Baseline Environmental Assessment
Conducted Pursuant to Section 20126(1)(c)
of 1994 PA 451, Part 201, as amended

2801 West Hamlin Road
Rochester Hills, Michigan 48326

REI Brownstown LLC

April 6, 2004

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BEA Prepared For:

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1.0 IDENTIFICATION OF AUTHOR AND DATE OF BEA COMPLETION

Mr. Trevor I. Woollatt assumes the primary responsibility for the data assembly, interpretation, and technical conclusions for the attached BEA. Mr. Woollatt's current resume is provided as Attachment 9.1.

This BEA was conducted on January 6, 2004.

The completion date of this BEA was April 6, 2004.

Trevor I. Woollatt Associate III	Date

2.0 INTRODUCTION

Applied Science & Technology, Inc. (ASTI) was retained by the City of Rochester Hills on behalf of REI Brownstown LLC (REI) to submit a Petition for a Baseline Environmental Assessment (BEA) determination for a 78-acre parcel of property located at 2801 West Hamlin Road, Rochester Hills, Oakland County, Michigan (Property). The Property is located in an area of residential and commercial development. The Property is currently developed with outdoor recreational facilities including 8 softball diamonds and a golf driving range. The Property was historically used as a landfill.

ASTI reviewed historic documents obtained from the City of Rochester Hills and the DEQ in regard to the Property. The documents were provided by REI and were obtained as part of their site evaluation. The documentation indicates that landfill operations on the Property were conducted primarily by two former owners. The central portion of the Property was known as the Veteran's landfill and was operated by Veteran's Disposal Service, Inc. until March 1, 1973, at which time Veteran's Disposal Service was bought out by Cardinal Land Company. Cardinal Land Company, operated by Browning Ferris Industries (BFI), continued to conduct landfill activities on the Property, primarily in three cells constructed along Hamlin Road, until the fall of 1977. The cells were located on the northeast, north central, and northwest portions on the Property and were designated as Areas A, B, and C, respectively.

REI provided ASTI was with a topographic map indicating the pre-landfill topography elevations, the bottom elevations as indicated in the permit application for Areas A, B, and C, and the current topography. Based on this information, the estimated depth of fill material was calculated in order to both minimize the number of split spoon samples that would be advanced in the fill material and to ensure that the liner of the cells was not penetrated.

ASTI conducted a Phase I Environmental Site Assessment (ESA) that included the Property. Additional information regarding the Property history and adjoining properties can be found in the Phase I ESA, which is included as Attachment 9.2 The Phase I ESA findings identified the Property on two State database lists.

Inactive Solid Waste Facilities

One Inactive Solid Waste Facility (HIST LF) site was identified. This database contains historical information and is no longer updated. This site is the Cardinal Landfill Corporation site located at 2571 West Hamlin Road. This is part of the Property and is the address associated with the former operation.

Delisted List of Contaminated Sites

One Delisted Contaminated Site (DEL SHWS) was identified. This database contains sites that have been delisted or deleted from the List of Contaminated Sites. This site is the Cardinal Landfill Corporation site located at 2571 West Hamlin Road. This is part of the Property and is the address associated with the former operation.

REI Brownstown LLC intends to purchase the Property on April 30, 2004. The future intended use of the Property includes a parking lot, office space, and commercial business development. This BEA is a Category N, based on Minimum Technical Standards for Baseline Environmental Assessments conducted under Section 20126(8) of 1994 PA 451, as amended, issued by the Michigan Department of Environmental Quality (DEQ), dated March 11, 1999.

3.0 PROPERTY DESCRIPTION & INTENDED HAZARDOUS SUBSTANCE/LAND USE

The Property is located on the south side of West Hamlin Road in the City of Rochester Hills in Section 29 of T.3N.-R.11E., and is addressed as 2801 West Hamlin Road, Rochester Hills, Oakland County, Michigan 48326. The location of the Property is shown in Figure 1. The Property is comprised of approximately 78 acres of land and has been assigned Parcel No. 70-15-29-151-012.

The Property is currently occupied by Suburban Softball, a recreational facility with 8 softball diamonds and a golf driving range. There are some structures including dugouts, sheds, garages, and an office trailer on the Property. Photographs of the Property taken on January 18, 2004, by Mr. Steve Guyot, an ASTI geologist, are included as Attachment 9.3. Additional photographs taken on January 28, 2004 are included in Appendix F of the Phase I ESA included as Attachment 9.2.

Land use adjoining the Property is listed below.

North	West Hamlin Road and beyond is vacant land known as the Christianson Landfill
South	Rails to Trails - former Grand Trunk Railway grade and beyond is Ajax paving concrete plant and storage yards. Trans line
East	Residential
West	Vacant land

The Property is zoned ORT, Office-Research-Technology. Zoning information was obtained from the City of Rochester Hills zoning map. Site utilities include sanitary and storm sewer services provided by the City of Rochester Hills. Municipal water supply is available through the City of Rochester Hills. DTE Energy and Consumers Energy provide electric and natural gas services to the Property, respectively.

Intended use of the Property is parking lot, office space, and commercial business development with no hazardous substance use intended.

4.0 KNOWN CONTAMINATION

A soil and groundwater investigation was conducted based on the historic use of the Property as a landfill.

The purpose of this investigation was to determine if 1) the Property's soil had been impacted, and, if impacts were found, to determine if the Property is a facility as defined in Part 201 of Michigan's *Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended* (Part 201) and 2) to determine groundwater depth, flow direction, and whether or not groundwater is impacted and if any off-site migration of contamination exists. To determine whether or not the Property has been impacted, analytical results were compared to Generic Residential Cleanup Criteria (GRCC) for soil and groundwater as published by Michigan's Department of Environmental Quality (DEQ) in the tables *Part 201 Generic Cleanup Criteria and Screening Levels, Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended* (OM18).

During the period December 16 through 19, 2003, Mr. Trevor Woollatt, a Hydrogeologist in ASTI's Property Services Group, supervised the installation of thirteen soil borings (SB-1 through SB-13) on the Property and in the right of way immediately to the north and south of the Property.

Soil borings SB-1 through SB-4 were located north of the Property along West Hamlin Road in the City of Rochester Hills right of way, and SB-5 through SB-8 were located south of the Property along the former railroad grade in property currently owned by the City of Rochester Hills. Soil borings SB-1 through SB-8 were completed as permanent groundwater monitor wells MW-1 through MW-8, respectively. Soil borings SB-9 and SB-10 were located in the Veteran's Landfill portion of the Property, and borings SB-11, SB-12, and SB-13 were located in the BFI operated Cardinal Landfill Areas A, B, and C, respectively. As described in Section 2.0 of this report, the bottom elevation of each cell was estimated based on the design elevations indicated in the permits and the current topography. These borings were advanced with minimal split spoon sampling until approximately 5' above the bottom of fill and then the borings were continuously split spooned. This methodology was employed based on the difficulty in split spooning in landfill material and to ensure that the liner was not penetrated. The boreholes were abandoned with a bentonite slurry immediately upon

completion. Figure 2 depicts the Property and the soil boring and monitor well locations. Soil boring logs are included as Attachment 9.4.

The monitor wells were installed in the right of ways because the access agreement between REI (the purchaser) and the seller did not allow for permanent monitor wells to be installed. REI anticipates that continued groundwater monitoring will be required for due care and locating the monitor wells in the right of way was both cost effective and ensures that the monitor wells will remain undisturbed during site redevelopment.

The monitor wells were constructed of 2" diameter PVC using 10' screens and solid risers and were finished with 8" diameter flush-mounted traffic rated covers set in concrete pads. The soil borings were installed using 4.25-inch hollow stem augers. The monitor wells were set so as to be partially penetrating the groundwater surface. The annulus space was backfilled with filter sand from the bottom of the screen to 2' above the screen and from the filter sand to 1' below ground surface (bgs) with a bentonite slurry. The borings located in the landfill material (SB-9 through SB-13) were filled with a bentonite slurry immediately upon completion of the borings. All auger cuttings, decontamination water, well development water, and the plastic lining used to construct the decontamination containment area were containerized in DOT approved 55-gallon drums that were labeled non-hazardous and staged on the asphalt-paved parking area by the office trailer on-site pending disposal. A total of eighteen 55-gallon drums of auger cuttings, three 55-gallon drums of monitor well development water, and three 55-gallon drums of decontamination water and wash liner are staged on-site.

From March 2 through 4, 2004, an additional 20 soil borings (SB-14 through SB-33) were advanced through the landfill material. The borings were located along the interior limit of the proposed excavation limits. The purpose of these borings was to determine the depth of fill along this boundary in order to design a leachate collection system and further refine landfill material volume estimates. Samples of the fill material were collected for analysis. Seven of the borings (SB-16 through SB-22) were located in the eastern portion of the Veteran's landfill, five borings (SB-23 through SB-27) were located in the western portion of the Veteran's landfill. Borings SB-14, SB-15, and SB-28 through SB-33 were installed in the Cardinal Landfill. Soil boring logs are included as Attachment 9.4.

All borings with the exception of SB-18 and SB-20 were competed as gas vents. The vents were constructed of 2" diameter PVC screen from the bottom of boring to approximately 10' bgs and 2" diameter solid PVC riser to approximately 3-4 feet above ground surface. The vents were capped using expandable well caps to prevent exposure to landfill gasses. The screened intervals were backfilled with washed peastone in order to enhance gas recovery and backfilled with bentonite from the screened interval to ground surface.

Soil and Groundwater Sample Collection Procedures

Soil encountered during field activities was identified by ASTI's staff, examined for visual and/or olfactory evidence of impact and recorded in a field logbook. All downhole equipment was decontaminated using a heated power-washer with an Alconox® wash and clean water rinse between borings to minimize the risk of cross contamination of samples. The split spoon sample equipment was decontaminated between borings using an Alconox® wash and clean water rinse.

Prior to sampling, the monitor wells were gauged for static water level and purged of a minimum of three casing volumes of water. The water level meter was decontaminated using an Alconox® wash and clean water rinse before gauging and after each monitor well to minimize the risk of cross contamination. Samples were collected using disposable bailers, pressure bailers, and bailer cord to minimize the risk of cross contamination. The pressure bailers are used to filter groundwater for analysis of dissolved metals.

One soil and one groundwater sample was collected from SB-1/MW-1 through SB-8/MW-8, and two soil samples were collected from SB-9 through SB-13, with the exception of SB-11, from which only one soil sample was obtained. A total of 25 samples were collected from borings (SB-14 through SB-33). All soil and groundwater samples were collected into laboratory certified clean sample containers, cooled to 4°C, and submitted to Brighton Analytical L.L.C. under standard chain-of-custody procedures for analysis of volatile organic compounds (VOCs) by US EPA Method SW846 8260, semi-volatile organic compounds (SVOCs) by US EPA Method SW846 8270, polychlorinated biphenyls (PCBs) by US EPA Method SW846 8082, and the 10 Michigan metals – arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium silver, and zinc (Metals) by US EPA Methods SW846 6020 and 7471. Samples submitted for soil VOC analysis were preserved in the field with methanol per US EPA Method 5035. Samples submitted for dissolved Metals analysis were filtered in the field using disposable 0.45 micron filters.

Soil and Groundwater Characteristics

The topography of the Property, due to the former use as a landfill and the geologic setting, declines steeply on all sides except the northwest. The general elevation of the central (Veteran's Landfill) portion is approximately 860'. The Property survey data were collected by Midwestern Consulting (MCI), who used benchmarks established by the City of Rochester Hills. The Property declines to approximately 800' at the northeast corner. The southern Property line adjoining the former railroad grade trends from approximately 836' at the southwest corner to 818' at the southeast corner.

The soil profile encountered along the north side of the Property from SB-1/MW-1 at the west end to SB-4/MW-4 at the east end consists of approximately 5' of brown clay underlain by approximately 10' of brown sand. This sand is underlain by brown clay that grades to blue/grey clay with lenses of very fine grey sandy silt. The blue clay is underlain by a medium to coarse grained quartz sand that is saturated. The bottom of the grey silt is also saturated. As the topography declines to the east, the upper clay and sand pinch out. In addition, by the SB-3/MW-3 location the blue clay and the silt are found to be thinning and pinching out and these strata are not evident at the SB-4/MW-4 location.

The soil profile encountered along the south side of the Property from SB-8/MW-8 at the west end to SB-5/MW-5 at the east end consists of approximately 15' of brown sand with occasional grey sand silt lenses that pinch out to the east and are not found in SB-5/MW-5.

The soil profile on the Property varied due to the nature of the fill material and the thickness of the overburden or cap. At SB-9 and SB-10, in the Veteran's Landfill area, the cap consisted of a sandy clay that was approximately 2' to 3' in thickness. At these locations, the fill was about 40' in thickness and was found to extend to an approximate elevation of 822'. In SB-9, the fill terminated in a dry, coarse to medium grained sand, and in SB-10, the fill terminated in a dry blue clay with evidence of dry coarse sand.

Soil borings SB-11, SB-12, and SB-13 were advanced in the Areas A, B, and C, respectively, of the BFI operated Cardinal Landfill. The soil profile encountered at SB-11, SB-12, and SB-13 consisted of between 6' and 8' of brown to grey, silty-clay cap material underlain by landfill material to an approximate elevation of 828', 809', and 809', respectively. The fill material terminated in a damp grey sandy silt. The SB-11 (Area A) location was saturated from approximately 836' in the fill material to 828' at the sandy silt. The saturated soil

prevented the collection of a bottom sample from this boring. The soil boring logs included as Attachment 9.4 include the surface elevation at each boring location.

Borings SB-16 through SB-22 on the east side of Veteran's Landfill terminate in native material that varies from grey silty fine grained sand to saturated grey medium grained sand with pebbles. The bottom of fill appears to be dependent on the groundwater elevation at the time aggregate material was removed prior to landfilling. The remainder of the borings in Veteran's and Cardinal Landfills appear to terminate in a native grey silt with varying amounts of fine sand.

Groundwater flow has been determined based on the elevation data collected from the monitor wells and presented on the boring logs. Groundwater flow is to the northeast toward wetlands and the Clinton River at a gradient of 0.02 ft/ft. The groundwater appears to occur at the same elevation as the wetland unit, therefore, it is likely that some portion of the groundwater discharges to the surface at this point. Figure 2 presents the monitor well locations, groundwater elevation, and groundwater flow direction. The soil boring logs included as Attachment 9.4 include the gauging data collected, top of casing elevation, and groundwater elevation.

Applicable Generic Residential Cleanup Criteria

Based on the lithology, the presence of groundwater, and nearby surface water bodies (wetlands and the Clinton River), the applicable Generic Residential Cleanup Criteria (GRCC) for soil are the drinking water protection (DWP) criteria, the groundwater surface water interface protection (GSIP) criteria, the soil volatilization to indoor air inhalation (SVIAI) criteria, and the direct contact (DC) criteria. The applicable GRCC for groundwater are the residential and commercial I drinking water (DW) criteria, the groundwater surface water interface (GSI) criteria, the residential and commercial I groundwater volatilization to indoor air inhalation (GVIAI) criteria, and the groundwater contact (GC) criteria.

Soil Results

The following is a presentation of the laboratory analytical results for chemicals that exceed the applicable GRCC. Table 1 presents the results for soil samples analyzed in comparison to the GRCC and includes the chemical abstract service number (CAS#) for each chemical. The laboratory analytical reports are included as Attachment 9.5.

PCBs

PCBs were detected in six samples submitted for analysis, however, only SB-25 (22') at 10,000 μg/Kg exceeds the DC criterion of 4,000 μg/Kg. All detections of PCBs were in samples collected from the Veteran's Landfill area.

Metals

Arsenic was detected in SB-10 (24') at 9,800 μg/Kg, SB-11 (18') at 13,000 μg/Kg, SB-13 (27.5-29.5') at 16,000 μg/Kg, SB-14 (24-26')at 20,000 μg/Kg, SB-15 (20')at 9,400 μg/Kg, SB-21 (18')at 8,300 μg/Kg, SB-21 (21-23')at 10,000 μg/Kg, SB-22 (26')at 15,000 μg/Kg, SB-24 (24')at 9,900 μg/Kg, SB-25 (22')at 9,400 μg/Kg, and SB-29 (30')at 14,000 μg/Kg,. These concentrations exceed the DC criterion of 7,600 μg/Kg.

Cadmium was detected in SB-22 (26) at 10,000 μg/Kg, SB-25 (22') at 13,000 μg/Kg, and SB-29 (30') at 9,000 μg/Kg. These concentrations exceed the DWP criterion of 6,000 μg/Kg.

Chromium was detected in all soil samples in excess of the GSIP criterion of 3,300 μg/Kg, however, only those values that exceed the Statewide Default Background Level (SDBL) of 18,000 μg/Kg are presented. Chromium was detected in SB-9 (28') at 33,000 μg/Kg, SB-10 (24') at 36,000 μg/Kg, SB-11 (18') at 20,000 μg/Kg, SB-12 (20') at 140,000 μg/Kg, SB-14 (24-24') at 23,000 μg/Kg, SB-15 (20') at 37,000 μg/Kg, SB-16 (20') at 24,000 μg/Kg, SB-17 (15') at 120,000 μg/Kg, SB-18 (20') at 89,000 μg/Kg, SB-19 (23') at 75,000 μg/Kg, SB-20 (18') at 19,000 μg/Kg, SB-21 (18') at 22,000 μg/Kg, SB-22 (26') at 100,000 μg/Kg, SB-23 (26') at 91,000 μg/Kg, SB-25 (22') at 260,000 μg/Kg, SB-26 (25') at 83,000 μg/Kg, SB-27 (22') at 26,000 μg/Kg, SB-28 (22') at 52,000 μg/Kg, SB-29 (30') at 41,000 μg/Kg, SB-30 (25') at 31,000 μg/Kg, SB-31 (35') at 62,000 μg/Kg, and SB-33 (28') at 110,000 μg/Kg. These concentrations exceed the SDBL of 18,000 μg/Kg and, with the exception of the SB-11 (18'), SB-14 ,16,20,21,27 sample, the DWP criterion of 30,000 μg/Kg.

Lead was detected in SB-10 (24') at 410,000 μg/Kg, SB-21 (21-23') at 720,000 μg/Kg, SB-22 (26') at 780,000 μg/Kg, SB-25 (22') at 1,000,000 μg/Kg, SB-29 (30') at 430,000 μg/Kg, and SB-32 (31-32') at 650,000 μg/Kg. These concentrations exceed the DC criterion of 400,000 μg/Kg. In addition, the concentrations in SB-21 (21-23'), SB-22 (26'), and SB-25 (22') exceed the DWP criterion of 700,000 μg/Kg.

Mercury was detected in SB-10 (24') at 150 μg/Kg, SB-12 (20') at 620 μg/Kg, and SB-13 (18') at 140 μg/Kg, SB-17 (15') at 170 μg/Kg, SB-18 (20') at 310 μg/Kg, SB-19 (40-41') at 140 μg/Kg, SB-20 (18) at 2,400 μg/Kg, SB-21 (18) at 270 μg/Kg, SB-22 (26) at 140 μg/Kg, SB-23 (26') at 130 μg/Kg, SB-25 (22') at 210 μg/Kg, SB-28 (22') at 310 μg/Kg, SB-29 (30') at 270 μg/Kg, SB-31 (35') at 220 μg/Kg, SB-32 (31-32') at 120 μg/Kg, and SB-33 (28') at 120 μg/Kg. These concentrations exceed the GSIP criterion of 100 μg/Kg. In addition, the sample collected from SB-20 (18) exceeds the DWP criterion of 1,700 μg/Kg.

Selenium was detected in SB-1/MW-1 (38.5-40') at 640 μg/Kg, SB-2/MW-2 (33.5-35') at 630 μg/Kg, SB-3/MW-3 (27-27.5') at 810 μg/Kg, SB-5/MW-5 (7-8.5') at 570 μg/Kg, SB-6/MW-6 (7-9') at 410 μg/Kg, SB-7/MW-7 (8.5-10') at 520 μg/Kg, SB-9 (28') at 780 μg/Kg, SB-9 (38.5-40') at 620 μg/Kg, SB-10 (24') at 1,300 μg/Kg, SB-10 (35-37') at 1,200 μg/Kg, SB-11 (18') at 1,300 μg/Kg, SB-13 (18') at 800 μg/Kg, SB-13 (27.5-29.5') at 690 μg/Kg, SB-14 (24-24') at 700 μg/Kg, SB-21 (18) at 580 μg/Kg, SB-22 (26) at 1,200 μg/Kg, SB-23 (26') at 490 μg/Kg, and SB-25 (22') at 2,000 μg/Kg. These concentrations exceed the GSIP criterion of 400 μg/Kg.

Silver was detected in SB-9 (28') at 3,900 μg/Kg, SB-10 (24') at 610 μg/Kg, SB-11 (18') at 1,600 μg/Kg, SB-13 (18') at 600 μg/Kg, SB-17 (15') at 930 μg/Kg, SB-19 (23') at 2,100 μg/Kg, SB-22 (26') at 530 μg/Kg, SB-25 (22') at 940 μg/Kg, SB-27 (22') at 720 μg/Kg, SB-31 (35') at 62,000 μg/Kg, and SB-33 (28') at 110,000 μg/Kg. These concentrations exceed the GSIP criterion of 500 μg/Kg.

Zinc was detected in SB-9 (28') at 2,900,000 μg/Kg, which exceeds the DWP criterion of 2,400,000 μg/Kg.

SVOCs

Acenaphthene was detected in SB-22 (26') at 5,200 μg/Kg, which exceeds the GSIP criterion of 4,400 μg/Kg.

Acenaphthylene was detected in SB-19 (23') at 7,000 μg/Kg, which exceeds the DWP criterion of 5,900 μg/Kg.

Benzo(a)pyrene was detected in SB-9 (28') at 4,500 μg/Kg, SB-19 (23') at 18,000 μg/Kg, SB-22 (26') at 5,300 μg/Kg, SB-25 (22') at 3,500 μg/Kg, SB-29 (30') at 4,100 μg/Kg, and

SB-32 (31-32') at 8,800 μg/Kg. These concentrations exceed the DC criterion of 2,000 μg/Kg.

Butyl benzyl phthalate was detected in SB-15 (20') at 77,000 μg/Kg, which exceeds the GSIP of 26,000 μg/Kg.

Carbazole was detected in SB-9 (28') at 2,200 μg/Kg, SB-19 (23') at 10,000 μg/Kg, SB-22 (26') at 3,200 μg/Kg, SB-25 (22') at 1,700 μg/Kg, SB-29 (30') at 2,600, and SB-32 (31-32') at 4,500 μg/Kg. These concentrations exceed the GSIP criterion of 1,100 μg/Kg. In addition, the concentration detected in SB-19 (23') exceeds the DWP criterion of 9,400 μg/Kg.

Dibenzofuran was detected in SB-9 (28') at 2,000 μg/Kg, SB-19 (23') at 5,600 μg/Kg,, SB-22 (26') at 4,300 μg/Kg, and SB-32 (31-32') at 2,800 μg/Kg. These concentrations exceed the GSIP criterion of 1,700 μg/Kg.

Diethylphthalate was detected in SB-17 (15') at 21,000 μg/Kg, SB-18 (20') at 3,700 μg/Kg, SB-19 (23') at 2,700 μg/Kg, SB-23 (26') at 26,000 μg/Kg, and SB-28 (22') at 2,600 μg/Kg. These concentrations exceed the GSIP criterion of 2,200 μg/Kg.

Fluoranthene was detected in SB-19 (23') at 61,000 μg/Kg, which exceed the GSIP criterion of 55,000 μg/Kg.

Fluorene SB-19 (23') at 8,200 μg/Kg and SB-22 (26') at 7,000 μg/Kg. These concentrations exceed the GSIP criterion of 5,300 μg/Kg.

Naphthalene was detected in SB-9 (28') at 8,100 μg/Kg, SB-10 (24') at 3,600 μg/Kg, SB-12 (20') at 1,400 μg/Kg, SB-17 (15') at 7,300 μg/Kg, SB-18 (20') at 5,300 μg/Kg, SB-19 (23') at 16,000 μg/Kg, SB-22 (26') at 5,100 μg/Kg, SB-23 (26') at 15,000 μg/Kg, SB-25 (22') at 20,000 μg/Kg, SB-29 (30') at 2,300 μg/Kg, and SB-32 (31-32') at 5,700 μg/Kg. These concentrations exceed the GSIP criterion of 870 μg/Kg.

Phenanthrene was detected in SB-9 (28') at 21,000 μg/Kg, SB-19 (23') at 6,400 μg/Kg, SB-22 (26') at 34,000 μg/Kg, SB-25 (22') at 11,000 μg/Kg, SB-29 (30') at 14,000 μg/Kg, and

SB-32 (31-32') at 29,000 μg/Kg. These concentrations exceed the GSIP criterion of 5,300 μg/Kg.
Phenol was detected in SB-17 (15') at 11,000 μg/Kg, SB-18 (20') at 4,700 μg/Kg, SB-22 (26') at 4,700 μg/Kg, SB-28 (22') at 6,200 μg/Kg, and SB-29 (30') at 5,600 μg/Kg. These concentrations exceed the GSIP criterion of 4,200 μg/Kg.

VOCs
Benzene was detected in SB-9 (28') at 2,700 μg/Kg, SB-21 (21-23') at 180 μg/Kg, SB-22 (26') at 130 μg/Kg, SB-24 (24') at 150 μg/Kg, SB-29 (30') at 330 μg/Kg, and SB-32 (31-32') at 120 μg/Kg. These concentrations exceed the DWP criterion of 100 μg/Kg. In addition, the concentration detected in SB-9 (28') exceeds the SVIAI criterion of 1,600 μg/Kg.

Chlorobenzene was detected in SB-26 (25') at 8,700 μg/Kg, which exceeds the GSIP criterion of 940μg/Kg and the DWP criterion of 2,000μg/Kg.

1,4-dichlorobenzene was detected in SB-20 (18') at 2,200 μg/Kg, SB-21 (18') at 1,200 μg/Kg, SB-22 (26') at 320 μg/Kg, SB-26 (25') at 2,900 μg/Kg, SB-27 (22') at 1,100 μg/Kg, SB-28 (22') at 2,100 μg/Kg, and SB-29 (30') at 430 μg/Kg. These concentrations exceed the GSIP criterion of 290 μg/Kg. In addition, the concentrations detected in SB-20 (18'), SB-26 (25'), and SB-28 (22') exceed the DWP criterion of 1,700 μg/Kg.

Ethylbenzene was detected in SB-9 (28') at 15,000 μg/Kg, SB-10 (24') at 2,000 μg/Kg, SB-10 (35-37') at 400 μg/Kg, SB-12 (20') at 1,700 μg/Kg, SB-13 (18') at 870 μg/Kg, SB-17 (15') at 2,200 μg/Kg, SB-18 (20') at 4,100 μg/Kg, SB-19 at (23') 4,300 μg/Kg, SB-20 (18') at 1,100 μg/Kg, SB-21 (18') at 650 μg/Kg, SB-22 (26') at 1,200 μg/Kg, SB-23 (26') at 220,000 μg/Kg, SB-24 (24') at 710 μg/Kg, SB-25 (22') at 43,000 μg/Kg, SB-26 (25') at 3,100 μg/Kg, SB-27 (22') at 2,500 μg/Kg, SB-28 (22') at 1,700 μg/Kg, SB-29 (30') at 7,200 μg/Kg, SB-30 (25') at 1,700 μg/Kg, SB-31 (35') at 860 μg/Kg, SB-32 (31-32') at 1,100 μg/Kg, and SB-33 (28') 1,900 μg/Kg. These concentrations exceed the GSIP criterion of 370 μg/Kg, and SB-9 (28'), SB-10 (24'), SB-12 (20'), SB-17 (15'), SB-18 (20'), SB-19 at (23'), SB-23 (26'), SB-25 (22'), SB-26 (25'), SB-27 (22'), SB-28 (22'), SB-29 (30'), SB-30 (25'), and SB-33 (28') exceed the DWP criterion of 1,500 μg/Kg. The concentration detected in SB-23 (26') exceeds the SVIAI criterion of 87,000 μg/Kg and the DC criterion of 140,000 μg/Kg.

Naphthalene was detected in SB-9 (28') at 8,200 µg/Kg, SB-10 (24') at 3,600 µg/Kg, SB-12 (20') at 11,000 µg/Kg, SB-14 (24-26') at 1,300 µg/Kg, SB-16 (20') at 930 µg/Kg, SB-17 (15') at 9,500 µg/Kg, SB-18 (20') at 5,800 µg/Kg, SB-19 (23') at 20,000 µg/Kg, SB-21 (18') at 1,900 µg/Kg, SB-22 (26') at 4,400 µg/Kg, SB-23 (26') at 31,000 µg/Kg, SB-24 (24') at 1,300 µg/Kg, SB-27 (22') at 950 µg/Kg, SB-28 (22') at 950 µg/Kg, SB-29 (30') at 1,600 µg/Kg, SB-32 (31-32') at 7,900 µg/Kg, and SB-33 (28') at 1,700 µg/Kg. These concentrations exceed the GSIP criterion of 870 µg/Kg. The difference in the concentrations detected in the VOC analysis versus the SVOC analysis is due to the analytical method used.

n-Butylbenzene was detected in SB-19 (23') at 2,000 µg/Kg, SB-23 (26') at 22,000 µg/Kg, and SB-25 (22') at 8,900 µg/Kg. These concentrations exceed the DWP criterion of 1,600 µg/Kg.

n-Propylbenzene was detected in SB-23 (26') at 70,000 µg/Kg and SB-25 (22') at 10,000 µg/Kg. These concentrations exceed the DWP criterion of 1,600 µg/Kg.

Tetrachloroethene was detected in SB-10 (24') at 1,500 µg/Kg, SB-11 (35-37') at 300 µg/Kg, SB-18 (20') at 3,500 µg/Kg, SB-19 (23') at 120 µg/Kg, SB-21 (18') at 110 µg/Kg, SB-22 (26') at 150 µg/Kg, SB-23 (26') at 16,000 µg/Kg, SB-27 (22') at 3,900 µg/Kg, SB-28 (22') at 2,100 µg/Kg, and SB-33 (28') at 230 µg/Kg. These concentrations exceed the DWP criterion of 100 µg/Kg. The concentrations detected in SB-10 (24'), SB-18 (20'), SB-23 (26'), SB-27 (22'), and SB-28 (22') exceed the GSIP criterion of 900 µg/Kg. In addition, the concentration detected in the SB-23 (26') exceeds the SVIAI criterion of 11,000 µg/Kg.

Toluene was detected in SB-9 (28') at 24,000 µg/Kg, SB-18 (20') at 10,000 µg/Kg, SB-23 (26') at 750,000 µg/Kg, SB-25 (22') at 180,000 µg/Kg, SB-27 (22') at 6,800 µg/Kg, SB-28 (22') at 4,700 µg/Kg, and SB-29 (30') at 14,000 µg/Kg. These concentrations exceed the GSIP criterion of 2,800 µg/Kg. The concentrations detected in SB-9 (28'), SB-23 (26'), and SB-25 (22') exceed the DWP criterion of 16,000 µg/Kg. In addition, the concentration detected in SB-23 (26') exceeds the SVIAI and DC criteria of 250,000 µg/Kg and 250,000 µg/Kg, respectively.

Trichloroethene was detected in SB-18 (20') at 450 µg/Kg, SB-23 (26') at 11,000 µg/Kg, SB-27 (22') at 1,100 µg/Kg, SB-28 (22') at 940 µg/Kg, SB-29 (30') at 290 µg/Kg, and SB-33 (28') at 490 µg/Kg. These concentrations exceed the DWP criterion of 100 µg/Kg. The concentration detected in SB-23 (26') exceeds the GSIP and SVIAI criteria of 4,000 µg/Kg and 7,100 µg/Kg, respectively.

1,2,4-trimethylbenzene was detected in SB-9 (28') at 5,500 µg/Kg, SB-10 (24') at 8,800 µg/Kg, SB-12 (20') at 3,100 µg/Kg, SB-13 (18') at 2,900 µg/Kg, SB-14 (24-26') at 2,200 µg/Kg, SB-15 (20') at 5,200 µg/Kg, SB-16 (20') at 2,700 µg/Kg, SB-17 (15') at 5,800 µg/Kg, SB-18 (20') at 4,500 µg/Kg, SB-19 (23') at 11,000 µg/Kg, SB-20 (18') at 1,900 µg/Kg, SB-21 (18') at 2,300 µg/Kg, SB-22 (26') at 2,000 µg/Kg, SB-23 (26') at 210,000 µg/Kg, SB-24 (24') at 3,600 µg/Kg, SB-25 (22') at 58,000 µg/Kg, SB-26 (25') at 1,600 µg/Kg, SB-27 (22') at 1,900 µg/Kg, SB-28 (22') at 4,100 µg/Kg, SB-29 (30') at 2,700 µg/Kg, SB-30 (25') at 1,300 µg/Kg, SB-32 (31-32') at 2,400 µg/Kg, and SB-33 (28') 2,400 µg/Kg. These concentrations exceed the GSIP criterion of 570 µg/Kg. The concentrations detected in SB-9 (28'), SB-10 (24'), SB-12 (20'), SB-13 (18'), SB-14 (24-26'), SB-15 (20'), SB-16 (20'), SB-17 (15'), SB-18 (20'), SB-19 (23'), SB-21 (18'), SB-23 (26'), SB-24 (24'), SB-25 (22'), SB-28 (22'), SB-29 (30'), SB-32 (31-32'), and SB-33 (28') exceed the DWP criterion of 2,100 µg/Kg. In addition, the concentration detected in SB-23 (26') exceeds the SVIAI and DC criteria of 110,000 µg/Kg and 110,000 µg/Kg, respectively.

1,3,5-trimethylbenzene was detected in SB-9 (28') at 1,400 µg/Kg, SB-10 (24') at 1,600 µg/Kg, SB-15 (20') at 1,600 µg/Kg, SB-17 (15') at 2,300 µg/Kg, SB-18 (20') at 1,900 µg/Kg, SB-19 (23') at 2,800 µg/Kg, SB-23 (26') at 90,000 µg/Kg, SB-25 (22') at 15,000 µg/Kg, and SB-28 (22') at 1,300 µg/Kg. These concentrations exceed the GSIP criterion of 1,100 µg/Kg. The concentrations detected SB-17 (15'), SB-18 (20'), SB-19 (23'), SB-23 (26'), and SB-25 (22') exceed the DWP criterion of 1,800 µg/Kg.

Xylenes were detected in SB-9 (28') at 37,000 µg/Kg, SB-10 (24') at 7,400 µg/Kg, SB-10 (35-37') at 1,600 µg/Kg, SB-11 (18') at 1,400 µg/Kg, SB-12 (20') at 7,300 µg/Kg, SB-12 (37-39') at 710 µg/Kg, SB-13 (18') at 1,900 µg/Kg, SB-13 (27.5-29.5') at 5,300 µg/Kg, SB-14 (24-26') at 3,600 µg/Kg, SB-15 (20') at 890 µg/Kg, SB-16 (20') at 4,900 µg/Kg, SB-17 (15') at 15,000 µg/Kg, SB-18 (20') at 21,000 µg/Kg, SB-19 (23') at 37,000 µg/Kg, SB-20 (18') at 5,300 µg/Kg, SB-20 (20-21') at 1,300 µg/Kg, SB-21 (18') at 4,100 µg/Kg, SB-22 (26') at 6,600 µg/Kg, SB-23 (26') at 1,000,000 µg/Kg, SB-24 (24') at 9,200 µg/Kg, SB-25 (22') at 230,000 µg/Kg, SB-26 (25') at 25,000 µg/Kg, SB-27 (22') at 12,000 µg/Kg, SB-28 (22') at 6,300 µg/Kg, SB-29 (30') at 25,000 µg/Kg, SB-30 (31') at 880 µg/Kg, SB-31 (35') at 4,100 µg/Kg, SB-32 (31-32') at 4,300 µg/Kg, and SB-33 (28') at 8,400 µg/Kg. These concentrations exceed the GSIP criterion of 700 µg/Kg. The concentrations detected in SB-9 (28'), SB-10 (24'), SB-12 (20'), SB-17 (15'), SB-18 (20'), SB-19 (23'), SB-22 (26'), SB-23

(26'), SB-24 (24'), SB-25 (22'), SB-26 (25'), SB-27 (22'), SB-28 (22'), SB-29 (30'), and SB-33 (28') exceed the DWP criterion of 5,600 µg/Kg. In addition, the concentrations detected in SB-23 (26') and SB-25 (22') exceed the SVIAI and DC criteria of 150,000 µg/Kg and 150,000 µg/Kg, respectively.

Groundwater Results

The following is a presentation of the laboratory analytical results for chemicals that exceed the applicable GRCC. Table 2 presents the results for groundwater samples analyzed in comparison to the GRCC and includes the chemical abstract service number (CAS#) for each chemical. The laboratory analytical reports are included as Attachment 9.5.

PCBs

There were no PCBs detected at or above the method detection limit in any sample analyzed.

Metals

Lead was detected in MW-2 at 8 µg/L, MW-4 at 41 µg/L, MW-7 at 13 µg/L, and MW-4 at 11 µg/L. These concentrations exceed the DW criterion of 4 µg/L. In addition, the concentration in MW-4 exceeds the GSI criterion for surface water that is used as a drinking water source or is in connection with the Great Lakes.

Naphthalene was detected in MW-2 at 25 µg/L, which exceeds the GSI criterion of 13 µg/L.

Other Media

Air samples were collected from the vents installed in borings SB-15, SB-21, and SB-30. The samples were collected into Tedlar bags and transported under standard chain of custody to RTI Laboratories, Inc. in Livonia for analysis of VOCs by EPA Method TO-15. The air sample results indicate that benzene, carbon disulfide, chlorobenzene, chloroethane, chloroform, cis-1,2-dichloroethene, 1,1,-dichloroethane, 1,1-dichloroethene, ethylbenzene, methylene chloride, styrene, tetrachloroethene, toluene, trans-1,2-dichloroethene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichlorotrifluoroethane, trimethylbenzene isomers, vinyl chloride, and xylenes were detected in one or more of the three samples. ASTI is currently in discussions with the DEQ Remediation and Redevelopment Division (RRD) and Air Quality Division (AQD) to determine exposure risks and possible due care obligations in regard to these VOCs. Table 3 presents the air sample results in comparison to

the AQD Initial Toxic Screening Levels (ITSLs). The laboratory analytical reports are included as Attachment 9.5

ASTI monitored methane in the augers and ambient air during drilling activities. The augers were screened at 5' intervals. Methane was detected in SB-9 through SB-33. The methane concentrations were 100% of the lower explosive limit (LEL) at all sample locations in the augers and < 2% LEL within 1' of the augers. Due to the elevated methane detections, drilling activities were halted regularly to allow the methane to vent. There were no LEL readings beyond 1' from the augers. The LEL meter was calibrated using 50 ppm methane calibration gas. ASTI intended to screen the augers during the SB-9 through SB-13 boring installation using a flame ionization detector (FID) calibrated with 100 ppm methane calibration gas in order to better quantify the methane concentrations, however, due to temperatures below 20° F, the FID was inoperable. Methane was also detected at 100% LEL at the methane vents located around the Property. An FID was used to screen borings SB-14 through SB-33 during installation. FID readings exceed the upper detectable range of 10,000 parts per million, which is equivalent to 1% by volume.

On March 5, 2004, ASTI screened the newly installed vents, the previously installed groundwater monitor wells along Hamlin Road (MW-1 through MW-4) and the Rails to Trails (MW-5 through MW-6), and three vents previously installed by the DEQ on the adjoining residential parcel to the northeast using a Landtec Model GEM-500 landfill gas analyzer capable of detecting methane concentrations from 0% to 100% by volume. Methane was detected at all locations within the landfill at approximately 65% by volume. Table 4 presents the methane screening data collected.

Methane was detected in the groundwater monitor wells located in the north and south adjoining right-of-ways at the following concentrations: MW-1 at 16.90%, MW-2 at 0.60%, MW-3 at 33.40%, MW-6 at 41.20%, and MW-7 0.10%. In addition, methane was detected at 3% in vent located at the center of the southern property line of the northeast adjoining residential parcel. Table 4 presents the methane screening data collected.

Summary

Based on the concentrations of PCBs, arsenic, cadmium, chromium, lead, mercury, selenium, silver, zinc, acenaphthene, acenaphthylene, benzo(a)pyrene, butyl benzyl phthalate, carbazole, dibenzofuran, diethylphthalate, fluoranthene, fluorene, naphthalene, phenanthrene,

phenol, benzene, chlorobenzene, 1,4-dichlorobenzene, ethylbenzene, n-butylbenzene, n-propylbenzene, tetrachloroethene, toluene, trichloroethene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes in excess of the GRCC for DC, SVIAI, GSIP, and DWP in the Property soil; lead and naphthalene in groundwater in excess of the GRCC for DW and GSI; and methane and other VOCs in the landfill material, the Property meets the definition of a facility as defined in Section 20101(1)(o) of Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

Based on the groundwater sample results and the methane readings in the off-site groundwater monitor wells and vents, in appears that impact is migrating off the Property above the GRCC. REI Brownstown LLC will file a Notice of Migration of Contamination Form upon taking ownership of the Property.

Due to the nature of landfills, it is possible that chemicals not listed in this BEA may be identified during the course of site redevelopment activities. In the event that other chemicals are identified, the DEQ will be notified as post BEA information.

5.0 LIKELIHOOD OF OTHER CONTAMINATION

A copy of the EDR report is included in Appendix G of the Phase I ESA included as Attachment 9.2. There is no reason to suspect that any additional hazardous substances, other than those discussed in Section 4.0 (Known Contamination) of this report, would be present on the Property.

6.0 ALTERNATIVE APPROACHES

Based on the Instructions for Preparing and Submitting Baseline Environmental Assessments and 7a Compliance Analysis to the Michigan Department of Environmental Quality and for Requesting Optional Determinations Pursuant to 1994 PA 451, Part 201, as amended, March 11, 1999, a Category N BEA does not require specific contaminant distribution and extent. No alternative approaches are required.

7.0 CONCLUSIONS

After reviewing all available data, ASTI makes the following conclusions regarding the Property:

- No abandoned aboveground storage tanks, or abandoned or discarded barrels, containers, or other receptacles containing hazardous substances are known to be present on the Property. Based on conversations with Mr. Ben Matthews of the DEQ, the 55-gallon drums used to containerize auger cuttings and decon and purge water are not considered to be abandoned containers.

- The soil profile encountered along the north side of the Property from SB-1/MW-1 at the west end to SB-4/MW-4 at the east end consists of approximately 5' of brown clay underlain by approximately 10' of brown sand. This sand is underlain by brown clay that grades to blue/grey clay with lenses of very fine grey sandy silt. The blue clay is underlain by a medium to coarse grained quartz sand that is saturated. The bottom of the grey silt is also saturated. As the topography declines to the east, the upper clay and sand pinch out. In addition, by the SB-3/MW-3 location the blue clay and the silt are found to be thinning and pinching out and these strata are not evident at the SB-4/MW-4 location.

- The applicable Generic Residential Cleanup Criteria (GRCC) for soil are the drinking water protection (DWP) criteria, the groundwater surface water interface protection (GSIP) criteria, the soil volatilization to indoor air inhalation (SVIAI) criteria, and the direct contact (DC) criteria. The applicable GRCC for groundwater are the residential and commercial I drinking water (DW) criteria, the groundwater surface water interface (GSI) criteria, the residential and commercial I groundwater volatilization to indoor air inhalation (GVIAI) criteria, and the groundwater contact (GC) criteria.

- Based on the concentrations of PCBs, arsenic, cadmium, chromium, lead, mercury, selenium, silver, zinc, acenaphthene, acenaphthylene, benzo(a)pyrene, butyl benzyl phthalate, carbazole, dibenzofuran, diethylphthalate, fluoranthene, fluorene, naphthalene, phenanthrene, phenol, benzene, chlorobenzene, 1,4-dichlorobenzene, ethylbenzene, n-butylbenzene, n-propylbenzene, tetrachloroethene, toluene, trichloroethene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes in

excess of the GRCC for DC, SVIAI, GSIP, and DWP in the Property soil; lead and naphthalene in groundwater in excess of the GRCC for DW and GSI; and methane in the landfill material, the Property meets the definition of a facility as defined in Section 20101(1)(o) of Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

- Based on the groundwater sample results and the methane readings in the off-site groundwater monitor wells and vents, in appears that impact is migrating off the Property above the GRCC. REI Brownstown LLC will file a Notice of Migration of Contamination Form upon taking ownership of the Property.

- Due to the nature of landfills, it is possible that chemicals not listed in this BEA may be identified during the course of site redevelopment activities. In the event that other chemicals are identified, the DEQ will be notified as post BEA information.

- There will be no significant hazardous substance use at the Property and this stipulated condition is the basis for being able to distinguish existing contamination from a new release.

8.0 REFERENCES

The following list of references were used as the basis to make the baseline environmental assessment:

1. *Part 201 of the Natural Resources and Environmental Protection Act, Act 451 of 1994, as amended*.

2. *Operational Memorandum #18: Part 201 Cleanup Criteria Tables, Revised Effective December 21, 2002.*

3. *Instructions for Preparing and Submitting Baseline Environmental Assessments and 7a Compliance Analysis to the Michigan Department of Environmental Quality and for Requesting Optional Determinations Pursuant to 1994 PA 451, Part 201, as amended, March 11, 1999.*

4. *ASTM Standard Practice E 1527-00; "Standard Practice for Environmental Assessments: Phase I Environmental Assessment Process"*

9.0 ATTACHMENTS

9.1 Resume of Trevor I. Woollatt
9.2 Phase I ESA 8 Contiguous Parcels Including Suburban Softball, dated February 10, 2004, prepared by ASTI
9.3 Site Photographs (January 18, 2004)
9.4 Soil Boring Logs
9.5 Laboratory Analytical Reports

FIGURES

2801 West Hamlin Road Rochester Hills, Michigan

ASTI Environmental

1 inch equals 200 feet

Created for: Real Estate Interest Group

ASTI Project 1-5450, JPB, 04-02-2004

Figure 1 Soil Boring, Monitoring Well & Groundwater Contour Map

TABLES

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-1/MW-1 38.5-40' 12/16/2003	SB-2/MW-2 33.5-35' 12/16/2003	SB-3/MW-3 27-27.5' 12/17/2003
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	7,100	4,500	6,300
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	25,000	9,400	39,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	340	160	270
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	7,400	6,400	18,000
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	13,000	8,500	16,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	8,000	4,800	7,500
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**640**	**630**	**810**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	41,000	35,000	43,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<330	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<330	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<330	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<330	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	<330	<330	<330
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	<330	<330	<330
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<330	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<330	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	<330	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-1/MW-1 38.5-40' 12/16/2003	SB-2/MW-2 33.5-35' 12/16/2003	SB-3/MW-3 27-27.5' 12/17/2003
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	<330	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<330	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	<330	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	<330	<330
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	<330	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	<330	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-1/MW-1 38.5-40' 12/16/2003	SB-2/MW-2 33.5-35' 12/16/2003	SB-3/MW-3 27-27.5' 12/17/2003
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	<50	<50	<50
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	<100	<100
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	<250	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	<250	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	<50	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	<100	<100
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	<50	<50	<50
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	<100	<100	<100
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	<100	<100	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	<150	<150	<150

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-4/MW-4 8.5-9.5' 12/17/2003	SB-5/MW-5 7-8.5' 12/17/2003	SB-6/MW-6 7-9' 12/17/2003
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	4,600	1,700	2,400
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	24,000	7,500	4,200
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	110	100	110
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	6,400	7,200	4,600
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	7,400	7,600	5,400
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	6,400	3,700	2,400
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	350	**570**	**410**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	23,000	24,000	15,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<330	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<330	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<330	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<330	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	<330	<330	<330
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	<330	<330	<330
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<330	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<330	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	<330	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-4/MW-4 8.5-9.5' 12/17/2003	SB-5/MW-5 7-8.5' 12/17/2003	SB-6/MW-6 7-9' 12/17/2003
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	<330	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<330	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	<330	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	<330	<330
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	<330	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	<330	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-4/MW-4 8.5-9.5' 12/17/2003	SB-5/MW-5 7-8.5' 12/17/2003	SB-6/MW-6 7-9' 12/17/2003
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	<50	<50	<50
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	<100	<100
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	<250	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	<250	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	<50	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	<100	<100
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	<50	<50	<50
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	<100	<100	<100
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	<100	<100	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	<150	<150	<150

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-7/MW-7 8.5-10' 12/17/2003	SB-8/MW-8 3.5-5' 12/17/2003	SB-9 28' 12/18/2003
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	3,200	6,000	6,500
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	8,900	17,000	90,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	120	110	1,500
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	6,100	10,000	**33,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	7,700	9,700	42,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	3,500	5,900	84,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**520**	400	**780**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500	**3,900**
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	20,000	30,000	**2,900,000**
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	3,000
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	3,900
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<330	5,800
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<330	**4,500**
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<330	3,900
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	1,300
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<330	3,900
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	<330	<330	3,200
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	<330	<330	630
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	**2,200**
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<330	6,100
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	**2,000**
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<330	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	<330	1,200
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-7/MW-7 8.5-10' 12/17/2003	SB-8/MW-8 3.5-5' 12/17/2003	SB-9 28' 12/18/2003
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	<330	20,000
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	3,600
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	1,100
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<330	11,000
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	<330	3,100
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	<330	**8,100**
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	<330	**21,000**
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	<330	8,700
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	**2,700**
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-7/MW-7 8.5-10' 12/17/2003	SB-8/MW-8 3.5-5' 12/17/2003	SB-9 28' 12/18/2003
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	<50	<50	**15,000**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	<100	2,600
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	<250	6,600
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	<250	**8,200**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	<50	880
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	<100	1,400
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	1,700
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	<50	<50	**24,000**
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	<100	<100	**5,500**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	<100	<100	**1,400**
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	<150	<150	**37,000**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-9 38.5-40' 12/18/2003	SB-10 24' 12/18/2003	SB-10 35-37' 12/18/2003
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	3,400	**9,800**	6,800
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	10,000	220,000	33,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	140	2,900	210
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	7,300	**36,000**	14,000
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	8,000	41,000	16,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	4,400	**410,000**	8,500
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	**150**	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**620**	**1,300**	**1,200**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	**610**	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	60,000	510,000	40,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<660	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<660	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<660	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<660	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<660	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<660	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<660	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<660	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<6,600	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<660	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<660	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<200	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<660	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	<330	69,000	<330
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<660	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	<330	8,500	<330
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<660	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<660	<330
4-Chloroaniline		-	-	-	-	-	<1300	<2,600	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<660	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<660	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<660	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<660	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<660	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<660	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<660	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<660	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<660	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<660	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<660	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	740	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<3,400	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<3,400	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<660	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<660	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-9 38.5-40' 12/18/2003	SB-10 24' 12/18/2003	SB-10 35-37' 12/18/2003
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	37,000	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<660	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	1,600	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<660	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<660	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<660	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<400	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<660	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<660	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<660	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	3,100	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<660	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	4,900	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	**3,600**	<330
2-Nitroaniline		-	-	-	-	-	<1700	<3,400	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<3,400	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<3,400	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<400	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<660	<330
4-Nitrophenol		-	-	-	-	-	<1700	<3,400	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<660	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<660	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<660	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<1,600	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	2,000	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	2,800	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	880	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<660	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<660	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<660	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	130
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	470	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	280	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

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1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	<50	**2,000**	**400**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	370	<100
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	3,600	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	**3,600**	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	740	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	430	<100
Styrene		100425	2,700	2,200	250,000	400,000	<50	170	100
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	**1,500**	**300**
Toluene		108883	16,000	2,800	250,000	250,000	<50	1,600	1,300
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	100	90
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	<100	**8,800**	340
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	<100	**1,600**	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	<150	**7,400**	**1,600**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

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Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	**13,000**	13,000	6,200
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	72,000	150,000	71,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	680	2,200	400
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**20,000**	**140,000**	16,000
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	19,000	120,000	15,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	56,000	250,000	25,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	**620**	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**1,300**	**700**	**780**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**1,600**	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	420,000	500,000	98,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<330	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<330	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<330	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<330	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	740	13,000	8,100
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	390	<330	<330
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<330	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<330	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	<330	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-11 18' 12/19/2003	SB-12 20' 12/19/2003	SB-12 37-39' 12/19/2003
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	860	1,600	9,500
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	400	310
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	1,400	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	430	<330	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	**1,400**	<330
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	1,800	730
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	430	580
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	100	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
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Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-11 18' 12/19/2003	SB-12 20' 12/19/2003	SB-12 37-39' 12/19/2003
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	330	**1,700**	**410**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	470	<100
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	3,600	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	**11,000**	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	90	320	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	390	<100
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	150	240	61
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	560	**3,100**	170
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	130	800	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**1,400**	**7,300**	**710**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-13 18' 12/19/2003	SB-13 27.5-29.5' 12/19/2003	SB-14 24-26' 3/2/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	6,700	**16,000**	**20,000**
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	58,000	73,000	120,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	580	200	460
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	18,000	12,000	**23,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	17,000	9,600	16,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	65,000	9,400	28,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	**140**	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**800**	**690**	**700**
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**600**	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	110,000	56,000	61,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	<528
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<528
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	<528
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	500	<330	<528
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	430	<330	<528
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	340	<330	<528
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	<528
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	380	<330	560
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<5280
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<528
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<528
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<160
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<528
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	1,400	<330	2,200
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<528
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	1,500	<330	<528
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	<528
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<528
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<2080
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<528
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<528
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<528
Chrysene		218019	NLL	NLL	ID	2,000,000	470	<330	<528
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<528
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	<528
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<528
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<528
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	<330	<528
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<528
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<528
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	<330	<528
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<2720
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<2720
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<528
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<528

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-13 18' 12/19/2003	SB-13 27.5-29.5' 12/19/2003	SB-14 24-26' 3/2/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330	<528
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<528
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	1,300	<330	870
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	<528
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<528
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<528
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<320
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<528
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	<528
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<528
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<330	970
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<528
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	<330	<528
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	<330	740
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<2720
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<2720
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<2720
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<320
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<528
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<2720
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<528
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<528
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<528
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<1280
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	1,000	<330	920
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<528
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	770	<330	970
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<528
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<528
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<528
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	60
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-13 18' 12/19/2003	SB-13 27.5-29.5' 12/19/2003	SB-14 24-26' 3/2/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**870**	230	150
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	400	280
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	290	<250	2,100
Naphthalene		91203	35,000	870	250,000	16,000,000	390	<250	**1,300**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	120	180	410
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	540	290
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	130	<50	150
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	74
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	540	**2,900**	**2,200**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	110	560	380
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**1,900**	**5,300**	**3,600**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-15 20' 3/2/2004	SB-16 20' 3/3/2004
Metals (ug/Kg)								
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	**9,400**	6,000
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	110,000	64,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	5,600	320
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**37,000**	**24,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	45,000	17,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	67,000	25,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	400	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	440,000	95,000
PCBs (ug/Kg)								
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
SVOCs (ug/Kg)								
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	570
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	1,000
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	1,100
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	890
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	920
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	8,600	9,300
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	**77,000**	1,600
Carbazole		86748	9,400	1,100	NLV	530,000	<330	460
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	1,100
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	1,200	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	2,300	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	4,700	380
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-15 20' 3/2/2004	SB-16 20' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	2,700
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	340
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	410
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	4,000	520
Naphthalene		91203	35,000	870	250,000	16,000,000	380	610
2-Nitroaniline		-	-	-	-	-	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	520	2,200
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	360	2,200
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330
VOCs (ug/Kg)								
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	160
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-15 20' 3/2/2004	SB-16 20' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	340	160
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	270	290
Methyl iodide		-	-	-	-	-	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	370	1,400
Naphthalene		91203	35,000	870	250,000	16,000,000	440	**930**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	1,100	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	650	460
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	170	100
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**5,200**	**2,700**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	**1,600**	650
Vinyl chloride		75014	40	300	270	3,800	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**890**	**4,900**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-17 15' 3/2/2004	SB-18 20' 3/2/2004
Metals (ug/Kg)								
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	4,300	6,600
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	52,000	260,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	720	2,200
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**120,000**	**89,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	59,000	49,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	170,000	140,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	**170**	**310**
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	210
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**930**	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	1,400,000	320,000
PCBs (ug/Kg)								
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	920	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
SVOCs (ug/Kg)								
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<495	<990
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<495	<990
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	1,000	<990
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	1,400	1,000
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<495	1,100
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	1,300	1,100
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<495	<990
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	1,200	1,100
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<4950	<9900
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<495	<990
Bis (2-chloroethoxy) methane		-	-	-	-	-	<495	<990
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<150	<300
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<495	<990
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	140,000	62,000
4-Bromophenyl phenyl ether		-	-	-	-	-	<495	<990
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	6,000	11,000
Carbazole		86748	9,400	1,100	NLV	530,000	660	<990
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<495	<990
4-Chloroaniline		-	-	-	-	-	<1950	<9900
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<495	<990
2-Chlorophenol		95578	900	440	ID	1,400,000	<495	<990
4-Chlorophenyl phenyl ether		-	-	-	-	-	<495	<990
Chrysene		218019	NLL	NLL	ID	2,000,000	1,400	1,200
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<495	<990
Dibenzofuran		132649	ID	1,700	ID	ID	<495	<990
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<495	<990
2,6-Dichlorophenol		-	-	-	-	-	<495	<990
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	**21,000**	**3,700**
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<495	<990
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<495	<990
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	2,700	5,000
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<2550	<5100
2,4-Dinitrophenol		-	-	-	-	-	<2550	<5100
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<495	<990
2,6-Dinitrotoluene		-	-	-	-	-	<495	<990

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-17 15' 3/2/2004	SB-18 20' 3/2/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	8,200	<990
1,2-Diphenylhydrazine		-	-	-	-	-	<495	<990
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	4,100	2,800
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	620	<990
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<495	<990
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<495	<990
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<300	<600
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<495	<990
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<495	<990
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<495	<990
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	3,800	2,600
2-Methylphenol (o-Cresol)		-	-	-	-	-	540	<990
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	8,900	11,000
Naphthalene		91203	35,000	870	250,000	16,000,000	**7,300**	**5,300**
2-Nitroaniline		-	-	-	-	-	<2550	<5100
3-Nitroaniline		-	-	-	-	-	<2550	<5100
4-Nitroaniline		-	-	-	-	-	<2550	<5100
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<300	<600
2-Nitrophenol		88755	400	ID	NLV	630,000	<495	<990
4-Nitrophenol		-	-	-	-	-	<2550	<5100
N-Nitrosodimethylamine		-	-	-	-	-	<495	<990
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<495	<990
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<495	<990
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<1200	<2400
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	4,100	3,700
Phenol		108952	88,000	4,200	NLV	12,000,000	**11,000**	**4,700**
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	2,900	2,300
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<495	<990
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<495	<990
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<495	<990
VOCs (ug/Kg)								
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	2,000
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	900
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	190
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	240
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	92
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-17 15' 3/2/2004	SB-18 20' 3/2/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**2,200**	**4,100**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	300	320
Methyl iodide		-	-	-	-	-	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	3,500	2,200
Naphthalene		91203	35,000	870	250,000	16,000,000	**9,500**	**5,800**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	850
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	560	630
Styrene		100425	2,700	2,200	250,000	400,000	<50	550
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	**3,500**
Toluene		108883	16,000	2,800	250,000	250,000	930	**10,000**
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	**450**
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**5,800**	**4,500**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	**2,300**	**1,900**
Vinyl chloride		75014	40	300	270	3,800	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**15,000**	**21,000**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-19 23' 3/2/2004	SB-19 40-41' 3/2/2004	SB-20 18' 3/3/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	5,400	3,300	5,600
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	620,000	13,000	340,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	2,300	110	480
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**75,000**	5,200	**19,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	32,000	7,100	16,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	130,000	4,100	40,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	**140**	**2,400**
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	<200	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**2,100**	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	410,000	31,000	200,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	1,500	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<990	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	**7,000**	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	12,000	<330	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	18,000	<330	1,400
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	**18,000**	<330	920
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	19,000	<330	960
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	5,500	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	16,000	<330	850
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<9900	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<990	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<990	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<300	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<990	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	110,000	<330	930,000
4-Bromophenyl phenyl ether		-	-	-	-	-	<990	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	5,800	<330	3,200
Carbazole		86748	9,400	1,100	NLV	530,000	**10,000**	<330	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<990	<330	<330
4-Chloroaniline		-	-	-	-	-	<3900	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<990	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<990	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<990	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	20,000	<330	1,000
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<990	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	**5,600**	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<990	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<990	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	**2,700**	<330	1,800
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<990	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<990	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	1,600	<330	6,600
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<5100	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<5100	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<990	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<990	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-19 23' 3/2/2004	SB-19 40-41' 3/2/2004	SB-20 18' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	44,000	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<990	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	**61,000**	<330	2,200
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	**8,200**	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<990	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<990	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<600	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<990	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	5,500	<330	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<990	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	7,400	<330	1,400
2-Methylphenol (o-Cresol)		-	-	-	-	-	<990	<330	880
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	16,000	<330	5,800
Naphthalene		91203	35,000	870	250,000	16,000,000	**16,000**	<330	800
2-Nitroaniline		-	-	-	-	-	<5100	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<5100	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<5100	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<600	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<990	<330	<330
4-Nitrophenol		-	-	-	-	-	<5100	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<990	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<990	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<990	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<2400	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	**6,400**	<330	950
Phenol		108952	88,000	4,200	NLV	12,000,000	3,700	<330	2,100
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	42,000	<330	1,800
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<990	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<990	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<990	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	1,400	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	860	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	220
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	81	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	<100	**2,200**
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-19 23' 3/2/2004	SB-19 40-41' 3/2/2004	SB-20 18' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**4,300**	220	**1,100**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	620	<100	120
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	6,100	<250	790
Naphthalene		91203	35,000	870	250,000	16,000,000	**20,000**	<250	640
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	**2,000**	<50	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	1,200	<100	180
Styrene		100425	2,700	2,200	250,000	400,000	<50	<50	84
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	**120**	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	2,000	<50	300
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	100	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	700	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**11,000**	270	**1,900**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	**2,800**	<100	550
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**37,000**	630	**5,300**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-20 20-21' 3/3/2004	SB-21 18' 3/3/2004	SB-21 21-23' 3/3/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	5,500	**8,300**	**10,000**
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	410,000	150,000	310,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	210	790	2,000
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	8,600	**22,000**	17,000
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	12,000	21,000	41,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	5,700	49,000	**720,000**
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	**270**	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	**580**	220
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	32,000	230,000	920,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	370	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<330	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<330	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<330	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<330	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<330	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<330	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<330	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<330	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<3300	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<330	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<330	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<100	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<330	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	1,100	8,200	650
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	<330	<330	<330
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<330	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<330	<330
4-Chloroaniline		-	-	-	-	-	<1300	<1300	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<330	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<330	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<330	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<330	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<330	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<330	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<330	<330
2,6-Dichlorophenol		-	-	-	-	-	<330	<330	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<330	610	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<330	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<330	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<330	340	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrophenol		-	-	-	-	-	<1700	<1700	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<330	<330
2,6-Dinitrotoluene		-	-	-	-	-	<330	<330	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-20 20-21' 3/3/2004	SB-21 18' 3/3/2004	SB-21 21-23' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<330	<330	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<330	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	<330	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<330	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<330	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<330	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<200	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<330	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<330	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<330	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<330	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<330	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	<330	950	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	730	<330
2-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
3-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
4-Nitroaniline		-	-	-	-	-	<1700	<1700	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<200	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<330	<330
4-Nitrophenol		-	-	-	-	-	<1700	<1700	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<330	<330	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<330	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<330	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<800	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	470	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	<330	<330	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	340	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<330	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<330	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<330	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<50	<50	**180**
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<250	<250
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<250	<250
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<250	<250
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<250	<250
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	270	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<100	**1,200**	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-20 20-21' 3/3/2004	SB-21 18' 3/3/2004	SB-21 21-23' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	210	**650**	57
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<250	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<100	180	<100
Methyl iodide		-	-	-	-	-	<100	<100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<250	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<250	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<250	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	360	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<250	**1,900**	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<50	370	<50
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<100	310	<100
Styrene		100425	2,700	2,200	250,000	400,000	<50	63	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	**110**	<50
Toluene		108883	16,000	2,800	250,000	250,000	<50	260	75
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<50	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<50	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<250	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<250	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<50	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<50	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	240	**2,300**	<100
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	<100	930	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**1,300**	**4,100**	410

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-22 26' 3/3/2004	SB-23 26' 3/3/2004	SB-24 24' 3/3/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	**15,000**	5,600	**9,900**
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	76,000	180,000	39,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	**10,000**	4,400	470
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**100,000**	**91,000**	12,000
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	92,000	29,000	200,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	**780,000**	270,000	19,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	**140**	**130**	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**1,200**	**490**	260
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**530**	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	480,000	240,000	160,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	1,900	1,800	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	**5,200**	<990	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<1020	<990	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	6,900	<990	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	7,000	<990	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	**5,300**	<990	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	6,700	<990	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	1,700	<990	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	6,300	<990	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<10230	<9900	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<1020	<990	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<1020	<990	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<310	<300	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<1020	<990	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	81,000	480,000	1,300
4-Bromophenyl phenyl ether		-	-	-	-	-	<1020	<990	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	6,100	2,800	<330
Carbazole		86748	9,400	1,100	NLV	530,000	**3,200**	<990	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<1020	<990	<330
4-Chloroaniline		-	-	-	-	-	<4030	<3900	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<1020	<990	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<1020	<990	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<1020	<990	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	7,700	<990	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<1020	<990	<330
Dibenzofuran		132649	ID	1,700	ID	ID	**4,300**	<990	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<1020	<990	<330
2,6-Dichlorophenol		-	-	-	-	-	<1020	<990	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	1,200	**26,000**	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<1020	<990	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<1020	<990	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	1,600	11,000	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<5270	<5100	<1700
2,4-Dinitrophenol		-	-	-	-	-	<5270	<5100	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<1020	<990	<330
2,6-Dinitrotoluene		-	-	-	-	-	<1020	<990	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-22 26' 3/3/2004	SB-23 26' 3/3/2004	SB-24 24' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	17,000	<990	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<1020	<990	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	28,000	<990	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	**7,000**	<990	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<1020	<990	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<1020	<990	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<620	<600	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<1020	<990	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	1,700	<990	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<1020	<990	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	3,300	3,100	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<1020	<990	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	8,500	5,900	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	**5,100**	**15,000**	<330
2-Nitroaniline		-	-	-	-	-	<5270	<5100	<1700
3-Nitroaniline		-	-	-	-	-	<5270	<5100	<1700
4-Nitroaniline		-	-	-	-	-	<5270	<5100	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<620	<600	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<1020	<990	<330
4-Nitrophenol		-	-	-	-	-	<5270	<5100	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<1020	<990	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<1020	<990	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<1020	<990	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<2480	<2400	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	**34,000**	1,500	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	**4,700**	2,400	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	21,000	<990	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<1020	<990	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<1020	<990	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<1020	<990	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	1,200	<45800	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<15300	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	**130**	<3100	**150**
Bromochloromethane		-	-	-	-	-	<100	<6100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<6100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<6100	<100
Bromomethane		74839	200	700	860	320,000	<250	<15300	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	580	<15300	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<15300	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<3100	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	61	<3100	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<15300	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<3100	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<15300	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<3100	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<3100	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<15300	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<6100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<3100	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<6100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<6100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<6100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	**320**	<6100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<6100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<3100	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<3100	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<3100	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-22 26' 3/3/2004	SB-23 26' 3/3/2004	SB-24 24' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<3100	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<15300	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**1,200**	**220,000**	**710**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<6100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<15300	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	150	27,000	360
Methyl iodide		-	-	-	-	-	<100	<6100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<15300	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<15300	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<15300	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	1,800	16,000	800
Naphthalene		91203	35,000	870	250,000	16,000,000	**4,400**	**31,000**	**1,300**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	210	**22,000**	320
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	230	**70,000**	870
Styrene		100425	2,700	2,200	250,000	400,000	210	<3100	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<6100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<6100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	**150**	**16,000**	<50
Toluene		108883	16,000	2,800	250,000	250,000	1,300	**750,000**	370
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<3100	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<3100	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<3100	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<15300	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<15300	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<3100	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<3100	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	82	**11,000**	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<6100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<6100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**2,000**	**210,000**	**3,600**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	650	**90,000**	460
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**6,600**	**1,000,000**	**9,200**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-25 22' 3/3/2004	SB-26 25' 3/3/2004
Metals (ug/Kg)								
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	**9,400**	7,300
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	380,000	220,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	**13,000**	870
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**260,000**	**83,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	130,000	1,100,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	**1,000,000**	120,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	**210**	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	**2,000**	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**940**	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	740,000	370,000
PCBs (ug/Kg)								
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	10,000	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<1650	<330
SVOCs (ug/Kg)								
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	1,500	<396
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<1120	<396
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	2,800	480
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	3,700	880
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	**3,500**	570
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	3,200	900
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<1120	<396
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	3,900	740
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<11200	<3960
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<1120	<396
Bis (2-chloroethoxy) methane		-	-	-	-	-	<1120	<396
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<340	<120
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<1120	<396
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	41,000	31,000
4-Bromophenyl phenyl ether		-	-	-	-	-	<1120	<396
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	2,400	790
Carbazole		86748	9,400	1,100	NLV	530,000	**1,700**	<396
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<1120	<396
4-Chloroaniline		-	-	-	-	-	<4420	<1560
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<1120	<396
2-Chlorophenol		95578	900	440	ID	1,400,000	<1120	<396
4-Chlorophenyl phenyl ether		-	-	-	-	-	<1120	<396
Chrysene		218019	NLL	NLL	ID	2,000,000	3,600	1,300
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<1120	<396
Dibenzofuran		132649	ID	1,700	ID	ID	1,300	<396
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<1120	<396
2,6-Dichlorophenol		-	-	-	-	-	<1120	<396
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<1120	<396
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<1120	<396
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<1120	<396
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	4,800	460
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<5780	<2040
2,4-Dinitrophenol		-	-	-	-	-	<5780	<2040
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<1120	<396
2,6-Dinitrotoluene		-	-	-	-	-	<1120	<396

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-25 22' 3/3/2004	SB-26 25' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	<1120	13,000
1,2-Diphenylhydrazine		-	-	-	-	-	<1120	<396
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	9,800	3,900
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	2,300	870
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<1120	<396
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<1120	<396
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<680	<240
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<1120	<396
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<1120	<396
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<1120	<396
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	7,300	<396
2-Methylphenol (o-Cresol)		-	-	-	-	-	<1120	<396
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	4,500	430
Naphthalene		91203	35,000	870	250,000	16,000,000	**20,000**	<396
2-Nitroaniline		-	-	-	-	-	<5780	<2040
3-Nitroaniline		-	-	-	-	-	<5780	<2040
4-Nitroaniline		-	-	-	-	-	<5780	<2040
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<680	<240
2-Nitrophenol		88755	400	ID	NLV	630,000	<1120	<396
4-Nitrophenol		-	-	-	-	-	<5780	<2040
N-Nitrosodimethylamine		-	-	-	-	-	<1120	<396
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<1120	<396
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<1120	<396
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<2720	<960
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	**11,000**	4,900
Phenol		108952	88,000	4,200	NLV	12,000,000	<1120	<396
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	9,000	3,000
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<1120	<396
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<1120	<396
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<1120	<396
VOCs (ug/Kg)								
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<53300	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<17800	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	<3600	<50
Bromochloromethane		-	-	-	-	-	<7100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<7100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<7100	<100
Bromomethane		74839	200	700	860	320,000	<17800	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<17800	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<17800	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<3600	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<3600	**8,700**
Chloroethane		75003	8,600	ID	950,000	950,000	<17800	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<3600	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<17800	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<3600	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<3600	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<17800	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<7100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<3600	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<7100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<7100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<7100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	<7100	**2,900**
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<7100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<3600	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<3600	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<3600	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-25 22' 3/3/2004	SB-26 25' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<3600	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<17800	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**43,000**	**3,100**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<7100	<100
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<17800	<250
Isopropylbenzene		98828	91,000	ID	390,000	390,000	<7100	400
Methyl iodide		-	-	-	-	-	<7100	<100
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<17800	<250
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<17800	<250
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<17800	<250
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<17800	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	<17800	350
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	**8,900**	120
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	**10,000**	850
Styrene		100425	2,700	2,200	250,000	400,000	<3600	120
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<7100	<100
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<7100	<100
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<3600	<50
Toluene		108883	16,000	2,800	250,000	250,000	**180,000**	100
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<3600	<50
trans-1,3-Dichloropropene		-	-	-	-	-	<3600	<50
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<3600	<50
1,2,3-Trichlorobenzene		-	-	-	-	-	<17800	<250
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<17800	<250
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<3600	<50
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<3600	<50
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<3600	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<7100	<100
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<7100	<100
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**58,000**	**1,600**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	**15,000**	480
Vinyl chloride		75014	40	300	270	3,800	<2800	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**230,000**	**25,000**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-27 22' 3/3/2004	SB-28 22' 3/3/2004
Metals (ug/Kg)								
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	5,700	5,500
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	29,000	72,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	880	1,100
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**26,000**	**52,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	17,000	32,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	120,000	93,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	<100	**310**
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**720**	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	130,000	220,000
PCBs (ug/Kg)								
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330
SVOCs (ug/Kg)								
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<330	<990
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<330	<990
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<330	<990
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<330	<990
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<330	<990
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<330	<990
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<330	<990
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<330	<990
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<3300	<9900
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<330	<990
Bis (2-chloroethoxy) methane		-	-	-	-	-	<330	<990
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<100	<300
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<330	<990
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	130,000	46,000
4-Bromophenyl phenyl ether		-	-	-	-	-	<330	<990
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	5,400	19,000
Carbazole		86748	9,400	1,100	NLV	530,000	<330	<990
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<330	<990
4-Chloroaniline		-	-	-	-	-	<1300	<3900
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<330	<990
2-Chlorophenol		95578	900	440	ID	1,400,000	<330	<990
4-Chlorophenyl phenyl ether		-	-	-	-	-	<330	<990
Chrysene		218019	NLL	NLL	ID	2,000,000	<330	<990
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<330	<990
Dibenzofuran		132649	ID	1,700	ID	ID	<330	<990
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<330	<990
2,6-Dichlorophenol		-	-	-	-	-	<330	<990
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	1,600	**2,600**
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<330	<990
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<330	<990
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	3,300	2,000
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<1700	<5100
2,4-Dinitrophenol		-	-	-	-	-	<1700	<5100
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<330	<990
2,6-Dinitrotoluene		-	-	-	-	-	<330	<990

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-27 22' 3/3/2004	SB-28 22' 3/3/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	6,900	<990
1,2-Diphenylhydrazine		-	-	-	-	-	<330	<990
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	<330	1,200
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<330	<990
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<330	<990
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<330	<990
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<200	<600
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<330	<990
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<330	<990
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<330	<990
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<330	<990
2-Methylphenol (o-Cresol)		-	-	-	-	-	<330	<990
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	1,200	5,000
Naphthalene		91203	35,000	870	250,000	16,000,000	<330	<990
2-Nitroaniline		-	-	-	-	-	<1700	<5100
3-Nitroaniline		-	-	-	-	-	<1700	<5100
4-Nitroaniline		-	-	-	-	-	<1700	<5100
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<200	<600
2-Nitrophenol		88755	400	ID	NLV	630,000	<330	<990
4-Nitrophenol		-	-	-	-	-	<1700	<5100
N-Nitrosodimethylamine		-	-	-	-	-	<330	<990
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<330	<990
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<330	<990
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<800	<2400
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	<330	1,600
Phenol		108952	88,000	4,200	NLV	12,000,000	1,500	**6,200**
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	<330	1,400
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<330	<990
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<330	<990
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<330	<990
VOCs (ug/Kg)								
Acetone		67641	15,000	34,000	110,000,000	23,000,000	950	2,200
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<500
Benzene		71432	100	4,000 (X)	1,600	180,000	100	<100
Bromochloromethane		-	-	-	-	-	<100	<200
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<200
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<200
Bromomethane		74839	200	700	860	320,000	<250	<500
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	790	2,100
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<500
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<100
Chlorobenzene		108907	2,000	940	120,000	260,000	63	<100
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<500
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<100
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<500
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	1,100	800
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<100
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<500
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<200
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<100
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<200
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<200
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<200
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	**1,100**	**2,100**
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<200
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	58	<100
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<100
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<100

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-27 22' 3/3/2004	SB-28 22' 3/3/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<100
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<500
Ethylbenzene		100414	1,500	360	87,000	140,000	**2,500**	**1,700**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<100	<200
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<250	<500
Isopropylbenzene		98828	91,000	ID	390,000	390,000	260	460
Methyl iodide		-	-	-	-	-	<100	<200
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<250	<500
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<250	<500
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<250	<500
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	550
Naphthalene		91203	35,000	870	250,000	16,000,000	**950**	**950**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	230	<100
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	310	<200
Styrene		100425	2,700	2,200	250,000	400,000	1,200	550
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<100	<200
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<100	<200
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	**3,900**	**2,100**
Toluene		108883	16,000	2,800	250,000	250,000	**6,800**	**4,700**
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<50	<100
trans-1,3-Dichloropropene		-	-	-	-	-	<50	<100
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<50	<100
1,2,3-Trichlorobenzene		-	-	-	-	-	<250	<500
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<250	<500
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<50	<100
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<50	<100
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	**1,100**	**940**
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<100	<200
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<100	<200
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**1,900**	**4,100**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	570	**1,300**
Vinyl chloride		75014	40	300	270	3,800	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**12,000**	**6,300**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-29 30' 3/4/2004	SB-30 25' 3/4/2004	SB-30 31' 3/4/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	**14,000**	5,900	2,600
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	190,000	48,000	6,400
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	**9,000**	1,100	120
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**41,000**	**31,000**	3,100
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	76,000	16,000	3,900
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	**430,000**	58,000	3,200
Total Mercury	130		1,700	100 (M)	48,000	160,000	**270**	<100	<100
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	<200	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	<500	<500	<500
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	660,000	160,000	25,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<1910	<891	<330
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<1910	<891	<330
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	2,900	1,200	<330
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	4,800	2,000	<330
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	**4,100**	1,800	<330
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	4,400	1,300	<330
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	2,300	940	<330
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	3,200	1,500	<330
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<19140	<8910	<3300
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<1910	<891	<330
Bis (2-chloroethoxy) methane		-	-	-	-	-	<1910	<891	<330
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<580	<270	<100
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<1910	<891	<330
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	2,100,000	14,000	<330
4-Bromophenyl phenyl ether		-	-	-	-	-	<1910	<891	<330
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	17,000	15,000	<330
Carbazole		86748	9,400	1,100	NLV	530,000	**2,600**	<891	<330
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<1910	<891	<330
4-Chloroaniline		-	-	-	-	-	<7540	<3510	<1300
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<1910	<891	<330
2-Chlorophenol		95578	900	440	ID	1,400,000	<1910	<891	<330
4-Chlorophenyl phenyl ether		-	-	-	-	-	<1910	<891	<330
Chrysene		218019	NLL	NLL	ID	2,000,000	5,500	2,000	<330
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<1910	<891	<330
Dibenzofuran		132649	ID	1,700	ID	ID	<1910	<891	<330
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<1910	<891	<330
2,6-Dichlorophenol		-	-	-	-	-	<1910	<891	<330
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<1910	<891	<330
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<1910	<891	<330
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<1910	<891	<330
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<1910	<891	<330
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<9860	<4590	<1700
2,4-Dinitrophenol		-	-	-	-	-	<9860	<4590	<1700
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<1910	<891	<330
2,6-Dinitrotoluene		-	-	-	-	-	<1910	<891	<330

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-29 30' 3/4/2004	SB-30 25' 3/4/2004	SB-30 31' 3/4/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	2,200,000	13,000	<330
1,2-Diphenylhydrazine		-	-	-	-	-	<1910	<891	<330
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	13,000	4,800	<330
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<1910	<891	<330
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<1910	<891	<330
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<1910	<891	<330
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<1160	<540	<200
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<1910	<891	<330
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	2,100	940	<330
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<1910	<891	<330
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<1910	<891	<330
2-Methylphenol (o-Cresol)		-	-	-	-	-	<1910	<891	<330
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	7,300	5,700	<330
Naphthalene		91203	35,000	870	250,000	16,000,000	**2,300**	<891	<330
2-Nitroaniline		-	-	-	-	-	<9860	<4590	<1700
3-Nitroaniline		-	-	-	-	-	<9860	<4590	<1700
4-Nitroaniline		-	-	-	-	-	<9860	<4590	<1700
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<1160	<540	<200
2-Nitrophenol		88755	400	ID	NLV	630,000	<1910	<891	<330
4-Nitrophenol		-	-	-	-	-	<9860	<4590	<1700
N-Nitrosodimethylamine		-	-	-	-	-	<1910	<891	<330
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<1910	<891	<330
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<1910	<891	<330
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<4640	<2160	<800
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	**14,000**	4,900	<330
Phenol		108952	88,000	4,200	NLV	12,000,000	**5,600**	1,700	<330
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	11,000	4,300	<330
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<1910	<891	<330
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<1910	<891	<330
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<1910	<891	<330
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	**330**	<50	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	<50	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	650	<50	<50
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	**430**	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-29 30' 3/4/2004	SB-30 25' 3/4/2004	SB-30 31' 3/4/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**7,200**	**1,700**	270
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<200	<200	<200
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<500	<500	<500
Isopropylbenzene		98828	91,000	ID	390,000	390,000	400	<100	<100
Methyl iodide		-	-	-	-	-	<200	<200	<200
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<500	<500	<500
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<500	<500	<500
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<500	<500	<500
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	380	<250	<250
Naphthalene		91203	35,000	870	250,000	16,000,000	**1,600**	450	<250
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	<100	<100	<100
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	350	210	<200
Styrene		100425	2,700	2,200	250,000	400,000	500	120	<50
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<200	<200	<200
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<200	<200	<200
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	<50	<50	<50
Toluene		108883	16,000	2,800	250,000	250,000	**14,000**	980	<50
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<100	<100	<100
trans-1,3-Dichloropropene		-	-	-	-	-	<100	<100	<100
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<100	<100	<100
1,2,3-Trichlorobenzene		-	-	-	-	-	<500	<500	<500
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<500	<500	<500
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<100	<100	<100
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<100	<100	<100
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	**290**	<50	<50
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<200	<200	<200
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<200	<200	<200
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	**2,700**	**1,300**	<100
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	650	450	<100
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**25,000**	9,000	**880**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-31 35' 3/4/2004	SB-32 31-32' 3/4/2004	SB-33 28' 3/4/2004
Metals (ug/Kg)									
Total Arsenic	5,800	7440382	23,000	70,000 (X)	NLV	7,600	5,300	4,500	5,000
Total Barium	75,000	7440393	1,300,000	(G,X)	NLV	370,000,000	110,000	180,000	100,000
Total Cadmium	1,200	7440439	6,000	(G,X)	NLV	550,000	1,700	1,600	2,800
Total Chromium	18,000	16065831	30,000	3,300	NLV	2,600,000	**62,000**	18,000	**110,000**
Total Copper	32,000	7440508	5,800,000	(G)	NLV	20,000,000	30,000	30,000	80,000
Total Lead	21,000	7439921	700,000	(G,M,X)	NLV	400,000	210,000	**650,000**	170,000
Total Mercury	130		1,700	100 (M)	48,000	160,000	**220**	**120**	**120**
Total Selenium	410	7782492	4,000	400	NLV	2,600,000	<200	<200	<200
Total Silver	1,000	7440224	4,500	500 (M)	NLV	2,500,000	**1,100**	<500	**1,500**
Total Zinc	47,000	7440666	2,400,000	(G)	NLV	170,000,000	670,000	480,000	410,000
PCBs (ug/Kg)									
ARO 1016		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1221		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1232		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1242		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1248		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1254		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1260		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1262		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
ARO 1268		1336363	NLL	NLL	3,000,000	4,000 (T)	<330	<330	<330
SVOCs (ug/Kg)									
Acenaphthene		83329	300,000	4,400	190,000,000	41,000,000	<957	4,400	<957
Acenaphthylene		208968	5,900	ID	1,600,000	1,600,000	<957	<330	<957
Anthracene		120127	41,000	ID	1,000,000,000 (D)	230,000,000	<957	7,300	<957
Benzo(a)anthracene		56553	NLL	NLL	NLV	20,000	<957	8,500	13,000
Benzo(a)pyrene		50328	NLL	NLL	NLV	2,000	<957	**8,800**	1,100
Benzo(b)fluoranthene		205992	NLL	NLL	ID	20,000	<957	7,500	<957
Benzo(g,h,i)perylene		191242	NLL	NLL	NLV	2,500,000	<957	3,500	<957
Benzo(k)fluoranthene		207089	NLL	NLL	NLV	200,000	<957	6,600	980
Benzoic acid		65850	640,000	NA	NLV	990,000,000	<9570	<3300	<9570
Benzyl alcohol		100516	200,000	NA	NLV	5,800,000 (C)	<957	<330	<957
Bis (2-chloroethoxy) methane		-	-	-	-	-	<957	<330	<957
Bis (2-chloroethyl) ether		111444	330 (M)	330 (M)	8,300	13,000	<290	<100	<290
Bis (2-chloroisopropyl) ether		-	-	-	-	-	<957	<330	<957
Bis (2-ethylhexyl) phthalate		117817	NLL	NLL	NLV	2,800,000	19,000	27,000	140,000
4-Bromophenyl phenyl ether		-	-	-	-	-	<957	<330	<957
Butyl benzyl phthalate		85687	310,000 (C)	26,000 (X)	NLV	310,000 (C)	2,100	990	21,000
Carbazole		86748	9,400	1,100	NLV	530,000	<957	**4,500**	<957
4-chloro-3-methylphenol		59507	5,800	330 (M)	NLV	4,500,000	<957	<330	<957
4-Chloroaniline		-	-	-	-	-	<3770	<1300	<3770
2-Chloronaphthalene		91587	620,000	NA	ID	56,000,000	<957	<330	<957
2-Chlorophenol		95578	900	440	ID	1,400,000	<957	<330	<957
4-Chlorophenyl phenyl ether		-	-	-	-	-	<957	<330	<957
Chrysene		218019	NLL	NLL	ID	2,000,000	<957	8,400	13,000
Dibenzo (a,h) anthracene		53703	NLL	NLL	NLV	2,000	<957	<330	<957
Dibenzofuran		132649	ID	1,700	ID	ID	<957	**2,800**	<957
2,4-Dichlorophenol		120832	1,500	380	NLV	660,000	<957	<330	<957
2,6-Dichlorophenol		-	-	-	-	-	<957	<330	<957
Diethylphthalate		84662	110,000	2,200	NLV	740,000 (C)	<957	<330	1,600
2,4-Dimethylphenol		105679	7,400	7,600	NLV	11,000,000	<957	<330	<957
Dimethylphthalate		131113	790,000	NA	NLV	790,000 (C)	<957	<330	<957
Di-n-butylphthalate		84742	760,000	11,000	NLV	760,000	<957	<330	1,400
4,6-Dinitro-2-methylphenol		-	-	-	-	-	<4930	<1700	<4930
2,4-Dinitrophenol		-	-	-	-	-	<4930	<1700	<4930
2,4-Dinitrotoluene		121142	430	NA	NLV	48,000	<957	<330	<957
2,6-Dinitrotoluene		-	-	-	-	-	<957	<330	<957

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-31 35' 3/4/2004	SB-32 31-32' 3/4/2004	SB-33 28' 3/4/2004
Di-n-octylphthalate		117840	100,000,000	ID	NLV	6,900,000	19,000	8,800	124,000
1,2-Diphenylhydrazine		-	-	-	-	-	<957	<330	<957
Fluoranthene		206440	730,000	55,000	1,000,000,000	46,000,000	1,800	26,000	2,800
Fluorene		86737	390,000	5,300	580,000,000	27,000,000	<957	4,400	<957
Hexachlorobenzene		118741	1,800	ID	41,000	8,900	<957	<330	<957
Haxachlorobutadiene		87683	26,000	330 (M)	130,000	100,000	<957	<330	<957
Hexachlorocyclopentadiene		319846	320,000	ID	30,000	720,000	<580	<200	<580
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<957	<330	<957
Indeno (1,2,3-cd) pyrene		193395	NLL	NLL	NLV	20,000	<957	3,300	<957
Isophorone		78591	15,000	11,000 (X)	NLV	2,400,000 (C)	<957	<330	<957
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<957	1,200	980
2-Methylphenol (o-Cresol)		-	-	-	-	-	<957	<330	<957
3&4 Methylphenol (m&p Cresol)		-	-	-	-	-	4,200	610	<957
Naphthalene		91203	35,000	870	250,000	16,000,000	<957	**5,700**	<957
2-Nitroaniline		-	-	-	-	-	<4930	<1700	<4930
3-Nitroaniline		-	-	-	-	-	<4930	<1700	<4930
4-Nitroaniline		-	-	-	-	-	<4930	<1700	<4930
Nitrobenzene		98953	200 (M)	3,600 (X)	91,000	100,000	<580	<200	<580
2-Nitrophenol		88755	400	ID	NLV	630,000	<957	<330	<957
4-Nitrophenol		-	-	-	-	-	<4930	<1700	<4930
N-Nitrosodimethylamine		-	-	-	-	-	<957	<330	<957
N-Nitrosodi-n-propylamine		621647	330 (M)	NA	NLV	1,200	<957	<330	<957
N-Nitrosodiphenylamine		86306	5,400	NA	NLV	1,700,000	<957	<330	<957
Pentachlorophenol		87865	22	(G,X)	NLV	90,000	<2320	<800	<2320
Phenanthrene		85018	56,000	5,300	2,800,000	1,600,000	1,900	**29,000**	3,100
Phenol		108952	88,000	4,200	NLV	12,000,000	<957	<330	1,600
Pyrene		129000	480,000	ID	1,000,000,000	29,000,000	1,600	19,000	2,600
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<957	<330	<957
2,4,5-Trichlorophenol		95954	39,000	NA	NLV	23,000,000	<957	<330	<957
2,4,6-Trichlorophenol		88062	2,400	NA	NLV	710,000	<957	<330	<957
VOCs (ug/Kg)									
Acetone		67641	15,000	34,000	110,000,000	23,000,000	<750	<750	<750
Acrylonitrile		107131	52	98 (X)	6,600	16,000	<250	<250	<250
Benzene		71432	100	4,000 (X)	1,600	180,000	80	**120**	<50
Bromochloromethane		-	-	-	-	-	<100	<100	<100
Bromodichloromethane		75274	2,000 (W)	ID	1,200	110,000	<100	<100	<100
Bromoform		75252	2,000 (W)	ID	150,000	820,000	<100	<100	<100
Bromomethane		74839	200	700	860	320,000	<250	<250	<250
2-Butanone (MEK)		78933	260,000	44,000	27,000,000	27,000,000	<250	<250	<250
Carbon disulfide		75150	16,000	ID	76,000	280,000	<250	<250	<250
Carbon tetrachloride		56235	100	900 (X)	190	96,000	<50	<50	<50
Chlorobenzene		108907	2,000	940	120,000	260,000	97	<50	<50
Chloroethane		75003	8,600	ID	950,000	950,000	<250	<250	<250
Chloroform		67663	2,000 (W)	3,400 (X)	7,200	1,200,000	<50	<50	<50
Chloromethane		74873	5,200	ID	2,300	1,100,000	<250	<250	<250
cis-1,2-Dichloroethene		156592	1,400	12,000	22,000	640,000	<50	<50	530
cis-1,3-Dichloropropene		-	-	-	-	-	<50	<50	<50
1,2-Dibromo-3-chloropropane		-	-	-	-	-	<250	<250	<250
Dibromochloromethane		124481	2,000 (W)	ID	3,900	110,000	<100	<100	<100
1,2-Dibromoethane		106934	250 (M)	250 (M)	670	250 (M)	<50	<50	<50
Dibromomethane		74953	1,600	NA	ID	2,000,000	<100	<100	<100
1,2-Dichlorobenzene		95501	14,000	360	210,000	210,000	<100	<100	<100
1,3-Dichlorobenzene		541731	170	1,100	ID	170,000	<100	<100	<100
1,4-Dichlorobenzene		106467	1,700	290	19,000	400,000	250	<100	<100
Dichlorodifluoromethane		75718	95,000	ID	900,000	1,000,000	<100	<100	<100
1,1,-Dichloroethane		75343	18,000	15,000	230,000	890,000	<50	<50	<50
1,2-Dichloroethane		107062	100	7,200 (X)	2,100	91,000	<50	<50	<50
1,1-Dichloroethene		75354	140	1,300 (X)	62	200,000	<50	<50	<50

Table 1 Summary of Soil Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number*	Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Soil Volatilization to Indoor Air Inhalation Criteria*	Direct Contact Criteria*	SB-31 35' 3/4/2004	SB-32 31-32' 3/4/2004	SB-33 28' 3/4/2004
1,2-Dichloropropane		78875	100	5,800 (X)	4,000	140,000	<50	<50	<50
Diethyl ether		60297	200	ID	7,400,000	7,400,000	<250	<250	<250
Ethylbenzene		100414	1,500	360	87,000	140,000	**860**	**1,100**	**1,900**
Hexachloroethane		67721	430	1,800 (X)	40,000	230,000	<200	<200	<200
2-Hexanone		591786	20,000	NA	990,000	2,500,000	<500	<500	<500
Isopropylbenzene		98828	91,000	ID	390,000	390,000	120	190	260
Methyl iodide		-	-	-	-	-	<200	<200	<200
Methy (tert) butyl ether		1634044	800	15,000 (X)	5,900,000	1,500,000	<500	<500	<500
4-Methyl-2-pentanone		108101	36,000	ID	2,700,000	2,700,000	<500	<500	<500
Methylene chloride		75092	100	19,000 (X)	45,000	1,300,000	<500	<500	<500
2-Methylnaphthalene		91576	57,000	ID	ID	8,100,000	<250	1,300	1,500
Naphthalene		91203	35,000	870	250,000	16,000,000	400	**7,900**	**1,700**
n-Butylbenzene		123864	1,600	ID	ID	2,500,000	81	<100	230
n-Propylbenzene		103651	1,600	NA	ID	2,500,000	<200	320	340
Styrene		100425	2,700	2,200	250,000	400,000	<50	86	120
1,1,1,2-Tetrachloroethane		630206	1,500	ID	6,200	440,000	<200	<200	<200
1,1,2,2-Tetrachloroethane		79345	170	1,600 (X)	4,300	53,000	<200	<200	<200
Tetrachloroethene		127184	100	900 (X)	11,000	88,000 (C)	63	<50	**230**
Toluene		108883	16,000	2,800	250,000	250,000	2,200	490	1,300
trans-1,2-Dichloroethene		156605	2,000	30,000	230,000	1,400,000	<100	<100	<100
trans-1,3-Dichloropropene		-	-	-	-	-	<100	<100	<100
trans-1,4-Dichloro-2-butene		-	-	-	-	-	<100	<100	<100
1,2,3-Trichlorobenzene		-	-	-	-	-	<500	<500	<500
1,2,4-Trichlorobenzene		120821	4,200	1,800	1,100,000	990,000	<500	<500	<500
1,1,1-Trichloroethane		71556	4,000	4,000	250,000	460,000	<100	<100	<100
1,1,2-Trichloroethane		79005	100	6,600 (X)	4,600	180,000	<100	<100	<100
Trichloroethene		79016	100	4,000 (X)	7,100	500,000	<50	82	**490**
Trichlorofluoromethane		75964	52,000	NA	560,000 (C)	560,000 (C)	<200	<200	<200
1,2,3-Trichloropropane		96184	840	NA	ID	830,000	<200	<200	<200
1,2,4-Trimethylbenzene		95636	2,100	570	110,000 (C)	110,000 (C)	530	**2,400**	**2,400**
1,3,5-Trimethylbenzene		108678	1,800	1,100	94,000 (C)	94,000 (C)	140	830	630
Vinyl chloride		75014	40	300	270	3,800	<40	<40	<40
Xylenes		1330207	5,600	700	150,000 (C)	150,000 (C)	**4,100**	**4,300**	**8,400**

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NA-Not available.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
NLL-Hazardous substance is not likely to leach under most conditions.
C-Value presented is a screening level based on the chemical-specific generic soil saturation concentration (Csat) since the calculated risk-based criterion is greater than Csat.
D-Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0E + 9 ppb.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
T-Refer to toxic substance control act (TSCA), 40 CFR Subpart D & G to determine the applicability of TSCA cleanup standards.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria table is not protective for surface water that is used as a drinking water source.

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-1 12/19/2003	MW-2 12/19/2003	MW-3 12/19/2003
Metals (ug/L)								
Dissolved Arsenic	7440382	50 (A)	50 (X)	NLV	4,300	1	1	1
Dissolved Barium	7440393	2,000 (A)	1,900 (X)	NLV	14,000,000	100	<100	220
Dissolved Cadmium	7440439	5.0 (A)	2.5 (X)	NLV	190,000	<0.2	<0.2	0.2
Dissolved Chromium	16065831	100 (A)	120 (X)	NLV	290,000,000	<5	<5	<5
Dissolved Copper	7440508	1,000 (E)	(G)	NLV	7,400,000	<5	7	<5
Dissolved Lead	7439921	4.0 (L)	14 (X)	NLV	ID	<3	**8**	<3
Dissolved Mercury		2.0 (A)	0.0013	56 (S)	56 (S)	<0.2	<0.2	<0.2
Dissolved Selenium	7782492	50 (A)	5	NLV	970,000	<5	<5	<5
Dissolved Silver	7440224	34	0.2 (M)	NLV	1,500,000	<0.2	<0.2	<0.2
Dissolved Zinc	7440666	2,400	(G)	NLV	110,000,000	<10	80	20
PCBs (ug/L)								
ARO 1016	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1221	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1232	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.4	<0.4	<0.4
ARO 1242	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1248	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1254	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1260	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1262	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1268	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
SVOC (ug/L)								
Acenaphthene	83329	1,300	19	4,200 (S)	4,200 (S)	<5	<5	<5
Acenaphthylene	208968	52	ID	3,900 (S)	3,900 (S)	<5	<5	<5
Anthracene	120127	43 (S)	ID	43 (S)	43 (S)	<5	<5	<5
Benzo (a) anthracene	56553	2.1	ID	NLV	9.4 (S,AA)	<1	<1	<1
Benzo (a) pyrene	50328	5.0 (A)	ID	NLV	2.0 (M,AA)	<2	<2	<2
Benzo (b) fluoranthene	205992	2.0 (M)	ID	ID	2.0 (M,AA)	<2	<2	<2
Benzo (ghi) perylene	191242	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5	<5
Benzo (k) fluoranthene	207089	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5	<5
Benzoic acid	65850	32,000	NA	NLV	3,500,000 (S)	<50	<50	<50
Benzyl alcohol	100516	10,000	NA	NLV	44,000,000 (S)	<5	<5	<5
Bis (2-chloroethoxy) methane	-	-	-	-	-	<5	<5	<5
Bis (2-chloroethyl) ether	111444	2	15 (X)	38,000	5,700	<1	<1	<1
Bis (2-chloroisopropyl) ether	-	-	-	-	-	<5	<5	<5
Bis (2-ethylhexyl) phthalate	117817	6.0 (A)	32	NLV	320 (AA)	<5	<5	<5
4-Bromophenyl phenyl ether	-	-	-	-	-	<5	<5	<5
Butyl benzyl phthalate	85687	1,200	14 (X)	NLV	2,700 (S)	<5	<5	<5
Carbazole	86748	85	10 (M)	NLV	7,400	<10	<10	<10
4-chloro-3-methylphenol	59507	150	7.4	NLV	79,000	<5	<5	<5
4-Chloroaniline	-	-	-	-	-	<20	<20	<20
2-Chloronaphthalene	91587	1,800	NA	ID	6,700 (S)	<5	<5	<5
2-Chlorophenol	95578	45	22	ID	94,000	<5	<5	<5
4-Chlorophenyl phenyl ether	-	-	-	-	-	<5	<5	<5
Chrysene	218019	5.0 (M)	ID	ID	5.0 (M,AA)	<5	<5	<5
Dibenzo (a,h) anthracene	53703	2.0 (M)	ID	NLV	2.0 (M,AA)	<2	<2	<2
Dibenzofuran	132649	ID	5.0 (M)	ID	ID	<5	<5	<5
2,4-Dichlorophenol	120832	73	19	NLV	48,000	<5	<5	<5
2,6-Dichlorophenol	-	-	-	-	-	<5	<5	<5
Diethylphthalate	84662	5,500	110	NLV	1,100,000 (S)	<5	<5	<5
2,4-Dimethylphenol	105679	370	380	NLV	520,000	<5	<5	<5
Dimethylphthalate	131113	73,000	NA	NLV	4,200,000 (S)	<5	<5	<5
Di-n-butylphthalate	84742	880	9.7	NLV	11,000 (S)	<5	<5	<5
4,6-Dinitro-2-methylphenol	-	-	-	-	-	<20	<20	<20
2,4-Dinitrophenol	-	-	-	-	-	<20	<20	<20
2,4-Dinitrotoluene	121142	7.7	NA	NLV	8,600	<5	<5	<5
2,6-Dinitrotoluene	-	-	-	-	-	<5	<5	<5

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-1 12/19/2003	MW-2 12/19/2003	MW-3 12/19/2003
Di-n-octylphthalate	117840	130	ID	NLV	400	<5	<5	<5
1,2-Diphenylhydrazine	-	-	-	-	-	<5	<5	<5
Fluoranthene	206440	210 (S)	5.0 (M)	210 (S)	210 (S)	<5	<5	<5
Flourene	86737	880	12	2,000 (S)	2,000 (S)	<5	<5	<5
Hexachlorobenzene	118741	1.0 (A)	ID	440	4.6	<5	<5	<5
Haxachlorobutadiene	87683	15	5.0 (M)	1,600	400	<5	<5	<5
Hexachlorocyclopentadiene	319846	0.43	NA	2,000 (S)	60	<2	<2	<2
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<5	<5	<5
Indeno (1,2,3) pyrene	193395	2.0 (M)	ID	NLV	2.0 (AA,M)	<2	<2	<2
Isophorone	78591	770	570 (X)	NLV	990,000	<5	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	37	11
2-Methylphenol (o-Cresol)	-	-	-	-	-	<5	<5	<5
3&4 Methylphenol (m&p Cresol)	-	-	-	-	-	<5	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	**25**	7
2-Nitroaniline	-	-	-	-	-	<20	<20	<20
3-Nitroaniline	-	-	-	-	-	<20	<20	<20
4-Nitroaniline	-	-	-	-	-	<20	<20	<20
Nitrobenzene	98953	3.4	180 (X)	280,000	11,000	<2	<2	<2
2-Nitrophenol	88755	20	ID	NLV	79,000	<5	<5	<5
4-Nitrophenol	-	-	-	-	-	<20	<20	<20
N-Nitrosodimethylamine	-	-	-	-	-	<5	<5	<5
N-Nitrosodi-n-propylamine	621647	5.0 (M)	NA	NLV	360	<5	<5	<5
N-Nitrosodiphenylamine	86306	270	NA	NLV	35,000 (S)	<5	<5	<5
Pentachlorophenol	87865	1.0 (A)	(G,X)	NLV	200	<20	<20	<20
Phenanthrene	85018	52	5.0 (M)	1,000 (S)	1,000 (S)	<5	<5	<5
Phenol	108952	4,400	210	NLV	ID	<5	<5	<5
Pyrene	129000	140 (S)	ID	140 (S)	140 (S)	<5	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5	<5
2,4,5-Trichlorophenol	95954	730	NA	NLV	170,000	<5	<5	<5
2,4,6-Trichlorophenol	88062	120	5.0 (M)	NLV	10,000	<4	<4	<4
VOCs (ug/L)								
Acetone	67641	730	1,700	1,000,000,000	31,000,000	<25	<25	<25
Acrylonitrile	107131	2.6	4.9 (X)	34,000	14,000	<1	<1	<1
Benzene	71432	5.0 (A)	200 (X)	5,600	11,000	<1	<1	<1
Bromochloromethane	-	-	-	-	-	<1	<1	<1
Bromodichloromethane	75274	100 (A,W)	ID	4,800	14,000	<1	<1	<1
Bromoform	75252	100 (A,W)	ID	470,000	140,000	<1	<1	<1
Bromomethane	74839	10	35	4,000	70,000	<1	<1	<1
2-Butanone	78933	13,000	2,200	240,000,000 (S)	240,000,000 (S)	<5	<5	<5
Carbon disulfide	75150	800	ID	250,000	1,200,000 (S)	<5	<5	<5
Carbon tetrachloride	56235	5.0 (A)	45 (X)	370	4,600	<1	<1	<1
Chlorobenzene	108907	100 (A)	47	210,000	86,000	<1	<1	<1
Chloroethane	75003	430	ID	5,700,000	440,000	<1	<1	<1
Chloroform	67663	100 (A,W)	170 (X)	28,000	150,000	<1	<1	<1
Chloromethane	74873	260	ID	8,600	490,000	<1	<1	<1
cis-1,2-Dichloroethene	156592	70 (A)	620	93,000	200,000	<1	<1	<1
cis-1,3-Dichloropropene	-	-	-	-	-	<1	<1	<1
1,2-Dibromo-3-chloropropane	-	-	-	-	-	<1	<1	<1
Dibromochloromethane	124481	100 (A,W)	ID	14,000	18,000	<1	<1	<1
1,2-Dibromoethane	106934	1.0 (A,M)	1.0 (M)	2,400	25	<1	<1	<1
Dibromomethane	74953	80	NA	ID	530,000	<1	<1	<1
1,2-Dichlorobenzene	95501	600 (A)	16	160,000 (S)	160,000 (S)	<1	<1	<1
1,3-Dichlorobenzene	541731	6.6	38	16,000	6,400	<1	<1	<1
1,4-Dichlorobenzene	106467	75 (A)	13	16,000	6,400	<1	<1	<1
Dichlorodifluoromethane	75718	1,700	ID	220,000	300,000 (S)	<1	<1	<1
1,1,-Dichloroethane	75343	880	740	1,000,000	2,400,000	<1	<1	<1
1,2-Dichloroethane	107062	5.0 (A)	360 (X)	9,600	19,000	<1	<1	<1
1,1-Dichloroethene	75354	7.0 (A)	65 (X)	200	11,000	<1	<1	<1

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-1 12/19/2003	MW-2 12/19/2003	MW-3 12/19/2003
1,2-Dichloropropane	78875	5.0 (A)	290 (X)	16,000	16,000	<1	<1	<1
Diethyl ether	60297	10 (E,M)	ID	61,000,000	35,000,000	<10	<10	<10
Ethylbenzene	100414	74 (E)	18	110,000	170,000	<1	<1	<1
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<1	<1	<1
2-Hexanone	591786	1,000	NA	4,200,000	5,200,000	<5	<5	<5
Isopropylbenzene	98828	800	ID	56,000 (S)	56,000 (S)	<1	<1	<1
Methyl iodide	-	-	-	-	-	<1	<1	<1
Methy (tert) butyl ether	1634044	40 (E)	730 (X)	47,000,000 (S)	610,000	<5	<5	<5
4-Methyl-2-pentanone	108101	1,800	ID	20,000,000	13,000,000	<5	<5	<5
Methylene chloride	75092	5.0 (A)	940 (X)	220,000	220,000	<5	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	<5	<5
n-Butylbenzene	123864	550	ID	6,700,000	1,800,000	<1	<1	<1
n-Propylbenzene	103651	80	ID	ID	15,000	<1	<1	<1
Styrene	100425	100 (A)	80	170,000	9,700	<1	<1	<1
1,1,1,2-Tetrachloroethane	630206	77	ID	15,000	30,000	<1	<1	<1
1,1,2,2-Tetrachloroethane	79345	8.5	78 (X)	12,000	4,700	<1	<1	<1
Tetrachloroethene	127184	5.0 (A)	45 (X)	25,000	12,000	<1	<1	<1
Toluene	108883	790 (E)	140	530,000 (S)	530,000 (S)	<1	<1	<1
trans-1,2-Dichloroethene	156605	100 (A)	1,500	85,000	220,000	<1	<1	<1
trans-1,3-Dichloropropene	-	-	-	-	-	<1	<1	<1
trans-1,4-Dichloro-2-butene	-	-	-	-	-	<1	<1	<1
1,2,3-Trichlorobenzene	-	-	-	-	-	<5	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5	<5
1,1,1-Trichloroethane	71556	200 (A)	200	660,000	1,300,000 (S)	<1	<1	<1
1,1,2-Trichloroethane	79005	5.0 (A)	330 (X)	17,000	21,000	<1	<1	<1
Trichloroethene	79016	5.0 (A)	200 (X)	15,000	22,000	<1	<1	<1
Trichlorofluoromethane	75964	2,600	NA	1,100,000 (S)	1,100,000 (S)	<1	<1	<1
1,2,3-Trichloropropane	96184	42	NA	ID	84,000	<1	<1	<1
1,2,4-Trimethylbenzene	95636	63 (E)	17	56,000 (S)	56,000 (S)	<1	<1	<1
1,3,5-Trimethylbenzene	108678	72 (E)	45	61,000 (S)	61,000 (S)	<1	<1	<1
Vinyl chloride	75014	2.0 (A)	15	1,100	1,000	<1	<1	<1
Xylenes	1330207	280 (E)	35	190,000 (S)	190,000 (S)	<3	<3	<3

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
A-Criterion is the State of Michigan drinking water standard established pursuant to Seciton 5 of 1976 PA 399.
E-Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the act.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
L-Criteria for lead are derived using a biologically based model, as allowed under Section 20120a(10) of the act.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
S-Criterion defaults to the hazardous substance-specific water solubility limit.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown is the value associated with a surface water used as a source of drinking water. This value may be lower depending on the hardness of the surface water body and the risk to aquatic organisms.
AA-Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-4 12/19/2003	MW-5 12/19/2003	MW-6 12/19/2003
Metals (ug/L)								
Dissolved Arsenic	7440382	50 (A)	50 (X)	NLV	4,300	33	17	<1
Dissolved Barium	7440393	2,000 (A)	1,900 (X)	NLV	14,000,000	230	300	<100
Dissolved Cadmium	7440439	5.0 (A)	2.5 (X)	NLV	190,000	0.9	<0.2	0.3
Dissolved Chromium	16065831	100 (A)	120 (X)	NLV	290,000,000	10	<5	<5
Dissolved Copper	7440508	1,000 (E)	(G)	NLV	7,400,000	46	<5	<5
Dissolved Lead	7439921	4.0 (L)	14 (X)	NLV	ID	**41**	<3	<3
Dissolved Mercury		2.0 (A)	0.0013	56 (S)	56 (S)	<0.2	<0.2	<0.2
Dissolved Selenium	7782492	50 (A)	5	NLV	970,000	<5	<5	<5
Dissolved Silver	7440224	34	0.2 (M)	NLV	1,500,000	<0.2	<0.2	<0.2
Dissolved Zinc	7440666	2,400	(G)	NLV	110,000,000	150	<10	20
PCBs (ug/L)								
ARO 1016	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1221	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1232	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.4	<0.4	<0.4
ARO 1242	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1248	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1254	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1260	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1262	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
ARO 1268	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2	<0.2
SVOC (ug/L)								
Acenaphthene	83329	1,300	19	4,200 (S)	4,200 (S)	<5	<5	<5
Acenaphthylene	208968	52	ID	3,900 (S)	3,900 (S)	<5	<5	<5
Anthracene	120127	43 (S)	ID	43 (S)	43 (S)	<5	<5	<5
Benzo (a) anthracene	56553	2.1	ID	NLV	9.4 (S,AA)	<1	<1	<1
Benzo (a) pyrene	50328	5.0 (A)	ID	NLV	2.0 (M,AA)	<2	<2	<2
Benzo (b) fluoranthene	205992	2.0 (M)	ID	ID	2.0 (M,AA)	<2	<2	<2
Benzo (ghi) perylene	191242	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5	<5
Benzo (k) fluoranthene	207089	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5	<5
Benzoic acid	65850	32,000	NA	NLV	3,500,000 (S)	<50	<50	<50
Benzyl alcohol	100516	10,000	NA	NLV	44,000,000 (S)	<5	<5	<5
Bis (2-chloroethoxy) methane	-	-	-	-	-	<5	<5	<5
Bis (2-chloroethyl) ether	111444	2	15 (X)	38,000	5,700	<1	<1	<1
Bis (2-chloroisopropyl) ether	-	-	-	-	-	<5	<5	<5
Bis (2-ethylhexyl) phthalate	117817	6.0 (A)	32	NLV	320 (AA)	<5	<5	<5
4-Bromophenyl phenyl ether	-	-	-	-	-	<5	<5	<5
Butyl benzyl phthalate	85687	1,200	14 (X)	NLV	2,700 (S)	<5	<5	<5
Carbazole	86748	85	10 (M)	NLV	7,400	<10	<10	<10
4-chloro-3-methylphenol	59507	150	7.4	NLV	79,000	<5	<5	<5
4-Chloroaniline	-	-	-	-	-	<20	<20	<20
2-Chloronaphthalene	91587	1,800	NA	ID	6,700 (S)	<5	<5	<5
2-Chlorophenol	95578	45	22	ID	94,000	<5	<5	<5
4-Chlorophenyl phenyl ether	-	-	-	-	-	<5	<5	<5
Chrysene	218019	5.0 (M)	ID	ID	5.0 (M,AA)	<5	<5	<5
Dibenzo (a,h) anthracene	53703	2.0 (M)	ID	NLV	2.0 (M,AA)	<2	<2	<2
Dibenzofuran	132649	ID	5.0 (M)	ID	ID	<5	<5	<5
2,4-Dichlorophenol	120832	73	19	NLV	48,000	<5	<5	<5
2,6-Dichlorophenol	-	-	-	-	-	<5	<5	<5
Diethylphthalate	84662	5,500	110	NLV	1,100,000 (S)	<5	<5	<5
2,4-Dimethylphenol	105679	370	380	NLV	520,000	<5	<5	<5
Dimethylphthalate	131113	73,000	NA	NLV	4,200,000 (S)	<5	<5	<5
Di-n-butylphthalate	84742	880	9.7	NLV	11,000 (S)	<5	<5	<5
4,6-Dinitro-2-methylphenol	-	-	-	-	-	<20	<20	<20
2,4-Dinitrophenol	-	-	-	-	-	<20	<20	<20
2,4-Dinitrotoluene	121142	7.7	NA	NLV	8,600	<5	<5	<5
2,6-Dinitrotoluene	-	-	-	-	-	<5	<5	<5

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-4 12/19/2003	MW-5 12/19/2003	MW-6 12/19/2003
Di-n-octylphthalate	117840	130	ID	NLV	400	<5	<5	<5
1,2-Diphenylhydrazine	-	-	-	-	-	<5	<5	<5
Fluoranthene	206440	210 (S)	5.0 (M)	210 (S)	210 (S)	<5	<5	<5
Flourene	86737	880	12	2,000 (S)	2,000 (S)	<5	<5	<5
Hexachlorobenzene	118741	1.0 (A)	ID	440	4.6	<5	<5	<5
Haxachlorobutadiene	87683	15	5.0 (M)	1,600	400	<5	<5	<5
Hexachlorocyclopentadiene	319846	0.43	NA	2,000 (S)	60	<2	<2	<2
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<5	<5	<5
Indeno (1,2,3) pyrene	193395	2.0 (M)	ID	NLV	2.0 (AA,M)	<2	<2	<2
Isophorone	78591	770	570 (X)	NLV	990,000	<5	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	<5	8
2-Methylphenol (o-Cresol)	-	-	-	-	-	<5	<5	<5
3&4 Methylphenol (m&p Cresol)	-	-	-	-	-	<5	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	<5	5
2-Nitroaniline	-	-	-	-	-	<20	<20	<20
3-Nitroaniline	-	-	-	-	-	<20	<20	<20
4-Nitroaniline	-	-	-	-	-	<20	<20	<20
Nitrobenzene	98953	3.4	180 (X)	280,000	11,000	<2	<2	<2
2-Nitrophenol	88755	20	ID	NLV	79,000	<5	<5	<5
4-Nitrophenol	-	-	-	-	-	<20	<20	<20
N-Nitrosodimethylamine	-	-	-	-	-	<5	<5	<5
N-Nitrosodi-n-propylamine	621647	5.0 (M)	NA	NLV	360	<5	<5	<5
N-Nitrosodiphenylamine	86306	270	NA	NLV	35,000 (S)	<5	<5	<5
Pentachlorophenol	87865	1.0 (A)	(G,X)	NLV	200	<20	<20	<20
Phenanthrene	85018	52	5.0 (M)	1,000 (S)	1,000 (S)	<5	<5	<5
Phenol	108952	4,400	210	NLV	ID	<5	<5	<5
Pyrene	129000	140 (S)	ID	140 (S)	140 (S)	<5	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5	<5
2,4,5-Trichlorophenol	95954	730	NA	NLV	170,000	<5	<5	<5
2,4,6-Trichlorophenol	88062	120	5.0 (M)	NLV	10,000	<4	<4	<4
VOCs (ug/L)								
Acetone	67641	730	1,700	1,000,000,000	31,000,000	<25	<25	<25
Acrylonitrile	107131	2.6	4.9 (X)	34,000	14,000	<1	<1	<1
Benzene	71432	5.0 (A)	200 (X)	5,600	11,000	4	4	<1
Bromochloromethane	-	-	-	-	-	<1	<1	<1
Bromodichloromethane	75274	100 (A,W)	ID	4,800	14,000	<1	<1	<1
Bromoform	75252	100 (A,W)	ID	470,000	140,000	<1	<1	<1
Bromomethane	74839	10	35	4,000	70,000	<1	<1	<1
2-Butanone	78933	13,000	2,200	240,000,000 (S)	240,000,000 (S)	<5	<5	<5
Carbon disulfide	75150	800	ID	250,000	1,200,000 (S)	<5	<5	<5
Carbon tetrachloride	56235	5.0 (A)	45 (X)	370	4,600	<1	<1	<1
Chlorobenzene	108907	100 (A)	47	210,000	86,000	<1	<1	<1
Chloroethane	75003	430	ID	5,700,000	440,000	<1	<1	<1
Chloroform	67663	100 (A,W)	170 (X)	28,000	150,000	<1	<1	<1
Chloromethane	74873	260	ID	8,600	490,000	<1	<1	<1
cis-1,2-Dichloroethene	156592	70 (A)	620	93,000	200,000	<1	<1	<1
cis-1,3-Dichloropropene	-	-	-	-	-	<1	<1	<1
1,2-Dibromo-3-chloropropane	-	-	-	-	-	<1	<1	<1
Dibromochloromethane	124481	100 (A,W)	ID	14,000	18,000	<1	<1	<1
1,2-Dibromoethane	106934	1.0 (A,M)	1.0 (M)	2,400	25	<1	<1	<1
Dibromomethane	74953	80	NA	ID	530,000	<1	<1	<1
1,2-Dichlorobenzene	95501	600 (A)	16	160,000 (S)	160,000 (S)	<1	<1	<1
1,3-Dichlorobenzene	541731	6.6	38	16,000	6,400	<1	<1	<1
1,4-Dichlorobenzene	106467	75 (A)	13	16,000	6,400	<1	<1	<1
Dichlorodifluoromethane	75718	1,700	ID	220,000	300,000 (S)	<1	<1	<1
1,1,-Dichloroethane	75343	880	740	1,000,000	2,400,000	2	<1	<1
1,2-Dichloroethane	107062	5.0 (A)	360 (X)	9,600	19,000	<1	<1	<1
1,1-Dichloroethene	75354	7.0 (A)	65 (X)	200	11,000	<1	<1	<1

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-4 12/19/2003	MW-5 12/19/2003	MW-6 12/19/2003
1,2-Dichloropropane	78875	5.0 (A)	290 (X)	16,000	16,000	<1	<1	<1
Diethyl ether	60297	10 (E,M)	ID	61,000,000	35,000,000	<10	<10	<10
Ethylbenzene	100414	74 (E)	18	110,000	170,000	<1	<1	<1
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<1	<1	<1
2-Hexanone	591786	1,000	NA	4,200,000	5,200,000	<5	<5	<5
Isopropylbenzene	98828	800	ID	56,000 (S)	56,000 (S)	<1	<1	<1
Methyl iodide	-	-	-	-	-	<1	<1	<1
Methy (tert) butyl ether	1634044	40 (E)	730 (X)	47,000,000 (S)	610,000	<5	<5	<5
4-Methyl-2-pentanone	108101	1,800	ID	20,000,000	13,000,000	<5	<5	<5
Methylene chloride	75092	5.0 (A)	940 (X)	220,000	220,000	<5	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	<5	<5
n-Butylbenzene	123864	550	ID	6,700,000	1,800,000	<1	<1	<1
n-Propylbenzene	103651	80	ID	ID	15,000	<1	<1	<1
Styrene	100425	100 (A)	80	170,000	9,700	<1	<1	<1
1,1,1,2-Tetrachloroethane	630206	77	ID	15,000	30,000	<1	<1	<1
1,1,2,2-Tetrachloroethane	79345	8.5	78 (X)	12,000	4,700	<1	<1	<1
Tetrachloroethene	127184	5.0 (A)	45 (X)	25,000	12,000	<1	<1	<1
Toluene	108883	790 (E)	140	530,000 (S)	530,000 (S)	<1	<1	<1
trans-1,2-Dichloroethene	156605	100 (A)	1,500	85,000	220,000	<1	<1	<1
trans-1,3-Dichloropropene	-	-	-	-	-	<1	<1	<1
trans-1,4-Dichloro-2-butene	-	-	-	-	-	<1	<1	<1
1,2,3-Trichlorobenzene	-	-	-	-	-	<5	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5	<5
1,1,1-Trichloroethane	71556	200 (A)	200	660,000	1,300,000 (S)	<1	<1	<1
1,1,2-Trichloroethane	79005	5.0 (A)	330 (X)	17,000	21,000	<1	<1	<1
Trichloroethene	79016	5.0 (A)	200 (X)	15,000	22,000	<1	<1	<1
Trichlorofluoromethane	75964	2,600	NA	1,100,000 (S)	1,100,000 (S)	<1	<1	<1
1,2,3-Trichloropropane	96184	42	NA	ID	84,000	<1	<1	<1
1,2,4-Trimethylbenzene	95636	63 (E)	17	56,000 (S)	56,000 (S)	<1	<1	<1
1,3,5-Trimethylbenzene	108678	72 (E)	45	61,000 (S)	61,000 (S)	<1	<1	<1
Vinyl chloride	75014	2.0 (A)	15	1,100	1,000	<1	<1	<1
Xylenes	1330207	280 (E)	35	190,000 (S)	190,000 (S)	<3	<3	<3

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
A-Criterion is the State of Michigan drinking water standard established pursuant to Seciton 5 of 1976 PA 399.
E-Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the act.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
L-Criteria for lead are derived using a biologically based model, as allowed under Section 20120a(10) of the act.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
S-Criterion defaults to the hazardous substance-specific water solubility limit.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown is the value associated with a surface water used a of drinking water. This value may be lower depending on the hardness of the surface water body and the risk to aq
AA-Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-7 12/19/2003	MW-8 12/19/2003
Metals (ug/L)							
Dissolved Arsenic	7440382	50 (A)	50 (X)	NLV	4,300	6	5
Dissolved Barium	7440393	2,000 (A)	1,900 (X)	NLV	14,000,000	160	<100
Dissolved Cadmium	7440439	5.0 (A)	2.5 (X)	NLV	190,000	0.9	0.3
Dissolved Chromium	16065831	100 (A)	120 (X)	NLV	290,000,000	7	<5
Dissolved Copper	7440508	1,000 (E)	(G)	NLV	7,400,000	18	17
Dissolved Lead	7439921	4.0 (L)	14 (X)	NLV	ID	**13**	**11**
Dissolved Mercury		2.0 (A)	0.0013	56 (S)	56 (S)	<0.2	<0.2
Dissolved Selenium	7782492	50 (A)	5	NLV	970,000	<5	<5
Dissolved Silver	7440224	34	0.2 (M)	NLV	1,500,000	<0.2	<0.2
Dissolved Zinc	7440666	2,400	(G)	NLV	110,000,000	30	20
PCBs (ug/L)							
ARO 1016	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1221	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1232	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.4	<0.4
ARO 1242	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1248	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1254	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1260	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1262	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
ARO 1268	1336363	0.5 (A)	0.2 (M)	45 (S)	3.3 (AA)	<0.2	<0.2
SVOC (ug/L)							
Acenaphthene	83329	1,300	19	4,200 (S)	4,200 (S)	<5	<5
Acenaphthylene	208968	52	ID	3,900 (S)	3,900 (S)	<5	<5
Anthracene	120127	43 (S)	ID	43 (S)	43 (S)	<5	<5
Benzo (a) anthracene	56553	2.1	ID	NLV	9.4 (S,AA)	<1	<1
Benzo (a) pyrene	50328	5.0 (A)	ID	NLV	2.0 (M,AA)	<2	<2
Benzo (b) fluoranthene	205992	2.0 (M)	ID	ID	2.0 (M,AA)	<2	<2
Benzo (ghi) perylene	191242	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5
Benzo (k) fluoranthene	207089	5.0 (A)	NA	NLV	5.0 (M,AA)	<5	<5
Benzoic acid	65850	32,000	NA	NLV	3,500,000 (S)	<50	<50
Benzyl alcohol	100516	10,000	NA	NLV	44,000,000 (S)	<5	<5
Bis (2-chloroethoxy) methane	-	-	-	-	-	<5	<5
Bis (2-chloroethyl) ether	111444	2	15 (X)	38,000	5,700	<1	<1
Bis (2-chloroisopropyl) ether	-	-	-	-	-	<5	<5
Bis (2-ethylhexyl) phthalate	117817	6.0 (A)	32	NLV	320 (AA)	<5	<5
4-Bromophenyl phenyl ether	-	-	-	-	-	<5	<5
Butyl benzyl phthalate	85687	1,200	14 (X)	NLV	2,700 (S)	<5	<5
Carbazole	86748	85	10 (M)	NLV	7,400	<10	<10
4-chloro-3-methylphenol	59507	150	7.4	NLV	79,000	<5	<5
4-Chloroaniline	-	-	-	-	-	<20	<20
2-Chloronaphthalene	91587	1,800	NA	ID	6,700 (S)	<5	<5
2-Chlorophenol	95578	45	22	ID	94,000	<5	<5
4-Chlorophenyl phenyl ether	-	-	-	-	-	<5	<5
Chrysene	218019	5.0 (M)	ID	ID	5.0 (M,AA)	<5	<5
Dibenzo (a,h) anthracene	53703	2.0 (M)	ID	NLV	2.0 (M,AA)	<2	<2
Dibenzofuran	132649	ID	5.0 (M)	ID	ID	<5	<5
2,4-Dichlorophenol	120832	73	19	NLV	48,000	<5	<5
2,6-Dichlorophenol	-	-	-	-	-	<5	<5
Diethylphthalate	84662	5,500	110	NLV	1,100,000 (S)	<5	<5
2,4-Dimethylphenol	105679	370	380	NLV	520,000	<5	<5
Dimethylphthalate	131113	73,000	NA	NLV	4,200,000 (S)	<5	<5
Di-n-butylphthalate	84742	880	9.7	NLV	11,000 (S)	<5	<5
4,6-Dinitro-2-methylphenol	-	-	-	-	-	<20	<20
2,4-Dinitrophenol	-	-	-	-	-	<20	<20
2,4-Dinitrotoluene	121142	7.7	NA	NLV	8,600	<5	<5
2,6-Dinitrotoluene	-	-	-	-	-	<5	<5

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-7 12/19/2003	MW-8 12/19/2003
Di-n-octylphthalate	117840	130	ID	NLV	400	<5	<5
1,2-Diphenylhydrazine	-	-	-	-	-	<5	<5
Fluoranthene	206440	210 (S)	5.0 (M)	210 (S)	210 (S)	<5	<5
Flourene	86737	880	12	2,000 (S)	2,000 (S)	<5	<5
Hexachlorobenzene	118741	1.0 (A)	ID	440	4.6	<5	<5
Haxachlorobutadiene	87683	15	5.0 (M)	1,600	400	<5	<5
Hexachlorocyclopentadiene	319846	0.43	NA	2,000 (S)	60	<2	<2
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<5	<5
Indeno (1,2,3) pyrene	193395	2.0 (M)	ID	NLV	2.0 (AA,M)	<2	<2
Isophorone	78591	770	570 (X)	NLV	990,000	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	<5
2-Methylphenol (o-Cresol)	-	-	-	-	-	<5	<5
3&4 Methylphenol (m&p Cresol)	-	-	-	-	-	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	<5
2-Nitroaniline	-	-	-	-	-	<20	<20
3-Nitroaniline	-	-	-	-	-	<20	<20
4-Nitroaniline	-	-	-	-	-	<20	<20
Nitrobenzene	98953	3.4	180 (X)	280,000	11,000	<2	<2
2-Nitrophenol	88755	20	ID	NLV	79,000	<5	<5
4-Nitrophenol	-	-	-	-	-	<20	<20
N-Nitrosodimethylamine	-	-	-	-	-	<5	<5
N-Nitrosodi-n-propylamine	621647	5.0 (M)	NA	NLV	360	<5	<5
N-Nitrosodiphenylamine	86306	270	NA	NLV	35,000 (S)	<5	<5
Pentachlorophenol	87865	1.0 (A)	(G,X)	NLV	200	<20	<20
Phenanthrene	85018	52	5.0 (M)	1,000 (S)	1,000 (S)	<5	<5
Phenol	108952	4,400	210	NLV	ID	<5	<5
Pyrene	129000	140 (S)	ID	140 (S)	140 (S)	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5
2,4,5-Trichlorophenol	95954	730	NA	NLV	170,000	<5	<5
2,4,6-Trichlorophenol	88062	120	5.0 (M)	NLV	10,000	<4	<4
VOCs (ug/L)							
Acetone	67641	730	1,700	1,000,000,000	31,000,000	<25	<25
Acrylonitrile	107131	2.6	4.9 (X)	34,000	14,000	<1	<1
Benzene	71432	5.0 (A)	200 (X)	5,600	11,000	<1	<1
Bromochloromethane	-	-	-	-	-	<1	<1
Bromodichloromethane	75274	100 (A,W)	ID	4,800	14,000	<1	<1
Bromoform	75252	100 (A,W)	ID	470,000	140,000	<1	<1
Bromomethane	74839	10	35	4,000	70,000	<1	<1
2-Butanone	78933	13,000	2,200	240,000,000 (S)	240,000,000 (S)	<5	<5
Carbon disulfide	75150	800	ID	250,000	1,200,000 (S)	<5	<5
Carbon tetrachloride	56235	5.0 (A)	45 (X)	370	4,600	<1	<1
Chlorobenzene	108907	100 (A)	47	210,000	86,000	<1	<1
Chloroethane	75003	430	ID	5,700,000	440,000	<1	<1
Chloroform	67663	100 (A,W)	170 (X)	28,000	150,000	<1	<1
Chloromethane	74873	260	ID	8,600	490,000	<1	<1
cis-1,2-Dichloroethene	156592	70 (A)	620	93,000	200,000	<1	<1
cis-1,3-Dichloropropene	-	-	-	-	-	<1	<1
1,2-Dibromo-3-chloropropane	-	-	-	-	-	<1	<1
Dibromochloromethane	124481	100 (A,W)	ID	14,000	18,000	<1	<1
1,2-Dibromoethane	106934	1.0 (A,M)	1.0 (M)	2,400	25	<1	<1
Dibromomethane	74953	80	NA	ID	530,000	<1	<1
1,2-Dichlorobenzene	95501	600 (A)	16	160,000 (S)	160,000 (S)	<1	<1
1,3-Dichlorobenzene	541731	6.6	38	16,000	6,400	<1	<1
1,4-Dichlorobenzene	106467	75 (A)	13	16,000	6,400	<1	<1
Dichlorodifluoromethane	75718	1,700	ID	220,000	300,000 (S)	<1	<1
1,1,-Dichloroethane	75343	880	740	1,000,000	2,400,000	<1	<1
1,2-Dichloroethane	107062	5.0 (A)	360 (X)	9,600	19,000	<1	<1
1,1-Dichloroethene	75354	7.0 (A)	65 (X)	200	11,000	<1	<1

Table 2 Summary of Groundwater Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Chemical Abstract Service Number*	Residential & Commercial I Drinking Water Criteria*	Groundwater Surface Water Interface*	Residential & Commercial I Groundwater Volatilization to Indoor Air Inhalation Criteria*	Groundwater Contact Criteria*	MW-7 12/19/2003	MW-8 12/19/2003
1,2-Dichloropropane	78875	5.0 (A)	290 (X)	16,000	16,000	<1	<1
Diethyl ether	60297	10 (E,M)	ID	61,000,000	35,000,000	<10	<10
Ethylbenzene	100414	74 (E)	18	110,000	170,000	<1	<1
Hexachloroethane	67721	7.3	6.7 (X)	27,000	1,900	<1	<1
2-Hexanone	591786	1,000	NA	4,200,000	5,200,000	<5	<5
Isopropylbenzene	98828	800	ID	56,000 (S)	56,000 (S)	<1	<1
Methyl iodide	-	-	-	-	-	<1	<1
Methy (tert) butyl ether	1634044	40 (E)	730 (X)	47,000,000 (S)	610,000	<5	<5
4-Methyl-2-pentanone	108101	1,800	ID	20,000,000	13,000,000	<5	<5
Methylene chloride	75092	5.0 (A)	940 (X)	220,000	220,000	<5	<5
2-Methylnaphthalene	91576	260	ID	ID	25,000 (S)	<5	<5
Naphthalene	91203	520	13	31,000 (S)	31,000 (S)	<5	<5
n-Butylbenzene	123864	550	ID	6,700,000	1,800,000	<1	<1
n-Propylbenzene	103651	80	ID	ID	15,000	<1	<1
Styrene	100425	100 (A)	80	170,000	9,700	<1	<1
1,1,1,2-Tetrachloroethane	630206	77	ID	15,000	30,000	<1	<1
1,1,2,2-Tetrachloroethane	79345	8.5	78 (X)	12,000	4,700	<1	<1
Tetrachloroethene	127184	5.0 (A)	45 (X)	25,000	12,000	<1	<1
Toluene	108883	790 (E)	140	530,000 (S)	530,000 (S)	<1	<1
trans-1,2-Dichloroethene	156605	100 (A)	1,500	85,000	220,000	<1	<1
trans-1,3-Dichloropropene	-	-	-	-	-	<1	<1
trans-1,4-Dichloro-2-butene	-	-	-	-	-	<1	<1
1,2,3-Trichlorobenzene	-	-	-	-	-	<5	<5
1,2,4-Trichlorobenzene	120821	70 (A)	30	300,000	19,000	<5	<5
1,1,1-Trichloroethane	71556	200 (A)	200	660,000	1,300,000 (S)	<1	<1
1,1,2-Trichloroethane	79005	5.0 (A)	330 (X)	17,000	21,000	<1	<1
Trichloroethene	79016	5.0 (A)	200 (X)	15,000	22,000	<1	<1
Trichlorofluoromethane	75964	2,600	NA	1,100,000 (S)	1,100,000 (S)	<1	<1
1,2,3-Trichloropropane	96184	42	NA	ID	84,000	<1	<1
1,2,4-Trimethylbenzene	95636	63 (E)	17	56,000 (S)	56,000 (S)	<1	<1
1,3,5-Trimethylbenzene	108678	72 (E)	45	61,000 (S)	61,000 (S)	<1	<1
Vinyl chloride	75014	2.0 (A)	15	1,100	1,000	<1	<1
Xylenes	1330207	280 (E)	35	190,000 (S)	190,000 (S)	<3	<3

*Per Operational Memorandum #18, Revised December 21, 2002.
ID-Inadequate data to develop criterion.
NLV- Hazardous substance is not likely to volatilize under most soil conditions.
A-Criterion is the State of Michigan drinking water standard established pursuant to Seciton 5 of 1976 PA 399.
E-Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the act.
G-Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.
L-Criteria for lead are derived using a biologically based model, as allowed under Section 20120a(10) of the act.
M-Calculated criterion is below the analytical target detection limit, thereofre, the criterion defaults to the target detection limit.
S-Criterion defaults to the hazardous substance-specific water solubility limit.
W-Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan Drinking Water standard of 100 ug/L.
X-The Groundwater Surface Water Interface (GSI) criterion shown is the value associated with a surface water used a of drinking water. This value may be lower depending on the hardness of the surface water body and the risk to aq
AA-Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

Table 3 Summary of Gas Sample Analytical Results
Suburban Softball
ASTI File No. 1-5450

Parameters	Statewide Default Background Levels*	Chemical Abstract Service Number	Air Quality Division Initial Toxic Screening Level (ITSL)	Vent-15 SB-15 3/5/2004	Vent-21 SB-21 3/5/2004	Vent-30 SB-30 3/5/2004
VOCs (ug/M3)						
Benzene		71432	30	120	350	3,400
Carbon disulfide		75150	700	<2	61	1,700
Chlorobenzene		108907	70	<2	30	190
Chloroethane		75003	--	<2	<2	820
Chloroform		67663	--	60	<2	<2
cis-1,2-Dichloroethene		156592	35	<2	<2	10,000
1,1,-Dichloroethane		75343	--	<2	37	2,000
1,1-Dichloroethene		75354	--	<2	<2	400
Ethylbenzene		100414	1,000	<2	320	3,500
Methylene chloride		75092	--	1,400	1,400	8,300
Styrene		100425	1,000	<2	14	<2
Tetrachloroethene		127184	--	<2	8	420
Toluene		108883	400	<2	91	2,500
trans-1,2-Dichloroethene		156605	70	<2	<2	400
1,1,1-Trichloroethane		71556	--	<2	<2	1,200
1,1,2-Trichloroethane		79005	--	<2	14	<2
1,1,2-Trichlorotrifluoroethane			--	<2	720	<2
Trimethylbenzene Isomers		25551137	1,230	<2	85	390
Vinyl chloride		75014	100	<2	50	7,300
Xylenes		1330207	100	130	1,032	7,700

Table 4 Methane Vent and Groundwater Monitor Well Screening Data
ASTI File 1-5450
Suburban Softball

Location	Methane (CH4) by Volume	Carbon Dioxide (CO2) by Volume	Oxygen (O2) by Volume	Balance Air by Volume
Resid. West Vent	0	Not Recorded	Not recorded	Not Recorded
Resid. Middle South Vent	3%	7.50%	Not Recorded	Not Recorded
Resid. East South Vent	0	Not Recorded	Not Recorded	Not Recorded
SB-1/MW-1	16.90%	11.80%	7.90%	63.40%
SB-2/MW-2	0.60%	0.20%	20.10%	79.10%
SB-3/MW-3	33.40%	16.40%	10.30%	39.90%
SB-4/MW-4	0	2.30%	18.50%	79.20%
SB-5/MW-5	0	8.90%	13.10%	78.00%
SB-6/MW-6	41.20%	29.30%	0.60%	28.90%
SB-7/MW-7	0.10%	16.20%	2.40%	81.30%
SB-8/MW-8	Not Recorded	Not Recorded	Not Recorded	Not Recorded
SB-14	62.20%	37.20%	0.60%	0.00%
SB-15	62.50%	36.70%	0.70%	0.10%
SB-16	61.40%	37.90%	0.60%	0.10%
SB-17	58.80%	39.90%	0.50%	0.80%
SB-19	64.70%	34.70%	0.60%	0.00%
SB-21	40.70%	29.00%	6.80%	23.50%
SB-22	64.30%	35.20%	0.50%	0.00%
SB-23	68.40%	30.20%	0.60%	0.80%
SB-24	66.40%	33%	0.60%	0.00%
SB-25	66.60%	32.80%	0.60%	0.00%
SB-26	66.30%	33.10%	0.60%	0.00%
SB-27	67.30%	32%	0.70%	0.00%
SB-28	65.70%	33.60%	0.70%	0.00%
SB-29	65.80%	33.50%	0.60%	0.10%
SB-30	64.30%	35.10%	0.60%	0.00%
SB-31	61.30%	37.90%	0.80%	0.00%
SB-32	66.60%	32.70%	0.60%	0.10%
SB-33	62.70%	36.70%	0.60%	0.00%

ATTACHMENT 9.1

RESUME

RESUME

APPLIED SCIENCE & TECHNOLOGY INC. (ASTI)

TREVOR I. WOOLLATT
Hydrogeologist

PROFILE

Certifications
OSHA 40 hour trained, 8-hour refresher current
DOT 4 hour THM-126 course

Education
West Virginia University, B.S. 1996, Geology
Montgomery College, MD, AA, 1993, General Studies
St. Andrew's University, Scotland, UK, 1990

Experience History
Associate III, Applied Science & Technology, Inc., Brighton, MI
Associate II, Applied Science & Technology, Inc., Brighton, MI
Geologist/Assistant Project Manager, TolTest, Plymouth, MI
Associate Geologist, TolTest, Plymouth, MI

Professional Background
Mr. Woollatt has experience in assigning and coordinating fieldwork. His experience includes both Part 201 and Part 213 regulations and includes the completion of Baseline Environmental Assessments, and Initial Assessment, Final Assessment, Closure, and related reports to the MDEQ. He is experienced in formulating corrective action plans to address soil and groundwater contamination issues on-site and off-site. He is also proficient in soil and groundwater sampling and installation of monitoring wells. Mr. Woollatt also has experience negotiating with government agencies. He has performed Phase II Investigations in MI, OH, NJ, NY and OR.

Years Experience:

4-ASTI
3.5-other firms

HYDROGEOLOGICAL INVESTIGATIONS

Retail Gasoline Stations – 35 Facilities
Assisted in the management of 35 LUST gasoline stations for Clark Refining and Marketing, a major refiner in the midwest. Project management work included site investigations, reports, permitting, and negotiations with government agencies. Activities performed included plume identification, installation of monitoring wells, soil and groundwater sampling, and aquifer testing. Successfully closed fifteen facilities.

Retail Gasoline Stations – 16 Facilities
Assisted in the management of 16 LUST gasoline stations for Mobil Oil Marketing, a major nationwide distributor. Project management work included site investigations, reports, permitting, and negotiations with government agencies. Activities performed included plume identification, installation of monitoring wells, soil and groundwater sampling, and aquifer testing.

Statistical Analysis of Groundwater Data
Developed quarterly reports for a major landfill for submittal to state environmental agency as required by state regulations. Analysis included intra-well comparisons, and evaluation of groundwater quality data in terms of recent land use changes in areas upgradient of landfill. Evaluated groundwater quality in lower regional supply aquifer in terms of natural geochemistry and man-made changes.

Hydrogeological Study, Ypsilanti Hospital
Determined placement of monitor well network through review of Phase I report of property condition of large regional mental health facility. Conducted field work, supervising drilling technicians, to collect soil samples, log lithology, and collect groundwater samples. Reviewed analytical results for soil and groundwater samples and prepared section of final report. Report identified impacted areas needing remediation.

Hydrogeological Study, Automotive Component Manufacturing Facility
Conducted four quarters of groundwater monitoring to demonstrate acceptable groundwater quality. Developed soil sampling plan and off-site groundwater evaluation using profiles and temporary wells. Conducted field work, supervising drilling technicians, to collect soil samples, log lithology, and collect groundwater samples. Reviewed analytical results for soil and groundwater samples and prepared section of final report for site closure.

Analysis of Unconfined Aquifer adjacent to Great Lakes
Reviewed data from monitor wells and staff gauges in creeks and ponds to determine two flow paths in uppermost, unconfined aquifer within ½ mile of Great Lakes. Demonstrated that two paths—surface water discharge and groundwater discharge—are available on 20-acre parcel.

Review of Proposed Golf Course Groundwater Use
Reviewed data from pump test and projected water use to determine suitability and capacity of aquifer to supply domestic and irrigation needs. Reviewed lithology to verify aquifer use did not impact high-quality tributary to Huron River. Presented findings to Township Planning Commission. Summarized findings in report to Planning Commission.

REMEDIATION PROJECTS

Due Care Plan, Part 201 for City of Auburn Hills
Reviewed report of contaminated property to develop a Due Care Plan for construction of enclosed storm drains and reconstruction of Churchill Road. Plan included site monitoring of air quality for worker safety, contingency procedures for soils requiring evaluation and possible disposal.

Ferrous Chloride Site
Performed system operation and maintenance at a major steel mill to address impact by ferrous chloride to a shallow aquifer.

Heating Fuel Oil Tank Investigation
Conducted site investigation of incompletely remediated heating oil tank installation at manufacturing facility. Work included review of previous earthwork, state agency files, regulatory requirements and on-site investigation. Successfully installed monitor wells in end moraine containing large cobbles, evaluated uppermost aquifer for residual contamination. Distinguished between olfactory evidence and results of chemical testing.

Specification Development, College Powerhouse
Conducted subsurface studies and reviewed property use to determine extent of remediation work. Wrote specifications for bidding by contractors.

Due Care Plan, Part 201 for City of Auburn Hills
Reviewed report of contaminated property to develop a Due Care Plan for construction of Squirrel Road Improvements. Plan addressed property acquired for right-of-way of improvements and included site monitoring of air quality for worker safety, contingency procedures for soils requiring evaluation and possible disposal.

LUST Facility
Performed operation and maintenance for a free product recovery system involving 3 to 4 feet of gasoline in a shallow aquifer.

Landfill Investigation
Performed subsurface geophysical investigation using EM-31 magnetometer to identify likely landfill boundaries. Coordinated test pit activities to verify geophysical investigation and to characterize soil. Developed remediation plan to address relocation of landfill.

Supervised the installation of air sparge remediation system to control off-site migration of gasoline contaminants. Activities included securing off-site access agreements to delineate migrating groundwater plume. Due to extensive historic migration of gasoline along a utility corridor, final corrective actions involved the purchase of adjacent properties to mitigate exposure and liability for the owner operator.

ENVIRONMENTAL SITE ASSESSMENTS

Performed Phase II Investigation in multiple states to address concerns raised by former use of property and potential impact from hazardous substances.

BASELINE ENVIRONMENTAL ASSESSMENTS

Have completed BEAs on vacant land, former retail gasoline stations, and industrial properties.

ATTACHMENT 9.2

PHASE I ESA

ATTACHMENT 9.3
SITE PHOTOGRAPHS

ATTACHMENT 9.4

SOIL BORING LOGS

Applied Science & Technology, Inc.
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Brighton, MI 48116

Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-33
County	Oakland	Suburban Softball		**Well #**	Vent-33
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/4/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	851	**From**	33
From TOC	37.45'	**Liner**	819.00	**To**	13

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Sand and gravel top layer with gray clay cap				
		material to 10 bgs				
19	21	landfill materails (cardboard and newspaper)		50	0	11,7,14,18
24	26	wood (stump?)		60	0	12,12,16,14
26	28	sand, gray and silty, some fill *		25	0	9,9,12,20
33	36	sand, gray with silt		75	0	11,15,23,28

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-32
County	Oakland	Suburban Softball		**Well #**	Vent-32
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/4/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**Length**	20		
From G L	None	**From**	34		
From TOC	None	**To**	14		
ELEVATIONS					
Ground	840.13				
Liner	808.00				

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Landfill materials at 3.0 to 4.0 bgs				
29	31	landfill materials		40	0	18,29,34,45
31	33	Some landfill materials underlain by sand, damp		40	0	15,12,19

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-31
County	Oakland	Suburban Softball		**Well #**	Vent-31
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/4/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	30
From G L	None	**Ground**	852.35	**From**	39
From TOC	None	**Liner**	813.50	**To**	9

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	5	Sand and gravel cover materials				
5	9	clay, gray changing to landfill material at 9.0 gbs				
39	41	silt, gray		100	0	15,16,22

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-30
County	Oakland	Suburban Softball		**Well #**	Vent-30
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/4/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	852.96	**From**	30
From TOC	36.30	**Liner**	823.00	**To**	10

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		cover material with landfill materials 1.0 bgs				
24	26	no recovery				103
26	28	no recovery				24,27,75
31	33	sand, fine and gray		25	0	15,34,42,44

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-29
County	Oakland	Suburban Softball		**Well #**	Vent-29
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/4/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	858.82	**From**	37
From TOC	39.70	**Liner**	820.50	**To**	7

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Sand and gravel with landfill materials at 6.0 bgs				
24	26	landfill materials *	50		0	18,6,5,7
29	31	landfill materials	50		0	12,12,16,40
33	35	landfill materials	50		0	13,9,13
37	39	sand, gray and silty	75		0	25,27,47

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-28
County	Oakland	Suburban Softball		**Well #**	Vent-28
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/2/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	856.4	**From**	26
From TOC	None	**Liner**	831.40	**To**	6

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Sand and gravel with landfill material at 2.5 bgs				
24	26	landfill material and gray silt		50	0	5,6,6,7
26	28	silt, gray		50	0	15,23,44

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-27
County	Oakland	Suburban Softball		**Well #**	Vent-27
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	857.47	**From**	28
From TOC	None	**Liner**	829.50	**To**	8

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Topsoil and sand				
28	30	silt, gray		50	0	17,21,15,18

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB- 26
County	Oakland	Suburban Softball		**Well #**	Vent-26
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	856.46	**From**	30
From TOC	None	**Liner**	825.50	**To**	10

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Sand and gravel with landfill materials starting at 2.0 bg				
28	30	no recovery				5,3,6,7
30	32	sand, gray and silty		50	0	15,10,9,5

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-25
County	Oakland	Suburban Softball		**Well #**	Vent-25
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	857.86	**From**	34
From TOC	None	**Liner**	823.50	**To**	14

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	3	Topsoil and sand with landfill materials at 3.0 bgs				
3		Landfill materials				
28	30	landfill materials		10	0	7,4,4,11
32	36	sand, gray and silty		16	0	8,10,14,29

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-24
County	Oakland	Suburban Softball		**Well #**	Vent-24
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	846.81	**From**	24
From TOC	25.59	**Liner**	822.50	**To**	4

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	2	Cover materials				
19	21	landfill materials		10	0	20,17,32
24	26	sandy silt and silty sand- sheen (black) *		50	0	28,18,18,7

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-23
County	Oakland	Suburban Softball		**Well #**	Vent-23
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	859.01	**From**	29
From TOC	29.43	**Liner**	832.00	**To**	9

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	3	Topsoil and sand				
24	26	landfill material *		25	0	22,17,50
29	31	liner material		66	0	13,8,11,11

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-22
County	Oakland	Suburban Softball		**Well #**	Vent-22
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	851.43	**From**	34
From TOC	None	**Liner**	817.00	**To**	14

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
21	23	Landfill materials		25	0	15,10,8,4
24	26	No recovery				12,9,5,10
32	34	landfill materials		40	0	57,16,10,12
34	36	clay and sand, brown		50	0	2,2,2,3

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-21
County	Oakland	Suburban Softball		**Well #**	Vent-21
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	24
From G L	None	**Ground**	847.5	**From**	32
From TOC	21.35	**Liner**	815.50	**To**	8

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
1	4	Silt, gray turning to landfill material at 4.0 bgs				
19	21	wood material		30	0	6,3,8,7
21	23	sand and gravel *		40	0	4,4,5,4
23	25	sand, dark and wood debris		25	0	1,2,2,2
25	27	Landfill material (newspaper)		75		too high to note
32	34	sand, gray and silty		60	0	14,17,8, 10

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-20
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	NA	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	NA		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	NA	in 55-gallon drums	
		Mtrl	NA	pending disposal.	
WATER LEVEL		**Length**	NA		
From G L	None	**From**	NA		
From TOC	None	**To**	NA		
ELEVATIONS					
Ground	844.03				
Liner	824.00				

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
1	3	sand with landfill materials beginning at 3.0 bgs				
20	22	sand, fine grained gray and silty *		10	0	7,8,4,8

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-19
County	Oakland	Suburban Softball		**Well #**	Vent-19
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	30
From G L	None	**Ground**	846.95	**From**	40
From TOC	None	**Liner**	807.00	**To**	10

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
1	2.5	Cover material changing to landfill materials				
24	26	Landfill materials (plastic)		25	0	15,19,16,50
29	31	Landfill materials (papers, books, glass & metal)		40	0	19,13,13,13
39	41	3" landfill material underlaying 9" of sand,		50	0	8,10,16,16
		damp, gray and medium to coarse grained *				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-18
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/2/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	NA	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	NA		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	NA	All cuttings containerized	
Weather		**Slot**	NA	in 55-gallon drums	
		Mtrl	NA	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	NA
From G L	None	**Ground**	841.9	**From**	NA
From TOC	None	**Liner**	801.00	**To**	NA

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
1	4	Cover material changing to landfill materials				
24	26	sand with some fill		40	0	24,10,8,6
26	28	landfill material		50	0	12,9,5,12
34	36	landfill materail (cardboard)		40	0	34,35
39	41	landfill material		40	0	10,11,11,15
41	43	landfill material and saturated sand		40	0	70,27,9,5
43	45	saturated gray fine sand		40	0	0,11,2

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-17
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/2/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	NA	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	NA		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	NA	All cuttings containerized	
Weather		**Slot**	NA	in 55-gallon drums	
		Mtrl	NA	pending disposal.	
WATER LEVEL		**Length**	NA		
From G L	None	**From**	NA		
From TOC	None	**To**	NA		
		ELEVATIONS			
		Ground	831.07		
		Liner	812.00		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
16	18	Landfill materials		30	0	62,21,75
18	20	Landfill materials		25	0	9,12,4,2
20	22	sand @ 19.0		40	0	2,3,2,3

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-16
County	Oakland	Suburban Softball		**Well #**	Vent-16
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/3/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	837.79	**From**	32
From TOC	None	**Liner**	805.50	**To**	12

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface	1	Grass and topsoil, black				
1	6	sand, silt and gravel mix				
6	15	Landfill materials				
15	17	no recovery				5,6,6,6
20	22	sandy silt with organic material *		50	0	18,9,3,7
22	24	Landfill materials		40	0	5,10,10,12
25	27	no recovery				28,41,34,36
28	30	wood		16		76,60,50,45
32	34	sand, trace clay		45	0	7,7,10,13

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-15
County	Oakland	Suburban Softball		**Well #**	Vent-15
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/2/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**ELEVATIONS**		**Length**	20
From G L	None	**Ground**	834.3	**From**	32
From TOC	28.30	**Liner**	802.00	**To**	12

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil, black				
24	26	Landfill materials		25	0	10,8,15,11
26	28	Landfill materials		25	0	24,12,7,8
28	30	Landfill materials		16	0	9,9,12,10
30	32	no recovery				11,27,75
32	34	Landfill materials		16	0	6,5,6,7
34	36	clay		25	0	5,6,8,9

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-14
County	Oakland	Suburban Softball		**Well #**	Vent-14
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	3/2/2004

Drilled by	Stearns Drilling Co.	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	See site diagram	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					

Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**	Johnson	All cuttings containerized	
Weather		**Slot**	10	in 55-gallon drums	
		Mtrl	PVC	pending disposal.	
WATER LEVEL		**Length**	20		
From G L	None	**From**	34		
From TOC	37.45'	**To**	14		

ELEVATIONS	
Ground	843.18
Liner	811.00

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil, black				
2	6	Silty clay, grey, damp				
		At 7.5' encountered trash fill, plastic				
		metal, wood, lots of paper				
20	22	no recovery		0		too high to note
24	26	fill material *		12	0	10,12,13,12
30	32	no recovery		0		5,5,6,4
32	34	some trash fill and silty clay, gray		10	0	2,9,13,11

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-13
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/19/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**		Center of Area C, BFI	
Method	4.25 HAS	**Length**		Operated Cardinal Landfill	
Grout	Bentonite Slurry	**Type**		In driving range in front of	
Developed				golf tees.	
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings containerized	
Weather		**Slot**		in 55-gallon drums	
		Mtrl		pending disposal.	
WATER LEVEL 12/19/03		**ELEVATIONS**	**Length**		
From G L		**Ground** 836.7	**From**		
From TOC		**Water**	**To**		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil, black				
2	6	Silty clay, grey, damp				
		At 6' encountered trash fill, plastic				
		metal, wood, lots of paper				
18	20	poor recovery, trash fill, paper, metal	18*	15	0	too high to note
		clayey matrix, black, partially decomposed				
		dry				
20	22	no recovery		0	0	8, 9, 9, 10
22	24	no recovery, spooned without advancing		0	0	6, 16, 26, 8
		augers as this is anticipated bottom of				
		fill and do not want to go through bottom				
		clay liner				
24	26	no recovery, same as above, suspect we		0	0	20, 50, -
		are pushing fill ahead of sample spoon				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-12
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/19/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**		Center of Area B, BFI	
Method	4.25 HAS	**Length**		Operated Cardinal Landfill	
Grout	Bentonite Slurry	**Type**			
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings containerized	
Weather		**Slot**		in 55-gallon drums	
		Mtrl		pending disposal.	
WATER LEVEL 12/19/03		**ELEVATIONS**	**Length**		
From G L		**Ground** 846.2	**From**		
From TOC		**Water**	**To**		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil, black				
2	8	Silty clay, grey, damp				
		At 8' encountered trash fill, plastic				
		metal, wood				
18.5	20	Fill trash, decomposed, clayey, black	20*	10	0	too high to note
35	37	Poor recovery, wood in sample spoon		5	0	13, 17, 31, 35
		fill, trace grey clay in shoe				
37	39	Silt, grey, sandy, very moist	37-39*	60	0	12, 19, 25, 30
		End boring				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-11
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/18&19/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**		Center of Area A, BFI	
Method	4.25 HAS	**Length**		Operated Cardinal Landfill	
Grout	Bentonite Slurry	**Type**			
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings containerized	
Weather		**Slot**		in 55-gallon drums	
		Mtrl		pending disposal.	
WATER LEVEL 12/19/03		**ELEVATIONS**	**Length**		
From G L		**Ground** 856.1	**From**		
From TOC		**Water**	**To**		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil, black				
2	7	Silty clay, grey, damp				
		At 7' encountered trash fill, plastic				
		metal, wood				
8.5	10	Sample spoon blocked by wood		5	0	too high to note
		and metal				
		Auger cuttings very moist				
18.5	20	Trash fill, decomposed, black	20*	10	0	too high to note
		becomes saturated at 20'				
26.5	28	No recovery, spoon blocked by				
		trash fill				
28.5	30	Poor recovery, Saturated sand and silt		5	0	15, 18, 25
		unable to collect bottom sample due to				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-10
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/18/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**		West side center of	
Method	4.25 HAS	**Length**		Veteran's Landfill	
Grout	Bentonite Slurry	**Type**			
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings containerized	
Weather		**Slot**		in 55-gallon drums	
		Mtrl		pending disposal.	
WATER LEVEL 12/19/03		**ELEVATIONS**	**Length**		
From G L		**Ground** 859.3	**From**		
From TOC		**Water**	**To**		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Sandy clay, brown				
2		Encountered trash fill at 2' to 3', Log				
		boring from auger cuttings, same as				
		SB-9, very hard drilling, lots of metal				
		Sampled Auger Cuttings	24*		0	
33	35	Sample spoon blocked by a book, dry		5	0	23, 35, 44
		text still readable				
35	37	Clay with pebbles, grey/blue, some	35-37*	100	0	27, 31, 38, 41
		coarse sand above clay				
		End Boring				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-9
County	Oakland	Suburban Softball		**Well #**	
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/18/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**BORING LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**		Center of 8 Softball diamonds	
Method	4.25 HAS	**Length**		Veteran's Landfill	
Grout	Bentonite Slurry	**Type**			
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings containerized	
Weather		**Slot**		in 55-gallon drums	
		Mtrl		pending disposal.	
WATER LEVEL 12/19/03		**ELEVATIONS**	**Length**		
From G L		**Ground** 862.4	**From**		
From TOC		**Water**	**To**		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Fine crushed stone, bark brown clay				
2	3.5	Clay, dark grey, trace sand		25	0	7, 6, 10
		encountered trash fill at 2' to 3'				
23.5	25	Trash fill, black, decomposed, paper		5	0	13, 33, 34
		plastic, metal, wood, some glass				
27	28.5	SAA	28*	5	0	32, 45, 52
38.5	39	Trash fill in top of spoon to 39'		25	0	20, 28, 33
39	40	Sand, grey, quartz, medium to coarse	38.5-40*	25	0	
		grained				
		End Boring				

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State	Michigan	**Site Address:**		**Boring #**	SB-8
County	Oakland	Suburban Softball		**Well #**	MW-8
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Abandoned rail grade	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**Length**	10'	disposal.	
From G L		**From**	5.12		
From TOC	3.25	**To**	15.12		

ELEVATIONS	
TOC	835.39
Water	832.14

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil				
3.5	5	Sand, brown, medium grained, moist	3.5-5*	100	0	7, 8, 9
		becomes saturated at 5'				
8.5	10	SAA, trace silt, saturated		100	0	6, 8, 10
13.5	15	Silt, grey, saturated, with saturated		100	0	6, 5, 5
		sand lenses				
		End boring, Set well				

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State	Michigan	**Site Address:**		**Boring #**	SB-7
County	Oakland	Suburban Softball		**Well #**	MW-7
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Abandoned rail grade	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**Length**	10'	disposal.	
From G L		**From**	6.85		
From TOC	12.69	**To**	16.85		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil				
8.5	10	Sand, brown, medium grained, moist	8.5-10*	100	0	8, 7, 10
		becomes very moist at 10'				
13.5	15	SAA, saturated		100	0	5, 8, 9
	17	End boring, Set well				

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State	Michigan	**Site Address:**		**Boring #**	SB-6
County	Oakland	Suburban Softball		**Well #**	MW-6
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Abandoned rail grade	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**Length**	10'	disposal.	
From G L		**From**	6.85		
From TOC	9.21	**To**	16.85		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil				
7	9	Sand, light brown, medium grained	7-9*	100	0	7, 5, 6, 6
		some coarse sand, damp				
9	11	SAA, saturated, grey silt lens encountered		100	0	6, 7, 4, 4
		from 10.5' to 11'				
	17	End boring, Set well				

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State	Michigan	**Site Address:**		**Boring #**	SB-5
County	Oakland	Suburban Softball		**Well #**	MW-5
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Abandoned rail grade	
Method	4.25 HAS	**Length**			
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**Length**	10'	disposal.	
From G L		**From**	6.86		
From TOC	9.41	**To**	16.86		

ELEVATIONS	
TOC	818.99
Water	809.58

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil				
3.5	5	Sand, brown, fine to medium grained		100	0	10, 9, 11
		damp				
7	8.5	SAA, some gravel, saturated	7-8.5*	10	0	6, 16, 20, 21
13.5	14	Sandy silt, grey, saturated		100	0	2, 6, 7
14	15	Sand, grey, quartz, medium to coarse			0	
		grained, saturated				
	17	End boring, Set well				

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Lithologic Log

State	Michigan	**Site Address:**		**Boring #**	SB-4
County	Oakland	Suburban Softball		**Well #**	MW-4
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Hamlin Road ROW	
Method	4.25 HAS	**Length**		South Side	
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**ELEVATIONS**		**Length**	10'	disposal.	
From G L		**TOC**	801.03	**From**	6.92		
From TOC	10.14	**Water**	790.89	**To**	16.92		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and topsoil				
3.5	5	Silty sand, medium grained, some coarse		100	0	7, 5, 4
		sand, moist				
8.5	10	Sand, medium to coarse grained, pebbles	8.5-9.5*	100	0	5, 5, 5
		moist, becoming wet at 9.5'				
13.5	15	Sand, grey, fine to coarse grained		100	0	4, 5, 9
		saturated				
	17	End boring, Set well				

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State	Michigan	**Site Address:**		**Boring #**	SB-3
County	Oakland	Suburban Softball		**Well #**	MW-3
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/17/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Hamlin Road ROW	
Method	4.25 HAS	**Length**		South Side	
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**ELEVATIONS**		**Length**	10'	disposal.	
From G L		**TOC**	825.92	**From**	25.11		
From TOC	25.91	**Water**	800.01	**To**	35.11		

Depth		Description	Split Spoon Data			
From	To		Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and Topsoil, dark brown sand				
		some silt				
8.5	10	Sand, light brown, medium grained to 9'		100	0	6, 9, 9
		becomes silt sand, very fine grained				
		moist				
18.5	20	Clay, brown, with pebbles, moist, sand		100	0	9, 11, 14
		seams, grading to blue clay				
27	28.5	Silt, brown, moist, becomes sand at 28'	27-27.5*	100	0	17, 32, 35
		saturated				
28.5	30	Sand, silty, medium to fine grained		100	0	6, 12, 18
		saturated, silt grading out downward				
34	35.5	SAA		100	0	18, 27, 30
		End Boring, Set Well				

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State	Michigan	**Site Address:**		**Boring #**	SB-2
County	Oakland	Suburban Softball		**Well #**	MW-2
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/16/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Hamlin Road ROW	
Method	4.25 HAS	**Length**		South Side	
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03		**ELEVATIONS**		**Length**	10'	disposal.	
From G L		**TOC**	838.47	**From**	35.22		
From TOC	29.78	**Water**	808.69	**To**	45.22		

Depth		Description	Split Spoon Data			
From	To		Sample Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and Topsoil				
6"	18.5	Sand, medium to coarse grained, brown		100	0	6, 10, 8
		dry, some pebbles				
18.5	20	Silt, grey, very moist, thin seam to 19'		100	0	6, 8, 15
		Sand, brown, silty, moist				
23.5	25	Sandy silt, grey, very moist		100	0	20, 30, 49
28.5	30	SAA, increasing moisture		100	0	26, 30, 49
33.5	35	SAA	33.5-35*	50	0	75, 90
38.5	40	SAA, saturated		100	0	27, 31, 44
	45	End Boring, Set Well				

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State	Michigan	**Site Address:**		**Boring #**	SB-1
County	Oakland	Suburban Softball		**Well #**	MW-1
Town/Range		2801 W. Hamlin Road		**Project #**	1-5450
Section		Rochester Hills, Michigan		**Date:**	12/16/2003

Drilled by	Cook Drilling, LLC	**CASING DATA**		**WELL LOCATION**	
Tech/Geol	Trevor I. Woollatt	**Diameter**	2"	Hamlin Road ROW	
Method	4.25 HAS	**Length**		South Side	
Grout	Bentonite Slurry	**Type**	PVC		
Developed					
Well Yield		**SCREEN DATA**		**DISPOSAL METHOD**	
Miss Dig #		**Mfgr**		All cuttings and development	
Weather		**Slot**	10 Slot	water containerized in	
		Mtrl		55-gallon drums pending	
WATER LEVEL 12/19/03	**ELEVATIONS**	**Length**	10'	disposal.	
From G L	**TOC** 861.67	**From**	40.16		
From TOC	44.87 **Water** 816.80	**To**	50.16		

Depth		Description	Split Spoon Data			
From	To		Sample Depth	% Rec'd	OVA-PID VOC's (PPM)	Blow C'nts Per 2 Feet
Surface		Grass and Topsoil				
3.5	5	Clay, brown and grey, some coarse sand		100	0	4, 7, 7
		seams, moist				
8.5	10	Sand, brown, trace grey clay, grades		100	0	2, 3, 3
		to dark blue to black sandy clay at				
		9 feet, moist				
38.5	40	Clay, brown, some pebbles, moist, pliable	38.5-40*	100	0	4, 7, 8
		some fine to coarse sand lenses, dry				
43.5	45	Sand, silty, with gravel, sand and gravel		100	0	8, 10, 11
		coarsening downward, saturated				
	50	End Boring, Set Well				

ATTACHMENT 9.5
LABORATORY ANALYTICAL RESULTS