installations RW-2B and PZ-11.
- b/ Groundwater monitoring (water levels and water quality) will be performed at H-4S and H-4D until closure of the South Lagoon is completed. Both wells will subsequently be abandoned.
- c/ RW-3 is only used for the recovery of oil. Consequently, neither water-level monitoring nor water quality monitoring will be performed at this location.
- d/ RW-7 is currently equipped with two submersible pumps for the recovery of groundwater. One pump is installed within the screened interval, but is stuck and not operational. A second pump was installed (above the initial pump) to allow for continued recovery. However, the elevation of the second pump (relative to the water table) does not allow for groundwater recovery. Both pumps will be removed and the well will be used to monitor groundwater in this area (water levels and water quality).





Table 5

**Summary of Well and Piezometer Information (a)**  
**Main Plant Area Groundwater Monitoring Program**  
**AL Tech Specialty Steel Corporation Facility**  
**Watervliet, New York**

Well	New York State Plane Coordinates		Screened Interval	Elevations (ft-msl)		Screened Interval		Total Depth from TOC	Depth of Outer Surface Casing (ft-bgs)	Well Construction Material (b)	Screen Length/Slot Size (feet/inches)	Installation Date
	Northing	Easting		Top-of- Casing	Ground Surface	ft-bgs (b)	ft-msl					
<b>Monitoring Wells</b>												
MW-1	987342.74	663838.10	Overburden	67.18	64.97	7 - 17	58 - 48	18	-	2", Sch. 40 PVC	10/0.010	10/26/94
MW-1B	987339.14	663850.05	Bedrock	66.90	64.56	28 - 38	37 - 27	38	0-22	2", Sch. 40 PVC	10/0.010	10/27/94
MW-2	987431.61	664403.92	Overburden	53.69	51.23	7 - 7	44 - 44	17	-	2", Sch. 40 PVC	10/0.010	11/08/94
MW-2B	987420.77	664399.99	Bedrock	53.72	51.42	36 - 46	15 - 5	46	0-30	2", Sch. 40 PVC	10/0.010	11/11/94
MW-3	987990.65	664527.23	Overburden	54.64	52.35	10 - 20	42 - 32	20	-	2", Sch. 40 PVC	10/0.010	10/31/94
MW-3B	988002.93	664532.32	Bedrock	54.31	52.23	40 - 50	12 - 2	50	0-33	2", Sch. 40 PVC	10/0.010	10/30/94
MW-4	988452.56	664642.14	Overburden	53.26	50.95	8 - 18	43 - 33	18	-	2", Sch. 40 PVC	10/0.010	10/30/94
MW-4B	988442.77	664639.82	Bedrock	53.55	50.83	39 - 49	12 - 2	49	0-33	2", Sch. 40 PVC	10/0.010	10/31/94
MW-5	989194.43	664867.51	Overburden	51.35	48.09	7.5 - 17.5	40.6 - 30.6	17.5	-	2", Sch. 40 PVC	10/0.010	10/29/94
MW-5B	989183.40	664861.55	Bedrock	51.25	49.24	49 - 59	0 - -10	59	0-42.5	2", Sch. 40 PVC	10/0.010	11/02/94
MW-6	988898.84	664764.52	Overburden	51.21	49.13	6.5 - 16.5	42.6 - 32.6	16.5	-	2", Sch. 40 PVC	10/0.020	10/31/94
MW-6B	988907.16	664766.71	Bedrock	51.80	49.16	53.5 - 63.5	-4.3 - -14.3	63.5	0-47.5	2", Sch. 40 PVC	10/0.010	11/08/94
MW-7B	988434.62	663409.98	Bedrock	115.08	112.93	11 - 21	102 - 92	21	-	2", Sch. 40 PVC	10/0.010	11/12/94
MW-8B	989511.80	663444.86	Bedrock	120.31	117.73	32.5 - 42.5	85.2 - 75.2	42.5	-	2", Sch. 40 PVC	10/0.010	11/16/94
MW-9B	989511.80	663667.57	Bedrock	87.32	84.65	20 - 30	65 - 75	33	0-8.5	2", Sch. 40 PVC	10/0.010	11/10/94
MW-11	989098.81	664047.86	Overburden	53.45	52.10	9 - 14	43 - 38	14	-	2", Sch. 40 PVC	5/0.010	11/10/94
MW-12	989476.43	664766.32	Overburden	50.96	49.32	7 - 17	42 - 32	18.6	-	2", Sch. 40 PVC	10/0.010	11/05/96
MW-14	987424.37	664195.25	Overburden	56.93	55.23	5 - 15	50 - 40	16.7	-	2", Sch. 40 PVC	10/0.010	11/04/96
MW-15	989782.70	664202.04	Overburden	55.01	53.27	5 - 10	48 - 43	11.7	-	2", Sch. 40 PVC	5/0.010	11/05/96
MW-16	989686.07	664612.02	Overburden	50.16	50.77	5 - 15	46 - 36	15	-	2", Sch. 40 PVC	10/0.010	11/04/96
MW-17	989573.47	664716.45	Overburden	49.45	49.82	4.5 - 14.5	45 - 35	14.5	-	2", Sch. 40 PVC	10/0.010	11/05/96
MW-18	988900.78	664870.73	Overburden	47.17	45.32	6 - 16	39 - 29	17.8	-	4", Sch. 40 PVC	10/0.010	06/12/97
MW-19	988424.44	664713.10	Overburden	48.03	46.27	13 - 23	33 - 23	24.8	-	4", Sch. 40 PVC	10/0.010	06/11/97
MW-19B	988417.65	664711.64	Bedrock	48.16	46.34	33 - 43	13 - 3	51.8	0 - 26	4", Sch. 40 PVC	10/0.010	06/13/97
MW-20 (c)	-	-	Overburden	-	-	-	-	-	-	-	-	-
MW-21 (c)	-	-	Overburden	-	-	-	-	-	-	-	-	-
MW-22 (c)	-	-	Overburden	-	-	-	-	-	-	-	-	-
MW-A1	989429.08	664911.57	Overburden	48.96	49.10	-	-	-	-	-	-	-
MW-B	988859.18	664749.21	Overburden	48.40	48.50	5 - 20	44 - 29	20	-	2", Sch. 40 PVC	15/0.020	04/29/88
MW-D1	988660.04	664644.52	Overburden	49.98	50.00	-	50 - 50	-	-	-	-	-
MW-D2	988661.58	664642.70	Overburden	49.70	49.90	-	50 - 50	-	-	-	-	-
H-4S	987447.77	664352.38	Overburden	55.27	53.05	5 - 15	48 - 38	15	-	2", Sch. 40 PVC	10/0.010	12/04/88
H-4D	987454.10	664355.97	Overburden	55.36	52.98	19 - 24	34 - 29	24	-	2", Sch. 40 PVC	5/0.010	12/03/88
TF-1	989528.74	663913.79	Overburden	62.22	-	5 - 15	-	-	-	2", Sch. 40 PVC	10/0.010	08/23/89
<b>Recovery Wells</b>												
RW-1B	988484.47	664442.54	Bedrock	54.86	52.12	45 - 65	7 - -13	68	0-37	6", Sch. 40 PVC	20/0.090	06/01/95
RW-2B	988447.42	664632.36	Bedrock	54.02	51.23	40 - 60	11 - -9	63	0-33	6", Sch. 40 PVC	20/0.090	05/31/95
RW-3	-	-	Overburden	52.19	52.19	4 - 20	48 - 32	20	-	4", CMP	16/Perforated	-
RW-5	988481.93	664446.30	Overburden	55.15	51.77	10 - 25	42 - 27	25	-	4", Sch. 40 PVC	15/0.020	11/19/94
RW-6	988456.49	664597.04	Overburden	54.12	51.18	10 - 25	41 - 26	25	-	4", Sch. 40 PVC	15/0.020	11/29/94
RW-7	988337.97	664572.69	Overburden	56.31	53.43	10 - 25	43 - 28	25	-	4", Sch. 40 PVC	15/0.020	11/29/94
RW-8 (d)	988515.42	664407.69	Overburden	54.14	51.52	10 - 25	42 - 27	27	-	1.5", Sch. 40 PVC	15/0.020	05/24/95
RW-9 (d)	988482.07	664539.38	Overburden	54.30	51.99	10 - 25	42 - 27	28	-	1.5", Sch. 40 PVC	15/0.020	05/24/95

Table 5 (continued)

Summary of Well and Piezometer Information  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York

Page 2 of 2

Well	New York State Plane Coordinates		Screened Interval	Elevations (ft-msl)		Screened Interval		Total Depth from TOC	Depth of Outer Surface Casing (ft-bgs)	Well Construction Material	Screen Length/Slot Size (feet/inches)	Installation Date
	Northing	Easting		Top-of- Casing	Ground Surface	ft-bgs	ft-msl					
<b>Observation Wells</b>												
OW-1	989364.29	664404.73	Overburden	54.17	51.10	-	-	-	-	-	-	-
OW-2	989280.20	664504.39	Overburden	55.08	51.50	-	-	-	-	-	-	-
OW-3	989130.00	664844.45	Overburden	52.05	48.70	-	-	-	-	-	-	-
OW-4	988993.18	664546.01	Overburden	51.91	49.00	-	-	-	-	-	-	-
OW-9	-	-	Overburden	62.26	59.90	-	-	-	-	-	-	-
OW-11	988526.19	664316.41	Overburden	55.46	52.66	10 - 20	43 - 33	28	-	2", Sch. 40 PVC	10/0.020	05/20/95
OW-13 (e)	988559.24	664645.56	Overburden	52.69	50.12	10 - 25	40 - 25	28	-	1.5", Sch. 40 PVC	15/0.020	05/20/95
OW-14 (d)	988630.37	664579.06	Overburden	52.91	50.50	7 - 25	44 - 26	27	-	1.5", Sch. 40 PVC	15/0.020	06/02/95
OW-15 (e)	988619.53	664422.49	Overburden	53.37	50.83	10 - 25	41 - 26	28	-	1.5", Sch. 40 PVC	15/0.020	05/20/95
OW-16	988751.79	664713.03	Overburden	47.17	47.40	7 - 17	40 - 30	17	-	2", Sch. 40 PVC	10/0.020	06/01/95
OW-17	988759.61	664523.93	Overburden	54.21	51.46	10 - 20	41 - 31	23	-	2", Sch. 40 PVC	10/0.020	05/30/95
OW-18	988935.75	664488.75	Overburden	50.86	51.07	7 - 17	44 - 34	17	-	2", Sch. 40 PVC	10/0.020	05/30/95
OW-19	989099.24	664635.81	Overburden	48.42	48.82	7 - 17	42 - 32	17	-	2", Sch. 40 PVC	10/0.020	05/31/95
OW-20	987707.10	664064.63	Overburden	58.68	56.51	8 - 18	49 - 39	20	-	2", Sch. 40 PVC	10/0.020	11/06/96
OW-22 (c)	-	-	Overburden	-	-	-	-	-	-	-	-	-
<b>Piezometers</b>												
PZ-4	988467.02	663812.13	Overburden	64.38	61.47	5 - 10	56 - 51	10	-	2", Sch. 40 PVC	5/0.020	11/07/94
PZ-8	988478.73	664556.29	Overburden	53.81	51.57	10 - 25	42 - 27	27	-	2", Sch. 40 PVC	15/0.020	06/01/95
PZ-9	988550.00	664540.18	Overburden	50.14	50.29	10 - 20	40 - 30	20	-	2", Sch. 40 PVC	10/0.020	06/01/95
PZ-10	988403.42	664592.14	Overburden	54.43	51.75	10 - 25	42 - 27	28	-	2", Sch. 40 PVC	15/0.020	05/31/95
PZ-11	988463.98	664599.24	Overburden	53.67	51.12	10 - 25	41 - 26	28	-	2", Sch. 40 PVC	15/0.020	05/22/95
PZ-12	988529.93	664612.87	Overburden	53.40	50.74	10 - 25	41 - 26	28	-	2", Sch. 40 PVC	15/0.020	05/30/95
PZ-13 (e)	988385.98	664621.40	Overburden	53.42	50.74	10 - 25	41 - 26	29	-	1.5", Sch. 40 PVC	15/0.020	05/20/95
PZ-15	988114.16	663918.94	Overburden	62.89	60.93	7 - 17	54 - 44	19	-	2", Sch. 40 PVC	10/0.020	11/07/96
PZ-16	989350.40	664101.56	Overburden	53.21	53.59	4 - 14	50 - 40	14	-	2", Sch. 40 PVC	10/0.020	11/08/96

a/ All elevations are in feet above mean sea level (ft-msl).

"ft-bgs" indicates feet below ground surface.

"-" indicates not applicable/not available.

b/ "2," Sch. 40 PVC" indicates two-inch diameter, Schedule 40 polyvinyl chloride.

c/ Proposed for installation (ESC 1999b).

d/ Well pair which includes 1.5- and 6-inch dia., Sch. 40 PVC installations, screened at the same interval.

e/ Well pair which includes 1.5- and 4-inch dia., Sch. 40 PVC installations, screened at the same interval.

Table 6

**Laboratory Analytical Requirements  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York**

<u>Monitoring Plan</u>	<u>Field Measurements</u>	<u>Laboratory Requirements</u>				<u>Maximum Holding Time</u>
		<u>Analytical Parameters</u>	<u>Analytical Method</u>	<u>Sampling Container Size and Type</u>	<u>Preservatives</u>	
<b>Site-Wide Monitoring Plan</b>	pH	SVOCs (a)	SW-846 8270	2, 1-liter amber glass	4°C	7 days to extract/ 40 days to analysis
	specific conductivity	(extractable)				
	dissolved oxygen	PCBs	SW-846 8082	2, 1-liter amber glass	4°C	7 days to extract/ 40 days to analysis
	turbidity	(extractable)				
	temperature	aluminum	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		antimony (a)	SW-846 7041	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		arsenic (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		barium	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		cadmium (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		chromium	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		lead (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		molybdenum	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		nickel	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		ammonia (a)	EPA 350.1	250 ml plastic	4°C	28 days
pH	EPA 150.1	100 ml plastic	4°C	24 hours		
<b>Fuel Oil ICM Monitoring Plan</b>	pH	TPH (a)	SW-846 8015	2, 1-liter amber glass	4°C	7 days to extract/ 40 days to analysis
	specific conductivity	(extractable)	(modified)			
	dissolved oxygen	SVOCs (a)	SW-846 8270	2, 1-liter amber glass	4°C	7 days to extract/ 40 days to analysis
	turbidity					
	temperature					

Table 6 (continued)

**Laboratory Analytical Requirements  
Main Plant Area Groundwater Monitoring Program  
AL Tech Specialty Steel Corporation Facility  
Watervliet, New York**

<u>Monitoring Plan</u>	<u>Field Measurements</u>	<u>Laboratory Requirements</u>				<u>Maximum Holding Time</u>
		<u>Analytical Parameters</u>	<u>Analytical Method</u>	<u>Sampling Container Size and Type</u>	<u>Preservatives</u>	
Groundwater ICM Monitoring	pH	aluminum	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
	specific conductivity	antimony (a)	SW-846 7041	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
	dissolved oxygen	arsenic (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
	turbidity	barium (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
	temperature	beryllium	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		cadmium	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		chromium	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		copper (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		lead (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		magnesium (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		manganese (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		mercury (a)	SW-846 7471	250 ml glass	HNO <sub>3</sub> to pH<2; 4°C	28 days
		molybdenum (a)	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		nickel	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		zinc	SW-846 6010	1-liter plastic	HNO <sub>3</sub> to pH<2; 4°C	180 days
		ammonia	EPA 350.1	250 ml plastic	4°C	28 days
		pH	EPA 150.1	100-ml plastic	4°C	24 hours
		chloride	EPA 325.2	100-ml plastic	4°C	28 days
		fluoride	EPA 340.1	100-ml plastic	4°C	28 days
		nitrate	EPA 353.2	100-ml plastic	4°C	28 days
	sulfate	EPA 375.3	100-ml plastic	4°C	28 days	

a\ Analysis for this parameter will be performed for samples from select well, and not necessarily for every sampling event. Refer to text for specific wells and sampling frequency.

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Appendix A - Well and Surface Water Record Sheets

















**WELL RECORD**

**YEAR -, ROUND -  
MAIN PLANT AREA  
AL TECH SPECIALTY STEEL CORPORATION  
WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>          MW-5          </u>		
<b>Upgradient</b>	<u>                          </u>	<b>Downgradient</b>	<u>          X          </u>
<b>Bedrock</b>	<u>                          </u>	<b>Overburden</b>	<u>          X          </u>
<b>Purge Date</b>	<u>          00/00/00          </u>	<b>Sample Date</b>	<u>          00/00/00          </u>

**Depth of Well:**

<b>Installed (from TOC)</b>	<u>          17.5          </u>
<b>Measured (from TOC)</b>	<u>                          </u>

<b>Top-of-Casing (TOC) Elevation</b>	<u>          51.35          </u>
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<b>Ground Surface Elevation</b>	<u>          48.09          </u>
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<b>Depth to Water (from TOC)</b>	<u>                          ft          </u>	<b>Date/Time</b>	<u>          00/00/00-00:00          </u>
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<b>Groundwater Elevation</b>	<u>                          </u>
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<b>Purge Volume</b>	<u>                          </u>
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<b>Purge Time (start/stop)</b>	<u>                          </u>
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<b>Sample Collection Time</b>	<u>          00:00          </u>
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**Field Parameters**

<b>pH</b>	<u>                          </u>	<b>Temperature</b>	<u>                          </u>
<b>DO</b>	<u>                          </u>	<b>Turbidity</b>	<u>                          </u>
<b>SC</b>	<u>                          </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_







**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

Well I.D.	<u>MW-6B</u>		
Upgradient	<u>          </u>	Downgradient	<u>  X  </u>
Bedrock	<u>  X  </u>	Overburden	<u>          </u>
Purge Date	<u>00/00/00</u>	Sample Date	<u>00/00/00</u>

**Depth of Well:**

Installed (from TOC)	<u>63.5</u>
Measured (from TOC)	<u>          </u>

Top-of-Casing (TOC) Elevation	<u>51.8</u>
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Ground Surface Elevation	<u>49.16</u>
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Depth to Water (from TOC)	<u>ft</u>	Date/Time	<u>00/00/00-00:00</u>
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Groundwater Elevation	<u>          </u>
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Purge Volume	<u>          </u>
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Purge Time (start/stop)	<u>          </u>
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Sample Collection Time	<u>00:00</u>
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**Field Parameters**

	pH	<u>          </u>	Temperature	<u>          </u>
	DO	<u>          </u>	Turbidity	<u>          </u>
	SC	<u>          </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_



**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>    MW-8B    </u>		
<b>Upgradient</b>	<u>    X    </u>	<b>Downgradient</b>	<u>          </u>
<b>Bedrock</b>	<u>    X    </u>	<b>Overburden</b>	<u>          </u>
<b>Purge Date</b>	<u>    00/00/00    </u>	<b>Sample Date</b>	<u>    00/00/00    </u>

**Depth of Well:**

Installed (from TOC)	<u>    42.5    </u>
Measured (from TOC)	<u>          </u>

Top-of-Casing (TOC) Elevation	<u>    120.31    </u>
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Ground Surface Elevation	<u>    117.73    </u>
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Depth to Water (from TOC)	<u>    ft    </u>	Date/Time	<u>    00/00/00-00:00    </u>
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Groundwater Elevation	<u>          </u>
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Purge Volume	<u>          </u>
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Purge Time (start/stop)	<u>          </u>
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Sample Collection Time	<u>    00:00    </u>
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**Field Parameters**

	pH	<u>          </u>	Temperature	<u>          </u>
	DO	<u>          </u>	Turbidity	<u>          </u>
	SC	<u>          </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_

**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>RW-1B</u>		
<b>Upgradient</b>	<u>          </u>	<b>Downgradient</b>	<u>  X  </u>
<b>Bedrock</b>	<u>  X  </u>	<b>Overburden</b>	<u>          </u>
<b>Purge Date</b>	<u>00/00/00</u>	<b>Sample Date</b>	<u>00/00/00</u>

**Depth of Well:**

Installed (from TOC)	<u>68</u>
Measured (from TOC)	<u>          </u>

Top-of-Casing (TOC) Elevation	<u>54.86</u>
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Ground Surface Elevation	<u>52.12</u>
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Depth to Water (from TOC)	<u>ft</u>	Date/Time	<u>00/00/00-00:00</u>
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Groundwater Elevation	<u>          </u>
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Purge Volume	<u>          </u>
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Purge Time (start/stop)	<u>          </u>
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Sample Collection Time	<u>00:00</u>
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**Field Parameters**

pH	<u>          </u>	Temperature	<u>          </u>
DO	<u>          </u>	Turbidity	<u>          </u>
SC	<u>          </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_









**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>MW-12</u>		
<b>Upgradient</b>	<u>                    </u>	<b>Downgradient</b>	<u>X</u>
<b>Bedrock</b>	<u>                    </u>	<b>Overburden</b>	<u>X</u>
<b>Purge Date</b>	<u>00/00/00</u>	<b>Sample Date</b>	<u>00/00/00</u>

**Depth of Well:**

Installed (from TOC)	<u>18.6</u>
Measured (from TOC)	<u>                    </u>

Top-of-Casing (TOC) Elevation	<u>50.96</u>
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Ground Surface Elevation	<u>49.32</u>
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Depth to Water (from TOC)	<u>ft</u>	Date/Time	<u>00/00/00-00:00</u>
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Groundwater Elevation	<u>                    </u>
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Purge Volume	<u>                    </u>
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Purge Time (start/stop)	<u>                    </u>
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Sample Collection Time	<u>00:00</u>
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**Field Parameters**

pH	<u>                    </u>	Temperature	<u>                    </u>
DO	<u>                    </u>	Turbidity	<u>                    </u>
SC	<u>                    </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_









**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>    MW-18    </u>		
<b>Upgradient</b>	<u>                    </u>	<b>Downgradient</b>	<u>    X    </u>
<b>Bedrock</b>	<u>                    </u>	<b>Overburden</b>	<u>    X    </u>
<b>Purge Date</b>	<u>    00/00/00    </u>	<b>Sample Date</b>	<u>    00/00/00    </u>

**Depth of Well:**

Installed (from TOC)	<u>    17.8    </u>
Measured (from TOC)	<u>                    </u>

Top-of-Casing (TOC) Elevation	<u>    47.17    </u>
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Ground Surface Elevation	<u>    45.32    </u>
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Depth to Water (from TOC)	<u>    ft    </u>	Date/Time	<u>    00/00/00-00:00    </u>
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Groundwater Elevation	<u>                    </u>
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Purge Volume	<u>                    </u>
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Purge Time (start/stop)	<u>                    </u>
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Sample Collection Time	<u>    00:00    </u>
------------------------	----------------------

<b>Field Parameters</b>			
pH	<u>                    </u>	Temperature	<u>                    </u>
DO	<u>                    </u>	Turbidity	<u>                    </u>
SC	<u>                    </u>		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_









**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>MW-21</u>		
<b>Upgradient</b>	_____	<b>Downgradient</b>	<u>X</u>
<b>Bedrock</b>	_____	<b>Overburden</b>	<u>X</u>
<b>Purge Date</b>	<u>00/00/00</u>	<b>Sample Date</b>	<u>00/00/00</u>

**Depth of Well:**

Installed (from TOC)	_____
Measured (from TOC)	_____

**Top-of-Casing (TOC) Elevation**

\_\_\_\_\_

**Ground Surface Elevation**

\_\_\_\_\_

**Depth to Water (from TOC)**

\_\_\_\_\_ **ft**

**Date/Time**

00/00/00-00:00

**Groundwater Elevation**

\_\_\_\_\_

**Purge Volume**

\_\_\_\_\_

**Purge Time (start/stop)**

\_\_\_\_\_

**Sample Collection Time**

00:00

**Field Parameters**

<b>pH</b>	_____
<b>DO</b>	_____
<b>SC</b>	_____

**Temperature**  
**Turbidity**

\_\_\_\_\_  
\_\_\_\_\_

**Sample Personnel**

\_\_\_\_\_

**Weather Conditions**

\_\_\_\_\_

**Physical Condition of Well**

\_\_\_\_\_

**Other Field Observations**

\_\_\_\_\_





**WELL RECORD**  
**YEAR -, ROUND -**  
**MAIN PLANT AREA**  
**AL TECH SPECIALTY STEEL CORPORATION**  
**WATERVLIET, NEW YORK**

<b>Well I.D.</b>	<u>H-4D</u>		
<b>Upgradient</b>	_____	<b>Downgradient</b>	<u>X</u>
<b>Bedrock</b>	_____	<b>Overburden</b>	<u>X</u>
<b>Purge Date</b>	<u>00/00/00</u>	<b>Sample Date</b>	<u>00/00/00</u>

**Depth of Well:**

Installed (from TOC)	<u>24</u>
Measured (from TOC)	_____

**Top-of-Casing (TOC) Elevation** 55.36

**Ground Surface Elevation** 52.98

<b>Depth to Water (from TOC)</b>	<u>ft</u>	<b>Date/Time</b>	<u>00/00/00-00:00</u>
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**Groundwater Elevation** \_\_\_\_\_

**Purge Volume** \_\_\_\_\_

**Purge Time (start/stop)** \_\_\_\_\_

**Sample Collection Time** 00:00

**Field Parameters**

<b>pH</b>	_____	<b>Temperature</b>	_____
<b>DO</b>	_____	<b>Turbidity</b>	_____
<b>SC</b>	_____		

**Sample Personnel** \_\_\_\_\_

**Weather Conditions** \_\_\_\_\_

**Physical Condition of Well** \_\_\_\_\_

**Other Field Observations** \_\_\_\_\_







**SURFACE WATER RECORD**

**MAIN PLANT AREA  
AL TECH SPECIALITY STEEL CORPORATION  
WATERVLIET, NEW YORK**

Surface Water Location I.D. PSW-1

Sample Date \_\_\_\_\_

Upgradient X

Downgradient \_\_\_\_\_

Approximate Depth of Water: \_\_\_\_\_

Sample Width of Stream: \_\_\_\_\_

Sample Collection Time \_\_\_\_\_

Field Parameters:

pH \_\_\_\_\_

SC \_\_\_\_\_

Temp \_\_\_\_\_

Turbidity \_\_\_\_\_

Sample Personnel: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Physical Description of Location: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other Field Observations: \_\_\_\_\_

\_\_\_\_\_

**SURFACE WATER RECORD**

**MAIN PLANT AREA  
AL TECH SPECIALITY STEEL CORPORATION  
WATERVLIET, NEW YORK**

Surface Water Location I.D. PSW-2

Sample Date \_\_\_\_\_

Upgradient \_\_\_\_\_

Downgradient X

Approximate Depth of Water: \_\_\_\_\_

Sample Width of Stream: \_\_\_\_\_

Sample Collection Time \_\_\_\_\_

Field Parameters:

pH \_\_\_\_\_ SC \_\_\_\_\_

Temp \_\_\_\_\_ Turbidity \_\_\_\_\_

Sample Personnel: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Physical Description of Location: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Other Field Observations: \_\_\_\_\_

\_\_\_\_\_