

Transmitted Via FedEx

December 31, 2002

Ms. Susan Kaelber-Matlock
Environmental Response Division
Michigan Department of Environmental Quality
Saginaw Bay district
503 North Euclid Street
Bay City, MI 48706

Re: REALM, Inc. Peninsula Area Property, Saginaw, Michigan
Additional Site Investigation
BBL Project #: 0869 869.91 #2.04

Dear Ms. Kaelber-Matlock:

This letter report has been prepared on behalf of the Remediation and Liability Management Company, Inc. (REALM) to present the results of additional investigation activities completed for the Peninsula Area property (Plant 2 Peninsula) shown on Figure 1. Investigation activities were completed to provide supplemental information regarding the potential source(s) of volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) detected in site groundwater.

Scope of Work

A proposal for additional site work was originally submitted to the MDEQ in a letter dated December 14, 2000. In response to telephone conversations with you and Ms. Rhonda Klann, the scope of work was modified, and the revised scope of work was presented in a letter dated September 27, 2001. The MDEQ requested additional modifications to the scope of work (Brouillet, October 16, 2001), and the resulting scope of investigation included the following activities:

- Installation of a water table monitoring well (MW01-118WT) along the western edge of the Peninsula Area property.
- Collection of two soil samples from the new water table monitoring well location (at the 0 to 2-foot depth interval and from the two-foot interval above the water table), and analysis of the samples for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and inorganic constituents.
- Completion of two geoprobe (or similar method) borings (TW01-120, MW01-119) to the depth of the top of the clay unit. Collection of grab groundwater samples at three depths at the northern boring location and at four depths at the southern location. At the northern location, installation of a permanent monitoring well at the base of the sand unit (MW01-119S1). Collection of grab groundwater samples at depth intervals of approximately five feet, as follows:
 - At the water table;
 - At the base of the sand unit (southern location only); and
 - At two intermediate depths.

Analysis of the grab groundwater samples for VOCs and SVOCs.

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- Development of the two new monitoring wells using traditional methods, but avoiding harsh surging.
- Collection of groundwater samples using a peristaltic pump from MW01-118WT, MW01-119S1, X-1A, X-1B, and X-1CR2. Analysis of the samples as follows:
 - MW01-118WT, MW01-119S1, X-1CR2 – TCL VOCs and TCL SVOCs; and
 - X-1A and X-1B – TCL SVOCs (samples were collected from these wells and analyzed for VOCs in June 2001 as part of the Green Point Landfill monitoring program).
- Surveying of the new wells by a licensed surveyor (x, y, and z coordinates).
- Collection of a round of water level measurements from the 14 site wells and nearby wells located on the adjacent REALM and GM properties, and coordination with Delphi to obtain water level measurement data for the same time period for the adjacent Delphi property.

Results

General

The field investigation tasks were completed in accordance with the site Quality Assurance Project Plan. Soil boring and monitoring well installation logs, sample collection logs for the November 2001 groundwater sampling event, and the analytical data review reports are provided as attachments.

Groundwater Elevation Data

Water levels were measured at the monitoring wells located within the Peninsula Property and at select monitoring wells located in adjacent areas of the GM SMI, REALM Green Point Landfill, and Delphi properties on November 26 and 28, 2001. The surface water elevation was also measured at a staff gauge located west of the Peninsula Area property, on the adjacent REALM Green Point Landfill property. Table 1 presents the latest groundwater elevation data and also historical measurements. Two groundwater contour maps were generated based on the November data, a water table elevation contour map (Figure 2), and a potentiometric surface elevation contour map for the base of the sand unit (Figure 3).

As shown on Figure 2, groundwater flow at the water table is generally to the west-southwest toward the marshy area west of the Peninsula Area. At the south end of the Peninsula Area, groundwater flow is to the north-northwest due to a slight mounding effect from the Green Point Landfill. North of the Peninsula Area, on the southern portion of the Delphi property, a groundwater divide is present, resulting in components of flow toward the northeast and toward the southwest. Groundwater flow at the base of the sand unit is generally to the west-southwest (Figure 3). These flow directions are generally consistent with flow directions determined during previous water level measurement events.

Soil Analytical Data

The soil analytical data for monitoring well MW01-118WT are shown in Table 2. The soil data do not exceed the applicable Generic MDEQ Criteria (Soil Criteria Protective of Groundwater Contact [GCCP], Generic Industrial Direct Contact [IDC], Generic Industrial Infinite Source Volatile Soil Inhalation Criteria [IVSIC], Generic Industrial Particulate Soil Inhalation Criteria [IPSIC], Generic Industrial Soil Volatilization to Indoor Air Inhalation Criteria [ISVIIC] values, or Generic Groundwater Surface Water Interface Protection Criteria [GSIP]).

Groundwater Analytical Data

The groundwater analytical data are presented in Tables 3 and 4. Consistent with historical site data, none of the detected VOC concentrations exceeded the Generic Acute Inhalation Screening Level (AISL),

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Flammability and Explosivity Screening Level (FESL), or Water Solubility Screening Level (WSSL) values. The Groundwater Contact Criteria (GCC) and Industrial Groundwater Volatilization to Indoor Air Inhalation Criteria (IGVIIC) for vinyl chloride (570 ug/L and 690 ug/L) were exceeded in samples from MW97-104S1, MW98-108S1, MW98-109S1, and MW98-111S1. The exceedences of criteria for vinyl chloride remain limited to wells screened at the base of the sand unit.

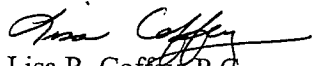
Concentrations of 1,2-dichloroethene, benzene, chlorobenzene, chloroform, ethylbenzene, toluene, trichloroethene, vinyl chloride, and xylene exceeded the Industrial Drinking Water (IDW) or Groundwater Surface Water Interface (GSI) Criteria (as appropriate based on well location), at one or more site wells, as shown in Table 3. Criteria were not exceeded for any constituent at the two new vertically profiled groundwater sampling locations completed east of the site on the adjacent GM Saginaw Malleable Iron property. The GSI criterion for chlorobenzene was exceeded at the water table monitoring well (MW-118WT) installed along the western property boundary.

Conclusions

To look at the spatial distribution of VOC detections at the site and surrounding properties, the total concentrations of the nine compounds detected above the IDW (or GSI criteria, as appropriate based on well location) are shown on Figure 4. This figure shows that the highest VOC concentrations are consistently found at the base of the sand unit in the northern half of the site. The data collected east of the site on the adjacent GM SMI property suggest the SMI property is not a contributing source of the detected VOCs. The groundwater data collected north of the site on the upgradient Delphi property indicate that VOCs are present, and suggest that a contributing source of VOCs is located on the Delphi property. However, at the Delphi monitoring well located closest to the northern boundary of the Peninsula Area property (MW-142D), the total VOC concentration is several orders of magnitude lower than the concentrations observed at the northern edge of the Peninsula Area. Additional groundwater quality data would be needed on the Delphi property along the northern site boundary to determine the magnitude of the contribution of VOCs from the Delphi property.

Sincerely,

BLASLAND, BOUCK & LEE, INC.



Lisa R. Coffey, P.G.

Associate, Sr. Geologist II

LRC/plf

Enclosures

cc: Ms. Rhonda Klann, MDEQ, ERD
Ms. Cheryl Hiatt/Mr. Edward Peterson, GM WFG
Mr. Dale Thrush, Delphi
Anthony Thrubis, Esq., GM Legal Staff
David Tripp, Esq., Dykema Gossett

Tables

TABLE 1

MONITORING WELL CONSTRUCTION AND ELEVATION DATA SUMMARY

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Monitoring Well Construction and Elevation Data Peninsula Area Property Monitoring Wells													
Well ID	MW97-104WT	MW97-104S1	MW97-105WT	MW97-105S1	TW98-108WT	MW98-108S1	TW98-109WT	MW98-109S1	TW98-110WT	MW98-110S1	TW98-111WT	MW98-111S1	MW01-118WT
Dated Installed	11/17/1997	11/17/1997	11/18/1997	11/18/1997	9/21/1998	9/21/1998	9/21/1998	9/23/1998	9/21/1998	9/22/1998	9/23/1998	9/22/1998	11/5/2001
Type of Protective Casing	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup
Well Material	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC
Screen Slot Size	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch
Well Diameter (in inches)	2	2	2	2	2	2	2	2	2	2	2	2	2
Screen Length (in feet)	10	5	5	5	10	5	10	5	10	5	10	5	10
Screened Interval (in feet below grade)	4-14	14.5-19.5	4-14	16-21	3-13	16-21	2-12	13-18	3-13	13-18	3-13	11.5-16.5	3-13
Total Depth (in feet from TOC)	15.88	21.50	16.15	23.09	15.10	24.70	15.20	20.30	15.10	20.20	13.80	20.00	16.13
Bottom/Invert Elev. of Screen	578.12	572.06	577.72	570.41	578.36	569.53	578.01	572.83	578.61	572.66	580.01	573.73	577.83
Ground Surface Elevation	591.30	591.20	591.30	591.40	591.15	590.88	590.96	591.03	590.71	590.71	590.99	590.95	590.53
Top-of-Casing (TOC) Elevation	594.00	593.56	593.87	593.50	593.46	594.23	593.21	593.13	593.71	592.86	593.81	593.73	593.06
TOC Elevation (resurveyed)	--	--	--	--	--	--	--	--	--	--	--	--	--
Depth to Water Measurements (from Top-of-Casing elevations)													
Date	December 8, 1997	8.90	8.43	8.80	--	--	--	--	--	--	--	--	--
February 25-26, 1998	7.48	7.95	8.19	8.75	--	--	--	--	--	--	--	--	--
July 15-16, 1998	8.66	8.16	9.10	8.59	--	--	--	--	--	--	--	--	--
November 5-6, 1998	9.34	8.89	9.37	8.89	8.94	9.70	8.85	8.77	8.68	7.79	8.87	8.89	--
May 16, 2000	7.76	7.30	8.10	7.64	7.41	8.20	7.28	7.27	7.00	6.10	7.07	7.30	--
November 26 and 28, 2001	8.73	8.25	9.12	8.66	8.42	8.70	8.43	8.36	7.88	7.01	7.94	8.19	8.13
Groundwater Elevations													
Date	December 8, 1997	585.10	585.13	584.70	--	--	--	--	--	--	--	--	--
February 25-26, 1998	586.52	585.61	585.68	584.75	--	--	--	--	--	--	--	--	--
July 15-16, 1998	585.34	585.40	584.77	584.91	--	--	--	--	--	--	--	--	--
November 5-6, 1998	584.66	584.67	584.50	584.61	584.52	584.53	584.36	584.36	585.03	585.07	584.94	584.84	--
May 16, 2000	586.24	586.26	585.77	585.86	586.05	586.03	585.93	585.86	586.71	586.76	586.74	586.43	--
November 26 and 28, 2001	585.27	585.31	584.75	584.84	585.04	585.53	584.78	584.77	585.83	585.85	585.87	585.54	584.93

See Notes on Page 3.

TABLE 1

MONITORING WELL CONSTRUCTION AND ELEVATION DATA SUMMARY

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

	Monitoring Well Construction and Elevation Data											
	Adjacent Property Monitoring Wells											
Well ID	MW97-106WT	MW01-119S1	MW-129WT	MW-142WT	MW-142D	MW-143WT	MW-144WT	MW-200S	MW-201S	PZ-36	B-2BAUG	B-2R
Dated Installed	11/20/1997	11/7/2001	1/17/1995	2/8/1995	5/2/2001	6/6/1995	6/7/1995	5/3/2001	5/2/2001	5/1/2001	NA	NA
Type of Protective Casing	Flush Mount	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Flush Mount	Stickup	Stickup
Well Material	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	NA	NA
Screen Slot Size	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	0.01-inch	NA	NA
Well Diameter (in inches)	2	2	2	2	2	2	2	2	2	2	NA	NA
Screen Length (in feet)	10	5	10	10	5	10	10	5	5.5	5	5	10
Screened Interval (in feet below grade)	4-14	21-26	2-12	3-13	13.3-18.3	6-16	2-12	5-10	4-9.5	3.7-8.7	20-25	3-13
Total Depth (in feet from TOC)	13.50	30.45	12.00	13.40	NA	18.96	13.00	NA	NA	NA	25.00	13.00
Bottom/Invert Elev. of Screen	577.84	568.83	575.38	581.18	NA	577.96	580.25	NA	NA	579.70	567.85	579.70
Ground Surface Elevation	591.63	592.08	584.57	592.07	NA	593.96	590.34	NA	NA	592.85	592.85	592.70
Top-of-Casing (TOC) Elevation	591.34	594.53	587.38	594.58	594.13	596.52	593.25	590.89	590.89	591.48	594.94	594.12
TOC Elevation (resurveyed)	--	--	--	--	--	--	--	--	--	--	--	--
Depth to Water Measurements (from Top-of-Casing elevations)												
Date												
December 8, 1997	5.38	--	NM	NM	--	NM	NM	--	--	--	NM	NM
February 25-26, 1998	4.11	--	NM	7.39	--	NM	6.10	--	--	--	NM	NM
July 15-16, 1998	4.68	--	3.45	8.14	--	8.31	8.37	--	--	--	NM	NM
November 5-6, 1998	6.99	--	4.63	9.31	--	9.60	7.62	--	--	--	NM	NM
May 16, 2000	4.35	--	1.75	7.52	--	9.01	7.08	--	--	--	NM	NM
November 26 and 28, 2001	--	8.41	2.74	8.21	8.83	9.01	11.65	6.16	6.93	4.86	8.69	8.51
Groundwater Elevations												
Date												
December 8, 1997	585.96	--	NM	NM	--	NM	NM	--	--	--	NM	NM
February 25-26, 1998	587.23	--	NM	587.19	--	NM	587.15	--	--	--	NM	NM
July 15-16, 1998	586.66	--	NM	586.44	--	588.21	584.88	--	--	--	NM	NM
November 5-6, 1998	584.35	--	NM	585.27	--	586.92	585.63	--	--	--	NM	NM
May 16, 2000	586.99	--	585.63	587.06	--	587.51	586.17	--	--	--	NM	NM
November 26 and 28, 2001	NM	586.12	584.64	586.37	585.30	587.51	581.60*	584.73	585.15	586.62	586.25	585.61

See Notes on Page 3.

TABLE 1

MONITORING WELL CONSTRUCTION AND ELEVATION DATA SUMMARY

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Monitoring Well Construction and Elevation Data										
Adjacent Property Monitoring Wells										
Well ID	B-3BAUG	B-3R	X-1A	X-1B	X-1CR	X-1CR2	X-20			
Dated Installed	NA	NA	6/2/1980	6/2/1980	1/10/1995	5/26/1995	2/21/1979			
Type of Protective Casing	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup	Stickup			
Well Material	NA	NA	PVC	PVC	PVC	PVC	PVC			
Screen Slot Size	NA	NA	NA	NA	0.01-inch	0.01-inch	0.01-inch			
Well Diameter (in inches)	NA	NA	NA	NA	2	2	2			
Screen Length (in feet)	5	10	3	3	10	5	3			
Screened Interval (in feet below grade)	22.2-27.2	16-26	9.7-12.7**	20.7-23.7**	2-12**	43.7-48.7**	4.7-7.7			
Total Depth (in feet from TOC)	27.20	26.00	NA	NA	14.82	52.03	NA			
Bottom/Invert Elev. of Screen	566.82	580.88	577.34	566.74	578.26	541.45	576.71			
Ground Surface Elevation	594.02	606.88	594.31	594.67	593.15	594.73	584.41			
Top-of-Casing (TOC) Elevation	596.54	609.51	592.31	592.19	592.68	593.08	586.33			
TOC Elevation (resurveyed)	--	--	597.72	597.69	598.35	598.41	--			
Date	Depth to Water Measurements (from Top-of-Casing elevations)									
December 8, 1997	NM	NM	NM	NM	NM	NM	NM			
February 25-26, 1998	NM	NM	NM	NM	NM	NM	NM			
July 15-16, 1998	NM	NM	6.11	6.52	5.52	4.22	NM			
November 5-6, 1998	NM	NM	NM	NM	NM	NM	NM			
May 16, 2000	NM	NM	11.40	12.76	11.95	7.94	0.70			
November 26 and 28, 2001	NM	NM	12.27	13.51	12.79	17.55	1.69			
Date	Groundwater Elevations									
December 8, 1997	NM	NM	NM	NM	NM	NM	NM			
February 25-26, 1998	NM	NM	NM	NM	NM	NM	NM			
July 15-16, 1998	NM	NM	586.20	585.67	587.16	588.86	NM			
November 5-6, 1998	NM	NM	NM	NM	NM	NM	NM			
May 16, 2000	NM	NM	580.91	579.43	580.73	585.14	585.63			
November 26 and 28, 2001	NM	NM	580.04	578.68	579.89	580.86*	584.64			

Notes:

- All top-of-casing elevations surveyed by Blasland, Bouck & Lee, Inc. (BBL) of Syracuse, New York ; Atwell-Hicks Inc. of Ulica, Michigan; Spicer Group of Saginaw, Michigan using N.G.V.D datum of 1929 from U.S.G.S. benchmark.
- Groundwater elevation measurements shown for X-20 and MW-129WT for the November 2001 measurement event were collected on December 5, 2001, due to flooding around the wells.
- PVC - Polyvinyl chloride.
- SS - Stainless Steel
- NM - Not Measured.
- NA - Not available.
- * - Data point appears to be anomalous; possible measurement error.
- The risers for monitoring wells in the X-1 cluster were extended due to the addition of fill during capping of the Green Point Landfill. The wells were resurveyed, and TOC elevations are shown.
- ** - The screened interval below grade reflects conditions prior to the addition of fill during Green Point Landfill capping.

TABLE 2
SOIL ANALYTICAL RESULTS

REALM, INC.
PENINSULA PROPERTY
SAGINAW, MICHIGAN

Location Depth Range Date Sampled Sample Type	State Default Background Level (ug/Kg)	Generic MDEQ GSIP Criteria Values (ug/Kg)	MW01-118WT (0.0 - 2.0') 11/5/2001 FS	MW01-118WT (0.0 - 2.0') 11/5/2001 DUP	MW01-118WT (4.0 - 6.0') 11/5/2001 FS
Volatile Organic Compounds					
1,1,1-Trichloroethane	NA	4,000	5.3 U	5.4 U	6.0 U
1,1,2,2-Tetrachloroethane	NA	1,600 {X}	5.3 U	5.4 U	6.0 U
1,1,2-Trichloroethane	NA	6,600 {X}	5.3 U	5.4 U	6.0 U
1,1-Dichloroethane	NA	ID	5.3 U	5.4 U	6.0 U
1,1-Dichloroethene	NA	1,300 {X}	5.3 U	5.4 U	6.0 U
1,2-Dibromo-3-chloropropane	NA	NA	5.3 U	5.4 U	6.0 U
1,2-Dibromoethane	NA	NA	5.3 U	5.4 U	6.0 U
1,2-Dichloroethane	NA	7,200 {IX}	5.3 U	5.4 U	6.0 U
1,2-Dichloropropane	NA	5,800 {IX}	5.3 U	5.4 U	6.0 U
2-Butanone	NA	44,000 {I}	10.7 U	10.7 U	12 U
2-Hexanone	NA	NA	10.7 U	10.7 U	12 U
4-Methyl-2-pentanone	NA	ID	10.7 U	10.7 U	12 U
Acetone	NA	34,000 {I}	18 U	12 U	12 U
Benzene	NA	4,000 {X}	1.9 J	1.1 J	6.0 U
Bromodichloromethane	NA	ID	5.3 U	5.4 U	6.0 U
Bromoform	NA	ID	5.3 U	5.4 U	6.0 U
Bromomethane	NA	700	5.3 U	5.4 U	6.0 U
Carbon disulfide	NA	ID	5.3 U	5.4 U	6.0 U
Carbon tetrachloride	NA	900 {X}	5.3 U	5.4 U	6.0 U
Chlorobenzene	NA	940 {I}	5.3 U	5.4 U	6.0 U
Chlorodibromomethane	NA	ID	5.3 U	5.4 U	6.0 U
Chloroethane	NA	ID	5.3 U	5.4 U	6.0 U
Chloroform	NA	3,400 {X}	5.3 U	5.4 U	6.0 U
Chloromethane	NA	ID	5.3 U	5.4 U	6.0 U
cis-1,2-Dichloroethene	NA	ID	5.3 U	5.4 U	6.0 U
cis-1,3-Dichloropropene	NA	NA	5.3 U	5.4 U	6.0 U
Dichlorodifluoromethane	NA	ID	5.3 U	5.4 U	6.0 U
Ethylbenzene	NA	360	0.98 J	5.4 U	6.0 U
Methyl tert-butyl ether	NA	15,000 {X}	5.3 U	5.4 U	6.0 U
Methylene chloride	NA	19,000 {X}	5.3 U	5.4 U	6.0 U
Styrene	NA	2,200	5.3 U	5.4 U	6.0 U
Tetrachloroethene	NA	900 {X}	2.2 J	5.4 U	6.0 U
Toluene	NA	2,800	9.2	3.8 J	2.3 J
trans-1,2-Dichloroethene	NA	ID	5.3 U	5.4 U	6.0 U
trans-1,3-Dichloropropene	NA	NA	5.3 U	5.4 U	6.0 U
Trichloroethene	NA	4,000 {X}	5.3 U	5.4 U	6.0 U
Trichlorofluoromethane	NA	NA	5.3 U	5.4 U	6.0 U
Vinyl chloride	NA	300	5.3 U	5.4 U	6.0 U
Xylenes, Total	NA	700	3.4 J	5.4 U	6.0 U
Semivolatile Organic Compounds					
1,2,4-Trichlorobenzene	NA	1,800	5.3 U	5.4 U	6.0 U
1,2-Dichlorobenzene	NA	360	5.3 U	5.4 U	6.0 U
1,3-Dichlorobenzene	NA	1,100	5.3 U	5.4 U	6.0 U
1,4-Dichlorobenzene	NA	290	5.3 U	5.4 U	6.0 U
2,4,5-Trichlorophenol	NA	NA	350 U	350 U	400 U
2,4,6-Trichlorophenol	NA	330 {M}	350 U	350 U	400 U
2,4-Dichlorophenol	NA	380	350 U	350 U	400 U
2,4-Dimethylphenol	NA	7,600	350 U	350 U	400 U
2,4-Dinitrophenol	NA	NA	890 U	890 U	1,000 U
2,4-Dinitrotoluene	NA	170,000	350 U	350 U	400 U
2,6-Dinitrotoluene	NA	NA	350 U	350 U	400 U
2-Chloronaphthalene	NA	NA	350 U	350 U	400 U
2-Chlorophenol	NA	440	350 U	350 U	400 U
2-Methylnaphthalene	NA	ID	160 J	140 J	470
2-Methylphenol	NA	1,400 {J}	350 U	350 U	400 U
2-Nitroaniline	NA	NA	350 U	350 U	800 U
2-Nitrophenol	NA	ID	350 U	350 U	400 U
3,3'-Dichlorobenzidine	NA	2,000 {M,X}	350 U	350 U	400 U
3-Nitroaniline	NA	NA	350 U	350 U	800 U
4,6-Dinitro-2-methylphenol	NA	NA	890 U	890 U	1,000 U
4-Bromophenyl phenyl ether	NA	NA	350 U	350 U	400 U
4-Chloro-3-methylphenol	NA	NA	350 U	350 U	400 U

See Generic Notes.

TABLE 2
SOIL ANALYTICAL RESULTS

REALM, INC.
PENINSULA PROPERTY
SAGINAW, MICHIGAN

Location Depth Range Date Sampled Sample Type	State Default Background Level (ug/Kg)	Generic MDEQ GSIP Criteria Values (ug/Kg)	MW01-118WT (0.0 - 2.0') 11/5/2001 FS	MW01-118WT (0.0 - 2.0') 11/5/2001 DUP	MW01-118WT (4.0 - 6.0') 11/5/2001 FS
4-Chloroaniline	NA	NA	350 U	350 U	400 U
4-Chlorophenyl phenyl ether	NA	NA	350 U	350 U	400 U
4-Methylphenol	NA	1,400 {J}	350 U	350 U	400 U
4-Nitroaniline	NA	NA	350 UJ	350 UJ	800 UJ
4-Nitrophenol	NA	NA	350 U	350 U	800 U
Acenaphthene	NA	4,400	350 U	350 U	400 U
Acenaphthylene	NA	ID	350 U	350 U	400 U
Acetophenone	NA	NA	350 U	350 U	400 U
Anthracene	NA	ID	350 U	350 U	400 U
Atrazine	NA	150 {X}	350 U	350 U	400 U
Benzo(a)anthracene	NA	NLL {Q}	350 U	350 U	400 U
Benzo(a)pyrene	NA	NLL {Q}	350 U	350 U	400 U
Benzo(b)fluoranthene	NA	NLL {Q}	350 U	350 U	400 U
Benzo(g,h,i)perylene	NA	NLL {Q}	350 U	350 U	400 U
Benzo(k)fluoranthene	NA	NLL {Q}	350 U	350 U	400 U
bis(2-Chloroethoxy)methane	NA	NA	350 U	350 U	400 U
bis(2-Chloroethyl)ether	NA	NA	350 U	350 U	400 U
bis(2-Chloroisopropyl) ether	NA	NA	350 U	350 U	400 U
bis(2-Ethylhexyl)phthalate	NA	NLL	350 U	350 U	400 U
Butyl benzyl phthalate	NA	26,000 {X}	350 U	350 U	400 U
Caprolactam	NA	NA	350 U	350 U	400 U
Carbazole	NA	1,100	350 U	350 U	400 U
Chrysene	NA	NLL {Q}	350 U	350 U	400 U
Di-n-butyl phthalate	NA	11,000	350 U	350 U	400 U
Di-n-octyl phthalate	NA	ID	350 U	350 U	400 U
Dibenz(a,h)anthracene	NA	NLL {Q}	350 U	350 U	400 U
Dibenzofuran	NA	1,700	350 U	350 U	400 U
Diethyl phthalate	NA	NA	350 U	350 U	400 U
Dimethyl phthalate	NA	NA	350 U	350 U	400 U
Fluoranthene	NA	5,500	78 J	350 U	400 U
Fluorene	NA	5,300	350 U	350 U	400 U
Hexachlorobenzene	NA	ID	350 U	350 U	400 U
Hexachlorobutadiene	NA	330 {M}	350 U	350 U	400 U
Hexachlorocyclopentadiene	NA	ID	350 U	350 U	800 U
Hexachloroethane	NA	1,800 {X}	350 U	350 U	400 U
Indeno(1,2,3-cd)pyrene	NA	NLL {Q}	350 U	350 U	400 U
Isophorone	NA	11,000 {X}	350 U	350 U	400 U
Isopropylbenzene	NA	ID	5.3 U	5.4 U	6.0 U
N-Nitroso-di-n-propylamine	NA	NA	350 U	350 U	400 U
N-Nitrosodiphenylamine	NA	NA	350 U	350 U	400 U
Naphthalene	NA	870	97 J	83 J	300 J
Nitrobenzene	NA	3,600 {L,X}	350 U	350 U	400 U
Pentachlorophenol	NA	{G,X}	350 U	350 U	400 U
Phenanthrene	NA	2,300	95 J	80 J	130 J
Phenol	NA	4,200	350 U	350 U	160 J
Pyrene	NA	ID	57 J	350 U	400 U
Polychlorinated Biphenyls					
Aroclor-1016	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1221	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1232	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1242	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1248	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1254	NA	NLL {J,T}	710 U	710 U	80 U
Aroclor-1260	NA	NLL {J,T}	4900 J	5,700	390
Inorganics					
Aluminum	6,900,000	NA	5,050,000 J	4,880,000 J	5,710,000 J
Antimony	NA	ID	1,500 BJ	1,200 BJ	690 BJ
Arsenic	5,800	70,000 {B,X}	6,700	5,900	3,700
Barium	75,000	{G,X}	38,000 J	37,600 J	40,300 J
Beryllium	NA	{G}	530 U	540 U	600 U
Cadmium	1,200	{B,G,X}	310 B	160 B	110 B
Calcium	NA	NA	14800000 J	13900000 J	18800000 J
Chromium	18,000	{G,X}	90,600	72,700	82,800

See Generic Notes.

TABLE 2
SOIL ANALYTICAL RESULTS

REALM, INC.
PENINSULA PROPERTY
SAGINAW, MICHIGAN

Location Depth Range Date Sampled Sample Type	State Default Background Level (ug/Kg)	Generic MDEQ GSIP Criteria Values (ug/Kg)	MW01-118WT (0.0 - 2.0') 11/5/2001 FS	MW01-118WT (0.0 - 2.0') 11/5/2001 DUP	MW01-118WT (4.0 - 6.0') 11/5/2001 FS
Cobalt	6,800	2,000	4,900 B	4,500 B	3,100 B
Copper	32,000	{G}	106000 J	170000 J	35700 J
Cyanide, Total	390	400 {P,R}	530 U	600	760
Iron	12,000,000	NA	59,600,000	52,900,000	35,900,000
Lead	21,000	{G,M,X}	22,400	26,300	8,800
Magnesium	NA	NA	641,000	611,000	795,000
Manganese	440,000	{B,G,X}	3,790,000 J	3,530,000 J	4,420,000 J
Mercury	130	100 {M}	14 B	16 B	120 U
Nickel	20,000	{G}	36,200	33,400	15,500
Potassium	NA	NA	432,000 B	423,000 B	479,000 B
Selenium	410	400 {B}	530 U	540 U	600 U
Silver	1,000	500 {B,M}	1,100 U	1,100 U	1,200 U
Sodium	NA	NA	75,900 B	103,000 B	306,000 B
Thallium	NA	4,200 {B,X}	1,100 U	1,100 U	1,200 U
Vanadium	NA	190,000	13,300	10,500	12,600
Zinc	47,000	{B,G}	28,100 L	31,900	16,000

See Generic Notes.

TABLE 3

VOC ANALYTICAL DATA FOR GROUNDWATER - 1997 THROUGH 2001

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria			Generic MDEQ Criteria Values (ug/L)		IND MW97-104W T		IND MW97-104S1		IND MW97-105WT		IND MW97-105S1					
Location ID	Sample Date	Sample Type	IDW	GSI	12/10/1997	FS	5/20/2000	FS	12/10/1997	FS	5/23/2000	FS	12/10/1997	FS	5/23/2000	FS
Volatile Organic Compounds (VOCs)																
1,1,1-Trichloroethane			200 (A)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane			35		1.0 U	2.5 U	100 U	100 DUJ	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane			330 (X)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane			170,000 (S)		NA	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane			2500		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.19 J	1.0 U
1,1-Dichloroethene			65 (I,X)		1.0 U	2.5 U	5.2	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane			0.20 (A)		--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromochloroethane			1 (M)		--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane			360 (I,X)		5.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene, Total			70 (A)		7.7	27	3,900	4,300 D	2.4	2.0	2.0	2.0 U	1.0 U	1.0 U	1.0 U	2.7
1,2-Dichloropropane			290 (I,X)		5.0 (A)	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Butanone			38,000 (I)		50 UJ	25 U	1,000 UJ	5,000 DU	50 U	50 U	50 U	50 U	50 U	50 U	10 UJ	50 UJ
2-Hexanone			2,900		50 UJ	25 U	1,000 UJ	5,000 DU	50 U	50 U	50 U	50 U	50 U	50 U	10 U	50 UJ
4-Methyl-2-pentanone			5,200 (I)		50 U	25 U	1,000 U	10,000 DU	100 UJ	100 UJ	100 U	100 U	100 U	100 U	12	100 UJ
Acetone			2,100 (I)		100 UJ	25 U	1,000 U	10,000 DU	100 UJ	100 UJ	100 U	100 U	100 U	100 U	12	100 UJ
Benzene			5.0 (A,I)		6.0	4.1	500 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromodichloromethane			100 (A,W)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoforn			100 (A,W)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane			35		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide			2,300 (I,R)		50 U	2.5 U	500 U	5,000 DU	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Carbon tetrachloride			5 (A)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene			100 (A,I)		34	7.8	200	210	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.071 J	1.0 U
Chlorodibromomethane			100 (A,W)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane			1,700		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform			100 (A,W)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.5 J
Chloromethane			1,100 (I)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene			70 (A)		--	26	--	--	--	--	--	--	--	--	0.64	--
cis-1,3-Dichloropropene			63		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane			4,800		--	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene			74 (E,I)		1.0 U	2.5 U	12.2	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl tert-butyl ether			40 (E)		--	--	--	--	--	--	--	--	--	--	--	--
Methylene chloride			5.0 (A)		5.0 U	2.5 U	500 U	1,400 DU	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Styrene			100 (A)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene			45 (X)		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene			790 (E,I)		1.0 U	2.5 U	7.9	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene			100 (A)		--	0.94 J	--	--	--	--	--	--	--	--	0.50 U	--
trans-1,3-Dichloropropene			63		1.0 U	2.5 U	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene			5.0 (A)		4.4	50	100 U	100 DU	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.40 J	1.0 U
Trichlorofluoromethane			200 (X)		--	--	--	--	--	--	--	--	--	--	--	--
Vinyl chloride			7,300		--	--	--	--	--	--	--	--	--	--	--	--
Total m,p-Xylene			2.0 (A)		8.9	2.5 U	3,400	1,700 D	2.0	2.1	2.0	1.0 U	1.0 U	1.0 U	1.0 U	1.8
Total o-Xylene			280 (E,I)		35 (I)	--	--	200 DUJ	--	--	--	2.0 UJ	2.0 UJ	--	--	--
Xylenes, Total			280 (E,I)		35 (I)	2.5 U	4.2	100 DU	3.0 U	3.0 U	3.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.0 U

See Generic Notes.

TABLE 3

VOC ANALYTICAL DATA FOR GROUNDWATER - 1997 THROUGH 2001

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria Location ID Sample Date Sample Type	Generic MDEQ Criteria Values (ug/L)	IND MW97-105S1		IND TW98-108WT		IND MW98-108S1		GSI TW98-109WT		GSI MW98-109S1	
		11/5/1998	5/23/2000	11/5/1998	5/21/2000	11/5/1998	5/21/2000	11/5/1998	5/22/2000	11/5/1998	5/22/2000
		FS	FS	FS	FS	FS	FS	FS	FS	FS	FS
Volatile Organic Compounds (VOCs)											
1,1,1-Trichloroethane	200 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,1,2,2-Tetrachloroethane	35	1.0 U	1.0 U	1.0 U	1.0 U	100 DUJ	25 U	1.0 UJ	5.0 UJ	100 UJ	170 U
1,1,2-Trichloroethane	5.0 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,1,2-Trichloro-1,2,2-trifluoroethane	170,000 (S)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	2500	1.0 U	1.0 U	1.0 U	0.11 J	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,1-Dichloroethene	7.0 (A,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,2-Dibromo-3-chloropropane	0.20 (A)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	1.0 (A,M)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5.0 (A,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,2-Dichloroethene, Total	70 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
1,2-Dichloropropane	5.0 (A,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
2-Butanone	38,000 (I)	10 U	10 U	10 U	10 U	5,000 DU	250 U	50 U	50 U	5,000 DU	1,700 U
2-Hexanone	2,900	10 U	10 U	10 U	10 U	5,000 DU	250 U	50 U	50 U	5,000 DU	1,700 U
4-Methyl-2-pentanone	5,200 (I)	10 U	10 U	10 U	10 U	5,000 DU	250 U	50 U	50 U	5,000 DU	1,700 U
Acetone	2,100 (I)	10 U	10 U	10 U	10 U	5,000 DU	250 U	50 U	50 U	5,000 DU	1,700 U
Benzene	5.0 (A,I)	1.0 U	1.0 U	1.0 U	0.77 JB	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Bromodichloromethane	100 (A,W)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Bromoforn	100 (A,W)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Bromomethane	29	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Carbon disulfide	5 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Carbon tetrachloride	100 (A,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Chlorobenzene	45 (X)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Chlorodibromomethane	47 (I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Chloroethane	1,700	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Chloroform	100 (A,W)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Chloromethane	1,100 (I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
cis-1,2-Dichloroethene	70 (A)	1.0 U	1.0 U	1.0 U	0.50 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
cis-1,3-Dichloropropene	63	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Dichlorodifluoromethane	4,800	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Ethylbenzene	74 (E,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Methyl tert-butyl ether	40 (E)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Methylene chloride	5.0 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Styrene	100 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Tetrachloroethene	45 (X)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Toluene	790 (E,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
trans-1,2-Dichloroethene	100 (A)	1.0 U	1.0 U	1.0 U	0.50 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
trans-1,3-Dichloropropene	63	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Trichloroethene	5.0 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Trichlorofluoromethane	7,300	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Vinyl chloride	2.0 (A)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Total m,p-Xylene	280 (E,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Total o-Xylene	280 (E,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U
Xylenes, Total	280 (E,I)	1.0 U	1.0 U	1.0 U	1.0 U	100 DU	25 U	1.0 U	5.0 U	100 U	170 U

See Generic Notes.

VOC ANALYTICAL DATA FOR GROUNDWATER - 1997 THROUGH 2001

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria Location ID Sample Date Sample Type		Generic MDEQ Criteria Values (ug/L)		IND TW98-110WT		IND MW98-110SL		IND TW98-111WT		IND MW98-111SL		GSI MW01-118WT	
		IDW	GSI	FS	FS	FS	FS	FS	FS	FS	FS	DUP	
Volatile Organic Compounds (VOCs)													
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2,2-Trichloro-1,2,2-trifluoroethane 1,1-Dichloroethane 1,1,2-Dichloroethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichloroethane 1,2-Dichloroethane, Total 1,2-Dichloropropane 2-Butanone 2-Hexanone 4-Methyl-2-pentanone Acetone Benzene Bromodichloromethane Bromoform Bromomethane Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorodibromomethane Chloroethane Chloroform Chloromethane cis-1,2-Dichloroethane cis-1,3-Dichloropropene Dichlorodifluoromethane Ethylbenzene Methyl tert-butyl ether Methylene chloride Styrene Tetrachloroethene Toluene trans-1,2-Dichloroethene trans-1,3-Dichloropropene Trichloroethene Trichlorofluoromethane Vinyl chloride Total m,p-Xylene Total o-Xylene Xylenes, Total	200 (A)	200	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	1.0 U	5.6 U	7.7 U	
	35	78 (X)	1.0 U	1.0 U	100 DUJ	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	5.0 (A)	330 (X)	1.0 U	1.0 U	100 DU	100 UJ	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	170,000 (S)	NA	--	--	--	--	--	--	--	--	5.6 U	7.7 U	
	2500	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	7.0 (A,I)	65 (I,X)	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	2.0 J	100 U	5.6 U	7.7 U	
	0.20 (A)	NA	--	--	--	--	--	--	--	--	11 U	15 U	
	1 (M)	1 (M)	--	--	--	--	--	--	--	--	5.6 U	7.7 U	
	360 (I,X)	ID	1.0 U	1.0 U	100 DU	3,700	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	70 (A)	290 (I,X)	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	5.0 (A,I)	2,200 (I)	50 U	0.90 J	5,000 DU	1,000 U	50 U	2.0 J	50 U	1,000 U	56 UJ	77 UJ	
	38,000 (I)	NA	50 U	10 U	5,000 DU	1,000 U	50 U	10 U	50 U	1,000 U	56 U	77 U	
	2,900	ID	50 U	10 U	5,000 DU	1,000 U	50 U	10 U	50 U	1,000 U	56 UJ	77 UJ	
	5,200 (I)	1,700 (I)	100 U	1.0 U	10,000 DU	1,000 U	100 U	10 U	100 U	1,000 U	56 UJ	77 UJ	
	2,100 (I)	200 (I,X)	5.0 U	1.4 B	500 DU	100 U	22	9.2	35 J	46 J	5.1 J	5.1 J	
	100 (A,W)	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	100 (A,W)	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	29	35	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	2,300 (I,R)	ID	50 U	1.0 U	5,000 DU	100 U	50 U	1.0 U	50 U	100 U	5.6 U	7.7 U	
	5 (A)	45 (X)	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	100 (A,I)	47 (I)	1.0 U	0.084 J	100 DU	100 U	1.0 U	5.0	2.3	370 EJ	350	180	
	100 (A,W)	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	1,700	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	100 (A,W)	170 (X)	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 UJ	7.7 UJ	
	1,100 (I)	ID	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U	
	70 (A)	ID	--	0.50 U	--	3,700	--	0.51	--	610	2.8 U	3.8 U	
63	NA	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	5.6 U	7.7 U		
4,800	ID	--	--	100 DU	100 U	--	--	--	--	5.6 UJ	7.7 UJ		
74 (E,I)	18 (I)	1.0 U	1.0 U	100 DU	100 U	27	13	13	1,500 EJ	1,700	1.3 J		
40 (E)	730 (X)	--	--	--	--	--	--	--	--	--	38 U		
5.0 (A)	940 (X)	7.0 U	1.0 U	500 DU	100 U	5.0 U	1.0 U	1.0 U	100 U	100 U	5.6 U		
100 (A)	80	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	100 U	5.6 U		
5.0 (A)	45 (X)	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	100 U	5.6 U		
790 (E,I)	140 (I)	1.0 U	1.0 U	100 DU	100 U	3.0	1.3 U	950	810 EJ	950	5.6 U		
100 (A)	ID	--	0.50 U	--	17 J	--	0.16 J	--	--	--	3.8 U		
63	NA	1.0 U	1.0 U	100 DU	100 U	1.0 U	1.0 U	1.0 U	100 U	100 U	5.6 U		
5.0 (A)	200 (X)	1.0 U	1.0 U	720 D	56 J	1.0 U	0.68 J	1.0 U	1.0 U	100 U	5.6 U		
7,300	NA	--	--	--	--	--	--	--	--	--	7.7 U		
2.0 (A)	15	1.0 U	1.0 U	1,200 D	500	3.0	1.1	2,700	4,900 EJ	2,700	5.6 U		
280 (E,I)	35 (I)	2.0 U	--	200 DUJ	--	80	--	--	4,200 EJ	--	--		
280 (E,I)	35 (I)	1.0 U	--	100 DU	--	33	--	--	2,000 EJ	--	--		
280 (E,I)	35 (I)	--	1.0 U	--	100 U	11	45	4,900	6200	4,900	5.6 U		

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TABLE 3

VOC ANALYTICAL DATA FOR GROUNDWATER - 1997 THROUGH 2001

REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria Location ID Sample Date Sample Type	Generic MDEQ Criteria Values (ug/L)		IND MW01-119		IND MW01-119S1		IND TW01-120		IND X-1A		IND X-1B		IND X-1CR2	
	IDW	GSI	11/7/2001 FS - grab (6-8)	11/7/2001 FS - grab (12-14)	11/7/2001 FS - grab (18-20)	11/7/2001 FS (6-8)	11/7/2001 DUP - grab (6-8)	11/8/2001 FS - grab (12-14)	11/8/2001 FS - grab (18-20)	11/8/2001 FS - grab (21-23)	6/20/2001 FS	6/20/2001 FS	11/26/2001 FS	11/26/2001 FS
Volatiles Organic Compounds (VOCs)														
1,1,1-Trichloroethane	200 (A)	200	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,1,2,2-Tetrachloroethane	35	78 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,1,2-Trichloroethane	5.0 (A)	330 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,1,2-Trichloro-1,2,2-trifluoroethane	170,000 (S)	NA	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,1-Dichloroethane	2500	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,1-Dichloroethene	7.0 (A,I)	65 (I,X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	0.18 J	1.0U	1.0U
1,2-Dibromo-3-chloropropane	0.20 (A)	NA	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,2-Dibromoethane	1.0 (A,M)	1 (M)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	2.0U
1,2-Dichloroethane	5.0 (A,I)	360 (I,X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
1,2-Dichloroethene, Total	70 (A)	ID	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	5.0 (A,I)	290 (I,X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
2-Butanone	38,000 (I)	2,200 (I)	2.0U	2.0U	2.0U	2.0U	2.0U	10U	4.0U	10U	2.0U	10U	10U	10U
2-Hexanone	2,900	NA	2.0U	2.0U	2.0U	2.0U	2.0U	10U	4.0U	10U	2.0U	10U	10U	10U
4-Methyl-2-pentanone	5,200 (I)	ID	2.0U	2.0U	2.0U	2.0U	2.0U	10U	4.0U	10U	2.0U	10U	10U	10U
Acetone	2,100 (I)	1,700 (I)	2.0U	2.1U	2.0U	2.0U	2.0U	10U	4.0U	10U	2.0U	11U	10U	10U
Benzene	5.0 (A,I)	200 (I,X)	0.35 J	1.0U	1.0U	0.19 J	0.23 J	5.0U	2.0U	5.0U	2.0U	9.3	1.0U	1.0U
Bromodichloromethane	100 (A,W)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Bromoforn	100 (A,W)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Bromomethane	29	35	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	15	1.0U	1.0U
Carbon disulfide	2,300 (I,R)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Carbon tetrachloride	5 (A)	45 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Chlorobenzene	100 (A,I)	47 (I)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Chlorodibromomethane	100 (A,W)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Chloroethane	1,700	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Chloroform	100 (A,W)	170 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Chloromethane	1,100 (I)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
cis-1,2-Dichloroethene	70 (A)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	0.33 J	1.0U	1.0U
cis-1,3-Dichloropropene	63	NA	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Dichlorodifluoromethane	4,800	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Ethylbenzene	74 (E,I)	18 (I)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Methyl tert-butyl ether	40 (E)	730 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Methylene chloride	5.0 (A)	940 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Styrene	100 (A)	80	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Tetrachloroethene	5.0 (A)	45 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Toluene	790 (E,I)	140 (I)	0.33 J	0.21 J	0.37 J	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
trans-1,2-Dichloroethene	100 (A)	ID	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
trans-1,3-Dichloropropene	63	NA	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Trichloroethene	5.0 (A)	200 (X)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Trichlorofluoromethane	7,300	NA	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Vinyl chloride	2.0 (A)	15	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.0U	1.0U	1.0U	1.0U
Total m,p-Xylene	280 (E,I)	35 (I)	--	--	--	--	--	--	--	--	--	--	--	--
Total o-Xylene	280 (E,I)	35 (I)	--	--	--	--	--	--	--	--	--	--	--	--
Xylenes, Total	280 (E,I)	35 (I)	1.0U	1.0U	1.0U	1.0U	1.0U	5.0U	2.0U	5.0U	2.3	0.63 J	1.0U	1.0U

See Generic Notes.

TABLE 4

SVOC ANALYTICAL DATA FOR GROUNDWATER
2000 and 2001REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria			IND		IND		GSI		GSI		IND		
Location ID	Generic MDEQ	Criteria Values (ug/L)	MW97-104WT	MW97-104SI	TW98-109WT	MW01-118WT		MW01-119					
Sample Date	Sample Type		5/20/2000 FS	5/20/2000 FS	5/22/2000 FS	11/26/2001 FS	11/26/2001 DUP	11/7/2001 FS - grab (6-8')	11/7/2001 FS - grab (12-14')	11/7/2001 FS - grab (18-20')			
			IDW	GSI									
Semivolatile Organic Compounds (SVOCs)													
1,2,4-Trichlorobenzene	70 {A}	30	--	--	--	5.6 U	7.7 U	1.0 U	1.0 U	1.0 U			
1,2-Dichlorobenzene	600 {A}	16	2.5 U	120 U	5.0 U	5.6 U	7.7 U	1.0 U	1.0 U	1.0 U			
1,3-Dichlorobenzene	19	38	--	--	--	5.6 U	7.7 U	1.0 U	1.0 U	1.0 U			
1,4-Dichlorobenzene	75 {A}	13	3.0 J	120 U	8.9 J	2.3 J	2.1 J	1.0 U	1.0 U	1.0 U			
2,2'-oxybis(dichloropropane)	NA	NA	--	--	--	--	--	--	--	--			
2,4,5-Trichlorophenol	2,100	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
2,4,6-Trichlorophenol	470	4.4	--	--	--	10 U	10 U	10 U	10 U	10 U			
2,4-Dichlorophenol	210	19	--	--	--	10 U	10 U	10 U	10 U	10 U			
2,4-Dimethylphenol	1,000	380	--	--	--	10 U	10 U	10 U	10 U	10 U			
2,4-Dinitrotoluene	32	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
2,6-Dinitrotoluene	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Chloronaphthalene	5,200	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Chlorophenol	130	22	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Methylnaphthalene	750	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Methylphenol	1,000 {J}	71 {J}	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Nitroaniline	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
2-Nitrophenol	58	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
3,3'-Dichlorobenzidine	4.3	0.3 {M,X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
3-Nitroaniline	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
4,6-Dinitro-2-methylphenol	20 {M}	NA	--	--	--	25 U	25 U	25 U	25 U	25 U			
4-Bromophenyl phenyl ether	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
4-Chloro-3-methylphenol	420	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
4-Chloroaniline	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
4-Chlorophenyl phenyl ether	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
4-Methylphenol	1,000 {J}	71 {J}	--	--	--	10 U	10 U	10 U	10 U	10 U			
4-Nitroaniline	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Acenaphthene	3,800	19	--	--	--	10 U	10 U	10 U	10 U	10 U			
Acenaphthylene	150	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
Acetophenone	4,400	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Anthracene	43 {S}	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
Atrazine	3.0 {A}	7.3 {X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Benzo(a)anthracene	8.5 {Q}	NA {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Benzo(a)pyrene	5.0 {A,M,Q}	ID {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Benzo(b)fluoranthene	2.0 {M,Q}	ID {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Benzo(g,h,i)perylene	5.0 {M}	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Benzo(k)fluoranthene	5.0 {M,Q}	NA {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
bis(2-Chloroethoxy)methane	NA	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
bis(2-Chloroethyl)ether	8.3 {I}	NA {I}	--	--	--	10 U	10 U	10 U	10 U	10 U			
bis(2-Chloroisopropyl) ether	NA	NA	--	--	--	3.3 J	3.9 J	10 U	10 U	10 U			
bis(2-Ethylhexyl)phthalate	6.0 {A}	32	--	--	--	10 U	10 U	10 U	10 U	10 U			
Butyl benzyl phthalate	2,700 {S}	14 {X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Caprolactam	17,000	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Carbazole	350	10 {M}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Chrysene	5.0 {M,Q}	ID {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Di-n-butyl phthalate	2,500	9.7	--	--	--	10 U	10 U	10 U	10 U	10 U			
Di-n-octyl phthalate	380	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
Dibenz(a,h)anthracene	5.0 {M,Q}	ID {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Dibenzofuran	ID	4	--	--	--	10 U	10 U	10 U	10 U	10 U			
Diethyl phthalate	16,000	NA	--	--	--	10 U	10 U	3.4 J	1.3 J	1.1 J			
Dimethyl phthalate	210,000	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Fluoranthene	210 {S}	1.6	--	--	--	10 U	10 U	10 U	10 U	10 U			
Fluorene	2,000 {S}	12	--	--	--	10 U	10 U	10 U	10 U	10 U			
Hexachlorobenzene	1.0 {A}	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
Hexachlorobutadiene	42	0.053	--	--	--	10 U	10 U	10 U	10 U	10 U			
Hexachlorocyclopentadiene	50 {A}	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			
Hexachloroethane	21	6.7 {X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Indeno(1,2,3-cd)pyrene	5.0 {M,Q}	ID {Q}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Isophorone	3,100	570 {X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Isopropylbenzene	2,300	ID	--	--	--	0.76 J	7.7 U	1.0 U	1.0 U	1.0 U			
N-Nitroso-di-n-propylamine	5.0 {M}	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
N-Nitrosodiphenylamine	1,100	NA	--	--	--	10 U	10 U	10 U	10 U	10 U			
Naphthalene	1,500	13	2.5 UJ	120 UJ	0.82 J	1.3 J	1.6 J	10 U	10 U	10 U			
Nitrobenzene	9.6 {I}	180 {I,X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Pentachlorophenol	1.0 {A}	2.8 {G,X}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Phenanthrene	150	5 {M}	--	--	--	10 U	10 U	10 U	10 U	10 U			
Phenol	13,000	210	--	--	--	10 U	10 U	10 U	10 U	10 U			
Pyrene	140 {S}	ID	--	--	--	10 U	10 U	10 U	10 U	10 U			

See Generic Notes.

TABLE 4

SVOC ANALYTICAL DATA FOR GROUNDWATER
2000 and 2001REALM, INC.
PENINSULA AREA PROPERTY
SAGINAW, MICHIGAN

Comparison Criteria			IND		IND					IND	IND	IND
Location ID	Generic MDEQ		MW01-119S1	TW01-120						X-1A	X-1B	X-1CR2
Sample Date	Criteria Values		11/28/2001	11/7/2001	11/7/2001	11/8/2001	11/8/2001	11/8/2001	11/27/2001	11/27/2001	11/26/2001	
Sample Type	(ug/L)		FS	FS - grab	DUP - grab	FS - grab	FS - grab	FS - grab	FS	FS	FS	
	IDW	GSI		(6-8')	(6-8')	(12-14')	(18-20')	(21-23')				
Semivolatile Organic Compounds (SVOCs)												
1,2,4-Trichlorobenzene	70 {A}	30	1.0 U	10 U	1.0 U	5.0 U	2.0 U	5.0 U	--	--	1.0 U	
1,2-Dichlorobenzene	600 {A}	16	1.0 U	1.0 U	1.0 U	5.0 U	2.0 U	5.0 U	--	--	1.0 U	
1,3-Dichlorobenzene	19	38	1.0 U	1.0 U	1.0 U	5.0 U	2.0 U	5.0 U	--	--	0.15 J	
1,4-Dichlorobenzene	75 {A}	13	1.0 U	10 U	1.0 U	5.0 U	2.0 U	5.0 U	--	--	1.0 U	
2,2'-oxybis(dichloropropane)	NA	NA	--	--	--	--	--	--	10 U	10 U	10 U	
2,4,5-Trichlorophenol	2,100	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4,6-Trichlorophenol	470	4.4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4-Dichlorophenol	210	19	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4-Dimethylphenol	1,000	380	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,4-Dinitrotoluene	32	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2,6-Dinitrotoluene	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Chloronaphthalene	5,200	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Chlorophenol	130	22	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Methylnaphthalene	750	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Methylphenol	1,000 {J}	71 {J}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Nitroaniline	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
2-Nitrophenol	58	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
3,3'-Dichlorobenzidine	4.3	0.3 {M,X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
3-Nitroaniline	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4,6-Dinitro-2-methylphenol	20 {M}	NA	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	
4-Bromophenyl phenyl ether	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Chloro-3-methylphenol	420	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Chloroaniline	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Chlorophenyl phenyl ether	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Methylphenol	1,000 {J}	71 {J}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
4-Nitroaniline	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Acenaphthene	3,800	19	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Acenaphthylene	150	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Acetophenone	4,400	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Anthracene	43 {S}	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Atrazine	3.0 {A}	7.3 {X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Benzo(a)anthracene	8.5 {Q}	NA {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Benzo(a)pyrene	5.0 {A,M,Q}	ID {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Benzo(b)fluoranthene	2.0 {M,Q}	ID {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Benzo(g,h,i)perylene	5.0 {M}	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Benzo(k)fluoranthene	5.0 {M,Q}	NA {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
bis(2-Chloroethoxy)methane	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
bis(2-Chloroethyl)ether	8.3 {I}	NA {I}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
bis(2-Chloroisopropyl) ether	NA	NA	10 U	10 U	10 U	10 U	10 U	10 U	--	--	--	
bis(2-Ethylhexyl)phthalate	6.0 {A}	32	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	4.5 J	
Butyl benzyl phthalate	2,700 {S}	14 {X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Caprolactam	17,000	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Carbazole	350	10 {M}	10 U	10 U	10 U	10 U	10 U	10 U	2.7 J	10 U	10 U	
Chrysene	5.0 {M,Q}	ID {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Di-n-butyl phthalate	2,500	9.7	10 U	10 U	10 U	10 U	10 U	1.8 J	10 U	10 U	10 U	
Di-n-octyl phthalate	380	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Dibenz(a,h)anthracene	5.0 {M,Q}	ID {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Dibenzofuran	ID	4	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Diethyl phthalate	16,000	NA	10 U	10 U	10 U	1.5 J	10 U	10 U	10 U	10 U	10 U	
Dimethyl phthalate	210,000	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Fluoranthene	210 {S}	1.6	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Fluorene	2,000 {S}	12	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Hexachlorobenzene	1.0 {A}	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Hexachlorobutadiene	42	0.053	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Hexachlorocyclopentadiene	50 {A}	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Hexachloroethane	21	6.7 {X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Indeno(1,2,3-cd)pyrene	5.0 {M,Q}	ID {Q}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Isophorone	3,100	570 {X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Isopropylbenzene	2,300	ID	1.0 U	1.0 U	1.0 U	5.0 U	2.0 U	5.0 U	--	--	1.0 U	
N-Nitroso-di-n-propylamine	5.0 {M}	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
N-Nitrosodiphenylamine	1,100	NA	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Naphthalene	1,500	13	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Nitrobenzene	9.6 {I}	180 {I,X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Pentachlorophenol	1.0 {A}	2.8 {G,X}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Phenanthrene	150	5 {M}	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Phenol	13,000	210	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	
Pyrene	140 {S}	ID	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	

See Generic Notes.

GENERIC NOTES

REALM, INC. PENINSULA AREA PROPERTY SAGINAW, MICHIGAN

General Notes:

All concentrations in micrograms per liter ($\mu\text{g/L}$) or micrograms per kilogram ($\mu\text{g/kg}$); equivalent to parts per billion (ppb), unless otherwise noted. Detections are shown in bold, and concentrations above the relevant criteria are shaded.

-- = Sample was not analyzed for the listed constituent.

REALM, INC. = Remediation and Liability Management Company, Inc.

Generic MDEQ Criteria Values, updated June 2000:

IDW = Industrial Drinking Water criteria.

Comparison Criteria:

IND = Site Interior Wells.

Location ID:

MW = Permanent monitoring wells (Note: 97 indicates the well was installed in 1997, 98 indicates the well was installed in 1998).

TW = Temporary monitoring wells (Note: 97 indicates the well was installed in 1997, 98 indicates the well was installed in 1998).

WT = Water table monitoring wells.

S1 = Well screened at base of sand unit.

SW = Surface water sampling location.

SD = Sediment sampling location.

Sample Type:

FS = Primary field sample.

DUP = Duplicate field sample.

Data Qualifiers:

SVOCs¹ = Samples collected during the May 2000 sampling event had select SVOC compounds analyzed under the VOC scan (8260).

B = (Organic) The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

(Inorganic) The analyte has been positively identified. The concentration is between the instrument detection limit and the required reporting limit.

D = Concentration is based on a diluted sample analysis.

E = The compound was quantitated above the calibration range.

J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.

M = Matrix interference.

ND = Not detected.

U = The compound/constituent was analyzed for but not detected. The associated value is the compound/constituent quantitation limit.

UJ = The compound/constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

< = The compound/constituent was not detected at or above the associated value.

MDEQ Criteria Qualifiers:

ID = *Inadequate data* to develop criterion.

IP = Development of generic GSI value *in process*. This notation is used for those hazardous substances on the Rule 57 Water Quality Values table where the NLS (no literature search) notation is indicated for one or more of the endpoints required for development of a generic GSI. Additional work needed to address these endpoints may either be underway, or not yet initiated by the Surface Water Quality Division.

NA = Criterion or value is *not available* or, as is the case for Csat, *not applicable*.

{A} = Criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act, Act No. 399 of the Public Acts of 1976.

{B} = Background, as defined in Rule 299.5701(c), may be substituted if higher than the calculated cleanup criteria. Background levels may not exceed criteria for all inorganic compounds.

{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. Concentrations greater than Csat are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase contaminant is not present. Consult the Generic Soil Saturation Concentrations: Technical Support Document (August 31, 1998) for further guidance on development of site-specific Csat values. Risk-based criteria are available by contacting an ERD toxicologist.

{D} = Calculated criterion exceeds 100%, hence it is reduced to 100% (i.e., 1.0E+9 ppb). Evaluation of free phase contaminant, environmental impacts, adverse aesthetics and acute or local toxicity is required.

GENERIC NOTES

REALM, INC. PENINSULA AREA PROPERTY SAGINAW, MICHIGAN

MDEQ Criteria Qualifiers (Cont'd.):

{E} = Criterion is the aesthetic drinking water value, as required by Sec. 20120(1)(5). A Notice of Aesthetic Impact may be employed as an institutional control mechanism where groundwater concentrations exceed the aesthetic DWC, but do not exceed the applicable health-based DWC. Health-based DWC are provided in the table below.

Hazardous Substance	CAS #	Residential Health-Based DWC	Industrial-Commercial Health-Based DWC
Aluminum	7429905	300	4,100
Chloride	16887006	ID	ID
Copper	7440508	1,400	4,000
Diethyl ether	60297	3,700	10,000
Ethylbenzene	100414	700	700
Iron	7439896	2,000	5,600
Manganese	7439965	860	2,500
Methyl-tert-butyl ether (MTBE)	1634044	240	690
Sulfate	14808798	ID	ID
Toluene	108883	1,000	1,000
1,2,4-Trimethylbenzene	95636	1,000	2,900
1,3,5-Trimethylbenzene	108678	1,000	2,900
Xylenes	1330207	10,000	10,000

{G} = GSI criterion is pH or water hardness dependent. The Final Chronic Value (FCV) for the protection of aquatic life must be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO₃/L, use 400 mg CaCO₃/L for the FCV calculation. The FCV formula provides values in units of ug/L (ppb). The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV) and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 X GSI and the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	FCV Formula ug/L	FCV Conversion Factor (CF)	WV ug/L	HNDV ug/L
Barium ^x	EXP(1.0629*(LnH)+1.1869)	NA	NA	1.6E+5
Beryllium	EXP(2.5279*(LnH)-10.7689)	NA	NA	1,200
Cadmium ^x	(EXP(0.7852*(LnH)-2.715))*CF	1.101672-((LnH)*0.04184)	NA	130
Chromium (III) ^x	(EXP(0.819*(LnH)+0.6848))*CF	0.86	NA	9,400
Copper	(EXP(0.8545*(LnH)-1.702))*CF	0.96	NA	64,000
Lead ^x	(EXP(1.273*(LnH)-3.296))*CF	1.46203-((LnH)*0.14571)	NA	190
Manganese	EXP(0.8784*(LnH)+2.226)	NA	NA	59,000
Nickel	(EXP(0.846*(LnH)+0.0584))*CF	0.997	NA	2.1E+5
Pentachlorophenol ^x	EXP(1.005*(pH)-5.134)	NA	NA	2.8
Zinc	(EXP(0.8473*(LnH)+0.884))*CF	0.986	NA	22,000

Where,

EXP(x) = The base of the natural logarithm raised to power x (e^x).

LnH = The natural logarithm of water hardness in mg CaCO₃/L.

SS = Total suspended solids in mg/L.

* = The multiplication symbol.

^x = The GSI criterion developed here may not be protective for surface water that is used as a drinking water source. Refer to footnote {X} for further guidance.

{H} = Valence-specific chromium data (Cr III and Cr VI) must be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the DWC of 100 ug/l. If analytical data are provided for "total" chromium only, then values for Cr VI must be applied as the cleanup criteria. Cr III cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future.

{I} = Hazardous substance may exhibit the characteristic of ignitability as defined in 40 CFR 261.21.

{J} = Hazardous substance may be present in several isomer forms. Isomer-specific concentrations must be added together for comparison to criteria.

{L} = Reserved

GENERIC NOTES

REALM, INC. PENINSULA AREA PROPERTY SAGINAW, MICHIGAN

MDEQ Criteria Qualifiers (Cont'd.):

- {M} = Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
- {Q} = Criteria for carcinogenic polycyclic aromatic hydrocarbons (PAHs) were developed using "relative potential potencies" (RPPs) to benzo(a)pyrene.
- {R} = Hazardous substance may exhibit the characteristic of reactivity as defined in 40 CFR 261.23.
- {T} = Refer to the Toxic Substances Control Act (TSCA), 40 CFR 761, Subparts D and G, as amended, to determine the applicability of TSCA cleanup standards. Alternatives to compliance with the standards listed below are possible under Subpart D. New releases may be subject to the standards identified in Subpart G. Use Part 201 soil direct contact criteria in the table below where TSCA standards are not applicable.

Land Use Category	TSCA, Subpart D	Part 201
Residential & Commercial I	1,000 ppb, or 10,000 ppb if capped	4,000 ppb
Industrial & Commercial II	1,000 ppb, or 10,000 ppb if capped	20,000 ppb
Commercial III	1,000 ppb, or 10,000 ppb if capped	62,000 ppb
Commercial IV	1,000 ppb, or 10,000 ppb if capped	32,000 ppb

- {W} = Concentrations of trihalomethanes in groundwater must be added together to determine compliance with the State of Michigan Drinking Water Standard of 100 ug/L. Concentrations of trihalomethanes in soil must be added together to determine compliance with the DWPC of 2,000 ug/kg.
- {X} = The GSI criterion shown is not protective for surface water that is used as a drinking water source. For groundwater discharges to the Great Lakes and their connecting waters or discharges in close proximity to water supply intake(s) in inland surface waters, the generic GSI criterion is the Surface Water Human Drinking Water Value (HDV) listed in the table below except for those HDV indicted with an asterisk. For HDV with an asterisk, the generic GSI criterion is the lesser of the HDV, the WV and the calculated FCV (see formulas in footnote {G}). Soil protection criteria based on the HDV are listed below except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk are the greater of the 20 X GSI and GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria for HDV (ug/Kg)
Acrylonitrile	107131	0.87	17
Alachlor	15972608	3.5	70
Arsenic	7440382	50	16,000
Atrazine	1912249	4.3	86
Barium	7440393	1,900*	*
Benzene	71432	12	240
Butyl benzyl phthalate	85687	6.9	1,300
Cadmium	7440439	2.5*	*
Carbon tetrachloride	56235	5.6	110
Chloride	16887006	50,000	1.0E+6
Chloroform	67663	77	1,500
Chromium (III)	16065831	120*	*
Cyanazine	21725462	10 {M}	200
3,3'-Dichlorobenzidine	91941	0.3 {M}	500
1,2-Dichloroethane	107062	6	120
1,1-Dichloroethylene	75354	24	480
1,2-Dichloropropane	78875	9.1	180
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Ethylene glycol	107211	56,000	1.1E+6
Hexachloroethane	67721	5.3	1,500
Isophorone	78591	310	6,200
Lead	7439921	14*	*
Methyl-tert-butyl ether (MTBE)	1634044	120	2,400
Methylene chloride	75092	47	940
Molybdenum	7439987	120	2,400

GENERIC NOTES

REALM, INC. PENINSULA AREA PROPERTY SAGINAW, MICHIGAN

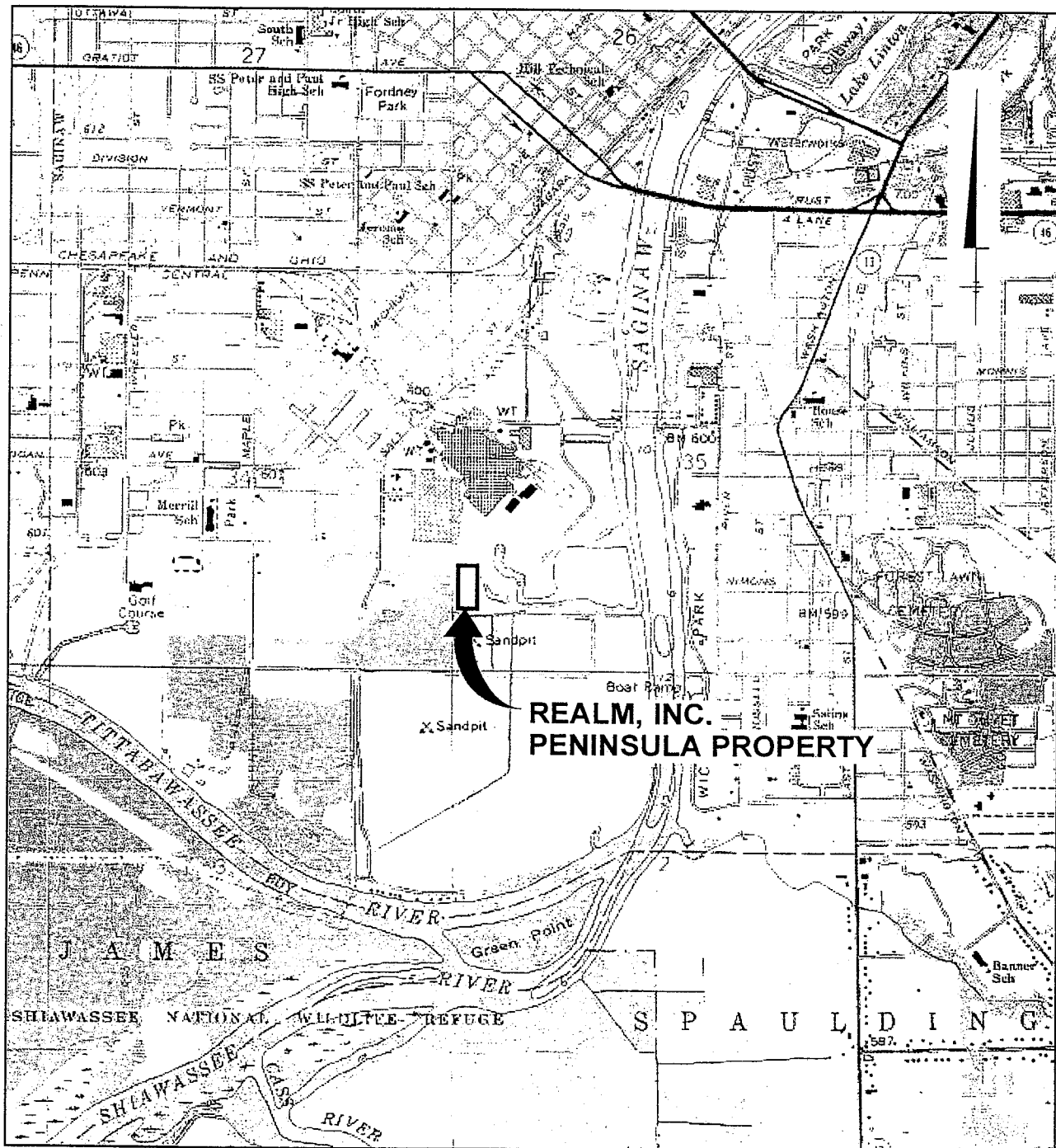
Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria for HDV (ug/Kg)
Nitrobenzene	98953	4.7	94
Pentachlorophenol	87865	1.8*	*
1,2,4,5-Tetrachlorobenzene	95943	2.8	3,300
1,1,2,2-Tetrachloroethane	79345	3.2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	1.2	910
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580

{AD} = Hazardous substance causes developmental effects. Residential and Commercial I DCC are protective of both prenatal and postnatal exposure. Industrial and Commercial II, III and IV DCC are protective for an adult pregnant receptor.

{Z} = The current TDL for mercury is 0.2 ppb; however, a TDL of 5.0E-4 using USEPA Method 1631, will be required after September 30, 2000.

{ }* = Site-specific background value has been used as the constituent criteria value.

Figures



NOTES:

1. Base map source: USGS 7.5 Min. Topo. Quad., Saginaw, Mich. (1967, Photorevised 1973).
2. Locations of Green Point Landfill and Drum Remediation Area are approximate.
3. All property boundary lines are approximate.

2,000 0 2,000
 APPROX. SCALE 1" = 2,000 Feet



Area Enlargement

REALM, INC. PENINSULA PROPERTY
 SAGINAW, MICHIGAN

SITE LOCATION MAP

BBL
 BLASLAND, BOUCK & LEE, INC.
 engineers & scientists

FIGURE
 1



LEGEND

PROPERTY BOUNDARY

FENCE LINE

GM SMI PLANT PROPERTY
BL AND OTHER COMPLETIONS

○ MW-142 WATER TABLE
MONITORING WELL

⊕ X-1A,B,C MONITORING WELL
CLUSTER

● SB-335 SOIL BORING

DELPHI PLANT 2
AND PENINSULA PROPERTY
BL AND OTHER COMPLETIONS

○ MW-142 MONITORING WELL

○ TW-109WT TEMPORARY WELL

▲ SB97-112 SOIL BORING

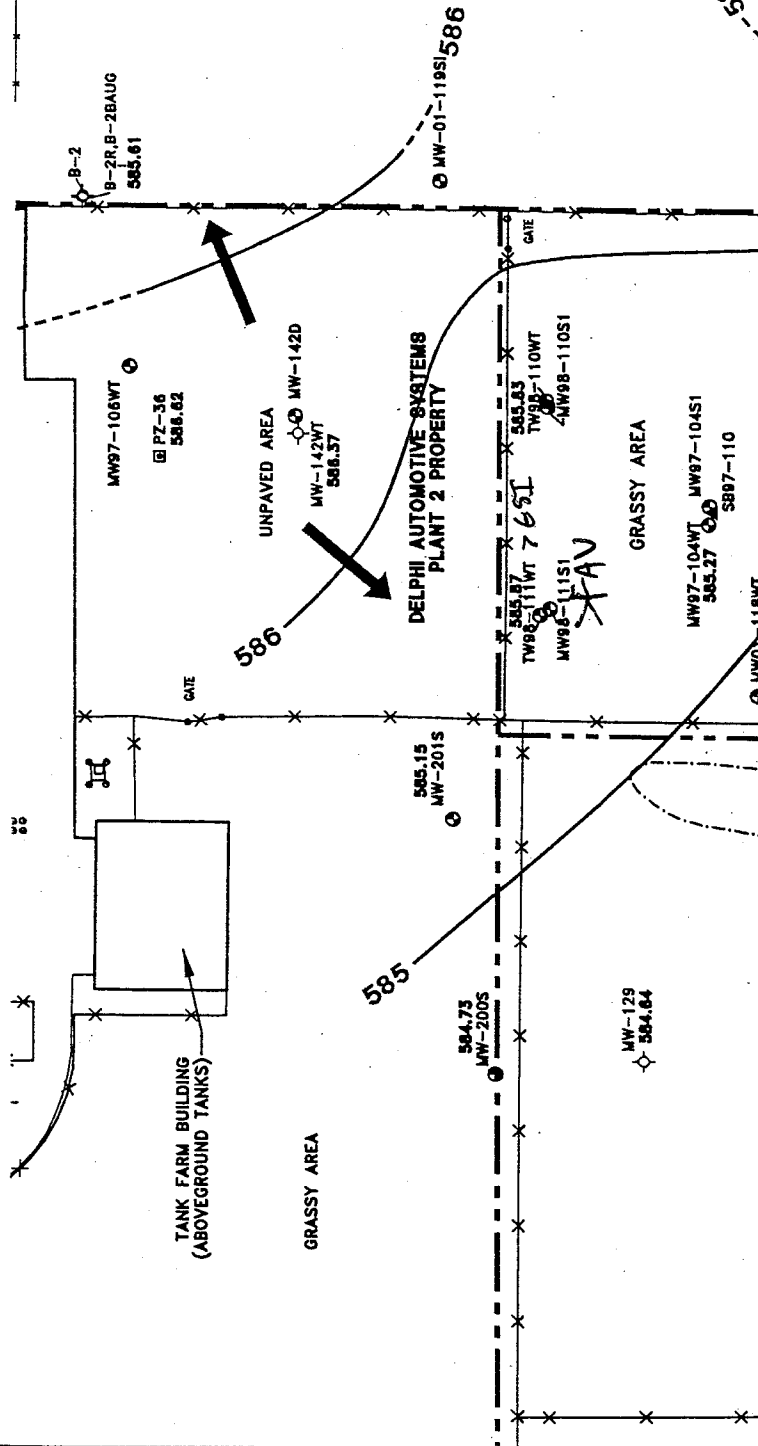
⊗ PZ-36 PIEZOMETER

○ GRAB GROUNDWATER
SAMPLING LOCATION

587.51 WATER TABLE
ELEVATION (FEET, AMSL)

586 WATER TABLE ELEVATION
CONTOUR (FEET, AMSL)

GENERALIZED GROUNDWATER
FLOW DIRECTION





FS/can drink

