

**PHASE II
RCRA FACILITY INVESTIGATION REPORT**

prepared for

**BORDEN, INC.
FORMER RESIN FACILITY
BAINBRIDGE, NEW YORK
NCD 000 691 865**

AUGUST 1996



Environmental and
Applied Earth Science
Consultants

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1.0 INTRODUCTION

From the 1940s until 1981, Borden, Inc. owned and operated a synthetic resin manufacturing facility in Bainbridge, New York. From 1981 to the present, the facility has been inoperative, and has undergone various environmental investigation and restoration activities. All buildings at the facility have been razed except for a warehouse and an office building.

In July 1992, Borden, Inc. submitted a comprehensive report on the results of environmental sampling and remedial actions in a report entitled "Draft RCRA Facility Investigation (RFI) Report." The locations of Solid Waste Management Units (SWMUs) addressed in the report are illustrated on Figure 1. The major environmental contaminants found at the site are volatile organic compounds (VOCs), formaldehyde, phenol, and polychlorinated biphenyls (PCBs).

Due to data gaps identified in the initial phase of the RFI, it was necessary to expand the sampling program. A Phase II RFI Workplan was submitted in February 1996, and approved in NYSDEC's letter dated April 8, 1996.

2.0 PHASE II INVESTIGATION RESULTS

All Phase II investigations were conducted in accordance with the approved workplan during April and May 1996. Laboratory reports of analyses are provided under separate cover.

2.1 Surface Water Sediment Sampling

2.1.1 Western Creek - As illustrated on Figure 1, an intermittent creek flows to the west of the site. Since no organic constituents were detected in surface water samples collected during Phase I of the RFI, no additional surface water samples were collected from the western creek.

Only formaldehyde was detected in creek sediments during Phase I of the RFI, at location SW-7. In order to delineate the extent of formaldehyde contamination, sediment samples were collected from creek locations illustrated on Figure 2. Formaldehyde analysis results are illustrated in Table 1 and on Figure 2. Based on these data, the following observations are relevant:

- 1) There has been an apparent decrease in formaldehyde concentration at SW-7, from 4.2 ppm in 1991 to 0.93 ppm in 1996. This may be indicative of natural attenuation/degradation.
- 2) The highest formaldehyde concentration is found at SW-11 (2.5 ppm). This location is within a horse track, and since formaldehyde is a natural constituent of manure, it may be attributable to a local source, and not migration from Borden.

2.1.2 Susquehanna River - Since PCBs were not detected in Phase I surface water samples, no additional water sampling was conducted within the Susquehanna River.

During the Phase I RFI, PCBs were detected in one of five Susquehanna River sediment samples (490 ppb at RS-4, see Figure 3). To assess the extent of contamination, 17 additional samples were collected from the vicinity of the contaminated sample (i.e., adjacent to and downgradient of the River Lagoon, see Figure 3). At each sampling location, samples were collected from 0-1 feet and 1-2 feet below the ground surface or river bed for PCB analysis. The two depth intervals were to account for possible sediment deposition since PCB contamination potentially occurred. Additionally, bottom land samples were collected from topographical depressions most likely to receive contaminant deposition.

Where a river sediment sample exhibited a detectable level of PCBs, it was further analyzed for total organic carbon (TOC). This parameter is useful in developing sediment criteria.

Bottom land (BL-#) and river sediment (RS-#) sample results are provided in Tables 2 and 3. Within the bottom land area, only two locations exhibited a detectable concentration of PCBs. In both cases, the levels were well below the most restrictive TSCA soil cleanup level of one ppm PCBs. Furthermore, trace PCB contamination detected is limited to the 0-1 foot depth interval. *Therefore, bottom land PCB contamination does not appear to be an environmental concern.*

PCBs were detected in one of five river sediment sampling locations, at the upgradient edge of the River Lagoon area. (Samples were collected approximately ten feet from the shore line.) The PCB concentration was 0.074 ppm, with a corresponding TOC concentration of 8,780 ppm.

2.2 Groundwater Sampling

Several areas where groundwater concentrations exceed NY groundwater standards were identified during the Phase I RFI groundwater investigation and subsequent quarterly monitoring events. Where monitoring wells downgradient of contaminated areas did not exist additional monitoring wells were installed during the Phase II investigation. (Well logs for new monitoring wells are provided in Appendix A.)

2.2.1 Phenol Recovery Area - Based upon RFI and subsequent quarterly monitoring data, groundwater at the Phenol Recovery Area was determined to be contaminated with formaldehyde, phenols, and VOCs in exceedance of NY groundwater standards. In order to determine the vertical and horizontal extent of contamination, newly installed and existing monitoring wells were sampled.

Figure 4 illustrates monitoring well locations and water table contours within the Phenol Recovery Area. Under natural water table conditions, shallow groundwater flows toward the east and discharges into Eastern (Beatty) Creek.

Table 4 summarizes the results of chemical analyses of samples collected from the monitoring wells. In general, review of Table 4 illustrates the following:

- 1) The primary groundwater contaminants are formaldehyde (3.9 ppm), phenolics (162 ppm), benzene (0.25 ppm) and toluene (5.7 ppm). *By far the highest concentrations are found at MW-29, between the former phenol recovery unit and former wastewater treatment basins.*
- 2) Groundwater standards are exceeded only to a nominal degree at downgradient wells MW-15 and MW-27, prior to discharge into Eastern Creek.
- 3) Contaminant concentrations are significantly less in deep wells (MW-15D and MW-29D) relative to adjacent shallow wells. This confirms a primary horizontal contaminant flowpath, as one would expect adjacent to a receiving stream (i.e., Eastern Creek).

An illustration of the extent of the contaminant plume exceeding groundwater standards is provided on Figure 5. It should be noted that as part of on-going Interim Remedial Measure (IRM), this plume is currently being remediated with a pump and treat/in-situ bioremediation system.

2.2.2 PCB Area - Based upon RFI and quarterly monitoring, MW-23, downgradient of the PCB Area, has historically been determined to be contaminated with PCBs (0.0001 ppm), carbon tetrachloride (0.337 ppm), chloroform (0.513 ppm), and 1,2-dichloroethane (0.024 ppm). To assess the horizontal and vertical extent of contamination, groundwater samples were collected from newly constructed and existing wells. Monitoring well locations and water table contours are illustrated on Figure 6. Analytical results are summarized in Table 5.

Based upon a review of the analytical data, the following observations are made:

- 1) There are trace exceedances of groundwater standards at MW-19 and MW-23 for phenolics and VOCs. However, the exceedances are minor and downgradient wells MW-32 and MW-34 do not have detectable levels of contamination. *Therefore, groundwater contamination in the PCB Area is not considered to be significant.*
- 2) The standards for arsenic and lead are exceeded in the unfiltered sample from MW-1. However, comparing filtered and unfiltered samples, the exceedances are attributed to digested sediments (i.e., sample turbidity), and are not believed to be indicative of contamination.
- 3) Deep monitoring well MW-23D is clean, confirming a primarily horizontal contaminant flow path in the water table aquifer.

2.2.3 Bone Yard - Contaminant concentrations encountered at Bone Yard monitoring wells have been insignificant in recent quarters, and no new wells were constructed for the Phase II investigation. Existing monitoring wells and water table contours are illustrated on Figure 7. Analytical data are provided in Table 6.

Review of Table 6 illustrates the following:

- 1) The only organic contaminants of concern are PCBs at WF-2A and WF-2B. However, the levels encountered are only marginally above the groundwater standards (e.g., 0.0006 vs. 0.0001), and are not detectable at downgradient well MW-21.
- 2) Standards for arsenic and lead are exceeded in unfiltered samples from MW-18 and MW-21. However, comparing filtered and unfiltered samples, the exceedances are attributable to digested sediments (i.e., sample turbidity), and are not believed to be indicative of contamination.

Based upon the above, groundwater contamination does not appear to be a significant environmental concern in the Bone Yard.

2.2.4 Land Application Area - Contaminant concentrations in Land Application Area wells have historically been insignificant, and no new wells were installed for the Phase II investigation. Existing monitoring wells and water table contours are illustrated on Figure 8. Analytical data are provided in Table 7.

Reviewing the analytical data, phenolics and PCBs were not detected in groundwater. The only potential chemicals-of-concern are lead and arsenic. However, in comparing filtered versus unfiltered results, the elevated metals concentrations are attributable to digested sediments (i.e., sample turbidity), and are not believed to be attributable to contamination. *Therefore, groundwater contamination in the Land Application Area is not an environmental concern.*

2.2.5 Buried Resin Area - As described in a letter report to NYSDEC dated March 18, 1993, formerly unknown resins and resin-contaminated soil were discovered to have been buried behind the resin plant office, northwest of the Phenol Recovery Area (Figure 4). Based upon observation of resins, soil discoloration, and odor, contaminated soils and waste resins were excavated and disposed of at an off-site landfill. In order to assess whether these wastes impacted groundwater, a monitoring well was installed hydraulically downgradient of the excavations. The location of the newly constructed well MW-33 is illustrated on Figure 4. Groundwater samples were collected and analyzed for formaldehyde, phenolics, VOCs, PCBs, arsenic, and lead. Results were reported in Table 4. *Based upon the non-detection of all organic constituents, these buried resins have not adversely impact groundwater quality.* As previously discussed, lead and arsenic in unfiltered samples are attributed to digested sediments (i.e., sample turbidity) and are not indicative of groundwater contamination.

2.2.6 Former Fuel Oil AST - After submission of the Phase II RFI Workplan, it was decided to include an investigation of a newly discovered release in the vicinity of a former above-ground storage tank used to store No. 6 fuel oil (Figure 1). The historic release was discovered during an Environmental Site Assessment (ESA) performed in anticipation of a Borden reorganization. NYSDEC approved incorporation of the AST investigation in a letter dated February 27, 1996, including the use of temporary wells to sample groundwater.

The locations of the initial evidence of a release to groundwater (i.e., a sheen) and four temporary wells installed to assess groundwater contamination are illustrated on Figure 9. Temporary well TW-1 is located upgradient of the sheen, temporary well TW-2 is within the sheen, and temporary wells TW-3 and -4 are hydraulically downgradient of the sheen. Analytical results are summarized in Table 8.

Based on these data, the following observations are made:

- 1) No VOCs were encountered above groundwater or drinking water standards,
- 2) PAHs were detectable at trace levels at all locations. The "non-detectable" groundwater standard for benzo(a)pyrene was exceeded at upgradient temporary well TW-1 and downgradient temporary well TW-3.
- 3) At the location of the sheen, TPH was detected at a relatively low concentration of 1.2 ppm.

black top

2.3 Soil Sampling

The horizontal extent of soil contamination was not fully delineated at several SWMUs during the Phase I RFI. Therefore, additional borings were installed laterally outward from Phase I borings where contamination was encountered. In the majority of cases, contamination of constituents such as phenolics was previously determined to coincide with PCB

contamination. Additionally, PCBs will require remedial action at lower concentrations. Therefore, investigative and remedial efforts at most SWMUs focus on PCBs as the target constituent. The exceptions are the Resin Excavation and Phenol Recovery Area, where non-PCB constituents are the primary constituents-of-concern.

2.3.1 PCB Area Excavation - Continued remedial excavation and sampling of the PCB Area is being conducted as an Interim Remedial Measure. Documentation of these activities is being submitted under separate cover.

2.3.2 River Lagoon - At the four Phase II borings within the former River Lagoon area, samples were collected from grade to ten feet at two-foot intervals. (At each Phase I boring, the vertical extent of contamination was delineated within the 10 foot boring). At the three Phase II borings outside the former lagoon area, samples were collected from grade to four feet, since this area was not part of the lagoon or subsequently covered over. Each interval was analyzed for PCBs. Phase II analytical results are provided in Table 9. Phase I and II boring locations are illustrated on Figure 10.

Also illustrated on Figure 10 are the highest PCB concentrations detected in each boring, and the area within which PCBs are encountered above 10 ppm. (Ten ppm is the TSCA cleanup level for restricted-access areas and is used as a screening level for purposes of evaluating the significance of contamination.)

Based on review of Table 9 and Figure 10, the following observations are made:

- 1) PCBs were not detected above one ppm at borings outside the River Lagoon property (i.e., outside the fence line).
- 2) The area with concentrations above 10 ppm PCBs is a contiguous area in the middle of the property, roughly

corresponding to the location of the former wastewater treatment lagoon.

Based upon a review of Phase I and II data, PCBs in excess of 10 ppm are found only within six feet of the ground surface, except at grid locations 2C and 10D.

2.3.3 Bone Yard - Within the Bone Yard, additional borings were installed at six locations. Soil samples were collected at two foot intervals from grade to a depth of four feet. (The vertical extent of PCB contamination did not exceed four feet in the Bone Yard during Phase I except at grid locations 15D, 4G and 3H in the middle of the Bone Yard.) Phase II results are provided in Table 10.

Phase I and II boring locations are illustrated on Figure 11. Illustrated on Figure 12 are the highest PCB concentrations within each boring and the area within which PCB concentrations exceed 10 ppm.

Based on inspection of Table 10 and Figures 11 and 12, the following observations are made:

- 1) No PCBs were detected significantly above one ppm in the Phase II borings.
- 2) There are two areas within which PCBs exceed 10 ppm, and both areas are delineated with existing data. As previously stated, *PCBs above 10 ppm are found primarily within four feet of the ground surface.*

2.3.4 Land Application Area - During the Phase II RFI, 18 additional borings were installed in the north, central, and south grid areas of the Land Application Area. At each location, samples were collected at two-foot intervals from grade to eight feet and analyzed for PCBs. (The deepest contamination in Phase I borings was six feet below grade at SB-9C and SB-9G.) Phase II results are provided in Table 11.

Phase I and II boring locations are illustrated on Figures 13 and 14. Also provided on Figures 13 and 14 are the highest PCB concentrations in each boring, and the area within which PCBs exceed 10 ppm.

In reviewing Table 11 and Figures 13 and 14, the following observations are made:

- 1) PCB concentrations did not exceed one ppm in any of the 18 Phase II borings.
- 2) *PCBs in excess of 10 ppm are found at five small areas.*

Based upon a review of Phase I and II data, PCB contamination occurs only within six feet of the ground surface.

2.3.5 Buried Resin Excavation - In order to assess whether all significantly contaminated soils were removed during excavation of buried resins in 1992, soil samples were collected from the four sidewalls of each of the two excavations (Figure 4). Each sample was collected from approximately two feet below grade, above the water table. Samples were analyzed for phenolics and formaldehyde. Analytical results are provided in Table 12. Also provided in Table 12 are generic risk-based screening levels, developed by U.S.EPA utilizing standard risk models and assumptions, and assuming exposure via soil ingestion in a residential setting. Sample locations are illustrated on Figure 15.

In reviewing Table 12, the following observations are made:

- 1) Phenol was detected at all sampling locations and was the constituent detected at the highest concentration (50 ppm). Other phenolics and formaldehyde were detected at scattered locations.
- 2) Neither phenolics nor formaldehyde were detected at concentrations above the generic screening levels.

Based upon the above observations and the fact that groundwater has not been impacted (Section 2.2.5), residual soil contamination at the Resin Excavation is not an environmental concern.

2.3.6 Phenol Recovery Area - Interim Remedial Measures are currently on-going to address soil and groundwater contamination in the Phenol Recovery Area. In order to establish pre-treatment concentrations of contaminants in soils, samples were collected from four locations within the soil treatment area illustrated on Figure 16. (The soil treatment area corresponds to the location of the former wastewater treatment basins.) At each location, samples were collected from grade to six feet (i.e., to the water table) at two-foot intervals and analyzed for formaldehyde, phenolics, and VOCs. It is anticipated that soil samples may be collected as IRM progresses to monitor soil remediation. (Monitoring of groundwater remediation is accomplished with the on-going quarterly monitoring program.)

Analytical results of soil sampling are provided in Table 13, along with selected risk-based screening levels (see Section 2.3.5).

Based upon a review of Table 13, the following observations are made:

- 1) VOC constituents were detected above one ppm at only one boring and depth interval. At TS-1 (4-6'), xylenes (5.8 ppm), 1,3,5-trimethyl benzene (3.3 ppm), and 1,2,4-trimethyl benzene (5.5 ppm) were the primary VOCs.
- 2) Phenol was the constituent detected at the highest concentrations (290 ppm maximum) and was detected in all borings. Other phenolics were encountered at trace levels.
- 3) Neither the major VOC nor phenolics compounds exceeded the risk-based screening levels.

Based upon the above findings, residual soil contamination is not a current or future public health threat in terms of possible soil ingestion in a residential setting. However, given the level of contaminants found in groundwater (see Section 2.2.1), residual soil contamination may be a continuing source of groundwater contamination.

2.4 Sewer Manhole Sampling

The former resin plant's sewers, illustrated on Figure 17 in their current condition, had been identified as potential contaminant pathways. In order to evaluate whether they are continuing sources of contamination, the remaining sections of the western (24") and eastern (15") lines were accessed at the indicated manholes (Figure 17). Water and sediments samples were collected from the manholes and analyzed for formaldehyde, phenolics, VOCs and PCBs.

2.4.1 Eastern (15") Sewer Line - At the location illustrated on Figure 17, the manhole lid was removed and both running water and sediment were observed in the manhole of the 15" line. Water was running clear and fast, and was determined to be discharging at a breach in the line near the River Lagoon (Figure 17). The source of flowing water is believed to be seepage of surface water from the overlying Eastern Creek. In order to eliminate continued flow in the sewer, an expanding plug was placed in the manhole in the upstream end of the line. From the manhole, both water (PSW-1) and sediment (PSS-1) were sampled and analyzed for VOCs, formaldehyde, phenolics, and PCBs. Results are provided in Table 14 and illustrate the following:

- 1) The sewer water sample was free of VOCs, formaldehyde, and phenolics. PCBs were detected at 0.0003 ppm, nominally exceeding the groundwater standard of 0.0001 ppm.

- 2) Low levels of VOCs (<one ppm), formaldehyde (28 ppm) and phenol (4.3 ppm) were detected in manhole sediments. PCBs were detected at 870 ppm.

2.4.2 Western (24") Sewer Line - At the location illustrated on Figure 17, the manhole lid was removed and standing water and sediment were determined to be present in the manhole. Analytical results of a water sample (PSW-2) and sediment sample (PSS-2) obtained from the manhole are provided in Table 14.

Based upon a review of Table 14, the following observations are noted:

- 1) A trace level of VOCs was detected in the sewer water sample. PCBs were detected at 0.00028 ppm, nominally exceeding the groundwater standard of 0.0001 ppm.
- 2) Trace levels of VOCs, formaldehyde, and phenol were detected in manhole sediments. PCBs were detected in sediments at 5.8 ppm.

Based upon these results, contamination of the western sewer does not appear to be a significant environmental concern.

3.0 SUMMARY OF CURRENT ENVIRONMENTAL CONDITIONS

Based upon the environmental sampling data generated during both Phase I and II of the RFI, the following summary of environmental conditions is believed relevant:

- 1) Two of four locations at the Western Creek exhibited formaldehyde-contaminated sediments. Historic versus recent results suggest that contamination may be naturally attenuating. Furthermore, the highest formaldehyde contamination may be associated with horse manure.

- 2) One of five recent Susquehanna River sediment samples exhibited a detectable concentration of PCBs (0.074 ppm). The adjacent bottom land is not contaminated above the one ppm benchmark.
- 3) Groundwater in the Phenol Recovery Area is contaminated with VOCs, formaldehyde, and phenol, and is currently being remediated with a combination pump and treat/in-situ bioremediation system. PCBs have not been encountered above the groundwater standard in this area. Soils are contaminated with VOCs, formaldehyde, and phenol at levels that are not a hazard in regard to soil ingestion, but which may be contributing to groundwater contamination.
- 4) PCB contamination in the PCB Area is being addressed by on-going excavation (IRM) not discussed in this report. Groundwater contamination is only nominally above VOC groundwater standards, and is not environmentally significant.
- 5) PCB contamination in the Bone Yard is restricted to shallow soils (generally \leq four feet below grade) within two delineated areas. Groundwater contamination is insignificant.
- 6) PCB contamination in the Land Application Area Trenches is restricted to shallow soils (\leq six feet below grade) within several small areas. Groundwater is not contaminated in the Land Application Area.
- 7) Temporary wells around the former fuel oil AST exhibited only trace levels of VOCs, PAHs, and TPH. Nevertheless, the "non-detectable" groundwater standard for benzo(a)pyrene was exceeded at two locations.
- 8) PCB contamination in the River Lagoon is restricted to shallow soils (generally \leq six feet below grade) in one delineated area. Although the single River Lagoon

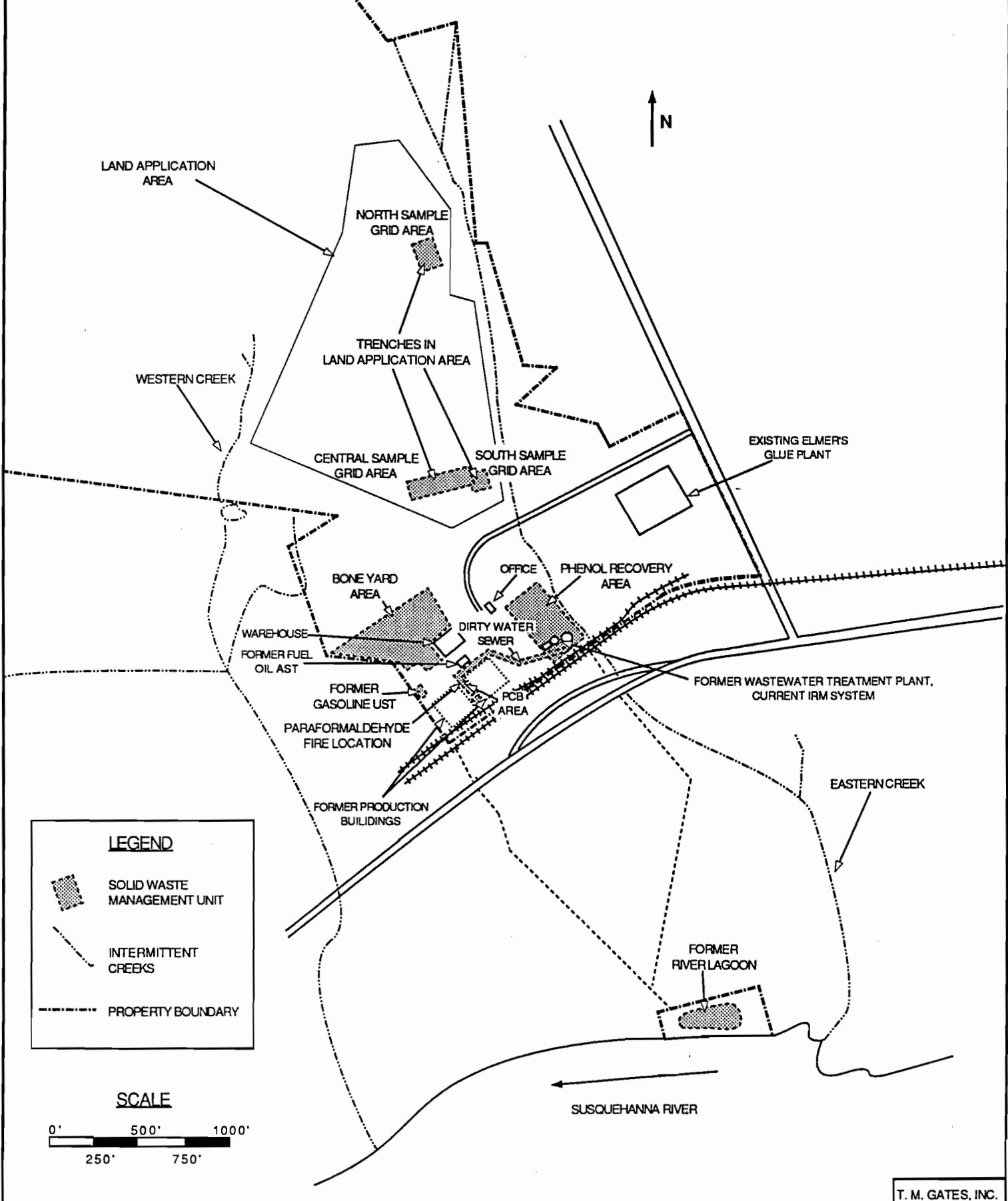
monitoring well was recently destroyed, historic analyses indicate that groundwater contamination at the River Lagoon is not a concern.

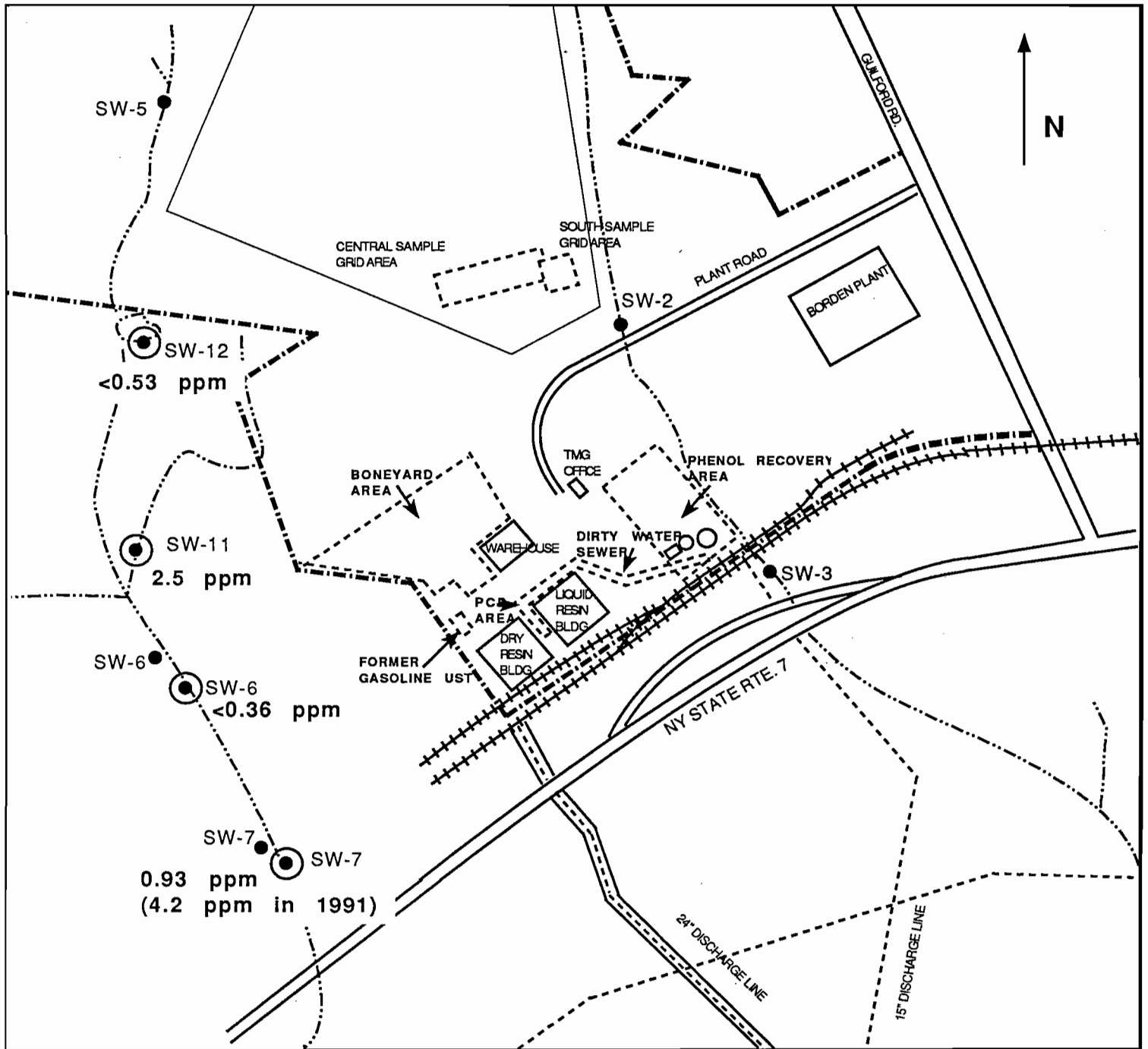
- 9) Groundwater has not been impacted by residual contamination at the Resin Excavations. Furthermore, residual levels in soils do not exceed risk-based screening levels and are not considered environmentally significant.
- 10) Both former plant wastewater sewers are contaminated with PCBs in the sewer sediments. Only the 15-inch sewer is highly contaminated (870 ppm). Water in both sewers exhibited PCB concentrations marginally above the groundwater standard (0.0003 vs. 0.0001 ppm).

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FIGURE 1

PLOT PLAN AND SWMU LOCATIONS





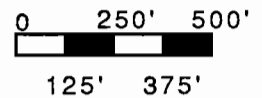
LEGEND

● SW-5 PHASE I RFI SURFACE WATER/SEDIMENT SAMPLE

--- INTERMITTENT CREEKS

⊙ SW-11 PHASE II RFI CREEK SEDIMENT SAMPLE

SCALE

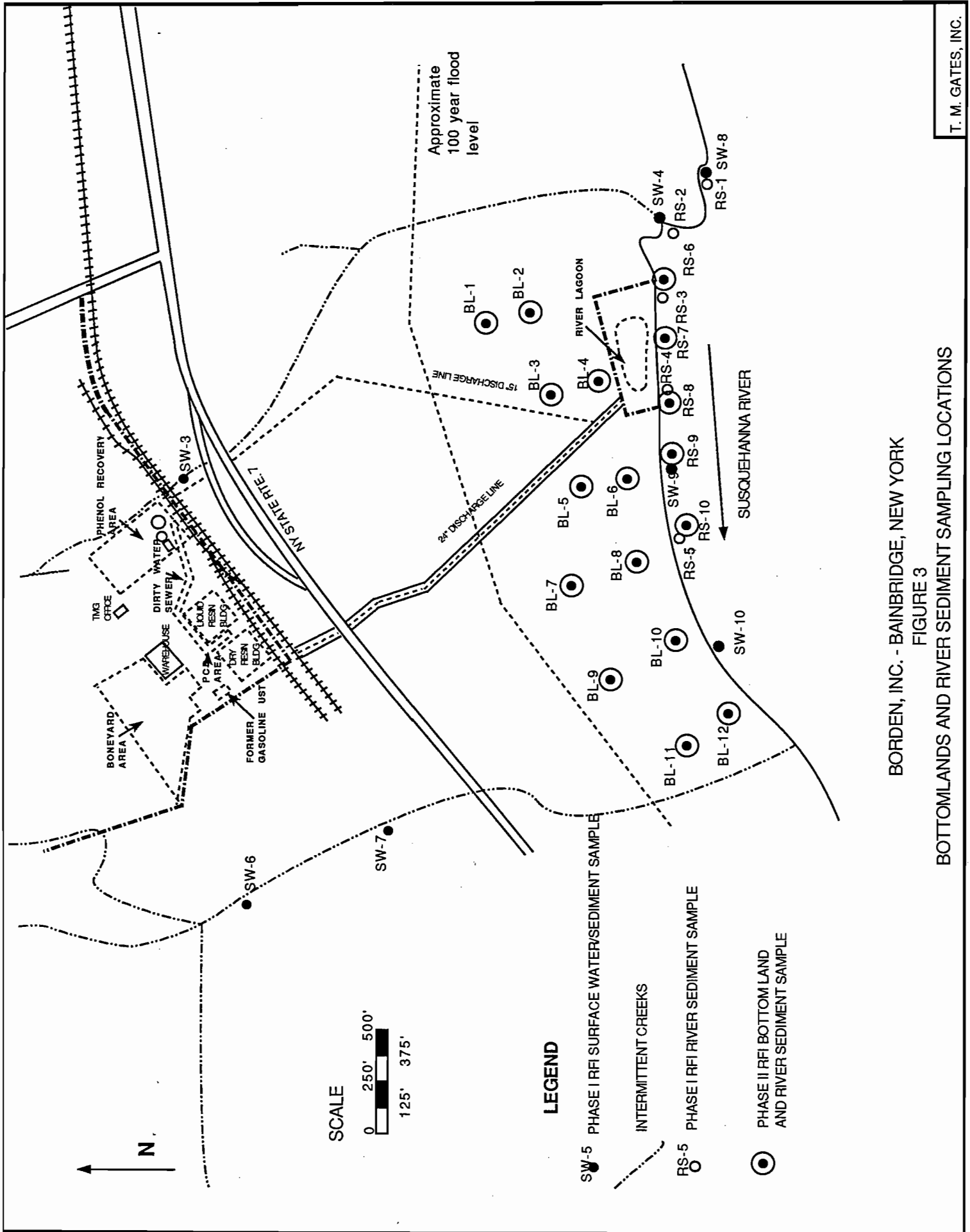


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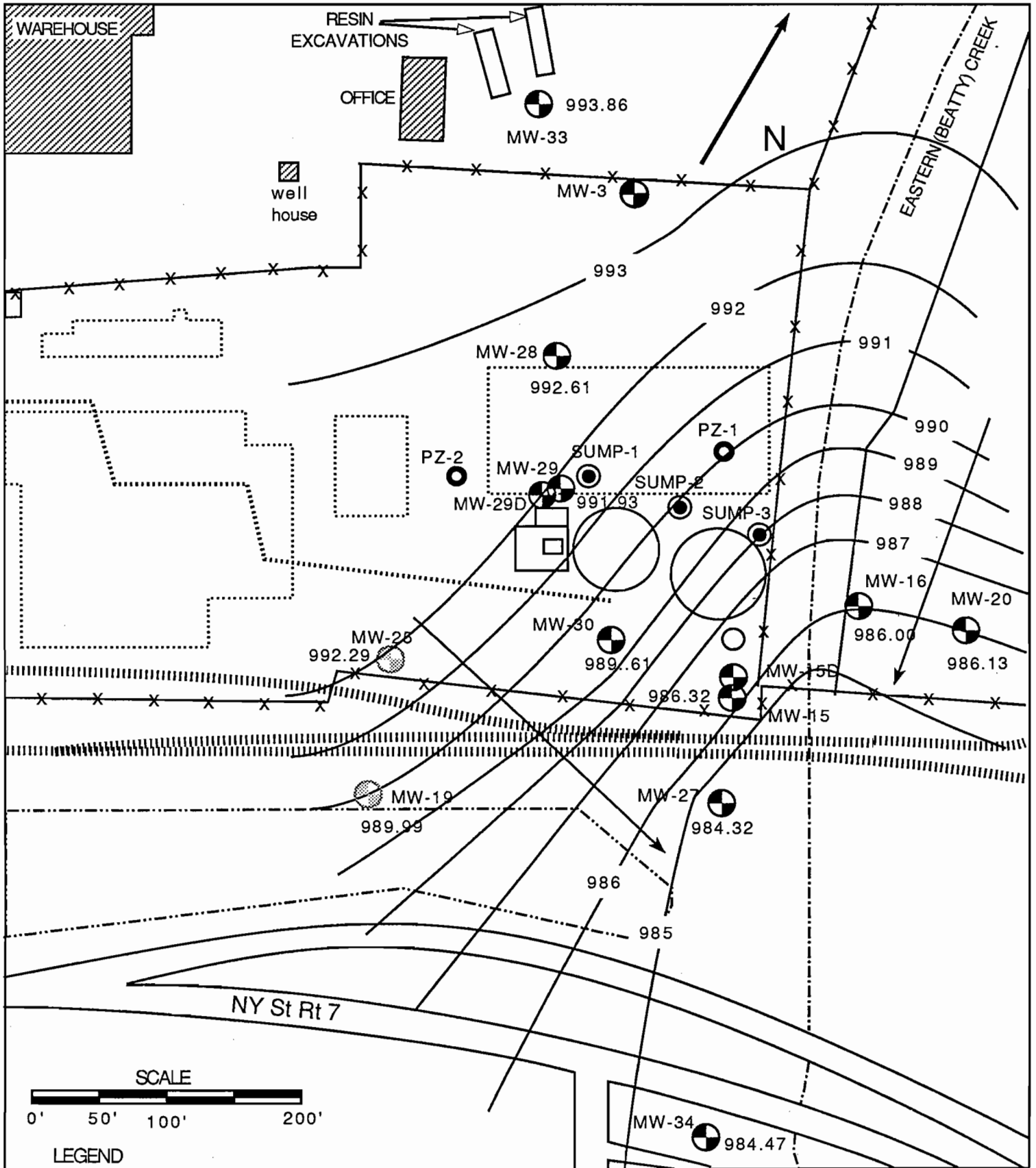
FIGURE 2

WESTERN CREEK SEDIMENT SAMPLING LOCATIONS
AND FORMALDEHYDE CONCENTRATIONS - APRIL 1996

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 FIGURE 3
 BOTTOMLANDS AND RIVER SEDIMENT SAMPLING LOCATIONS

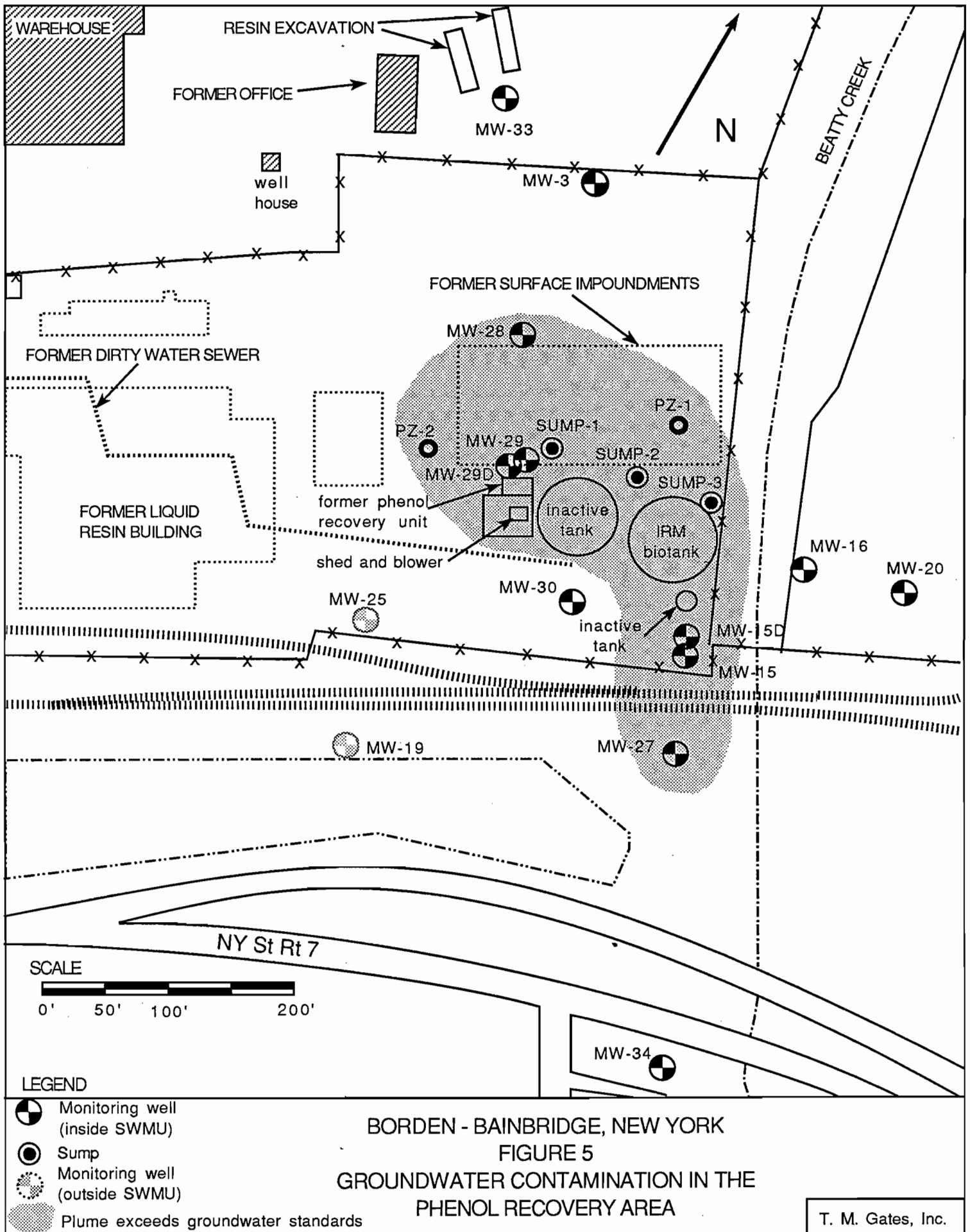


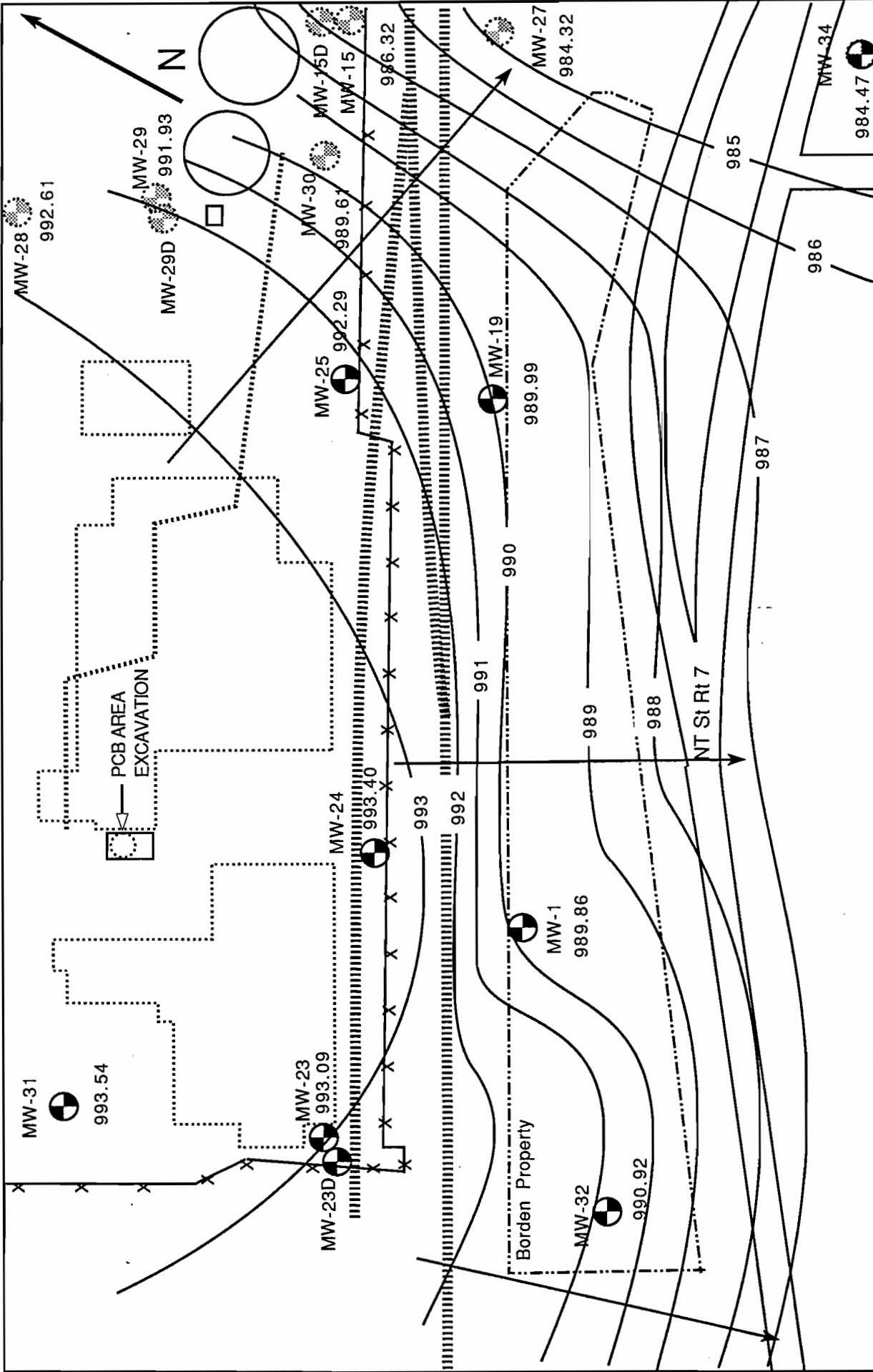
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 FIGURE 4
 PHENOL RECOVERY AREA MONITORING WELLS
 AND GROUNDWATER CONTOURS - MAY 1996

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	Groundwater Contour (1' interval)
	Flow Direction
	Monitoring well
	Groundwater Elevation (feet MSL)

989.99





LEGEND

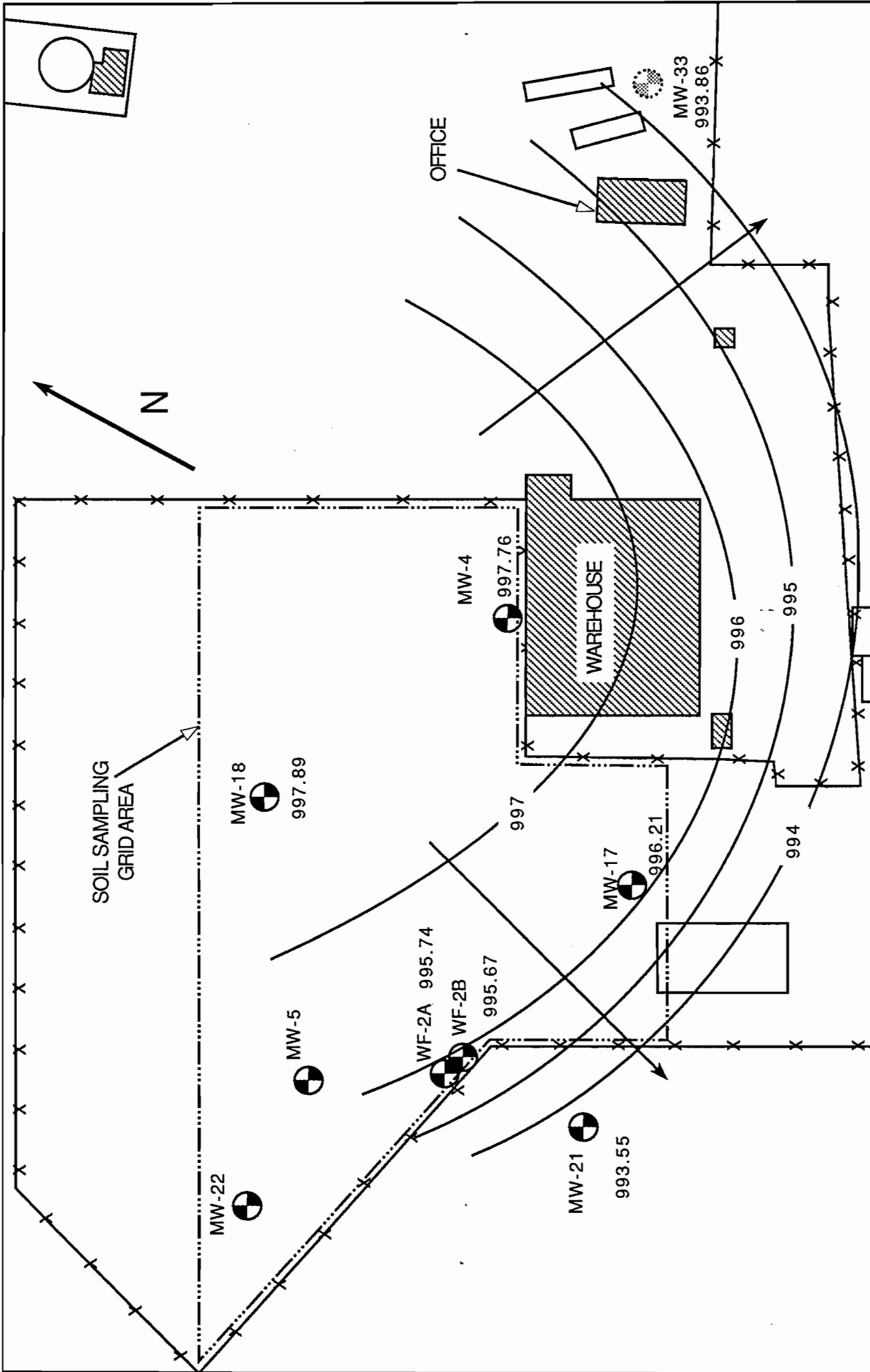
- Groundwater Contour (1' interval)
- Flow Direction
- ⊕ Monitoring well
- 989.99 Groundwater Elevation (feet MSL)

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FIGURE 6
PCB AREA MONITORING WELL LOCATIONS
AND GROUNDWATER CONTOURS - MAY 1996

SCALE

0' 50' 100' 200'

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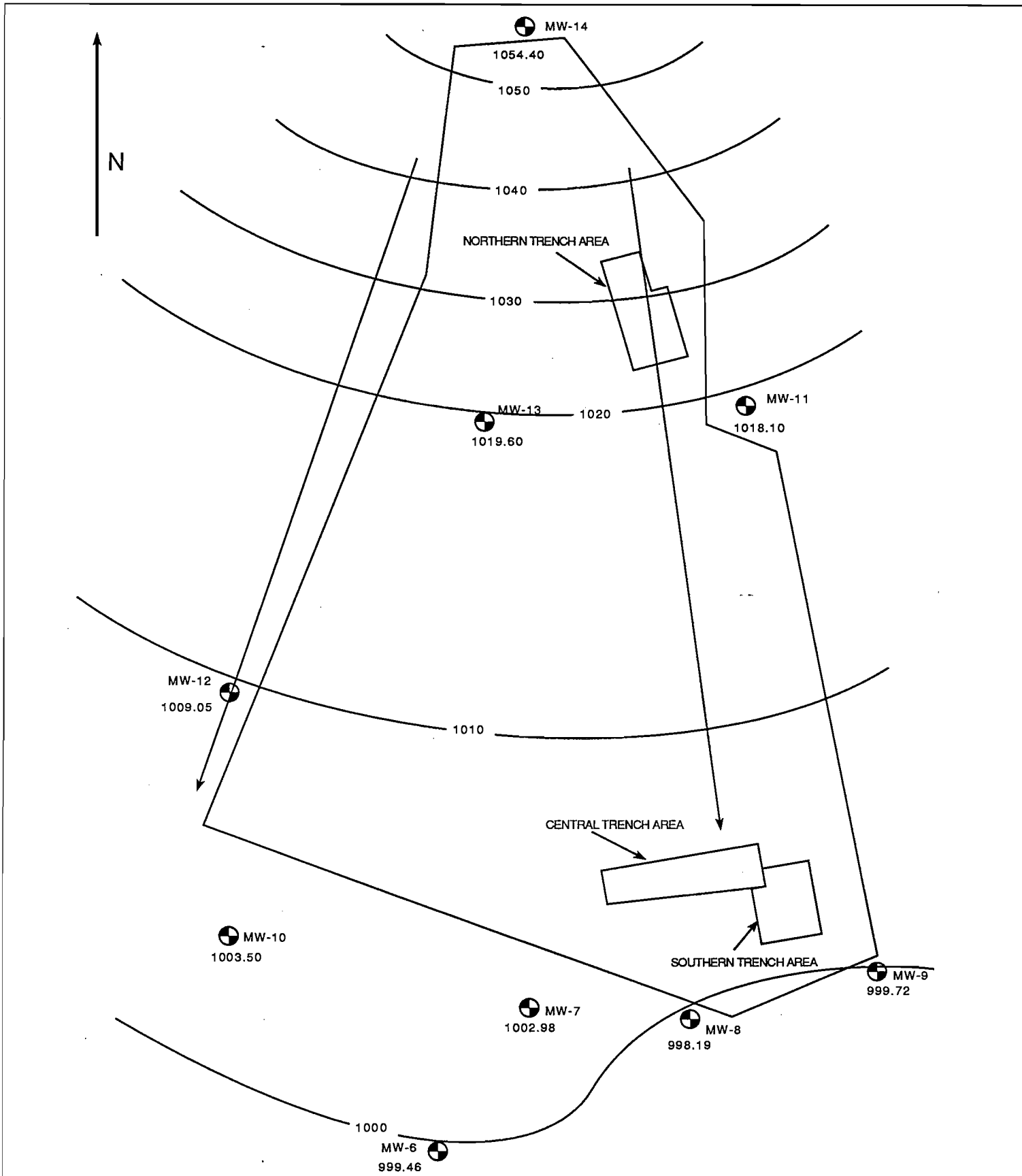
- LEGEND**
- Groundwater Contour (1' interval)
 - Flow Direction
 - ⊕ Monitoring well
 - 989.99 Groundwater Elevation (feet MSL)

BORDEN - BAINBRIDGE, NEW YORK
 BONEYARD AREA MONITORING WELL LOCATIONS
 AND GROUNDWATER CONTOURS - MAY 1996
 FIGURE 7

SCALE

0' 50' 100' 200'

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LEGEND

- Groundwater Contour (10' Interval)
- Flow Direction
- Monitoring Well

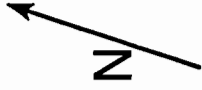
1018.10 Groundwater Elevation (feet MSL)

BORDEN - BAINBRIDGE, NEW YORK
 FIGURE 8
 LAND APPLICATION AREA MONITORING WELL LOCATIONS
 AND GROUNDWATER CONTOURS - MAY 1996

SCALE

0' 100' 200' 400'

Groundwater
Flow
Direction



TW-1

Sheen on groundwater

TW-2

Tree

Existing Dike for
Former Fuel Oil
ASTs

Exploratory Trench installed for
Environmental Site Assessment (ESA)

TW-3

TW-4

SEWER
MANHOLE

LEGEND:

○ Former Groundwater
Sample Location

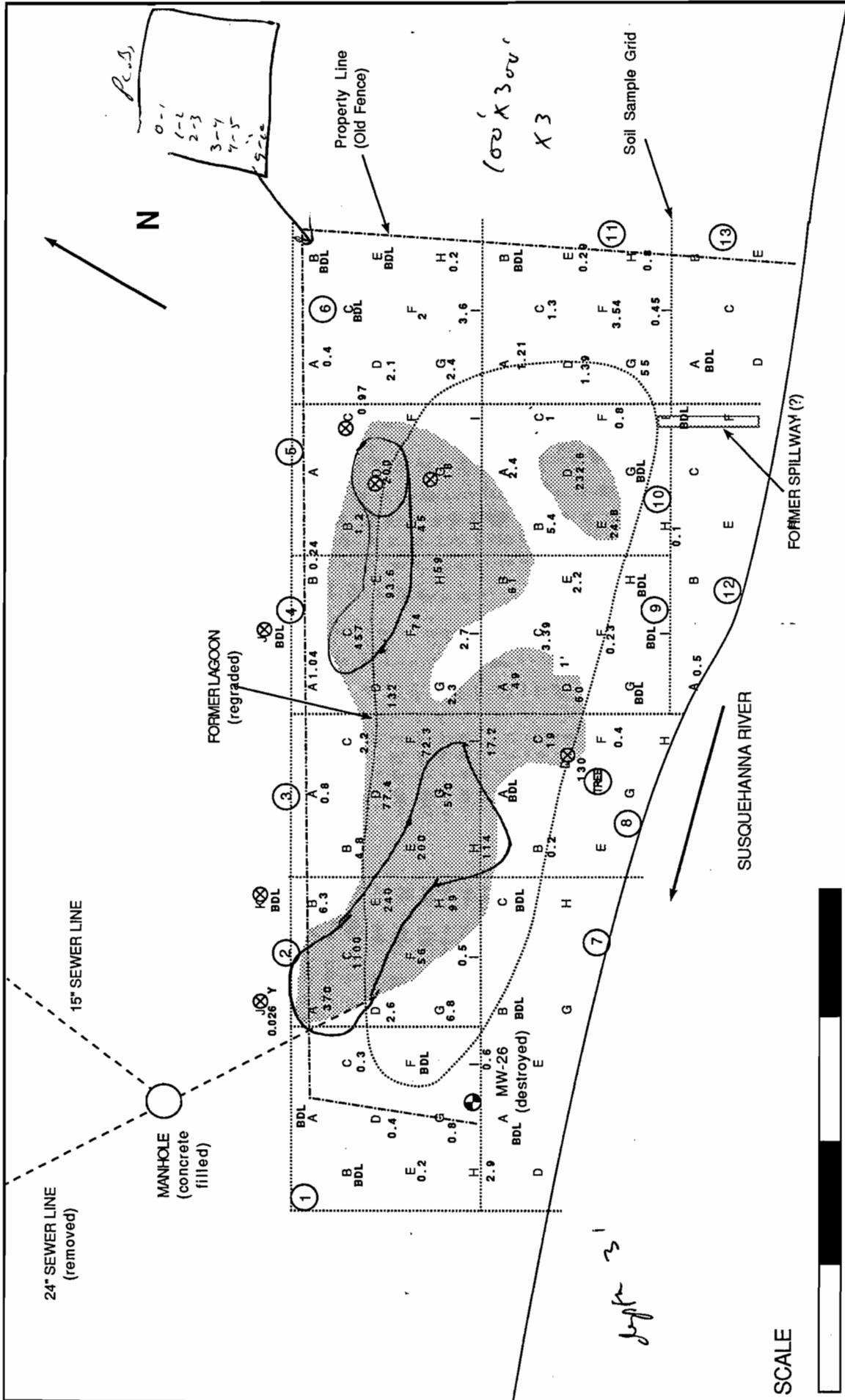
⊕ Groundwater
Sample Location

Scale: 1" = 20'

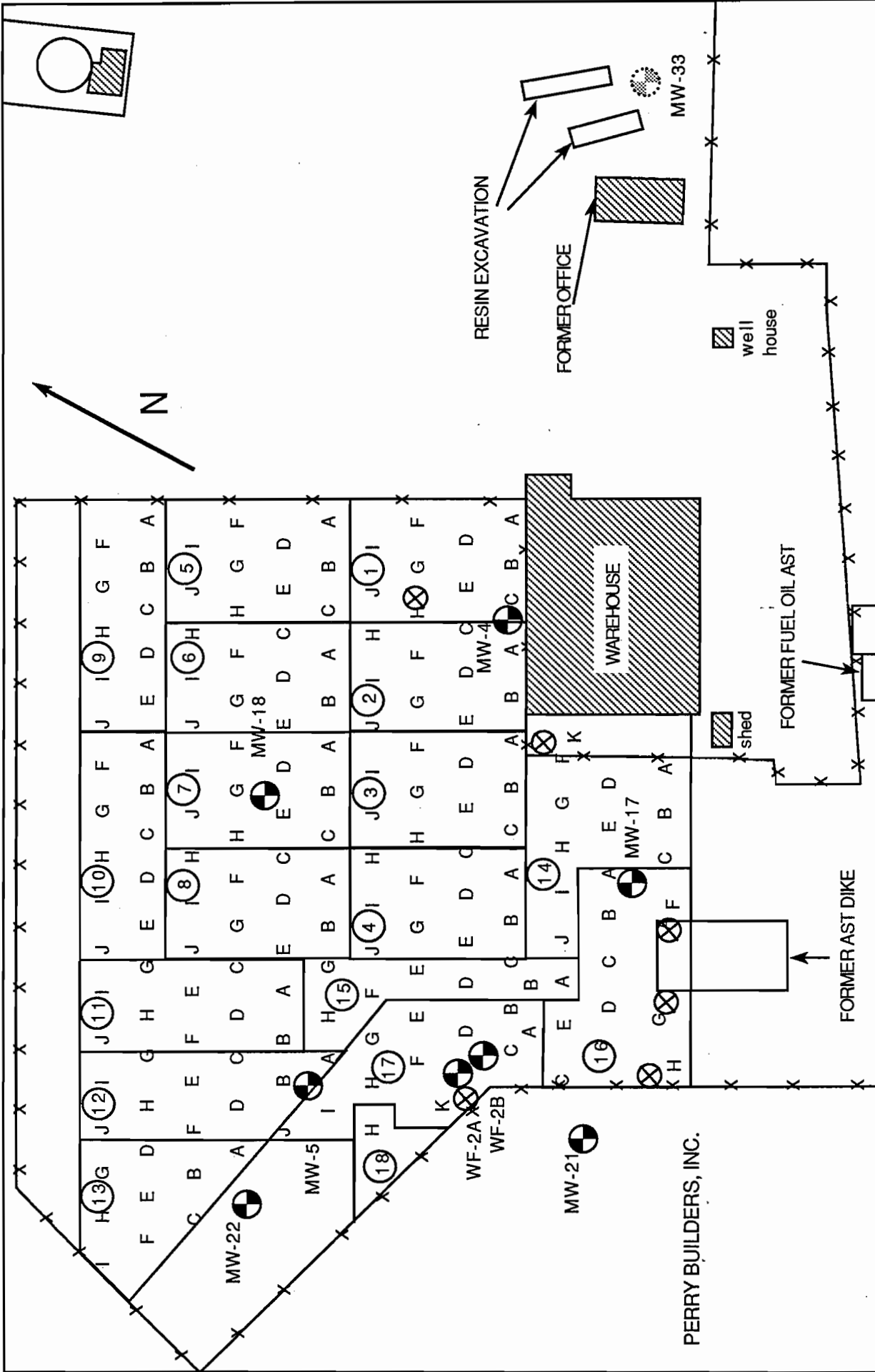
BORDEN, INC. - BAINBRIDGE, NEW YORK

FIGURE 9

LOCATION OF TEMPORARY WELLS
NEAR FORMER FUEL OIL ASTs



BORDEN - BAINBRIDGE, NEW YORK
FIGURE 10
HIGHEST PCB CONCENTRATIONS
AND THE AREA EXCEEDING 10 PPM PCBs
RIVER LAGOON



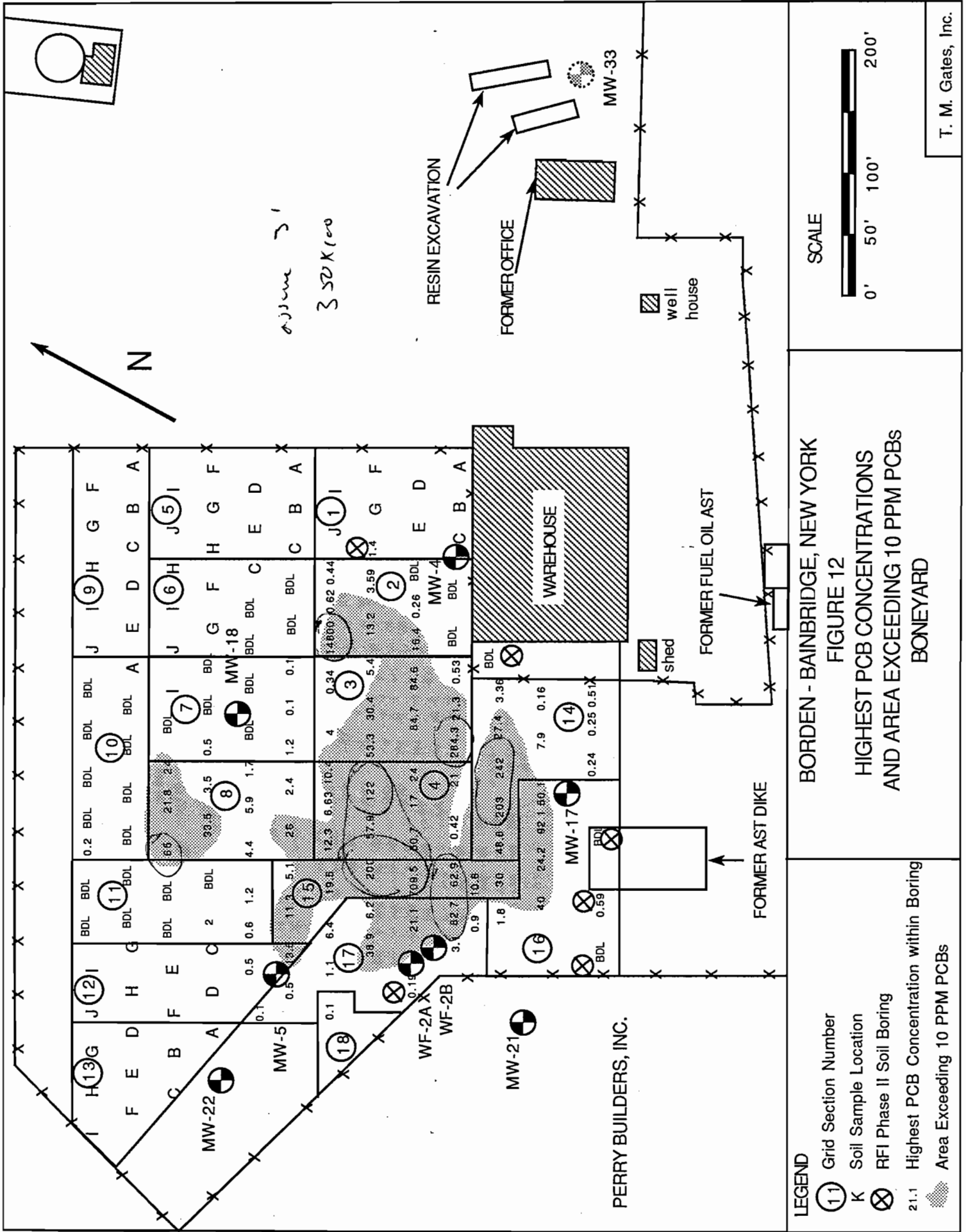
BORDEN - BAINBRIDGE, NEW YORK
FIGURE 11
BONEYARD SOIL SAMPLE LOCATIONS

LEGEND

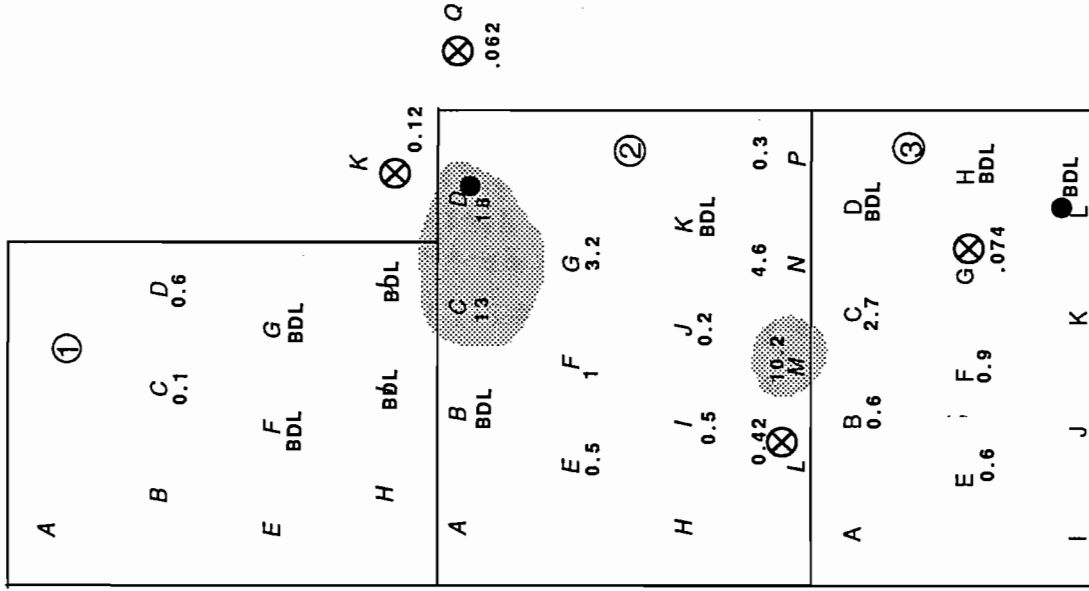
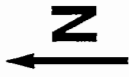
- Monitoring Well (inside SWMU)
- Monitoring Well (outside SWMU)
- Grid Section Number
- Soil Sample Location
- RFI Phase II Soil Boring

SCALE
0' 50' 100' 200'

T. M. Gates, Inc.



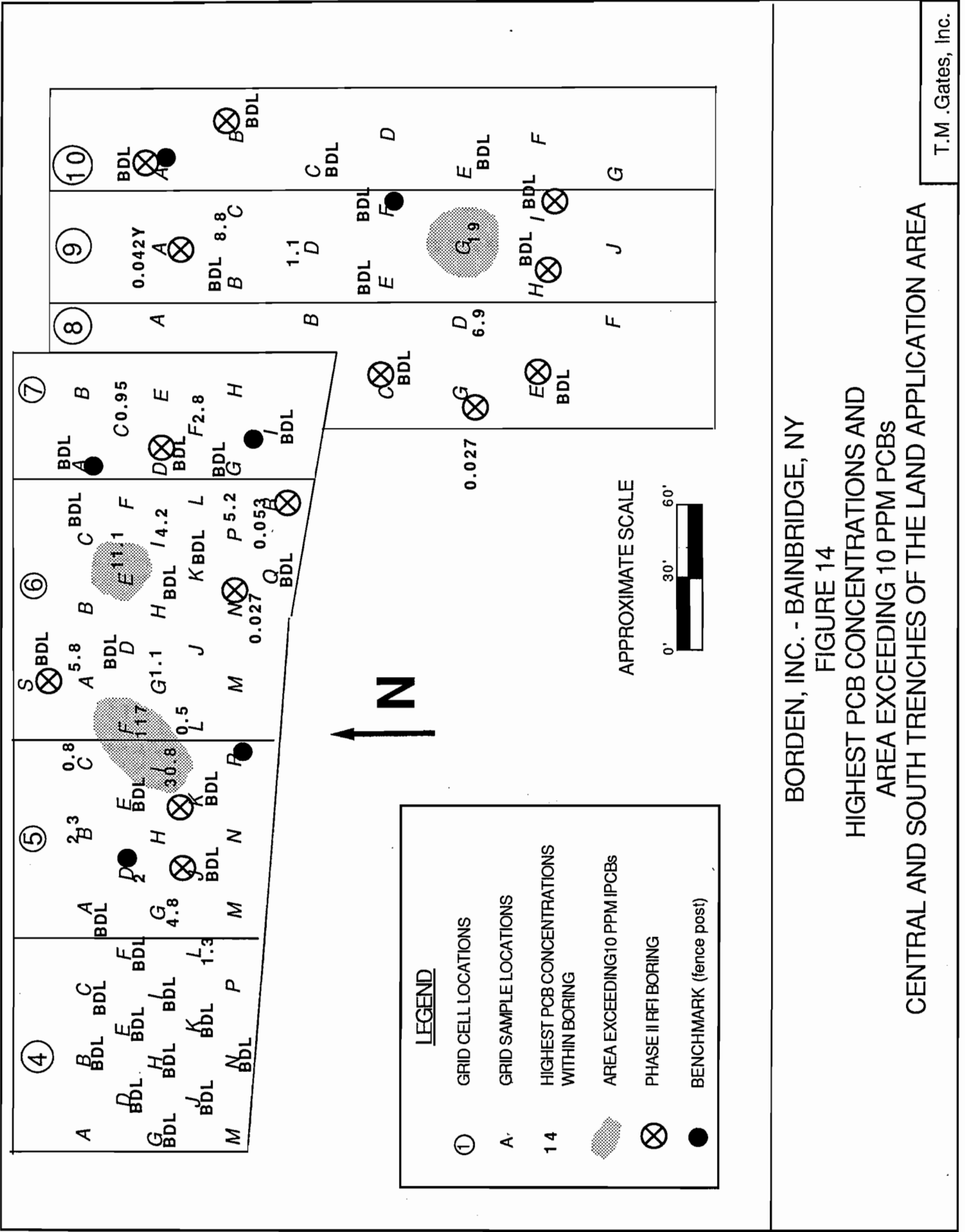
BORDEN - BAINBRIDGE, NEW YORK
FIGURE 12
HIGHEST PCB CONCENTRATIONS
AND AREA EXCEEDING 10 PPM PCBs
BONEYARD



LEGEND

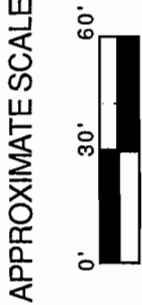
- ① GRID CELL LOCATIONS
- A GRID SAMPLE LOCATIONS
- 1 4 HIGHEST PCB CONCENTRATIONS WITHIN BORING
- AREA EXCEEDING 10 PPM PCBs
- ⊗ PHASE II RIBORING
- BENCHMARK (fence post)

BORDEN, INC. - BAINBRIDGE, NEW YORK
 FIGURE 13
 HIGHEST PCB CONCENTRATIONS AND
 AREAS EXCEEDING 10 PPM PCBs
 NORTH LAND APPLICATION AREA



LEGEND

- ① GRID CELL LOCATIONS
- A GRID SAMPLE LOCATIONS
- 14 HIGHEST PCB CONCENTRATIONS WITHIN BORING
- AREA EXCEEDING 10 PPM IPCBs
- ⊗ PHASE II RFI BORING
- BENCHMARK (fence post)

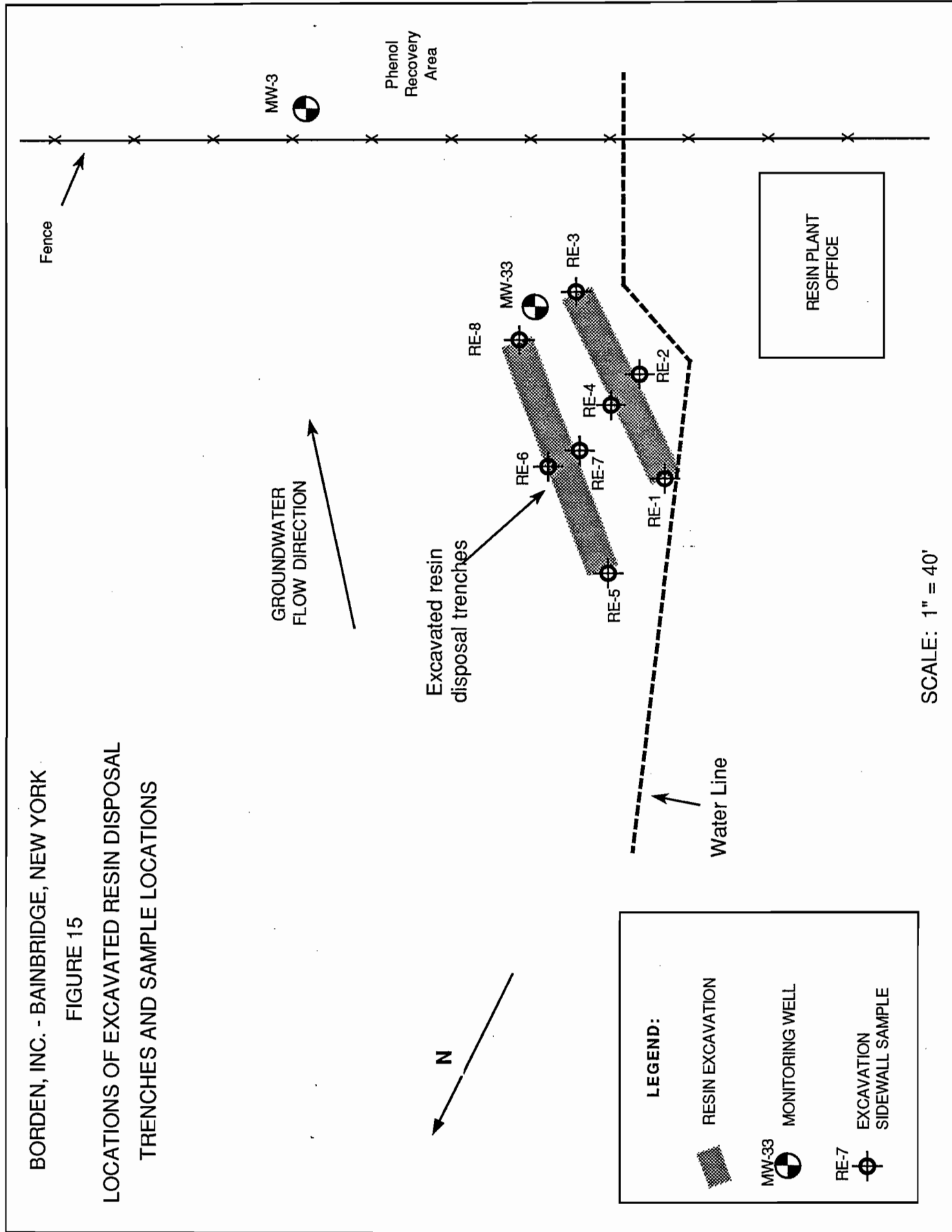


BORDEN, INC. - BAINBRIDGE, NY
 FIGURE 14
 HIGHEST PCB CONCENTRATIONS AND
 AREA EXCEEDING 10 PPM PCBs
 CENTRAL AND SOUTH TRENCHES OF THE LAND APPLICATION AREA

BORDEN, INC. - BAINBRIDGE, NEW YORK

FIGURE 15

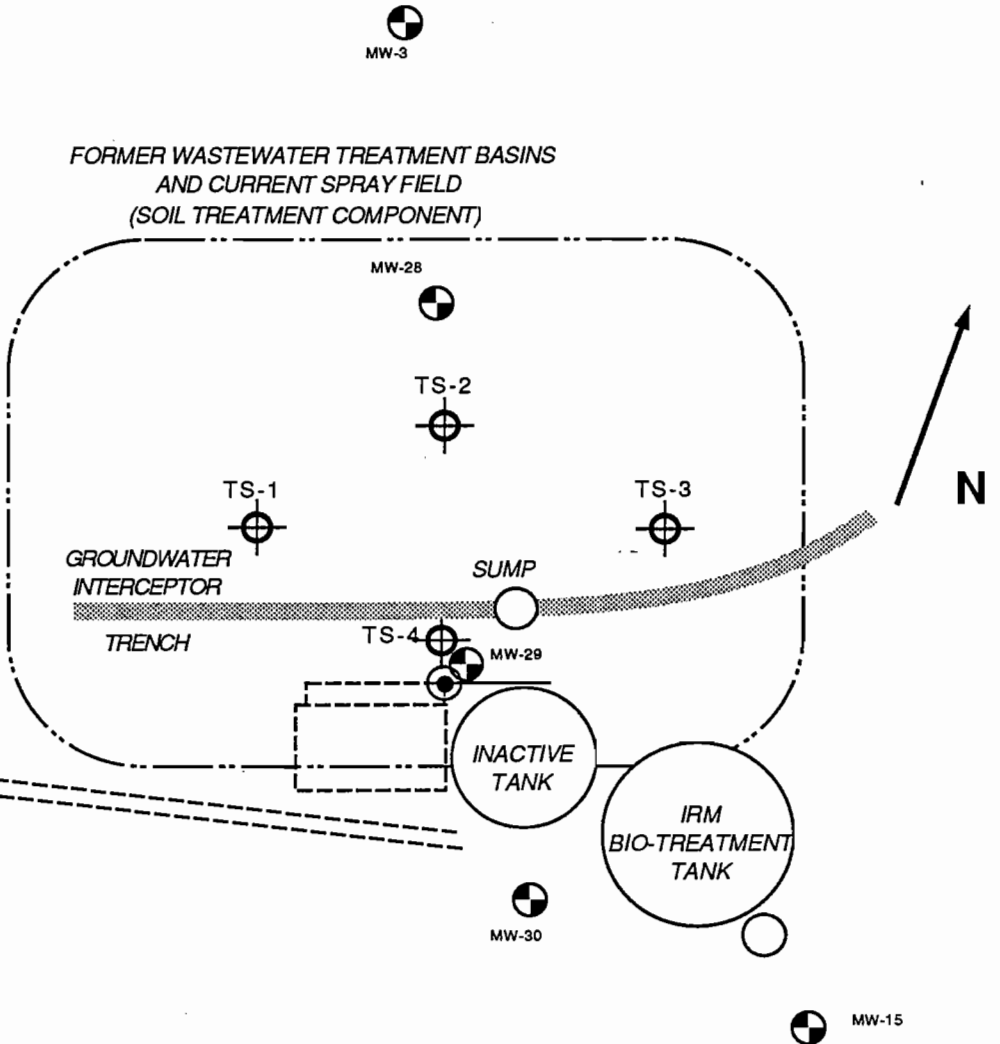
LOCATIONS OF EXCAVATED RESIN DISPOSAL TRENCHES AND SAMPLE LOCATIONS



BORDEN, INC. - BAINBRIDGE, NEW YORK
 FIGURE 16
 PLAN VIEW OF IRM SYSTEM AND
 SOIL SAMPLE LOCATIONS

GROUNDWATER
 FLOW
 DIRECTION

FORMER WASTEWATER TREATMENT BASINS
 AND CURRENT SPRAY FIELD
 (SOIL TREATMENT COMPONENT)



EXCAVATED SEWER LINE

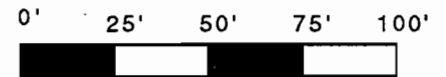
GROUNDWATER
 INTERCEPTOR
 TRENCH

SUMP

INACTIVE
 TANK

IRM
 BIO-TREATMENT
 TANK

SCALE



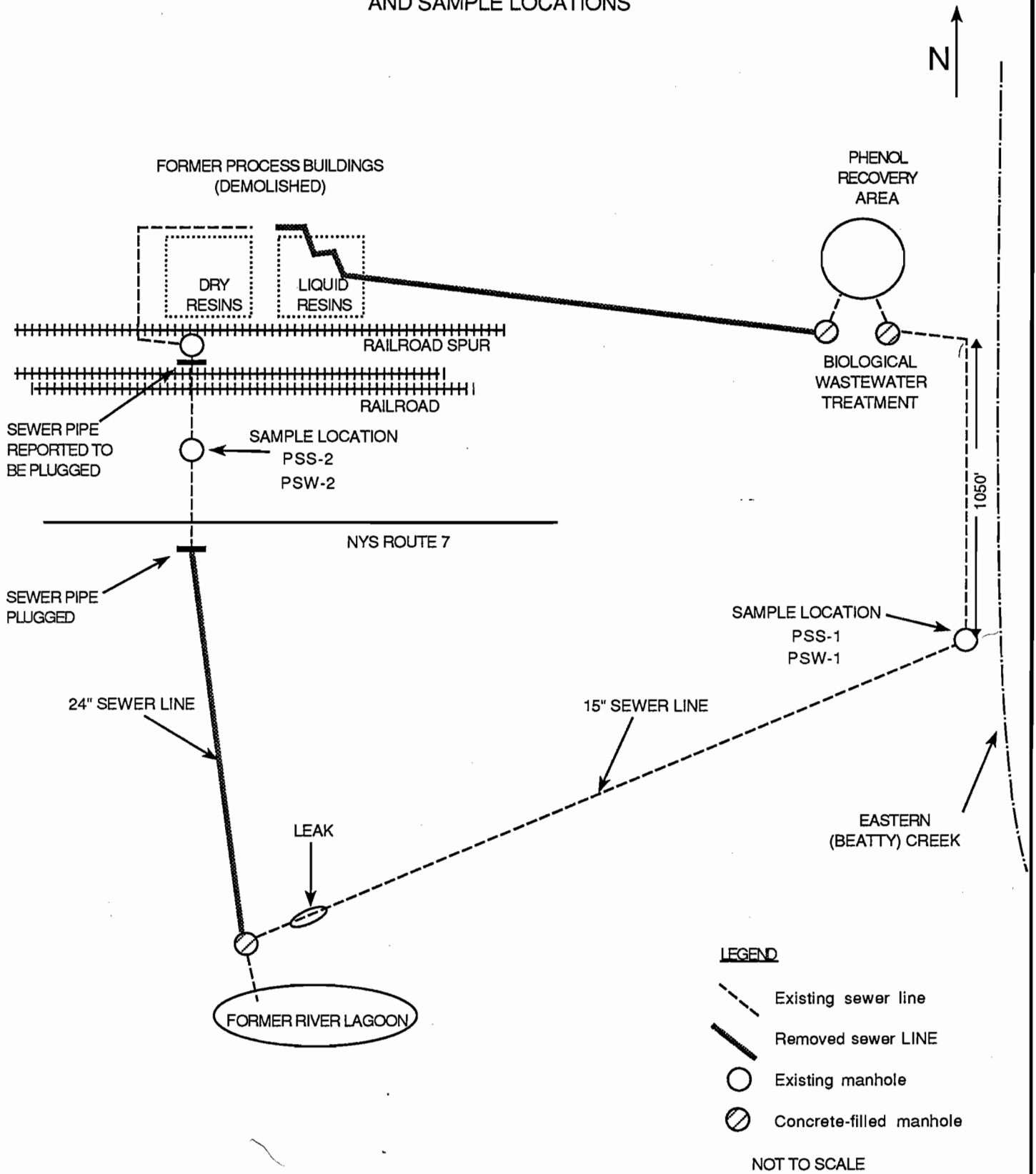
⊙ BENCHMARK

MW-15
 ⊕ MONITORING WELL





⊕ SOIL SAMPLE LOCATION

TS-1 (DATE)

BORDEN, INC. - BAINBRIDGE, NEW YORK
 FIGURE 17
 FORMER RESIN PLANT WASTEWATER SEWERS
 AND SAMPLE LOCATIONS



LEGEND

-  Existing sewer line
-  Removed sewer LINE
-  Existing manhole
-  Concrete-filled manhole

NOT TO SCALE

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 1
 PHASE II RFI
 SEDIMENT RESULTS
 APRIL 1996

WESTERN CREEK SEDIMENT SAMPLE NUMBER (PCB CONCENTRATION IN PPM)

COMPOUND	SW-6	SW-7	SW-11	SW-12	DUP#2 (Dup of SW-12)
Formaldehyde	<0.36	0.93	2.5	<0.53	<0.51

NOTE: All results reported as ppm.

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 2
 PHASE II RFI
 SUSQUEHANNA BOTTOM LAND PCB RESULTS
 APRIL 1996

SAMPLE	DEPTH	BL-1	BL-2	BL-3	BL-4	BL-5	BL-6	BL-D (dup of BL-6)
S-1	0-1'	<0.027	<0.027	<0.025	.025 Y	<0.026	<0.028	<0.027
S-2	1-2'	<0.030	<0.028	<0.027	<0.026	<0.025	<0.026	

SAMPLE	DEPTH	BL-7	BL-8	BL-9	BL-10	BL-11	BL-12
S-1	0-1'	<0.026	<0.025	<0.025	<0.026	<0.026	.015 Y
S-2	1-2'	<0.027	<0.027	<0.025	<0.025	<0.029	<0.025

Notes: All results reported as ppm.
 PCB detected as Aroclor 1242 except at BL-12 where it is detected as Aroclor 1254
 Y - Corrected Aroclor value is between MDL and PQL

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 3
 PHASE II RFI
 SUSQUEHANNA RIVER SEDIMENT PCB RESULTS
 APRIL 1996

SAMPLE	DEPTH	RS-6	RS-7	RS-8	RS-9	RS-10	DUP-RS (dup. of RS-7)
S-1	0-1'	0.074 *	<0.027	<0.027	<0.027	<0.026	<0.027
S-2	1-2'	<0.027	<0.028	<0.028	<0.027	<0.023	

Notes: All results reported as ppm
 PCB detected as Aroclor 1242
 Y - Corrected Aroclor value is between MDL and PQL
 * - RS-6 total organic carbon determined to be 8,780 mg/kg

BORDEN, INC. - BAINBRIDGE, NEW YORK
TABLE 4
PHENOL RECOVERY AREA GROUNDWATER ANALYSIS - MAY 1986

(mg/L-ppm)	New York Groundwater Standards *	USEPA Drinking Water Standards *	MW-15	MW-16	MW-20	MW-27	MW-28	MW-29	MW-29 D	MW-30	MW-33	MW-34
			0.038	<0.0083	0.022	0.017	0.083	3.8	0.022	<0.0083	<0.0083	<0.0083
Formaldehyde	0.050 **		<0.000026	<0.000020	<0.000025	<0.000021	<0.000022	<0.000023	0.00006	<0.000025	<0.000021	<0.000024
PCBs	0.0001											
Arochlor 1242												
Metals-Filtered	0.025	0.015	0.0058	0.0074	0.0087	NA	0.006	0.0028	0.0258	0.002	<0.001	<0.001
As			<0.001	0.0015	0.0011	NA	0.0012	0.0018	0.0015	0.0018	0.0017	0.0014
Pb												
Metals-Unfiltered	0.025	0.015	0.0214	0.0186	0.0153	NA	0.0038	0.0212	0.0038	0.0016	0.0066	0.0067
As			0.0017	0.0113	0.0088	NA	0.0041	0.0053	0.0022	0.002	0.0144	0.207
Pb												
Phenolics												
2,4-Dimethylphenol			<0.012	<0.010	<0.010	<0.015	0.026	<0.011	0.002 J	<0.012	<0.010	<0.012
2-Methylphenol			<0.012	<0.010	<0.010	<0.015	0.003 J	0.48 E	0.049	<0.012	<0.010	<0.012
4-Methylphenol			<0.012	<0.010	<0.010	<0.015	0.002 J	1.2 E	0.059	<0.012	<0.010	<0.012
2-Nitrophenol			<0.012	<0.010	<0.010	<0.010	<0.011	<0.011	<0.011	<0.012	<0.010	<0.012
4-Nitrophenol			<0.058	<0.050	<0.075	<0.054	<0.054	<0.056	<0.054	<0.058	<0.050	<0.060
Pentachlorophenol			<0.058	<0.050	<0.075	<0.054	<0.054	<0.056	<0.054	<0.058	<0.050	<0.060
Phenol			<0.012	0.003 J	<0.010	<0.015	0.019	1.50 E	2 E	<0.012	<0.010	<0.012
Total phenols	0.001		ND	0.003	ND	ND	0.05	162.48	2.11	ND	ND	ND
Volatile Organics												
Methylene Chloride			<0.005	<0.005	0.0008 J	<0.005	<0.005	0.23 E	<0.005	<0.005	<0.005	<0.005
Chloroform	0.007	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	0.2		<0.005	<0.005	<0.005	<0.005	<0.005	0.002 J	<0.005	<0.005	<0.005	<0.005
Carbon Tetrachloride	0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01 J	<0.005	<0.005	<0.005	<0.005
1,1-Dichloropropene			<0.005	<0.005	<0.005	<0.005	<0.005	0.003 J	<0.005	<0.005	<0.005	<0.005
Trichloroethene			0.008	<0.005	<0.005	<0.005	0.002 J	0.25 E	0.001 J	<0.005	<0.005	<0.005
Benzene	0.0007		0.001 J	<0.005	<0.005	<0.005	0.002 B J	5.7 E	0.76 E	<0.005	<0.005	<0.005
Toluene			0.008	<0.005	<0.005	0.001 J	0.028	0.027	<0.005	<0.005	<0.005	<0.005
Chlorobenzene			<0.005	<0.005	<0.005	<0.005	0.005	0.4 E	0.003 J	<0.005	<0.005	<0.005
Ethylbenzene			<0.005	<0.005	<0.005	<0.005	0.005 X	0.19 X	<0.005	<0.005	<0.005	<0.005
total Xylenes			0.008	<0.005	<0.005	<0.005	0.038	0.13	0.001 J	<0.005	<0.005	<0.005
Isopropylbenzene			0.005	<0.005	<0.005	<0.005	0.027	<0.005	<0.005	<0.005	<0.005	<0.005
sec-Butylbenzene			<0.005	<0.005	<0.005	<0.005	0.0008 J	0.0009 J	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethene			<0.005	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	<0.005	<0.005
1,3-Dichlorobenzene			0.002 J	<0.005	<0.005	<0.005	0.004 J	0.16	0.002 J	<0.005	<0.005	<0.005
1,4-Dichlorobenzene	0.0007 (total 1,2- and 1,4-)		0.001 J	<0.005	<0.005	<0.005	0.002 J	0.19	0.004 J	<0.005	<0.005	<0.005
1,2-Dichlorobenzene	0.0047 (total 1,2- and 1,4-)		<0.005	<0.005	<0.005	<0.005	0.018 B	0.33 BE	0.02 B	<0.005	<0.005	<0.005
Naphthalene			<0.005	<0.005	<0.005	<0.005	<0.005	0.012 B	<0.005	<0.005	<0.005	<0.005
1,2,3-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	0.022 B	0.0007 B J	<0.005	<0.005	<0.005
1,2,4-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total VOCs			0.033	ND	ND	0.0008	0.003	0.1338	7.6579	0.7917	ND	ND

All Concentrations in Parts Per Million (mg/l)
 * - Only detected compounds reported
 NA - Not Analyzed
 ND - Not Detected
 X - Exceeds Standard
 E - Manual Quantitation
 J - Exceeds calibration range
 B - value fell between MDL and PQL
 .. - Compound detected in the Method Blank
 .. - Practical Quantitation Limit, no groundwater standard promulgated.

NOTES:

BORDEN, INC. - BAINBRIDGE, NEW YORK
TABLE 5
PCB AREA GROUNDWATER ANALYSIS - MAY 1996

(mg/L-ppm)	New York Groundwater Standards *	USEPA Drinking Water Standards *	MW-19 Dupl. MW-23 MW-24 MW-25 MW-31 MW-32										PCB-Dup. MW-23 Dup.	
			MW-1	MW-19	MW-19 Dupl.	MW-23	MW-24	MW-25	MW-31	MW-32				
Formaldehyde	0.050 ** 0.0001		0.011	<0.0083	<0.0083	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs			<0.00024	<0.00027	<0.00020	<0.00020	<0.00023	0.00006	<0.00020	<0.00020	0.00003	0.00003	0.00003	J
Arochlor 1242														
Metals-Filtered	0.025	0.015	0.0254	0.0011	0.001	NA	NA	NA	NA	NA	NA	NA	NA	NA
As			0.0013	0.0013	0.0011	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pb														
Metals-Unfiltered	0.025	0.015	0.31	0.0035	0.0064	NA	NA	NA	NA	NA	NA	NA	NA	NA
As			0.89	0.0032	0.0056	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pb														
Phenolics														
2,4-Dimethylphenol			<0.012	<0.011	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylphenol			<0.012	<0.011	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
4-Methylphenol			<0.012	<0.011	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Nitrophenol			<0.012	0.053	0.045	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
4-Nitrophenol			<0.061	0.012	0.011	<0.050	<0.054	<0.050	<0.050	<0.050	<0.051	<0.051	<0.050	<0.050
Pentachlorophenol			<0.061	<0.054	<0.054	<0.054	<0.054	<0.050	<0.050	<0.050	<0.051	<0.051	<0.050	<0.050
Phenol			<0.012	<0.011	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total phenols	0.001		ND	0.065	0.056	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organics														
Methylene Chloride			<0.005	<0.005	<0.005	0.0057	J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Chloroform			<0.005	<0.005	<0.005	0.063	J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,2-Dichloroethane	0.005		<0.005	<0.005	<0.005	0.012	J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,1,1-Trichloroethane	0.2		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Carbon Tetrachloride	0.005		<0.005	<0.005	<0.005	0.014	J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,1-Dichloropropane			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Trichloroethene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Benzene	0.0007		<0.005	0.001	J	0.002	J	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Toluene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Chlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Ethylbenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
total Xylenes			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Isopropylbenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
sec-Butylbenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
cis-1,2-Dichloroethene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,3-Dichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,4-Dichlorobenzene	0.0047 (total 1,2- and 1,4-)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,2-Dichlorobenzene	0.0047 (total 1,2- and 1,4-)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Naphthalene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,2,3-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
1,2,4-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NA
Total VOCs			ND	0.001	0.002	0.0917	0.001	0.001	ND	ND	ND	ND	ND	NA

NOTES: All Concentrations in Parts Per Million (mg/l)
 * = Only detected compounds reported
 NA = Not Analyzed
 ND = Not Detected
 X = Exceeds Standard
 E = Manual Quantitation
 J = Exceeds calibration range
 B = value fell between MDL and PQL
 B = Compound detected in the Method Blank
 ** = Practical Quantitation Limit; no groundwater standard promulgated.

BORDEN, INC. - BAINBRIDGE, NEW YORK
TABLE 6
BONEYARD GROUNDWATER ANALYSIS - MAY 1996

(mg/L=ppm)	New York Groundwater Standards *	USEPA Drinking Water Standards *	MW-4	MW-17	MW-18	MW-21	WF-2A	WF-2B
			<0.0083	0.028	<0.0083	<0.0083	<0.0083	<0.0083
Formaldehyde	0.050 ** 0.0001		<0.000020	0.00007	<0.000020	<0.000022	0.00062	0.00038
PCBs								
Arachlor 1242								
Metals-Filtered								
As	0.025	0.015	<0.001	<0.001	0.0043	<0.001	<0.001	<0.001
Pb			0.0013	0.0014	0.0013	<0.001	0.0013	0.0012
Metals-Unfiltered								
As	0.025	0.015	0.0013	0.0095	0.0134	0.0922	<0.001	<0.001
Pb			0.0047	0.0128	0.0258	0.232	0.002	0.0011
Phenolics								
2,4-Dimethylphenol			<0.010	<0.010	<0.012	<0.011	<0.013	<0.011
2-Methylphenol			<0.010	<0.010	<0.012	<0.011	<0.013	<0.011
4-Methylphenol			<0.010	<0.010	<0.012	<0.011	<0.013	<0.011
2-Nitrophenol			<0.010	<0.010	<0.012	<0.011	<0.013	<0.011
4-Nitrophenol			<0.050	<0.050	<0.058	<0.053	<0.066	<0.054
Pentachlorophenol			<0.050	<0.050	<0.058	<0.053	<0.066	<0.054
Phenol			<0.010	<0.010	<0.012	<0.011	<0.013	<0.011
Total phenols	0.001		ND	ND	ND	ND	ND	ND
Volatile Organics								
Methylene Chloride	0.007	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chloroform			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichloroethane		0.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,1-Trichloroethane	0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbon Tetrachloride			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,1-Dichloropropene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Trichloroethene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Benzene	0.0007	1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene		0.1 (proposed)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorobenzene		0.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene		10	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
total Xylenes			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Isopropylbenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
sec-Butylbenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-Dichloroethene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,3-Dichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,4-Dichlorobenzene	0.0047 (total 1,2,- and 1,4-)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2-Dichlorobenzene	0.0047 (total 1,2,- and 1,4-)		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Naphthalene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2,3-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
1,2,4-Trichlorobenzene			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total VOCs			ND	ND	ND	ND	ND	ND

NOTES: All Concentrations in Parts Per Million (mg/l)

* = Only detected compounds reported

ND = Not Detected

E = Exceeds Standard

** = Exceeds calibration range

*** = Practical Quantitation Limit; no groundwater standard promulgated.

BORDEN, INC. - BAINBRIDGE, NEW YORK

TABLE 7

LAND APPLICATION AREA GROUNDWATER ANALYSIS - MAY 1996

(mg/L=ppm)	New York Groundwater Standards *	U.S.E.P.A. Drinking Water Standards *	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14
Formaldehyde	0.050 ** 0.0001		NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs			<0.000025	<0.000023	<0.000023	<0.000026	<0.000020	<0.000022	<0.000022	<0.000020	<0.000020
Arochlor 1242											
Metals-Filtered											
As	0.025	0.015	0.0027	0.0021	0.0071	<0.001	<0.001	<0.001	<0.001	<0.001	NA
Pb			0.0014	0.0022	<0.001	0.0014	0.0013	<0.001	0.0011	0.0013	NA
Metals-Unfiltered											
As	0.025	0.015	0.272	0.118	0.0809	<0.001	0.004	0.0061	0.0019	0.0014	NA
Pb			1.21	0.572	0.188	0.0024	0.0157	0.0149	0.0041	0.0034	NA
Phenolics											
2,4-Dimethylphenol			<0.012	<0.011	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010
2-Methylphenol			<0.012	<0.011	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010
4-Methylphenol			<0.012	<0.011	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010
2-Nitrophenol			<0.012	<0.011	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010
4-Nitrophenol			<0.060	<0.056	<0.050	<0.053	<0.050	<0.050	<0.055	<0.050	<0.050
Pentachlorophenol			<0.060	<0.056	<0.050	<0.053	<0.050	<0.050	<0.055	<0.050	<0.050
Phenol			<0.012	<0.011	<0.010	<0.011	<0.010	<0.010	<0.011	<0.010	<0.010
Total phenols	0.001		ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organics			NA	NA	NA	NA	NA	NA	NA	NA	NA

NOTES: All Concentrations in Parts Per Million (mg/l)

NA = Not Analyzed

ND = Not Detected

☐ = Exceeds Standard

** = Practical Quantitation Limit; no groundwater standard promulgated.

BORDEN, INC. - BAINBRIDGE, NEW YORK

TABLE 8
 PHASE II RFI
 AST AREA TEMPORARY WELL GROUNDWATER QUALITY ANALYSIS
 APRIL 1996

COMPOUND	TW-1	TW-2	TW-3	TW-4	New York Groundwater Standards	U. S. Drinking Water Standards
VOCs (8021)						
Methyl-Tert-Butyl-Ether	0.00093	<0.00088	0.0026	0.01	0.05	
Toluene	<0.00041	<0.00041	<0.00041	0.0047		1
Ethylbenzene	<0.0005	<0.0005	<0.0005	0.00051		0.7
Meta & Para- Xylene	<0.00098	<0.00098	<0.00098	0.0016		10**
Tert-Butylbenzene	<0.00062	0.0015	0.0016	0.095 D		
Sec-Butylbenzene	<0.00058	<0.00058	<0.00058	0.00082		
PAHs (8270)						
Naphthalene	<0.014	0.0006 J	0.004 J	<0.011	0.01	
Acenaphthylene	0.0008J	0.0003 J	0.004 J	<0.011		
Acenaphthene	<0.014	<0.012	0.002 J	<0.011	0.02	
Fluorene	<0.014	<0.012	0.011 J	<0.011		
Phenanthrene	0.0008J	0.001 J	0.039	<0.011		
Anthracene	<0.014	0.0007 J	0.01 J	<0.011		
Fluoranthene	0.001J	0.002 J	0.027 J	0.0007 J		
Pyrene	0.001J	0.002 J	0.037	0.001 J		
Benzo(a)Anthracene	<0.014	<0.012	0.016 J	<0.011		
Chrysene	0.001J	0.001 J	0.01 J	<0.011		
Benzo(b)Fluoranthene	0.002J	0.002 J	0.019 J	<0.011		
Benzo(a)Pyrene	0.001J	<0.012	0.013 J	<0.011	non-detectable	
Indeno (1,2,3-cd)Pyrene	<0.014	<0.012	0.005 J	<0.011		
TPH (418.1)						
Total Recoverable Petroleum Hydrocarbons	<1.1	1.2	1.2	<2		

Note: All results reported as ppm
 PCB detected as Aroclor 1242
 J - Value is detected below PQL (Practical Quantitation Limit)
 * Drinking water standard for total 1,2 and 1,4-Dichlorobenzene combined
 ** Drinking water standard for total Xylenes
 D - Quantitation determined from a diluted analysis
 - Includes only compounds detected in one or more samples
 [] - Exceeds Standard

BORDEN, INC. - BAINBRIDGE, NEW YORK

TABLE 9

PHASE II RFI

RIVER LAGOON AREA PCB RESULTS

APRIL 1996

SAMPLE	DEPTH	RL-5C	RL-5D	RL-5G	LT-BD (blind dup. of RL-5G)	RL-8D
S-1	0-2'	0.57	40	0.82	1.1	5.4
S-2	2-4'	0.14	200	0.8		130
S-3	4-6'	0.97	22	18		0.16
S-4	6-8'	0.24	0.17	<0.027		0.11
S-5	8-10'	.034 Y	0.32	<0.028		<0.029

SAMPLE	DEPTH	RL-4J	RL-2K	RL-2J
S-1	0-2'	<0.025	<0.026	.026 Y
S-2	2-4'	<0.025	<0.026	<0.027

Notes: All results reported as ppm

PCB detected as Aroclor 1242

Y - Corrected Aroclor value is between MDL and PQL

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 10
 PHASE IIRFI
 BONEYARD AREA PCB RESULTS
 APRIL 1996

SAMPLE	DEPTH	SB-14K	SB-1H	SB-16F	SB-17K	SB-16G	SB-16H
S-1	0-2'	<0.022	1.4	<0.022	0.19	0.59	<0.020
S-2	2-4'	<0.021	<0.021	<0.022	<0.021	<0.021	<0.023

Notes: All results reported in ppm
 PCB detected as Aroclor 1242
 No PCBs were detected in the equipment blank

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 11
 PHASE II RFI
 LAND APPLICATION AREA PCB RESULTS
 APRIL 1996

<u>NORTH GRID</u>				LT-BD (blind dup. of NL-2L)			
SAMPLE	DEPTH	NL-3G	NL-2L	NL-2Q	NL-1K		
S-1	0-2'	0.074	0.42	<0.025	0.12		
S-2	2-4'	<0.023	<0.021	0.062	<0.022		
S-3	4-6'	<0.021	<0.022	<0.024	0.06		
S-4	6-8'	<0.023	<0.022	<0.024	<0.024		

<u>SOUTH GRID</u>				LT-BD2 (blind dup of SL-9H)			
SAMPLE	DEPTH	SL-10B	SL-10A	SL-9I	SL-9H		
S-1	0-2'	<0.024	<0.022	<0.027	<0.024		
S-2	2-4'	<0.024	<0.023	<0.022	<0.022		
S-3	4-6'	<0.023	<0.025	<0.022	<0.022		
S-4	6-8'	<0.025	<0.027	<0.023	<0.024		<0.024

<u>CENTRAL GRID</u>							
SAMPLE	DEPTH	SL-8E	SL-8G	SL-8C	SL-9A		
S-1	0-2'	<0.023	<0.024	<0.025	0.042 Y		
S-2	2-4'	<0.022	0.027 Y	<0.022	<0.022		
S-3	4-6'	<0.022	<0.022	<0.022	<0.023		
S-4	6-8'	<0.024	<0.025	<0.024	<0.023		

<u>CENTRAL GRID</u>							
SAMPLE	DEPTH	CL-6R	CL-6N	CL-5K	CL-5J	CL-6S	CL-7D
S-1	0-2'	<0.023	<0.024	<0.026	<0.028	<0.025	<0.025
S-2	2-4'	0.053 Y	<0.023	<0.021	<0.022	<0.023	<0.022
S-3	4-6'	<0.022	<0.022	<0.024	<0.023	<0.023	<0.022
S-4	6-8'	<0.023	<0.026	<0.025	<0.023	<0.023	<0.022

Notes: All results reported as ppm
 PCB detected as Aroclor 1242
 Y - Corrected Aroclor value is between MDL and PQL

BORDEN, INC. - BAINBRIDGE, NEW YORK
TABLE 12
PHASE II RFI
RESIN EXCAVATION SOILS ANALYSIS RESULTS

COMPOUND (ppm) PHENOLICS (8270)	DUP-1 (Blind split of										RISK-BASED SCREENING LEVEL (1)
	RE-1	RE-1)	RE-2	RE-3	RE-4	RE-5	RE-6	RE-7	RE-8	RE-8	
Phenol	42 D	8.6	50 D	0.48 J	0.11 J	0.84	0.29 J	0.3 J	2.2	47,000	
2-Chlorophenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
2-Methylphenol	2.1	0.59 J	1	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85	3,900	
3- and 4-Methylphenol	1.3	0.38 J	0.83 J	<0.94	<0.82	<0.84	<0.82	<0.73	0.071 J	3,900	
2-Nitrophenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
2,4-Dimethylphenol	0.058 J	0.29 J	0.041 J	0.027 J	<0.82	<0.84	<0.82	<0.73	<0.85	1,000	
2,4-Dichlorophenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
4-Chloro-3-Methylphenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
2,4,6-Trichlorophenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
2,4,5-Trichlorophenol	<0.96	<0.92	<0.94	<0.94	<0.82	<0.84	<0.82	<0.73	<0.85		
2,4-Dinitrophenol	<4.6	<4.4	<4.6	<4.6	<4	<4.1	<4	<3.6	<4.1		
4-Nitrophenol	<4.6	<4.4	<4.6	<4.6	<4	<4.1	<4	<3.6	<4.1		
4,6-Dinitro-2-methylphenol	<4.6	<4.4	<4.6	<4.6	<4	<4.1	<4	<3.6	<4.1		
Pentachlorophenol	<4.6	<4.4	<4.6	<4.6	<4	<4.1	<4	<3.6	<4.1		
Total Phenolics	45.458	9.86	51.871	0.507	0.11	0.84	0.29	0.3	2.271		
Formaldehyde (8315)	<0.41	<0.39	<0.4	<0.4	<0.35	0.4	<0.35	<0.31	<0.36	16,000	

Notes: All results reported as ppm
(1) Developed by U.S. EPA Region 3: "Risk-based Concentration Tables", dated 7/11/94. Values calculated using standard risk models, assumptions, and soil ingestion/residential exposure scenarios.

BORDEN, INC. - BAINBRIDGE, NEW YORK
TABLE 13
PHASE II RFI
PHENOL RECOVERY AREA SOIL ANALYSIS RESULTS
APRIL 1996

COMPOUND (ppm)	PHENOL RECOVERY AREA SOIL BORINGS							Risk-based Screening Level (1)
	TS-1, S-1 0-2'	TS-1, S-2 2-4'	TS-1, S-3 4-6'	TS-2, S-1 0-2'	TS-2, S-2 2-4'	PRA-D (blind split of TS-2, S-2) 2-4'	TS-2, S-3 4-6'	
VOLATILE ORGANICS (8260)								
Chloromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Bromomethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Vinyl Chloride	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Chloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Methylene Chloride	0.077	0.024	0.15	0.046	0.039	0.066	0.15	
1,1-Dichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1-Dichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Chloroform	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,2-Dichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1,1-Trichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Carbon Tetrachloride	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1-Dichloropropene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Bromodichloromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Bromochloromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,2-Dichloropropene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Trichloroethene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Dibromochloromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1,2-Trichloromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Benzene	<0.005	<0.007	0.14	<0.006	<0.006	<0.006	<0.006	
Bromoform	<0.005	<0.007	<0.034	<0.006	0.005 BJ	<0.006	0.005 BJ	
1,2-Dibromoethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Tetrachloroethene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,3-Dichloropropene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1,2,2-Tetrachloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Toluene	0.047	0.022	0.031 J	0.004 J	0.005 J	0.016	0.055	
Chlorobenzene	<0.005	<0.007	0.065	<0.006	<0.006	<0.006	0.007	
Ethylbenzene	0.002 J	0.001 J	0.83	<0.006	<0.006	0.002 J	0.009	
Styrene	<0.005	<0.007	<0.034	<0.006	0.002 BJ	<0.006	0.001 BJ	
Xylenes (total)	0.0005 JX	<0.007	5.8 D	<0.006	0.004 BJ	0.01 X	0.006 BJ	160,000
Isopropylbenzene	0.004 J	<0.007	0.61	0.0004 J	0.003 BJ	0.004 J	0.009 B	
Bromobenzene	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
2-Chlorotoluene	<0.005	<0.007	<0.034	<0.006	0.001 J	<0.006	0.001 J	
sec-Butylbenzene	<0.005	<0.007	0.15	<0.006	0.002 J	<0.006	0.003 J	
n-Butylbenzene	<0.005	<0.007	<0.034	<0.006	0.002 BJ	<0.006	0.001 BJ BJ	
Cis-1,2-Dichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,2-Dibromo-3-chloropropane	<0.005	<0.007	<0.034	<0.006	0.002 J	<0.006	<0.006	
Dichlorodifluoromethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Trichlorofluoromethane	<0.005	<0.007	<0.034	<0.006	0.006	<0.006	0.006	
Dibromomethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,1,1,2-Tetrachloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,2,3-Trichloropropane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
n-Propylbenzene	<0.005	<0.007	0.44	<0.006	0.001 J	0.002 J	0.0009 J	
4-Chlorotoluene	<0.005	<0.007	<0.034	<0.006	0.002 J	<0.006	0.0009 J	
1,3,5-Trimethylbenzene	<0.005	<0.007	3.3 D	<0.006	0.002 BJ	0.007	0.002 BJ	35
tert-Butylbenzene	<0.005	<0.007	<0.034	<0.006	0.001 J	<0.006	<0.006	
1,2,4-Trimethylbenzene	0.002 J	<0.007	5.5 D	<0.006	0.004 BJ	0.016	0.004 BJ	39
1,3-Dichlorobenzene	<0.005	<0.007	<0.034	0.0005 J	0.011 B	0.01	0.021 B	
p-Isopropyltoluene	0.002 J	0.005 J	0.034	<0.006	0.003 BJ	0.003 J	0.004 BJ	
1,4-Dichlorobenzene	0.014	<0.007	0.005 J	0.002 J	0.038	0.044	0.08	
2,2-Dichloropropane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
1,2-Dichlorobenzene	0.018	<0.007	0.002 J	0.001 J	0.017	0.02	0.076	
Hexachlorobutadiene	<0.005	<0.007	<0.034	<0.006	<0.006	0.001 J	<0.006	
Naphthalene	0.015	0.008	<0.034	<0.006	0.024 B	0.007	0.082 B	
1,2,3-Trichlorobenzene	0.005 J	<0.007	<0.034	<0.006	0.008 B	0.002 J	0.006 B	
1,2,4-Trichlorobenzene	0.008	0.004 J	<0.034	<0.006	0.012	0.008	0.021	
Trans-1,2-Dichloroethane	<0.005	<0.007	<0.034	<0.006	<0.006	<0.006	<0.006	
Total VOCs	0.1945	0.064	17.057	0.0539	0.194	0.218	0.5498	
Formaldehyde (8315)								
	0.45	<0.33	10	<0.34	3.9	3.3	4.3	
Phenol								
Phenol	22	41 D	<0.89	1.8	290 D	160 E	110 D	47000
2-Chlorophenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
2-Methylphenol	1.1 J	1	<0.89	0.14 J	0.43 J	<3.9	<3.9	
3- and 4-Methylphenol	1.5 J	0.28 J	<0.89	0.12 J	0.51 J	0.6 J	0.48 J	
2-Nitrophenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
2,4-Dimethylphenol	<3.6	0.061 J	<0.89	0.058 J	<3.9	0.14 J	<3.9	
2,4-Dichlorophenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
4-Chloro-3-Methylphenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
2,4,6-Trichlorophenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
2,4,5-Trichlorophenol	<3.6	<0.780	<0.89	<0.8	<3.9	<3.9	<3.9	
2,4-Dinitrophenol	<18	<3.8	<4.3	<3.9	<19	<19	<19	
4-Nitrophenol	<18	<3.8	<4.3	<3.9	<19	<19	<19	
4,6-Dinitro-2-Methylphenol	<18	<3.8	<4.3	<3.9	<19	<19	<19	
Pentachlorophenol	<18	<3.8	<4.3	<3.9	<19	<19	<19	
Total Phenolics	24.6	42.341	BDL	2.118	290.94	160.74	110.48	

Notes:

All results reported as ppm
 B - Compound was detected in method blank
 J - Corrected value is between MDL and PQL (Practical Quantitation Limit)
 X - Manual quantitation
 E - Exceeds calibration range
 D - Quantitation determined from a diluted analysis
 BDL - Below Detection Limit
 (1) Developed by U.S. EPA Region 3: "Risk-based Concentration Tables," dated 7/1/94. Values calculated using standard risk models, assumptions, and soil ingestion/residential exposure scenarios.

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 13 (continued)
 PHASE II RFI
 PHENOL RECOVERY AREA SOIL ANALYSIS RESULTS
 APRIL 1996
 PHENOL RECOVERY AREA SOIL BORINGS

COMPOUND (ppm)	TS-3, S-1	TS-3, S-2	TS-3, S-3	TS-4, S-1	TS-4, S-2	TS-4, S-3	Risk-based Screening Level (1)
	0-2'	2-4'	4-6'	0-2'	2-4'	4-6'	
VOLATILE ORGANICS (8260)							
Chloromethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Bromomethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Vinyl Chloride	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Chloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Methylene Chloride	0.078	0.1	0.11	0.02	0.013	0.008	
1,1-Dichloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,1-Dichloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Chloroform	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,2-Dichloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,1,1-Trichloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Carbon Tetrachloride	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,1-Dichloropropene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Bromodichloromethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Bromochloromethane	<0.006	0.002 J	<0.006	<0.006	<0.006	<0.006	
1,2-Dichloropropane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Trichloroethene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Dibromochloromethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,1,2-Trichloromethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Benzene	<0.006	<0.006	0.002 J	<0.006	<0.006	<0.006	
Bromoform	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,2-Dibromoethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Tetrachloroethene	<0.006	<0.006	<0.006	0.001 J	0.001 J	0.003 J	
1,3-Dichloropropane	<0.006	0.001 J	0.002 J	<0.006	<0.006	<0.006	
1,1,2,2-Tetrachloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Toluene	0.034	0.054	0.6 E	0.018	0.007	0.018	
Chlorobenzene	<0.006	<0.006	0.0009 J	<0.006	<0.006	<0.006	
Ethylbenzene	<0.006	0.005 J	0.11	<0.006	<0.006	<0.006	
Styrene	0.001 BJ	0.001 BJ	0.002 BJ	0.001 BJ	0.001 BJ	0.001 BJ	
Xylenes (total)	0.002 BJ	0.003 BJ	0.012	0.001 BJ	0.001 BJ	0.003 J	160,000
Isopropylbenzene	0.003 BJ	0.004 BJ	0.015 B	0.0009 BJ	0.0009 BJ	0.0005 J	
Bromobenzene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
2-Chlorotoluene	<0.006	<0.006	0.001 J	<0.006	<0.006	<0.006	
sec-Butylbenzene	0.001 J	0.001 J	0.005 J	0.0006 J	<0.006	<0.006	
n-Butylbenzene	0.001 BJ	0.001 BJ	0.001 BJ	0.0009 BJ	<0.006	<0.006	
Cis-1,2-Dichloroethene	<0.006	0.001 J J	0.001 J	<0.006	<0.006	<0.006	
1,2-Dibromo-3-chloropropane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Dichlorodifluoromethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Trichlorofluoromethane	0.006	0.007	0.007	0.007	0.006	<0.006	
Dibromomethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,1,1,2-Tetrachloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,2,3-Trichloropropane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
n-Propylbenzene	0.0007 J	<0.006	0.0009 J	<0.006	<0.006	<0.006	
4-Chlorotoluene	<0.006	<0.006	0.001 J	<0.006	<0.006	<0.006	
1,3,5-Trimethylbenzene	0.001 BJ	0.001 BJ	0.002 BJ	0.0007 BJ	0.0007 BJ	0.002 J	35
tert-Butylbenzene	<0.006	<0.006	0.0008 J	<0.006	<0.006	<0.006	
1,2,4-Trimethylbenzene	0.003 BJ	0.003 BJ	0.005 BJ	0.002 BJ	0.001 BJ	0.004 J	39
1,3-Dichlorobenzene	0.007 B	0.031 B	0.063 B	0.001 BJ	0.0009 BJ	0.0005 J	
p-Isopropyltoluene	0.003 BJ	0.007 B	0.011 B	0.0008 BJ	0.0006 BJ	0.0006 J	
1,4-Dichlorobenzene	0.039	0.11	0.24 E	0.005 J	0.003 J	<0.006	
2,2-Dichloropropane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
1,2-Dichlorobenzene	0.026	0.03	0.18	<0.006	<0.006	0.0008 J	
Hexachlorobutadiene	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Naphthalene	0.042 B	0.032 B	0.16 B	0.019 B	0.005 BJ	<0.006	
1,2,3-Trichlorobenzene	0.009 B	0.009 B	0.005 BJ	0.003 BJ	0.002 BJ	<0.006	
1,2,4-Trichlorobenzene	0.015	0.017	0.047	<0.006	<0.006	<0.006	
Trans-1,2-Dichloroethane	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	
Total VOCs	0.2717	0.419	1.5846	0.0819	0.0431	0.0404	
Formaldehyde (8315)							
Formaldehyde	0.62	3.9	2.8	<0.32	<0.032	<0.33	
Phenols							
Phenol	27 D	12	5.2	0.56 J	0.35 J	2.7	47000
2-Chlorophenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
2- Methylphenol	0.29 J	0.21 J	1.2	<0.74	<0.76	0.11 J	
3- and 4-Methylphenol	0.4 J	0.23 J	3.8	<0.74	<0.76	0.08 J	
2-Nitrophenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
2,4-Dimethylphenol	0.19 J	0.04 J	0.045 J	<0.74	<0.76	<0.77	
2,4-Dichlorophenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
4-Chloro-3-Methylphenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
2,4,6-Trichlorophenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
2,4,5-Trichlorophenol	<0.77	<0.82	<0.78	<0.74	<0.76	<0.77	
2,4-Dinitrophenol	<3.8	<4	<3.8	<3.6	<3.7	<3.7	
4-Nitrophenol	<3.8	<4	<3.8	<3.6	<3.7	<3.7	
4,6-Dinitro-2-Methylphenol	<3.8	<4	<3.8	<3.6	<3.7	<3.7	
Pentachlorophenol	<3.8	<4	<3.8	<3.6	<3.7	<3.7	
Total Phenolics	27.88	12.48	10.245	0.56	0.35	2.89	

Notes: All results reported as ppm
 B - Compound was detected in method blank
 J - Corrected value is between MDL and PQL (Practical Quantitation Limit)
 X - Manual quantitation
 E - Exceeds calibration range
 D - Quantitation determined from a diluted analysis
 BDL - Below Detection Limit
 (1) Developed by U.S. EPA Region 3: "Risk-based Concentration Tables," dated 7/11/94. Values calculated using standard risk models, assumptions, and soil ingestion/residential exposure scenarios.

BORDEN, INC. - BAINBRIDGE, NEW YORK
 TABLE 14
 PHASE II RFI
 FORMER RESIN PLANT WASTEWATER SEWERS ANALYSIS RESULTS

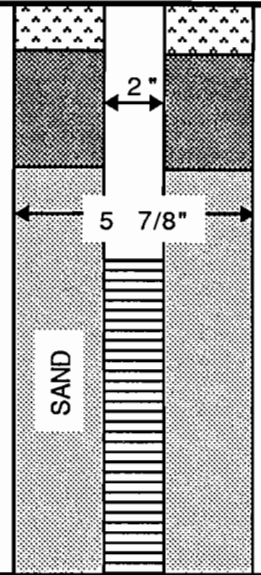
COMPOUND	15" SEWER		24" SEWER	
	WATER	SEDIMENT	WATER	SEDIMENT
	PSW-1	PSS-1	PSW-2	PSS-2
VOLATILE ORGANICS				
Chloromethane	<0.005	<0.007	<0.01	<0.007
Bromomethane	<0.005	<0.007	<0.01	<0.007
Vinyl Chloride	<0.005	<0.007	<0.01	<0.007
Chloroethane	<0.005	<0.007	<0.01	<0.007
Methylene Chloride	<0.005	0.048	0.0007 J	<0.007
1,1-Dichloroethane	<0.005	<0.007	<0.01	<0.007
1,1-Dichloroethane	<0.005	<0.007	<0.01	<0.007
Chloroform	<0.005	<0.007	0.001 J	<0.007
1,2-Dichloroethane	<0.005	<0.007	0.0003 J	<0.007
1,1,1-Trichloroethane	<0.005	<0.007	<0.01	<0.007
Carbon Tetrachloride	<0.005	<0.007	<0.01	<0.007
1,1-Dichloropropene	<0.005	<0.007	NA	<0.007
Bromodichloromethane	<0.005	<0.007	<0.01	<0.007
Bromochloromethane	<0.005	<0.007	NA	<0.007
1,2-Dichloropropane	<0.005	<0.007	<0.01	<0.007
Trichloroethane	<0.005	<0.007	<0.01	<0.007
Dibromochloromethane	<0.005	<0.007	<0.01	<0.007
1,1,2-Trichloromethane	<0.005	<0.007	0.0009 J	<0.007
Benzene	<0.005	0.01	<0.01	<0.007
Bromoform	<0.005	<0.007	<0.01	<0.007
1,2-Dibromoethane	<0.005	<0.007	NA	<0.007
Tetrachloroethane	<0.005	<0.007	<0.01	<0.007
1,3-Dichloropropane	<0.005	<0.007	NA	<0.007
1,1,2,2-Tetrachloroethane	<0.005	<0.007	0.001 J	<0.007
Toluene	<0.005	0.06	<0.01	<0.007
Chlorobenzene	<0.005	0.16	<0.01	<0.007
Ethylbenzene	<0.005	0.17	<0.01	<0.007
Styrene	<0.005	<0.007	<0.01	<0.007
Xylene (total)	<0.005	0.022 DJ	0.0004 JX	<0.007
Isopropylbenzene	<0.005	0.5 E	NA	0.002 J
Bromobenzene	<0.005	<0.007	NA	<0.007
2-Chlorotoluene	<0.005	<0.007	NA	<0.007
sec-Butylbenzene	<0.005	0.069	NA	0.002 J
n-Butylbenzene	<0.005	0.006 J	NA	<0.007
Cis-1,2-Dichloroethane	<0.005	<0.007	NA	<0.007
1,2-Dibromo-3-chloropropane	<0.005	<0.007	NA	<0.007
Dichlorodifluoromethane	<0.005	<0.007	NA	<0.007
Trichlorodifluoromethane	<0.005	<0.007	NA	<0.007
Dibromomethane	<0.005	<0.007	NA	<0.007
1,1,1,2-Tetrachloroethane	<0.005	<0.007	NA	<0.007
1,2,3-Trichloropropane	<0.005	<0.007	NA	<0.007
n-Propylbenzene	<0.005	0.002 J	NA	<0.007
4-Chlorotoluene	<0.005	<0.007	NA	<0.007
1,3,5-Trimethylbenzene	<0.005	<0.007	NA	<0.007
tert-Butylbenzene	<0.005	<0.007	NA	<0.007
1,2,4-Trimethylbenzene	<0.005	0.016	NA	<0.007
1,3-Dichlorobenzene	<0.005	0.076	NA	0.0009 J
p-Isopropyltoluene	<0.005	0.045	NA	0.001 J
1,4-Dichlorobenzene	<0.005	0.64 D	NA	0.004 J
2,2-Dichloropropane	<0.005	<0.007	NA	<0.007
1,2-Dichlorobenzene	<0.005	0.043	NA	<0.007
Hexachlorobutadiene	<0.005	<0.007	NA	<0.007
Naphthalene	<0.005	0.027	NA	0.002 J
1,2,3-Trichlorobenzene	<0.005	<0.007	NA	<0.007
1,2,4-Trichlorobenzene	<0.005	<0.007	NA	<0.007
Trans-1,2-Dichloroethane	<0.005	<0.007	NA	<0.007
Acetone	NA	NA	<0.01	NA
Carbon Disulfide	NA	NA	<0.01	NA
Trans-1,2-Dichloroethane	NA	NA	<0.01	NA
2-Butanone	NA	NA	<0.01	NA
Vinyl Acetate	NA	NA	<0.01	NA
Cis-1,3-Dichloropropene	NA	NA	<0.01	NA
Trans-1,3-Dichloropropene	NA	NA	<0.01	NA
2-Chloroethylvinylether	NA	NA	<0.01	NA
4-Methyl-2-Pentanone	NA	NA	<0.01	NA
2-Hexanone	NA	NA	<0.01	NA
Total VOCs	BDL	1.894	0.0043	BDL
PCBs (8080)	0.0003	870	0.00028	5.8
Formaldehyde (8315)	<0.0083	28	<0.05	9.3
PHENOLICS (8270)				
Phenol	<0.01	4.3	<0.01	2.2
2-Chlorophenol	<0.01	<0.94	<0.01	<0.92
2-Methylphenol	<0.01	0.23 J	<0.01	<0.92
4-Methylphenol	<0.01	0.3 J	<0.01	<0.92
2-Nitrophenol	<0.01	<0.94	<0.01	<0.92
2,4-Dimethylphenol	<0.01	0.22 J	<0.01	<0.92
2,4-Dichlorophenol	<0.01	<0.94	<0.01	<0.92
4-Chloro-3-Methylphenol	<0.01	<0.94	<0.01	<0.92
2,4,6-Trichlorophenol	<0.01	<0.94	<0.01	<0.92
2,4,5-Trichlorophenol	<0.01	<0.94	<0.025	<0.92
2,4-Dinitrophenol	<0.05	<4.6	<0.025	<4.4
4-Nitrophenol	<0.05	<4.6	<0.025	<4.4
4,6-Dinitro-2-methylphenol	<0.05	<4.6	<0.025	<4.4
Pentachlorophenol	<0.05	<4.6	<0.025	<4.4
Total Phenolics	BDL	5.05	BDL	2.2

Notes: All results reported as ppm
 B - Compound was detected in method blank
 J - Corrected value is between MDL and PQL (Practical Quantitation Limit)
 X - Manual quantitation
 E - Exceeds calibration range
 D - Quantitation determined from a diluted analysis
 BDL - Below Detection Limit
 NA - Not Analyzed

APPENDIX A

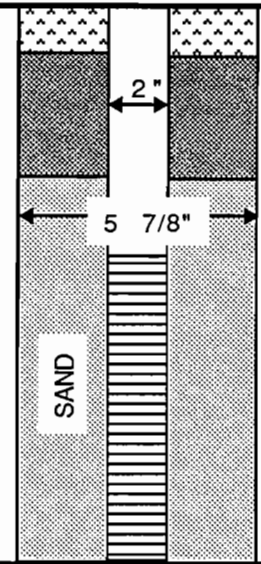
PHASE II MONITORING WELL INSTALLATION LOGS

T.M. GATES, INC.		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG		MW-15D (WELL NO.)	
PROJECT: BORDEN-BAINBRIDGE, NY, SUPPLEMENTAL RFI				SHT. NO. 2 OF 2	
CLIENT: BORDEN SERVICES COMPANY				PROJ. NO. 96-01-007	
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
22	S-4	4	M L / SM & CL	<p>Brown and gray silt, little to some very fine-grained sand, wet, firm. Noted 0.08' to 0.2' thick xbed sets throughout most of this interval. Noted ten (10) interbeds of red-brown/purple clay (CL) ranging from 0.05' to 0.20' thick. Material from S-8 was notably sandier than that from S-4, but the change was gradational rather than abrupt.</p> <p>S-5 Recovery = 1.4'. S-6 Recovery = 1.65'. S-7 Recovery = 1.6'. S-8 Recovery = Not recorded.</p> <p style="text-align: right;">Total depth = 30.5'</p>	
		4			
23	S-5	5			
		6			
24		5			
		7			
25	S-6	5			
		7			
26		6			
		7			
27	S-6	7			
		7			
		7			
28		5			
29	S-8	4			
		4			
30		3			
31				<p style="text-align: center;"><u>WELL CONSTRUCTION</u></p> <p>4/2/96: Drill 12.5" diameter hole from 0' to 20', install and grout 6" I.D. PVC casing.</p> <p>4/4/96: Drill 5.875" diameter hole to total depth, install well as noted below.</p> <p>2" 0.01 slot pvc well screen: 30.5' - 25.5'. 2" pvc riser: 25.5'-surface filter pack (Morie #00): 30.5' - 24.0'. bentonite pellets: 24.0' - 22.2'. cement/bentonite grout: 22.2' - 3.0'. concrete surface seal: 3.0'-surface</p>	
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					



T.M. GATES, INC		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG			MW-23D (WELL NO.)
PROJECT: BAINBRIDGE, NY - RFI SUPPLEMENTAL					SHT. NO. 1 OF 1
CLIENT: BORDEN, INC					PROJ. NO. 96-01-007
BORING CONTRACTOR: EMPIRE SOIL INVESTIGATIONS, INC.					DATE START 4/2/96
TOP OF CASING ELEVATION:					DATE FINISH 4/5/96
GROUND ELEVATION: DATUM: MEAN SEA LEVEL					DRILLER J. LEONHARDT
DRILLING METHOD: 8 1/4" HOLLOW STEM AUGER: 0' - 20', 5 7/8" ROLLER BIT: 20' - T.D.					TMG-REP. JNS
SAMPLING METHOD: SPLIT SPOON BY ASTM METHOD D-1586					
CORING METHOD:					
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
1					
2					
3					
4					
5	S-1	8	ML	Gray silt, wet, firm. Recovery = 0.85'.	
6		8			
7		7			
8		9			
9					
10					
11	S-2	2	ML	Same as above. Noted 0.01' lamina of reddish-purple clay (CL) at 11.9'. Recovery = 1.5'.	
12		2			
13		3			
14					
15					
16	S-3	2	ML	Gray silt, wet, loose. Noted well-defined very thin (0.01') horizontal laminae of alternating red silt and gray silt at 16.0' to 17.0'. Recovery = 1.35'.	
17		4			
18		5			
19					
20				(6" I. D. PVC Surface casing 0' - 20')	
21	S-4	2	ML	Similar to above, with very fine-grained sand. Noted xbed sets (0.08'-0.15') throughout. Recovery = 1.8'.	
		3	SM		
		3			

T.M. GATES, INC.		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG		MW-23D (WELL NO.)	
PROJECT: BORDEN-BAINBRIDGE, NY. SUPPLEMENTAL RFI				SHT. NO. 2 OF 2	
CLIENT: BORDEN SERVICES COMPANY				PROJ. NO. 96-01-007	
DEPTH F.T.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
22	S-4	3	ML & CL	<p>Brown and gray silt, wet, firm. Noted 0.08' to 0.2' thick xbed sets throughout most of this interval. Noted several interbeds of red-purple clay (CL) ranging from 0.02' to 0.30' thick.</p> <p>S-5 Recovery = 1.25'. S-6 Recovery = 1.55'. S-7 Recovery = 1.75'. S-8 Recovery = 1.8'.</p> <p style="text-align: right;">Total depth = 30.3'</p>	
		6			
23	S-5	7			
		6			
		6			
24		4			
		4			
25	S-6	5			
		5			
26		5			
		6			
27	S-6	7			
		5			
28		8			
		6			
29	S-8	5			
		6			
30					
31					
32					
<u>WELL CONSTRUCTION</u>					
33				4/2/96: Drill 12.5" diameter hole from 0' to 20', install and grout 6" I.D. PVC casing.	
34				4/4/96: Drill 5.875" diameter hole to total depth, install well as noted below.	
35				2" 0.01 slot pvc well screen: 30.3' - 25.3'.	
36				2" pvc riser: 25.3'-surface	
37				filter pack (Morie #00): 30.3' - 24.1'.	
38				bentonite pellets: 24.1' - 22.2'.	
39				cement/bentonite grout: 22.2' - 3.0'.	
40				concrete surface seal: 3.0'-surface	
41					
42					
43					
44					
45					



T.M. GATES, INC	INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG	MW-29D (WELL NO.)
PROJECT: BAINBRIDGE, NY - RFI SUPPLEMENTAL		SHT. NO. 1 OF 1
CLIENT: BORDEN, INC		PROJ. NO. 96-01-007
BORING CONTRACTOR: EMPIRE SOIL INVESTIGATIONS, INC.		DATE START 1/3/96
TOP OF CASING ELEVATION:		DATE FINISH 4/5/96
GROUND ELEVATION: DATUM: MEAN SEA LEVEL		DRILLER J. LEONHARDT
DRILLING METHOD: 8 1/4" HOLLOW STEM AUGER: 0' - 20', 5 7/8" ROLLER BIT: 20' - T.D.		TMG-REP. JNS
SAMPLING METHOD: SPLIT SPOON BY ASTM METHOD D-1586		
CORING METHOD:		

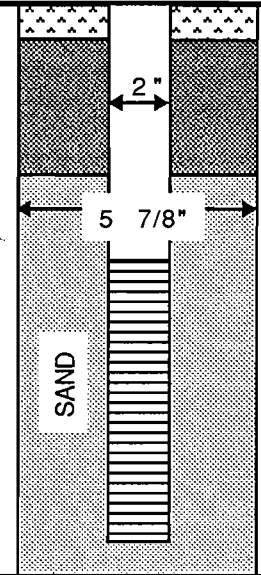
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
1					
2					
3					
4					
5		12	SM	Brown and gray silty very fine-grained sand, little to some coarse-grained sand, trace gravel, moist, loose. Recovery = 1.2'.	
6	S-1	6			
7		2			
8		3			
9					
10		24	SW	Brown and gray sand and gravel, wet, very dense. Recovery = 0.8'.	
11	S-2	29			
12		26			
13		16			
14					
15		5	ML	Gray and reddish-brown silt, wet, firm. Noted 0.02' thick lamina of reddish-purple clay (CL) at 16.0'. Recovery = 1.55'.	
16	S-3	4			
17		3			
18		5			
19					
20		5	ML	Similar to above, with trace very fine-grained sand. Recovery = 1.1'.	
21	S-4	4			
21		3			

(6" I. D. PVC Surface casing 0' - 20')

CONCRETE GROUT

12.5"
6"
2"

T.M. GATES, INC.		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG		MW-29D (WELL NO.)	
PROJECT: BORDEN-BAINBRIDGE, NY, SUPPLEMENTAL RFI				SHT. NO. 2 OF 2	
CLIENT: BORDEN SERVICES COMPANY				PROJ. NO. 96-01-007	
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
22	S-4	5	ML/ SM & CL	<p>Brown and gray silt, little to some very fine-grained sand, wet, firm. Noted 0.08' to 0.2' thick xbed sets throughout most of this interval. Noted several interbeds of red-purple clay (CL) ranging from 0.01' to 0.30' thick. Material from S-8 was notably sandier than that from S-4, but the change was gradational rather than abrupt.</p> <p>S-5 Recovery = 1.4'. S-6 Recovery = Not recorded. S-7 Recovery = Not recorded. S-8 Recovery = Not recorded.</p> <p style="text-align: right;"><u>Total depth = 30.5'</u></p>	
		6			
23	S-5	4			
		5			
		3			
24		6			
		5			
25	S-6	3			
		4			
26		4			
		3			
27	S-6	8			
		7			
28		6			
29	S-8	5			
		6			
30		5			
31			<p style="text-align: center;"><u>WELL CONSTRUCTION</u></p> <p>4/3/96: Drill 12.5" diameter hole from 0' to 20', install and grout 6" I.D. PVC casing.</p> <p>4/4/96: Drill 5.875" diameter hole to total depth, install well as noted below.</p> <p>2" 0.01 slot pvc well screen: 30.0' - 25.0'. 2" pvc riser: 25.5'-surface filter pack (Morie #00): 30.5' - 24.1'. bentonite pellets: 24.1' - 22.0'. cement/bentonite grout: 22.0' - 3.0'. concrete surface seal: 3.0'-surface</p>		
32					
33					
34					
35					
36					
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38					
39					
40					
41					
42					
43					
44					
45					



T.M. GATES, INC		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG			MW-31 (WELL NO.)
PROJECT: BAINBRIDGE, NY - RFI SUPPLEMENTAL					SHT. NO. 1 OF 1
CLIENT: BORDEN, INC					PROJ. NO. 96-01-007
BORING CONTRACTOR: T.M. GATES, INC.					DATE START 4/2/96
TOP OF CASING ELEVATION: 998.04					DATE FINISH 4/2/96
GROUND ELEVATION: DATUM: MEAN SEA LEVEL					DRILLER BG
DRILLING METHOD: HOLLOW STEM AUGER					TMG-REP. TKW
SAMPLING METHOD: SPLIT SPOON BY ASTM METHOD D-1586					
CORING METHOD:					
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	
1	S-1				<p>CONCRETE GROUT ← 2" →</p> <p>BENTONITE PELLETT SEAL</p> <p>← 8" →</p> <p>COARSE SAND</p>
2	S-2				
3	S-3				
4	S-4			BROWN SILTY CLAY, SOME GRAVEL, MOIST	
5	S-5				
6	S-6				
7	S-7				
8	S-8				
9	S-9				
10	S-10				
11	S-11				
12	S-12				
13					
14					
15					
16					
17				2 inch, 0.01 slot PVC well screen: 14'-4'	
18				2 inch PVC riser: 4'-3.5' above	
19				coarse sand: 14'-3'	
20				bentonite pellet seal: 3'-2'	
21				concrete grout: 2'-0'	

T.M. GATES, INC		INVESTIGATIVE BORING & MONITORING WELL INSTALLATION LOG			MW-34 (WELL NO.)
PROJECT: BAINBRIDGE, NY				SHT. NO. 1 OF 1	
CLIENT: BORDEN, INC				PROJ. NO. 96-01-007	
BORING CONTRACTOR: T.M. GATES, INC.				DATE START 4/5/96	
TOP OF CASING ELEVATION: 992.09				DATE FINISH 4/5/96	
GROUND ELEVATION:		DATUM: MEAN SEA LEVEL		DRILLER BG	
DRILLING METHOD: HOLLOW STEM AUGER				TMG-REP. TKW	
SAMPLING METHOD: SPLIT SPOON BY ASTM METHOD D-1586					
CORING METHOD:					
DEPTH FT.	SAMPLE NO.	BLOWS ON SAMPLE SPOON PER 6"	SYMBOL	IDENTIFICATION & REMARKS	BOLT-DOWN, FLUSH COVER. LOCKING PLUG
1		3		BROWN CLAYEY SILT	
		3			
		2			
		2			
2				BENTONITE PELLET SEAL	
3					
4					
5					
6		14		GREY SILTY SAND, SOME GRAVEL	
		16			
		17			
		20			
7					
8					
9					
10					
11		8		BROWN CLAYEY SILT, WET	
		7			
		7			
		8			
12					
13					
14					
15					
16		4		BROWN CLAYEY SILT, WET	
		4			
		4			
		4			
17					
18				2 inch, 0.01 slot PVC well screen: 13'-3'	
19				2 inch PVC riser: 3'-0'	
20				coarse sand: 13'-2'	
21				bentonite pellet seal: 2'-1'	
				concrete grout: 1'-0'	

