Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision
Magnusonic Devices, Inc.
Hicksville, Nassau County
Site Number 1-30-031

March 1999

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* JOHN P. CAHILL, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

Magnusonic Devices, Inc. Inactive Hazardous Waste Site
City of Hicksville, Town of Oyster Bay, Nassau County, New York
Site No. 1-30-031
March, 1999

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedial action for the Magnusonic Devices, Inc. Inactive Hazardous Waste Disposal Site which was chosen in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based upon the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Magnusonic Devices, Inc. Inactive Hazardous Waste Site and upon public input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. A bibliography of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action in the ROD, presents a potential threat to public health and the environment.

Description of Selected Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) for the Magnusonic Devices, Inc. Site and the criteria identified for evaluation of alternatives, the NYSDEC has selected excavation and off-site disposal of the fill material in Area 3 and the contaminated soil from catch basins in Areas 2, 4 and 5. The components of the remedy (Alternative 2) are as follows:

- Asphalt removal from Area 3 with off-site disposal at an appropriate facility.
- Mechanical excavation of fill material from Area 3, hazardous waste from the middle east-side catch basin in Area 2, and non-hazardous contaminated soil from catch basins

facilities.

- Backfill all excavations with clean fill material.
- Repave Area 3 with asphalt. Replace excavated soil with clean soil in storm drains in Areas 2, 4, and 5.
- Monitor groundwater semi-annually for a period of two years.

New York State Department of Health Acceptance

The New York State Department of Health concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 29, 1999
Date

Michael J. O'Toole, Jr., Director
Director of Environmental Remediation

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RECORD OF DECISION

MAGNUSONIC DEVICES, INC.
Town of Oyster Bay, City of Hicksville, Nassau County, New York
Site No. 1-30-031
March, 1999

SECTION 1: SITE LOCATION AND DESCRIPTION

Magnusonic Devices, Inc. Site #1-30-031 is located at 290 Duffy Avenue in the City of Hicksville, Town of Oyster Bay, Nassau County, New York. Please refer to Figure 1 for the location of the Site. The Site consists of a three acre parcel of land containing a 53,000 sq. ft. concrete building situated on the central and southern portions of the property (Figure 2). The entire Site is paved or covered by the building structure. The northernmost and southernmost portions of the Site were previously used as parking areas. Adjacent to the Site are industrial and commercial properties to the north, east and west. Residential lots are located to the south, across Duffy Avenue, and are the nearest non-industrial, non-commercial properties relative to the site.

Four inactive hazardous waste disposal sites are located within one mile of the Site. They are:

- Alsy Manufacturing, Inc., adjacent to the east
- General Instruments Corp., 0.9 miles to the northwest
- Anchor Lith Kem Ko (formerly Anchor Chem), 0.6 miles to the north
- Air Techniques, Inc. (Old Sylvania Site), 0.9 miles to the west

AGO Associates, a construction debris landfill and former inactive hazardous waste disposal site, is located adjacent to and upgradient (north) of Magnusonic Devices.

A public park (Cantiague Park) is located approximately 1,500 feet north of the Site. A small public park is located approximately 2,000 feet south of the Site. Several schools are located in the vicinity of the Site. The nearest school is an elementary school located approximately ½ mile northeast of the Site.

SECTION 2: SITE HISTORY

2.1: History of Operations

Magnusonic Devices manufactured computer parts at this location. Processes included photographic etching of thin sheet metal as well as copper and chrome electroplating. The facility used a physical-chemical treatment system that processed rinse waters from its plating and chemical milling operations, and discharged the treated wastewater, which contained metals and solvents, into on-site leaching pools.

Plating wastes containing chromium and lead were discharged into a leaching pool which, in this document, is referred to as the middle east-side catch basin (see Figure 3). A ferric hydroxide sludge which contained lead and iron was generated as part of the facility's processes and discovered beneath the parking lot at the northern portion of the Site (the "fill area"). This portion of the Site predominately contains this ferric hydroxide sludge (the "fill material").

Prior to 1962: The Site was undeveloped land.

1947: Site owned by Master Craftsman, Inc..

1947-1948: Site owned by Long Island Lighting Company.

1948-1950: Site owned by W.J. Sloane.

1950-1961: Site owned by Balatem Corporation.

1962: Mr. Milton S. Stevens purchased the property and built a single story warehouse to operate a direct mail business.

1962-1986: Site owned by Mr. Milton S. Stevens.

1962-1976: A direct mail business operated at the Site.

1977-87: Magnusonic Devices occupied the Site as a manufacturer of computer tape recording heads.

1986-1988: ICL owned the Site.

1987-1995: Building was vacant.

1988-1995: SmithKline Beecham owned the Site.

1995: Site purchased by 290 Industrial Co., the current owner.

1995-Present: Building occupied and used as a warehouse with no known discharges to the environment.

2.2: Response Actions at the Site to Date

1981-1985: Documented discharges of solvent and metal process water in violation of New York State Pollution Discharge Elimination System (SPDES) Permit limitations into two subsurface leaching pools located outside of the northwest corner of the building.

1984: Site listed by the NYSDEC as a class "2a" site.

1986: Facility hooked up to Nassau County Sewer System.

?-1987: Discharges of plating wastes to the leaching pool (middle-east side catch basin) on the eastern side of the building.

1987: RCRA closure of the facility. The floor of the plating room, which was the source area of the plating waste discharges, was contaminated by heavy metals and removed as hazardous waste.

March, 1988: Site owner (ICL) entered into an order on consent with NYSDEC for a Phase II Investigation.

1989: A Potentially Responsible Party (PRP) funded Phase II Investigation was completed at the Site. Results revealed 1,650 ppm of chromium, 1,170 ppm of lead, 54,900 ppm of copper, and 11,500 ppm of zinc in the soil in the middle east-side storm drain. Lead, at up to 1,322 ppm, and iron, at up to 32,000 ppm, were discovered in the fill area at the northern portion of the Site, which is now covered by asphalt pavement. Groundwater samples taken from newly installed monitoring wells revealed low levels of metals as well as 1,1,1-trichloroethane at up to 72 ppb in the groundwater at the eastern portion of the Site, adjacent to Alsy Manufacturing Site #1-30-027. No source areas for the 1,1,1-trichloroethane were identified at the Magnusonic Site. Please see figures 3 and 4 for a summary of the Phase II Investigation soil and groundwater sampling results.

1990: Site was reclassified by the NYSDEC to a class "2" site based on groundwater data generated from the Phase II Investigation.

1992: A PRP funded Preliminary Sampling Investigation was performed at the Site in preparation of an Interim Remedial Measure (IRM) workplan for on-site leaching pools. This investigation included sampling of soils in the two northern loading dock leaching pools, the middle east-side catch basin, and Cantiague Park (metals only) for a background sample. Significantly elevated concentrations of metals were detected in sludge/sediment from the middle east-side catch basin, but it was determined that an IRM was not necessary at that time.

July 20, 1993: SmithKline Beecham entered into an order on consent with NYSDEC for a Remedial Investigation/Feasibility Study (RI/FS) at the Site.

September 19, 1994: Public Meeting was held for the RI/FS Work Plan.

December 1994-March 1995: RI field work was conducted.

March, 1995: RI was completed. Results are summarized in Section 3.

June, 1996: Supplemental Area 3 (the fill area) Investigation was conducted.

August, 1996: Results of the Supplemental Area 3 Investigation are evaluated.

January, 1997: Limited Risk Assessment was completed and submitted to the NYSDEC.

February, 1997: Workplan for the remediation of the middle east side catch basin was reviewed by NYSDEC.

May, 1997: NYSDEC received and reviewed supplemental sampling information for the middle-east side catch basin.

June-August, 1997: Draft Feasibility Study Report was received, reviewed, and commented on by NYSDEC.

January, 1998: Final Feasibility Study Report approved by NYSDEC.

February 10, 1998: Public Comment period for the PRAP began.

February 24, 1998: Public Meeting for the PRAP was held.

March 11, 1998: Public Comment period for the PRAP ended.

October, 1998: NYSDEC approved a work plan entitled "Storm Drain Soil Vertical Profile Work Plan"

December, 1998: The "Storm Drain Vertical Profile Work Plan" was implemented.

February, 1999: NYSDEC received the "February 17, 1999 Storm Drain Soil Vertical Profiling Investigation Results and Risk-Based Analysis."

SECTION 3: CURRENT STATUS

In response to a determination that the presence of CERCLA hazardous substances at the Site presents the potential for a significant threat to human health or the environment, the potentially responsible party (PRP) has recently completed a Remedial Investigation Report, a Supplemental Area 3 Investigation Report, a Limited Risk Assessment, a Feasibility Study, and a Storm Drain Soil Vertical Profiling Investigation Results and Risk-Based Analysis Report.

3.1: Summary of the Remedial Investigation and Storm Drain Soil Vertical Profiling

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the Site. The RI evaluated five distinct potential source areas (see figure 2). These areas are:

Area 1: Loading dock drywells and primary leaching pools
Area 2: East-side catch basins
Area 3: Rear parking area
Area 4: Northern catch basin
Area 5: Southern catch basin and sanitary system

The RI was conducted in two phases. The first phase was conducted between December 1994 and March, 1995. The second phase, or supplemental soils investigation, was conducted during June, 1996. Vertical profile soil sampling was conducted in December, 1998. A Remedial Investigation Report has been prepared by Roux Associates, Inc., on behalf of SmithKline Beecham, describing the field activities and findings of the RI in detail. Data from the supplemental soils investigation are contained in the

Supplemental Area 3 Investigation Report, Magnusonic Devices, Inc., Hicksville, New York and are not contained in the Remedial Investigation Report.

The RI investigation included the following activities:

- Water level measurements were taken from all monitoring wells at the Site and groundwater flow direction was confirmed.

- A magnetometer survey was conducted within the "fill area," located in the rear parking area of the Site.

- A soil gas survey was conducted throughout the Site, outside of the areas previously identified as areas of potential contamination (Figure 2). A total of twenty soil gas points were installed at the Site.

- A soil boring/sampling program was conducted at the five separate potential source areas (Figure 2). A total of 29 soil borings were installed throughout the Site. All but one were installed using the Geoprobe method. One boring was installed with a hollow-stem auger.

- Four on site groundwater monitoring wells (Figure 2) were installed by hollow-stem auger method. One of these wells (a "shallow" well) was screened at the water table and three ("deep" wells) were screened deeper, near the interface of the Upper Glacial and Magothy aquifers. Sampling of all new and existing wells was conducted.

The Supplemental Soils Investigation included the following activities:

- Three composite soil samples were taken from the "fill area" at the Site and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals to determine if the fill material is a characteristic hazardous waste.

The Storm Drain Soils Vertical Profiling Investigation included the following activities:

- Four soil borings were installed through on-site catch basins using a hollow-stem auger drill rig.

- Soil samples from the four contaminated catch basins were acquired at depth and analyzed for the metals of concern. Sample data were evaluated to ascertain the vertical profile of soil quality.

To determine which media (soil, groundwater, etc.) contain contaminants at significant concentrations, the RI analytical data were compared to environmental Standards, Criteria, and Guidance (SCGs). Groundwater and drinking water SCGs identified for the Magnusonic Devices site were based on NYSDEC Ambient Water Quality Standards and Guidance Values and Part V of the New York State Sanitary Code. NYSDEC TAGM 4046 soil cleanup guidelines for the protection of groundwater, background conditions, and risk based remediation criteria were used as SCGs for soil.

Based upon the results of the remedial investigation in comparison to the SCGs and potential public health and environmental exposure routes, four areas of the Site will be remediated (i.e., Areas 2, 3, 4, and 5). The supporting data is summarized below. More complete information can be found in the RI Report.

3.1.1 Nature of Contamination

As described in the RI Report, many soil and ground water samples were collected at the Site to characterize the nature and extent of contamination.

Soil Quality:

- Soil gas samples showed low concentrations of volatile organic compounds (VOCs) throughout the Site. Due to their low concentrations, these data do not indicate additional sources of contamination.

- From soil samples, VOCs were either absent or detected at low concentrations (well below NYSDEC cleanup objectives) about the Site. It can be concluded that this site is not a significant source of VOC ground water contamination.

- From soil samples, semi-VOCs (SVOCs) detected were predominately polyaromatic hydrocarbons and were detected at most significant concentrations in sediment samples from on-site catch basins. It can be concluded that the presence of these SVOCs is a result of parking lot runoff from automobiles and other vehicles.

- Metals, including lead, zinc, and iron were detected at significant concentrations (above NYSDEC TAGM 4046 soil cleanup objectives) in the fill material at the northern portion of the Site. Additionally, several metals, including copper, nickel, and zinc, were detected at elevated concentrations in the catch basins at Areas 2, 4, and 5. The middle east-side catch basins in Area 2 also contained significantly elevated concentrations of lead and chromium.

Groundwater Quality:

- With the exception of toluene at 29 ppb in one well at the site (MW-5), no volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs) were detected at significant concentrations from shallow groundwater samples taken at the Site. Chlorinated VOCs detected during previous investigations in shallow groundwater along the eastern portion of the site were absent or detected at concentrations below New York State groundwater standards during this investigation. In shallow groundwater, lead slightly exceeded the groundwater standard site-wide and chromium slightly exceeded the groundwater standard in one well during the initial round only. Lead also exceeded its groundwater standard in the groundwater upgradient (north) of the Site. Several other non-toxic metals also exceeded their groundwater standards in shallow groundwater throughout the Site. The concentrations of most of these metals detected in the shallow groundwater are indicative of suspended sediment as well as dissolved constituents and are consistent with concentrations found in groundwater in an industrial area.

- With the exception of one VOC (toluene), only metals were detected in the deep groundwater during the initial and confirmatory rounds of sampling. The concentrations of these metals in deep groundwater were typical of background values in the area of this site. The toluene appears to originate from an off-site source and was not detected in the deep monitoring wells at the Site during the confirmatory groundwater sampling round. It can be concluded that the Site is not a source of deep groundwater contamination.

3.1.2 Extent of Contamination

Soil:

Tables 1 and 2 and Figure 5 summarize the extent of contamination for the contaminants of concern in the soil at the Site and compares the data with NYSDEC TAGM 94-4046 recommended soil cleanup objectives.

Although this section identifies all constituents detected, it should be noted that metals are natural components of the earths crust and are therefore expected to be present in soil and ground water.

Area 1 results:
Area 1 includes the loading dock area and two leaching pools located adjacent to the northern portion of the building (Figure 2). From boring SB-26 (Figure 5), which was advanced through the primary leaching pool, samples were acquired at three different depths. No VOC's or SVOC's were detected in any of the soil samples collected from this area. Seventeen of 23 Target Analyte List (TAL) metals were detected in this area (see Table 1). Concentrations of these metals were consistent with typical regional soil quality in the area of this site and were below NYSDEC TAGM 94-4046 recommended soil cleanup objectives. It can therefore be concluded that this area is not a source of groundwater contamination beneath the Site.

Area 2 results:
Area 2 is located to the east side of the building (Figure 2). Soil samples were collected from three catch basins within this area. Three VOCs were detected at concentrations below NYSDEC TAGM 94-4046 recommended soil cleanup objectives for soil in this area. Chlorobenzene (180 ppb), toluene (1 ppb) and xylene (5 ppb) were detected in the storm drain associated with sample SB-21 (Figure 5) at 1-2 feet below the invert level of the basin. Toluene (17 ppb) and xylene (60 ppb) were detected in sample SB-22U from the middle east-side catch basin at 1-2 feet below the invert level of the basin. There were no VOCs detected in the deeper sample from this basin (SB-22, 9-11 feet below bottom of basin). Twenty one SVOCs (excluding phthalate esters) were detected in soil samples from Area 2. They were predominately detected in samples SB-21 and SB-22U. These SVOCs were all nondetect or detected at significantly lower concentrations in the deeper samples from the middle east-side catch basin (SB-22).

Eighteen of 23 TAL metals were detected in this area. The maximum concentrations of these metals were detected primarily in the upper most sample from the middle east-side catch basin. Historically, plating wastes were discharged from the plating room inside the building to this catch basin. Here, lead was detected at 1,270 ppm, and chromium was detected at 1,690 ppm. Nickel was detected at 4,000 ppm, copper at 52,000 ppm, and zinc at 11,600 ppm. The deeper sample (9-11 feet) from this boring contained copper at 477 ppm, zinc at 107 ppm, nickel at 46 ppm, chromium at 33 ppm, and lead at 13 ppm. Soil samples from 0-2, 2-4, and 4-6 feet were analyzed for TCLP lead and cadmium. The sample from 2-4 feet

contained lead at its regulatory limit of 5.0 ppm. Finally, results from the vertical profile soil sampling indicated the presence of copper at 42.5 ppm in soil at 19-21 feet below the bottom of this catch basin. Copper, nickel, and zinc were also detected at elevated concentrations in the catch basins associated with SB-21 and SB-23. The sediment at the bottom of the catch basin associated with SB-23 contains lead at 248 ppm, copper at 728 ppm, nickel at 137 ppm, and zinc at 352 ppm. The sediment at the bottom of the basin associated with SB-21 contains copper at 275 ppm and zinc at 320 ppm. Based on the results of the vertical profile soil sampling, soil at 9-11 feet below the bottom of SB-23 contains copper at 236 ppm, nickel at 34 ppm, and zinc at 201 ppm. Soil at 9-11 feet below the bottom of SB-21 contains zinc at 20.2 ppm.

Area 3 results:
Area 3 is located in the northernmost portion of the Site (Figure 5). This entire area contains fill material to a depth of approximately twelve feet below land surface. This fill material is covered by asphalt pavement. Thirty four samples were collected from 11 borings at this location. At each boring in this area, soil samples were collected from within the fill material, five feet below the fill/native soil interface, and 10 feet below the fill/native soil interface. The only VOC detected in this area was toluene, with concentrations ranging from non-detect to 3 ppb. Twelve SVOCs were detected in this area and were predominately in the surface sample from the boring for MW-7. No SVOCs were detected from the middle or bottom samples (native soil) in this area.

All TAL metals were detected in this area. The maximum concentrations of these metals were detected in the samples from the fill material (barium at up to 1,550 ppm, copper at up to 5,020 ppm, iron at up to 114,000 ppm, lead at up to 4,320 ppm, nickel at up to 126 ppm, and zinc at up to 968 ppm). Samples from the native soil beneath the fill material exhibited concentrations of these metals consistent with background levels. Furthermore, sampling and analysis for TCLP metals of the fill material as part of the Supplemental Soils Investigation (see Table 2) revealed that the fill material is not a characteristic hazardous waste. Because concentrations of these metals were significantly lower in samples from the native soil and the fact that these metals do not appear to be leaching out of the fill material, it is not likely that this area will impact groundwater quality beneath the Site.

Area 4 results:
Area 4 is located in the vicinity of the northern catch basin at soil boring SB-27 (Figure 5). Toluene, at 1 ppb, was the only VOC detected in soil at this location. Eight SVOCs were detected in Area 4. Two SVOCs (chrysene and benzo[a]pyrene) exceeded the NYSDEC TAGM 94-4046 recommended soil cleanup objectives. Sixteen metals were detected at SB-27. Copper at 161 ppm, lead at 242 ppm, and zinc at up to 368 ppm were detected in soil at less than eight feet beneath the bottom of this catch basin. Concentrations of these metals were insignificant in the deeper sample, which was taken at eight to ten feet beneath the bottom of this basin.

Area 5 results:
Area 5 is located in the vicinity of the southern catch basin which contained soil boring SB-28 and former sanitary system beneath the southern parking lot at the Site. Toluene was detected in the soil at up to 2 ppb here, and was the only VOC detected in the soil at this area. Six SVOCs were detected at this area, but none at concentrations exceeding the NYSDEC TAGM 94-4046 soil cleanup objectives. Thirteen metals were detected in soil sampled from this area. Lead was detected at 357 ppm in a sample taken from 1-2 feet beneath the bottom of this drain. Zinc, at 263 ppm, was also detected in this sample. All metals

except nickel, which was detected at 154 ppm in the 8-10 foot sample, were below SCGs in the deeper, 8-10 foot sample from this area. Based on data obtained from the vertical profile soil sampling, soil at 9-11 feet below the bottom of this basin does not contain elevated concentrations of nickel, copper, or zinc.

Groundwater:

Groundwater was encountered at a depth of approximately 60 feet below land surface. Groundwater flow direction was determined to be to the south with a slight easterly component.

Table 3 and Figure 6 summarize the extent of contamination for the contaminants of concern in the groundwater at the Site, and compares the data with the New York State Ambient Water Quality Standards.

Samples from monitoring wells MW-1 through MW-6, MW-10 and AGO-4 represent shallow groundwater quality at the Site. Only low concentrations of three VOCs and no SVOCs (other than phthalate esters, which are common laboratory contaminants) were detected in the shallow groundwater. Toluene was the only VOC to exceed its groundwater standard (5 ppb), and was detected at concentrations up to 29 ppb. Chlorinated VOCs detected during previous investigations were only detected at trace concentrations during the Remedial Investigation. Eight metals exceeded NYSDEC Ambient Water Quality Standards in shallow groundwater at the Site. Since samples were not filtered, reported concentrations will reflect any metals bound to suspended sediment. The high turbidity of these samples may explain the elevated concentrations of many of these metals. Lead, for which the groundwater standard is 25 ppb, was found at elevated concentrations (up to 56.5 ppb) in shallow groundwater throughout and upgradient of the site. Chromium, for which the groundwater standard is 50 ppb, was detected at 52 ppb and 112 ppb in shallow groundwater from two wells at the site. Antimony, iron, manganese, nickel, sodium and zinc also slightly exceeded NYSDEC Ambient Water Quality Standards in shallow groundwater from monitoring wells at the Site. It should be noted that a filtered groundwater sample acquired from MW-6 had significantly lower concentrations of all metals of concern.

Samples from MW-7 through MW-9 represent deep groundwater quality at the Site. With the exception of toluene, at concentrations up to 10 ppb, only metals were detected in the deep groundwater at the Site. Only two metals (manganese and sodium) exceeded their ambient water quality standards in deep groundwater at the Site.

3.2 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site.

An exposure pathway is how an individual may come into contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Completed pathways which are known to or may exist at the site include:

- Ingestion of contaminated groundwater. This pathway is controlled here by the presence of a public water supply for the Site and surrounding communities and the fact that this Site is not a significant source of groundwater contamination.

- Exposure to on-site contaminated soils. These soils, which are primarily in the fill area (Area 3) at the Site, do not appear to be mobile. Excavation of the contaminated material from Area 3 will prevent human exposure via direct contact and eliminate the risk to human health from this area of the Site. The soil/sediment at the bottom of the catch basins in Areas 2, 4 and 5 are also contaminated by several metals. This contamination has a slight potential to be a threat to public health or the environment. Removal of contaminated soil from these areas would eliminate this threat.

- Exposure to contaminated vapors is not a concern at this site because the levels of VOCs at the Site are insignificant.

- Exposure to contaminated surface water is not a concern at this site because there are no surface waters in the vicinity of the Site.

3.3: Summary of Environmental Exposure Pathways:

Because there are no sensitive receptors in close proximity to the Site, there are no significant environmental exposure pathways from this site.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The NYSDEC and SmithKline Beecham Clinical Laboratories entered into Order on Consent #WP-045-83 on July 20, 1993. The Order obligated SmithKline Beecham Clinical Laboratories to implement a Remedial Investigation/Feasibility Study at the Site. The NYSDEC and SmithKline Beecham will seek to negotiate a separate order on consent for the implementation of cleanup measures at the Site.

SECTION 5: SUMMARY OF REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all Standards, Criteria, and Guidance (SCGs) and be protective of human health and the environment.

At a minimum, through the proper application of scientific and engineering principles, the remedy selected should eliminate or mitigate all significant threats to the public health and the environment presented from the site.

The goals selected for this site are:

- *Reduce, control, or eliminate to the extent practicable the contamination present within the soils at the Site.*

- *Eliminate the potential for direct human or animal contact with the contaminated soils on site.*

- *Prevent, to the extent possible, migration of contaminants from the soil and fill material at the Site to groundwater.*

SECTION 6: SUMMARY OF THE EVALUATION OF THE ALTERNATIVES

The selected remedy should be protective of human health and the environment, be cost effective, comply with other statutory laws, be readily implementable, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Magnusonic Devices, Inc. site were identified, screened and evaluated in a Feasibility Study. This evaluation is presented in the report entitled Feasibility Study, Magnusonic Devices, Inc., Hicksville, New York dated January 23, 1998.

A summary of the detailed analysis follows. As used in the following text, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy.

6.1: Description of Alternatives

The potential remedies are intended to address the contaminated soils at the Site.

The following alternatives were evaluated in detail during the Feasibility Study:

1. *No Action:* This alternative is evaluated as a procedural requirement and as a basis for comparison. It requires continued monitoring only, allowing the Site to remain in an unremediated state. This alternative would leave the Site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 1 would have no cost because no action would be taken.

Alternative 2 includes Alternatives 2a and 2b.

2a. Excavation of Fill Material From Area 3 and Off-Site Disposal:

- asphalt removal from Area 3 with off-site disposal at the appropriate facility
- mechanical excavation of fill material from Area 3 with off-site disposal at a nonhazardous waste facility. End point samples will meet the SCGs
- backfill Area 3 with clean fill and repave area with asphalt
- mechanical excavation of hazardous waste from the middle-east catch basin in Area 2 with off-site disposal at a hazardous waste facility.

Alternative 2a has an estimated cost of $594,200 on a present worth basis.

2b. *Excavation of Non-Hazardous Material from Catch Basins in Areas 2, 4 and 5 and Off-Site Disposal:*

- excavation of non-hazardous material from catch basins within Areas 2, 4 and 5, with off site disposal.
- acquire end point samples for analysis and backfill excavations with clean fill material
- semiannual groundwater monitoring for a period of two years will be necessary to ensure that residual soil contamination does not present a threat to the groundwater.

Alternative 2b has an estimated cost of $126,100 on a present worth basis.

Alternative 2 has an estimated total cost of $720,300 on a present worth basis.

Alternative 3 includes Alternatives 3a and 3b.

3a. *In-Situ Stabilization and Asphalt Capping of Area 3:*

- asphalt removal from Area 3 with off-site disposal at the appropriate facility
- in-situ stabilization of Area 3
- asphalt capping of Area 3
- mechanical excavation of hazardous material from the middle east-side catch basin in Area 2 with off-site disposal at a hazardous waste facility
- backfill the middle east-side catch basin to its usable depth with clean fill material.

Alternative 3a would have an estimated cost of $300,100, plus the cost of a deed restriction, on a present worth basis.

3b. *In-Situ Stabilization of Non-Hazardous Material in Catch Basins in Areas 2, 4 and 5 and Installation of New Storm Drains:*

- removal and disposal of asphalt in vicinity of the contaminated catch basins in these Areas
- in-situ stabilization of contaminated material in these Areas
- backfilling and asphalt capping of stabilized catch basins
- installation of five new catch basins
- semiannual groundwater monitoring for a period of two years would be necessary.

Alternative 3b would have a total estimated cost of $117,500 plus the cost of the deed restrictions, on a present worth basis.

Alternative 3 would have an estimated total cost of $417,600, plus the cost of deed restrictions, on a present worth basis.

Alternative 4 includes Alternatives 4a and 4b.

4a. *Asphalt Capping of Area 3*

- asphalt removal from Area 3 with off-site disposal at the appropriate facility
- asphalt capping of Area 3
- mechanical excavation of hazardous material from the middle east-side catch basin in Area 2 with off-site disposal at a hazardous waste facility
- backfill the middle east-side catch basin to its usable depth with clean fill material.

Alternative 4a would have a total estimated cost of $108,000, plus the cost of a deed restriction, on a present worth basis.

4b. *Asphalt Capping of Existing Catch Basins and Installation of New Storm Drains in Areas 2, 4 and 5:*

- removal and disposal of asphalt in the vicinity of the contaminated catch basins in Areas 2, 4 and 5
- backfilling and asphalt capping of existing catch basins
- installation of five new catch basins
- quarterly groundwater monitoring for a period of two years would also be necessary.

Alternative 4b would have an estimated total cost of $65,500, plus the cost of the deed restrictions, on a present worth basis.

Alternative 4 would have an estimated total cost of $173,500, plus the cost of deed restrictions, on a present worth basis.

6.2: Evaluation of Remedial Alternatives

The criteria used to compare the potential remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375). For each of the criteria, a brief description is provided followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is contained in the Feasibility Study.

The first two evaluation criteria are termed threshold criteria and must be satisfied for an alternative to be considered for selection. These are:

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance. The contaminants of concern, for which SCGs must be met, are metals in on site soils at this site.

Although Alternative 2 will not comply with SCGs in the catch basins at the site, this remedy will comply with SCGs at Area 3 and is protective of human health and the environment for this site.

By treating all contaminated media, Alternative 3 would also adequately address the contaminated soils at the Site.

Alternative 1 would not comply with NYS SCGs because if no action is taken, the contaminated media will remain at the Site.

Alternative 4 would not comply with NYS SCGs, but, by utilizing institutional controls at Areas 2, 3, 4 and 5, this alternative would protect any potential receptors from the contaminated media at the Site.

2. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective.

Alternative 2 is protective of human health and the environment. The risks related to exposure to metals will be mitigated. Proper air monitoring and provision of engineering controls will minimize the risks associated with exposure to dust during excavation activities. Compliance with OSHA regulations will minimize the risks associated with the use of heavy machinery on site.

Alternatives 3 and 4 would also be protective of human health and the environment.

Alternative 3 includes in-situ stabilization of metals contaminated media in Areas 2, 3, 4 and 5. In conjunction with asphalt capping of these areas, this alternative would protect human health and the environment by reducing the mobility and leachability of the metals as well as reducing the risks associated with exposure to the metals at the Site.

Alternative 4 includes capping the metals contaminated media at Areas 2, 3, 4 and 5 at the Site. This alternative would protect human health and the environment by minimizing the risks associated with exposure to the metals at the Site. By preventing precipitation from entering the contaminated media, this alternative would minimize the rate of contaminant migration to the aquifer.

Alternative 1 would not be protective of human health and the environment.

The next five "primary balancing criteria" were used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation were evaluated for each remedial alternative. The length of time needed to achieve the remedial objectives was also estimated and compared with that of the other alternatives.

Alternative 1 would have no associated construction and/or implementation of a proposed remedy and would therefore result in no short-term adverse impacts on human health or the environment.

Alternative 2 includes excavation and removal of hazardous waste from the middle east-side catch basin in Area 2 at the Site, resulting in potential short-term adverse impacts on human health and/or the environment. Proper air monitoring and engineering controls will minimize the risks associated with the excavation of the contaminated media. Contingency measures such as covering and lining of the vehicles and the use of leakproof vehicles will reduce the risk of off-site human and environmental exposure associated with the transportation of the contaminated media. In the event of an off-site spill of the

hazardous waste, transportation contractors are trained to effectively clean up the spill in a timely fashion.

Alternatives 3 and 4 would also include excavation and removal of hazardous waste from the middle east-side catch basin in Area 2 at the Site. Again, proper engineering controls would minimize all risks associated with the excavation.

Alternative 2 also includes excavation and removal of nonhazardous contaminated soil from Areas 2, 4 and 5 at the Site. To minimize potential short-term adverse impacts on human health and/or the environment, the air monitoring and engineering controls and the contingency measures described above will be utilized.

Alternatives 3 and 4 include asphalt capping at the Site. With proper health and safety controls, the risks associated with exposure to the fill material would be minimized.

Furthermore, for Alternative 2 groundwater monitoring will be conducted semiannually for a period of two years to ensure that the remedy imposed is protective of the aquifer. This contingency would be considered for Alternatives 3 and 4 as well.

Alternative 2a will take approximately two months to implement. Alternative 2b will take approximately one month to implement.

Alternative 3a would take approximately three months to implement, including one month for in-situ stabilization of Area 3. Alternative 3b would take approximately two months to implement, including one month for in-situ stabilization of Areas 2, 4 and 5.

Alternative 4a would take approximately two weeks to implement, and Alternative 4b would take approximately one month to implement.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items have been evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 2 will effectively and permanently remove the contaminated media from Area 3 and the catch basins in Areas 2, 4 and 5 at the Site and monitor groundwater quality at the Site. It should be noted that the effectiveness of removal and off-site disposal of contaminated media from this site is limited to the life of the landfill in which it is placed.

Alternatives 3 and 4 would not remove the contaminated media from Areas 2, 3, 4 or 5 at the Site. With Alternative 3, the contaminated media would be stabilized via in-situ stabilization. With Alternative 4, the contaminated media would be capped by asphalt. These alternatives would not reduce the concentrations of the contaminants in on site soils. Alternative 3 would, however, reduce the mobility of these contaminants. With the installation of a multi-layer, impermeable asphalt cap and a deed restriction on the Site, both of these alternatives would provide long-term effectiveness and permanence. Operation and maintenance activities would be performed on the asphalt cap to verify its integrity. Replacement of the cap would be required every 20 years, which is the expected life of the cap.

Alternative 1 does not provide a long term or effective remedy for the contaminated media at the Site.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the Site.

Alternative 2 would permanently and significantly reduce the volume of wastes at the Site.

Alternatives 3 and 4 would permanently and significantly reduce the volume of wastes in the contaminated middle east-side catch basin at the Site. These alternatives would also permanently and significantly reduce the mobility of the contaminants in Areas 2, 3, 4 and 5. The toxicity and volume of the contaminants in Area 3 would not, however, be permanently or significantly reduced.

Alternative 1 would not permanently or significantly reduce the toxicity, mobility, or volume of wastes at the Site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. For administrative feasibility, the availability of the necessary personnel and material was evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

Alternative 1 would be the easiest to implement because no action would be taken.

Alternative 2 will be easy to implement because the services of the contractors who can perform the proposed work are readily available. This alternative will require the excavation of significantly more material than will be required by the other alternatives, but is still easily implementable.

Alternatives 3 and 4 are also readily implementable.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative were presented in Section 6.1, Description of Alternatives, and are summarized in Table 4.

8. Community Acceptance. Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary," included as Appendix A, presents the public comments received and the Department's response to the concerns raised. In general, the public comments received were supportive of Alternative 2.

SECTION 7: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, the NYSDEC is selecting Alternative 2 because it is the most protective of human health.

This selection is based upon the following:

Alternative 1 was not selected because it would not comply with the New York State SCGs and would not be protective of human health and the environment

Alternative 3 was not selected because it is not as protective as Alternative 2 and it would not permanently or significantly reduce the volume of wastes at the Site.

Alternative 4 was not selected because it is not as protective as Alternative 2 and it would not permanently or significantly reduce the volume of wastes at the Site.

Site-specific factors that were considered in the selection of Alternative 2 as the remedy for this site include:

- The only hazardous waste at the Site is in the middle east-side catch basin and will be excavated as part of the remedy.
- Although the on-site catch basins have been contaminated since at least the mid 1980's, groundwater has not been impacted. In fact, vertical profiling soils data shows that the concentrations of contaminants decrease significantly with depth.
- The facility no longer generates any hazardous waste.
- After the remedy is implemented, all residual contamination will be at a depth of greater than 15 feet below grade. Consequently, no exposure pathways will exist at this site.
- Excavation of deeper soils from the contaminated catch basins may jeopardize the structural integrity of the building.
- The nearest downgradient public supply well is located approximately 5,000 feet from the site and has not been impacted by any site contaminants.
- The downgradient residences are all served by public water.

The NYSDEC has determined that Alternative 2 will be the most protective of human health and the environment, achieve both short-term and long-term effectiveness and permanence, significantly and permanently reduce the volume of contaminants at the Site, and be readily implementable. This remedy best meets the eight criteria used to evaluate potential remedial alternatives as defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6NYCRR Part 375).

The cost to construct the remedy is estimated to be $720,300.

The elements of the selected remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved.

2. The remedy will include:

For the contaminated catch basins in Areas 2, 4 and 5:

- SmithKline Beecham has proposed to excavate two feet of contaminated soil from catch basins SB-21, 27, and 28 as part of routine maintenance for these basins. The NYSDEC has determined that mechanical excavation of five feet of contaminated soils from catch basins SB-22 and SB-23 is also necessary. Therefore, these soils will be excavated and disposed of at the appropriate off-site facilities. End point samples will then be acquired for analysis and these catch basins will then be backfilled to their usable depths.

- semi-annual groundwater monitoring for a period of two years.

For Area 3:

SmithKline Beecham has agreed to excavate the contaminated fill material from Area 3 (see Appendix C). Therefore, the selected remedy will also include:

- asphalt removal and disposal,
- sheeting and shoring,
- fill excavation. End points will be native soil which meets the SCGs
- off-site disposal of fill,
- backfill, compaction, and restoration

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation (CP) activities were undertaken in an effort to inform and educate the public about conditions at the Site and the potential remedial alternatives. The following public participation activities were conducted for the Site:

- A repository for documents relating to the Site was established.

- A Site mailing list which included nearby property owners, local political officials, local media, and other interested parties was established.

- September, 1994: RI/FS Work Plan Fact Sheet was disseminated to the public contact list.

- September 19, 1994: Public Meeting for the RI/FS Work Plan was conducted.

- February, 1998: Proposed Remedial Action Plan Fact Sheet was disseminated to the public contact list.

- February 10, 1998 - March 11, 1998: Public Comment period for the Proposed Remedial Action Plan.

- February 24, 1998: Public meeting for the Proposed Remedial Action Plan was conducted.

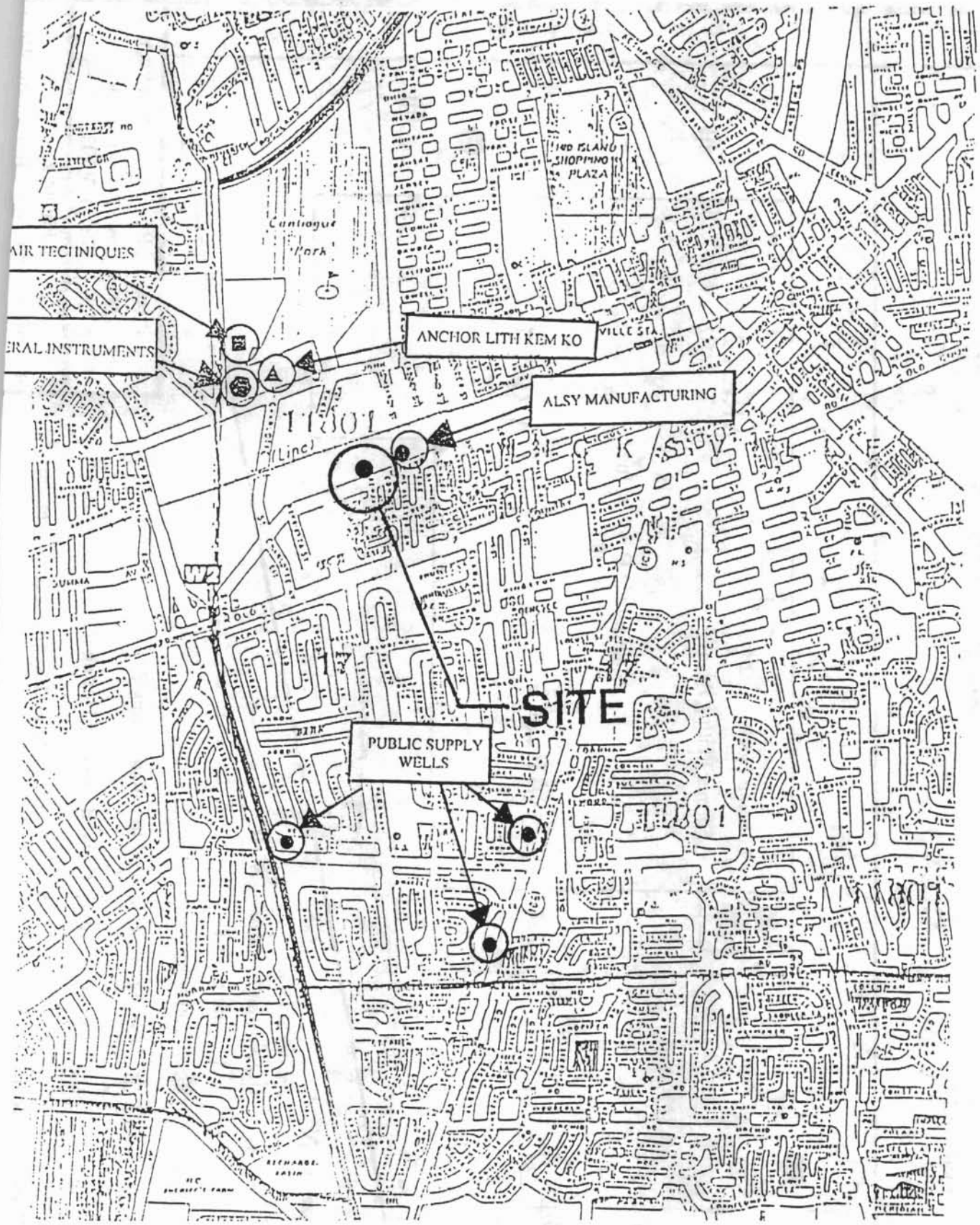
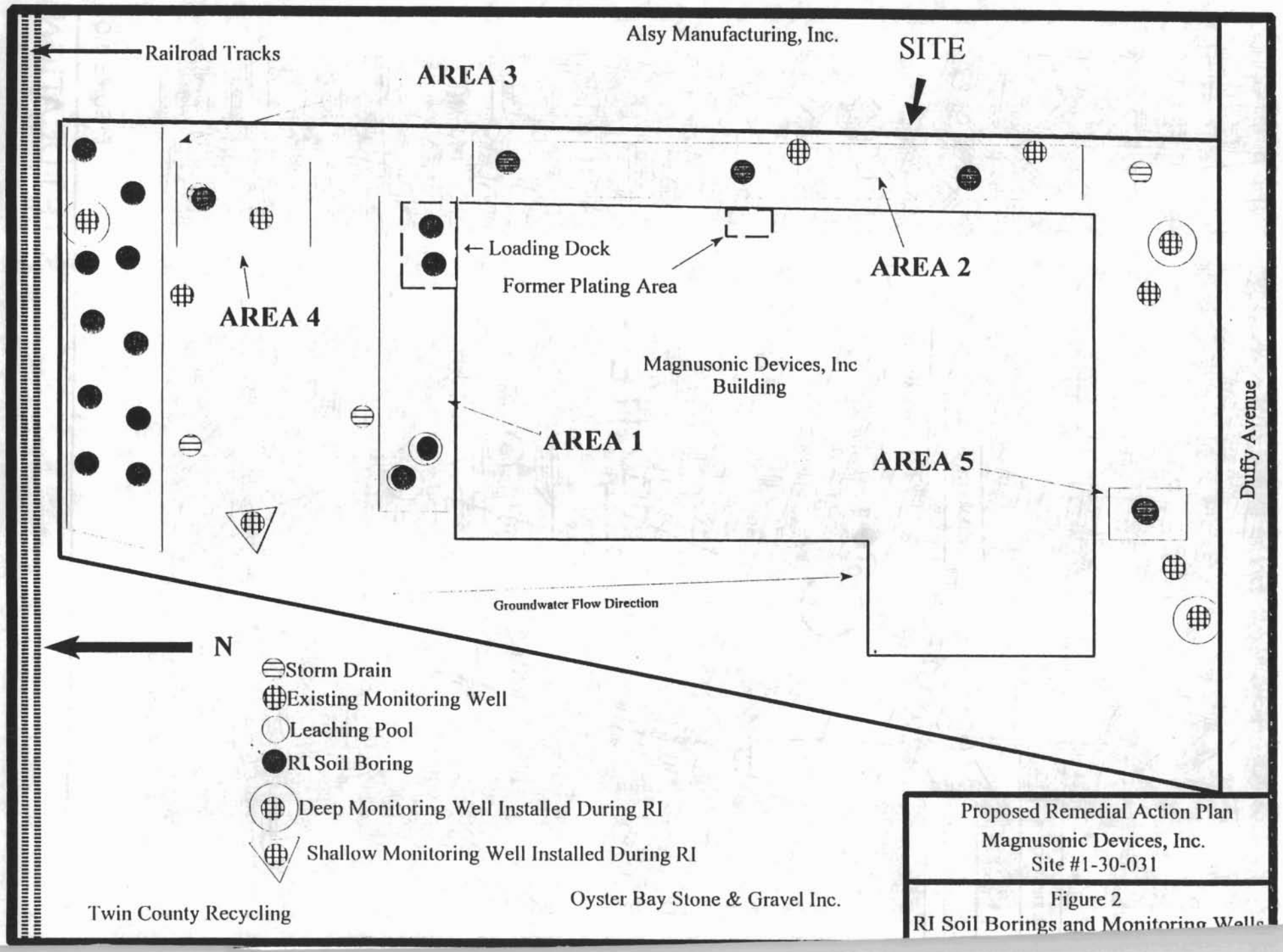


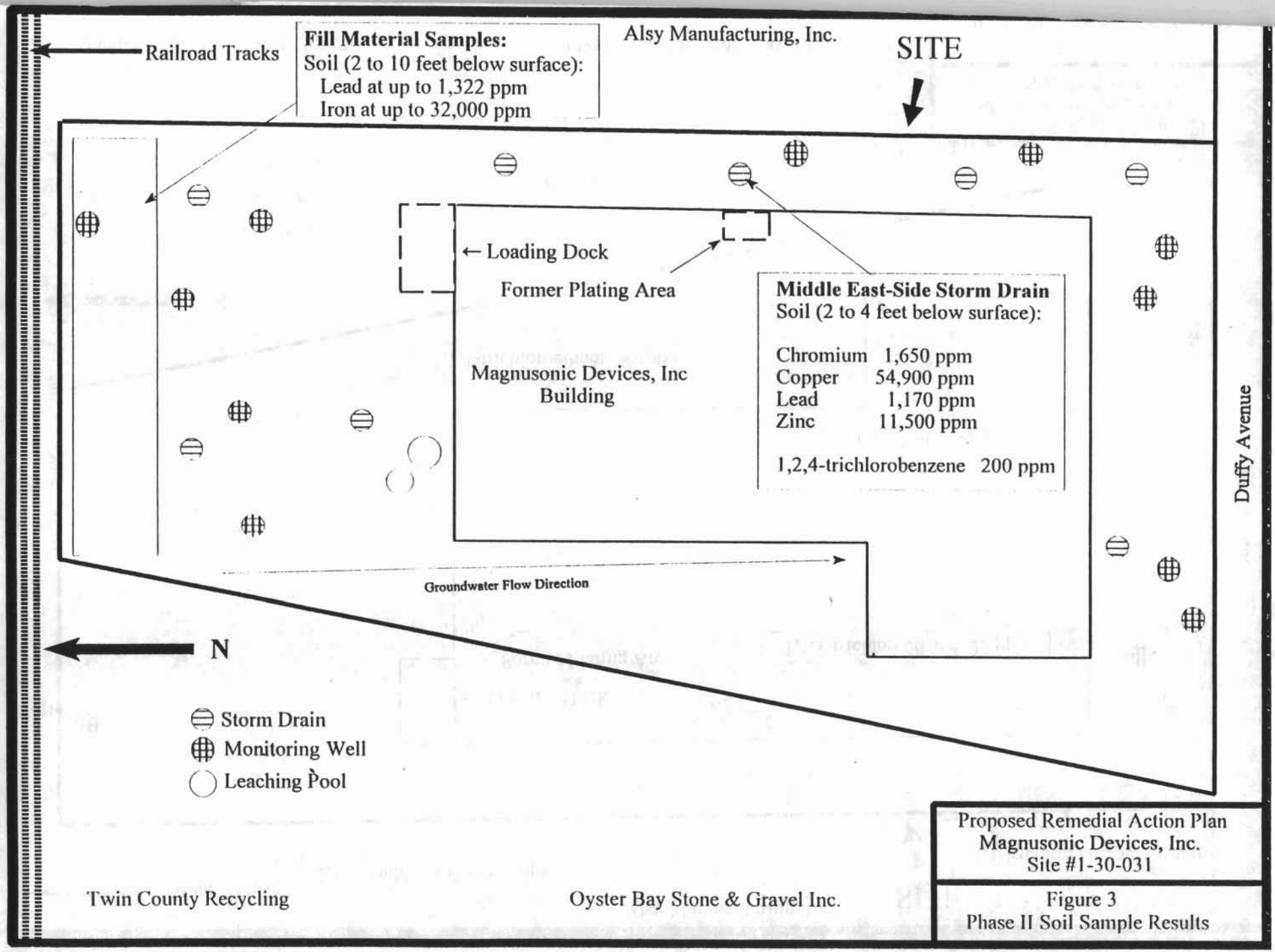
FIGURE 1.0

SITE LOCATION

MAGNUSONIC DEVICES

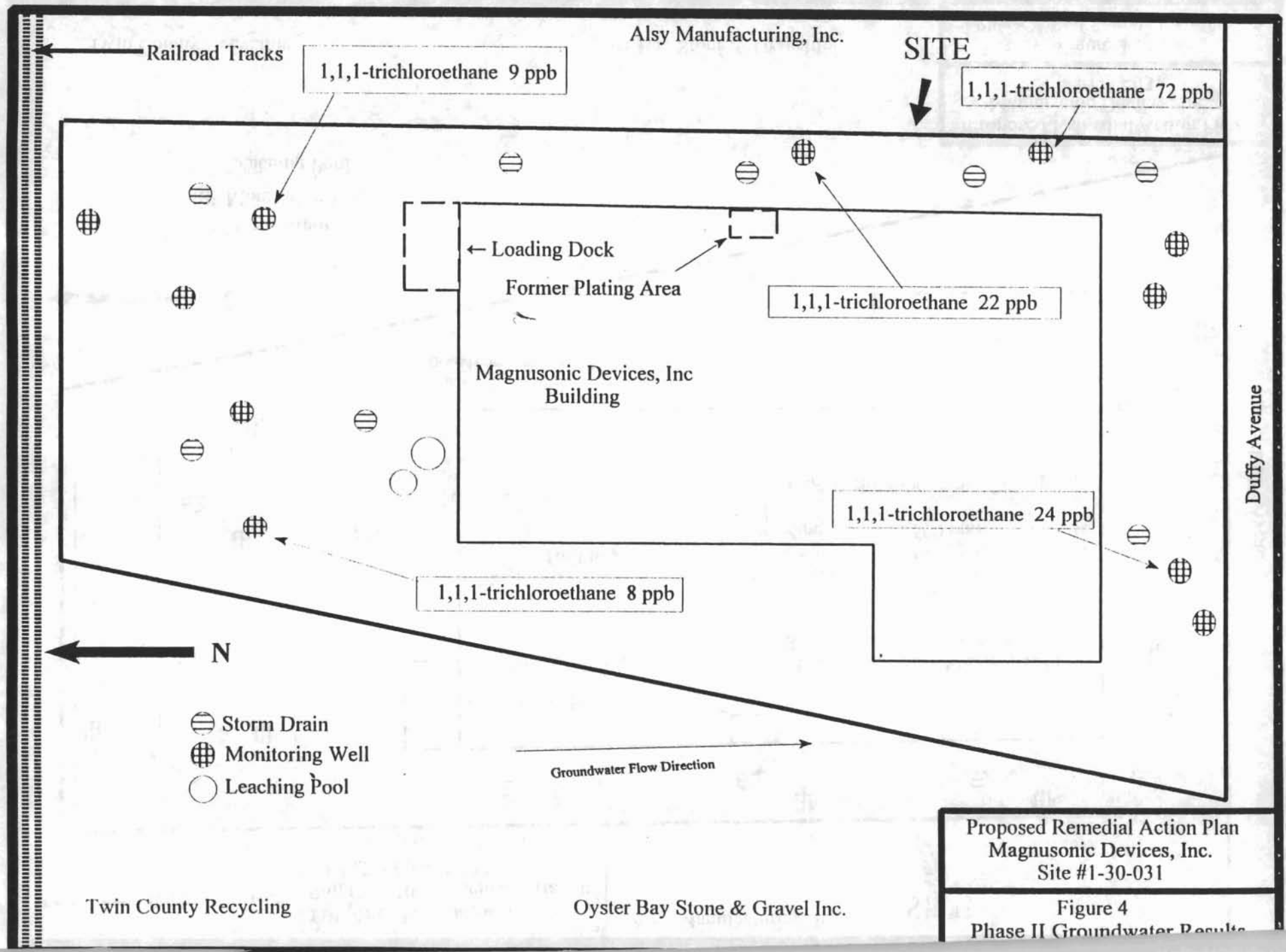
290 DUFFY AVENUE


Railroad Tracks
Alsy Manufacturing, Inc.
SITE
AREA 3
AREA 4
Loading Dock
Former Plating Area
AREA 2
Magnusonic Devices, Inc
Building
AREA 1
AREA 5
Duffy Avenue
Groundwater Flow Direction
N
Storm Drain
Existing Monitoring Well
Leaching Pool
RI Soil Boring
Deep Monitoring Well Installed During RI
Shallow Monitoring Well Installed During RI
Twin County Recycling
Oyster Bay Stone & Gravel Inc.
Proposed Remedial Action Plan
Magnusonic Devices, Inc.
Site #1-30-031
Figure 2
RI Soil Borings and Monitoring Wells



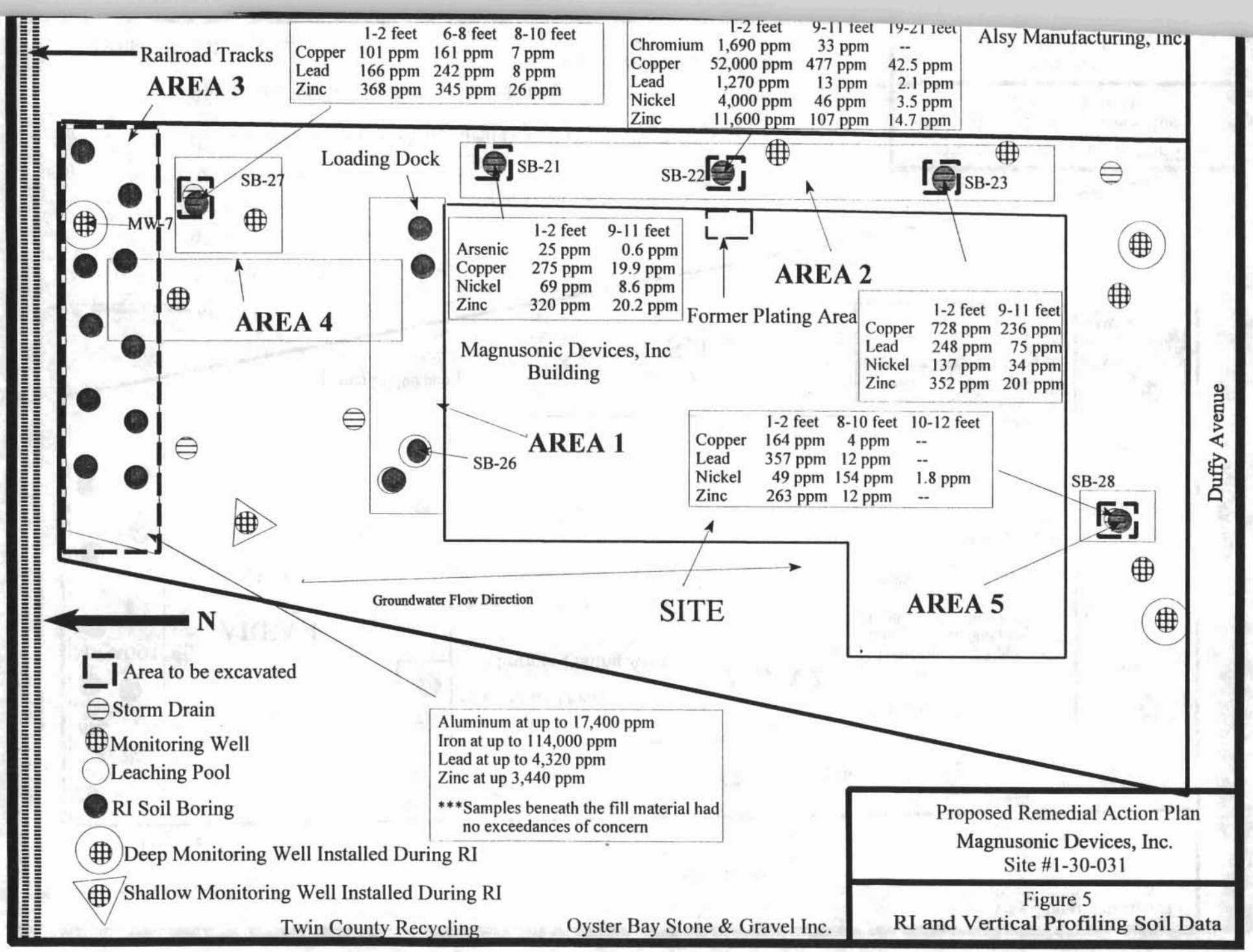
Proposed Remedial Action Plan
Magnusonic Devices, Inc.
Site #1-30-031

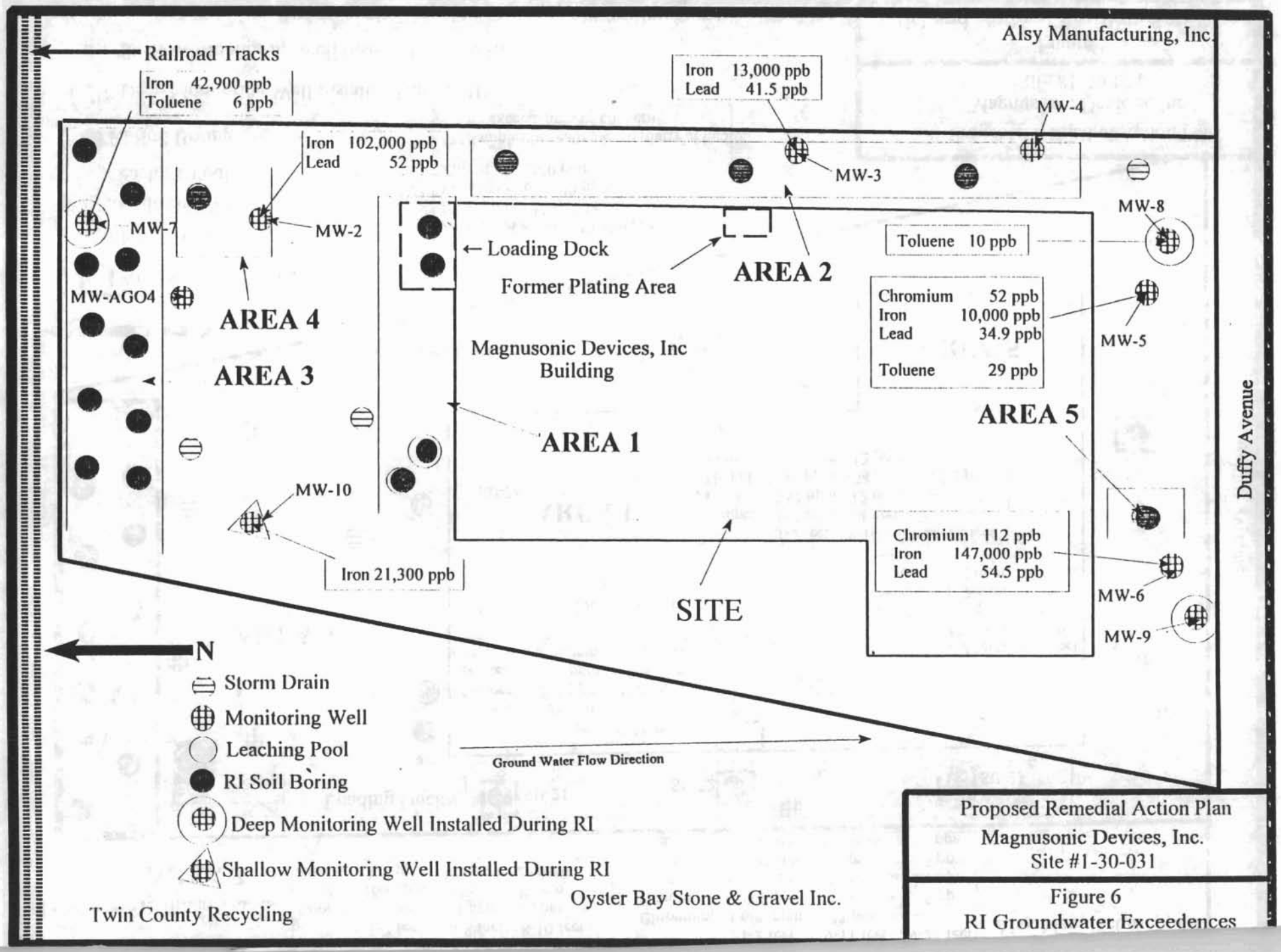
Figure 3
Phase II Soil Sample Results



Proposed Remedial Action Plan
Magnusonic Devices, Inc.
Site #1-30-031

Figure 4
Phase II Groundwater Results


Railroad Tracks
AREA 3
1-2 feet 6-8 feet 8-10 feet
Copper 101 ppm 161 ppm 7 ppm
Lead 166 ppm 242 ppm 8 ppm
Zinc 368 ppm 345 ppm 26 ppm
1-2 feet 9-11 feet 19-21 feet
Chromium 1,690 ppm 33 ppm --
Copper 52,000 ppm 477 ppm 42.5 ppm
Lead 1,270 ppm 13 ppm 2.1 ppm
Nickel 4,000 ppm 46 ppm 3.5 ppm
Zinc 11,600 ppm 107 ppm 14.7 ppm
Alsy Manufacturing, Inc.
Loading Dock
SB-21
SB-22
SB-23
SB-27
MW-7
AREA 4
1-2 feet 9-11 feet
Arsenic 25 ppm 0.6 ppm
Copper 275 ppm 19.9 ppm
Nickel 69 ppm 8.6 ppm
Zinc 320 ppm 20.2 ppm
AREA 2
Former Plating Area
1-2 feet 9-11 feet
Copper 728 ppm 236 ppm
Lead 248 ppm 75 ppm
Nickel 137 ppm 34 ppm
Zinc 352 ppm 201 ppm
Magnusonic Devices, Inc
Building
AREA 1
SB-26
1-2 feet 8-10 feet 10-12 feet
Copper 164 ppm 4 ppm --
Lead 357 ppm 12 ppm --
Nickel 49 ppm 154 ppm 1.8 ppm
Zinc 263 ppm 12 ppm --
SB-28
Duffy Avenue
Groundwater Flow Direction
SITE
AREA 5
N
Area to be excavated
Storm Drain
Monitoring Well
Leaching Pool
RI Soil Boring
Deep Monitoring Well Installed During RI
Shallow Monitoring Well Installed During RI
Aluminum at up to 17,400 ppm
Iron at up to 114,000 ppm
Lead at up to 4,320 ppm
Zinc at up 3,440 ppm
***Samples beneath the fill material had no exceedances of concern
Twin County Recycling
Oyster Bay Stone & Gravel Inc.
Proposed Remedial Action Plan
Magnusonic Devices, Inc.
Site #1-30-031
Figure 5
RI and Vertical Profiling Soil Data



Proposed Remedial Action Plan
Magnusonic Devices, Inc.
Site #1-30-031

Figure 6
RI Groundwater Exceedences

TABLE I
NATURE AND EXTENT OF SOIL CONTAMINATION

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (PPM)	FREQUENCY OF EXCEEDENCE	SCG (PPM)
SOIL	VOLATILE ORGANIC COMPOUNDS (VOCs)	Toluene	ND to 0.017	0	1.5
		Xylene	ND to 0.06	0	1.2
		Chlorobenzene	ND to 0.18	0	1.7
	SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)	Phenol	ND to 0.16	1 of 58	0.03
		1,4-dichlorobenzene	ND to 41	1 of 58	8.5
		1,2,4-trichlorobenzene	ND to 11	1 of 58	3.4
		Naphthalene	ND to 1	0	13
		2-methylnaphthalene	ND to 6.6	0	36.4
		Acenapthylene	ND to 3.5	0	41
		Dibenzofuran	ND to 1.6	0	6.2
		Benzo(a)anthracene	ND to 1.1	6 of 58	0.224
		Chrysene	ND to 1	7 of 58	0.4
		bis(2-ethylhexyl)phthalate	ND to 35	0	50
		Di-n-octylphthalate	ND to 1	0	50
		Benzo(b)flouranthene	ND to 0.6	0	1.1
		Benzo(k)flouranthene	ND to 0.42	0	1.1
		Benzo(a)pyrene	ND to 0.45	4 of 58	0.061
	METALS	Aluminum	495 to 17,400	0	25,000*
		Antimony	ND to 27.8	0	NA
		Arsenic	ND to 34.7	0	NA

TABLE 1 (CONTINUED)

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (PPM)	FREQUENCY OF EXCEEDENCE	SCG (PPM)
		Barium	ND to 1,550	5 of 58	300
		Beryllium	ND to 0.96	11 of 58	0.19*
		Cadmium	ND to 6.7	0	10
		Chromium	ND to 1,690	1 of 58	50
		Cobalt	ND to 142	1 of 58	30
		Copper	ND to 52,000	19 of 58	25
		Iron	1,570 to 105,000	5 of 58	up to 25,000*
		Lead	ND to 4,320	10 of 58	up to 500
		Magnesium	ND to 2,830	0	up to 6,000*
		Manganese	18.2 to 2,210	0	up to 5,000*
		Mercury	ND to 5.5	27 of 58	0.1
		Nickel	ND to 4,000	16 of 58	up to 25*
		Selenium	ND to 5.2	5 of 58	2
		Silver	ND to 59.3	4 of 58	2.1*
		Vanadium	ND to 65.8	0	150
		Zinc	2 to 11,6000	16 of 58	20

NA indicates that there is no applicable SCG
ND indicates that contaminant was not detected
* indicates that SCG is based on background conditions

TABLE 3
NATURE AND EXTENT OF GROUNDWATER CONTAMINATION

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (PPB)	FREQUENCY OF EXCEEDING SCGs	SCG (PPB)
GROUNDWATER	VOLATILE ORGANIC COMPOUNDS (VOCs)	Toluene	ND to 29	4 of 11	5
		1,1-Dichloroethane	ND to 1	0	5
		1,1,1-Trichloroethane	ND to 3	0	5
	SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)	bis(2-ethylhexyl)phthalate	ND to 14	0	50
		Diethylphthalate	ND to 2	0	50
	METALS	Aluminum	ND to 131,000	0	NA
		Antimony	ND to 70.1	2 of 11	3
		Arsenic	ND to 8.8	0	25
		Barium	39.7 to 411	0	1,000
		Beryllium	ND to 16	1 of 11	3
		Cadmium	ND to 7.8	0	10
		Calcium	5,570 to 46,100	0	NA
		Chromium	ND to 112	1 of 11	50
		Cobalt	ND to 63.4	0	NA
		Copper	ND to 117	0	200
		Iron	181 to 147,000	9 of 11	300
		Lead	4.1 to 56.5	5 of 11	25
		Magnesium	1,160 to 10,400	0	35,000
		Manganese	30 to 6,670	6 of 11	300
		Mercury	ND to 1.9	0	2

TABLE 3 (CONTINUED)

MEDIA	CLASS	CONTAMINANT OF CONCERN	CONCENTRATION RANGE (PPB)	FREQUENCY OF EXCEEDING SCGs	SCG (PPB)
		Nickel	ND to 117	0	NA
		Potassium	1,750 to 60,600	0	NA
		Selenium	ND to 5	0	10
		Silver	2,110 to 105,000	8 of 11	20,000
		Vanadium	ND to 222	0	NA
		Zinc	12.6 to 686	1 of 11	300

NA indicates that there is no applicable SCG

ND indicates that contaminant was not detected

TABLE 4
REMEDIAL ALTERNATIVE COSTS

Alternative		Capital Cost	Present Worth of Operation and Maintenance Cost	Total Present Worth
Alternative 1	1	$0	----	**$0**
Alternative 2	2a	$594,200	----	**$720,300**
	2b	$126,100	----	
Alternative 3	3a	$271,600	Annual Cost - $15,500 Cap Replacement Cost - $13,000 Total - $28,500	**$417,600**
	3b	$113,000	Annual Cost - $2,000 Cap Replacement Cost - $2,500 Total - $4,500	
Alternative 4	4a	$79,500	Annual Cost - $15,500 Cap Replacement Cost - $13,000 Total - $28,500	**$173,500**
	4b	$61,000	Annual Cost - $2,000 Cap Replacement Cost - $2,500 Total - $4,500	

APPENDIX A

RESPONSIVENESS SUMMARY
MAGNUSONIC DEVICES, INC.
SITE NO. 1-30-031

This document summarizes the comments and questions received by the New York State Department of Environmental Conservation (NYSDEC) regarding the Proposed Remedial Action Plan (PRAP) for the Magnusonic Devices, Inc. Inactive Hazardous Waste Site. The Department provided a comment period from February 10, 1998 to March 11, 1998 to receive comments from the public on the PRAP. The Department held a public meeting on February 24, 1998 at the Hicksville Middle School Auditorium to discuss the PRAP and the preferred alternative.

Although the remedy described in this Record of Decision was proposed in February, 1998, it has not yet been implemented because additional soil sampling was necessary to further define the aerial extent of soil contamination at this site. Vertical profiling of the contaminated on-site catch basins accomplished this objective. Consequently, some of the following questions and comments, which were presented to the NYSDEC before the vertical profiling was implemented, may not be as significant as they once were.

Part I: The following questions and comments were raised during and since the public meeting of February 24, 1998:

1) **When was the consent order executed?**

The consent order for a Remedial Investigation/Feasibility Study at this Site was executed on July 20, 1993

2) **Has the pollution gotten worse over the past five years?**

No, over the past five years there has been no documented on-site disposal at this site.

3) **Are people living across the street notified about this site?**

As per the Citizen Participation Plan for this site, residents in the area of the Site included those in an area bounded by Old Country Road to the south, Long Island Railroad to the north, Charlotte Avenue to the west, and McAlester Avenue to the east. Approximately 95 households within this area were notified by mail about the February 24, 1998 public meeting for the Proposed Remedial Action Plan.

Furthermore, NYSDEC disseminated a Press Notice for the public meeting to Newsday's "Government Watch" and to the local weeklies (Hicksville Illustrated News, Old Bethpage/Plainview Herald, and the Hicksville edition of the Pennysaver/Town Crier).

4) **What other sites are in the area and how do these sites affect the contamination at Magnusonic Devices, Inc.?**

Other inactive hazardous waste disposal sites in the area include the following:

- Alsy Manufacturing, Inc. at 270 and 280 Duffy Avenue, Hicksville
- General Instruments Corp. at 600 West John Street, Hicksville
- Anchor Lith Kem Ko at 500 West John Street, Hicksville
- Air Techniques, Inc. at 70 Cantiague Rock Rd., Hicksville

Of these sites, Alsy Manufacturing, Inc. is the only site which may currently have an impact on groundwater quality beneath the Magnusonic Devices, Inc. Site. None of the above sites have impacted soil at the Magnusonic Devices, Inc. Site.

5) Are the other sites in the area being addressed?

Yes, remedial investigations have either been completed or are underway at all of these sites. In fact, a remedial investigation has recently been completed at the adjacent Alsy Manufacturing, Inc. Inactive Hazardous Waste Disposal Site #1-30-027.

6) What's the time frame involved in cleaning up this site?

Actual implementation of the proposed remedy should take less than two months. Before the remedy is implemented, a new consent order between the potentially responsible party and the NYSDEC must be executed. The NYSDEC is optimistic that the new consent order will be executed without delay.

7) How large is Area 3?

Area 3 contains approximately 2,000 cubic yards of fill material.

8) How will the public be notified about the next stage of this project (ie., remedial design/construction)?

According to state-wide guidance, when we get to the next major stage (such as Remedial Design/Construction) of this project, a fact-sheet will be disseminated to the public contact list.

9) Why doesn't the PRP just cap the Site?

Capping the Site is not as permanent as excavating the contaminated media.

10) Who is the potentially responsible party?

SmithKline Beecham.

11) Why is SmithKline Beecham the potentially responsible party if they purchased the Site after the documented disposal of hazardous waste had occurred at the Site?

The current property owner is always one of the potentially responsible parties of a class 2 site.

12) What is a leaching pool?

For this site, the underground structure designed to collect regulated process waste water. This water then migrated through the soil beneath the leaching pool. These pools have been abandoned and are no longer in use.

13) Is the fill material hazardous?

The fill material has been tested and is not considered to be a hazardous waste. However, it still has the potential to be hazardous to human health if exposure occurred.

14) Following the Phase II Investigation, why was the site deemed not an immediate threat?

The Phase II Investigation results showed that all contaminated media on site were beneath the surface and covered by an asphalt parking lot and did not represent a direct exposure pathway. As a result, the Site was not considered an immediate threat to human health or the environment. Although concentrations of 1,1,1-trichloroethane slightly exceeded New York State Class GA Drinking Water Standards, the contamination was in the shallow Upper Glacial Aquifer and was not an imminent threat to downgradient public water supply wells.

15) What are the health risks to current employees?

There is no risk to current employees from direct contact with or incidental ingestion of contaminated media at the Site during normal operations at the facility because all contaminants are subsurface. Because the building is served by a public water supply, employees are not ingesting the groundwater beneath the Site.

Part II: The following questions and comments were raised by Mr. Thomas Beggs of SmithKline Beecham in a letter dated March 9, 1998. Because vertical profiling of soils beneath the contaminated catch basins was conducted subsequent to March 9, 1998, these questions and comments may not be as relevant as they were before the vertical profiling was done :

Comment 1

The sampling previously performed in Areas 2, 4 and 5 was intended for initial soil characterization, and as such was not designated to comprehensively determine the full extent of contamination. Therefore, it is premature to determine the appropriate Standards, Criteria, and Guidances (SCGs) for the soil at the Site based on incomplete delineation. It is SmithKline Beecham's understanding that the SCGs for soil will be properly evaluated (6 NYCRR Part 375-1.10) following the completion of the pre-design vertical profiling (as specified in the PRAP) to be conducted in Areas 2, 4 and 5.

NYSDEC Response to Comment 1

Based on all the data that has been acquired from this site, including the vertical profiling data, the selected remedy for this site is protective of human health and the environment at this site.

Comment 2

As stated by the NYSDEC in Section 4.1 of the PRAP (Page 5), "*To determine which media*

(soil, ground water, etc.) contain contamination at significant concentrations, the Remedial Investigation (RI) analytical data were compared to environmental SCGs. Ground water and drinking water SCGs identified for the Magnusonic Devices Site were based on the NYSDEC Ambient Water-Quality Standards and Guidance Values and Part V of the New York State Sanitary Code. The NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 soil cleanup guidelines for the protection of ground water, background conditions, and risk-based remediation criteria were used as SCGs for soil."

We agree with NYSDEC's definition of SCGs for the Site and we request that this definition of SCGs be incorporated into the ROD.

We feel strongly that it is appropriate to view soil quality conditions in a commercial/industrial area in relation to regional quality (background) and the likely exposure scenarios (non-residential). A similar approach, which has been deemed appropriate by NYSDEC at several other inactive hazardous waste sites, has resulted in site-specific soil cleanup levels for these sites. We want to clarify that risk-based remediation criteria, a NYSDEC defined SCG, will be considered as part of the evaluation based on the planned vertical profiling at the Magnusonic Site.

NYSDEC Response to Comment 2

The remediation goal for the Magnusonic Devices site is to achieve the soil cleanup guidance values contained in NYSDEC's TAGM 94-4046. The selected remedy for the Site is protective of human health and the environment.

Comment 3

Additionally, Roux Associates, Inc., on behalf of SmithKline Beecham, submitted to NYSDEC a November 18, 1997 letter regarding the remediation of the storm drain material in Areas 2, 4 and 5. The intent of this letter was to demonstrate to the NYSDEC that, based on available data, the department did not agree with the "no action" alternative. Therefore, after completion of the pre-design vertical profiling, we will re-evaluate our technical justification made in the November 18, 1997 letter to confirm that a "no action alternative still may be appropriate remedial alternative for the storm drain materials in Areas 2, 4 and 5. If the additional data indicates to us that a "no action" alternative still may be appropriate, then we will revise and re-submit our technical justification letter for the NYSDEC's review.

Comment 4

In summary, it is SmithKline Beecham's understanding that after completion of the pre-design vertical profiling at Areas 2, 4 and 5, the SCGs stated in the PRAP will be evaluated to determine the appropriate cleanup criteria for the soil at the Site.

NYSDEC Response to Comments 3 and 4

Based on the results of the vertical profile soil sampling, the Department has determined that soil excavation is required for the contaminated soils inside the on-site catch basins in order for the remedy to be protective of human health and the environment.

Part III: The following commentary relates to Appendix C (attached), which is a letter from SmithKline Beecham's representative.

The December 22, 1998 letter from Mr. Jerome Muys, Jr. on behalf of SmithKline Beecham Clinical Laboratories, Inc., confirms that the PRP was willing to implement Alternative II in the Feasibility Study. This remedy included fill excavation from Area 3 and off-site disposal. This letter also says that after completion of the vertical profiling, further discussion between the PRP and the NYSDEC would be necessary before determining the necessity to remediate the contaminated on-site catch basins.

Since December 22, vertical profiling has been completed and discussions have been held with the PRP. Consequently, the catch basin issues have been resolved and are reflected in this Record of Decision.

APPENDIX C

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FOR SETTLEMENT PURPOSES ONLY

December 22, 1998

JAN - 4

Mr. Christopher LaFemina
Environmental Engineer
New York State Department of Environmental Conservation
Division of Environmental Remediation
Building 40 - SUNY
Stony Brook, NY 11790-2356

Re: Feasibility Study, Order on Consent #WP-045-83
Magnusonic Devices, Inc., Site #1-30-031
Hicksville, NY

Dear Mr. LaFemina:

I am writing on behalf of SmithKline Beecham Clinical Laboratories, Inc. ("SmithKline") to follow up on our recent discussion regarding the Feasibility Study for the Magnusonic Devices Site in Hicksville, New York. This will confirm SmithKline's willingness to implement Alternative II in the Feasibility Study, subject to negotiation of a mutually-acceptable consent order with the New York State Department of Environmental Conservation. We understand that there will be further discussions between the parties regarding the need for remediation of certain storm drains at the Site, following consideration of the results of the vertical profiling.

Please feel free to call me if you have any questions regarding the foregoing.

Sincerely,

Jerome C. Muys, Jr.

cc: Mr. Robert Becherer
Jeanna Hussey, Esquire
Ms. Monica Alston
Paul Noll, Esquire
Ms. Judy Tellefsen
Mr. Joseph Duminuco

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