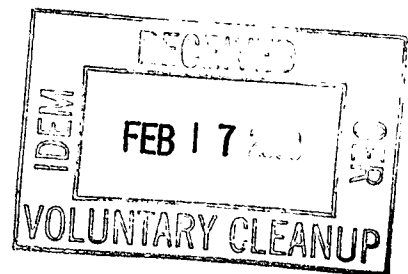


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SEMI-ANNUAL GROUNDWATER MONITORING REPORT

HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA



PREPARED BY:

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PROJECT NUMBER 45181 (9822-02)

FEBRUARY 2000

**SEMI-ANNUAL
GROUNDWATER MONITORING REPORT**

**HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA**

PREPARED FOR:

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717 N. BENDIX DRIVE
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1. INTRODUCTION

Honeywell International Inc. (Honeywell) has retained Harding Lawson Associates (HLA) to assist with the quarterly groundwater monitoring program at the Honeywell Industrial Complex, 717 N. Bendix Drive, South Bend, Indiana (Figure 1). This report presents the results of the 2nd and 3rd Quarter 1999 groundwater sampling events conducted by HLA.

1.1 BACKGROUND

Environmental assessment activities at the Honeywell facility date back to the 1970s. Investigations have indicated that two groundwater contaminant plumes exist beneath the facility. The two plumes are labeled as a naphtha plume in the area of Plant 6/16 and a dissolved volatile organic compound (VOC) plume in the area of Plant 1.

In 1978, a free-phase plume of naphtha and Stoddard solvent was discovered on the water table beneath the Plant 6/16 area (in the central portion of the facility). A naphtha recovery well system (consisting of a depression well, product recovery well, and above-ground storage tank) was first installed at the Complex in 1978 for removal of naphtha free product from the top of the water table (well E3 on Figure 2). Four additional recovery well systems were installed in 1982. Two of the five naphtha recovery well systems have been deactivated because free product is no longer present. The amount of product currently being recovered by these three operating wells is negligible, but operation of the system is beneficial because it maintains an inward gradient of groundwater flow at the site. An additional naphtha recovery well system (RWB-23) was installed and placed on line in January 1999 to enhance containment of groundwater on-site and to recover a localized area of free product.

In 1988, a VOC recovery well system was installed on the north side of Plant 1 and Plant 9 just south of Bendix Drive and Bertrand Street. The recovery well system included 20 shallow and 1 deep VOC recovery wells, and was installed to inhibit off-site migration of impacted groundwater from the Plant 1/9 area.

Beginning in December 1993, certain shallow wells were taken off-line due to low yield of groundwater. The deep VOC recovery well was taken off-line due to the presence of gravel pack material in the well. In 1997, Honeywell modified the well configuration to provide a system that more effectively captures groundwater migrating from the Plant 1/9 area. Three additional extraction wells (EW-1, EW-2 and EW-3) were installed and the existing system was abandoned (see Figure 2). Select existing recovery wells (RW-3, RW-4, RW-7, RW-14, RW-16, and RW-17) were retained as groundwater level measurement locations.



A network of monitoring wells has also been installed at the facility to monitor the effectiveness of the recovery systems and the movement and quality of groundwater. In addition to the three VOC and four currently active naphtha recovery wells, the current monitoring network consists of 59 shallow wells, 4 intermediate wells screened in the deep portion of the shallow aquifer, and 12 deep groundwater monitoring wells screened a deeper aquifer system. Monitoring well locations are shown on Figure 2.

1.2 QUARTERLY MONITORING PROGRAM

Groundwater monitoring requirements are set forth in Discharge Permit SB004:4 issued by the Department of Public Works, City of South Bend, Indiana. Under the permit, Honeywell must report the analytical results of VOCs, total lead, total nickel, total chromium, total phenols and total cyanide for groundwater samples collected from all wells discharging into city sewers. The three VOC recovery wells (EW-1, EW-2, and EW-3) and the four naphtha recovery wells (E3, RWB16, RWB22, and RWB23) are included under the discharge permit.

The monitoring program at the facility is summarized as follows:

- Water levels are measured in all wells on a quarterly basis to demonstrate the effectiveness of the naphtha and VOC recovery systems;
- Recovery wells are sampled on a quarterly basis to comply with the permit requirements. Discharge water is sampled quarterly for VOCs, and semi-annually for total lead, total chromium, total nickel, total phenols and total cyanide;
- Groundwater samples are collected from 33 monitoring wells semi-annually for VOCs, and annually for dissolved lead, dissolved chromium, dissolved nickel, total phenols and total cyanide.

Quality control (QC) samples are also collected during each sampling event. Duplicate samples are collected at a frequency of 10 percent. Duplicates are analyzed for the same parameters as the respective primary samples to assess the homogeneity of sampled media and the precision of the sampling and analytical protocols. Trip blank samples for VOC analysis are collected at a frequency of one per cooler of VOC samples. Analysis of trip blanks is used to confirm that sample contamination has not occurred during shipment. Equipment blanks are collected during the sampling program when non-dedicated sampling devices are used. Equipment blank results are used to assess whether cross-contamination has occurred between sampling locations due to the sampling device.



2. SAMPLE METHODOLOGY

Procedures for measuring water levels and collecting groundwater samples are described in this section.

2.1 WATER LEVEL MEASUREMENTS

The 3rd Quarter water level measurements were collected in September. The measurements are listed on Table 1. During this event, water levels were not measured at wells 86-6, 86-19, S5, S24, 7-50 and RWB21. These wells either could not be located or were temporarily inaccessible. The 4th Quarter groundwater measurements were collected in December. These measurements are listed on Table 2. During this sampling event, well 86-6 was damaged, and MW-10 monitoring was covered with construction material. Water levels were not measured at these two locations. During both events, the three VOC and four naphtha recovery wells were fully operational.

After opening the well and allowing the water level to equilibrate, the depth to groundwater was measured at each location to the nearest 0.01 foot using an electronic water level indicator. After each measurement, the water level indicator was washed with a solution of LiquiNox and distilled water and rinsed with distilled water. Water level measurements were referenced to the top of the well casing. Groundwater elevations were calculated by subtracting the depth-to-groundwater at each well from the top-of-well casing elevation.

2.2 GROUNDWATER SAMPLING

During the September 1999 (3rd Quarter) sampling event, groundwater discharge samples were collected from the naphtha and VOC recovery wells indicated on Table 1. During the December 1999 (4th Quarter) sampling event, groundwater samples were collected from the 40 locations indicated on Table 2. Sampling locations in December (4th Quarter) event included 31 monitoring wells on and adjacent to the site, the 4 active naphtha recovery wells and the 3 VOC recovery wells.

Monitoring wells were purged of stagnant groundwater prior to sample collection. During purging, the pH, specific conductivity and temperature of the groundwater was measured in the field with a Horiba U10 Water Checker. Groundwater was purged from the monitoring wells until a minimum of three well volumes was evacuated and the pH, specific conductivity, and temperature were stabilized (within 10 percent between the final two readings). Once purging was completed, a groundwater sample was collected. Monitoring wells were purged and sampled with either dedicated bladder pumps, dedicated PVC bailers, disposable bailers, or a stainless-steel bailer. Non-dedicated equipment (i.e., the stainless-

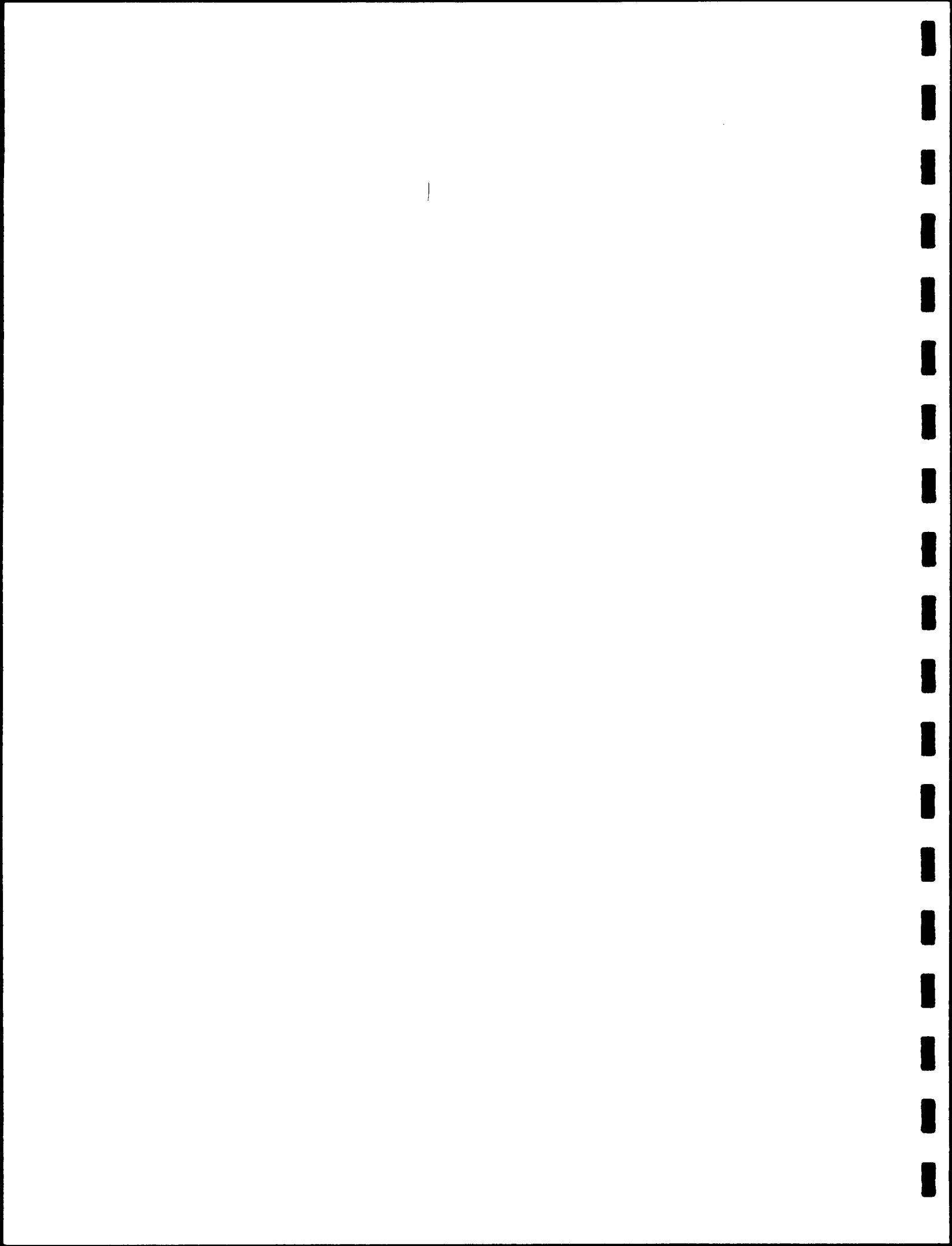


steel bailer) was washed with a solution of LiquiNox and distilled water and rinsed with distilled water before each use.

VOC and naphtha recovery wells were purged and sampled through existing spigots on discharge lines. In general, approximately 5 gallons of water were drained through spigots of each well prior to sampling.

In accordance with QC procedures, duplicate samples were collected at a frequency of 10 percent. Duplicate samples were collected from shallow monitoring well MW-11, naphtha recovery well RWB23 and deep monitoring wells D5 and D5. The laboratory-prepared trip blank included with each cooler containing samples for VOC analysis were also analyzed for VOCs. A total of two trip blanks were analyzed during this program. An equipment rinsate blank was collected from the stainless-steel bailer. This sample was collected prior to sampling by pouring distilled water into the bailer and then transferring the distilled water to the appropriate sample containers.

Samples were placed in insulated coolers with sealed bags of ice and picked up by TriMatrix Laboratories, Inc. of Grand Rapids, Michigan. Chain-of-Custody (COC) documentation accompanied each set of samples and included the following information: date and time of sample collection, sample name, analysis method, and sampler's signature. Details of daily activities (including times, dates and methods of sample collection) were recorded in a site-specific field notebook. Details on the purging and sampling procedures were recorded on Groundwater Sample Record Sheets, included as Appendix A.



3. ANALYTICAL PROCEDURES

Analytical methods and QC procedures are discussed below.

3.1 LABORATORY METHODS

Groundwater samples were collected from the naphtha and VOC recovery wells during the September 1999 and December 1999 and analyzed for VOCs, total phenols, total chromium, total lead, total nickel, and total cyanide. In December 1999, groundwater samples from the monitoring wells were analyzed for VOCs. Groundwater samples collected from the recovery wells were analyzed as follows:

Analysis	Method
VOCs	8260
Total phenols	420.2
Dissolved/total chromium, lead and nickel	6020
Total cyanide	335.3

3.2 DATA EVALUATION

TriMatrix Laboratories conducted a systematic review of the data for compliance with the established QC criteria. An evaluation of data accuracy, precision, sensitivity and completeness was performed and presented in the analytical reports. Non-compliant data were qualified and a case narrative prepared to describe the corrective actions taken and the implications on data quality.

Laboratory results were then submitted to HLA in the form of laboratory data sheets and on computer disk. Data was electronically transferred from the computer disk into a database maintained by HLA. Upon transfer of the data, HLA reviewed each data package to evaluate the "usability" of the data. The data was evaluated based upon the following parameters: completeness of the data package, holding times, trip blanks, equipment rinsate blanks, duplicates and laboratory case narratives. No data flags were necessary.



4. RESULTS

Analytical summary tables for the December 1999 sampling event are presented in Appendix B. The tables include a comparison of the analytical results to U.S. Environmental Protection Agency Primary Maximum Contaminant Levels (PMCLs). Data qualifiers are also shown on the tables, if necessary. Appendix C contains both the current and historic data. Only the constituents reported above the laboratory detection limit at each sampling location are presented in the Appendix C tables.

4.1 QUALITY CONTROL REVIEW

For the 3rd and 4th quarter sampling events, no VOCs were detected in any of the trip blanks or the equipment rinsate blank collected from the stainless-steel bailer. As part of the quality control program, four duplicate samples were collected in December 1999 (at wells MW-11, RWB23, 5D and D5). In all cases, good correlation was observed between original and duplicate samples for all parameters analyzed.

4.2 SHALLOW/INTERMEDIATE MONITORING WELLS

Figure 3 and Figure 4 are potentiometric surface maps of the water table aquifer based upon water level measurements collected in September and December 1999, respectively. The maps demonstrate shallow groundwater flow patterns based on monitoring wells screened in the shallow portion of the shallow aquifer. Four intermediate wells (7-50, 8D, D8 and I1) are included on the figures as shallow wells, but their measurements are not used for the potentiometric maps because the wells are screened in the lower portion of the shallow aquifer.

Figure 3 reflects groundwater measurements made in September 1999 when the 3 VOC and 4 naphtha recovery wells were fully operational. As indicated on the figure, VOC recovery wells EW-1 and EW-2 provide containment of groundwater in the Plant 1 area. Recovery well EW-3 provides some containment of groundwater in the Plant 9 area. Shallow groundwater flow from the western and central portions of the site is generally to the east (toward the naphtha recovery wells). Northeast of Plant 1, shallow groundwater flow is generally to the north, toward Kennedy Park.

Figure 4 is a potentiometric map of the water table based upon water levels measured in December 1999 during the 4th Quarter sampling event. The seven recovery wells were also operating in December, and the shallow groundwater flow pattern is similar to the September measurements.



Total VOC concentrations in groundwater samples collected from shallow monitoring wells, when detected, ranged from 5.8 micrograms per liter ($\mu\text{g/l}$) at well S22 to 4,575 $\mu\text{g/l}$ at well MW-2. VOCs in groundwater samples from the shallow monitoring wells were highest in on-site wells. VOCs were non-detectable in groundwater from wells located along the downgradient boundary of the western two-thirds of the site (along West Westmoor Street, west of Bendix Drive). Consistent with previous sampling events, VOCs were detected in shallow wells located north and northeast of Plant 1.

Well S26 was sampled during this event to evaluate present groundwater quality in this area. S26 was last sampled in December 1997. Detected concentrations of trichlorethene (TCE) and cis 1,2-dichloroethene (DCE) have decrease. Prior to 1997 an increasing trend was observed for these constituents. This provides further evidence as to effectiveness of the rehabilitation VOC recovery well system.

Trendline plots for select shallow wells area provided in Appendix D. The plots are updated after each sampling event and provide information on VOC concentrations in groundwater samples collected from the monitoring well locations over time. Three shallow wells (86-10, 86-15, and S4A) were selected for trendline plotting to represent sampling points near the origin of the groundwater plume. Shallow monitoring wells S9, S24 and S27 were selected to assess the central portion of the groundwater plume, and wells S21, S22, and S25 were selected to represent sampling points along the downgradient boundary of the plume.

The majority of nine shallow well graphs indicate stable or decreasing trends of VOC concentrations. The graph for well S24 indicates possible increases in TCE, although the potential for a continuation of this trend should be evaluated based upon future sampling events. It is probable that the slight increases may be related to the reduced effectiveness of the old VOC recovery wells prior to their rehabilitation in 1997.

4.3 DEEP MONITORING WELLS

Figure 5 is a potentiometric surface map based on water levels measured in the 12 deep monitoring wells during the 4th Quarter sampling event. As indicated on the figure, the deep groundwater flow direction is northeasterly. It should be noted that the potentiometric map for the deeper portion of the aquifer includes groundwater level data from wells ranging in depth from 75 feet to over 200 feet deep. Considering the range in well depths, the potentiometric map for the deeper portion of the aquifer



represents the general direction of groundwater flow but does not consider the potential for vertical gradients within the aquifer.

Four deep monitoring wells (2D, 5D, D5, and D7) were sampled during the 4th Quarter 1999 sampling event. Well 4D was scheduled for sampling but the well would not produce water in sufficient quantities to collect a groundwater sample. VOCs were reported in samples from two of the four sampling locations (wells 2D and D7), with detected concentrations ranging from 26.5 µg/l to 25.2 µg/l total VOCs, respectively. Samples collected from downgradient deep well 5D remain non-detectable for VOCs.

Trendline plots for deep wells 2D and 5D have been prepared using all available VOC analytical data from past sampling events. Well 2D is located within the deep VOC plume and well 5D is located at the leading edge of the plume. Trendline plots are provided in Appendix D. A slight increasing trend has been observed in cis-1,2 DCE in samples from well 2D. DCE is a degradation product of TCE and, therefore, may be related to an upgradient decrease in TCE. The potential for a continuation of this trend should be evaluated based upon future sampling events.

4.4 NAPHTHA RECOVERY WELLS

For the 3rd and 4th Quarter 1999 sampling events, VOC constituents detected in the naphtha recovery wells were generally consistent with previous sampling events. Reported concentrations in samples from this event ranged from 26.2 µg/l total VOCs at RWB22 to 1,961 µg/l total VOCs at RWB23.

Naphtha recovery wells were also sampled in December 1999 for total lead, total nickel, total chromium, total cyanide and total phenols. No detectable concentrations of total chromium and total nickel were reported. Total phenols and cyanide were detected in sample from E3 at concentrations of 10 µg/l for each constituent. Total lead was reported at 84 µg/l in the sample from well E3. In March 1998, total lead was detected at 4.8 µg/l in the groundwater sample from E3. Total cyanide was detected in samples from RWB16 and RWB23 at concentrations of 10 µg/l and 9 µg/l, respectively. The duplicate sample collected from RWB23 had no detectable levels of total cyanide. Historically, cyanide has not been detected at this location.

4.5 VOC RECOVERY WELLS

Samples are collected from wells EW-1, EW-2 and EW-3 along the north side of Plant 1 and Plant 9 to evaluate the quality of groundwater extracted by the VOC recovery system. The VOC samples collected



from these wells in December 1999 reported total VOC concentrations ranging from 159 µg/l at well EW-3 to 417 µg/l at well EW-1. In general, these results are consistent with previous sampling events.

Throughout 1998, an increasing trend in TCE and vinyl chloride concentrations was observed at well EW-1. In 1999, the concentrations of TCE and vinyl chloride in EW-1 stabilized.

No phenols, total chromium, and total nickel were detected in samples collected during this event. Total lead was detected in samples from each of the VOC recovery wells at concentrations ranging from 5.5 µg/l (EW-1) to 36 µg/l (EW-2). Total cyanide was detected in samples from each of the recovery wells. Reported concentrations ranged between 20 µg/l and 40 µg/l. Reported concentrations at EW-1 and EW-2 show slight decrease from historic data. This sampling event was the first time total cyanide had been detected in sample from EW-3 (40 µg/l). This detection should be evaluated based upon future sampling events.



Table 1
Groundwater Elevation Summary
3rd Quarter Groundwater Monitoring - September 1999
Honeywell Industrial Complex - South Bend, Indiana

Well No.	Well Depth (feet)	Measuring Point Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Locations Sampled	Sampling Method
Shallow Monitoring Wells						
7-25	26.6	720.47	19.70	700.77		
86-2	28.3	714.98	18.07	696.91		
86-4	23.8	715.09	18.30	696.79		
86-5	30.1	715.04	17.97	697.07		
86-6	25.9	715.00		NM		
86-7	27.2	714.15	16.11	698.04		
86-8	28.5	714.62	16.54	698.08		
86-9	26.8	715.25	17.19	698.06		
86-10	27.1	715.06	17.06	698.00		
86-11	27.0	715.14	17.18	697.96		
86-12	25.4	715.71	17.80	697.91		
86-13	28.8	714.75	16.88	697.87		
86-15	25.3	715.06	16.59	698.47		
86-19	28.1	714.33		NM		
9-33	27.3	716.20	23.13	693.07		
MW-1	25.3	720.88	18.37	702.51		
MW-2	15.4	713.93	12.41	701.52		
MW-3	17.2	713.10	14.02	699.08		
MW-4	21.0	712.66	16.11	696.55		
MW-5	20.8	713.21	17.50	695.71		
MW-6	18.0	709.98	(13.68) 15.20	694.24		
MW-7	18.2	712.59	15.45	697.14		
MW-8	19.0	712.79	(16.04) 18.10	694.69		
MW-9	19.8	710.90	16.24	694.66		
MW-10	19.4	716.01	12.59	703.42		
MW-11	21.7	717.74	(18.06) 18.08	699.66		
MW-12	13.8	711.58	11.02	700.56		
MW-13	18.8	712.55	15.55	697.00		
OW-1	37.4	711.48	14.55	696.93		
OW-2	35.0	711.45	14.59	696.86		
S1	35.6	728.09	20.03	708.06		
S3	24.6	716.65	20.82	695.83		
S4A	31.6	711.37	14.55	696.82		
S5	33.0	712.83		NM		
S6	32.4	716.91	19.95	696.96		
S8	22.6	714.65	16.31	698.34		
S9	21.1	714.17	17.77	696.40		
S12	30.0	721.45	20.02	701.43		
S14	20.2	711.86	16.25	695.61		
S15	22.0	714.37	19.48	694.89		
S16	21.5	716.18	18.60	697.58		
S17	24.8	716.97	18.85	698.12		
S18	32.4	715.41	19.25	696.16		
S19	36.4	723.38	20.21	703.17		
S20	18.8	709.97	15.51	694.46		
S21	23.4	711.33	15.99	695.34		
S22	26.0	709.33	14.89	694.44		
S23	28.2	710.24	18.08	692.16		
S24	21.4	713.03	16.41	NM		
S25	26.8	710.60	15.98	694.62		
S26	26.9	714.50	17.79	696.71		
S27	27.9	715.40	19.05	696.35		
S28	23.5	714.48	16.46	698.02		

Depth to water measured from the top of well casing

Water elevations are referenced to Mean Sea Level

Locations and top-of-well casings for MW-1, MW-10, MW-11, MW-12, MW-13, 9-33, 3D, 4D, EW-1, EW-2, EW-3, RW-3, RW-4, RW-7, RW-14, RW-16, RW-17, OW-1, OW-2 and S4A were surveyed in June 1998.

(13.23) 15.2 = (Depth to Product)Depth to Water

NM = Not Measured

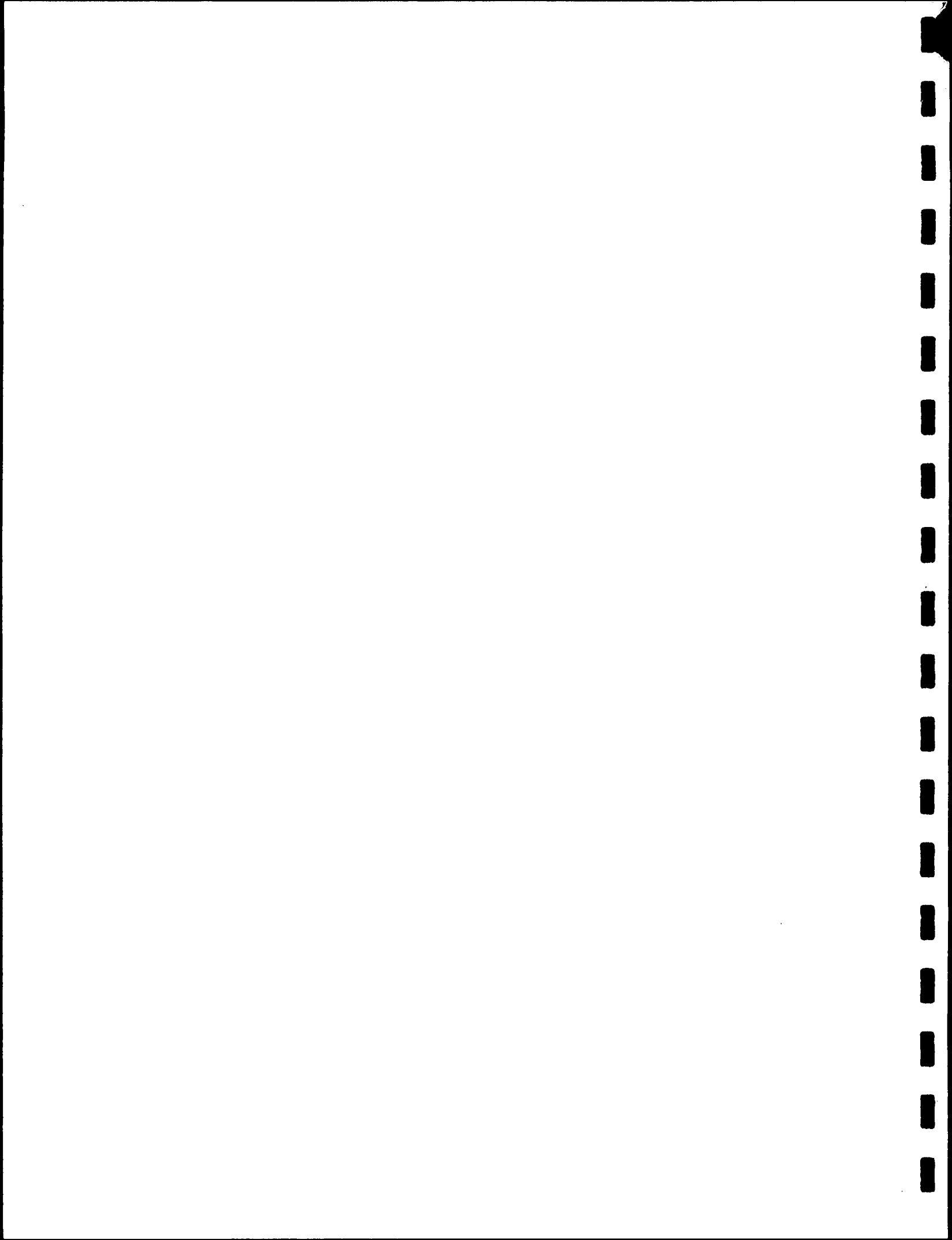


Table 1
Groundwater Elevation Summary
3rd Quarter Groundwater Monitoring - September 1999
Honeywell Industrial Complex - South Bend, Indiana

Well No.	Well Depth (feet)	Measuring Point Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Locations Sampled	Sampling Method
Intermediate Monitoring Wells (50 - 75 feet)						
7-50	50.0	719.84		NM		
8D	59.5	714.56	17.83	696.73		
D8	61.9	717.07	20.11	696.96		
I1	47.6	711.58	19.05	692.53		
Deep Monitoring Wells (75 - 210 feet)						
D3	133.1	714.45	18.19	696.26		
D4	118.6	717.85	21.01	696.84		
D5	186.8	712.07	19.45	692.62		
D7	78.4	713.83	16.64	697.19		
D9	96.9	717.00	17.45	699.55		
D12	147.1	710.35	21.07	689.28		
1D	208.6	714.17	16.41	697.76		
2D	188.3	715.36	18.11	697.25		
3D	196.9	712.91	17.81	695.10		
4D	192.7	711.68	21.00	690.68		
5D	192.2	712.01	22.33	689.68		
7D	95.1	714.85	18.19	696.66		
Recovery Wells						
Former VOC System:						
RW-3	30.7	710.93	13.95	696.98		
RW-4	24.4	709.81	14.09	695.72		
RW-7	21.6	710.73	15.57	695.16		
RW-14	28.8	712.63	14.70	697.93		
RW-16	22.1	712.51	14.67	697.84		
RW-17	28.8	712.78	14.39	698.39		
Naphtha System:						
E3	36.0	714.50	22.52	691.98	✓	Spigot
RWB6	36.0	715.80	20.75	695.05		
RWB16	45.0	715.30	18.81	696.49	✓	Spigot
RWB21	29.5	717.62		NM		
RWB22	36.0	715.11	19.65	695.46	✓	Spigot
RWB23	50.0	713.01	18.70	694.31	✓ Duplicate	Spigot
VOC System:						
EW-1	56.3	712.26	19.61	692.65	✓	Spigot
EW-2	43.2	711.58	21.84	689.74	✓	Spigot
EW-3	30.6	712.59	16.25	696.34	✓	Spigot

Depth to water measured from the top of well casing

Water elevations are referenced to Mean Sea Level

Locations and top-of-well casings for MW-1, MW-10, MW-11, MW-12, MW-13, 9-33, 3D, 4D, EW-1, EW-2, EW-3, RW-3, RW-4, RW-7, RW-14, RW-16, RW-17, OW-1, OW-2 and S4A were surveyed in June 1998.

Wells 8-27, 86-1 and D10 are abandoned.

(a) Wells MW-6, MW-8 and MW-11 not measured due to presence of free product

NM = Not Measured



Table 2
Groundwater Elevation Summary
4th Quarter Groundwater Monitoring - December 1999
Honeywell Industrial Complex - South Bend, Indiana

Well No.	Well Depth (feet)	Measuring Point Elevation (feet)	Depth to Water (feet)	Water Elevation (feet)	Locations Sampled	Sampling Method
Shallow Monitoring Wells						
7-25	26.6	720.47	21.97	698.50		
86-2	28.3	714.98	18.41	696.57		
86-4	23.8	715.09	18.30	696.79		
86-5	30.1	715.04	18.26	696.78		
86-6	25.9	715.00		NM		
86-7	27.2	714.15	16.56	697.59		
86-8	28.5	714.62	16.99	697.63		
86-9	26.8	715.25	17.66	697.59		
86-10	27.1	715.06	17.63	697.43	✓	Dedicated PVC Bailer
86-11	27.0	715.14	17.78	697.36		
86-12	25.4	715.71	18.36	697.35		
86-13	28.8	714.75	17.30	697.45		
86-15	25.3	715.06	17.72	697.34	✓	Dedicated PVC Bailer
86-19	28.1	714.33	16.75	697.58		
9-33	27.3	716.20	20.11	696.09	✓	Stainless-Steel Bailer
MW-1	25.3	720.88	18.78	702.10		
MW-2	15.4	713.93	12.73	701.20	✓	Disposable Bailer
MW-3	17.2	713.10	14.25	698.85		
MW-4	21.0	712.66	16.75	695.91	✓	Disposable Bailer
MW-5	20.8	713.21	16.83	696.38	✓	Disposable Bailer
MW-6 (a)	18.0	709.98	(13.89) 15.99	693.45		
MW-7	18.2	712.59	15.84	696.75	✓	Disposable Bailer
MW-8 (a)	19.0	712.79	(15.34) 17.35	695.44		
MW-9	19.8	710.90	16.24	694.66	✓	Disposable Bailer
MW-10	19.4	716.01		NM		
MW-11 (a)	21.7	717.74	(18.68) 18.71	699.03	✓	Duplicate Disposable Bailer
MW-12	13.8	711.58	11.28	700.30	✓	Disposable Bailer
MW-13	18.8	712.55	15.80	696.75	✓	Disposable Bailer
OW-1	37.4	711.48	14.90	696.58		
OW-2	35.0	711.45	14.93	696.52		
S1	35.6	728.09	25.37	702.72		
S3	24.6	716.65	21.44	695.21	✓	Bladder Pump
S4A	31.6	711.37	14.93	696.44	✓	Duplicate Bladder Pump
S5	33.0	712.83	14.34	698.49		
S6	32.4	716.91	20.28	696.63		
S8	22.6	714.65	19.78	694.87		
S9	21.1	714.17	19.52	694.65	✓	Disposable Bailer
S12	30.0	721.45	20.33	701.12		
S14	20.2	711.86	17.00	694.86		
S15	22.0	714.37	19.84	694.53	✓	Disposable Bailer
S16	21.5	716.18	19.47	696.71	✓	Dedicated PVC Bailer
S17	24.8	716.97	19.45	697.52	✓	Bladder Pump
S18	32.4	715.41	17.35	698.06		
S19	36.4	723.38	20.69	702.69		
S20	18.8	709.97	16.13	693.84	✓	Bladder Pump
S21	23.4	711.33	16.80	694.53	✓	Bladder Pump
S22	26.0	709.33	15.59	693.74	✓	Bladder Pump
S23	28.2	710.24	18.57	691.67	✓	Bladder Pump
S24	21.4	713.03	17.30	695.73	✓	Bladder Pump
S25	26.8	710.60	16.27	694.33	✓	Bladder Pump
S26	26.9	714.50	19.95	694.55	✓	Disposable Bailer
S27	27.9	715.40	19.94	695.46	✓	Bladder Pump
S28	23.5	714.48	17.54	696.94		

Depth to water measured from the top of well casing

Water elevations are referenced to Mean Sea Level

Locations and top-of-well casings for MW-1, MW-10, MW-11, MW-12, MW-13, 9-33, 3D, 4D, EW-1, EW-2, EW-3, RW-3, RW-4, RW-7, RW-14, RW-16, RW-17, OW-1, OW-2 and S4A were surveyed in June 1998.

(13.23) 15.2 = (Depth to Product)Depth to Water

NM = Not Measured



Table 2
Groundwater Elevation Summary
4th Quarter Groundwater Monitoring - December 1999
Honeywell Industrial Complex - South Bend, Indiana

Intermediate Monitoring Wells (50 - 75 feet)							
7-50	50.0	719.84	21.49	698.35	✓		Dedicated PVC Bailer
8D	59.5	714.56	18.45	696.11	✓		Bladder Pump
D8	61.9	717.07	20.81	696.26			
I1	47.6	711.58	19.45	692.13			
Deep Monitoring Wells (75 - 210 feet)							
D3	133.1	714.45	18.71	695.74			
D4	118.6	717.85	21.59	696.26			
D5	186.8	712.07	16.94	695.13	✓	Duplicate	Bladder Pump
D7	78.4	713.83	17.02	696.81	✓		Bladder Pump
D9	96.9	717.00	18.17	698.83			
D12	147.1	710.35	21.27	689.08			
1D	208.6	714.17	17.06	697.11			
2D	188.3	715.36	18.68	696.68	✓		Bladder Pump
3D	196.9	712.91	18.46	694.45			
4D	192.7	711.68	21.34	690.34			
5D	192.2	712.01	22.44	689.57	✓	Duplicate	Bladder Pump
7D	95.1	714.85	18.80	696.05			
Recovery Wells							
Former VOC System:							
RW-3	30.7	710.93	14.42	696.51			
RW-4	24.4	709.81	14.28	695.53			
RW-7	21.6	710.73	14.13	696.60			
RW-14	28.8	712.63	15.35	697.28			
RW-16	22.1	712.51	15.77	696.74			
RW-17	28.8	712.78	16.14	696.64			
Naphtha System:							
E3	36.0	714.50	22.48	692.02	✓		Spigot
RWB6	36.0	715.80	20.06	695.74			
RWB16	45.0	715.30	20.06	695.24	✓		Spigot
RWB21	29.5	717.62	21.12	696.50			
RWB22	36.0	715.11	20.4	694.71	✓		Spigot
RWB23	50.0	713.01	19.51	693.50	✓	Duplicate	Spigot
VOC System:							
EW-1	56.3	712.26	22.98	689.28	✓		Spigot
EW-2	43.2	711.58	19.68	691.90	✓		Spigot
EW-3	30.6	712.59	18.56	694.03	✓		Spigot

Depth to water measured from the top of well casing

Water elevations are referenced to Mean Sea Level

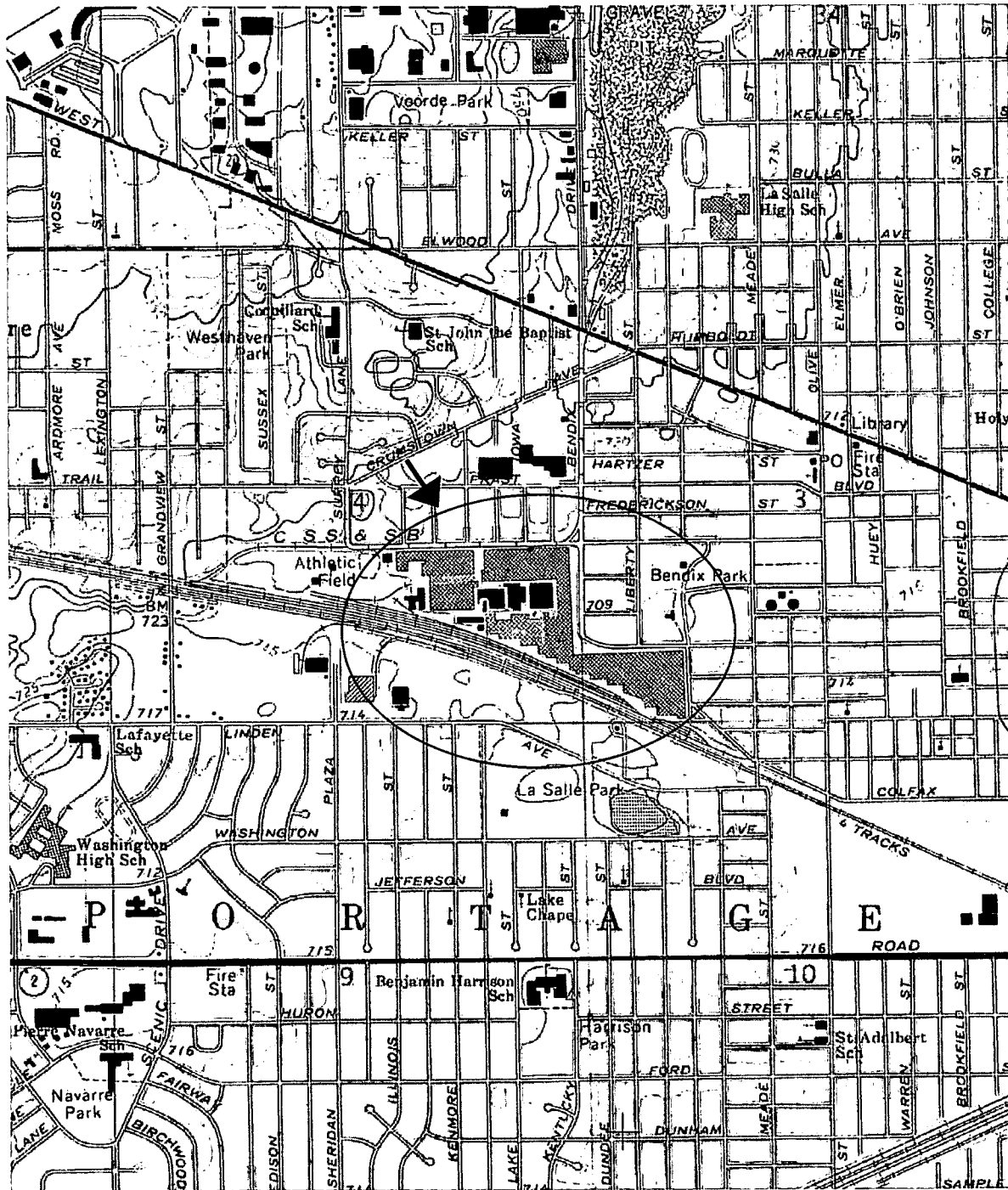
Locations and top-of-well casings for MW-1, MW-10, MW-11, MW-12, MW-13, 9-33, 3D, 4D, EW-1, EW-2, EW-3, RW-3, RW-4, RW-7, RW-14, RW-16, RW-17, OW-1, OW-2 and S4A were surveyed in June 1998.

Wells 8-27, 86-1 and D10 are abandoned.

(a) Wells MW-6, MW-8 and MW-11 not measured due to presence of free product

NM = Not Measured

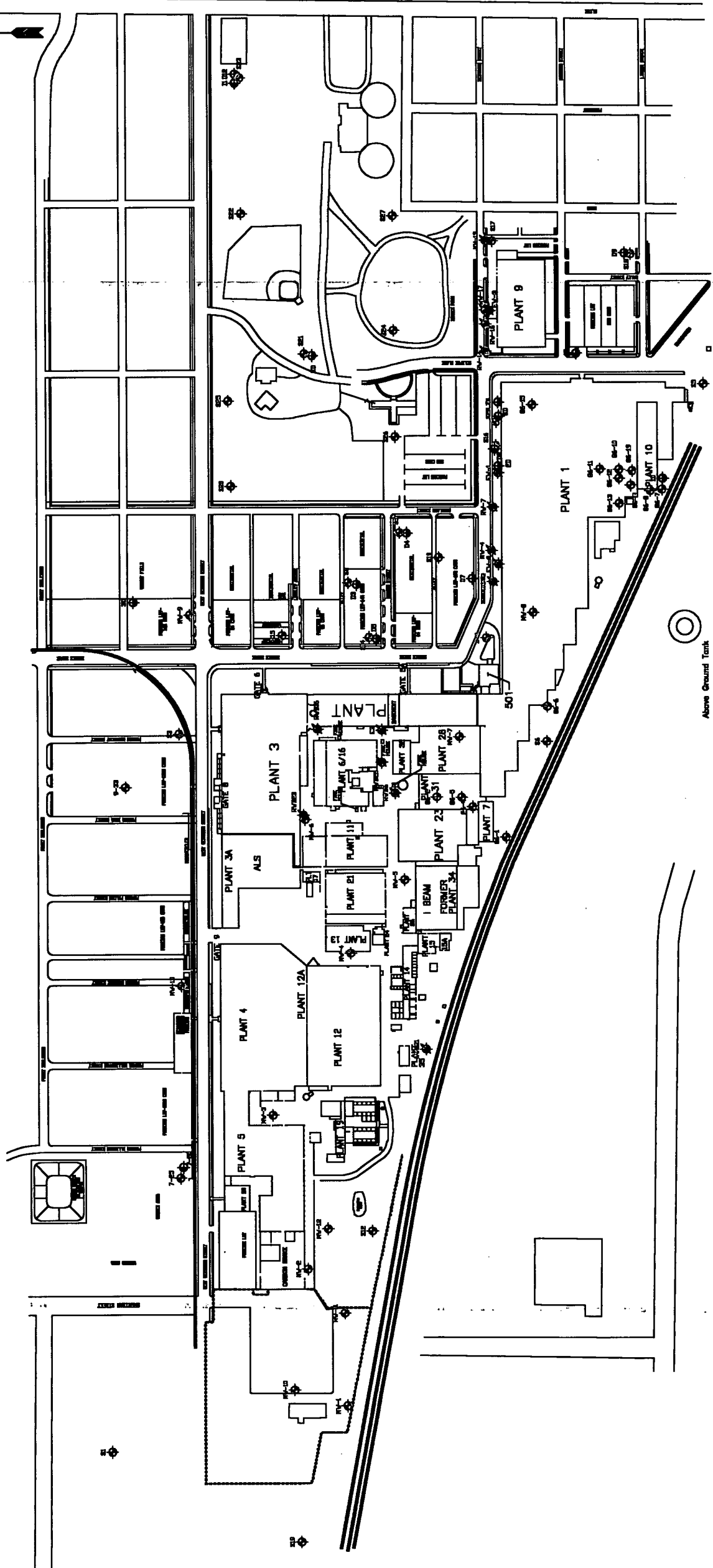
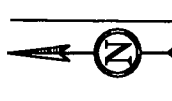




Taken from the South Bend, Indiana 7.5
Series U.S.G.S. Topographic Quadrangle Map

Figure 1
Facility Location Map
Honeywell - South Bend, Indiana





Legend

W-1	Water Table Monitoring Well Location
T-1	Intermediate Monitoring Well Location (50 to 100 feet deep)
D-1	Deep Monitoring Well Location (100 to 210 feet deep)
FR-1	Former Recovery Well Location
CR-1	Existing Recovery Well Location

FIGURE 2
MONITORING WELL AND RECOVERY WELL NETWORK
AFTER REHABILITATION
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA

Harding Lawson Associates



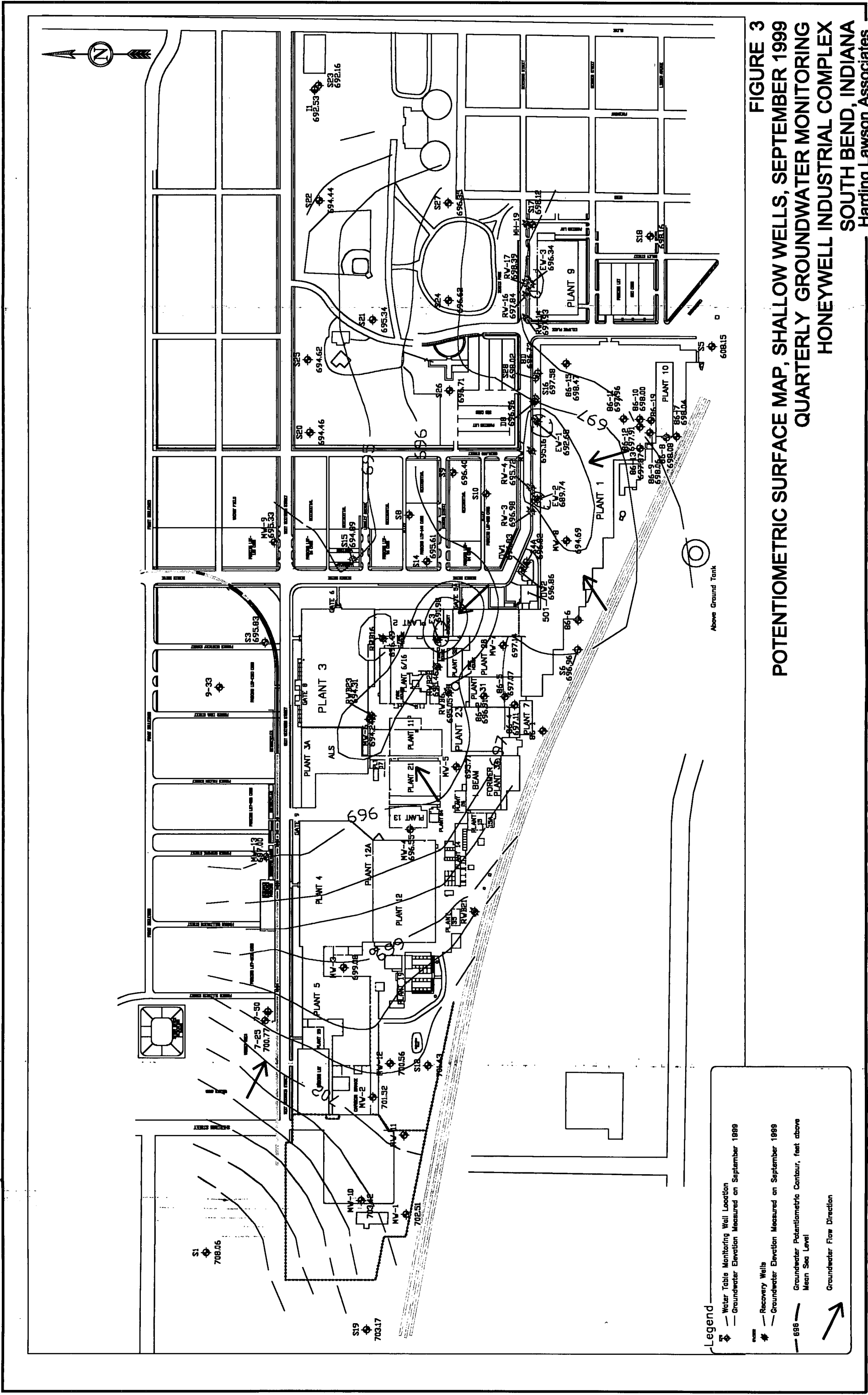


FIGURE 3
POTENTIOMETRIC SURFACE MAP, SHALLOW WELLS, SEPTEMBER 1999
QUARTERLY GROUNDWATER MONITORING
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA
 Harding Lawson Associates

- Legend**
- ◆ Water Table Monitoring Well Location
 - Groundwater Elevation Measured on September 1999
 - ◆ Recovery Wells
 - Groundwater Elevation Measured on September 1999
 - Groundwater Potentiometric Contour, feet above Mean Sea Level
 - ➔ Groundwater Flow Direction

1



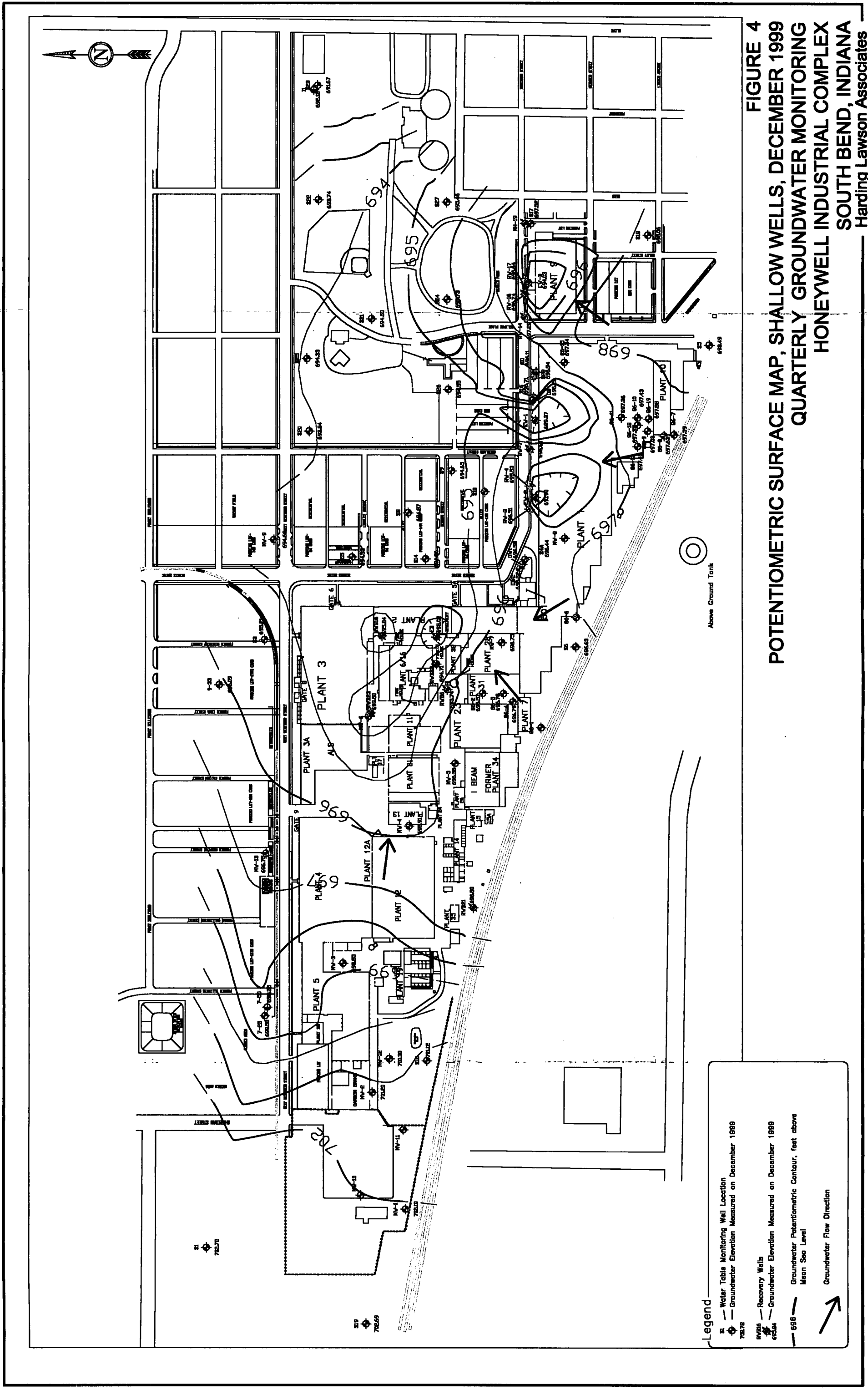


FIGURE 4
POTENTIOMETRIC SURFACE MAP, SHALLOW WELLS, DECEMBER 1999
QUARTERLY GROUNDWATER MONITORING
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA
 Harding Lawson Associates

Legend

- ◻ Water Table Monitoring Well Location
- ◻ Groundwater Elevation Measured on December 1999
- Recovery Wells
- ◻ Groundwater Elevation Measured on December 1999
- Groundwater Potentiometric Contour, feet above Mean Sea Level
- Groundwater Flow Direction



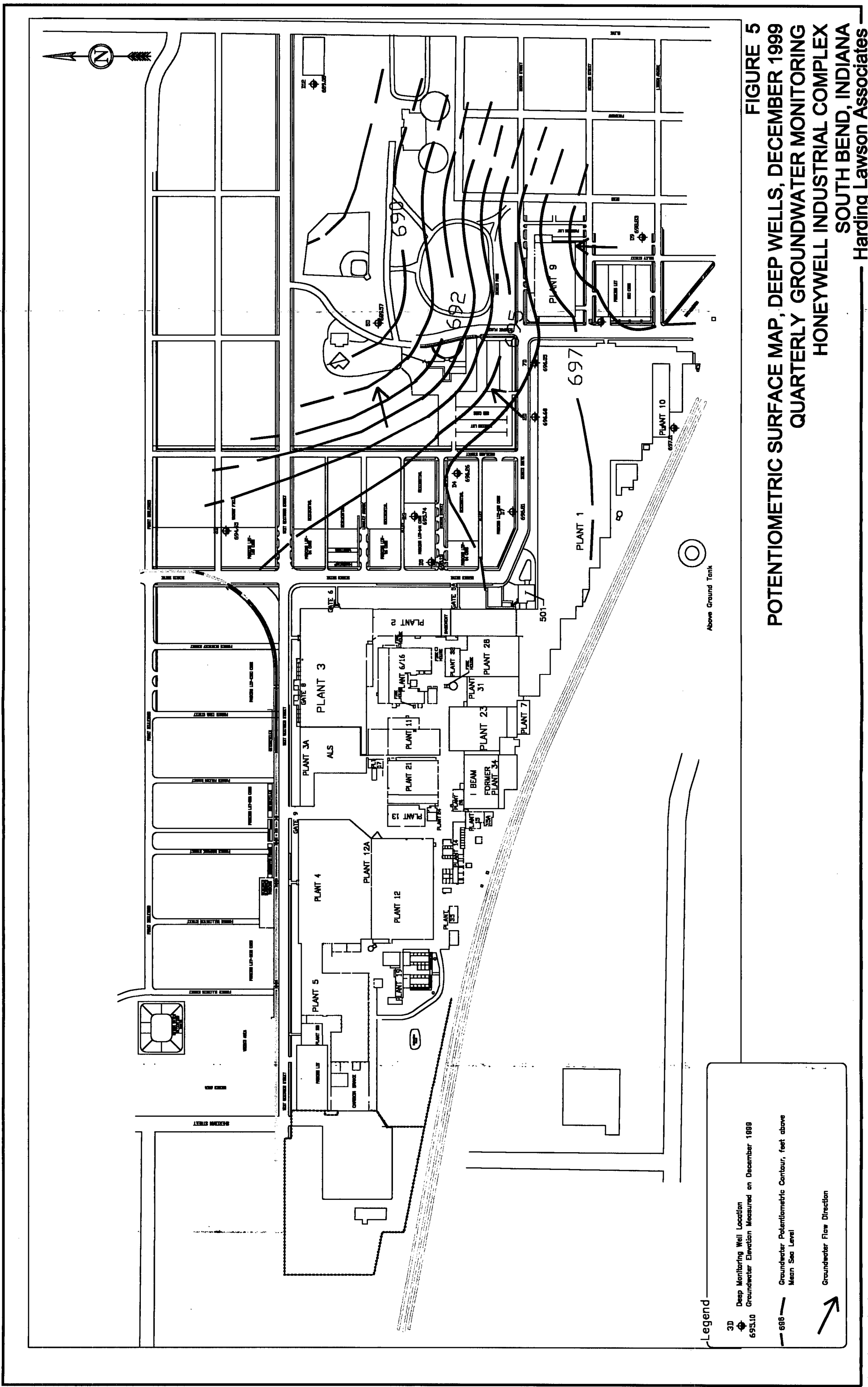


FIGURE 5
POTENTIOMETRIC SURFACE MAP, DEEP WELLS, DECEMBER 1999
QUARTERLY GROUNDWATER MONITORING
HONEYWELL INDUSTRIAL COMPLEX
SOUTH BEND, INDIANA
 — Harding Lawson Associates

Legend

- 3D Deep Monitoring Well Location
- 695.10 Groundwater Elevation Measured on December 1899
- 696 — Groundwater Potentiometric Contour, feet above Mean Sea Level
- Groundwater Flow Direction



HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-100~~ 5-27
 Sample Date: 12/15/99
 Sample Time: 9:35

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: .092 PVC steel galv. lined pvc cover

WATER LEVEL/WELL DATA

Well Depth: 27.9 feet using Solinst Water Depth: 19.94 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.19 gallons to purge
7.96 () .65 gal/ft (4 in)
 (0.092 gal/ft () in)
 Purge Method (see Note 2): Bailer

	<u>0.73</u>	<u>1.46</u>	<u>2.19</u>	
Purge Vol. (gal)				
Time (Min.)	<u>9:27</u>	<u>9:30</u>	<u>9:33</u>	
Temperature (C°)	<u>11.2</u>	<u>11.7</u>	<u>12.0</u>	
pH (Units)	<u>6.50</u>	<u>6.47</u>	<u>6.52</u>	
Conductivity at 25°C (mS/cm)	<u>1.09</u>	<u>1.08</u>	<u>1.09</u>	
Total Volume Purged	gallons			
Water Appearance (describe color, clarity odor):	<u>Translucent cloudy, odorless</u>			

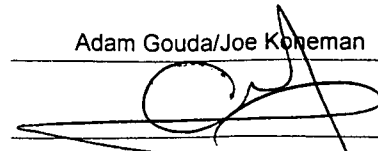
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bailer
 Sample Water Appearance (color, clarity, odor): same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	<u>6010/7471</u>	1		<u>HNO3</u>	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~42-100~~ J-25

Sample Date: 12/15/94

Sample Time: 8:44

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend

Project No.: 9822.02

Personnel Present: Adam Gouda, Joe Koneman

Activity Start: _____

Activity End: _____

Weather: Snow Cold 29°

Well Type and Location: 1092 PVC flw/ steel process in Park adjacent from Box.

WATER LEVEL/WELL DATA

Well Depth: 26.8 feet using Solinst Water Depth: 16.27 feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition (see Note 1): ok.

Measuring Device Decontamination Procedure: Liquinox-DI water

PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.90 gallons to purge
10.53 () .65 gal/ft (4 in)
10.92 gal/ft (in)

Purge Method (see Note 2): Bailer.

	<u>10.53</u>	<u>10.92</u>	<u>2.90</u>
Purge Vol. (gal)	<u>96</u>	<u>1.92</u>	<u>2.90</u>
Time (Min.)	<u>8:32</u>	<u>8:38</u>	<u>8:42</u>
Temperature (C°)	<u>11.7</u>	<u>12.3</u>	<u>12.7</u>
pH (Units)	<u>6.30</u>	<u>6.33</u>	<u>6.33</u>
Conductivity at 25°C (mS/cm)	<u>1.97</u>	<u>1.98</u>	<u>1.97</u>
Total Volume Purged	<u>2.90</u> gallons		
Water Appearance (describe color, clarity odor)	<u>Translucent brown, eggy sulfur odor</u>		

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bailer

Sample Water Appearance (color, clarity, odor): For same as above

ANALYTICAL PARAMETERS

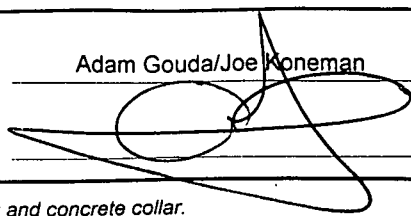
Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	Y	N
Total CN	<u>335</u>	1		NaOH	Y	N	Y	N
Phenols	<u>42-2</u>	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	<u>6010/7471</u>	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	<u>6010/7471</u>	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print)

Adam Gouda/ Joe Koneman

SIGNATURE:



- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12/199~~ S-17
 Sample Date: 12/14/99
 Sample Time: 11:22

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 2:00
 Well Type and Location: .65" steel galvanized stickup

WATER LEVEL/WELL DATA

Well Depth: 19.45 feet using Solinst Water Depth: 24.8 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 10.4 gallons to purge
5.35 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Decontaminated bladder pump

Purge Vol. (gal)	<u>3.47</u>	<u>6.94</u>	<u>10.4</u>	
Time (Min.)	<u>11:10</u>	<u>11:14</u>	<u>11:17</u>	<u>11:22</u>
Temperature (C°)	<u>14.0</u>	<u>14.5</u>	<u>15.0</u>	<u>14.6</u>
pH (Units)	<u>6.75</u>	<u>6.55</u>	<u>6.60</u>	<u>6.57</u>
Conductivity at 25°C (mS/cm)	<u>1.15</u>	<u>1.46</u>	<u>1.46</u>	<u>1.46</u>
Total Volume Purged				
Water Appearance (describe color, clarity odor)				<u>Cloudy egg odor</u>

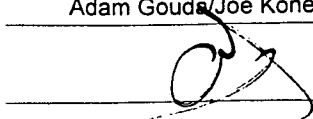
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): same
 Sample Water Appearance (color, clarity, odor): same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?	Y	N
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/ Joe Koneman
 SIGNATURE: 

Notes: (1) Describe whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-09~~ 5-22
 Sample Date: 12/15/99
 Sample Time: 12:17

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: 4" galvanized steel

WATER LEVEL/WELL DATA

Well Depth: 26.0 feet using Solinst Water Depth: 15.59 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): OK
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 20.2 gallons to purge
10.41 ← () .65 gal/ft (4 in)
 () _____ gal/ft () in
 Purge Method (see Note 2): _____

Purge Vol. (gal)	<u>6.76</u>	<u>13.41</u>	<u>20.2</u>
Time (Min.)	<u>11:42</u>	<u>11:53</u>	<u>12:05</u>
Temperature (C°)	<u>11.4</u>	<u>12.1</u>	<u>12.0</u>
pH (Units)	<u>6.56</u>	<u>6.48</u>	<u>6.49</u>
Conductivity at 25°C (mS/cm)	<u>1.07</u>	<u>1.08</u>	<u>1.08</u>
Total Volume Purged	<u>20.2</u> gallons		
Water Appearance (describe color, clarity odor):	<u>Not translucent w/Black particulate, odorless, clear, odorless</u>		

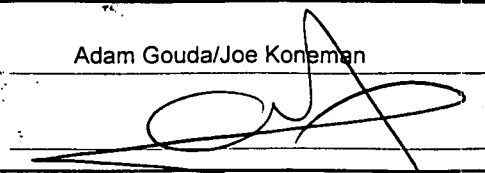
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bladder pump
 Sample Water Appearance (color, clarity, odor): Clear, odorless

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles		Preservative/ Volume	Field Filtered?	Cool	
		Volume, Type	Bottle Lot			to 4°C?	
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u> N
Total CN	336	1		NaOH	Y	N	Y N
Phenols	42.2	1		H2SO4	Y	N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y N

OTHER OBSERVATIONS

NAME (Print): Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-15-89~~ S-23
 Sample Date: 12/15/89
 Sample Time: 12:57

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: _____
 Well Type and Location: 4" steel galvanized steel

WATER LEVEL/WELL DATA

Well Depth: 26.2 feet using Solinst Water Depth: 18.57 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): _____
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 18.77 gallons to purge
9.63 () .65 gal/ft (4 in)
 () _____ gal/ft () in
 Purge Method (see Note 2): _____

Purge Vol. (gal)	<u>6.25</u>	<u>12.5</u>	<u>18.77</u>
Time (Min.)	<u>12:46</u>	<u>12:52</u>	<u>12:57</u>
Temperature (C°)	<u>13.0</u>	<u>13.1</u>	<u>13.5</u>
pH (Units)	<u>6.57</u>	<u>6.05</u>	<u>6.55</u>
Conductivity at 25°C (mS/cm)	<u>1.03</u>	<u>1.03</u>	<u>1.03</u>
Total Volume Purged	<u>18.77</u> gallons		
Water Appearance (describe color, clarity odor:)	<u>Clear and odorless</u>		

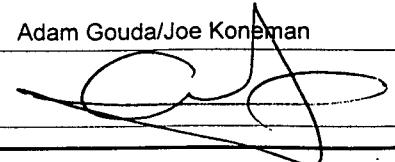
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bladder pump
 Sample Water Appearance (color, clarity, odor): Same as Above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	422	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-159~~ 70
 Sample Date: 12/15/91
 Sample Time: 16:42

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: 092 PVC fl. mnt.

WATER LEVEL/WELL DATA

Well Depth: 95.1 feet using Solinst (measuring device) Water Depth: 18.80 feet using Solinst (measuring device)
 (from top of well casing) (from top of well casing)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
 (from ground surface) (for above-ground surface)
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 21.0 gallons to purge
76.3 () .65 gal/ft (4 in)
 () 0.092 gal/ft (_____ in)
 Purge Method (see Note 2): _____

	<u>7.0</u>	<u>14.0</u>	<u>21.0</u>
Purge Vol. (gal)			
Time (Min.)	<u>16:05</u>	<u>16:27</u>	<u>16:40</u>
Temperature (C°)	<u>12.5</u>	<u>12.58</u>	<u>13.2</u>
pH (Units)	<u>6.50</u>	<u>6.52</u>	<u>6.47</u>
Conductivity at 25°C (mS/cm)	<u>1.86</u>	<u>1.83</u>	<u>1.82</u>
Total Volume Purged			
Water Appearance (describe color, clarity odor:)	<u>initially blackened water w/ particulate & odor; then trans. ^{orange} odorless</u>		

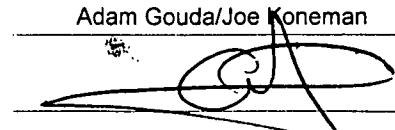
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bladder Pump
 Sample Water Appearance (color, clarity, odor): translucent orange, odorless

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-09~~ 20
 Sample Date: 12/15/99
 Sample Time: 18:16

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow cold 29°
 Well Type and Location: .092 Stickup PVC w/ galvanized steel prolon

WATER LEVEL/WELL DATA

Well Depth: 108.3 feet using Solinst Water Depth: 18.68 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): Ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 46.81 gallons to purge
 () .65 gal/ft (4 in)
 169.62 (A) .092 gal/ft (in)
 Purge Method (see Note 2): _____

Purge Vol. (gal)	15.60	31.20	46.81
Time (Min.)	17:18	17:47	18:15
Temperature (C°)	11.6	11.8	11.6
pH (Units)	6.67	6.65	6.64
Conductivity at 25°C (mS/cm)	1.38	1.38	1.38
Total Volume Purged	46.81 gallons		
Water Appearance (describe color, clarity odor):			

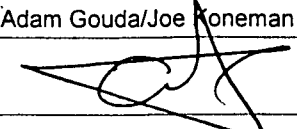
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bladder Pump
 Sample Water Appearance (color, clarity, odor): Clear & odorless

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y N	N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

NAME (Print): Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~127-799~~ 50
 Sample Date: 12/15/99
 Sample Time: 15:27

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Cold snow 29°
 Well Type and Location: .092 PVC fl. mnt.

WATER LEVEL/WELL DATA

Well Depth: 192.7 feet using Solinst Water Depth: 22.44 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 45.9 gallons to purge
109.76 (✓) .092 gal/ft (in)
 Purge Method (see Note 2): Bladder Pump

Purge Vol. (gal)	<u>15.6</u>	<u>31.20</u>	<u>45.9</u>	
Time (Min.)	<u>14:31</u>	<u>1459</u>	<u>15:27</u>	
Temperature (C°)	<u>10.7</u>	<u>10.1</u>	<u>10.7</u>	
pH (Units)	<u>6.88</u>	<u>6.80</u>	<u>6.86</u>	
Conductivity at 25°C (mS/cm)	<u>1.24</u>	<u>1.25</u>	<u>1.23</u>	
Total Volume Purged	_____ gallons			
Water Appearance (describe color, clarity odor:)	<u>initially slightly cloudy with trace black particles, then clear.</u>			<u>odorless</u>

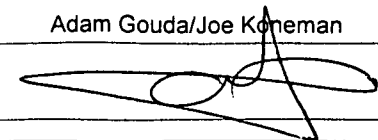
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bladder pump
 Sample Water Appearance (color, clarity, odor): Clear & Odorless

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>(N)</u>	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~127-103~~ 40
 Sample Date: _____
 Sample Time: _____

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: _____
 Well Type and Location: _____

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition (see Note 1): _____
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (____ in)

Purge Method (see Note 2): _____

Purge Vol. (gal) _____
 Time (Min.) _____
 Temperature (C°) _____
 pH (Units) _____
 Conductivity at 25°C (mS/cm) _____
 Total Volume Purged _____ gallons
 Water Appearance (describe color, clarity odor): _____

See other observations

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8280	2		HCL	Y N	Y N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

Unable to sample due to bladder pump not installed & being fixed.

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: _____

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.



HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-16-99~~ D-7
 Sample Date: 12-16-99
 Sample Time: 1354

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Sno-30
 Well Type and Location: 6.5 steel galvanized stlge

WATER LEVEL/WELL DATA

Well Depth: 78.4 feet using Solinst Water Depth: 17.02 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 119 gallons to purge
61.38 () .65 gal/ft (4 in)
 () _____ gal/ft () in)
 Purge Method (see Note 2): Dedicated bladder pump

	<u>39.0</u>	<u>78</u>	<u>119</u>
Purge Vol. (gal)			
Time (Min.)			
Temperature (C°)	<u>11.6</u>	<u>12.3</u>	<u>12.6</u>
pH (Units)	<u>7.28</u>	<u>7.25</u>	<u>7.24</u>
Conductivity at 25°C (mS/cm)	<u>0.583</u>	<u>0.540</u>	<u>0.589</u>
Total Volume Purged	<u>119</u> gallons		
Water Appearance (describe color, clarity, odor):	<u>clear</u>		

SAMPLING PROCEDURES

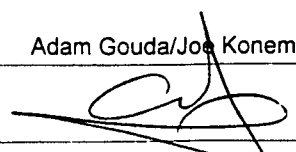
Sampling Procedure (see Note 2): Sam as above
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool to 4°C?
					Filtered?		
VOC	8260	2		HCL	Y	<u>(N)</u>	<u>(Y)</u> N
Total CN	335	1		NaOH	Y	N	Y N
Phenols	42.2	1		H2SO4	Y	N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y N

OTHER OBSERVATIONS

||||| + 4 gallons

NAME (Print) Adam Gouda/ Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12/199~~ 7-50
 Sample Date: 12/13/99
 Sample Time: 1550

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Sunny 40°
 Well Type and Location: 0.092 Stickup PVC w/ steel Recovery

WATER LEVEL/WELL DATA

Well Depth: 50.0 feet using Solinst Water Depth: 21.49 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 7.86 gallons to purge
 28.51 () .65 gal/ft (4 in)
 (x) .092 gal/ft (in)
 Purge Method (see Note 2): Debrinked bailer

Purge Vol. (gal)	2.62	5.24	7.86	
Time (Min.)	1530	1542		
Temperature (C°)	11.2	11.3	11.3	
pH (Units)	4.07	4.04	4.05	
Conductivity at 25°C (mS/cm)	.767	.767	.760	
Total Volume Purged	7.86 gallons			
Water Appearance (describe color, clarity odor):	clear			

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): clear Debrinked bailer
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	(N)	(Y)	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE:

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-139~~ MW-13
 Sample Date: 12/13/99
 Sample Time: 1700

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Sunny 37°
 Well Type and Location: FL. 2" PVC

WATER LEVEL/WELL DATA

Well Depth: 18.8 feet using Solinst Water Depth: 15.80 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X 3.0 (~~A~~ .16 gal/ft (2 in) X 3 casing volumes = 1.44 gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): _____

Purge Vol. (gal)	<u>.48</u>	<u>.96</u>	<u>1.44</u>	
Time (Min.)				
Temperature (C°)	<u>11.8</u>	<u>12.2</u>	<u>12.3</u>	
pH (Units)	<u>4.02</u>	<u>4.01</u>	<u>4.00</u>	
Conductivity at 25°C (mS/cm)	<u>.790</u>	<u>.797</u>	<u>.797</u>	
Total Volume Purged	<u>1.44</u>	gallons		
Water Appearance (describe color, clarity odor):				

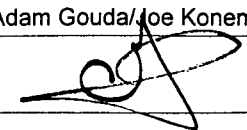
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y <u>(N)</u>	<u>(Y)</u>	N	N
Total CN	335	1		NaOH	Y N	Y N	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N	Y N	Y N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/ Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-199~~ EW-3
 Sample Date: 12/13/99
 Sample Time: _____

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: Sunny 4:50 / 1304 Activity End: 13:17
 Weather: ↓
 Well Type and Location: Extraction well

WATER LEVEL/WELL DATA

Well Depth: — feet using Solinst Water Depth: — feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: — feet Protective Casing Stickup: — feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: — feet
 Floating Product Thickness: — feet using — (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: — Ambient Air: — ppm Well Mouth: — ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = — gallons to purge
 () .65 gal/ft (4 in)
 () — gal/ft (— in)
 Purge Method (see Note 2): Purge 5 gallons w/ spigot & sample
 Purge Vol. (gal) 5.0
 Time (Min.) 1307
 Temperature (C°) 17.2
 pH (Units) 3.77
 Conductivity at 25°C (mS/cm) 1067
 Total Volume Purged 5.0 gallons
 Water Appearance (describe color, clarity odor): clear and odorless

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): same as above
 Sample Water Appearance (color, clarity, odor): same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y (N)	(Y) N
Total CN	335	1		NaOH	Y (N)	(Y) N
Phenols	42.2	1		H2SO4	Y (N)	(Y) N
<u>total</u> Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y (N)	(Y) N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y (N)	(Y) N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/ Joe Koneman
 SIGNATURE: [Signature]

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-13-99~~ **Ew-1**
 Sample Date: **12/13/99**
 Sample Time: **1340**

SITE/SAMPLE LOCATION

Site Name: **Allied signal- South Bend** Project No.: **9822.02**
 Personnel Present: **Adam Gouda, Joe Koneman**
 Activity Start: **1290** Activity End: **1345**
 Weather: **Sunny 45°**
 Well Type and Location: **Extraction well.**

WATER LEVEL/WELL DATA

Well Depth: feet using Solinst Water Depth: feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: feet Protective Casing Stickup: feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: feet
 Floating Product Thickness: feet using (measuring device)
 Well Condition (see Note 1): **good**
 Measuring Device Decontamination Procedure: **Liquinox-DI water**
 PI Meter ID: Ambient Air: ppm Well Mouth: ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = gallons to purge
 () .65 gal/ft (4 in)
 () gal/ft (in)
 Purge Method (see Note 2): **Open spigot Purge 5 gallons**

Purge Vol. (gal) **5.0**
 Time (Min.) **11:36**
 Temperature (C°) **11.9**
 pH (Units) **4.02**
 Conductivity at 25°C (mS/cm) **1.45**
 Total Volume Purged **5.0** gallons
 Water Appearance (describe color, clarity odor): **clear**

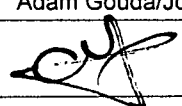
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): **Same as above**
 Sample Water Appearance (color, clarity, odor): **clear**

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y (N)	N
Total CN	335	1		NaOH	Y (N)	N
Phenols	42.2	1		H2SO4	Y (N)	N
Total Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y (N)	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y (N)	N

OTHER OBSERVATIONS

NAME (Print) **Adam Gouda/Joe Koneman**
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: 19-009 EW-2
 Sample Date: 12/17/99
 Sample Time: 1352

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 1342 Activity End: _____
 Weather: Sunny 45°
 Well Type and Location: Extraction well

WATER LEVEL/WELL DATA

Well Depth: _____ feet using _____ Solinst Water Depth: _____ feet using _____ Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good -
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Open spigot purge 5 gallons + sample

Purge Vol. (gal) 5.0
 Time (Min.) 1350
 Temperature (C°) 12.0
 pH (Units) 3.93
 Conductivity at 25°C (mS/cm) 1.19
 Total Volume Purged 5.0 gallons
 Water Appearance (describe color, clarity odor): clear

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Same as above
 Sample Water Appearance (color, clarity, odor): Same

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool to 4°C?
					Filtered?		
VOC	8260	2		HCL	Y	<u>ZZ</u>	N
Total CN	335	1		NaOH	Y	<u>ZZ</u>	N
Phenols	42.2	1		H2SO4	Y	<u>ZZ</u>	N
<u>total</u> Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	<u>ZZ</u>	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	<u>ZZ</u>	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: [Signature]

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12/100~~ E-3C
 Sample Date: 12/17/99
 Sample Time: 1420

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 1409 Activity End: 1422
 Weather: Sunny 45°
 Well Type and Location:

WATER LEVEL/WELL DATA

Well Depth: — feet using Solinst Water Depth: — feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: — feet Protective Casing Stickup: — feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: — feet
 Floating Product Thickness: — feet using — (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: — Ambient Air: — ppm Well Mouth: — ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 5.0 gallons to purge
 () .65 gal/ft (4 in)
 () gal/ft (in)
 Purge Method (see Note 2): OPEN spigot + Purge 5 gallons then Sample

Purge Vol. (gal) 5.0
 Time (Min.) 1416
 Temperature (C°) 14.3
 pH (Units) 4.14
 Conductivity at 25°C (mS/cm) 1.10
 Total Volume Purged 5.0 gallons
 Water Appearance (describe color, clarity odor): oily/white/black, heavy odor & sheen

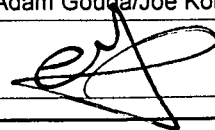
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Same as above
 Sample Water Appearance (color, clarity, odor): Same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <input checked="" type="checkbox"/>	N <input checked="" type="checkbox"/>
Total CN	335	1		NaOH	Y <input checked="" type="checkbox"/>	N <input checked="" type="checkbox"/>
Phenols	42.2	1		H2SO4	Y <input checked="" type="checkbox"/>	N <input checked="" type="checkbox"/>
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y <input checked="" type="checkbox"/>	N <input checked="" type="checkbox"/>
Total Cr,Pb,Ni	6010/7471	1		HNO3	Y <input checked="" type="checkbox"/>	N <input checked="" type="checkbox"/>

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~191-193~~ S-16
 Sample Date: 12/14/99
 Sample Time: 1740

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 45°
 Well Type and Location: 65 Stibp

WATER LEVEL/WELL DATA

Well Depth: 21.5 feet using Solinst Water Depth: 19.47 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 3.95 gallons to purge
2.03 (✓) .65 gal/ft (4 in)
 Purge Method (see Note 2): Dedicated bailer

Purge Vol. (gal)	<u>1.31</u>	<u>2.62</u>	<u>3.95</u>
Time (Min.)	<u>1730</u>	_____	_____
Temperature (C°)	<u>12.8</u>	_____	_____
pH (Units)	<u>5.45</u>	_____	_____
Conductivity at 25°C (mS/cm)	<u>1.47</u>	_____	_____
Total Volume Purged	<u>4.0</u> gallons		
Water Appearance (describe color, clarity odor):		<u>clear</u>	

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Dedicated bailer.
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
<u>VOC</u>	<u>6260</u>	2		<u>HCL</u>	Y	<u>N</u>	<u>Y</u>	N
<u>Total CN</u>	<u>335</u>	1		<u>NaOH</u>	Y	N	Y	N
<u>Rhenols</u>	<u>42.2</u>	1		<u>H2SO4</u>	Y	N	Y	N
<u>Dissolved Cr, Pb, Ni</u>	<u>6010/7471</u>	1		<u>HNO3</u>	Y	N	Y	N
<u>Total Cr, Pb, Ni</u>	<u>6010/7471</u>	1		<u>HNO3</u>	Y	N	Y	N

OTHER OBSERVATIONS

Purged Dry after 1 Volume
allow 10 min Recharge then
sample

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: [Signature]

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-755~~ S-9
 Sample Date: 12/14/99
 Sample Time: 1720

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 1900 Activity End: _____
 Weather: Cold cloudy 32'
 Well Type and Location: 65 galvanized steel stickup

WATER LEVEL/WELL DATA

Well Depth: 21.1 feet using Solinst Water Depth: 19.52 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 4.86 gallons to purge
1.50 (X) .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable bailer

Purge Vol. (gal)	<u>1.62</u>	<u>3.24</u>	<u>4.86</u>
Time (Min.)	<u>1708</u>	<u>1817</u>	<u>1717</u>
Temperature (C°)	<u>14.4</u>	<u>14.8</u>	<u>15.1</u>
pH (Units)	<u>5.55</u>	<u>5.52</u>	<u>5.55</u>
Conductivity at 25°C (mS/cm)	<u>1.19</u>	<u>1.24</u>	<u>1.26</u>
Total Volume Purged	<u>4.86</u> gallons		
Water Appearance (describe color, clarity odor):	<u>clear</u>		

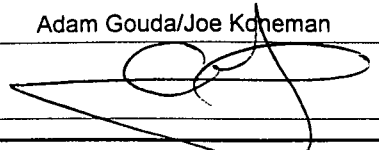
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable bailer
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> <u>Y</u>	N
Total CN	335	1		NaOH	Y N Y N	N
Phenols	42.2	1		H2SO4	Y N Y N	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y N	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y N	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~721~~ 799 S-15
 Sample Date: 12/14/99
 Sample Time: 1526

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow cold 29°
 Well Type and Location: .65 steel stickup

WATER LEVEL/WELL DATA

Well Depth: 22.0 feet using Solinst Water Depth: 19.84 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 4.2 gallons to purge
2.16 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable bailer

	<u>1.4</u>	<u>2.8</u>	<u>4.2</u>	
Purge Vol. (gal)				
Time (Min.)	<u>1509</u>	<u>1518</u>	<u>1526</u>	
Temperature (C°)	<u>14.7</u>	<u>16.0</u>	<u>16.0</u>	
pH (Units)	<u>5.26</u>	<u>5.32</u>	<u>5.33</u>	
Conductivity at 25°C (mS/cm)	<u>1.77</u>	<u>1.74</u>	<u>1.74</u>	
Total Volume Purged				gallons
Water Appearance (describe color, clarity odor):				<u>clear</u>

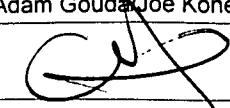
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): D. bailer
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	422	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda, Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~42-199~~ S-4-A
 Sample Date: 12/1/99
 Sample Time: 16:54

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: .092 PVC stickup w/ galvanized steel p.cover

WATER LEVEL/WELL DATA

Well Depth: 31.6 feet using Solinst (measuring device) Water Depth: 14.93 feet using Solinst (measuring device)
 (from top of well casing) (from top of well casing)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
 (from ground surface) (for above-ground surface)
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 4.6 gallons to purge
16.67 () .65 gal/ft (4 in)
 () .092 gal/ft () in)
 Purge Method (see Note 2): Disp. bailer

	<u>1.53</u>	<u>3.06</u>	<u>4.6</u>
Purge Vol. (gal)	<u>1.53</u>	<u>3.06</u>	<u>4.6</u>
Time (Min.)	<u>16:40</u>	<u>16:46</u>	<u>16:52</u>
Temperature (C°)	<u>11.4</u>	<u>11.4</u>	<u>11.8</u>
pH (Units)	<u>5.47</u>	<u>5.54</u>	<u>5.53</u>
Conductivity at 25°C (mS/cm)	<u>1.13</u>	<u>1.03</u>	<u>1.07</u>
Total Volume Purged	<u>4.6</u> gallons		
Water Appearance (describe color, clarity odor:)	<u>Translucent and odorless</u>		

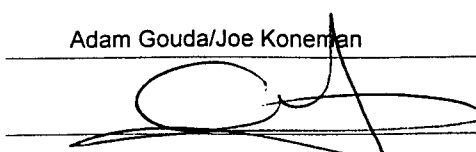
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable Bailer
 Sample Water Appearance (color, clarity, odor): Same as Purge

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u>	<u>Y</u> N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-488~~ MW-103

Sample Date: 12/16/99

Sample Time: _____

SITE/SAMPLE LOCATION

Site Name **Allied signal- South Bend** Project No.: 9822.02

Personnel Present: **Adam Gouda, Joe Koneman**

Activity Start: _____ Activity End: _____

Weather: _____

Well Type and Location: _____

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition (see Note 1): _____

Measuring Device Decontamination Procedure: Liquinox-DI water

PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)

Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge

() .65 gal/ft (4 in)

() _____ gal/ft (____ in)

Purge Method (see Note 2): _____

Purge Vol. (gal) _____

Time (Min.) _____

Temperature (C°) _____

pH (Units) _____

Conductivity at 25°C (mS/cm) _____

Total Volume Purged _____ gallons

Water Appearance (describe color, clarity odor): _____

See D-5 for Details

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____

Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> Y	N
Total CN	335	1		NaOH	Y N Y	N
Phenols	42-2	1		H2SO4	Y N Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman

SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

take mw-102 Sample No.: ~~12-100~~ *S-21*
 Sample Date: *12/18/99*
 Sample Time: *13:45*

SITE/SAMPLE LOCATION

Site Name **Allied signal- South Bend** Project No.: **9822.02**
 Personnel Present: **Adam Gouda, Joe Koneman**
 Activity Start: _____ Activity End: _____
 Weather: *Cold snow 29°*
 Well Type and Location: *.092 fl mant.*

WATER LEVEL/WELL DATA

Well Depth: *23.4* feet using **Solinst** Water Depth: *16.80* feet using **Solinst**
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): *ok.*
 Measuring Device Decontamination Procedure: **Liquinox-DI water**
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = *12.87* gallons to purge
6.6 () *.65* gal/ft (4 in)
 Purge Method (see Note 2): _____

Purge Vol. (gal)	<i>4.29</i>	<i>8.6</i>	<i>12.87</i>	
Time (Min.)	<i>13:30</i>	<i>13:34</i>	<i>13:40</i>	<i>13:43</i>
Temperature (C°)	<i>11.2</i>	<i>11.6</i>	<i>11.7</i>	<i>11.8</i>
pH (Units)	<i>6.62</i>	<i>6.57</i>	<i>6.57</i>	<i>6.58</i>
Conductivity at 25°C (mS/cm)	<i>1.65</i>	<i>1.94</i>	<i>1.43</i>	<i>1.95</i>
Total Volume Purged				
Water Appearance (describe color, clarity odor):	<i>initially black silty water, odorless; clear w/ trace black particulate, odorless</i>			

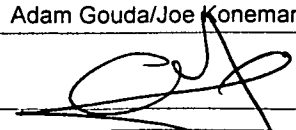
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): *Bailing*
 Sample Water Appearance (color, clarity, odor): *clear w/ trace black particulates, odorless*

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <i>(N)</i>	N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS
Bladder pump is set above water level, bailed instead. Bottom of bladder pump @ 17.0' (TOL).

NAME (Print) **Adam Gouda/Joe Koneman**
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~123~~ MW-102
 Sample Date: _____
 Sample Time: _____

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: _____
 Well Type and Location: _____

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): _____
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): _____
 Purge Vol. (gal) _____
 Time (Min.) _____
 Temperature (C°) See SD _____
 pH (Units) _____
 Conductivity at 25°C (mS/cm) _____
 Total Volume Purged _____ gallons
 Water Appearance (describe color, clarity odor): _____

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u>	N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

See S-D for all details of sample

NAME (Print) Adam Gouda/ Joe Koneman
 SIGNATURE: _____

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

*to be
mw-100
mw-101*

Sample No.: ~~12-100~~ *mw-11*
 Sample Date: *12/13/99*
 Sample Time: *1056*

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow 31°
 Well Type and Location: 2" PVC fl. mt

WATER LEVEL/WELL DATA

Well Depth: 21.7 feet using Solinst Water Depth: 18.71 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X 2.99 .16 gal/ft (2 in) X 3 casing volumes = 1.43 gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): D. bailer

Purge Vol. (gal)	<u>0.17</u>	<u>0.54</u>	<u>1.43</u>
Time (Min.)	<u>1048</u>	<u>1052</u>	<u>1055</u>
Temperature (C°)	<u>11.9</u>	<u>12.5</u>	<u>12.6</u>
pH (Units)	<u>5.40</u>	<u>5.45</u>	<u>5.41</u>
Conductivity at 25°C (mS/cm)	<u>1.23</u>	<u>1.23</u>	<u>1.24</u>
Total Volume Purged	<u>1.43</u> gallons		
Water Appearance (describe color, clarity odor:)	<u>clear</u>		

SAMPLING PROCEDURES

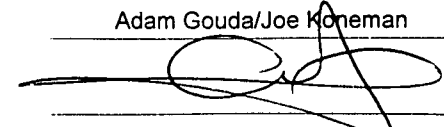
Sampling Procedure (see Note 2): Disposable bailer
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42-2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

to be mw-100

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-109~~ MW-101
 Sample Date: 12/14/99
 Sample Time: _____

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: _____
 Well Type and Location: _____

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): _____
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (____ in)
 Purge Method (see Note 2): _____

Purge Vol. (gal) _____
 Time (Min.) _____
 Temperature (C°) _____
 pH (Units) _____
 Conductivity at 25°C (mS/cm) _____
 Total Volume Purged _____ gallons
 Water Appearance (describe color, clarity odor): _____

*See MW-11
for all details*


SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?	Y	N
VOC	8260	2		HCL	Y	N	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

take me-100

Sample No.: ~~1289~~ **EWB-23**
 Sample Date: **12/13/99**
 Sample Time: **1500**

SITE/SAMPLE LOCATION

Site Name: **Allied signal- South Bend** Project No.: **9822.02**
 Personnel Present: **Adam Gouda, Joe Koneman**
 Activity Start: **1452** Activity End: _____
 Weather: **Sunny 40°**
 Well Type and Location: **Recovery well crack & PVC**

WATER LEVEL/WELL DATA

Well Depth: _____ feet using _____ Solinst Water Depth: _____ feet using _____ Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): **good**
 Measuring Device Decontamination Procedure: **Liquinox-DI water**
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X **3** casing volumes = **5.0** gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (____ in)
 Purge Method (see Note 2): **OPEN SP:got & Purge 5.0 gallons & Sample.**

Purge Vol. (gal)	5.0			
Time (Min.)	1449	_____	_____	_____
Temperature (C°)	13.5	_____	_____	_____
pH (Units)	4.16	_____	_____	_____
Conductivity at 25°C (mS/cm)	1.30	_____	_____	_____
Total Volume Purged	5.0	gallons		
Water Appearance (describe color, clarity odor:)	clear			

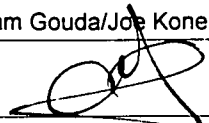
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): **same as above**
 Sample Water Appearance (color, clarity, odor): **clear.**

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles		Preservative/ Volume	Field Filtered?	Cool to 4°C?	
		Volume, Type	Bottle Lot				
VOC	8260	2		HCL	Y	N	N
Total CN	335	1		NaOH	Y	N	N
Phenols	42.2	1		H2SO4	Y	N	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	N
Total Cr,Pb,Ni	6010/7471	1		HNO3	Y	N	N

OTHER OBSERVATIONS

NAME (Print) **Adam Gouda/Joe Koneman**
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.



GROUNDWATER SAMPLING RECORDS

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-109~~ S-20
 Sample Date: 12/15/99
 Sample Time: 9:55

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: .65 steel stickup

WATER LEVEL/WELL DATA

Well Depth: 18.8 feet using Solinst Water Depth: 16.13 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 5.20 gallons to purge
2.67 (✓) .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Bailer

Purge Vol. (gal)	<u>1.73</u>	<u>3.46</u>	<u>5.20</u>	
Time (Min.)	<u>9:49</u>	<u>9:52</u>	<u>9:55</u>	
Temperature (C°)	<u>11.5</u>	<u>12.3</u>	<u>12.4</u>	
pH (Units)	<u>6.65</u>	<u>6.55</u>	<u>6.57</u>	
Conductivity at 25°C (mS/cm)	<u>1.51</u>	<u>1.52</u>	<u>1.53</u>	
Total Volume Purged	_____ gallons			
Water Appearance (describe color, clarity odor:)	<u>Clear, odorless</u>			

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Bailer
 Sample Water Appearance (color, clarity, odor): same as Above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>De</u>	N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

Needs new lock

NAME (Print) Adam Gouda/Joe Koneman

SIGNATURE: _____

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~127-100~~ 5-24
 Sample Date: 2/15/99
 Sample Time: 8:08

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 7:58 Activity End: 8:11
 Weather: Snow cold 29°
 Well Type and Location: .092 PVC float w/ steel fl. no cover.

WATER LEVEL/WEEL DATA

Well Depth: 21.4 feet using Solinst Water Depth: 17.30 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 1.13 gallons to purge
 4.10 () .65 gal/ft (4 in)
 () .092 gal/ft (in)
 Purge Method (see Note 2): D. bailer

Purge Vol. (gal)	0.37	0.74	1.13	
Time (Min.)	8:02	8:05	8:08	
Temperature (C°)	11.2	11.5	11.7	
pH (Units)	6.39	6.38	6.38	
Conductivity at 25°C (mS/cm)	1.85	1.88	1.88	
Total Volume Purged	1.13	gallons		
Water Appearance (describe color, clarity odor):	Clear, eggy odor			

SAMPLING PROCEDURES

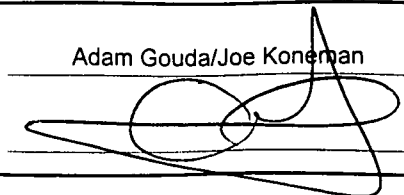
Sampling Procedure (see Note 2): Bailor

Sample Water Appearance (color, clarity, odor): clear, eggy odor

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	(N)	(Y)	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-799~~ S-26
 Sample Date: 12/15/99
 Sample Time: 750

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 727 Activity End: _____
 Weather: Cold 36'
 Well Type and Location: 097 PVC Flant w/ galvanized steel fl. pro cover

WATER LEVEL/WELL DATA

Well Depth: 26.9 feet using Solinst Water Depth: 19.45 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.05 gallons to purge
 () .65 gal/ft (4 in)
7.45 () 0.97 gal/ft (in)
 Purge Method (see Note 2): Disposable bailer 2/3 inch

Purge Vol. (gal)	<u>0.68</u>	<u>1.36</u>	<u>2.05</u>	
Time (Min.)	<u>775</u>			
Temperature (C°)	<u>12.4</u>			
pH (Units)	<u>6.13</u>			
Conductivity at 25°C (mS/cm)	<u>1.13</u>			
Total Volume Purged	<u>205</u> gallons			
Water Appearance (describe color, clarity odor:)	<u>clear</u>			

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable .75 in bailer
 Sample Water Appearance (color, clarity, odor): clear.

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> <u>Y</u>	N
Total CN	335	1		NaOH	Y N Y N	
Phenols	42.2	1		H2SO4	Y N Y N	
Dissolved Cr, Pb, Ni	6040/7471	1		HNO3	Y N Y N	
Total Cr, Pb, Ni	6040/7471	1		HNO3	Y N Y N	

OTHER OBSERVATIONS

Dry after 1 gallon, wait for Rubege then sample.

NAME (Print) Adam Gouda/Joe Koneman

SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No: ~~17-198~~ 5-3
 Sample Date: 12/14/99
 Sample Time: 1450

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: 4" steel galvanized

WATER LEVEL/WELL DATA

Well Depth: 24.6 feet using Solinst Water Depth: 21.44 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 6.1 gallons to purge
3.16 () .65 gal/ft (4 in)
 () _____ gal/ft () in
 Purge Method (see Note 2): Boiler

	<u>2.0</u>	<u>4.0</u>	<u>6.1</u>
Purge Vol. (gal)			
Time (Min.)	<u>1432</u>	<u>1440</u>	<u>1450</u>
Temperature (C°)	<u>13.2</u>	<u>13.8</u>	<u>13.6</u>
pH (Units)	<u>5.84</u>	<u>5.80</u>	<u>5.88</u>
Conductivity at 25°C (mS/cm)	<u>.627</u>	<u>.625</u>	<u>.627</u>
Total Volume Purged	_____ gallons		
Water Appearance (describe color, clarity odor):	<u>translucent w/ Red (Iron) particulates.</u>		

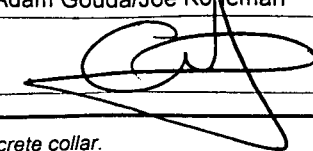
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Boiler
 Sample Water Appearance (color, clarity, odor): Same

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-198~~ MW-10

Sample Date: _____

Sample Time: _____

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02

Personnel Present: Adam Gouda, Joe Koneman

Activity Start: _____ Activity End: _____

Weather: _____

Well Type and Location: 2" PVC fl. mt

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)

Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: _____ feet

Floating Product Thickness: _____ feet using _____
(measuring device)

Well Condition (see Note 1): _____

Measuring Device Decontamination Procedure: Liquinox-DI water

PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
Column feet X () .16 gal/ft (2 in) X 3 casing volumes = _____ gallons to purge
() .65 gal/ft (4 in)
() _____ gal/ft (___ in)

Purge Method (see Note 2): _____

Purge Vol. (gal) _____
Time (Min.) _____
Temperature (C°) _____
pH (Units) _____
Conductivity at 25°C (mS/cm) _____
Total Volume Purged _____ gallons
Water Appearance (describe color, clarity odor): _____

See other observations

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): _____

Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOG	3260	2		HCL	Y N	Y N
Total CN	335	1		NaOH	Y N	Y N
Phenols	42.2	1		H2SO4	Y N	Y N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N	Y N

OTHER OBSERVATIONS

*Well unable to access due to piled
steel from I beams covering it.*

NAME (Print) Adam Gouda/Joe Koneman

SIGNATURE: _____

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
(2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-100~~ *1240*
 Sample Date: *12/13/99*
 Sample Time: *1240*

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: cold snow - 32°
 Well Type and Location: 2" PVC fl. mt.

WATER LEVEL/WELL DATA

Well Depth: 21.0 feet using Solinst Water Depth: 16.75 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): _____
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X (A) .16 gal/ft (2 in) X 3 casing volumes = 2.04 gallons to purge
11.25 () .65 gal/ft (4 in)
 () _____ gal/ft () in)
 Purge Method (see Note 2): Disposable bailer.

Purge Vol. (gal)	<u>0.68</u>	<u>1.36</u>	<u>2.04</u>
Time (Min.)	<u>1229</u>	<u>1235</u>	<u>1240</u>
Temperature (C°)	<u>15.0</u>	<u>15.6</u>	<u>15.6</u>
pH (Units)	<u>5.62</u>	<u>5.60</u>	<u>5.64</u>
Conductivity at 25°C (mS/cm)	<u>1.31</u>	<u>1.36</u>	<u>1.36</u>
Total Volume Purged	<u>2.04</u> gallons		
Water Appearance (describe color, clarity odor):	<u>Silly brown</u>		

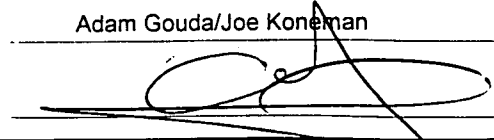
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): disposable bailer
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-135~~ MW-5
 Sample Date: 12/14/99
 Sample Time: 1150

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow 32°
 Well Type and Location: 26 flmnt PVC w/ fl pro cover

WATER LEVEL/WELL DATA

Well Depth: 20.8 feet using Solinst Water Depth: 16.83 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X (X) .16 gal/ft (2 in) X 3 casing volumes = 1.90 gallons to purge
3.97 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable Sailer

Purge Vol. (gal)	<u>1.63</u>	<u>1.26</u>	<u>1.90</u>	
Time (Min.)	<u>1140</u>	<u>1145</u>	<u>1150</u>	
Temperature (C°)	<u>13.5</u>	<u>13.9</u>	<u>13.0</u>	
pH (Units)	<u>5.49</u>	<u>5.50</u>	<u>5.52</u>	
Conductivity at 25°C (mS/cm)	<u>1.24</u>	<u>1.18</u>	<u>1.832</u>	
Total Volume Purged	<u>1.90</u> gallons			
Water Appearance (describe color, clarity odor)		<u>Silty brn</u>		

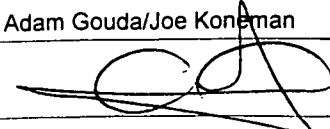
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable Sailer
 Sample Water Appearance (color, clarity, odor): Same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool to 4°C?
					Filtered?		
VOC	8260	2		HCL	Y	<u>N</u>	Y
Total CN	335	1		NaOH	Y	N	Y
Phenols	42-2	1		H2SO4	Y	N	Y
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-123~~ *12-12*
 Sample Date: *12/14/99*
 Sample Time: *1030*

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 29°
 Well Type and Location: 2" PVC FL. mt

WATER LEVEL/WELL DATA

Well Depth: 13.8 feet using Solinst Water Depth: 11.28 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X (2.52) .16 gal/ft (2 in) X 3 casing volumes = 1.20 gallons to purge
 () .65 gal/ft (4 in)
 Purge Method (see Note 2): Disposable bailer

Purge Vol. (gal)	<u>0.40</u>	<u>.80</u>	<u>1.20</u>	
Time (Min.)	<u>1022</u>	<u>1026</u>	<u>1028</u>	
Temperature (C°)	<u>11.1</u>	<u>11.5</u>	<u>11.4</u>	
pH (Units)	<u>5.96</u>	<u>5.91</u>	<u>5.87</u>	
Conductivity at 25°C (mS/cm)	<u>.419</u>	<u>.426</u>	<u>.437</u>	
Total Volume Purged	<u>1.20</u> gallons			
Water Appearance (describe color, clarity odor):	<u>clear opaque / Brown</u>			

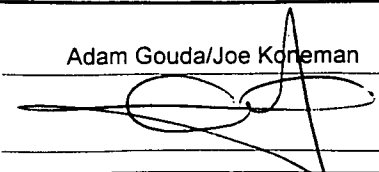
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable bailer
 Sample Water Appearance (color, clarity, odor): same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-190~~ mw-7
 Sample Date: 12/13/99
 Sample Time: 1126

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow 60 29°
 Well Type and Location: 2" PVC FL. mount.

WATER LEVEL/WELL DATA

Well Depth: 18.2 feet using Solinst Water Depth: 15.84 feet using Solinst
(from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
(from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
(measuring device)
 Well Condition (see Note 1): good.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X 2.36 .16 gal/ft (2 in) X 3 casing volumes = 1.11 gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable bailer

Purge Vol. (gal)	<u>2.37</u>	<u>2.74</u>	<u>1.11</u>	
Time (Min.)	<u>1117</u>	<u>1120</u>	<u>1124</u>	
Temperature (C°)	<u>12.4</u>	<u>12.6</u>	<u>12.7</u>	
pH (Units)	<u>5.38</u>	<u>5.39</u>	<u>5.37</u>	
Conductivity at 25°C (mS/cm)	<u>1.20</u>	<u>1.22</u>	<u>1.21</u>	
Total Volume Purged	<u>1.11</u>	gallons		
Water Appearance (describe color, clarity odor:)		<u>5.647 gm</u>		

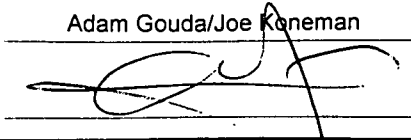
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable bailer
 Sample Water Appearance (color, clarity, odor): Same as above.

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> <u>Y</u>	N
Total CN	335	1		NaOH	Y <u>N</u> <u>Y</u>	N
Phenols	42.2	1		H2SO4	Y <u>N</u> <u>Y</u>	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y <u>N</u> <u>Y</u>	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y <u>N</u> <u>Y</u>	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-195~~ *MLW-2*
 Sample Date: *12/14/95*
 Sample Time: *1012*

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: *old Sr. 95°*
 Well Type and Location: *2" PVC blank*

WATER LEVEL/WELL DATA

Well Depth: *15.4* feet using Solinst Water Depth: *12.73* feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): *good*
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X *2.67* .16 gal/ft (2 in) X 3 casing volumes = *1.28* gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable bailer

Purge Vol. (gal)	<i>0.42</i>	<i>0.84</i>	<i>1.28</i>
Time (Min.)	<i>1004</i>	<i>1008</i>	<i>1011</i>
Temperature (C°)	<i>11.2</i>	<i>11.4</i>	<i>11.1</i>
pH (Units)	<i>5.45</i>	<i>5.45</i>	<i>5.48</i>
Conductivity at 25°C (mS/cm)	<i>1.07</i>	<i>1.05</i>	<i>1.05</i>
Total Volume Purged	<i>1.28</i>		
Water Appearance (describe color, clarity odor):	<i>clear</i>		

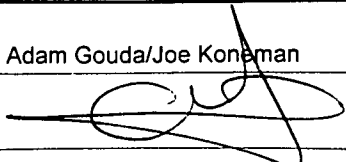
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable bailer
 Sample Water Appearance (color, clarity, odor): clear.

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<input checked="" type="checkbox"/> N	<input checked="" type="checkbox"/> Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-100~~ B6-15
 Sample Date: 12/13/99
 Sample Time: 943

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 927 Activity End: _____
 Weather: cold rain JS
 Well Type and Location: .092 stickup PVC w/ steel galvanized pipe cover.

WATER LEVEL/WELL DATA

Well Depth: 15.3 feet using Solinst Water Depth: 17.72 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.09 gallons to purge
75B () .65 gal/ft (4 in)
 (X) .092 gal/ft (_____ in)
 Purge Method (see Note 2): Deducked barrel

Purge Vol. (gal)	<u>.69</u>	<u>1.38</u>	<u>2.09</u>
Time (Min.)	<u>933</u>	<u>940</u>	<u>943</u>
Temperature (C°)	<u>15.6</u>	<u>16.0</u>	<u>16.2</u>
pH (Units)	<u>5.66</u>	<u>5.63</u>	<u>5.67</u>
Conductivity at 25°C (mS/cm)	<u>1.88</u>	<u>1.87</u>	<u>1.75</u>
Total Volume Purged	<u>2.09</u> gallons		
Water Appearance (describe color, clarity odor):	<u>cloudy / opaque.</u>		

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Deducked barrel

Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	<u>N</u>	<u>Y</u>	N
Total CN	395	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman

SIGNATURE: _____

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~21-435~~ 86-10
 Sample Date: 12/14/99
 Sample Time: 722

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: _____ Activity End: _____
 Weather: Snow Cold 25°
 Well Type and Location: .092

WATER LEVEL/WELL DATA

Well Depth: 27.1 feet using Solinst Water Depth: 17.63 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____
 (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.61 gallons to purge
9.47 () .65 gal/ft (4 in)
 (X) .092 gal/ft (in)
 Purge Method (see Note 2): Dedicated bailer

Purge Vol. (gal)	<u>.87</u>	<u>1.74</u>	<u>2.61</u>
Time (Min.)	<u>912</u>	<u>917</u>	<u>921</u>
Temperature (C°)	<u>14.5</u>	<u>14.7</u>	<u>14.9</u>
pH (Units)	<u>5.75</u>	<u>5.70</u>	<u>5.71</u>
Conductivity at 25°C (mS/cm)	<u>1.46</u>	<u>1.66</u>	<u>1.80</u>
Total Volume Purged	<u>2.61</u> gallons		
Water Appearance (describe color, clarity odor:)	<u>sl. translucent/cloudy but quite clear</u>		

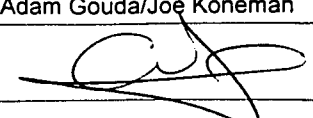
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Dedicated bailer
 Sample Water Appearance (color, clarity, odor): clear.

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> <u>Y</u>	N
Total CN	335	1		NaOH	Y N Y	N
Phenols	42.2	1		H2SO4	Y N Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~12-199~~ mw-9
 Sample Date: 12/13/99
 Sample Time: 855

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 842 Activity End: _____
 Weather: wdl Rain 35'
 Well Type and Location: 2" PVC fl. mount

WATER LEVEL/WELL DATA

Well Depth: 19.8 feet using Solinst (measuring device) Water Depth: 16.24 feet using Solinst (measuring device)
 (from top of well casing) (from top of well casing)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well Casing Difference: _____ feet
 (from ground surface) (for above-ground surface)
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok.
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X 3.56 .16 gal/ft (2 in) X 3 casing volumes = 1.70 gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (_____ in)
 Purge Method (see Note 2): Disposable bulb

Purge Vol. (gal)	<u>0.56</u>	<u>1.12</u>	<u>1.70</u>
Time (Min.)	<u>844</u>		
Temperature (C°)	<u>15.6</u>	<u>16.5</u>	<u>16.6</u>
pH (Units)	<u>5.37</u>	<u>5.12</u>	<u>5.16</u>
Conductivity at 25°C (mS/cm)	<u>1.62</u>	<u>1.65</u>	<u>1.68</u>
Total Volume Purged	<u>1.70</u> gallons		
Water Appearance (describe color, clarity odor:)	<u>clear</u>		

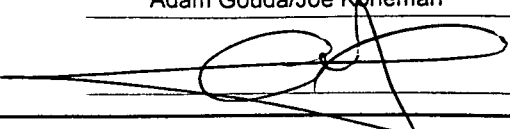
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): Disposable bulb
 Sample Water Appearance (color, clarity, odor): clear

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y <u>N</u> <u>Y</u>	N
Total CN	335	1		NaOH	Y N Y	N
Phenols	42.2	1		H2SO4	Y N Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y N Y	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~9-33~~ 9-33
 Sample Date: 12/14/99
 Sample Time: 828

SITE/SAMPLE LOCATION

Site Name: Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koroman, Paul Shen
 Activity Start: 817 Activity End: _____
 Weather: Cold Rain 35'
 Well Type and Location: .092 PVC Al. mt

WATER LEVEL/WELL DATA

Well Depth: 27.3 feet using Solinst Water Depth: 20.11 feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): ok
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 2.0 gallons to purge
 () .65 gal/ft (4 in)
 7.19 (A) .092 gal/ft (in)
 Purge Method (see Note 2): Stainless steel bailer

Purge Vol. (gal)	0.66	1.32	2.00	2.10	2.20
Time (Min.)	816	822	824	826	828
Temperature (C°)	13.4	14.5	14.8	15.0	14.7
pH (Units)	4.94	5.30	5.40	5.45	5.49
Conductivity at 25°C (mS/cm)	27.398	415	545	555	552
Total Volume Purged	2.0 gallons				
Water Appearance (describe color, clarity odor):	orange/brown w/ particulates				

SAMPLING PROCEDURES

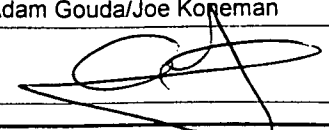
Sampling Procedure (see Note 2): Stainless steel bailer
 Sample Water Appearance (color, clarity, odor): _____

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool	
					Filtered?	to 4°C?		
VOC	8260	2		HCL	Y	N	Y	N
Total CN	335	1		NaOH	Y	N	Y	N
Phenols	42.2	1		H2SO4	Y	N	Y	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N	Y	N

OTHER OBSERVATIONS

Well needs riser, it is loose + shaking
 + can be pulled off to allow water to come in

NAME (Print): Adam Gouda/Joe Koroman
 SIGNATURE: 

- Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES

GROUNDWATER SAMPLE RECORD

Sample No.: ~~12~~ 99 RWD-16
 Sample Date: 12/13/99
 Sample Time: 1449

SITE/SAMPLE LOCATION

Site Name Allied signal- South Bend Project No.: 9822.02
 Personnel Present: Adam Gouda, Joe Koneman
 Activity Start: 1430 Activity End: 1454
 Weather: Sunny 45°
 Well Type and Location: _____

WATER LEVEL/WELL DATA

Well Depth: _____ feet using Solinst Water Depth: _____ feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: _____ feet Protective Casing Stickup: _____ feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: _____ feet
 Floating Product Thickness: _____ feet using _____ (measuring device)
 Well Condition (see Note 1): good
 Measuring Device Decontamination Procedure: Liquinox-DI water
 PI Meter ID: _____ Ambient Air: _____ ppm Well Mouth: _____ ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = 5.0 gallons to purge
 () .65 gal/ft (4 in)
 () _____ gal/ft (____ in)
 Purge Method (see Note 2): OPEN SPIGOT + Purge 5.0 gallons + SAMPLE

Purge Vol. (gal) 5.0
 Time (Min.) 1445
 Temperature (C°) 14.8
 pH (Units) 4.30
 Conductivity at 25°C (mS/cm) 1.27
 Total Volume Purged 5.0 gallons
 Water Appearance (describe color, clarity odor): slight translucent

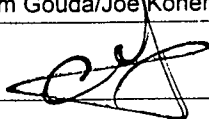
SAMPLING PROCEDURES

Sampling Procedure (see Note 2): same as above
 Sample Water Appearance (color, clarity, odor): same as above

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field		Cool to 4°C?
					Filtered?		
VOC	8260	2		HCL	Y	<u>N</u>	N
Total CN	335	1		NaOH	Y	<u>N</u>	N
Phenols	42.2	1		H2SO4	Y	<u>N</u>	N
Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	<u>N</u>	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	<u>N</u>	N

OTHER OBSERVATIONS

NAME (Print) Adam Gouda/Joe Koneman
 SIGNATURE: 

Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

HARDING LAWSON ASSOCIATES GROUNDWATER SAMPLE RECORD

Sample No.: ~~121-199~~ **RWB-22**
 Sample Date: **12/13/99**
 Sample Time: **1414**

SITE/SAMPLE LOCATION

Site Name **Allied signal- South Bend** Project No.: **9822.02**
 Personnel Present: **Adam Gouda, Joe Koneman**
 Activity Start: **1400** Activity End: **1419**
 Weather: **Sunny 45°**
 Well Type and Location: **Recovery well.**

WATER LEVEL/WEELL DATA

Well Depth: feet using Solinst Water Depth: feet using Solinst
 (from top of well casing) (measuring device) (from top of well casing) (measuring device)
 Historical Well Depth: feet Protective Casing Stickup: feet Protect. Casing Well
 (from ground surface) (for above-ground surface) Casing Difference: feet
 Floating Product Thickness: feet using (measuring device)
 Well Condition (see Note 1): **good**
 Measuring Device Decontamination Procedure: **Liquinox-DI water**
 PI Meter ID: Ambient Air: ppm Well Mouth: ppm

PURGING PROCEDURES

Height of Water () .041 gal/ft (1 in)
 Column feet X () .16 gal/ft (2 in) X 3 casing volumes = **5.0** gallons to purge
 () .65 gal/ft (4 in)
 () gal/ft (in)
 Purge Method (see Note 2): **OPEN Spigot + Purge 5 gallons + Sample**
 Purge Vol. (gal) **5.0**
 Time (Min.) **1409**
 Temperature (C°) **13.6**
 pH (Units) **3.92**
 Conductivity at 25°C (mS/cm) **1.29**
 Total Volume Purged **5.0** gallons
 Water Appearance (describe color, clarity odor): **opaque w/ black particulates**

SAMPLING PROCEDURES

Sampling Procedure (see Note 2): **Same as above**
 Sample Water Appearance (color, clarity, odor): **Same opaque**

ANALYTICAL PARAMETERS

Analysis	Method	No. of Bottles Volume, Type	Bottle Lot	Preservative/ Volume	Field Filtered?	Cool to 4°C?
VOC	8260	2		HCL	Y	N
Total CN	335	1		NaOH	Y	N
Phenols	42.2	1		H2SO4	Y	N
total Dissolved Cr, Pb, Ni	6010/7471	1		HNO3	Y	N
Total Cr, Pb, Ni	6010/7471	1		HNO3	Y	N

OTHER OBSERVATIONS

NAME (Print) **Adam Gouda/Joe Koneman**
 SIGNATURE:

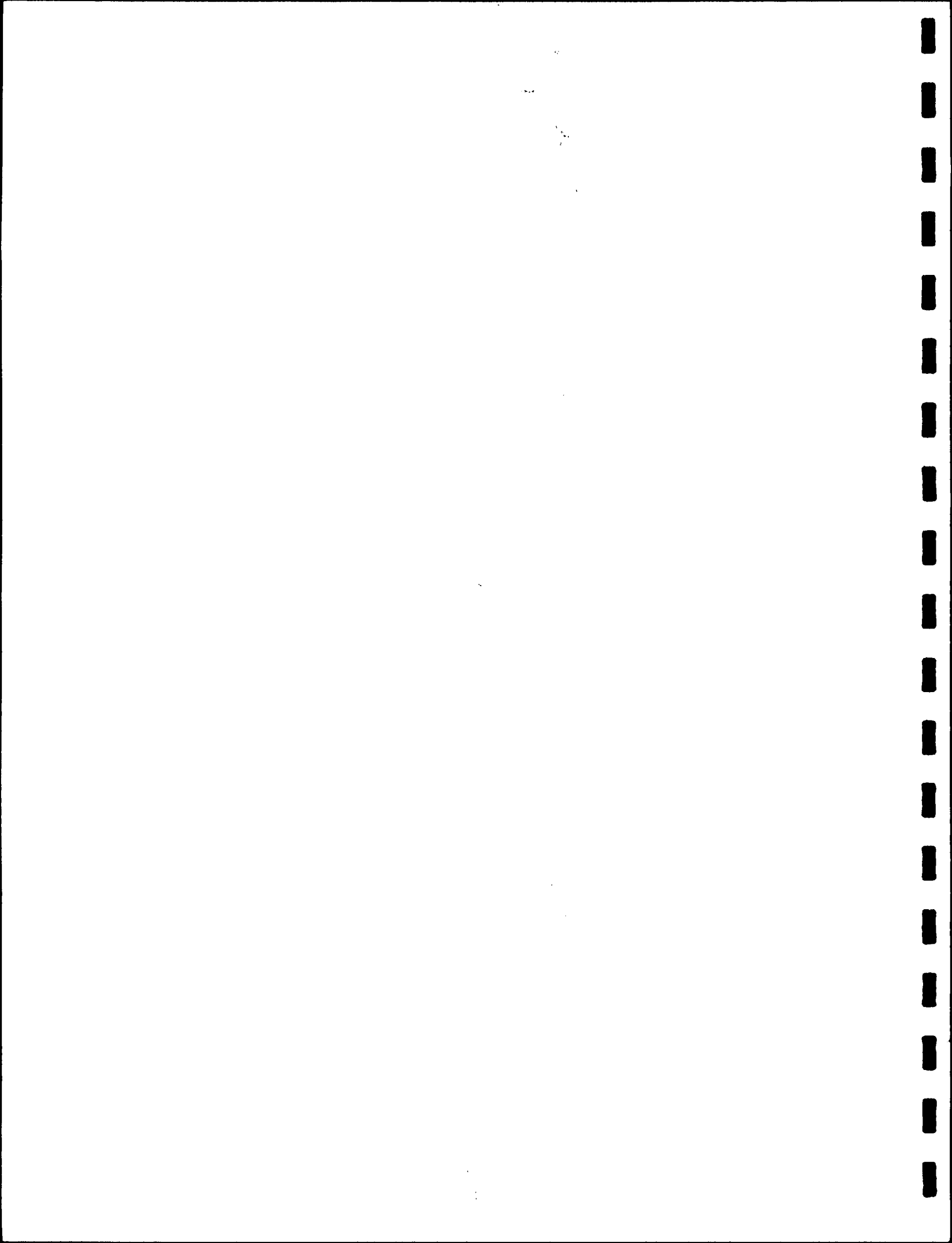
Notes: (1) Described whether well was locked and the condition of the protective casing and concrete collar.
 (2) Describe sequence of purging/sampling including equipment type and decontamination method.

ANALYTICAL RESULTS - DECEMBER 1999

- **SHALLOW MONITORING WELLS**
- **INTERMEDIATE MONITORING WELLS**
- **DEEP MONITORING WELLS**
- **NAPHTHA RECOVERY WELLS**
- **VOC RECOVERY WELLS**



SHALLOW MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	RESULT TYPE	86-10	86-15	9-33	MW-11	MW-11
	(ug/l)	(ug/l)			12/14/1999	12/14/1999	12/14/1999	12/14/1999	12/14/1999
					Primary	Primary	Primary	Primary	Duplicate 1
Acrolein					<100	<100	<100	<100	<100
Acrylonitrile					<100	<100	<100	<100	<100
Benzene			5		<5	<5	<5	<5	<5
Bromoform			100		<5	<5	<5	<5	<5
Bromomethane					<10	<10	<10	<10	<10
Carbon tetrachloride			5		<5	<5	<5	<5	<5
Chlorobenzene			100		<5	<5	<5	<5	<5
Chlorodibromomethane			100		<5	<5	<5	<5	<5
Chloroethane					<10	<10	<10	<10	<10
Chloroform			100		<5	<5	<5	<5	<5
Chloromethane					<10	<10	<10	<10	<10
Dichlorobromomethane			100		<5	<5	<5	<5	<5
Dichlorodifluoromethane					<10	<10	<10	<10	<10
1,1-Dichloroethane					<5	<5	<5	<5	<5
1,2-Dichloroethane			5		<5	<5	<5	<5	<5
1,1-Dichloroethene			7		<5	<5	<5	<5	<5
trans-1,2-Dichloroethene			100		6.9	43	<5	<5	<5
cis-1,2-Dichloroethene			70		[78]	27	<5	[100]	[110]
1,2-Dichloropropane			5		<5	<5	<5	<5	<5
cis-1,3-Dichloropropene					<5	<5	<5	<5	<5
trans-1,3-Dichloropropene					<5	<5	<5	<5	<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	86-10 12/14/1999	9-33 12/14/1999	MW-11 12/14/1999	MW-11 12/14/1999
	RESULT TYPE		Primary	Primary	Primary	Duplicate 1
Ethylbenzene	(ug/l)	700	<5	<5	<5	<5
Methylene chloride	(ug/l)	5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)		<5	<5	<5	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	5.1	<5	<5	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5	<5	<5
Trichloroethene	(ug/l)	5	[64]	<5	<5	<5
Trichlorofluoromethane	(ug/l)		<10	<10	<10	<10
Vinyl chloride	(ug/l)	2	<10	<10	[29]	[39]
Acetone	(ug/l)		<100	<100	<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100	<100	<100
Styrene	(ug/l)	100	<5	<5	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Vinyl Acetate	(ug/l)		<50	<50	<50	<50
2-Hexanone	(ug/l)		<50	<50	<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50	<50	<50
Carbon disulfide	(ug/l)		<5	<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5	<5	<5

For RCL VOC [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	MW-12	MW-13	MW-2	MW-4	MW-5
	(ug/l)				Primary	Primary	Primary	Primary	Primary
Acrolein					<100	<100	<1000	<100	<100
Acrylonitrile					<100	<100	<1000	<100	<100
Benzene			5		<5	<5	<50	<5	<5
Bromoform			100		<5	<5	<50	<5	<5
Bromomethane					<10	<10	<100	<10	<10
Carbon tetrachloride			5		<5	<5	<50	<5	<5
Chlorobenzene			100		<5	<5	<50	<5	<5
Chlorodibromomethane			100		<5	<5	<50	<5	<5
Chloroethane					<10	<10	<100	<10	<10
Chloroform			100		<5	<5	<50	<5	<5
Chloromethane					<10	<10	<100	<10	<10
Dichlorobromomethane			100		<5	<5	<50	<5	<5
Dichlorodifluoromethane					<10	<10	<100	<10	<10
1,1-Dichloroethane					<5	<5	230	11	6.3
1,2-Dichloroethane			5		<5	<5	[55]	<5	<5
1,1-Dichloroethene			7		<5	<5	<50	<5	<5
trans-1,2-Dichloroethene			100		9.9	<5	<50	<5	<5
cis-1,2-Dichloroethene			70		[240]	<5	[3500]	[120]	9.5
1,2-Dichloropropane			5		<5	<5	<50	<5	<5
cis-1,3-Dichloropropene					<5	<5	<50	<5	<5
trans-1,3-Dichloropropene					<5	<5	<50	<5	<5

For RGL VOC
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	MW-12	MW-13	MW-2	MW-4	MW-5
					12/14/1999	12/13/1999	12/14/1999	12/14/1999	12/14/1999
					Primary	Primary	Primary	Primary	Primary
Ethylbenzene			(ug/l)	700	<5	<5	<50	<5	<5
Methylene chloride			(ug/l)	5	<5	<5	<50	<5	<5
1,1,2,2-Tetrachloroethane			(ug/l)		<5	<5	<50	<5	<5
Tetrachloroethene			(ug/l)	5	<5	<5	<50	<5	[5.1]
Toluene			(ug/l)	1000	<5	<5	<50	<5	<5
1,1,1-Trichloroethane			(ug/l)	200	8.4	<5	[790]	5.8	7.4
1,1,2-Trichloroethane			(ug/l)	5	<5	<5	<50	<5	<5
Trichloroethene			(ug/l)	5	[63]	<5	<50	[34]	[21]
Trichlorofluoromethane			(ug/l)		<10	<10	<100	<10	<10
Vinyl chloride			(ug/l)	2	<10	<10	<100	<10	[13]
Acetone			(ug/l)		<100	<100	<1000	<100	<100
2-Butanone (ME-K)			(ug/l)		<100	<100	<1000	<100	<100
Styrene			(ug/l)	100	<5	<5	<50	<5	<5
Xylene (total)			(ug/l)	10000	<10	<10	<100	<10	<10
Vinyl Acetate			(ug/l)		<50	<50	<500	<50	<50
2-Hexanone			(ug/l)		<50	<50	<500	<50	<50
4-Methyl-2-pentanone			(ug/l)		<50	<50	<500	<50	<50
Carbon disulfide			(ug/l)		<5	<5	<50	<5	<5
1,2-Dichlorobenzene			(ug/l)	600	<5	<5	<50	<5	<5
1,3-Dichlorobenzene			(ug/l)	600	<5	<5	<50	<5	<5
1,4-Dichlorobenzene			(ug/l)	75	<5	<5	<50	<5	<5

For RCL VOC [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	MW-7	MW-9	S15	S16	S17
					12/14/1999	12/14/1999	12/14/1999	12/14/1999	12/15/1999
					Primary	Primary	Primary	Primary	Primary
	(ug/l)				<100	<100	<100	<100	<100
Acrolein	(ug/l)				<100	<100	<100	<100	<100
Acrylonitrile	(ug/l)				<100	<100	<100	<100	<100
Benzene	(ug/l)	5			<5	<5	<5	<5	<5
Bromoform	(ug/l)	100			<5	<5	<5	<5	<5
Bromomethane	(ug/l)				<10	<10	<10	<10	<10
Carbon tetrachloride	(ug/l)	5			<5	<5	<5	<5	<5
Chlorobenzene	(ug/l)	100			<5	<5	<5	<5	<5
Chlorodibromomethane	(ug/l)	100			<5	<5	<5	<5	<5
Chloroethane	(ug/l)				<10	<10	<10	<10	<10
Chloroform	(ug/l)	100			<5	<5	<5	<5	<5
Chloromethane	(ug/l)				<10	<10	<10	<10	<10
Dichlorobromomethane	(ug/l)	100			<5	<5	<5	<5	<5
Dichlorodifluoromethane	(ug/l)				<10	<10	<10	<10	<10
1,1-Dichloroethane	(ug/l)				6.8	<5	14	<5	<5
1,2-Dichloroethane	(ug/l)	5			<5	<5	<5	<5	<5
1,1-Dichloroethene	(ug/l)	7			<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100			<5	<5	<5	18	<5
cis-1,2-Dichloroethene	(ug/l)	70			[240]	<5	12	68	<5
1,2-Dichloropropane	(ug/l)	5			<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	(ug/l)				<5	<5	<5	<5	<5
trans-1,3-Dichloropropene	(ug/l)				<5	<5	<5	<5	<5

For RCL VOC

For RCL VOC

||=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	MW-7	MW-9	S15	S16	S17
	(ug/l)				12/14/1999	12/14/1999	12/14/1999	12/14/1999	12/15/1999
					Primary	Primary	Primary	Primary	Primary
Ethylbenzene			700		<5	<5	<5	<5	<5
Methylene chloride			5		<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane					<5	<5	<5	<5	<5
Tetrachloroethene			5		<5	<5	<5	<5	<5
Toluene			1000		<5	<5	<5	<5	<5
1,1,1-Trichloroethane			200		<5	<5	<5	17	16
1,1,2-Trichloroethane			5		<5	<5	<5	<5	<5
Trichloroethene			5		<5	<5	<5	[380]	[17]
Trichlorofluoromethane					<10	<10	<10	<10	<10
Vinyl chloride			2		[82]	<10	[30]	<10	<10
Acetone					<100	<100	<100	<100	<100
2-Butanone (MEK)					<100	<100	<100	<100	<100
Styrene			100		<5	<5	<5	<5	<5
Xylene (total)			10000		<10	<10	<10	<10	<10
Vinyl Acetate					<50	<50	<50	<50	<50
2-Hexanone					<50	<50	<50	<50	<50
4-Methyl-2-pentanone					<50	<50	<50	<50	<50
Carbon disulfide					<5	<5	<5	<5	<5
1,2-Dichlorobenzene			600		<5	<5	<5	<5	<5
1,3-Dichlorobenzene			800		<5	<5	<5	<5	<5
1,4-Dichlorobenzene			75		<5	<5	<5	<5	<5

For RCL VOC [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	S20	S21	S22	S23	S24
					12/15/1999	12/15/1999	12/15/1999	12/15/1999	12/15/1999
					Primary	Primary	Primary	Primary	Primary
	(ug/l)				<100	<100	<100	<100	<100
Acrolein	(ug/l)				<100	<100	<100	<100	<100
Acrylonitrile	(ug/l)				<100	<100	<100	<100	<100
Benzene	(ug/l)	5			<5	<5	<5	<5	<5
Bromoform	(ug/l)	100			<5	<5	<5	<5	<5
Bromomethane	(ug/l)				<10	<10	<10	<10	<10
Carbon tetrachloride	(ug/l)	5			<5	<5	<5	<5	<5
Chlorobenzene	(ug/l)	100			<5	<5	<5	<5	<5
Chlorodibromomethane	(ug/l)	100			<5	<5	<5	<5	<5
Chloroethane	(ug/l)				<10	<10	<10	<10	<10
Chloroform	(ug/l)	100			<5	<5	<5	<5	<5
Chloromethane	(ug/l)				<10	<10	<10	<10	<10
Dichlorobromomethane	(ug/l)	100			<5	<5	<5	<5	<5
Dichlorodifluoromethane	(ug/l)				<10	<10	<10	<10	<10
1,1-Dichloroethane	(ug/l)				<5	<5	<5	<5	<5
1,2-Dichloroethane	(ug/l)	5			<5	<5	<5	<5	<5
1,1-Dichloroethene	(ug/l)	7			<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100			<5	28	67	<5	[170]
cis-1,2-Dichloroethene	(ug/l)	70			<5	36	53	<5	[120]
1,2-Dichloropropane	(ug/l)	5			<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	(ug/l)				<5	<5	<5	<5	<5
trans-1,3-Dichloropropene	(ug/l)				<5	<5	<5	<5	<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S20 12/15/1999 Primary	S21 12/15/1999 Primary	S22 12/15/1999 Primary	S23 12/15/1999 Primary	S24 12/15/1999 Primary
RESULT TYPE	(ug/l)	700	<5	<5	<5	<5	<5
Ethylbenzene	(ug/l)	700	<5	<5	<5	<5	<5
Methylene chloride	(ug/l)	5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)		<5	<5	<5	<5	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5	<5	<5	<5
Trichloroethene	(ug/l)	5	<5	[26]	[5.8]	[18]	[32]
Trichlorofluoromethane	(ug/l)		<10	<10	<10	<10	<10
Vinyl chloride	(ug/l)	2	<10	<10	<10	<10	<10
Acetone	(ug/l)		<100	<100	<100	<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100	<100	<100	<100
Styrene	(ug/l)	100	<5	<5	<5	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10
Vinyl Acetate	(ug/l)		<50	<50	<50	<50	<50
2-Hexanone	(ug/l)		<50	<50	<50	<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50	<50	<50	<50
Carbon disulfide	(ug/l)		<5	<5	<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5	<5	<5	<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	S25	S26	S27	S3	S4A
DATE	DATE	DATE	DATE	DATE	DATE	DATE
RESULT TYPE	US-PMCL	Primary	Primary	Primary	Primary	Primary
(ug/l)		<100	<100	<100	<100	<100
Acrolein		<100	<100	<100	<100	<100
Acrylonitrile		<100	<100	<100	<100	<100
Benzene	5	<5	<5	<5	<5	<5
Bromoform	100	<5	<5	<5	<5	<5
Bromomethane		<10	<10	<10	<10	<10
Carbon tetrachloride	5	<5	<5	<5	<5	<5
Chlorobenzene	100	<5	<5	<5	<5	<5
Chlorodibromomethane	100	<5	<5	<5	<5	<5
Chloroethane		<10	<10	<10	<10	<10
Chloroform	100	<5	<5	<5	<5	<5
Chloromethane		<10	<10	<10	<10	<10
Dichlorobromomethane	100	<5	<5	<5	<5	<5
Dichlorodifluoromethane		<10	<10	<10	<10	<10
1,1-Dichloroethane		<5	<5	65	<5	26
1,2-Dichloroethane	5	<5	<5	<5	<5	<5
1,1-Dichloroethene	7	<5	<5	[11]	<5	<5
trans-1,2-Dichloroethene	100	<5	<5	<5	<5	<5
cis-1,2-Dichloroethene	70	<5	7.1	18	<5	[180]
1,2-Dichloropropane	5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene		6.2	<5	<5	<5	<5
trans-1,3-Dichloropropene		<5	<5	<5	<5	<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S25 12/15/1999 Primary	S26 12/14/1999 Primary	S27 12/15/1999 Primary	S3 12/14/1999 Primary	S4A 12/14/1999 Primary
	RESULT TYPE						
Ethylbenzene	(ug/l)	700	<5	<5	<5	<5	<5
Methylene chloride	(ug/l)	5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)		<5	<5	<5	<5	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	5.2	<5	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5	<5	<5	<5
Trichloroethene	(ug/l)	5	<5	[28]	[30]	<5	<5
Trichlorofluoromethane	(ug/l)		<10	<10	<10	<10	<10
Vinyl chloride	(ug/l)	2	<10	<10	<10	<10	<10
Acetone	(ug/l)		<100	<100	<100	<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100	<100	<100	<100
Styrene	(ug/l)	100	<5	<5	<5	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10
Vinyl Acetate	(ug/l)		<50	<50	<50	<50	<50
2-Hexanone	(ug/l)		<50	<50	<50	<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50	<50	<50	<50
Carbon disulfide	(ug/l)		<5	<5	<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5	<5	<5	<5

For RCL VOC [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT	TYPE	US-PMCL	SITE	DATE	RESULT
Acrolein			(ug/l)			SS	12/14/1999	<100
Acrylonitrile			(ug/l)					<100
Benzene			(ug/l)	5				<5
Bromoform			(ug/l)	100				<5
Bromomethane			(ug/l)					<10
Carbon tetrachloride			(ug/l)	5				<5
Chlorobenzene			(ug/l)	100				<5
Chlorodibromomethane			(ug/l)	100				<5
Chloroethane			(ug/l)					<10
Chloroform			(ug/l)	100				<5
Chloromethane			(ug/l)					<10
Dichlorobromomethane			(ug/l)	100				<5
Dichlorodifluoromethane			(ug/l)					<10
1,1-Dichloroethane			(ug/l)	5				<5
1,2-Dichloroethane			(ug/l)	5				[160]
1,1,1-Trichloroethane			(ug/l)	7				<5
trans-1,2-Dichloroethene			(ug/l)	100				8.3
cis-1,2-Dichloroethene			(ug/l)	70				[70]
1,2-Dichloropropane			(ug/l)	5				<5
cis-1,3-Dichloropropene			(ug/l)					<5
trans-1,3-Dichloropropene			(ug/l)					<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

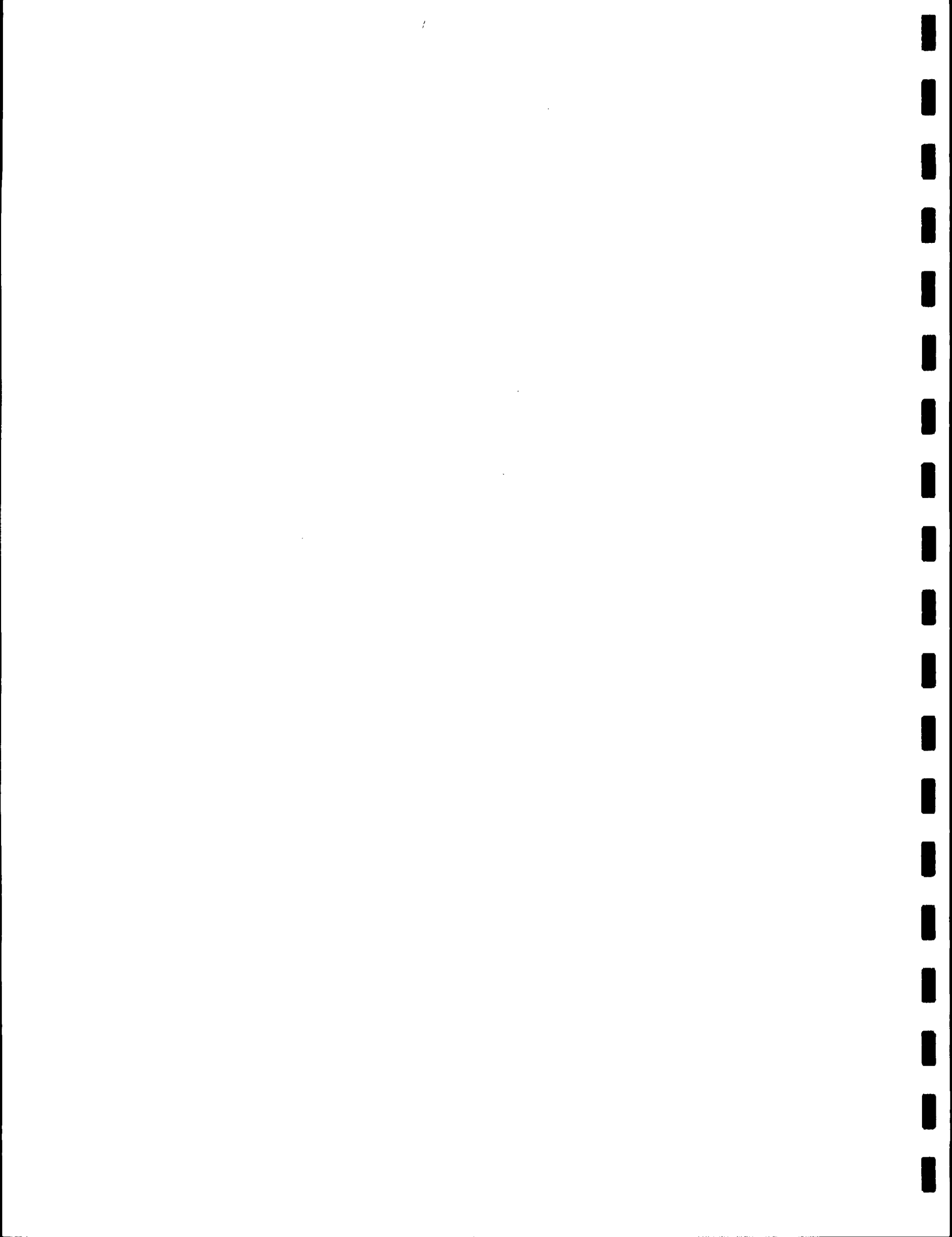
PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	
Ethylbenzene	S9	12/14/1999	(ug/l)	700	<5
Methylene chloride			(ug/l)	5	<5
1,1,2,2-Tetrachloroethane			(ug/l)	5	<5
Tetrachloroethene			(ug/l)	5	<5
Toluene			(ug/l)	1000	<5
1,1,1-Trichloroethane			(ug/l)	200	<5
1,1,2-Trichloroethane			(ug/l)	5	<5
Trichloroethane			(ug/l)	5	<5
Trichlorofluoromethane			(ug/l)		<10
Vinyl chloride			(ug/l)	2	<10
Acetone			(ug/l)		<100
2-Butanone (MEK)			(ug/l)		<100
Styrene			(ug/l)	100	<5
Xylene (total)			(ug/l)	10000	<10
Vinyl Acetate			(ug/l)		<50
2-Hexanone			(ug/l)		<50
4-Methyl-2-pentanone			(ug/l)		<50
Carbon disulfide			(ug/l)		<5
1,2-Dichlorobenzene			(ug/l)	600	<5
1,3-Dichlorobenzene			(ug/l)	600	<5
1,4-Dichlorobenzene			(ug/l)	75	<5

For RCL VOC

---=Not analyzed

INTERMEDIATE MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	7D	8D
Acrolein	(ug/l)		<100	<100
Acrylonitrile	(ug/l)		<100	<100
Benzene	(ug/l)	5	<5	<5
Bromoform	(ug/l)	100	<5	<5
Bromomethane	(ug/l)		<10	<10
Carbon tetrachloride	(ug/l)	5	<5	<5
Chlorobenzene	(ug/l)	100	<5	<5
Chlorodibromomethane	(ug/l)	100	<5	<5
Chloroethane	(ug/l)		<10	<10
Chloroform	(ug/l)	100	<5	<5
Chloromethane	(ug/l)		<10	<10
Dichlorobromomethane	(ug/l)	100	<5	<5
Dichlorodifluoromethane	(ug/l)		<10	<10
1,1-Dichloroethane	(ug/l)		<5	<5
1,2-Dichloroethane	(ug/l)	5	<5	<5
1,1-Dichloroethene	(ug/l)	7	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5	23
cis-1,2-Dichloroethene	(ug/l)	70	19	[200]
1,2-Dichloropropane	(ug/l)	5	<5	<5
cis-1,3-Dichloropropene	(ug/l)		<5	<5
trans-1,3-Dichloropropene	(ug/l)		<5	<5

[] = Greater than Action Level --- = Not analyzed

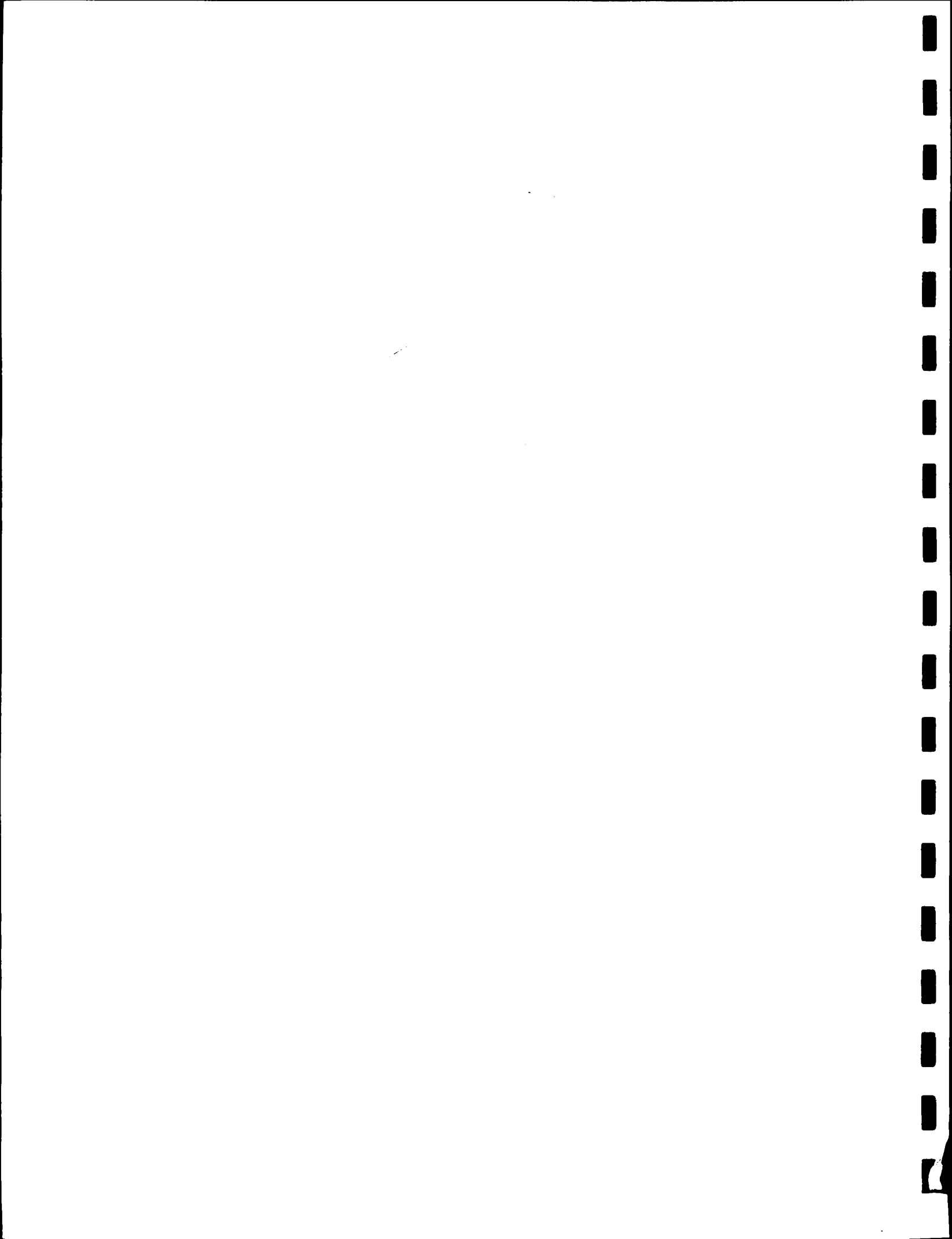
Analytical Summary - VOCs in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	7D 12/15/1999	8D 12/15/1999
Ethylbenzene	(ug/l)	700	<5	<5
Methylene chloride	(ug/l)	5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)	5	<5	<5
Tetrachloroethane	(ug/l)	5	<5	<5
Toluene	(ug/l)	1000	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5
Trichloroethene	(ug/l)	5	[6.2]	<5
Trichlorofluoromethane	(ug/l)		<10	<10
Vinyl chloride	(ug/l)	2	<10	<10
Acetone	(ug/l)		<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100
Styrene	(ug/l)	100	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10
Vinyl Acetate	(ug/l)		<50	<50
2-Hexanone	(ug/l)		<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50
Carbon disulfide	(ug/l)		<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5

[]=Greater than Action Level ---=Not analyzed

DEEP MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	2D		5D		D5	
		DATE	RESULT TYPE	DATE	RESULT TYPE	DATE	RESULT TYPE
Acrolein		12/15/1999	Primary	12/15/1999	Duplicate 1	12/16/1999	Duplicate 1
Acrylonitrile	(ug/l)	<100		<100		<100	
Benzene	(ug/l)	5		<5		<5	
Bromoform	(ug/l)	100		<5		<5	
Bromomethane	(ug/l)	<10		<10		<10	
Carbon tetrachloride	(ug/l)	5		<5		<5	
Chlorobenzene	(ug/l)	100		<5		<5	
Chlorodibromomethane	(ug/l)	100		<5		<5	
Chloroethane	(ug/l)	<10		<10		<10	
Chloroform	(ug/l)	100		<5		<5	
Chloromethane	(ug/l)	<10		<10		<10	
Dichlorobromomethane	(ug/l)	<5		<5		<5	
Dichlorodifluoromethane	(ug/l)	<10		<10		<10	
1,1-Dichloroethane	(ug/l)	<5		<5		<5	
1,2-Dichloroethane	(ug/l)	5	[6.5]	<5		<5	
1,1-Dichloroethene	(ug/l)	7		<5		<5	
trans-1,2-Dichloroethene	(ug/l)	100		<5		<5	
cis-1,2-Dichloroethene	(ug/l)	70		<5		<5	
1,2-Dichloropropane	(ug/l)	5		<5		<5	
cis-1,3-Dichloropropene	(ug/l)	<5		<5		<5	
trans-1,3-Dichloropropene	(ug/l)	<5		<5		<5	

For RCL VOC

For RCL VOC

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	2D 12/15/1999 Primary	5D 12/15/1999 Primary	5D 12/15/1999 Duplicate 1	D5 12/16/1999 Primary	D5 12/16/1999 Duplicate 1
Ethylbenzene	(ug/l)	700	<5	<5	<5	<5	<5	<5
Methylene chloride	(ug/l)	5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)		<5	<5	<5	<5	<5	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5	<5	<5	<5	<5
Trichloroethene	(ug/l)	5	<5	<5	<5	<5	<5	<5
Trichlorofluoromethane	(ug/l)		<10	<10	<10	<10	<10	<10
Vinyl chloride	(ug/l)	2	<10	<10	<10	<10	<10	<10
Acetone	(ug/l)		<100	<100	<100	<100	<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100	<100	<100	<100	<100
Styrene	(ug/l)	100	<5	<5	<5	<5	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10	<10
Vinyl Acetate	(ug/l)		<50	<50	<50	<50	<50	<50
2-Hexanone	(ug/l)		<50	<50	<50	<50	<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50	<50	<50	<50	<50
Carbon disulfide	(ug/l)		<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5	<5	<5	<5	<5

For RCL VOC ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	Primary
Acrolein	D7	12/18/1999	(ug/l)	<100	
Acrylonitrile			(ug/l)	<100	
Benzene			(ug/l)	5	<5
Bromoform			(ug/l)	100	<5
Bromomethane			(ug/l)		<10
Carbon tetrachloride			(ug/l)	5	<5
Chlorobenzene			(ug/l)	100	<5
Chlorodibromomethane			(ug/l)	100	<5
Chloroethane			(ug/l)		<10
Chloroform			(ug/l)	100	<5
Chloromethane			(ug/l)		<10
Dichlorobromomethane			(ug/l)	100	<5
Dichlorodifluoromethane			(ug/l)		<10
1,1-Dichloroethane			(ug/l)		<5
1,2-Dichloroethane			(ug/l)	5	[39]
1,1,1-Trichloroethane			(ug/l)	7	<5
trans-1,2-Dichloroethene			(ug/l)	100	<5
cis-1,2-Dichloroethene			(ug/l)	70	<5
1,2-Dichloropropane			(ug/l)	5	<5
cis-1,3-Dichloropropene			(ug/l)		<5
trans-1,3-Dichloropropene			(ug/l)		<5

For RCL VOC []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	SITE	DATE	RESULT TYPE	US-PMCL
Ethylbenzene	D7	12/18/1999			D7	12/18/1999	Primary	
			(ug/l)	700				<5
Methylene chloride			(ug/l)	5				<5
1,1,2,2-Tetrachloroethane			(ug/l)					<5
Tetrachloroethene			(ug/l)	5				<5
Toluene			(ug/l)	1000				<5
1,1,1-Trichloroethane			(ug/l)	200				<5
1,1,2-Trichloroethane			(ug/l)	5				<5
Trichloroethene			(ug/l)	5				<5
Trichlorofluoromethane			(ug/l)					<10
Vinyl chloride			(ug/l)	2				<10
Acetone			(ug/l)					<100
2-Butanone (MEK)			(ug/l)					<100
Styrene			(ug/l)	100				<5
Xylene (total)			(ug/l)	10000				<10
Vinyl Acetate			(ug/l)					<50
2-Hexanone			(ug/l)					<50
4-Methyl-2-pentanone			(ug/l)					<50
Carbon disulfide			(ug/l)					<5
1,2-Dichlorobenzene			(ug/l)	600				<5
1,3-Dichlorobenzene			(ug/l)	600				<5
1,4-Dichlorobenzene			(ug/l)	75				<5

For RCL VOC

---=Not analyzed

NAPHTHA RECOVERY WELLS



Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	E3		RWB16		RWB22		RWB23		RWB23 Duplicate 1
				12/13/1999	Primary	12/13/1999	Primary	12/13/1999	Primary	12/13/1999	Primary	
Ethylbenzene	(ug/l)	700		320	<5	<5	<5	<5	<5	<10	<5	<5
Methylene chloride	(ug/l)	5		<5	<5	<5	<5	<5	<5	<10	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)			<5	<5	<5	<5	<5	<5	<10	<5	<5
Tetrachloroethene	(ug/l)	5		<5	<5	<5	<5	[14]	[14]	<10	<5	[14]
Toluene	(ug/l)	1000		190	<5	<5	<5	12	12	<5	12	12
1,1,1-Trichloroethane	(ug/l)	200		<5	<5	<5	<5	<5	<5	<10	<5	<5
1,1,2-Trichloroethane	(ug/l)	5		<5	<5	<5	<5	<5	<5	<10	<5	<5
Trichloroethene	(ug/l)	5		<5	<5	<5	<5	[69]	[64]	<10	<5	[64]
Trichlorofluoromethane	(ug/l)			<10	<10	<10	<10	<20	<20	<10	<10	<10
Vinyl chloride	(ug/l)	2		<10	<10	<10	<10	[600]	[600]	<10	[600]	[600]
Acetone	(ug/l)			110	<100	<100	<100	<200	<200	<100	<100	<100
2-Butanone (MEK)	(ug/l)			<100	<100	<100	<100	<200	<200	<100	<100	<100
Styrene	(ug/l)	100		<5	<5	<5	<5	<10	<10	<5	<5	<5
Xylene (total)	(ug/l)	10000		640	<10	<10	<10	<20	<20	<10	<10	<10
Vinyl Acetate	(ug/l)			<50	<50	<50	<50	<100	<100	<50	<50	<50
2-Hexanone	(ug/l)			<50	<50	<50	<50	<100	<100	<50	<50	<50
4-Methyl-2-pentanone	(ug/l)			<50	<50	<50	<50	<100	<100	<50	<50	<50
Carbon disulfide	(ug/l)			17	<5	<5	<5	<10	<10	<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600		<5	<5	<5	<5	<10	<10	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600		<5	<5	<5	<5	<10	<10	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75		<5	<5	<5	<5	<10	<10	<5	<5	<5

For RCL VOC [] = Greater than Action Level --- = Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naptha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	RESULT	TYPE	US:PMCL	SITE	DATE	US:PMCL	RESULT	TYPE
Cyanide			200								
Chromium, Total			100								
Lead, Total			15								
Nickel, Total			100								
	E3	12/13/1999	10	<20	Primary		RWB16	12/13/1999	10	<5	Primary
				[84]							
	RWB22	12/13/1999		<5	Primary		RWB23	12/13/1999	9	<5	Primary
				<2.0						<2.0	Duplicate 1
				<20						<20	

[] = Greater than Action Level --- = Not analyzed



Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	(ug/l)
	E3	12/13/1999	Primary		10
	RWB16	12/13/1999	Primary		<10
	RWB22	12/13/1999	Primary		<10
	RWB23	12/13/1999	Primary		<10
	RWB23	12/13/1999	Duplicate 1		<10
Total Phenols					

For RCL VOC

---=Not analyzed



VOC RECOVERY WELLS



Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	EW-1 12/13/1999	EW-2 12/13/1999	EW-3 12/13/1999
Acrolein		<100	<100	<100
Acrylonitrile		<100	<100	<100
Benzene	5	<5	<5	<5
Bromoform	100	<5	<5	<5
Bromomethane		<10	<10	<10
Carbon tetrachloride	5	<5	<5	<5
Chlorobenzene	100	<5	<5	<5
Chlorodibromomethane	100	<5	<5	<5
Chloroethane		<10	<10	<10
Chloroform	100	<5	<5	<5
Chloromethane		<10	<10	<10
Dichlorobromomethane	100	<5	<5	<5
Dichlorodifluoromethane		<10	<10	<10
1,1-Dichloroethane		25	38	<5
1,2-Dichloroethane	5	[7]	<5	<5
1,1,1-Dichloroethane	7	<5	6	<5
trans-1,2-Dichloroethane	100	50	24	90
cis-1,2-Dichloroethane	70	[180]	[140]	42
1,2-Dichloropropane	5	<5	<5	<5
cis-1,3-Dichloropropene		<5	<5	<5
trans-1,3-Dichloropropene		<5	<5	<5

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-FMCL	EW-1 12/13/1999	EW-2 12/13/1999	EW-3 12/13/1999
Ethylbenzene	(ug/l)	700	<5	<5	<5
Methylene chloride	(ug/l)	5	<5	<5	<5
1,1,2,2-Tetrachloroethane	(ug/l)		<5	<5	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	32	<5
1,1,2-Trichloroethane	(ug/l)	5	<5	<5	<5
Trichloroethene	(ug/l)	5	[120]	[79]	[26]
Trichlorofluoromethane	(ug/l)		<10	<10	<10
Vinyl chloride	(ug/l)	2	[34]	<10	<10
Acetone	(ug/l)		<100	<100	<100
2-Butanone (MEK)	(ug/l)		<100	<100	<100
Styrene	(ug/l)	100	<5	<5	<5
Xylene (total)	(ug/l)	10000	<10	<10	<10
Vinyl Acetate	(ug/l)		<50	<50	<50
2-Hexanone	(ug/l)		<50	<50	<50
4-Methyl-2-pentanone	(ug/l)		<50	<50	<50
Carbon disulfide	(ug/l)		<5	<5	<5
1,2-Dichlorobenzene	(ug/l)	600	<5	<5	<5
1,3-Dichlorobenzene	(ug/l)	600	<5	<5	<5
1,4-Dichlorobenzene	(ug/l)	75	<5	<5	<5

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
VOC Recovery Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	EW-1	EW-2	EW-3
Total Phenols		(ug/l)		<10	<10	<10

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 12/01/1999 thru 12/31/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	U.S.-PMCL	SITE DATE	EW-1 12/13/1999	EW-2 12/13/1999	EW-3 12/13/1999
Chromium, Total	100	(ug/l)	<5	<5	<5
Lead, Total	15	(ug/l)	5.5	[36]	[18]
Nickel, Total	100	(ug/l)	<20	<20	<20
Cyanide, total	200	(ug/l)	30	20	40

[]=Greater than Action Level ---=Not analyzed

CURRENT AND HISTORICAL DATA TABLES

- SHALLOW MONITORING WELLS
- INTERMEDIATE MONITORING WELLS
- DEEP MONITORING WELLS
- NAPHTHA RECOVERY WELLS
- VOC RECOVERY WELLS



SHALLOW MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	7-25 03/18/1997	7-25 06/03/1997	7-25 07/18/1997	7-25 09/25/1997	7-25 12/08/1997
Benzene	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<2	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5	<5	<5	<5.0	<5.0
trans-1,2-Dichloroethane	(ug/l)	100	<5	<5	<5	<5.0	<5.0
cis-1,2-Dichloroethane	(ug/l)	70	<5	<5	<5	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Tetrachloroethane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5	<5.0	<5.0
Trichloroethane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<5	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	7-25		7-25	
			06/09/1998	12/12/1998	06/22/1999	06/22/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	7-25	7-25	7-25	7-25
Total Phenols				<10	<10	<10	<10
				03/18/1997	09/25/1997	06/09/1998	06/22/1999

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	U.S. PMCL	7-25 03/18/1997	7-25 09/25/1997	7-25 06/22/1999
Chromium (T), Dissolved (Filtered)	(ug/l)	--	<5	<5
Chromium, Total	100	7	--	--
Cyanide	200	<5	--	--
Lead, Dissolved (Filtered)	(ug/l)	--	<2.0	<2.0
Lead, Total	15	[27]	--	--
Nickel, Dissolved (Filtered)	(ug/l)	--	<20	<20
Nickel, Total	100	<20	--	--

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

SOURCE: 7-25

DATE SAMPLED	SAMPLE NO.	LAB	MCL		NOTES
				METHOD	
11/07/86	31	AQJA			No VOC Detected
06/05/87	2	AQJA			No VOC Detected
09/09/87	2	AQJA			No VOC Detected
01/13/88	3	AQJA			No VOC Detected
02/08/88	2	AQJA			No VOC Detected
05/18/88	2	AQJA			No VOC Detected
09/22/88	2	AQJA			No VOC Detected
12/09/88	13	AQJA			No VOC Detected
03/31/92	22	AQJA		0240	No VOC Detected
09/02/92	43	AQJA		0240	No VOC Detected

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

NPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIED SIGNAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

alliedsignal

associates

Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	86-10 03/18/1997	86-10 06/05/1997	86-10 09/25/1997	86-10 12/09/1997	86-10 06/11/1998
Benzene	5	<5	<5	<5.0E	<5.0	<5.0
Vinyl Chloride	2	<10	<2	<10E	<10	<10
Chloroform	100	<5	<5	<5.0E	<5.0	<5.0
1,1-Dichloroethane		<5	<5	<5.0E	<5.0	<5.0
1,2-Dichloroethane	5	<5	<5	<5.0E	<5.0	<5.0
1,1-Dichloroethene	7	<5	<5	<5.0E	<5.0	<5.0
trans-1,2-Dichloroethene	100	9.6	12	12J	12	9.1
cis-1,2-Dichloroethene	70	[76]	[95]	[92J	[98]	[71]
Methylene chloride	5	<5	<5	<5.0E	<5.0	<5.0
Tetrachloroethene	5	<5	<5	<5.0E	<5.0	<5.0
Toluene	1000	<5	<5	<5.0E	<5.0	<5.0
1,1,1-Trichloroethane	200	<5	<5	<5.0E	<5.0	<5.0
Trichloroethene	5	[88]	[100]	[120J	[120]	[63]
Acetone		<100	<100	<100E	<100	<100
Xylene (total)	10000	<10	<5	<10E	<10	<10
Carbon disulfide		<5	<5	<5.0E	<5.0	<5.0
1,2-Dichloropropane	5	<5	<5	<5.0E	<5.0	<5.0
Chloroethane		<10	<10	<10E	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[J]=Greater than Action Level The following qualifier(s) exist: E, J ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	86-10	86-10	86-10
	DATE	12/12/1998	06/23/1999	12/14/1999
	(ug/l)	US-PMCL		
Benzene	(ug/l)	5	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10
Chloroform	(ug/l)	100	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5
1,1,1-Dichloroethane	(ug/l)	7	<5.0	<5
trans-1,2-Dichloroethane	(ug/l)	100	<5.0	6.9
cis-1,2-Dichloroethane	(ug/l)	70	[81]	[78]
Methylene chloride	(ug/l)	5	<5.0	<5
Tetrachloroethane	(ug/l)	5	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	5.1
Trichloroethene	(ug/l)	5	[79]	[64]
Acetone	(ug/l)		<100	<100
Xylene (total)	(ug/l)	10000	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5
Chloroethane	(ug/l)		<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	86-10	86-10	86-10	86-10
Total Phenols				<10	<10	<10	<10
				03/18/1997	09/25/1997	06/11/1998	06/23/1999

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	86-10	86-10	86-10	86-10
	DATE		03/18/1997	09/25/1997	06/17/1998	05/23/1999
Cyanide	(ug/l)	200	<5	6	<5	5
Chromium (T), Dissolved	(ug/l)		---	<5	13	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	---	---	---
Lead, Total	(ug/l)	15	2.4	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			86-10	12 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q		
A.VOA	BENZENE	UG/L	5.0 U		5.0 U							5.0 U
	CHLOROETHANE	UG/L	10 U		10 U							10 U
	CHLOROFORM	UG/L	5.0 U		5.0 U							5.0 U
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U	J	2.5		4.9			5.0 U
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U							5.0 U
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U							5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	16		9.2				7.5			5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	77		75				78			12
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U				5.0 U			88
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U				5.0 U			5.0 U
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U				5.0 U			5.0 U
	1,1,1-TRICHLOROETHENE	UG/L	10		6.4				22			7.2
	TRICHLOROETHENE	UG/L	120		94				120			100
	VINYL CHLORIDE	UG/L	10 U		10 U				10 U			10 U
	ACETONE	UG/L	100 U		100 U				100 U			100 U
XYLENE (TOTAL)	UG/L	10 U		10 U				10 U			10 U	
CARBON DISULFIDE	UG/L	5.0 U		5.0 U				5.0 U			5.0 U	
TOTAL VOCs:		UG/L	223		187.1			232.4			272.2	
E.METALS	CHROMIUM	UG/L	5 U									
	LEAD	UG/L	2.8					13				
	NICKEL	UG/L	11					2.7				
H.MISC	CYANIDE, TOTAL	UG/L	5 U					5.4		J		
	PHENOLS	UG/L	10 U									5 U
		UG/L	10 U									10 U

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		15 MAR 95		08 JUN 95		19 SEP 95		05 DEC 95	
			86-10	86-10	08 DEC 94	08 DEC 94	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U				5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U				10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U				5.0 U		J		J		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U				5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U				5.0 U		J		J		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	18			16					11			
	CIS-1,2-DICHLOROETHENE	UG/L	90			78			15		75		16	
	METHYLENE CHLORIDE	UG/L	5 U				5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	-				5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U				5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U				5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	141			35			3.6		4.0		53	
	VINYL CHLORIDE	UG/L	10 U				10 U		J		100		10 U	
	ACETONE	UG/L	100 U				100 U		2.2		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U				10 U				10 U		10 U	
TOTAL VOCs:		UG/L	249			129			216.2		192.1		150	
E.METALS	LEAD	UG/L	-								1.4		J	
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-				2.0 U							
	NICKEL (DISSOLVED)	UG/L	-				20 U							
H.MISC	CYANIDE, TOTAL	UG/L	-				5 U						5 U	
	PHENOLS	UG/L	-				10 U						10 U	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: 06-10

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DI-CHLORO-ETHANE		1,1-DI-CHLORO-ETHANE		1,1,1-TRICHLORO-ETHANE		1,1,1-TRICHLORO-ETHANE		TRI-CHLORO-ETHENE		VINYL CHLORIDE		SUM		NOTES
				MPL	UG/L	P-70	UG/L	P-100	UG/L	200	UG/L	5	UG/L	2	UG/L	UG/L		
06/02/86	7	AQUA		10	10	85.4	140	140	308	110	303							
10/10/86	19	AQUA		6.7	100	130	89.7	100	440	110	675							
02/24/89	22	AQUA		10	100	41	140	100	340	110	501							
06/06/89	10	AQUA	624	10	67.3	35.3	140	100	300	110	403							
09/07/89	3	AQUA	8240	10	75.7	35.1	15.5	100	230	110	313							
12/12/89	15	AQUA	8240	10	92.4	48.8	110	100	440	110	507							
02/28/90	7	AQUA	8240	10	150	61.8	110	100	270	110	504							
06/01/90	3	AQUA	8240	10	81.7	48.5	140	100	360	110	490							
08/23/90	12	AQUA	8240	10	55.2	30.8	110	100	330	110	436							
10/29/90	21	AQUA	8240	10	87.4	39.7	10.4	100	327	110	465							
03/01/91	14	AQUA	8240	21.2	88.9	46.2	6.0	100	310	110	472							
05/31/91	6	AQUA	8240	10	85.2	78.6	16.9	100	342.5	110	523							
06/30/91	16	AQUA	8240	10	42.4	21.5	32.6	100	282	110	379							
11/13/91	10	AQUA	8240	10	57.3	28.1	15.4	100	270	110	371							
01/23/92	7	AQUA	8240	5.8	53.7	24.0	14.5	100	243	110	341							
01/23/92	8	AQUA	8240	6.1	53.9	24.7	13.5	100	240	110	346							
04/01/92	26	AQUA	8240	10	47.7	10.0	15.1	100	246	110	327							
08/21/92	5	AQUA	8240	10	64.1	20.1	45.7	100	272	110	402							
11/02/92	36	AQUA	8240	9.3	61.9	18.5	61.0	100	191	110	342							
02/05/93	23	AQUA	8240	10	80.2	21.8	17.9	100	324	110	394							
05/12/93	21	AQUA	8240	10	91.8	24.0	12.0	100	225	110	353							
09/01/93	21	AQUA	8240	10	76.4	15.8	140	100	143	110	235							
12/02/93	15	AQUA	8240	5.7	115	32.8	29.1	100	255	110	437							
02/18/94	16	AQUA	8240	10	39.7	23.7	140	100	102	110	163							
05/06/94	23	AQUA	8240	10	78.8	12.5	27.1	100	158	110	277							
08/13/94	18	AQUA	8240	6.7	80.1	10.8	82.7	100	171	110	333							

PARAMETER

o - Date Sampled

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - MD U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

SHALLOW MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA



Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	86-15	86-15	86-15	86-15	86-15
	(ug/l)				03/18/1997	06/05/1997	06/05/1997	09/05/1997	12/09/1997
					Primary	Primary	Duplicate 1	Primary	Primary
Benzene	5				<5	<5	<5	<5.0	<5.0
Vinyl Chloride	2				<10	<2	<2	<10	<10
Chloroform	100				<5	<5	<5	<5.0	<5.0
1,1-Dichloroethane					<5	<5	<5	<5.0	<5.0
1,2-Dichloroethane	5				<5	<5	<5	<5.0	<5.0
1,1-Dichloroethene	7				<5	<5	<5	<5.0	<5.0
trans-1,2-Dichloroethene	100				60	58	53	48	50
cis-1,2-Dichloroethene	70				35	38	33	32	33
Methylene chloride	5				<5	<5	<5	<5.0	<5.0
Tetrachloroethene	5				<5	<5	<5	<5.0	<5.0
Toluene	1000				<5	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	200				<5	<5	<5	<5.0	<5.0
Trichloroethene	5				[330]	[330]	[290]	[260]	[290]
Acetone					<100	<100	<100	<100	<100
Xylene (total)	10000				<10	<5	<5	<10	<10
Carbon disulfide					<5	<5	<5	<5.0	<5.0
1,2-Dichloropropane	5				<5	<5	<5	<5.0	<5.0
Chloroethane					<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	RESULT TYPE	86-15 06/11/1998 Primary	86-15 12/12/1998 Primary	86-15 06/23/1999 Primary	86-15 12/14/1999 Primary
Benzene	(ug/l)	5		<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2		<10	<10	<10	<10
Chloroform	(ug/l)	100		<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)			<5.0	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5		<5.0	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7		<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100		86	68	68	43
cis-1,2-Dichloroethene	(ug/l)	70		57	40	43	27
Methylene chloride	(ug/l)	5		<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5		<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000		<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200		<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5		[350]	[390]	[300]	[340]
Acetone	(ug/l)			<100	<100	<100	<100
Xylene (total)	(ug/l)	10000		<10	<10	<10	<10
Carbon disulfide	(ug/l)			<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5		<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)			<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	U.S. PMCL	DATE	86-15	86-15	86-15	86-15
Total Phenols				<10	<10	<10	<10
				03/18/1997	09/25/1997	06/11/1998	06/23/1999

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	86-15 03/18/1997	86-15 09/25/1997	86-15 06/11/1998	86-15 06/23/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	18	6.9
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	---	---	---
Lead, Total	(ug/l)	15	6.4	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		08 JUN 95		15 MAR 95		19 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	25 U		13 U		25 U		25 U		25 U	
	CHLOROETHANE	UG/L	50 U		25 U		25 U		50 U		50 U	
	1,1-DICHLOROETHANE	UG/L	25 U		13 U		13 U		25 U		25 U	
	1,2-DICHLOROETHANE	UG/L	25 U		13 U		13 U		25 U		25 U	
	1,1-DICHLOROETHENE	UG/L	25 U		13 U		13 U		25 U		25 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	47		35		35		45		38	
	CIS-1,2-DICHLOROETHENE	UG/L	61		230		230		59		37	
	METHYLENE CHLORIDE	UG/L	25 U		13 U		13 U		25 U		25 U	
	TETRACHLOROETHENE	UG/L	-		13 U		13 U		25 U		25 U	
	TOLUENE	UG/L	25 U		13 U		13 U		25 U		25 U	
	1,1,1-TRICHLOROETHANE	UG/L	43		470		470		6.5		310	
	TRICHLOROETHENE	UG/L	625		60		60		440		50 U	
	VINYL CHLORIDE	UG/L	138		250 U		250 U		500 U		500 U	
	ACETONE	UG/L	50 U		25 U		25 U		50 U		50 U	
	XYLENE (TOTAL)	UG/L	914		795		795		550.5		385	
	TOTAL VOCs:	UG/L			468.8		468.8		3.8			
E.METALS	LEAD	UG/L	-		-		-		-		-	
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.3		2.3		-		-	
	NICKEL (DISSOLVED)	UG/L	-		22		22		-		-	
H.MISC	CYANIDE, TOTAL	UG/L	-		5 U		5 U		5 U		-	
	PHENOLS	UG/L	-		10 U		10 U		10 U		-	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: 06-15

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DICHLOROETHYLENE	CIS-1,2-DICHLOROETHYLENE	TRANS-1,2-DICHLOROETHYLENE	1,1,1-TRICHLOROETHYLENE	TRI-CHLOROETHYLENE	VINYL CHLORIDE	SUM	NOTES
				UG/L	P-70 UG/L	P-100 UG/L	UG/L	UG/L	UG/L	UG/L	
08/02/86	4	AQUA		181	140	48.1	61.9	1620	10	1733	
10/10/86	13	AQUA		181	140	33.7	38.0	1280	10	1352	
02/24/89	24	AQUA		181	140	9.2	9.1	400	10	418	
06/08/89	9	AQUA	824	181	18.2	33.5	7.6	600	10	659	
09/07/89	2	AQUA	8240	181	20.8	35.0	181	470	10	527	
12/12/89	14	AQUA	8240	181	12.2	20.5	10.6	440	10	403	
02/28/90	8	AQUA	8240	181	18.5	32.7	11.8	520	10	581	
06/01/90	2	AQUA	8240	181	6.7	11.8	10.8	390	10	419	
08/23/90	11	AQUA	8240	181	181	6.1	7.6	370	10	304	
10/29/90	23	AQUA	8240	181	8.8	10.8	11.2	604	10	435	
03/01/91	13	AQUA	8240	6.1	7.9	13.9	18.1	322	10	380	
05/31/91	5	AQUA	8240	181	181	39.1	8.3	492.6	10	490	
08/30/91	13	AQUA	8240	181	8.4	13.8	8.8	323	10	354	
11/13/91	8	AQUA	8240	181	12.5	14.2	7.4	301	10	415	
11/13/91	9	AQUA	8240	181	10.4	15.2	7.1	345	10	378	
01/23/92	6	AQUA	8240	5.6	12.1	21.3	11.5	350	10	401	
04/01/92	25	AQUA	8240	181	11.9	21.1	7.5	404	10	445	
08/21/92	4	AQUA	8240	181	20.9	18.2	8.8	546	11.1	605	
11/02/92	34	AQUA	8240	181	28.6	34.1	7.6	488	10	478	
11/02/92	35	AQUA	8240	181	28.7	33.4	8.3	376	10	446	
02/05/93	22	AQUA	8240	181	33.1	36.2	7.0	440	10	516	
05/12/93	19	AQUA	8240	181	28.7	34.1	6.8	364	10	434	
05/12/93	20	AQUA	8240	181	33.9	40.9	7.8	383	10	468	
09/01/93	20	AQUA	8240	7.3	47.4	41.6	8.1	373	10	477	
12/02/93	14	AQUA	8240	181	78.1	53.9	181	891	10	1021	
02/10/94	15	AQUA	8240	181	39.7	31.1	181	374	10	447	
05/06/94	21	AQUA	8240	181	31.8	37.8	181	370	10	440	
05/06/94	22	AQUA	8240	181	37.2	36.3	181	344	10	410	
08/13/94	17	AQUA	8240	181	84.5	62.0	181	575	109	801	

NOTES:
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ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - MD U.S. EPA PUBLISHED LEVEL
P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALL REGIONAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

Wraggerson
Associates
Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT	TYPE	US:PMCL	9-33	9-33	9-33	9-33	9-33
	(ug/l)		(ug/l)			03/19/1997	08/04/1997	09/26/1997	09/26/1997	06/10/1998
						Primary	Primary	Primary	Duplicate 1	Primary
Benzene	5		<5			<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	2		<10			<2	<10	<10	<10	<10
Chloroform	100		<5			<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane			<5			<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	5		<5			<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	7		<5			<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	100		<5			<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	70		<5			<5	<5	<5.0	<5.0	<5.0
Methylene chloride	5		<5			<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	5		<5			<5	<5	<5.0	<5.0	<5.0
Toluene	1000		<5			<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	200		<5			<5	<5	<5.0	<5.0	<5.0
Trichloroethene	5		<5			<5	<5	<5.0	<5.0	<5.0
Acetone			<100			<100	<100	<100	<100	<100
Xylene (total)	10000		<10			<5	<5	<10	<10	<10
Carbon disulfide			<5			<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	5		<5			<5	<5	<5.0	<5.0	<5.0
Chloroethane			<10			<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	9-33	9-33	9-33
	DATE	12/12/1998	06/22/1999	12/14/1999
	RESULT TYPE	US-PMCL	Primary	Primary
Benzene	(ug/l)	5	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10
Chloroform	(ug/l)	100	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5
Acetone	(ug/l)		<100	<100
Xylene (total)	(ug/l)	10000	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5
Chloroethane	(ug/l)		<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
	9-33	03/19/1997	Primary		10
	9-33	09/26/1997	Primary		<10
	9-33	09/26/1997	Duplicate 1		<10
	9-33	06/10/1998	Primary		<10
	9-33	06/22/1999	Primary		<10

Total Phenols

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	U.S.-PMCL	9-33	9-33	9-33	9-33	9-33
					03/19/1997	09/26/1997	09/26/1997	09/26/1997	06/10/1998
					Primary	Primary	Duplicate 1	Primary	Primary
Cyanide	(ug/l)			200	<5	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)				---	<5	<5	<5	48
Lead, Dissolved	(ug/l)				---	<2.0	<2.0	<2.0	76
Nickel, Dissolved	(ug/l)				---	<20	<20	<20	<20
Chromium, Total	(ug/l)			100	<5	---	---	---	---
Lead, Total	(ug/l)			15	<2	---	---	---	---
Nickel, Total	(ug/l)			100	<20	---	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		05 SEP 96		10 DEC 96	
			9-33	13 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	ACETONE	UG/L	10 U		10 U		10 U		10 U		10 U	
	XYLENE (TOTAL)	UG/L	100 U		100 U		100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
TOTAL VOCs:		UG/L	0		0		0		0		0	
E-METALS	CHROMIUM	UG/L	5 U		5 U		5 U		5 U		5 U	
	LEAD	UG/L	1.0		1.0		1.3		1.3		1.3	
	NICKEL	UG/L	20 U		20 U		20 U		20 U		20 U	
H-MISC	CYANIDE, TOTAL	UG/L	5 U		5 U		5 U		5 U		5 U	
	PHENOLS	UG/L	10 U		10 U		10		10		10	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

SAMPLE ID
9-33

DATE COLLECTED
07 DEC 94

GROUP	PARAMETER NAME	UNITS	07 DEC 94 AMOUNT	13 MAR 95 AMOUNT	06 JUN 95 AMOUNT	20 SEP 95 AMOUNT	06 DEC 95 AMOUNT
A.VOA	BENZENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	CHLOROETHANE	UG/L	10 U	10 U	10 U	10 U	10 U
	1,1-DICHLOROETHANE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	1,2-DICHLOROETHANE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	1,1-DICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	METHYLENE CHLORIDE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	TETRACHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	TOLUENE	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U
	1,1,1-TRICHLOROETHANE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	TRICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	VINYL CHLORIDE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U
	ACETONE	UG/L	10 U	10 U	10 U	10 U	10 U
	XYLENE (TOTAL)	UG/L	100 U	12	12	100 U	100 U
		UG/L	10 U	10 U	10 U	10 U	10 U
	TOTAL VOCs:	UG/L	0	0	12	0	0
E.METALS	LEAD	UG/L	-	-	-	4.2	-
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-	-	-	-	-
	NICKEL (DISSOLVED)	UG/L	-	2.0 U	-	-	-
H.MISC	CYANIDE, TOTAL	UG/L	-	5 U	-	-	-
	PHENOLS	UG/L	-	10 U	-	-	-

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERN QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: 9-33

DATE SAMPLED	SAMPLE NO.	LAB	MCL	METHOD	NOTES
01/08/87	11	AQUA			No VOC Detected
05/05/87	3	AQUA			No VOC Detected
09/03/87	3	AQUA			No VOC Detected
01/13/88	3	AQUA			No VOC Detected
02/18/88	31	AQUA			No VOC Detected
05/19/88	3	AQUA			No VOC Detected
09/23/88	3	AQUA			No VOC Detected
12/05/88	15	AQUA			No VOC Detected
02/22/89	4	AQUA			No VOC Detected
06/10/89	35	AQUA	024		No VOC Detected
09/07/89	4	AQUA	0240		No VOC Detected
12/17/89	32	AQUA	0240		No VOC Detected
02/28/90	9	AQUA	0240		No VOC Detected
06/04/90	33	AQUA	0240		No VOC Detected
06/04/90	34	AQUA	0240		No VOC Detected
08/23/90	2	AQUA	0240		No VOC Detected
10/27/90	3	AQUA	0240		No VOC Detected
02/28/91	11	AQUA	0240		No VOC Detected
06/01/91	24	AQUA	0240		No VOC Detected
08/29/91	11	AQUA	0240		No VOC Detected
11/12/91	6	AQUA	0240		No VOC Detected
01/23/92	12	AQUA	0240		No VOC Detected
04/01/92	32	AQUA	0240		No VOC Detected
08/22/92	11	AQUA	0240		No VOC Detected
02/04/93	8	AQUA	0240		No VOC Detected
02/16/93	1	AQUA	0240		No VOC Detected
05/11/93	12	AQUA	0240		No VOC Detected
05/11/93	13	AQUA	0240		No VOC Detected
08/31/93	2	AQUA	0240		No VOC Detected
12/02/93	18	AQUA	0240		No VOC Detected
02/17/94	7	AQUA	0240		No VOC Detected
05/05/94	12	AQUA	0240		No VOC Detected
05/05/94	13	AQUA	0240		No VOC Detected
05/14/94	9	AQUA	0240		No VOC Detected

PARAMETER
 0 - Date Sampled

SHALLOW MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIED SIGNAL INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA

algaleason
 associates

Environmental and Geotechnical Services

NOTES:
 OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
 NO RESULT FOR 10/92 SAMPLING EPISODE ONE TO LAB ERROR.

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	MW-1 03/18/1997	MW-1 06/05/1997	MW-1 09/26/1997	MW-1 12/10/1997
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 ---= Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	UNIT	U.S.-PMCL	MW-1 03/18/1997	MW-1 09/26/1997
Cyanide	(ug/l)	200	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5
Lead, Dissolved	(ug/l)		---	<2.0
Nickel, Dissolved	(ug/l)		---	<20
Chromium, Total	(ug/l)	100	30J	---
Lead, Total	(ug/l)	15	[19]J	---
Nickel, Total	(ug/l)	100	[140]	---

Summary of Detected Constituents during Quarterly Monitoring [] = Greater than Action Level The following qualifier(s) exist: J --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
	DATE	03/18/1997	06/05/1997	09/26/1997	12/09/1997	06/12/1998			
RESULT TYPE	US-PMCL	Primary	Primary	Primary	Primary	Primary			
(ug/l)	5	<130	<5	<25	<10	<20			
Benzene									
Vinyl Chloride		<250	<2	[70]	[83]	[93]			
Chloroform		<130	<5	<25	<10	<20			
1,1-Dichloroethane		<130	260	190	110	220			
1,2-Dichloroethane		<130	<5	[49]	<10	<20			
1,1-Dichloroethene		<130	<5	<25	<10	<20			
trans-1,2-Dichloroethene		<130	<5	<25	14	27			
cis-1,2-Dichloroethene		[2400]	[3500]	[2600]	[950]	[2100]			
Methylene chloride		<130	<5	<25	<10	<20			
Tetrachloroethene		<130	<5	<25	<10	<20			
Toluene		<130	<5	<25	<10	<20			
1,1,1-Trichloroethane		[880]	[960]	[500]	[240]	[490]			
Trichloroethene		[170]	<5	[36]	[19]	[51]			
Acetone		<2500	<100	<500	<200	<400			
Xylene (total)		<250	<5	<50	<20	<40			
Carbon disulfide		<130	<5	<25	<10	<20			
1,2-Dichloropropane		<130	<5	<25	<10	<20			
Chloroethane		<250	<10	<50	<20	<40			

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	MW-2		MW-2		MW-2	
				12/13/1998	12/13/1998	06/22/1999	12/14/1999	Primary	Primary
Benzene	(ug/l)	5	<25	<25	<25	<25	<50	<50	<50
Vinyl Chloride	(ug/l)	2	[100]	[110]	[76]	<100	<100	<100	<100
Chloroform	(ug/l)	100	<25	<25	<25	<50	<50	<50	<50
1,1-Dichloroethane	(ug/l)	240	240	250	250	230	230	230	230
1,2-Dichloroethane	(ug/l)	5	[32]	[33]	<25	[55]	[55]	[55]	[55]
1,1-Dichloroethene	(ug/l)	7	[28]J	[38]	<25	<50	<50	<50	<50
trans-1,2-Dichloroethene	(ug/l)	100	38	39	<25	<50	<50	<50	<50
cis-1,2-Dichloroethene	(ug/l)	70	[3000]	[3200]	[2900]	[3500]	[3500]	[3500]	[3500]
Methylene chloride	(ug/l)	5	[38]JB	[49]	<25	<50	<50	<50	<50
Tetrachloroethene	(ug/l)	5	<25	<25	<25	<50	<50	<50	<50
Toluene	(ug/l)	1000	<25	<25	<25	<50	<50	<50	<50
1,1,1-Trichloroethane	(ug/l)	200	[700]J	<25	[920]	[790]	[790]	[790]	[790]
Trichloroethene	(ug/l)	5	[40]	[44]	[46]	<50	<50	<50	<50
Acetone	(ug/l)	10000	<500	<500	<500	<1000	<1000	<1000	<1000
Xylene (total)	(ug/l)	10000	<50	<50	<50	<100	<100	<100	<100
Carbon disulfide	(ug/l)	5	<25	<25	<25	<50	<50	<50	<50
1,2-Dichloropropane	(ug/l)	5	<25	<25	<25	<50	<50	<50	<50
Chloroethane	(ug/l)	5	<50	<50	<50	<100	<100	<100	<100

Summary of Detected Constituents during Quarterly Monitoring

[J]=Greater than Action Level The following qualifier(s) exist: J, B ----=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	MW-2	MW-2	MW-2	MW-2
Total Phenols				<10	10	<10	<10
				03/18/1997	09/26/1997	06/12/1998	06/22/1999

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	MW:2 03/18/1997	MW:2 09/26/1997	MW:2 06/12/1998	MW:2 06/22/1999
Cyanide (ug/l)	200	<5	<5	<5	10
Chromium (T), Dissolved (ug/l)		---	<5	7.8	<5
Lead, Dissolved (ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved (ug/l)		---	<20	<20	<20
Chromium, Total (ug/l)	100	<5	---	---	---
Lead, Total (ug/l)	15	12	---	---	---
Nickel, Total (ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-3 03/18/1997	MW-3 03/18/1997	MW-3 06/05/1997	MW-3 09/26/1997	MW-3 12/10/1997
	RESULT TYPE		Primary	Duplicate 1	Primary	Primary	Primary
	(ug/l)						
Benzene	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<10	<2	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5	5.0	5.1
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	38	39	50	57	60
Methylene chloride	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	7.6	8.6	6.9
Trichloroethene	(ug/l)	5	[6.2]	[6]	[6.0]	[8.4]	[5.7]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<5	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	US-PMCL
Benzene	MW-3	12/10/1997	Duplicate 1	5	<5.0
Vinyl Chloride				2	<10
Chloroform				100	<5.0
1,1-Dichloroethane				5.2	5.2
1,2-Dichloroethane				5	<5.0
1,1-Dichloroethene				7	<5.0
trans-1,2-Dichloroethene				100	<5.0
cis-1,2-Dichloroethene				70	62
Methylene chloride				5	<5.0
Tetrachloroethene				5	<5.0
Toluene				1000	<5.0
1,1,1-Trichloroethane				200	7.1
Trichloroethene				5	[5.8]
Acetone					<100
Xylene (total)				10000	<10
Carbon disulfide					<5.0
1,2-Dichloropropane				5	<5.0
Chloroethane					<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	(ug/l)
Total Phenols	MW-3	03/18/1997	Primary	<10	<10
	MW-3	03/18/1997	Duplicate 1	<10	<10
	MW-3	09/26/1997	Primary	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/30/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	U.S. PMCL	MW-3 03/18/1997 Primary	MW-3 03/18/1997 Duplicate 1	MW-3 09/26/1997 Primary
Cyanide	(ug/l)		200		<5	<5	<5
Chromium (T), Dissolved	(ug/l)				---	---	<5
Lead, Dissolved	(ug/l)				---	---	<2.0
Nickel, Dissolved	(ug/l)				---	---	<20
Chromium, Total	(ug/l)		100		9.8	20	---
Lead, Total	(ug/l)		15		3.6	[19]	---
Nickel, Total	(ug/l)		100		<20	<20	---

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-4 03/18/1997	MW-4 06/04/1997	MW-4 09/26/1997	MW-4 12/10/1997	MW-4 06/12/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	5.6	6.5	7.8
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	11	5.4	10	5.2	6.9
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	[13]	[17]	[20]	[21]	[7.0]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-4			
			12/14/1998	06/22/1999		
Benzene	(ug/l)	5	<5.0	<5.0	MW-4 12/14/1999	<5
Vinyl Chloride	(ug/l)	2	<10	<10		<10
Chloroform	(ug/l)	100	<5.0	<5.0		<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0		11
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0		<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0		<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0		<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0		[120]
Methylene chloride	(ug/l)	5	<5.0	<5.0		<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0		<5
Toluene	(ug/l)	1000	<5.0	<5.0		<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0		5.8
Trichloroethene	(ug/l)	5	[15]	<5.0		[34]
Acetone	(ug/l)		<100	<100		<100
Xylene (total)	(ug/l)	10000	<10	<10		<10
Carbon disulfide	(ug/l)		<5.0	<5.0		<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0		<5
Chloroethane	(ug/l)		<10	<10		<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/30/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	MW-4 03/18/1997	MW-4 09/26/1997	MW-4 06/12/1998	MW-4 06/22/1999
Cyanide (ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved (ug/l)		---	<5	7.5	<5
Lead, Dissolved (ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved (ug/l)		---	<20	<20	<20
Chromium, Total (ug/l)	100	[2770]	---	---	---
Lead, Total (ug/l)	15	[707]	---	---	---
Nickel, Total (ug/l)	100	[620]	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-5 03/18/1997	MW-5 06/05/1997	MW-5 09/26/1997	MW-5 12/10/1997	MW-5 06/12/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	[13]	[12]	[13]	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethane	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethane	(ug/l)	70	9.8	11	11	11	7.4
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethane	(ug/l)	5	[5.8]	[8.4]	[13]	[8.8]	[6.8]
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	9	11	16	33	8.9
Trichloroethane	(ug/l)	5	[24]	[28]	[42]	[18]	[24]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	MW-5 12/14/1998	MW-5 06/23/1999	MW-5 12/14/1999
Benzene	5	<5.0	[8.4]	<5
Vinyl Chloride	2	[11]	<10	[13]
Chloroform	100	<5.0	<5.0	<5
1,1-Dichloroethane	5	<5.0	5.5	6.3
1,2-Dichloroethane	5	<5.0	<5.0	<5
1,1-Dichloroethene	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	70	12	8.4	9.5
Methylene chloride	5	<5.0	<5.0	<5
Tetrachloroethene	5	[6.7]	<5.0	[5.1]
Toluene	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	200	10	<5.0	7.4
Trichloroethene	5	[28]	[20]	[21]
Acetone		<100	<100	<100
Xylene (total)	10000	<10	<10	<10
Carbon disulfide		<5.0	<5.0	<5
1,2-Dichloropropane	5	<5.0	<5.0	<5
Chloroethane		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ----=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	MW-5	MW-5	MW-5	MW-5
Total Phenols				<10	<10	<10	20

[Large empty area for data or notes]							
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Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	MW-5 03/18/1997	MW-5 09/26/1997	MW-5 06/12/1998	MW-5 06/23/1999
Cyanide (ug/l)	200	<5	<5	<5	10
Chromium (T), Dissolved (ug/l)		---	<5	<5	<5
Lead, Dissolved (ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved (ug/l)		---	<20	<20	<20
Chromium, Total (ug/l)	100	[290]	---	---	---
Lead, Total (ug/l)	15	[152]	---	---	---
Nickel, Total (ug/l)	100	92	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-7 03/18/1997	MW-7 06/05/1997	MW-7 09/25/1997	MW-7 12/09/1997	MW-7 06/12/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	[63]	[120]	[81]	[95]	[110]
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		15	28	19	16	21
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	[230]	[350]	[290]	[270]	[300]
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

[]=Greater than Action Level ---=Not analyzed

Summary of Detected Constituents during Quarterly Monitoring

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	MW-7		
			12/14/1998	06/22/1999	12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	[130]	[120]	[82]
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)	14	14	15	6.8
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	[340]	[360]	[240]
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring []=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	MW-7	MW-7	MW-7	MW-7
Total Phenols				<10	<10	<10	<10
				03/18/1997	09/25/1997	06/12/1998	06/22/1999

(ug/l)							
---=Not analyzed							

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	MW:7 03/18/1997	MW:7 09/25/1997	MW:7 06/12/1998	MW:7 06/22/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	5.9	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	75	---	---	---
Lead, Total	(ug/l)	15	[85]	---	---	---
Nickel, Total	(ug/l)	100	[110]	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

Legend: [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE		US-PMCL	MW-8		MW-8
	DATE	DATE		03/18/1997	06/05/1997	
Benzene	(ug/l)	5	<5	<5	<5	<5
Vinyl Chloride	(ug/l)	2	[14]	<2	<2	<2
Chloroform	(ug/l)	100	<5	<5	<5	<5
1,1-Dichloroethane	(ug/l)	330	330	440	440	440
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5	<5
1,1-Dichloroethene	(ug/l)	7	5.3	<5	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100	9	<5	<5	<5
cis-1,2-Dichloroethene	(ug/l)	70	[1000]	[1400]	[1400]	[1400]
Methylene chloride	(ug/l)	5	<5	<5	<5	<5
Tetrachloroethene	(ug/l)	5	[19]	<5	<5	<5
Toluene	(ug/l)	1000	<5	<5	<5	<5
1,1,1-Trichloroethane	(ug/l)	200	7.6	<5	<5	<5
Trichloroethene	(ug/l)	5	[78]	[140]	[140]	[140]
Acetone	(ug/l)	<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<5	<5
Carbon disulfide	(ug/l)	<5	<5	<5	<5	<5
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5	<5
Chloroethane	(ug/l)	<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-8 03/18/1997
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Total Phenols

3100

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	MW-12 06/12/1998	MW-12 06/22/1999
Cyanide (ug/l)	200	<5	<5
Chromium (T), Dissolved (ug/l)		<5	<5
Lead, Dissolved (ug/l)		<2.0	<2.0
Nickel, Dissolved (ug/l)		<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	SITE DATE	MW-8	03/18/1997
Cyanide	200	(ug/l)	6	
Chromium, Total	100	(ug/l)	<5	
Lead, Total	15	(ug/l)	12	
Nickel, Total	100	(ug/l)	[150]	

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	MW-9 03/18/1997	MW-9 06/03/1997	MW-9 09/25/1997	MW-9 12/08/1997	MW-9 06/11/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethane	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethane	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	[6.2]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	MW-9 09/18/1998	MW-9 12/14/1998	MW-9 06/22/1999	MW-9 12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethane	(ug/l)	100	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethane	(ug/l)	70	<5.0	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5
Tetrachloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5
Trichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	MW-9	MW-9	MW-9	MW-9
Total Phenols				80	20	<10	<10
				03/18/1997	09/25/1997	06/11/1998	06/22/1999

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	MW-9 03/18/1997	MW-9 09/25/1997	MW-9 05/11/1998	MW-9 06/22/1999
Cyanide	200	9	30	<5	<5
Chromium (T), Dissolved		---	<5	7.2	<5
Lead, Dissolved		---	<2.0	<2.0	<2.0
Nickel, Dissolved		---	<20	20	<20
Chromium, Total	100	82	---	---	---
Lead, Total	15	[48]	---	---	---
Nickel, Total	100	[100]	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE		US-PMCL	MW-10	
	DATE			DATE	
Benzene	(ug/l)	5	<5.0	MW-10	12/13/1998
Vinyl Chloride	(ug/l)	2	<10		<5.0
Chloroform	(ug/l)	100	<5.0		<10
1,1-Dichloroethane	(ug/l)	12	64		<5.0
1,2-Dichloroethane	(ug/l)	5	<5.0		<5.0
1,1-Dichloroethene	(ug/l)	7	<5.0		<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5.0		31
cis-1,2-Dichloroethene	(ug/l)	70	[91]		[700]
Methylene chloride	(ug/l)	5	<5.0		<5.0
Tetrachloroethene	(ug/l)	5	<5.0		<5.0
Toluene	(ug/l)	1000	<5.0		<5.0
1,1,1-Trichloroethane	(ug/l)	200	43		[210]
Trichloroethene	(ug/l)	5	[130]		[500]
Acetone	(ug/l)		<100		<100
Xylene (total)	(ug/l)	10000	<10		<10
Carbon disulfide	(ug/l)		<5.0		<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0		<5.0
Chloroethane	(ug/l)		<10		<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	DATE	CONCENTRATION
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Total Phenols (ug/l) <10

	MW-10		06/11/1998	<10
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Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	MW:10	DATE
Cyanide	(ug/l)	200	<5	06/11/1998
Chromium (T), Dissolved	(ug/l)		<5	
Lead, Dissolved	(ug/l)		<2.0	
Nickel, Dissolved	(ug/l)		<20	

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	MW-11 06/11/1998 Primary	MW-11 06/22/1999 Primary	MW-11 12/14/1999 Primary	MW-11 12/14/1999 Duplicate 1
Benzene	(ug/l)	5			<5.0	<5.0	<5	<5
Vinyl Chloride	(ug/l)	2			<10	[15]	[29]	[39]
Chloroform	(ug/l)	100			<5.0	<5.0	<5	<5
1,1-Dichloroethane	(ug/l)	36			<5.0	<5.0	<5	<5
1,2-Dichloroethane	(ug/l)	5			<5.0	<5.0	<5	<5
1,1-Dichloroethene	(ug/l)	7			<5.0	<5.0	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100			<5.0	<5.0	<5	<5
cis-1,2-Dichloroethene	(ug/l)	70			[90]	[100]	[100]	[110]
Methylene chloride	(ug/l)	5			<5.0	<5.0	<5	<5
Tetrachloroethene	(ug/l)	5			<5.0	<5.0	<5	<5
Toluene	(ug/l)	1000			<5.0	<5.0	<5	<5
1,1,1-Trichloroethane	(ug/l)	200			18	<5.0	<5	<5
Trichloroethene	(ug/l)	5			[8.7]	<5.0	<5	<5
Acetone	(ug/l)				<100	<100	<100	<100
Xylene (total)	(ug/l)	10000			<10	<10	<10	<10
Carbon disulfide	(ug/l)				<5.0	<5.0	<5	<5
1,2-Dichloropropane	(ug/l)	5			<5.0	<5.0	<5	<5
Chloroethane	(ug/l)				<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	US-PMCL	US-PMCL
Total Phenols	MW-11	06/11/1998	10	MW-11	06/22/1998
					<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	MW:11 06/17/1998	MW:11 06/22/1999
Cyanide (ug/l)	200	<5	<5
Chromium (T), Dissolved (ug/l)		<5	<5
Lead, Dissolved (ug/l)		<2.0	<2.0
Nickel, Dissolved (ug/l)		<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	U.S. PMCL	MW-12 06/12/1998	MW-12 12/13/1998	MW-12 06/22/1999	MW-12 12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		14	<5.0	5.2	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	16	7.7	14	9.9
cis-1,2-Dichloroethene	(ug/l)	70	[690]	[68]	[410]	[240]
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	16	<5.0	8.8	8.4
Trichloroethene	(ug/l)	5	[180]	[35]	[100]	[63]
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	SITE DATE	MW-12 06/12/1998	MW-12 06/22/1999
Total Phenols (ug/l)			<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	MW-13 06/10/1998	MW-13 12/13/1998	MW-13 06/22/1999	MW-13 12/13/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	MW-13	MW-13
Total Phenols		(ug/l)			

<10

<10

06/22/1999

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	MW-13 06/10/1998	MW-13 06/22/1999
Cyanide	200	<5	20
Chromium (T), Dissolved		<5	<5
Lead, Dissolved		<2.0	<2.0
Nickel, Dissolved		<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	S3 DATE	S3 12/14/1998	S3 06/22/1999	S3 12/14/1999
Benzene	5	(ug/l)	<5.0	<5.0	<5
Vinyl Chloride	2	(ug/l)	<10	<10	<10
Chloroform	100	(ug/l)	<5.0	<5.0	<5
1,1-Dichloroethane		(ug/l)	<5.0	<5.0	<5
1,2-Dichloroethane	5	(ug/l)	<5.0	<5.0	<5
1,1-Dichloroethene	7	(ug/l)	<5.0	<5.0	<5
trans-1,2-Dichloroethene	100	(ug/l)	<5.0	<5.0	<5
cis-1,2-Dichloroethene	70	(ug/l)	<5.0	<5.0	<5
Methylene chloride	5	(ug/l)	<5.0	<5.0	<5
Tetrachloroethene	5	(ug/l)	<5.0	<5.0	<5
Toluene	1000	(ug/l)	<5.0	<5.0	<5
1,1,1-Trichloroethane	200	(ug/l)	<5.0	<5.0	<5
Trichloroethene	5	(ug/l)	<5.0	<5.0	<5
Acetone		(ug/l)	<100	<100	<100
Xylene (total)	10000	(ug/l)	<10	<10	<10
Carbon disulfide		(ug/l)	<5.0	<5.0	<5
1,2-Dichloropropane	5	(ug/l)	<5.0	<5.0	<5
Chloroethane		(ug/l)	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	U.S.-PMCL	10	10	10	<10
Total Phenols						

	S4A	03/21/1997	10	S4A	09/23/1997	10	S4A	06/22/1999	<10
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Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	SITE DATE	S3 06/11/1998	S3 06/22/1999
Cyanide (ug/l)	200		<5	<5
Chromium (T), Dissolved (ug/l)			<5	<5
Lead, Dissolved (ug/l)			<2.0	<2.0
Nickel, Dissolved (ug/l)			<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S4A 03/21/1997	S4A 06/03/1997	S4A 09/23/1997	S4A 12/09/1997	S4A 06/10/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		14	31	24	23	33
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	5.2
cis-1,2-Dichloroethene	(ug/l)	70	[210]	[300]	[220]	[210]	[280]
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	[6.6]	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			S-4A	12 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	50 U		10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	J				16					
	1,2-DICHLOROETHANE	UG/L	23		25							
	1,1-DICHLOROETHENE	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	25 U		5.2							
	CIS-1,2-DICHLOROETHENE	UG/L	J		5.2							
	METHYLENE CHLORIDE	UG/L	14		250		150		150		6.2	
	TETRACHLOROETHENE	UG/L	310		25 U		5.0 U		5.0 U		230	
	TOLUENE	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	25 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10		7.9						5.6	
	ACETONE	UG/L	J				5.0 U		5.0 U		5.0 U	
	XYLENE (TOTAL)	UG/L	50 U		10 U		10 U		10 U		10 U	
	CARBON DISULFIDE	UG/L	500 U		100 U		100 U		100 U		100 U	
		UG/L	50 U		10 U		10 U		10 U		10 U	
		UG/L	25 U		5.0 U		5.0 U		5.0 U		7.5	
	TOTAL VOCs:	UG/L	357		293.3		166		249.3			
E.METALS	CHROMIUM	UG/L	5 U				43					
	LEAD	UG/L	2.0 U				53					
	NICKEL	UG/L	20 U				81					
H.MISC	CYANIDE, TOTAL	UG/L	5 U						5 U			
	PHENOLS	UG/L	10 U						10 U			

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTIFICATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		14 MAR 95		07 JUN 95		19 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		2.2	J	10 U		10 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		20 U		20 U	
	1,1-DICHLOROETHANE	UG/L	62		43		11		34		15	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		10 U		25 U	
	1,1-DICHLOROETHENE	UG/L	9.1		12		2.5	J	7.5		25 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	40		21		75		10		25 U	
	CIS-1,2-DICHLOROETHENE	UG/L	200		200		5.0 U		320		25 U	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		10 U		25 U	
	TETRACHLOROETHENE	UG/L	-		5.0 U		5.0 U		10 U		25 U	
	TOLUENE	UG/L	5 U		5.0 U		3.0	J	10 U		25 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		10 U		25 U	
	TRICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		10 U		25 U	
	VINYL CHLORIDE	UG/L	6.5		7		10 U		11		25 U	
	ACETONE	UG/L	10 U		10 U		100 U		20 U		500 U	
XYLENE (TOTAL)	UG/L	10 U		10 U		2.9	J	20 U		50 U		
TOTAL VOCs:		UG/L	317.6		283		96.6		382.5		175	
E.METALS	LEAD	UG/L	-		-		-		13		-	
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-	
H.MISC	CYANIDE, TOTAL	UG/L	-		25 U		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		40		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-4A

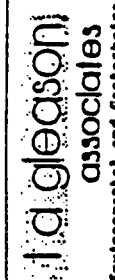
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-01-CYCLOHEXADIENE		1,2-01-CYCLOHEXADIENE		1,1-01-CYCLOHEXADIENE		1,2-01-CYCLOHEXADIENE		1,1-01-CYCLOHEXADIENE		1,2-01-CYCLOHEXADIENE		1,1-01-CYCLOHEXADIENE		1,2-01-CYCLOHEXADIENE		SUM	NOTES
				MPL	UG/L	MPL	UG/L	MPL	UG/L	MPL	UG/L	MPL	UG/L	MPL	UG/L	MPL	UG/L	MPL	UG/L		
06/05/97	22	AQUA		1100	180	180	200	820	110	200	110	200	120	110	2550	A					
09/04/97	27	AQUA		1100	180	180	60.0	2000	170	170	170	170	17.0	170	4137						
01/14/98	25	AQUA		1800	180	180	180	1800	112	180	180	180	180	180	4182						
02/08/98	2	AQUA		1500	180	180	165	1770	160	180	180	180	180	180	4495						
05/19/98	7	AQUA		1700	180	180	165	2800	180	180	180	180	180	180	5102						
05/18/98	6	AQUA		1840	180	180	200	2750	180	180	180	180	180	180	4963						
09/22/98	7	AQUA		1810	7.0	7.0	292	940	154	11.0	11.0	40.0	40.0	1670							
09/22/98	6	AQUA		1820	7.3	7.3	281	920	155	10.0	10.0	39.0	39.0	1620							
12/18/98	26	AQUA		970	180	180	114	1600	135	180	180	23.7	633	1676							
02/27/99	43	AQUA		700	180	180	110	1400	150	6.7	6.7	17.2	270	2656							
08/18/99	37	AQUA	624	660	180	180	120	1080	190	180	180	180	180	2050							
08/18/99	38	AQUA	624	620	180	180	110	1040	190	180	180	180	180	1960							
09/09/99	25	AQUA	8240	500	180	180	120	640	190	34	19.7	69.5	1853								
12/13/99	27	AQUA	8240	880	180	180	151	760	180	34.1	32.5	41	2079								
01/02/00	37	AQUA	8240	670	180	180	92.1	1000	210	27	19	27.4	2046								
06/03/00	23	AQUA	8240	430	180	180	84.0	640	180	20.8	19.1	20.9	1795								
08/22/00	22	AQUA	8240	231	180	180	9.0	500	60.2	9.5	16.6	16.6	826								
10/28/00	14	AQUA	8240	408	180	180	86.2	677	170	16.8	25.9	180	1392								
01/02/01	25	AQUA	8240	176	5.7	5.7	39.7	311	50.0	6.2	16.0	12.7	625								
06/02/01	28	AQUA	8240	220	180	180	47.2	180	180	9.5	26.6	180	311								
08/31/01	30	AQUA	8240	140	180	180	53.8	182	46.6	11.3	34.1	10.3	478								
11/13/01	21	AQUA	8240	156	180	180	45.2	179	47.2	8.6	36.0	180	473								
11/13/01	22	AQUA	8240	131	180	180	41.5	171	40.6	8.5	37.0	180	432								
01/25/02	27	AQUA	8240	342	180	180	51.8	197	46.3	180	39.8	180	677								
01/25/02	28	AQUA	8240	322	180	180	48.9	180	45.7	180	34.6	180	631								
04/01/02	38	AQUA	8240	127	180	180	40.5	169	41.0	6.7	25.1	180	409								
08/22/02	24	AQUA	8240	171	180	180	46.4	238	72.4	180	26.0	180	554								
10/31/02	18	AQUA	8240	103	180	180	37.2	171	46.6	180	16.7	180	375								
10/31/02	19	AQUA	8240	94.1	180	180	32.2	149	37.1	180	15.3	180	320								
02/04/03	18	AQUA	8240	108	180	180	37.8	216	46.7	180	21.8	180	430								
05/11/03	18	AQUA	8240	90.5	180	180	27.0	161	32.8	180	13.7	180	325								
08/31/03	16	AQUA	8240	68.4	180	180	17.7	125	20.6	180	20.6	180	252								
12/03/03	28	AQUA	8240	89.7	180	180	55.2	234	26.4	180	29.4	180	435								
12/03/03	29	AQUA	8240	83.2	180	180	55.6	223	27.7	180	29.7	180	419								
02/18/04	18	AQUA	8240	66.8	180	180	17.5	201	22.7	180	16.8	180	325								
05/05/04	18	AQUA	8240	77.7	180	180	17.9	174	31.0	180	9.9	180	311								
09/15/04	31	AQUA	8240	96.7	180	180	19.5	230	57.7	180	10.8	180	415								

PARAMETER
o - Date Sampled

NOTES:
OIM INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
MID - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
MPL - MD U.S. EPA PUBLISHED LEVEL.
P - PROPOSED
VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
A - AS OF 06/25/07 WELL S-4 WAS REPLACED BY WELL S-4A.

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S4A 12/14/1998	S4A 06/22/1999	S4A 12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		33	40J	26
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	6.8	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	[260]	[260]	[190]
Methylene chloride	(ug/l)	5	[11]	<15.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level The following qualifier(s) exist: J ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	U.S.-PMCL	DATE	CONC.
	S3		06/11/1998	<10
	S3		06/22/1999	<10

Total Phenols (ug/l)

Summary of Detected Constituents during Quarterly Monitoring

----Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S4A 03/21/1997 Primary	S4A 09/23/1997 Primary	S4A 06/22/1999 Primary	S4A 06/22/1999 Duplicate 1
Cyanide	(ug/l)	200	<5	<5	20	<5
Chromium (T), Dissolved	(ug/l)		---	<5	<5	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	16	---	---	---
Lead, Total	(ug/l)	15	[26]	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	U.S.-PMCL	S9 03/19/1997	S9 06/04/1997	S9 09/25/1997	S9 12/11/1997	S9 06/11/1998
Benzene (ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride (ug/l)	2	<10	<2	<10	<10	<10
Chloroform (ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane (ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane (ug/l)	5	[220]	[250]	[190]	[240]	[170]
1,1-Dichloroethene (ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene (ug/l)	100	5.8	<5	5.8	<5.0	7.3
cis-1,2-Dichloroethene (ug/l)	70	45	54	54	62	61
Methylene chloride (ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene (ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene (ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane (ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene (ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone (ug/l)		<100	<100	<100	<100	<100
Xylene (total) (ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide (ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane (ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane (ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S9 12/14/1998	S9 06/23/1999	S9 12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	[240]	<5.0	[160]
1,1,1-Trichloroethane	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	12	8.3
cis-1,2-Dichloroethene	(ug/l)	70	[92]	[91]	[70]
Methylene chloride	(ug/l)	5	[6.8]BJ	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	[300]	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level The following qualifier(s) exist: B, J ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	DATE	US-PMCL	DATE	US-PMCL	DATE
Total Phenols	S9		03/19/1997	<10	S9		06/11/1998
	S9		09/25/1997	<10	S9		06/23/1999
	S9		06/11/1998	<10	S9		06/23/1999

CONSTITUENT	SITE	US-PMCL	DATE	US-PMCL	DATE	US-PMCL	DATE
Total Phenols	S9		03/19/1997	<10	S9		06/11/1998
	S9		09/25/1997	<10	S9		06/23/1999
	S9		06/11/1998	<10	S9		06/23/1999

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S9 03/19/1997	S9 09/25/1997	S9 06/11/1998	S9 06/23/1999
Cyanide	(ug/l)	200	9	10	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	8.9	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	---	---	---
Lead, Total	(ug/l)	15	3	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			AMOUNT	q	AMOUNT	q	AMOUNT	q	AMOUNT	q
A.VOA	BENZENE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	20 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	250		230		240		270	
	1,1-DICHLOROETHENE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	4.8	J	3.4		5.0 U		3.1	J
	CIS-1,2-DICHLOROETHENE	UG/L	26		26		24		42	
	METHYLENE CHLORIDE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		5.0 U		5.0 U		5.0 U	
	ACETONE	UG/L	20 U		10 U		10 U		10 U	
	XYLENE (TOTAL)	UG/L	200 U		100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	20 U		10 U		10 U		10 U	
		UG/L	10 U		5.0 U		5.0 U		10 U	J
	TOTAL VOCS:	UG/L	280.8		259.4		264		319.9	
E-METALS	CHROMIUM	UG/L	5 U		-		7.2		-	
	LEAD	UG/L	2.0 U		-		2.0 U		-	
	NICKEL	UG/L	20 U		-		6.9	J	-	
H-MISC	CYANIDE, TOTAL	UG/L	5 U		-		5 U		-	
	PHENOLS	UG/L	10 U		-		10 U		-	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		14 MAR 95		06 JUN 95		19 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	CHLOROETHANE	UG/L	20 U		20 U		20 U		10 U		20 U		20 U	
	1,1-DICHLOROETHANE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	1,2-DICHLOROETHANE	UG/L	363		330		330		170		210		250	
	1,1-DICHLOROETHENE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	10 U		10 U		10 U		5.0 U	J	10 U		10 U	
	CIS-1,2-DICHLOROETHENE	UG/L	21		26		26		2.2		22		23	
	METHYLENE CHLORIDE	UG/L	10 U		10 U		10 U		14		10 U		10 U	
	TETRACHLOROETHENE	UG/L	-		10 U		10 U		5.0 U		10 U		10 U	
	TOLUENE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	1,1,1-TRICHLOROETHANE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	TRICHLOROETHENE	UG/L	10 U		10 U		10 U		5.0 U		10 U		10 U	
	VINYL CHLORIDE	UG/L	20 U		20 U		20 U		5.0 U		10 U		10 U	
	ACETONE	UG/L	200 U		200 U		200 U		10 U		200 U		200 U	
	XYLENE (TOTAL)	UG/L	20 U		20 U		20 U		100 U		20 U		20 U	
	TOTAL VOCs:	UG/L	384		356		356		186.2		241.1		273	
E-METALS	LEAD	UG/L	-		-		-		-		2.0 U		-	
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		20 U		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		5 U		5 U		-		5 U		-	
	PHENOLS	UG/L	-		10 U		10 U		-		10 U		-	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-9

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,2-DI-CHLORO-ETHANE			1,2-DI-CHLORO-ETHANE			TRANS-1,2-DICHLORO-ETHENE			SUM	NOTES
				5	P-70	P-100	5	P-70	P-100	UO/L	UO/L	UO/L		
10/01/86	12	ADJA		81.3	10	2.2						84		
11/05/86	4	ADJA		29	10	2.3						31		
12/10/86	20	ADJA		210	15	10						225		
12/10/86	30	ADJA		43.3	10	10						43		
02/12/87	12	ADJA		313	10	23						336		
06/05/87	7	ADJA		460	17	10						477		
09/03/87	8	ADJA		170	13	10						183		
01/13/88	6	ADJA		810	43	10						853		
02/06/88	9	ADJA		448	10	10						440		
03/10/88	9	ADJA		440	47.6	10						488		
09/23/88	9	ADJA		240	10	10						240		
12/08/88	4	ADJA		12.3	10	10						12		
02/23/89	13	ADJA		9.2	10	10						0		
06/10/89	33	ADJA	624	6.7	10	10						7		
09/08/89	15	ADJA	8240	No VOC Detected										
12/13/89	28	ADJA	8240	40.3	10	10						40		
02/27/90	4	ADJA	8240	40.0	10	10						40		
06/01/90	6	ADJA	8240	34.2	10	10						34		
08/22/90	4	ADJA	8240	No VOC Detected										
10/27/90	9	ADJA	8240	No VOC Detected										
02/28/91	3	ADJA	8240	7.8	10	10						8		
05/31/91	9	ADJA	8240	16.3	10	10						16		
06/28/91	14	ADJA	8240	11.7	10	10						12		
11/14/91	33	ADJA	8240	19.0	10	10						15		
01/22/92	5	ADJA	8240	42.8	10	10						43		
01/30/92	12	ADJA	8240	68.8	10	10						66		
06/22/92	26	ADJA	8240	127	5.4	10						132		
10/31/92	27	ADJA	8240	155	7.0	10						163		
02/03/93	5	ADJA	8240	221	13.8	10						235		
05/12/93	29	ADJA	8240	223	11.8	10						235		
09/02/93	34	ADJA	8240	220	16.0	10						237		
12/02/93	17	ADJA	8240	324	25.7	5.1						355		
02/17/94	9	ADJA	8240	259	16.9	10						276		
05/05/94	17	ADJA	8240	215	15.6	10						231		
09/15/94	24	ADJA	8240	240	19.9	10						259		

PARAMETER

o - Date Sampled

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 NPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

SHALLOW MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA

alderson
 associates
 Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S15 03/21/1997	S15 09/05/1997	S15 09/24/1997	S15 09/24/1997	S15 12/08/1997
	RESULT TYPE		Primary	Primary	Primary	Duplicate 1	Primary
	(ug/l)		<5	<5	<5.0	<5.0	<5.0
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	[18]	[30]	[31]	[32]	[25]
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	14	14	14	14
1,2-Dichloroethane	(ug/l)	5	[24]	[41]	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	6.3	5.4	5.8	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	18	35	22	23	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S15 06/11/1998	S15 12/14/1998	S15 06/23/1999	S15 12/14/1999
	RESULT TYPE		Primary	Primary	Primary	Primary
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	[15]	[29]	<10	[30]
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		8.6	13	8.2	14
1,2-Dichloroethane	(ug/l)	5	[12]	<5.0	[9.7]	<5
1,1,1-Trichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethane	(ug/l)	100	<5.0	5.3	<5.0	<5
cis-1,2-Dichloroethane	(ug/l)	70	16	16	14	12
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5
Tetrachloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
Total Phenols	S15	03/21/1997	Primary	<10	<10
	S15	09/24/1997	Primary	<10	<10
	S15	09/24/1997	Duplicate 1	<10	<10
	S15	06/11/1998	Primary	<10	<10
	S15	06/23/1999	Primary	20	20

Summary of Detected Constituents during Quarterly Monitoring

---= Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	RESULT TYPE	S15	S15	S15	S15	S15
	(ug/l)				03/21/1997	09/24/1997	09/24/1997	09/24/1997	06/11/1998
					Primary	Primary	Duplicate 1	Primary	Primary
Cyanide			200		<5	<5	<5	<5	<5
Chromium (T), Dissolved					--	<5	<5	7.2	<5
Lead, Dissolved					--	<2.0	<2.0	<2.0	<2.0
Nickel, Dissolved					--	<20	<20	<20	<20
Chromium, Total			100		44	--	--	--	--
Lead, Total			15		2.7	--	--	--	--
Nickel, Total			100		<20	--	--	--	--

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		05 JUN 96		04 SEP 96		10 DEC 96	
			13 MAR 96	19 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U				5.0 U					5.0 U
	CHLOROETHANE	UG/L	10 U				10 U					10 U
	CHLOROFORM	UG/L	5.0 U				5.0 U					5.0 U
	1,1-DICHLOROETHANE	UG/L	19			13		13				15
	1,2-DICHLOROETHANE	UG/L				6.6		32				5.0 U
	1,1-DICHLOROETHENE	UG/L				5.0 U		5.0 U				5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	3.6			2.9		4.9				5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	8.2			8.2		30				4.2
	METHYLENE CHLORIDE	UG/L										8.1
	TETRACHLOROETHENE	UG/L				5.0 U		5.0 U				5.0 U
	TOLUENE	UG/L				5.0 U		5.0 U				5.0 U
	1,1,1-TRICHLOROETHANE	UG/L				5.0 U		5.0 U				5.0 U
	TRICHLOROETHENE	UG/L				5.0 U		5.0 U				5.0 U
	VINYL CHLORIDE	UG/L				5.0 U		5.0 U				5.0 U
	ACETONE	UG/L	23			17		20				25
	XYLENE (TOTAL)	UG/L				100 U		100 U				100 U
	CARBON DISULFIDE	UG/L				10 U		10 U				10 U
		UG/L				5.0 U		5.0 U				5.0 U
	TOTAL VOCs:	UG/L	53.8			47.7		99.9				52.3
E.METALS	CHROMIUM	UG/L				5 U						5.0 U
	LEAD	UG/L				2.0 U						2.0 U
	NICKEL	UG/L				20 U						20 U
H.MISC	CYANIDE, TOTAL	UG/L				5 U						5 U
	PHENOLS	UG/L				10 U						10 U

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERH'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

NPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIED SIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

alliedsignal
associates
Environmental and Geotechnical Services

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	ETHANE		ETHENE		PROPANE		BUTADIENE		PENTADIENE		VINYL CHLORIDE		OTHER VOC		SUM	NOTES
				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L		
11/05/86	27	AQUA		ND	1.2	ND	ND	1.6	ND	ND	ND	ND	ND	2	ND	ND	ND	3	
12/10/86	22	AQUA		No VOC Detected															
05/05/87	6	AQUA		No VOC Detected															
09/03/87	6	AQUA		ND	ND	ND	ND	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	76	
09/23/87	5	AQUA		No VOC Detected															
01/14/88	24	AQUA		22.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	
02/08/88	4	AQUA		19.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	
05/18/88	6	AQUA		No VOC Detected															
09/23/88	6	AQUA		5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	
12/10/88	24	AQUA		ND	ND	ND	ND	ND	ND	10.9	ND	ND	ND	ND	ND	ND	ND	172	
02/23/89	15	AQUA		No VOC Detected															
06/10/89	31	AQUA	824	No VOC Detected															
09/03/89	22	AQUA	8240	ND	ND	ND	ND	178	ND	ND	ND	ND	ND	ND	ND	ND	ND	205	
12/12/89	22	AQUA	8240	ND	100	240	ND	26.6	ND	40.9	ND	ND	ND	ND	ND	ND	ND	124	
07/03/90	40	AQUA	8240	69.3	ND	ND	ND	ND	ND	31.3	ND	ND	ND	ND	ND	ND	ND	665	
07/03/90	41	AQUA	8240	71.8	ND	ND	ND	ND	ND	32.0	ND	ND	ND	ND	ND	ND	ND	143	
06/03/90	25	AQUA	8240	37.8	ND	ND	ND	ND	ND	46.1	ND	ND	ND	ND	ND	ND	ND	150	
06/21/90	20	AQUA	8240	12.8	ND	ND	ND	ND	ND	22.4	ND	ND	ND	ND	ND	ND	ND	60	
10/28/90	13	AQUA	8240	27.2	ND	ND	ND	178	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	
03/01/91	12	AQUA	8240	26.8	28.8	27.4	ND	ND	ND	40.9	ND	ND	ND	ND	ND	ND	ND	205	
06/01/91	25	AQUA	8240	22.5	24.5	28.8	ND	10.7	ND	25.2	ND	ND	ND	ND	ND	ND	ND	124	
08/31/91	26	AQUA	8240	23.8	17.3	ND	ND	ND	ND	44.4	ND	ND	ND	ND	ND	ND	ND	86	
11/12/91	6	AQUA	8240	ND	5.7	6.1	ND	ND	ND	36.8	ND	ND	ND	ND	ND	ND	ND	49	
01/25/92	34	AQUA	8240	ND	ND	7.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8	
04/01/92	33	AQUA	8240	21.5	ND	6.0	ND	ND	ND	22.0	ND	ND	ND	ND	ND	ND	ND	50	
06/22/92	21	AQUA	8240	40.9	12.4	5.9	ND	ND	ND	36.8	ND	ND	ND	ND	ND	ND	ND	95	
10/31/92	16	AQUA	8240	17.8	ND	6.9	ND	ND	ND	17.8	ND	ND	ND	ND	ND	ND	ND	43	
02/04/93	19	AQUA	8240	26.2	83.8	50.7	ND	6.7	ND	40.0	ND	ND	ND	ND	ND	ND	ND	208	
05/11/93	18	AQUA	8240	19.1	89.4	45.1	ND	8.9	ND	36.8	ND	ND	ND	ND	ND	ND	ND	179	
08/31/93	15	AQUA	8240	15.4	48.4	36.8	ND	7.0	ND	25.2	ND	ND	ND	ND	ND	ND	ND	177	
12/03/93	23	AQUA	8240	15.8	17.8	38.9	ND	7.9	ND	29.8	ND	ND	ND	ND	ND	ND	ND	110	
02/17/94	14	AQUA	8240	12.3	ND	17.3	ND	ND	ND	30.0	ND	ND	ND	ND	ND	ND	ND	60	
05/05/94	20	AQUA	8240	11.2	ND	8.0	ND	ND	ND	22.5	ND	ND	ND	ND	ND	ND	ND	42	
09/15/94	28	AQUA	8240	10.8	7.6	21.0	ND	ND	ND	23.8	ND	ND	ND	ND	ND	ND	ND	63	

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S16 03/20/1997	S16 06/03/1997	S16 09/24/1997	S16 12/08/1997	S16 06/11/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	[28]	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	11	<5	18	19	5.5
cis-1,2-Dichloroethene	(ug/l)	70	[150]	[120]	[91]	[73]	[79]
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	25	37	27	20	20
Trichloroethene	(ug/l)	5	[380]	[650]	[560]	[470]	[460]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S16 12/14/1998	S16 06/23/1999	S16 12/14/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	26	8.2	18
cis-1,2-Dichloroethene	(ug/l)	70	54	54	68
Methylene chloride	(ug/l)	5	[15]	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	20	19	17
Trichloroethene	(ug/l)	5	[420]	[390]	[380]
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	Result	SITE	DATE	Result
Total Phenols (ug/l)	S16	03/20/1997		<10	S16	09/24/1997	<10
	S16	06/11/1998		<10	S16	06/23/1999	20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S16 03/20/1997	S16 09/24/1997	S16 05/11/1998	S16 06/23/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		--	<5	20	<5
Lead, Dissolved	(ug/l)		--	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		--	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	--	--	--
Lead, Total	(ug/l)	15	<2	--	--	--
Nickel, Total	(ug/l)	100	<20	--	--	--

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		14 MAR 95		07 JUN 95		19 SEP 95		06 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	CHLOROETHANE	UG/L	20 U		50 U		50 U		50 U		50 U		50 U	
	1,1-DICHLOROETHANE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	1,2-DICHLOROETHANE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	1,1-DICHLOROETHENE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	12		25 U		25 U		25 U		25 U		25 U	
	CIS-1,2-DICHLOROETHENE	UG/L	59		49		49		230		13		16	
	METHYLENE CHLORIDE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	TETRACHLOROETHENE	UG/L	-		25 U		25 U		25 U		25 U		25 U	
	TOLUENE	UG/L	10 U		25 U		25 U		25 U		25 U		25 U	
	1,1,1-TRICHLOROETHANE	UG/L	25		240		18		19		23		23	
	TRICHLOROETHENE	UG/L	261		620		250		250		250		250	
	VINYL CHLORIDE	UG/L	56		500 U		360		430		160		500 U	
	ACETONE	UG/L	200 U		50 U		50 U		50 U		50 U		50 U	
	XYLENE (TOTAL)	UG/L	413		909		732.3		956.8		782		782	
	TOTAL VOCs:	UG/L												
E-METALS	LEAD	UG/L	-		-		-		0.7		J		-	
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		5 U		-		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		-		10 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			S-16	12 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	25 U		25 U		25 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	50 U		50 U		50 U		10 U		10 U	
	CHLOROFORM	UG/L	25 U		25 U		25 U		5.0 U	J	3.8	
	1,1-DICHLOROETHANE	UG/L	25 U		25 U		25 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	25 U		25 U		25 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	44		43		25 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	29		13	J			15		26	
	CIS-1,2-DICHLOROETHENE	UG/L	440		420				17		16	
	METHYLENE CHLORIDE	UG/L					25 U		180		170	
	TETRACHLOROETHENE	UG/L					25 U		5.0 U		5.0 U	
	TOLUENE	UG/L					25 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	36		32		25 U		27		35	
	TRICHLOROETHENE	UG/L	400		370				360		400	
	VINYL CHLORIDE	UG/L	210		50				10 U		10 U	
ACETONE	UG/L					500 U		100 U		100 U		
XYLENE (TOTAL)	UG/L					50 U		10 U		10 U		
CARBON DISULFIDE	UG/L					25 U		5.0 U		5.0 U		
TOTAL VOCs:		UG/L	1159		928			599		650.8		
E.METALS	CHROMIUM	UG/L	5 U					5.0 U				
	LEAD	UG/L	0.92	J				1.5	J			
	NICKEL	UG/L	8	J				6.9	J			
H.MISC	CYANIDE, TOTAL	UG/L	5 U					5 U				
	PHENOLS	UG/L	10 U					10 U				

QUALIFIER CODES (Q):

J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SOURCE S-16

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLOROETHENE		TRANS-1,2-DICHLOROETHENE		1,1,1-TRIETHYLENE		NOTES	
				P-70 UG/L	UG/L	P-100 UG/L	UG/L	200 UG/L	5 UG/L		
11/16/86	11	AQUA		No VOC Detected							
12/18/86	19	AQUA		ND	ND	ND	22.5	70.1	93		
12/18/86	29	AQUA		ND	ND	ND	21.5	63.0	85		
02/12/87	11	AQUA		ND	4.4	ND	23.3	95.0	123		
06/05/87	12	AQUA		5.8	8.8	ND	18.0	97.0	95		
09/04/87	20	AQUA		ND	ND	ND	ND	65.0	65		
01/15/88	27	AQUA		ND	ND	ND	15.0	58.0	73		
02/09/88	12	AQUA		ND	ND	ND	13.5	93.0	67		
05/19/88	25	AQUA		6.8	ND	ND	10.9	92.0	70		
09/23/88	14	AQUA		ND	ND	ND	20.0	76.0	96		
12/18/88	29	AQUA		6.2	ND	ND	18.7	62.1	87		
02/24/89	20	AQUA		8.1	ND	ND	15.7	60.4	82		
08/08/89	12	AQUA	824	9.2	9.4	ND	18.4	66.7	104		
09/10/89	34	AQUA	8240	8.1	8.7	ND	20.2	58.2	95		
12/13/89	31	AQUA	8240	10.8	9.0	ND	22.5	94.6	137		
03/03/90	44	AQUA	8240	19.8	ND	ND	17.9	73.4	111		
06/03/90	19	AQUA	8240	19.4	8.6	ND	19.4	83.6	131		
08/23/90	16	AQUA	8240	No VOC Detected							
10/29/90	30	AQUA	8240	11.3	ND	ND	20.0	82.0	114		
03/04/91	36	AQUA	8240	ND	ND	ND	ND	35.8	36		
06/02/91	29	AQUA	8240	ND	ND	ND	10.3	46.7	57		
08/31/91	33	AQUA	8240	8.1	ND	ND	ND	84.5	70		
11/13/91	32	AQUA	8240	8.1	ND	ND	15.5	67.1	91		
01/26/92	37	AQUA	8240	16.4	ND	ND	19.4	95.5	131		
04/02/92	45	AQUA	8240	20.1	ND	ND	19.9	98.7	147		
08/22/92	18	AQUA	8240	37.3	5.8	ND	22.1	141	206		
10/31/92	20	AQUA	8240	42.8	ND	ND	19.1	91.4	153		
02/05/93	24	AQUA	8240	48.3	ND	ND	20.1	155	223		
05/12/93	23	AQUA	8240	42.1	ND	ND	16.5	109	168		
09/01/93	27	AQUA	8240	28.8	ND	ND	18.8	136	183		
12/03/93	32	AQUA	8240	ND	38.1	ND	21.4	188	248		
02/18/94	25	AQUA	8240	17.8	ND	ND	9.9	81.0	108		
05/06/94	27	AQUA	8240	32.3	8.7	ND	21.8	143	205		
09/15/94	23	AQUA	8240	48.8	6.2	ND	18.1	148	222		

PARAMETER

o - Date Sampled

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S17 03/20/1997	S17 06/03/1997	S17 09/24/1997	S17 12/11/1997	S17 06/10/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	34	40	51	37	26
Trichloroethene	(ug/l)	5	[16]	[25]	[28]	[25]	[19]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S17 12/14/1998	S17 06/23/1999	S17 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	22	16	16
Trichloroethene	(ug/l)	5	[18]	[15]	[17]
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	CONCENTRATION
Total Phenols	S17	03/20/1997	<10	<10
	S17	06/23/1999		20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	S17 03/20/1997	S17 06/23/1999
Cyanide	200	<5	<5
Chromium (T): Dissolved		---	<5
Lead, Dissolved		---	<2.0
Nickel, Dissolved		---	<20
Chromium, Total	100	<5	---
Lead, Total	15	<2	---
Nickel, Total	100	<20	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		04 JUN 96		04 SEP 96		11 DEC 96	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	4.1	J	4.8	J	3.2	J	5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	8.4		4.6	J	4.2	J	5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	97		72		74		46	
	TRICHLOROETHENE	UG/L	21		21		22		21	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U	
	CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOTAL VOCs:	UG/L	130.5		102.4		103.4		67	
E-METALS	CHROMIUM	UG/L	5 U		-		4.1	J	-	
	LEAD	UG/L	2.0 U		-		0.6	J	-	
	NICKEL	UG/L	20 U		-		20 U		-	
H-MISC	CYANIDE, TOTAL	UG/L	5 U		-		5 U		-	
	PHENOLS	UG/L	10 U		-		10 U		-	

QUALIFIER CODES (Q):

J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.

U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.

NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID				06 DEC 95 AMOUNT	q
			DATE COLLECTED	08 DEC 94 AMOUNT	07 JUN 95 AMOUNT	19 SEP 95 AMOUNT		
A.VOA	BENZENE	UG/L	25 U	25 U	25 U	25 U	25 U	5.0 U
	CHLOROETHANE	UG/L	50 U	50 U	50 U	50 U	50 U	10 U
	1,1-DICHLOROETHANE	UG/L	88	110	39	21	12	
	1,2-DICHLOROETHANE	UG/L	25 U	25 U	25 U	25 U	25 U	5.0 U
	1,1-DICHLOROETHENE	UG/L	65	56	24	14	22	
	TRANS-1,2-DICHLOROETHENE	UG/L	25 U	25 U	25 U	25 U	25 U	5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	25 U	25 U	25 U	25 U	25 U	5.0 U
	METHYLENE CHLORIDE	UG/L	25 U	25 U	3.2			5.0 U
	TETRACHLOROETHENE	UG/L	-	25 U	25 U	25 U	25 U	5.0 U
	TOLUENE	UG/L	25 U	25 U	25 U	25 U	25 U	5.0 U
	1,1,1-TRICHLOROETHANE	UG/L	1000	700	300	220	140	
	TRICHLOROETHENE	UG/L	51	27	20	27	30	
	VINYL CHLORIDE	UG/L	50 U	50 U	50 U	50 U	50 U	10 U
	ACETONE	UG/L	500 U	500 U	500 U	500 U	500 U	100 U
	XYLENE (TOTAL)	UG/L	50 U	50 U	50 U	50 U	50 U	10 U
	TOTAL VOCs:	UG/L	1204	893	386.2	282	204	
E.METALS	LEAD	UG/L	-	-	-	2.0 U	-	
E.METALS (DJS.)	LEAD (DISSOLVED)	UG/L	-	2.0 U	-	-	-	
	NICKEL (DISSOLVED)	UG/L	-	20 U	-	-	-	
H.MISC	CYANIDE, TOTAL	UG/L	-	5 U	-	5 U	-	
	PHENOLS	UG/L	-	10 U	-	10 U	-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-17

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-D1-CHLORO-ETHANE		1,2-D1-CHLORO-ETHANE		1,1-D1-CHLORO-ETHANE		C15-1,2-DICHLORO-ETHENE		TRANS-1,2-DICHLORO-ETHENE		1,1,1-TRI-CHLORO-ETHANE		1,1-D1-CHLORO-ETHENE		SUM	NOTES
				MP/L	UG/L	MP/L	UG/L	MP/L	UG/L	MP/L	UG/L	MP/L	UG/L	MP/L	UG/L	MP/L	UG/L		
11/16/86	16	AQUA		4.3	1.5	10	10	10	10	10	10	10	10	ND	12.0	5	18		
01/07/87	4	AQUA		10	10	10	10	10	10	10	10	10	10	10	84.8	93	93		
02/12/87	3	AQUA		10	10	10	10	10	10	10	10	7.9	10	ND	116	124	124		
06/05/87	13	AQUA		10	10	10	10	10	10	5.6	10	10	10	10	80.0	86	86		
09/03/87	20	AQUA		10	10	10	10	10	10	10	10	10	10	10	86.0	86	86		
01/14/88	22	AQUA		10	10	10	10	10	10	8.8	10	10	10	10	68.0	77	77		
02/19/88	33	AQUA		10	10	10	10	10	10	5.8	10	10	10	10	75.0	81	81		
05/19/88	26	AQUA		10	10	10	10	10	10	10	10	10	10	10	80.7	61	61		
09/23/88	12	AQUA		10	10	10	10	10	10	10	10	10	10	10	78.0	78	78		
02/27/89	17	AQUA		10	10	10	10	10	10	10	10	10	10	10	75.9	78	78		
06/09/89	27	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	65.7	68	68		
09/08/89	13	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	53.6	54	54		
12/12/89	25	AQUA	8240	10	10	10	10	10	10	5.1	10	10	10	10	62.4	68	68		
03/02/90	26	AQUA	8240	10	10	10	10	10	10	6.9	10	10	10	10	42.4	49	49		
06/04/90	35	AQUA	8240	10	10	10	10	10	10	6.2	10	10	10	10	42.8	49	49		
08/24/90	34	AQUA	8240	10	10	10	10	10	10	6.9	10	10	10	10	35.0	42	42		
09/24/90	35	AQUA	8240	10	10	10	10	10	10	6.5	10	10	10	10	33.6	40	40		
10/28/90	22	AQUA	8240	10	10	10	10	10	10	10	10	9.6	10	10	40.4	50	50		
01/02/81	24	AQUA	8240	10	10	10	10	10	10	8.2	10	10	10	10	29.6	38	38		
06/02/81	30	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	27.2	27	27		
08/31/81	31	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	32.6	33	33		
08/31/81	32	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	33.0	33	33		
11/13/81	23	AQUA	8240	10	10	10	10	10	10	5.5	10	10	10	10	27.6	33	33		
01/26/82	38	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	24.5	25	25		
01/02/82	42	AQUA	8240	10	10	10	10	10	10	7.6	10	10	10	10	31.2	39	39		
01/02/82	43	AQUA	8240	10	10	10	10	10	10	10.3	10	10	10	10	38.9	49	49		
08/23/82	27	AQUA	8240	10	10	10	10	10	10	5.7	10	10	10	10	27.0	31	31		
10/31/82	24	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	17.3	17	17		
02/08/83	34	AQUA	8240	10	10	10	10	10	10	19.3	10	10	10	10	28.9	48	48		
02/08/83	35	AQUA	8240	10	10	10	10	10	10	20.5	10	10	10	10	36.6	57	57		
05/11/83	15	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	16.9	17	17		
08/31/83	13	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	23.7	24	24		
08/31/83	14	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	22.5	23	23		
12/02/83	20	AQUA	8240	10	10	10	10	10	10	5.2	10	10	10	10	34.0	39	39		
12/02/83	21	AQUA	8240	10	10	10	10	10	10	5.2	10	10	10	10	35.3	41	41		
02/19/84	40	AQUA	8240	10	10	10	10	10	10	10	10	10	10	10	23.8	24	24		
05/05/84	19	AQUA	8240	12.8	10	10	10	10	10	10	10	10	10	10	16.1	67	67		
09/15/84	25	AQUA	8240	139	10	44.6	10	10	10	10	10	10	10	10	43.2	761	761		

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

Radisson
associates
Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	03/20/1997	05/04/1997	09/23/1997	12/09/1997	06/09/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

---=Not analyzed

Summary of Detected Constituents during Quarterly Monitoring

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S20 12/14/1998	S20 06/22/1999	S20 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<1.0	<1.0	<1.0
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	CONC.	DATE	CONC.
Total Phenols (ug/l)	S20	03/20/1997	<10		S20	06/22/1999
	S20	09/23/1997	<10		S20	06/09/1998
	S20	06/09/1998	<10		S20	<10
	S20	06/22/1999	<10		S20	<10

Summary of Detected Constituents during Quarterly Monitoring

----=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	S20	S20	S20	S20
	DATE		03/20/1997	09/23/1997	06/09/1998	06/22/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		--	<5	<5	--
Lead, Dissolved	(ug/l)		--	<2.0	<2.0	--
Nickel, Dissolved	(ug/l)		--	<20	<20	--
Chromium, Total	(ug/l)	100	<5	--	--	--
Lead, Total	(ug/l)	15	3:6	--	--	--
Nickel, Total	(ug/l)	100	<20	--	--	--

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		05 JUN 96		05 SEP 96		11 DEC 96	
			AMOUNT	q	AMOUNT	q	AMOUNT	q	AMOUNT	q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	ACETONE	UG/L	10 U		10 U		10 U		10 U	
	XYLENE (TOTAL)	UG/L	100 U		100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	10 U		10 U		10 U		10 U	
		UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
TOTAL VOCs:		UG/L	0		0		0		0	
E-METALS	CHROMIUM	UG/L	5 U				5.0 U			
	LEAD	UG/L	2.0 U				2.0 U			
	NICKEL	UG/L	20 U			5.4	J			
H-MISC	CYANIDE, TOTAL	UG/L	5 U				5 U			
	PHENOLS	UG/L	10 U				10 U			

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERH'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		13 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	-		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U	
TOTAL VOCs:		UG/L	0		0		0		0		0	
E-METALS	LEAD	UG/L	-		-		-		2.0 U		-	
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		19		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		10 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERN QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-20

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD		NOTES
			MCL	METHOD	
11/07/86	30	AQUA			No VOC Detected
02/12/87	9	AQUA			No VOC Detected
06/08/87	18	AQUA			No VOC Detected
09/03/87	18	AQUA			No VOC Detected
01/15/88	7	AQUA			No VOC Detected
02/09/88	19	AQUA			No VOC Detected
05/19/88	19	AQUA			No VOC Detected
09/23/88	23	AQUA			No VOC Detected
09/23/88	24	AQUA			No VOC Detected
12/09/88	9	AQUA			No VOC Detected
02/22/89	9	AQUA			No VOC Detected
06/09/89	28	AQUA	024		No VOC Detected
09/09/89	28	AQUA	0240		No VOC Detected
12/11/89	3	AQUA	0240		No VOC Detected
12/11/89	4	AQUA	0240		No VOC Detected
03/02/90	36	AQUA	0240		No VOC Detected
06/01/90	7	AQUA	0240		No VOC Detected
09/22/90	6	AQUA	0240		No VOC Detected
10/27/90	4	AQUA	0240		No VOC Detected
02/26/91	6	AQUA	0240		No VOC Detected
08/01/91	13	AQUA	0240		No VOC Detected
09/29/91	6	AQUA	0240		No VOC Detected
11/12/91	7	AQUA	0240		No VOC Detected
01/25/92	31	AQUA	0240		No VOC Detected
03/31/92	17	AQUA	0240		No VOC Detected
06/22/92	12	AQUA	0240		No VOC Detected
10/29/92	9	AQUA	0240		No VOC Detected
02/04/93	9	AQUA	0240		No VOC Detected
05/11/93	6	AQUA	0240		No VOC Detected
06/31/93	4	AQUA	0240		No VOC Detected
12/01/93	2	AQUA	0240		No VOC Detected
02/17/94	4	AQUA	0240		No VOC Detected
05/03/94	6	AQUA	0240		No VOC Detected
09/14/94	11	AQUA	0240		No VOC Detected

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

ND = NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

NPL = NO U.S. EPA PUBLISHED LEVEL

P = PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

alliedsignal

associates

Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	U.S. PMCL	S21 03/20/1997	S21 06/04/1997	S21 09/26/1997	S21 12/10/1997	S21 06/10/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	16	29	20	18	24
cis-1,2-Dichloroethene	(ug/l)	70	22	36	25	23	33
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	[28]	[31]	[42]	[46]	[38]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	S21 12/14/1998	S21 06/22/1999	S21 12/15/1999
Benzene	5	<5.0	<5.0	<5
Vinyl Chloride	2	<10	<10	<10
Chloroform	100	<5.0	<5.0	<5
1,1-Dichloroethane		<5.0	<5.0	<5
1,2-Dichloroethane	5	<5.0	<5.0	<5
1,1-Dichloroethene	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	100	13	52	28
cis-1,2-Dichloroethene	70	22	57	36
Methylene chloride	5	<5.0	<5.0	<5
Tetrachloroethene	5	<5.0	<5.0	<5
Toluene	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	200	<5.0	<5.0	<5
Trichloroethene	5	[25]	[20]	[26]
Acetone		<100	<100	<100
Xylene (total)	10000	<10	<10	<10
Carbon disulfide		<5.0	<5.0	<5
1,2-Dichloropropane	5	<5.0	<5.0	<5
Chloroethane		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	U.S. PMCL	DATE	U.S. PMCL	DATE	U.S. PMCL	DATE		
Total Phenols (ug/l)	S21	03/20/1997	<10	S21	09/26/1997	<10	S21	06/22/1999	20
	S21	03/20/1997	<10	S21	06/10/1998	<10	S21	06/10/1998	<10
	S21	03/20/1997	<10	S21	09/26/1997	<10	S21	06/22/1999	20
	S21	03/20/1997	<10	S21	06/10/1998	<10	S21	06/10/1998	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	S21 03/20/1997	S21 09/26/1997	S21 06/10/1998	S21 06/22/1999
Cyanide	200	<5	<5	<57	<5
Chromium (T), Dissolved		---	<5	8.87	9.7
Lead, Dissolved		---	<2.0	<2.07	<2.0
Nickel, Dissolved		---	<20	<207	<20
Chromium, Total	100	5.6	---	---	---
Lead, Total	15	3	---	---	---
Nickel, Total	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

?=Duplicate records found, Data review required. ---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		05 SEP 96		11 DEC 96	
			13 MAR 96	S-21	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	18		18		17		17		9.3	
	METHYLENE CHLORIDE	UG/L	25		25		25		25		15	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	20		20		21		21		19	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U		
CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U		
TOTAL VOCs:		UG/L	63		64		63		63		86.3	
E.METALS	CHROMIUM	UG/L	5 U		5 U		5.0 U		5.0 U		-	
	LEAD	UG/L	23		23		0.7		0.7		-	
	NICKEL	UG/L	10		10		J		20 U		-	
H.MISC	CYANIDE, TOTAL	UG/L	5 U		5 U		5 U		5 U		-	
	PHENOLS	UG/L	10 U		10 U		10 U		10 U		-	

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U	5.0 U	33	5.0 U	15	5.0 U	15	5.0 U
	CHLOROETHANE	UG/L	10 U	10 U	38	10 U	21	10 U	21	10 U
	1,1-DICHLOROETHANE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	1,2-DICHLOROETHANE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	1,1-DICHLOROETHENE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	7.9	18						
	CIS-1,2-DICHLOROETHENE	UG/L	14	25						
	METHYLENE CHLORIDE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	TETRACHLOROETHENE	UG/L	-	5.0 U		5.0 U		5.0 U		5.0 U
	TOLUENE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	1,1,1-TRICHLOROETHANE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	TRICHLOROETHENE	UG/L	5 U	5.0 U		5.0 U		5.0 U		5.0 U
	VINYL CHLORIDE	UG/L	16	21	11	10 U	15	10 U	16	10 U
	ACETONE	UG/L	100 U	100 U		100 U		100 U		100 U
	XYLENE (TOTAL)	UG/L	10 U	10 U		10 U		10 U		10 U
	TOTAL VOCs:	UG/L	37.9	64	82	51	52			
E-METALS	LEAD	UG/L	-	-		-		2.0 U		-
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-	2.0 U		-		-		-
	NICKEL (DISSOLVED)	UG/L	-	20 U		-		-		-
H-MISC	CYANIDE, TOTAL	UG/L	-	5 U		-		5 U		-
	PHENOLS	UG/L	-	10 U		-		10 U		-

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-21

DATE SAMPLED	SAMPLE NO.	LAB	MCL		CIS-1,2-DICHLORO-ETHENE	TRANS-1,2-DICHLORO-ETHENE	TRI-CHLORO-ETHENE	SUM	NOTES
			PPM	UG/L					
11/06/88	17	AQUA	ND	116	ND	ND	116		
12/17/88	13	AQUA	ND	89.3	ND	ND	89		
02/11/87	6	AQUA	ND	88.8	ND	ND	89		
06/05/87	17	AQUA	5.0	30.0	ND	ND	35		
06/05/87	18	AQUA	5.5	34.0	ND	ND	40		
09/03/87	14	AQUA	50.0	13.0	ND	ND	63		
01/14/88	11	AQUA	53.2	20.4	ND	ND	74		
02/02/88	22	AQUA	60.0	33.0	ND	ND	93		
05/18/88	13	AQUA	137	11.1	ND	ND	148		
09/23/88	13	AQUA	58.0	49.0	ND	ND	107		
12/02/88	10	AQUA	68.0	32.0	ND	ND	99		
02/23/89	10	AQUA	64.1	32.7	ND	ND	97		
05/02/89	24	AQUA	48.3	24.0	ND	ND	72		
09/18/89	41	AQUA	72.5	41.5	ND	ND	114		
12/11/89	9	AQUA	9.3	ND	ND	ND	9		
03/02/90	32	AQUA	98.5	45.0	5.0	5.0	151		
06/02/90	15	AQUA	87.3	52.5	ND	ND	140		
08/23/90	10	AQUA	48.4	28.0	6.7	6.7	82		
10/26/90	19	AQUA	110	50.7	ND	ND	169		
10/29/90	20	AQUA	107	56.1	ND	ND	163		
03/03/91	28	AQUA	69.3	36.2	ND	ND	106		
06/01/91	18	AQUA	31.1	121	ND	ND	152		
08/28/91	3	AQUA	33.5	21.8	6.1	6.1	61		
11/12/91	3	AQUA	33.7	19.7	6.7	6.7	60		
01/21/92	2	AQUA	20.2	14.8	ND	ND	43		
03/30/92	6	AQUA	26.8	14.8	7.5	7.5	51		
06/29/92	3	AQUA	20.1	14.3	6.4	6.4	51		
10/30/92	13	AQUA	47.8	28.0	6.5	6.5	84		
02/03/93	3	AQUA	70.1	51.7	5.6	5.6	135		
05/11/93	3	AQUA	70.3	65.0	ND	ND	125		
08/31/93	12	AQUA	41.4	33.6	5.1	5.1	80		
12/01/93	7	AQUA	70.5	67.8	5.3	5.3	153		
02/18/94	3	AQUA	36.9	27.5	5.9	5.9	70		
05/01/94	3	AQUA	28.1	18.7	6.4	6.4	50		
09/12/94	7	AQUA	11.3	6.3	6.8	6.8	26		

PARAMETER

o - Date Sampled

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH DEER, INDIANA

alliedsignal
associates

Environmental and Geotechnical Services

A-11318-21-VII, 10-18-1984

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	S22	S22	S22	S22	S22	S22
	DATE		03/22/1997	06/04/1997	09/23/1997	12/10/1997	06/09/1998	
	(ug/l)		<5	<5	<5.0	<5.0	<5.0	
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	69	91	97	92	71	71
cis-1,2-Dichloroethene	(ug/l)	70	46	66	64	63	53	53
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	S22 12/14/1998	S22 06/22/1999	S22 12/15/1999
SITE DATE	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Benzene	5	<5.0	<5.0	<5
Vinyl Chloride	2	<10	<10	<10
Chloroform	100	<5.0	<5.0	<5
1,1-Dichloroethane		<5.0	70	<5
1,2-Dichloroethane	5	<5.0	<5.0	<5
1,1-Dichloroethene	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	100	86	<5.0	67
cis-1,2-Dichloroethene	70	59	53	53
Methylene chloride	5	<5.0	[5.7]	<5
Tetrachloroethene	5	<5.0	<5.0	<5
Toluene	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	200	<5.0	<5.0	<5
Trichloroethene	5	<5.0	<5.0	[5.8]
Acetone		<100	<100	<100
Xylene (total)	10000	<10	<10	<10
Carbon disulfide		<5.0	<5.0	<5
1,2-Dichloropropane	5	<5.0	<5.0	<5
Chloroethane		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	CONC.	DATE	CONC.
Total Phenols (ug/l)	S22	03/22/1997		<10	S22	06/22/1999
	S22	09/23/1997		<10	S22	06/09/1998
	S22	06/09/1998		<10	S22	06/22/1999
	S22	09/23/1997		<10	S22	06/22/1999

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	03/22/1997	09/23/1997	06/09/1998	06/22/1999
	DATE					
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	<5	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	7.4	---	---	---
Lead, Total	(ug/l)	15	<2	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID			DATE COLLECTED				
			S-22	13 MAR 96	05 JUN 96	04 SEP 96	11 DEC 96			
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	92	73	77	70				
	METHYLENE CHLORIDE	UG/L	66	55	57	55				
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U	
XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		
CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		
TOTAL VOCS:		UG/L	158		128		134		125	
E.METALS	CHROMIUM	UG/L	5 U				5.0 U			
	LEAD	UG/L	2.0 U				1.6			
	NICKEL	UG/L	20 U				20 U			
H.MISC	CYANIDE, TOTAL	UG/L	5 U				5 U			
	PHENOLS	UG/L	10 U				10 U			

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		SAMPLE ID	13 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q		AMOUNT	Q	AMOUNT	Q	AMOUNT	Q		
A.VOA	BENZENE	UG/L	5 U			5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U			10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U			5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U			5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U			5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L					79						
	CIS-1,2-DICHLOROETHENE	UG/L	66			78				66			
	METHYLENE CHLORIDE	UG/L	54			57				47			
	TETRACHLOROETHENE	UG/L											
	TOLUENE	UG/L											
	1,1,1-TRICHLOROETHANE	UG/L											
	TRICHLOROETHENE	UG/L											
	VINYL CHLORIDE	UG/L											
	ACETONE	UG/L											
	XYLENE (TOTAL)	UG/L											
TOTAL VOCs:		UG/L	120			135				113		130	
E.METALS	LEAD	UG/L											
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L				2.0 U							
	NICKEL (DISSOLVED)	UG/L				20 U							
H.MISC	CYANIDE, TOTAL	UG/L				5 U							
	PHENOLS	UG/L				10 U							

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERN QUALITY ASSURANCE COMPREHENSIVE REVIEW.

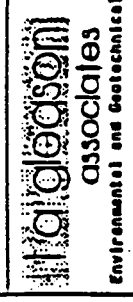
SOURCE: S-22		C18-1,8-DICHLORO-ETHENE		TRANS-1,2-DICHLORO-ETHENE		SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	P-70	P-100		
				UG/L	UG/L	UG/L	
11/06/86	18	AQJA		ND	164	164	
01/07/87	6	AQJA		60	75.6	126	
01/07/87	7	AQJA		50	73.6	124	
02/12/87	5	AQJA		ND	132	132	
02/12/87	7	AQJA		ND	109	109	
06/05/87	26	AQJA		41	69	110	
09/03/87	12	AQJA		97	41	98	
01/13/88	6	AQJA		41.5	ND	42	
02/09/88	23	AQJA		48	61	109	
03/10/88	19	AQJA		77.5	27.7	105	
03/10/88	18	AQJA		82	25.2	107	
09/23/88	22	AQJA		21	45	66	
02/22/89	6	AQJA		43.1	38.8	82	
02/22/89	7	AQJA		35.7	37.5	73	
06/09/89	19	AQJA	624	33	40.7	74	
06/09/89	20	AQJA	624	37.9	42.1	80	
09/08/89	28	AQJA	8240	38.4	45.6	84	
12/11/89	8	AQJA	8240	37.7	66.6	95	
03/01/90	21	AQJA	8240	59.8	74.4	134	
06/01/90	11	AQJA	8240	45.1	71.8	117	
08/22/90	7	AQJA	8240	39.9	60.1	100	
08/22/90	6	AQJA	8240	40.7	61.4	102	
10/27/90	5	AQJA	8240	69.3	82.8	142	
02/28/91	7	AQJA	8240	35.8	48.4	84	
08/01/91	16	AQJA	8240	52.8	168.0	221	
08/28/91	5	AQJA	8240	34.1	61.6	96	
11/13/91	12	AQJA	8240	45.8	78.6	122	
01/25/92	33	AQJA	8240	50.8	86.8	137	
03/31/92	14	AQJA	8240	41.3	64.9	106	
08/22/92	15	AQJA	8240	61.7	100.0	162	
08/22/92	16	AQJA	8240	83.9	91.3	145	
02/04/93	11	AQJA	8240	56.7	91.8	148	
02/04/93	12	AQJA	8240	83.7	98.0	180	
02/18/93	2	AQJA	8240	64.7	80.0	135	
05/11/93	9	AQJA	8240	87.8	90.0	147	
08/31/93	7	AQJA	8240	45.8	78.6	124	
12/01/93	6	AQJA	8240	65.1	113.0	178	
02/18/94	23	AQJA	8240	48.8	78.1	126	
05/04/94	6	AQJA	8240	38.3	62.1	100	
09/14/94	7	AQJA	8240	54.8	88.3	144	

NOTES:
 OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
 NO RESULTS FOR 10/92 SAMPLING EPISODE DUE TO LAB ERROR.
 A - METHYLENE CHLORIDE 18.3 UG/L

PARAMETER
 0 - Data Sampled

SHALLOW MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIED SIGNAL INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S23 03/22/1997	S23 06/04/1997	S23 09/23/1997	S23 12/10/1997	S23 06/10/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	[5.1]	[5.2]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S23 12/14/1998	S23 06/22/1999	S23 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	[9.8]	[11]	[18]
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	03/22/1997	09/23/1997	06/10/1998	06/22/1999
Total Phenols		(ug/l)		<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S23 03/22/1997	S23 09/23/1997	S23 06/10/1998	S23 06/22/1999
Cyanide	(ug/l)	200	<5	<5	11	6
Chromium (T), Dissolved	(ug/l)		---	<5	<5	<5
Lead, Dissolved	(ug/l)		--	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	--	--	--
Lead, Total	(ug/l)	15	<2	--	--	--
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID			DATE COLLECTED		
			S-23	13 MAR 96	05 JUN 96	05 SEP 96	11 DEC 96	
			AMOUNT	q	AMOUNT	q	AMOUNT	q
A. VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U	
	ACETONE	UG/L	10 U		10 U		10 U	
	XYLENE (TOTAL)	UG/L	100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	10 U		10 U		10 U	
			5.0 U		5.0 U		5.0 U	
TOTAL VOCS:		UG/L	0		0		0	
E-METALS	CHROMIUM	UG/L	5 U				5.0 U	
	LEAD	UG/L	2.0 U				2.0 U	
	NICKEL	UG/L	7				20 U	
H-MISC	CYANIDE, TOTAL	UG/L	5 U				5 U	
	PHENOLS	UG/L	10 U				10 U	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

SAMPLE ID
 S-23

DATE COLLECTED
 08 DEC 94

GROUP	PARAMETER NAME	UNITS	08 DEC 94		15 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	-		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U	
	TOTAL VOCs:	UG/L	0		0		0		0		0	
E-METALS	LEAD	UG/L	-		-		-		2.0 U		-	
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		5 U		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		10 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-23

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLOROETHENE		TRANS-1,2-DICHLOROETHENE		SUM	NOTES
				P-79 UG/L	NO	P-100 UG/L	4,6 UG/L		
11/06/86	18	AQUA		NO		4,6	6		
01/07/87	8	AQUA		No VOC Detected					
02/11/87	8	AQUA		No VOC Detected					
06/05/87	21	AQUA		No VOC Detected					
09/03/87	13	AQUA		No VOC Detected					
01/13/88	9	AQUA		No VOC Detected					
02/09/88	24	AQUA		No VOC Detected					
05/19/88	17	AQUA		6,4	NO		6		
09/24/88	17	AQUA		No VOC Detected					
12/01/88	7	AQUA		No VOC Detected					
02/23/89	8	AQUA		No VOC Detected					
06/09/89	17	AQUA	824	No VOC Detected					
09/09/89	27	AQUA	8240	No VOC Detected					
12/11/89	7	AQUA	8240	No VOC Detected					
03/07/90	23	AQUA	8240	No VOC Detected					
06/01/90	18	AQUA	8240	No VOC Detected					
08/22/90	9	AQUA	8240	No VOC Detected					
10/27/90	7	AQUA	8240	No VOC Detected					
02/20/91	8	AQUA	8240	No VOC Detected					
06/01/91	17	AQUA	8240	No VOC Detected					
08/29/91	4	AQUA	8240	No VOC Detected					
11/13/91	19	AQUA	8240	No VOC Detected					
03/31/92	15	AQUA	8240	No VOC Detected					
08/25/92	17	AQUA	8240	No VOC Detected					
02/04/93	13	AQUA	8240	No VOC Detected					
02/10/93	3	AQUA	8240	No VOC Detected					
05/11/93	8	AQUA	8240	No VOC Detected					
08/31/93	8	AQUA	8240	No VOC Detected					
12/01/93	8	AQUA	8240	No VOC Detected					
03/29/94	47	AQUA	8240	No VOC Detected					
05/04/94	8	AQUA	8240	No VOC Detected					
09/14/96	8	AQUA	8240	No VOC Detected					

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

NPL - NO U.S. EPA PUBLISHED LEVEL

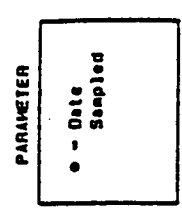
P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A SCANS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

A - B19 (2-ETHYLHEXYL) PHTHALATE REPORTED 3.4 UG/L

WELL NOT SAMPLED 01/82.

NO RESULTS FOR 10/92 SAMPLING EPISODE DUE TO LAB ERROR.



SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
Southbend, Indiana

PERIOD: From 03/01/1997 thru 12/30/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	US-PMCL	S24	S24	S24	S24
	DATE	(ug/l)	DATE	(ug/l)	(ug/l)	(ug/l)	(ug/l)
1,1,1-Trichloroethane		200	03/21/1997	<5	09/23/1997	<5.0	12/09/1997
1,1-Dichloroethane				<5		<5.0	<5.0
1,1-Dichloroethylene		7		<5		<5.0	<5.0
1,2-Dichloroethane		5		<5		<5.0	<5.0
1,2-Dichloropropane		5		<5		<5.0	<5.0
Acetone				<100		<100	<100
Benzene		5		<5		<5.0	<5.0
Carbon disulfide				<5		<5.0	<5.0
Chloroform		100		<5		<5.0	<5.0
cis-1,2-Dichloroethylene		70		44	[100]	[91]	[99]
Ethene, 1,2-dichloro- (E)-		100		85	[170]	[160]	[180]
Methylene chloride		5		<5		<5.0	<5.0
Tetrachloroethylene		5		<5		<5.0	<5.0
Toluene		1000		<5		<5.0	<5.0
Trichloroethylene		5		<5	[9.0]	[9.1]	[9.3]
Vinyl chloride		2		<10	<2	<10	<10
Xylene (total)		10000		<10	<5	<10	<10
Sum of Constituents ()				129.00	279.00	260.10	288.30

[]=Greater than Action Level ---=Not analyzed

For RCL ANSUM

Analytical Summary - VOCs in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
Southbend, Indiana

PERIOD: From 03/01/1997 thru 12/30/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	US-PMCL	S24	S24	S24
	(ug/l)	200	200	12/14/1998	06/22/1999	12/15/1999
1,1,1-Trichloroethane	(ug/l)	200	200	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)			<5.0	<5.0	<5
1,1-Dichloroethylene	(ug/l)	7	7	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	5	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	5	<5.0	<5.0	<5
Acetone	(ug/l)			<100	<100	<100
Benzene	(ug/l)	5	5	<5.0	<5.0	<5
Carbon disulfide	(ug/l)			<5.0	<5.0	<5
Chloroform	(ug/l)	100	100	<5.0	<5.0	<5
cis-1,2-Dichloroethylene	(ug/l)	70	70	[100]	[140]	[120]
Ethene, 1,2-dichloro-, (E)-	(ug/l)	100	100	[150]	[220]	[170]
Methylene chloride	(ug/l)	5	5	<5.0	<5.0	<5
Tetrachloroethylene	(ug/l)	5	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	1000	<5.0	<5.0	<5
Trichloroethylene	(ug/l)	5	5	[10]	[22]	[32]
Vinyl chloride	(ug/l)	2	2	<10	<10	<10
Xylene (total)	(ug/l)	10000	10000	<10	<10	<10
Sum of Constituents ()	(ug/l)		260.00		362.00	322.00

[]=Greater than Action Level ---=Not analyzed

For RCL ANSUM

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		11 DEC 96	
			S-24	13 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q		
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		70		84		77	
	CHLOROETHANE	UG/L	10 U		10 U		47		52		52	
	CHLOROFORM	UG/L	5.0 U		5.0 U							
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U							
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U							
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U							
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U							
	CIS-1,2-DICHLOROETHENE	UG/L	71									
	METHYLENE CHLORIDE	UG/L	44									
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U							
	TOLUENE	UG/L	5.0 U		5.0 U							
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U							
	TRICHLOROETHENE	UG/L	8.4				9.2		8.0		7.3	
	VINYL CHLORIDE	UG/L	10 U		10 U							
	ACETONE	UG/L	100 U		100 U							
XYLENE (TOTAL)	UG/L	10 U		10 U								
CARBON DISULFIDE	UG/L	5.0 U		5.0 U								
TOTAL VOCS:	UG/L	123.4		126.2				144		139.4		
E-METALS	CHROMIUM	UG/L	5 U									
	LEAD	UG/L	2.0 U									
	NICKEL	UG/L	14						0.6			
H-MISC	CYANIDE, TOTAL	UG/L	5 U						5.4			
	PHENOLS	UG/L	10 U									

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		14 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	147		65		190		68		73		73	
	CIS-1,2-DICHLOROETHENE	UG/L	101		48		110		48		50		50	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	-		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	23		12		11		9.7		10		10	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U		10 U	
	TOTAL VOCs:	UG/L	271		125		311		125.7		133		133	
E.METALS	LEAD	UG/L	-		-		-		1.2		J		-	
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-		-	
H.MISC	CYANIDE, TOTAL	UG/L	-		11		-		-		5 U		-	
	PHENOLS	UG/L	-		-		-		-		10 U		-	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-24				MCL		MCL METHOD		C18-1,2-DICHLORO-ETHYLENE		TRANS-1,2-DICHLORO-ETHYLENE		TRI-CHLORO-ETHYLENE		SUM		NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL	P-78	P-100	P-78	P-100	B	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
07/10/87	2	AQJA	824	170	145	150	150	150	150	145	150	150	150	465			
09/01/87	25	AQJA	824	150	140	170	170	170	170	140	170	170	170	460			
05/19/88	28	AQJA	824	277	230	277	230	105	105	230	230	105	105	612			
09/23/88	26	AQJA	824	75	124	75	124	65	65	124	124	65	65	284			
12/08/88	1	AQJA	824	119	129	119	129	66	66	129	129	66	66	314			
02/25/89	33	AQJA	824	107	146	107	146	50.6	50.6	146	146	50.6	50.6	312			
08/09/89	26	AQJA	824	92.7	110	92.7	110	52.1	52.1	110	110	52.1	52.1	255			
09/08/89	16	AQJA	824	110	130	110	130	44.7	44.7	130	130	44.7	44.7	285			
09/08/89	17	AQJA	824	110	130	110	130	46	46	130	130	46	46	286			
12/11/89	10	AQJA	824	60.8	79.8	60.8	79.8	33.6	33.6	79.8	79.8	33.6	33.6	174			
02/28/90	10	AQJA	824	81.8	77.8	81.8	77.8	20.3	20.3	77.8	77.8	20.3	20.3	160			
05/02/90	16	AQJA	824	110	150	110	150	32.2	32.2	150	150	32.2	32.2	292			
08/24/90	31	AQJA	824	78.1	92.1	78.1	92.1	39.1	39.1	92.1	92.1	39.1	39.1	209			
10/28/90	10	AQJA	824	103	104	103	104	105	105	104	104	105	105	312			
02/28/91	10	AQJA	824	61.5	63.8	61.5	63.8	76.1	76.1	63.8	63.8	76.1	76.1	201			
05/01/91	21	AQJA	824	95.0	256.0	95.0	256.0	78.5	78.5	256.0	256.0	78.5	78.5	430			
08/21/91	9	AQJA	824	91.7	139	91.7	139	75.3	75.3	139	139	75.3	75.3	306			
11/13/91	17	AQJA	824	89.5	122.0	89.5	122.0	51.4	51.4	122.0	122.0	51.4	51.4	263			
01/25/92	20	AQJA	824	84.0	139	84.0	139	46.0	46.0	139	139	46.0	46.0	270			
03/31/92	10	AQJA	824	63.8	66.3	63.8	66.3	31.0	31.0	66.3	66.3	31.0	31.0	182			
08/23/92	29	AQJA	824	49.3	66.3	49.3	66.3	23.1	23.1	66.3	66.3	23.1	23.1	139			
02/04/93	19	AQJA	824	132	178	132	178	30.5	30.5	178	178	30.5	30.5	341			
02/10/93	6	AQJA	824	116	165	116	165	28.0	28.0	165	165	28.0	28.0	309			
05/11/93	4	AQJA	824	136	175	136	175	36.3	36.3	175	175	36.3	36.3	349			
08/31/93	9	AQJA	824	110	175	110	175	53.4	53.4	175	175	53.4	53.4	346			
12/01/93	6	AQJA	824	152	224	152	224	45.5	45.5	224	224	45.5	45.5	422			
02/10/94	39	AQJA	824	67.0	92.0	67.0	92.0	22.0	22.0	92.0	92.0	22.0	22.0	162			
05/05/94	8	AQJA	824	63.0	98.1	63.0	98.1	13.6	13.6	98.1	98.1	13.6	13.6	175			
09/14/94	14	AQJA	824	83.8	134	83.8	134	18.5	18.5	134	134	18.5	18.5	240			

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

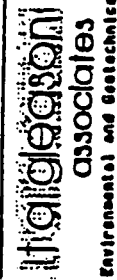
NO RESULTS FOR 10/92 SAMPLED EPISODE (DUE TO LAB ERROR).

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	S25	S25	S25	S25	S25
	DATE		03/20/1997	06/04/1997	09/23/1997	12/10/1997	06/09/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S25 12/14/1998	S25 06/22/1999	S25 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	5.2	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	U.S. PMCL	DATE	DATE	DATE
	S25		03/20/1997	09/23/1997	06/22/1999

Total Phenols (ug/l)

<10 <10 <10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	S25	S25	S25	S25
	DATE		03/20/1997	09/23/1997	06/09/1998	06/22/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	<5	6.7
Lead, Dissolved	(ug/l)		--	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	7.3	--	--	--
Lead, Total	(ug/l)	15	[30]	--	--	--
Nickel, Total	(ug/l)	100	<20	--	--	--

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		05 JUN 96		05 SEP 96		11 DEC 96	
			S-25	S-25	13 MAR 96	13 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	3.1	J	3.0	J	2.3	J	3.2	J	3.2	J
	METHYLENE CHLORIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U	
	CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
TOTAL VOCs:		UG/L	3.1	3	3	2.3	3.2					
E.METALS	CHROMIUM	UG/L	5 U		5 U		5 U		5 U		5 U	
	LEAD	UG/L	6.5		20 U		0.9	J	20 U		20 U	
	NICKEL	UG/L										
H.MISC	CYANIDE, TOTAL	UG/L	5 U		5 U		5 U		5 U		5 U	
	PHENOLS	UG/L	10		10		10		10		10	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		13 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U	
TOTAL VOCs:		UG/L	0		0		3.8		2.6		3.9	
E-METALS	LEAD	UG/L	-		-		-		5.3		-	
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		5 U		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		10 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-25

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DI-CHLORO-ETHANE		1,2-DI-CHLORO-ETHANE		1,1,1-TRI-CHLORO-ETHANE		1,1,1-TRI-CHLORO-ETHANE		SUM	NOTES
				MPL	UG/L	5	UG/L	P-70	UG/L	P-100	UG/L		
07/10/87	1	AQUA		No VOC Detected									
09/03/87	11	AQUA		No VOC Detected									
01/15/88	32	AQUA		No VOC Detected									
02/09/88	20	AQUA		No VOC Detected									
03/18/88	18	AQUA		ND	ND	7.3	ND	ND	ND	ND	ND	7	
09/25/88	25	AQUA		No VOC Detected									
12/08/88	8	AQUA	8240	25.2	30.0	79.0	5.9	6.5	9.6	164			
02/22/89	8	AQUA		No VOC Detected									
02/23/89	32	AQUA		No VOC Detected									
08/08/89	21	AQUA	624	No VOC Detected									
09/09/89	26	AQUA	8240	No VOC Detected									
12/11/89	5	AQUA	8240	No VOC Detected									
03/03/90	35	AQUA	8240	No VOC Detected									
06/01/90	9	AQUA	8240	No VOC Detected									
09/22/90	6	AQUA	8240	No VOC Detected									
12/21/90	5	AQUA	8240	No VOC Detected									
02/28/91	8	AQUA	8240	No VOC Detected									
06/01/91	15	AQUA	8240	No VOC Detected									
08/29/91	7	AQUA	8240	No VOC Detected									
11/13/91	13	AQUA	8240	No VOC Detected									
01/25/92	32	AQUA	8240	No VOC Detected									
03/31/92	16	AQUA	8240	No VOC Detected									
08/22/92	14	AQUA	8240	No VOC Detected									
10/30/92	4	AQUA	8240	No VOC Detected									
02/04/93	10	AQUA	8240	No VOC Detected									
05/11/93	7	AQUA	8240	ND	ND	5.3	ND	ND	ND	5			
08/31/93	5	AQUA	8240	ND	ND	6.0	ND	ND	ND	6			
12/01/93	4	AQUA	8240	ND	ND	10.7	ND	ND	ND	11			
02/17/94	5	AQUA	8240	ND	ND	7.3	ND	ND	ND	7			
05/04/94	7	AQUA	8240	ND	ND	5.5	ND	ND	ND	6			
09/14/94	12	AQUA	8240	No VOC Detected									

NOTES:

OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR MILLIUM REPORTS.

ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - MD U.S EPA PUBLISHED LEVEL P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S26 03/20/1997	S26 06/03/1997	S26 09/23/1997	S26 12/09/1997	S26 12/14/1999
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	12	18	21	22	7.1
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	[35]	[51]	[66]	[65]	[28]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Shallow Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	DATE	CONC
Total Phenols	S26		03/20/1997	<10
	S26		09/23/1997	<10

CONSTITUENT	SITE	US:PMCL	DATE	CONC
Total Phenols	S26		03/20/1997	<10
	S26		09/23/1997	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US:PMCL	S26 03/20/1997	S26 09/23/1997
Cyanide	200	<5	<5
Chromium (T) Dissolved		--	<5
Lead, Dissolved		--	<2.0
Nickel, Dissolved		--	<20
Chromium, Total	100	<5	--
Lead, Total	15	[41]	--
Nickel, Total	100	<20	--

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	03/20/1997	06/05/1997	09/23/1997	12/09/1997	06/10/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)	5	<5	<5	17	28	44
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	11	15	18	16	14
cis-1,2-Dichloroethene	(ug/l)	70	21	26	31	30	29
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	[23]	[25]	[36]	[36]	[32]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	S27 12/14/1998	S27 06/22/1999	S27 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)	50	50	83	65
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	[9.9]	[14]	[11]
trans-1,2-Dichloroethene	(ug/l)	100	16	5.3	<5
cis-1,2-Dichloroethene	(ug/l)	70	29	22	18
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	5.2
Trichloroethene	(ug/l)	5	[32]	[31]	[30]
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	DATE	DATE	DATE
Total Phenols	S27	US:PMCL	03/20/1997	09/23/1997	06/10/1998
			<10	<10	<10
	S27		06/22/1999		
			<10		

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Shallow Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	S27 03/20/1997	S27 09/23/1997	S27 06/10/1998	S27 06/22/1999
Cyanide	(ug/l)	200	7	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	<5	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	19	---	---	---
Lead, Total	(ug/l)	15	[52]	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		04 JUN 96		05 SEP 96		11 DEC 96	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U	
	CHLOROFORM	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	21	15	15	14	14	15	15	15
	METHYLENE CHLORIDE	UG/L	27	23	23	21	21	25	25	25
	TETRACHLOROETHENE	UG/L								
	TOLUENE	UG/L								
	1,1,1-TRICHLOROETHANE	UG/L								
	TRICHLOROETHENE	UG/L								
	VINYL CHLORIDE	UG/L	39	32	32	27	27	27	27	27
	ACETONE	UG/L	10 U		10 U		10 U		10 U	
	XYLENE (TOTAL)	UG/L	100 U		100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	10 U		10 U		10 U		10 U	
		UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOTAL VOCs:	UG/L	87	70	70	62	62	78	78	
E.METALS	CHROMIUM	UG/L								
	LEAD	UG/L	5 U				5.0 U			
	NICKEL	UG/L	3.8			5.4				
		UG/L	20 U			6.0				
H.MISC	CYANIDE, TOTAL	UG/L	5 U							
	PHENOLS	UG/L	10 U							

QUALIFIER CODES (Q):

J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SHALLOW MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		14 MAR 95		06 JUN 95		20 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CHLOROETHANE	UG/L	10 U		10 U		10 U		10 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,2-DICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	15	17	17		21		16		20	
	CIS-1,2-DICHLOROETHENE	UG/L	22	25	25		24		22		24	
	METHYLENE CHLORIDE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TETRACHLOROETHENE	UG/L	-		5.0 U		5.0 U		5.0 U		5.0 U	
	TOLUENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	1,1,1-TRICHLOROETHANE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	52	52	52		41		41		37	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	XYLENE (TOTAL)	UG/L	10 U		10 U		10 U		10 U		10 U	
TOTAL VOCS:		UG/L	89	94	94		86		79		81	
E.METALS	LEAD	UG/L	-		-		-		9.8		-	
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
	NICKEL (DISSOLVED)	UG/L	-		20 U		-		-		-	
H.MISC	CYANIDE, TOTAL	UG/L	-		5 U		-		5 U		-	
	PHENOLS	UG/L	-		10 U		-		10 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: S-27

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,3-DICHLOROETHENE		TRANS-1,2-DICHLOROETHENE		TRI-CHLOROETHENE	SUM	NOTES
				P-70	P-100	P-100	5			
				UG/L	UG/L	UG/L	UG/L	UG/L		
07/10/87	8	AQUA		9.4	10	90	109			
09/04/87	28	AQUA		7.6	8	100	116			
01/15/88	33	AQUA		9.6	18	86	125			
02/10/88	32	AQUA		12	16	81	109			
05/19/88	27	AQUA		24.5	18.4	74.6	118			
09/23/88	27	AQUA		11	26	85	122			
12/08/88	2	AQUA		13.3	21	80	114			
02/23/89	12	AQUA		11.1	17	97.1	125			
06/09/89	25	AQUA	824	10.6	12.3	86	109			
09/08/89	16	AQUA	8240	14.8	19.5	78.8	113			
12/11/89	11	AQUA	8240	14.8	20.4	100	135			
02/28/90	11	AQUA	8240	20.4	22.3	83.1	126			
02/28/90	12	AQUA	8240	20	20.9	84.8	126			
06/02/90	17	AQUA	8240	17.4	21.8	84.8	124			
08/24/90	23	AQUA	8240	17.5	17.9	78.0	113			
10/28/90	17	AQUA	8240	20.8	20.9	81.4	132			
02/28/91	9	AQUA	8240	18.1	12.4	76.4	107			
06/01/91	22	AQUA	8240	22.5	60.8	68.7	151			
08/28/91	8	AQUA	8240	14.8	21.8	86.8	93			
11/13/91	18	AQUA	8240	20.8	23.1	84.1	97			
01/25/92	30	AQUA	8240	17.1	18.9	85.2	91			
03/31/92	19	AQUA	8240	18.8	17.8	87.8	91			
08/23/92	25	AQUA	8240	18.8	18.8	88.8	92			
02/04/93	16	AQUA	8240	23.5	18.8	75.3	119			
02/18/93	5	AQUA	8240	28.4	24.2	80.2	143			
05/11/93	5	AQUA	8240	21.4	21.8	88.2	101			
08/31/93	8	AQUA	8240	21.1	21.7	88.8	89			
12/01/93	8	AQUA	8240	58.2	48.3	89.2	159			
02/17/94	6	AQUA	8240	27.3	23.8	NO	81			
05/05/94	18	AQUA	8240	21.1	19.8	34.8	75			
09/14/94	13	AQUA	8240	28.7	18.7	44.8	81			

NOTES:
OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.

NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

MPL - NO U.S. EPA PUBLISHED LEVEL

P - PROPOSED

VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

NO RESULTS FOR 10/82 SAMPLING EPISODE DUE TO LAB ERROR.

PARAMETER

o - Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

Atmos
Associates
Environmental and Geotechnical Services



INTERMEDIATE MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	7-50 07/18/1997	7-50 06/09/1998	7-50 12/12/1998	7-50 06/22/1999	7-50 12/13/1999
Benzene	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<2	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5	<5.0	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	7	<5	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5.0	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5	<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<5	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
Intermediate Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	DATE	CONC.
Total Phenols	7-50		06/09/1998	<10
	7-50		06/22/1999	<10

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US:PMCL	7-50	7-50
	(ug/l)	(ug/l)		06/09/1998	06/22/1999
Cyanide			200	<5	<5
Chromium (T), Dissolved				<5	<5
Lead, Dissolved				<2.0	<2.0
Nickel, Dissolved				<20	<20

Analytical Summary - VOCs in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	U.S. PMCL	8D 03/21/1997	8D 06/03/1997	8D 09/24/1997	8D 12/08/1997	8D 06/11/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethane	(ug/l)	100	27	35	23	21	29
cis-1,2-Dichloroethane	(ug/l)	70	[230]	[310]	[240]	[220]	[260]
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	8D 12/12/1998	8D 06/23/1999	8D 12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	32	28	23
cis-1,2-Dichloroethene	(ug/l)	70	[220]	[240]	[200]
Methylene chloride	(ug/l)	5	[7.2]B	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level The following qualifier(s) exist: B ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	8D	8D	8D	8D
	DATE		03/21/1997	09/24/1997	06/11/1998	06/23/1999
	(ug/l)		<10	<10	<10	10
Total Phenols						

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Intermediate Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	8D 03/21/1997	8D 09/24/1997	8D 06/11/1998	8D 06/23/1999
Cyanide	(ug/l)	200	161	90	110	80
Chromium (T), Dissolved	(ug/l)		---	<5	13	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	11	---	---	---
Lead, Total	(ug/l)	15	<2	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Intermediate Monitoring Well

SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	12 MAR 96		05 JUN 96		04 SEP 96		12 DEC 96	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	10 U		25 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	10 U		25 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	6.9	J	30		23		21	
	CIS-1,2-DICHLOROETHENE	UG/L	97		270		240		200	
	TOLUENE	UG/L								
	TRICHLOROETHENE	UG/L								
	VINYL CHLORIDE	UG/L								
CARBON DISULFIDE	UG/L									
TOTAL VOCS:		UG/L	103.9		300		263		221	
E-METALS	LEAD	UG/L	2.0 U				1.6		J	
	NICKEL	UG/L	20 U				5.8		J	
H.MISC	CYANIDE, TOTAL	UG/L	220				180			
	PHENOLS	UG/L	10 U				10 U			

QUALIFIER CODES (Q):

J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.



Intermediate Monitoring Well
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		SAMPLE ID	14 MAR 95		07 JUN 95		19 SEP 95		06 DEC 95	
			AMOUNT	q		AMOUNT	q	AMOUNT	q	AMOUNT	q	AMOUNT	q
A.VOA	1,2-DICHLOROETHANE	UG/L	5 U	5.0 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
	1,1-DICHLOROETHENE	UG/L	5 U	5.0 U	2.6	34	9.6	19	10 U	10 U	10 U	10 U	10 U
	TRANS-1,2-DICHLOROETHENE	UG/L	33	18	270	270	89	180	10 U	10 U	10 U	10 U	10 U
	CIS-1,2-DICHLOROETHENE	UG/L	244	200	6.9	6.9	98.6	199	10 U	10 U	10 U	10 U	10 U
	TRICHLOROETHENE	UG/L	5 U	5.0 U	313.5	313.5	1.8	250	10 U	10 U	10 U	10 U	10 U
	VINYL CHLORIDE	UG/L	10 U	10 U	218	218	1100		10 U	10 U	10 U	10 U	10 U
	TOTAL VOCs:	UG/L	277	277	218	218	1100		10 U	10 U	10 U	10 U	10 U
E.METALS	LEAD	UG/L	-	-	-	-	-	-	-	-	-	-	-
H.MISC	CYANIDE, TOTAL	UG/L	-	-	-	-	-	-	-	-	-	-	-

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERN QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: 8-D

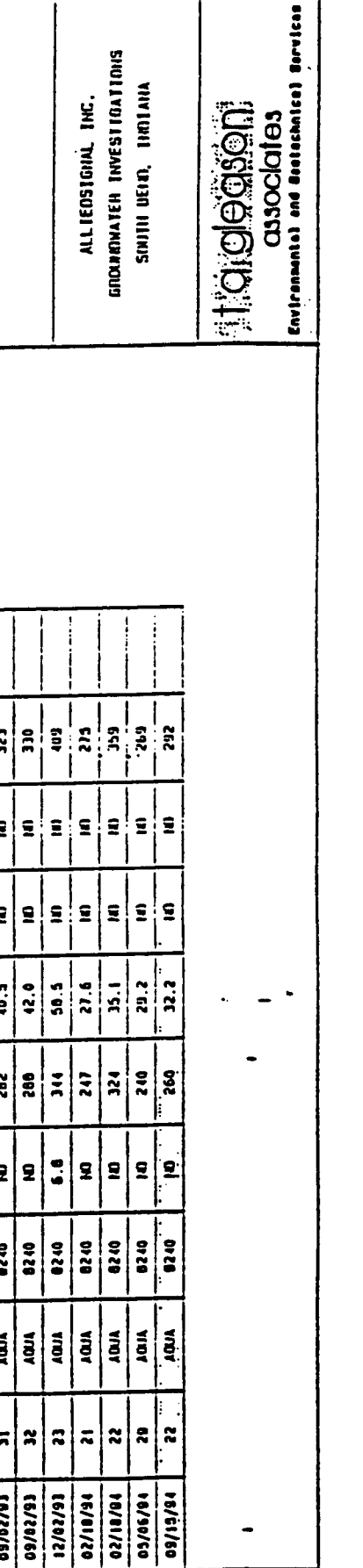
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DI-CHLORO-ETHENE		CIS-1,2-DICHLORO-ETHENE		TRANS-1,2-DICHLORO-ETHENE		1,1,1-TRI-CHLORO-ETHANE		VINYL CHLORIDE		SUM	NOTES
				7	UG/L	P-70	UG/L	P-100	UG/L	200	UG/L	2	UG/L		
07/10/87	5	AQUA		ND	720		27		10		10		747		
09/04/87	30	AQUA		ND	900		ND		ND		ND		900		
01/15/88	28	AQUA		ND	840		ND		ND		ND		840		
01/15/88	29	AQUA		ND	855		ND		ND		ND		855		
02/09/88	13	AQUA		ND	770		ND		ND		ND		770		
02/09/88	14	AQUA		ND	630		ND		ND		ND		630		
05/19/88	23	AQUA		ND	1600		24		ND		67.9		1692		
09/24/88	19	AQUA		ND	420		32		20		ND		472		
12/10/88	32	AQUA		No VOC Detected											
02/23/89	35	AQUA		ND	570		33.1		ND		24.5		628		
06/08/89	11	AQUA	624	ND	600		37.2		ND		18.3		656		
09/10/89	35	AQUA	8240	5.4	560		35.6		ND		17.7		619		
12/13/89	33	AQUA	8240	ND	440		27.5		ND		ND		460		
12/13/89	34	AQUA	8240	ND	440		27.8		ND		ND		460		
01/02/90	15	AQUA	8240	ND	780		41.5		ND		11.6		833		
06/03/90	22	AQUA	8240	ND	430		35.6		ND		ND		466		
06/23/90	15	AQUA	8240	No VOC Detected											
10/29/90	31	AQUA	8240	5.4	449		42.3		ND		16.6		513		
03/01/91	21	AQUA	8240	ND	336		31.2		ND		12.2		379		
06/01/91	11	AQUA	8240	ND	355		62.0		ND		ND		417		
06/01/91	12	AQUA	8240	ND	332		67.8		ND		ND		400		
08/31/91	34	AQUA	8240	5.6	309		33.8		ND		ND		348		
11/14/91	35	AQUA	8240	ND	323		30.9		ND		ND		354		
01/26/92	36	AQUA	8240	ND	324		39.6		ND		ND		364		
04/02/92	41	AQUA	8240	ND	403		59.6		ND		ND		463		
08/21/92	9	AQUA	8240	ND	430		45.7		ND		ND		476		
10/31/92	23	AQUA	8240	ND	318		31.3		ND		ND		349		
02/05/93	33	AQUA	8240	ND	340		29.9		ND		ND		370		
05/12/93	24	AQUA	8240	ND	375		47.7		ND		ND		423		
09/02/93	31	AQUA	8240	ND	282		40.5		ND		ND		323		
09/02/93	32	AQUA	8240	ND	289		42.0		ND		ND		330		
12/02/93	23	AQUA	8240	6.8	344		59.5		ND		ND		409		
02/10/94	21	AQUA	8240	ND	247		27.6		ND		ND		275		
02/10/94	22	AQUA	8240	ND	324		35.1		ND		ND		359		
03/06/94	29	AQUA	8240	ND	240		29.2		ND		ND		269		
09/15/94	22	AQUA	8240	ND	260		32.2		ND		ND		292		

NOTES:
 OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER
 o - Date Sampled

Intermediate Monitoring Well
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIED SIGNAL, INC.
 GROUNDWATER INVESTIGATIONS
 SIMPSONVILLE, ILLINOIS



DEEP MONITORING WELLS



Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	2D 03/22/1997	2D 06/03/1997	2D 09/23/1997	2D 12/08/1997	2D 06/11/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	[12]	[16]	[14]	[10]	[7.9]
1,1-Dichloroethane	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	10	17	16	15	15
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	12/12/1998	06/23/1999	12/15/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	[7.8]	[12]	[6.5]
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	18	17	20
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	DATE	2D	2D	2D	2D
	DATE			03/22/1997	09/23/1997	06/11/1998	06/23/1999
Total Phenols	(ug/l)		<10	<10	<10	20	20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	2D 03/22/1997	2D 09/23/1997	2D 06/11/1998	2D 06/23/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		---	<5	7.6	<5
Lead, Dissolved	(ug/l)		---	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		---	<20	<20	<20
Chromium, Total	(ug/l)	100	9.4	---	---	---
Lead, Total	(ug/l)	15	<2	---	---	---
Nickel, Total	(ug/l)	100	<20	---	---	---

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

DEEP MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID							
			2-D	14 MAR 95	07 JUN 95	19 SEP 95	06 DEC 95			
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A. VOA	1,2-DICHLOROETHANE	UG/L	18		16		16			
	1,1-DICHLOROETHENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	17		14	11	14			
	TRICHLOROETHENE	UG/L	24		5.0 U	5.0 U	5.0 U			5.0 U
	VINYL CHLORIDE	UG/L		10 U		10 U				10 U
	TOTAL VOCS:		59		30	11	30			30
E. METALS	LEAD	UG/L						2.0 U		
H. MISC	CYANIDE, TOTAL	UG/L		5 U					5 U	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN EQM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

DEEP MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLED SIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		04 JUN 96		05 SEP 96		12 DEC 96	
			12 MAR 96	12 MAR 96	AMOUNT	q	AMOUNT	q	AMOUNT	q
A. VOA	1,2-DICHLOROETHANE	UG/L	16	5.0 U	15	5.0 U	14	5.0 U	15	5.0 U
	1,1-DICHLOROETHENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L	17		15		11		13	
	TOLUENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	TRICHLOROETHENE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	VINYL CHLORIDE	UG/L		10 U		10 U		10 U		10 U
	CARBON DISULFIDE	UG/L		5.0 U		5.0 U		5.0 U		5.0 U
	TOTAL VOCs:	UG/L	33		30		25		28	
E. METALS	LEAD	UG/L	9.4					2.0 U		
	NICKEL	UG/L		20 U				20 U		
H. MISC	CYANIDE, TOTAL	UG/L		5 U				5 U		
	PHENOLS	UG/L	10					10 U		

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

SOURCE: 2-D

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,2-DI-CHLORO-ETHANE		1,1-DI-CHLORO-ETHANE		TRI-CHLORO-ETHANE		SUM	NOTES
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
12/10/88	2	AQUA		20.4	ND	ND	ND	ND	ND	20	
05/03/87	11	AQUA		23	ND	ND	ND	ND	ND	23	
09/03/87	18	AQUA		24	ND	ND	ND	ND	ND	24	
01/15/88	34	AQUA		34	ND	ND	ND	ND	ND	34	
02/09/88	11	AQUA		25	ND	ND	ND	ND	ND	25	
05/19/88	24	AQUA		34.2	ND	ND	ND	ND	ND	34	
09/24/88	20	AQUA		28	ND	ND	ND	ND	ND	28	
12/10/88	27	AQUA		22	ND	ND	ND	ND	ND	22	
12/10/88	28	AQUA		21.4	ND	ND	ND	ND	ND	21	
02/24/89	10	AQUA		24.0	13.4	ND	ND	ND	ND	38	
05/08/89	10	AQUA	024	26.0	22.4	ND	ND	ND	ND	49	
09/09/89	31	AQUA	0240	22.8	24.6	ND	ND	ND	ND	47	
12/13/89	30	AQUA	0240	21	14.8	ND	ND	ND	ND	36	
07/01/90	28	AQUA	0240	23.8	31.8	ND	ND	ND	ND	56	
05/03/90	26	AQUA	0240	20.8	26.3	ND	ND	ND	ND	47	
06/23/90	19	AQUA	0240	18.0	17.7	ND	ND	ND	ND	34	
10/29/90	27	AQUA	0240	20.8	25.0	ND	ND	ND	ND	47	
10/29/90	28	AQUA	0240	19.4	25.1	ND	ND	ND	ND	45	
07/02/91	26	AQUA	0240	14.7	13.7	ND	ND	ND	ND	28	
05/30/91	4	AQUA	0240	14.7	5.1	ND	ND	ND	ND	20	
09/31/91	35	AQUA	0240	15.8	14.6	ND	ND	ND	ND	30	
11/14/91	41	AQUA	0240	18.0	12.7	ND	ND	ND	ND	20	
01/24/92	25	AQUA	0240	16.2	9.3	ND	ND	ND	ND	26	
04/02/92	45	AQUA	0240	17.4	12.2	ND	ND	ND	ND	30	
06/21/92	7	AQUA	0240	23.8	13.1	ND	ND	ND	ND	37	
10/31/92	33	AQUA	0240	ND	9.4	15.0	ND	ND	ND	25	
02/05/93	31	AQUA	0240	22.8	21.3	ND	ND	ND	ND	44	
05/12/93	37	AQUA	0240	17.8	11.1	ND	ND	ND	ND	29	
09/02/93	28	AQUA	0240	20.8	11.1	ND	ND	ND	ND	31	
12/03/93	31	AQUA	0240	21.2	15.7	ND	ND	ND	ND	37	
02/18/94	28	AQUA	0240	19.1	12.8	ND	ND	ND	ND	32	
05/05/94	30	AQUA	0240	13.9	10.6	ND	ND	ND	ND	25	
09/12/94	3	AQUA	0240	15.8	11.3	ND	ND	ND	ND	28	

NOTES:
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 ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - NO U.S. EPA PUBLISHED LEVEL.
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GC/MS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

PARAMETER
 o - Date Sampled

DEEP MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIEDSIGNAL, INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	4D DATE	4D
Benzene	(ug/l)	5	06/10/1998	<5.0
Vinyl Chloride	(ug/l)	2		<10
Chloroform	(ug/l)	100		<5.0
1,1-Dichloroethane	(ug/l)			<5.0
1,2-Dichloroethane	(ug/l)	5		<5.0
1,1-Dichloroethene	(ug/l)	7		<5.0
trans-1,2-Dichloroethene	(ug/l)	100		<5.0
cis-1,2-Dichloroethene	(ug/l)	70	14	
Methylene chloride	(ug/l)	5		<5.0
Tetrachloroethene	(ug/l)	5		<5.0
Toluene	(ug/l)	1000		<5.0
1,1,1-Trichloroethane	(ug/l)	200		<5.0
Trichloroethene	(ug/l)	5		<5.0
Acetone	(ug/l)			<100
Xylene (total)	(ug/l)	10000		<10
Carbon disulfide	(ug/l)			<5.0
1,2-Dichloropropane	(ug/l)	5		<5.0
Chloroethane	(ug/l)			<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
Deep Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
	4D	06/10/1998	Primary		<10
	4D	06/10/1998	Duplicate 1		<10

Total Phenols

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	4D	06/10/1998	4D	06/10/1998
	(ug/l)				Primary	Duplicate 1		
Cyanide			200		<5UJ	19		
Chromium (T), Dissolved	(ug/l)				<5	<5		
Lead, Dissolved	(ug/l)				<2.0	<2.0		
Nickel, Dissolved	(ug/l)				<20	<20		

Summary of Detected Constituents during Quarterly Monitoring

The following qualifier(s) exist: U, J ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	5D 03/20/1997 Primary	5D 06/04/1997 Primary	5D 09/24/1997 Primary	5D 12/10/1997 Primary	5D 06/10/1998 Primary
Benzene	(ug/l)	5	<5	<5	<5.0E	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

The following qualifier(s) exist: E ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	5D 06/10/1998 Duplicate 1	5D 12/13/1998 Primary	5D 06/22/1999 Primary	5D 06/22/1999 Duplicate 1	5D 12/15/1999 Primary
	RESULT TYPE		(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Benzene		5	<5.0	<5.0	<5.0	<5.0	<5
Vinyl Chloride		2	<10	<10	<10	<10	<10
Chloroform		100	<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane			<5.0	<5.0	<5.0	<5.0	<5
1,2-Dichloroethane		5	<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene		7	<5.0	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene		100	<5.0	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene		70	<5.0	<5.0	<5.0	<5.0	<5
Methylene chloride		5	<5.0	<5.0	<5.0	<5.0	<5
Tetrachloroethene		5	<5.0	<5.0	<5.0	<5.0	<5
Toluene		1000	<5.0	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane		200	<5.0	<5.0	<5.0	<5.0	<5
Trichloroethene		5	<5.0	<5.0	<5.0	<5.0	<5
Acetone			<100	<100	<100	<100	<100
Xylene (total)		10000	<10	<10	<10	<10	<10
Carbon disulfide			<5.0	<5.0	<5.0	<5.0	<5
1,2-Dichloropropane		5	<5.0	<5.0	<5.0	<5.0	<5
Chloroethane			<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	SD	DATE	RESULT TYPE	US-PMCL
Benzene	(ug/l)	5	<5		
Vinyl Chloride	(ug/l)	2	<10		
Chloroform	(ug/l)	100	<5		
1,1-Dichloroethane	(ug/l)	5	<5		
1,2-Dichloroethane	(ug/l)	7	<5		
trans-1,2-Dichloroethane	(ug/l)	100	<5		
cis-1,2-Dichloroethane	(ug/l)	70	<5		
Methylene chloride	(ug/l)	5	<5		
Tetrachloroethene	(ug/l)	5	<5		
Toluene	(ug/l)	1000	<5		
1,1,1-Trichloroethane	(ug/l)	200	<5		
Trichloroethene	(ug/l)	5	<5		
Acetone	(ug/l)		<100		
Xylene (total)	(ug/l)	10000	<10		
Carbon disulfide	(ug/l)		<5		
1,2-Dichloropropane	(ug/l)	5	<5		
Chloroethane	(ug/l)		<10		

Summary of Detected Constituents during Quarterly Monitoring ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	RESULT	TYPE	DATE
Total Phenols (ug/l)	5D	03/20/1997	Primary	<10	<10	Primary	
	5D	09/24/1997	Primary	<10	<10	Primary	
	5D	06/10/1998	Primary	<10	<10	Primary	
	5D	06/10/1998	Duplicate 1	<10	<10	Duplicate 1	
	5D	06/22/1999	Primary	<10	<10	Primary	

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
Deep Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL
Total Phenols	5D	06/22/1999	Duplicate 1	<10

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---= Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	5D	5D	5D	5D	5D
Cyanide	(ug/l)		200		<5	<5	<5	<5	10
Chromium (T), Dissolved	(ug/l)				--	<5	<5	<5	<5
Lead, Dissolved	(ug/l)				--	<2.0	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)				--	<20	<20	<20	<20
Chromium, Total	(ug/l)		100		<5	--	--	--	--
Lead, Total	(ug/l)		15		<2	--	--	--	--
Nickel, Total	(ug/l)		100		<20	--	--	--	--

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL
Cyanide	5D	06/22/1999	Duplicate 1	
	(ug/l)			200
Chromium (T), Dissolved				<5
	(ug/l)			<5
Lead, Dissolved				<2.0
Nickel, Dissolved				<20
Chromium, Total				100
Lead, Total				15
Nickel, Total				100

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE: 01/28/97

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		04 JUN 96		05 SEP 96		11 DEC 96	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
SAMPLE ID 5-D										
DATE COLLECTED 13 MAR 96										
A.VOA	1,2-DICHLOROETHANE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	3.3 J		3.2 J		3.0 J		3.0 J	
	TOLUENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TRICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U	
	CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U	
	TOTAL VOCs:	UG/L	3.3		3.2		3.0		3.0	
E.METALS	LEAD	UG/L	2.0 U		-		0.8 J		-	
	NICKEL	UG/L	20 U		-		20 U		-	
H.MISC	CYANIDE, TOTAL	UG/L	5 U		-		5 U		-	
	PHENOLS	UG/L	10 U		-		10 U		-	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

DEEP MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED				05 DEC 95 AMOUNT	Q
			07 DEC 94 AMOUNT	13 MAR 95 AMOUNT	06 JUN 95 AMOUNT	20 SEP 95 AMOUNT		
A-VOA	1,2-DICHLOROETHANE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U	
	1,1-DICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U	5.0 U	5.0 U	5.0 U	5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	5 U	5.0 U	3.4	2.8	5.0 U	
	TRICHLOROETHENE	UG/L	5 U	16	5.0 U	5.0 U	3.0	
	VINYL CHLORIDE	UG/L	10 U	10 U	10 U	10 U	10 U	
	TOTAL VOCs:	UG/L	0	16	3.4	2.8	3.0	
E-METALS	LEAD	UG/L	-	-	-	2.0 U	-	
H-MISC	CYANIDE, TOTAL	UG/L	-	5 U	-	5 U	-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: 5-D

DATE SAMPLED	SAMPLE NO.	LAB	MCL		CIS-1,2-DICHLORO-ETHENE		TOLUENE		SUM	NOTES
			METHOD	UG/L	P-70	P-2000	UG/L	UG/L		
12/10/88	4	ADJA		10	ND	ND	ND	10		
12/10/88	5	ADJA		10	ND	ND	ND	10		
02/11/87	4	ADJA		No VOC Detected						
06/05/87	19	ADJA		No VOC Detected						
09/03/87	15	ADJA		No VOC Detected						
01/14/88	12	ADJA		No VOC Detected						
02/09/88	21	ADJA		ND	6.7	ND	ND	7	A	
03/14/88	2	ADJA		6.1	ND	ND	ND	6		
05/16/88	14	ADJA		10.4	ND	ND	ND	10		
09/23/88	15	ADJA		No VOC Detected						
12/09/88	9	ADJA		No VOC Detected						
02/25/89	31	ADJA		5.4	ND	ND	ND	5		
08/09/89	23	ADJA	B24	No VOC Detected						
09/10/89	36	ADJA	B240	5.8	ND	ND	ND	6		
12/11/89	8	ADJA	B240	7.5	ND	ND	ND	8		
02/28/90	9	ADJA	B240	6.2	ND	ND	ND	6		
06/02/90	14	ADJA	B240	6.4	ND	ND	ND	6		
08/24/90	28	ADJA	B240	No VOC Detected						
10/28/90	21	ADJA	B240	5.7	ND	ND	ND	6		
03/03/91	27	ADJA	B240	No VOC Detected						
05/20/91	2	ADJA	B240	No VOC Detected						
08/28/91	2	ADJA	B240	No VOC Detected						
11/12/91	2	ADJA	B240	No VOC Detected						
01/21/92	1	ADJA	B240	No VOC Detected						
03/28/92	7	ADJA	B240	No VOC Detected						
08/26/92	2	ADJA	B240	No VOC Detected						
10/30/92	12	ADJA	B240	No VOC Detected						
02/03/93	2	ADJA	B240	No VOC Detected						
05/11/93	1	ADJA	B240	No VOC Detected						
08/31/93	11	ADJA	B240	No VOC Detected						
12/01/93	1	ADJA	B240	No VOC Detected						
02/18/94	2	ADJA	B240	No VOC Detected						
05/04/94	2	ADJA	B240	No VOC Detected						
09/12/94	1	ADJA	B240	No VOC Detected						

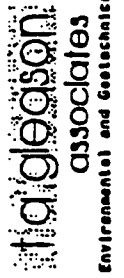
NOTES:
 OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
 ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
 MPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

A - TOLUENE WAS NOT DETECTED IN 6 PREVIOUS SAMPLING EPISODES. A RESAMPLING ON 03/14/88 DETECTED NO TOLUENE. BASED ON PREVIOUS DATA & THE RETEST, WE CONCLUDED THAT THE 02/09/88 SAMPLING DATA ARE ABNORMALOUS.

PARAMETER
 o - Date Sampled

DEEP MONITOR WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US:PMCL	D5 06/11/1998 Primary	D5 12/12/1998 Primary	D5 12/12/1998 Duplicate 1	D5 06/23/1999 Primary	D5 12/16/1999 Primary
Benzene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2		<10	<10	<10	<10	<10
Chloroform	(ug/l)	100		<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)			<5.0	<5.0	<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7		<5.0	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100		<5.0	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70		<5.0	<5.0	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000		<5.0	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200		<5.0	<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)			<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000		<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)			<5.0	<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)			<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	US-PMCL
Benzene	D5	12/16/1999	(ug/l)	5	<5
Vinyl Chloride			(ug/l)	2	<10
Chloroform			(ug/l)	100	<5
1,1-Dichloroethane			(ug/l)		<5
1,2-Dichloroethane			(ug/l)	5	<5
1,1-Dichloroethene			(ug/l)	7	<5
trans-1,2-Dichloroethene			(ug/l)	100	<5
cis-1,2-Dichloroethene			(ug/l)	70	<5
Methylene chloride			(ug/l)	5	<5
Tetrachloroethene			(ug/l)	5	<5
Toluene			(ug/l)	1000	<5
1,1,1-Trichloroethane			(ug/l)	200	<5
Trichloroethene			(ug/l)	5	<5
Acetone			(ug/l)		<100
Xylene (total)			(ug/l)	10000	<10
Carbon disulfide			(ug/l)		<5
1,2-Dichloropropane			(ug/l)	5	<5
Chloroethane			(ug/l)		<10

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

Analytical Summary - Phenols in Groundwater
Deep Monitoring Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	U.S.-PMCL	D5	D5	06/23/1999
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Total Phenols (ug/l)

<10

20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	D5	D5
	DATE		DATE	DATE
Cyanide	(ug/l)	200	<5	<5
Chromium (T), Dissolved	(ug/l)		<5	<5
Lead, Dissolved	(ug/l)		<2.0	<2.0
Nickel, Dissolved	(ug/l)		<20	<20

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	D7 03/22/1997	D7 06/03/1997	D7 09/24/1997	D7 12/11/1997	D7 06/09/1998
Benzene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<2	<10	<10	<10
Chloroform	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	[13]	[14]	[14]	[14]	<5.0
1,1-Dichloroethene	(ug/l)	7	<5	<5	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5	<5	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5	<5	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5	<5	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5	<5	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<5	<10	<10	<10
Carbon disulfide	(ug/l)		<5	<5	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5	<5	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	D7 12/13/1998	D7 06/22/1999	D7 12/16/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	[23]	[51]	[39]
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	SITE DATE	D7	03/22/1997	09/24/1997	06/09/1998	06/22/1999
Total Phenols	10	(ug/l)	<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Deep Monitoring Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	D7 03/22/1997	D7 09/24/1997	D7 06/09/1998	D7 06/22/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)		--	<5	<5	<5
Lead, Dissolved	(ug/l)		--	<2.0	<2.0	<2.0
Nickel, Dissolved	(ug/l)		--	<20	<20	<20
Chromium, Total	(ug/l)	100	<5	--	--	--
Lead, Total	(ug/l)	15	<2	--	--	--
Nickel, Total	(ug/l)	100	<20	--	--	--

Summary of Detected Constituents during Quarterly Monitoring

--=Not analyzed

DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID			DATE COLLECTED		
			D-7	12 MAR 96	04 JUN 96	04 SEP 96	10 DEC 96	
			AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
A.VOA	1,2-DICHLOROETHANE	UG/L	19	15	15	20	5.0 U	5.0 U
	1,1-DICHLOROETHENE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
	CIS-1,2-DICHLOROETHENE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
	TOLUENE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
	TRICHLOROETHENE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
	VINYL CHLORIDE	UG/L		10 U	10 U		10 U	10 U
	CARBON DISULFIDE	UG/L		5.0 U	5.0 U		5.0 U	5.0 U
TOTAL VOCs:		UG/L	19	15	15	20		
E-METALS	LEAD	UG/L					2.0 U	J
	NICKEL	UG/L					20 U	20 U
H-MISC	CYANIDE, TOTAL	UG/L					5 U	5 U
	PHENOLS	UG/L					10 U	10 U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERN'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

DEEP MONITOR WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		14 MAR 95		07 JUN 95		19 SEP 95		05 DEC 95	
			D-7	D-7	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	25	5 U	24	5.0 U	21	5.0 U	14	5.0 U	18	5.0 U	10 U	
	1,1-DICHLOROETHENE	UG/L		5 U		5.0 U		5.0 U		5.0 U		5.0 U		
	TRANS-1,2-DICHLOROETHENE	UG/L		5 U		5.0 U		5.0 U		5.0 U		5.0 U		
	CIS-1,2-DICHLOROETHENE	UG/L		5 U		5.0 U		5.0 U		5.0 U		5.0 U		
	TRICHLOROETHENE	UG/L		10 U		10 U		10 U		10 U		10 U		
	VINYL CHLORIDE	UG/L												
	TOTAL VOCs:	UG/L	25		24		21		14		18			
E-METALS	LEAD	UG/L								2.0 U				
H-MISC	CYANIDE, TOTAL	UG/L				5 U				5 U				

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.



NAPHTHA RECOVERY WELLS



Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	US-PMCL	E3 03/18/1997 Primary	E3 03/18/1997 Duplicate 1	E3 06/04/1997 Primary	E3 09/26/1997 Primary	E3 09/26/1997 Duplicate 1
	(ug/l)			<5	<5	<5	[5.0]J	<5.0UJ
Benzene			5	<5	<5	<5	[5.0]J	<5.0UJ
Vinyl Chloride			2	[17]	[18]	[24]	[32]	[20]
Chloroform			100	<5	<5	<5	<5.0	<5.0
1,1-Dichloroethane				<5	<5	10	8.4	6.8
1,2-Dichloroethane			5	<5	<5	<5	<5.0	<5.0
1,1-Dichloroethene			7	<5	<5	<5	<5.0	<5.0
trans-1,2-Dichloroethene			100	<5	<5	<5	<5.0	<5.0
cis-1,2-Dichloroethene			70	14	15	24	15	14
Methylene chloride			5	<5	<5	<5	<5.0	<5.0
Tetrachloroethene			5	<5	<5	<5	<5.0	<5.0
Toluene			1000	<5	<5	<5	<5.0	<5.0
1,1,1-Trichloroethane			200	<5	<5	<5	<5.0	<5.0
Trichloroethene			5	<5	<5	<5	<5.0	<5.0
Acetone				<100	<100	<100	<100	<100
Xylene (total)			10000	<10	<10	<5	<10	<10
Carbon disulfide				<5	<5	<5	<5.0	<5.0
1,2-Dichloropropane			5	<5	<5	<5	<5.0	<5.0
Chloroethane				<10	<10	21	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level The following qualifier(s) exist: J, U ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	E3 12/10/1997 Primary	E3 03/17/1998 Primary	E3 06/12/1998 Primary	E3 09/18/1998 Primary	E3 12/13/1998 Primary
Benzene	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	[27]		[17]	[24]			<10
Chloroform	(ug/l)	100	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		17		6.1	7.7			5.3
1,2-Dichloroethane	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5.0		13	18	21		19
Methylene chloride	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10		<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0		<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	E3 03/02/1999 Primary	E3 06/22/1999 Primary	E3 12/13/1999 Primary
Benzene	(ug/l)	5	<5.0	[5.2]	<5.0	[200]	<10
Vinyl Chloride	(ug/l)	2	<10	[14]	<5.0	<5	<5
Chloroform	(ug/l)	100	7	7.3	<5.0	<5	<5
1,1-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5	<5
1,2-Dichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5	<5
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5.0	<5	<5
cis-1,2-Dichloroethene	(ug/l)	70	22	9.9	<5.0	7.5	<5
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	190	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5	<5
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5	<5
Acetone	(ug/l)		<100	<100	<100	110	<10
Xylene (total)	(ug/l)	10000	<10	<10	<10	840	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	17	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5	<5
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	US-PMCL (ug/l)	RESULT	QUALIFIER	DATE	QUALIFIER
Total Phenols	E3	03/18/1997	Primary	10J	10J	<10		03/17/1998	Primary
	E3	03/18/1997	Duplicate 1	40	40	<10		09/26/1997	Duplicate 1
	E3	09/26/1997	Primary	<10	<10	<10		09/26/1997	Duplicate 1
	E3	09/26/1997	Primary	<10	<10	<10		03/17/1998	Primary

Summary of Detected Constituents during Quarterly Monitoring

The following qualifier(s) exist: J ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
Total Phenols	E3	06/22/1999	Primary	<10	
	E3	12/13/1999	Primary	10	

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed



Analytical Summary - Inorganics in Groundwater
 Naptha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	RESULT TYPE	E3	E3	E3	E3
				03/18/1997	03/18/1997	09/26/1997	09/26/1997
				Primary	Duplicate 1	Primary	Duplicate 1
Cyanide	(ug/l)	200		<5	<5	<5	<5
Chromium (T), Dissolved	(ug/l)			---	---	<5J	---
Lead, Dissolved	(ug/l)			---	---	<2.0	---
Nickel, Dissolved	(ug/l)			---	---	<20	---
Chromium, Total	(ug/l)	100		<5	<5	---	18
Lead, Total	(ug/l)	15		<2	<2	---	4.8
Nickel, Total	(ug/l)	100		<20	<20	---	<20

Summary of Detected Constituents during Quarterly Monitoring

The following qualifier(s) exist: J ---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naptha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/30/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL
Cyanide	E3	06/22/1999	Primary	<5
Chromium (T), Dissolved	E3	12/13/1999	Primary	10
Lead, Dissolved				
Nickel, Dissolved				
Chromium, Total				
Lead, Total				
Nickel, Total				

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ----=Not analyzed

NAPHTHA RECOVERY WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		04 JUN 96	04 SEP 96	10 DEC 96	
			E-3	Q				
DATE COLLECTED			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	4.3	J	4.4	J	4.0	J
	CHLOROETHANE	UG/L	7.0	J	10 U	10 U	10 U	J
	1,1-DICHLOROETHANE	UG/L	10	5.0 U	8.7	5.0 U	9.6	5.0 U
	1,1-DICHLOROETHENE	UG/L	19	5.0 U	12	5.0 U	16	5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	20	100 U	13	100 U	20	100 U
	CIS-1,2-DICHLOROETHENE	UG/L		100 U		100 U		100 U
	VINYL CHLORIDE	UG/L		5.0 U		5.0 U		100 U
	ACETONE	UG/L						22
	2-BUTANONE	UG/L						
	CARBON DISULFIDE	UG/L						
TOTAL VOCS:		UG/L	60.3		38.1		71.6	
E-METALS	LEAD	UG/L			0.6	J		
H-MISC	CYANIDE, TOTAL	UG/L				5 U		

QUALIFIER CODES (Q):

J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.



NAPHTHA RECOVERY WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		15 MAR 95		07 JUN 95		19 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	5 U		5.0 U		4.8	J	4.9	J	5.1	
	CHLOROETHANE	UG/L	10 U		10 U		6.2	J	10		12	
	1,1-DICHLOROETHANE	UG/L	8.9		9		7.0		7.2		9.2	
	TRANS-1,2-DICHLOROETHENE	UG/L	5 U		5.0 U		5.0 U		5.0 U		5.0 U	
	CIS-1,2-DICHLOROETHENE	UG/L	38		24		17		18		18	
	VINYL CHLORIDE	UG/L	20		21		14		23		26	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	2-BUTANONE	UG/L	215		100 U		100 U		100 U		100 U	
	TOTAL VOCS:	UG/L	281.9		54		51		63.1		70.3	
	E-METALS	LEAD	UG/L	-		-		-		2.0 U		-
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L	-		2.0 U		-		-		-	
H-MISC	CYANIDE, TOTAL	UG/L	-		14		-		5 U		-	

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: E-3

DATE SAMPLED	SAMPLE NO.	LAB	METHOD	BENZENE		1,1-DICHLOROETHANE		1,1-DICHLOROETHYLENE		ETHYL BENZENE		TOLUENE		CIS-1,2-DICHLOROETHYLENE		TRANS-1,2-DICHLOROETHYLENE		SUM	NOTES
				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L		
01/25/87	7	AQUA		72	66	ND	ND	10	10	53	ND	ND	ND	ND	201				
01/14/88	18	AQUA		60	25	ND	ND	9.4	9.2	48	ND	ND	ND	ND	152				
02/10/88	28	AQUA		60	20	ND	ND	11	8.5	61	ND	ND	ND	70	237				
05/19/88	34		8240	43	28.8	ND	ND	7.8	ND	96	ND	ND	ND	ND	163				
09/23/88	32	AQUA		81	28	ND	ND	5.6	ND	28	ND	ND	ND	11	124				
12/08/88	21	AQUA		30.4	21.6	ND	ND	ND	ND	51.2	ND	ND	ND	ND	116				
02/24/89	28	AQUA		42.7	28.8	ND	ND	ND	ND	74	ND	ND	ND	7.2	151				
06/07/89	5	AQUA	824	82.1	18.7	ND	ND	ND	ND	43.8	ND	ND	ND	6.9	164				
09/07/89	8	AQUA	8240	48.3	18.1	ND	ND	ND	9.7	52.4	ND	ND	ND	7.8	134				
12/12/89	20	AQUA	8240	77.8	24.4	ND	ND	7.4	24.1	32.5	ND	ND	ND	8	172				
01/01/90	18	AQUA	8240	72.3	20.1	ND	ND	7.4	25.1	59.2	ND	ND	ND	7	191				
06/04/90	31	AQUA	8240	66.7	23.3	ND	ND	ND	ND	50.6	ND	ND	ND	8	139				
08/24/90	28	AQUA	8240	30.8	13.8	ND	ND	ND	ND	32.0	ND	ND	ND	5.2	82				
08/24/90	27	AQUA	8240	30.9	13.7	ND	ND	ND	ND	31.0	ND	ND	ND	5.1	82				
10/30/90	36	AQUA	8240	31.5	20.2	ND	ND	ND	ND	51.4	ND	ND	ND	6.0	109				
01/04/91	34	AQUA	8240	15.8	13.0	ND	ND	ND	ND	35.9	ND	ND	ND	5.3	71				
06/03/91	35	AQUA	8240	15.8	12.2	ND	ND	ND	ND	0.7	ND	ND	ND	ND	30			A	
08/30/91	26	AQUA	8240	11.7	8.7	ND	ND	ND	ND	20.0	ND	ND	ND	ND	40				
11/14/91	37	AQUA	8240	11.9	13.8	ND	ND	ND	ND	30.5	ND	ND	ND	ND	56				
01/24/92	17	AQUA	8240	13.3	ND	ND	ND	ND	ND	27.2	ND	ND	ND	ND	41				
03/30/92	8	AQUA	8240	14.3	9.7	ND	ND	ND	ND	22.1	ND	ND	ND	ND	46				
06/24/92	34	AQUA	8240	14.3	ND	ND	ND	ND	ND	17.7	ND	ND	ND	8.7	41				
11/02/92	44	AQUA	8240	16.7	ND	ND	ND	ND	ND	8.1	ND	ND	ND	ND	10				
02/09/93	41	AQUA	8240	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3				
06/18/93	1	AQUA	8240	8.4	ND	5.1	ND	ND	ND	21.4	ND	ND	ND	5.1	44				
12/11/93	40	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND				
05/08/94	43	AQUA	8240	10	7.9	ND	ND	ND	ND	12.4	ND	ND	ND	ND	20				
09/18/94	47	AQUA	8240	ND	6.8	ND	ND	ND	ND	21.4	ND	ND	ND	ND	20				

PARAMETER
o - Data Sampled

NOTES:
OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
NPL - NO U.S. EPA PUBLISHED LEVEL
P - PROPOSED
VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
A - METHYLENE CHLORIDE 8.5 UG/L
WELL NOT SAMPLED AUGUST, 1993 DUE TO IMPERATIVE PUMP.

NAFITHIA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLTECHNICAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

At a glance
associates
Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	RWB16 DATE	RWB16 RESULT	RWB16 DATE	RWB16 RESULT	RWB16 DATE	RWB16 RESULT
Benzene	(ug/l)	5	03/18/1997	[20]	06/04/1997	[27]	09/26/1997	[45]
Vinyl Chloride	(ug/l)	2	03/18/1997	<10	06/04/1997	<2	09/26/1997	<10
Chloroform	(ug/l)	100	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
1,1-Dichloroethane	(ug/l)		03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
1,2-Dichloroethane	(ug/l)	5	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
1,1-Dichloroethene	(ug/l)	7	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	03/18/1997	<5	06/04/1997	<5	09/26/1997	5.6
Methylene chloride	(ug/l)	5	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
Tetrachloroethene	(ug/l)	5	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
Toluene	(ug/l)	1000	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
1,1,1-Trichloroethane	(ug/l)	200	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
Trichloroethene	(ug/l)	5	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
Acetone	(ug/l)		03/18/1997	<100	06/04/1997	<100	09/26/1997	<100
Xylene (total)	(ug/l)	10000	03/18/1997	<10	06/04/1997	<5	09/26/1997	<10
Carbon disulfide	(ug/l)		03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
1,2-Dichloropropane	(ug/l)	5	03/18/1997	<5	06/04/1997	<5	09/26/1997	<5.0
Chloroethane	(ug/l)		03/18/1997	<10	06/04/1997	<10	09/26/1997	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	RWB16 03/17/1998 Primary	RWB16 06/12/1998 Primary	RWB16 09/17/1998 Primary	RWB16 12/14/1998 Primary	RWB16 12/14/1998 Duplicate 1
(ug/l)	(ug/l)	(ug/l)	[63]	[55]	[76]	[71]	[70]
Benzene	(ug/l)	5	<10	<10	<10	<10	<10
Vinyl Chloride	(ug/l)	2	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100	<5.0	<5.0	<5.0	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	11	11

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US-PMCL	RWB16	RWB16	RWB16	RWB16
	DATE	RESULT TYPE	03/02/1999	06/22/1999	06/22/1999	12/13/1999
	(ug/l)		Primary	Primary	Duplicate 1	Primary
Benzene		5	<5.0	[47]	[45]	[47]
Vinyl Chloride		2	<10	<10	<10	<10
Chloroform		100	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane			<5.0	<5.0	<5.0	<5
1,2-Dichloroethane		5	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene		7	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene		100	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene		70	<5.0	<5.0	<5.0	<5
Methylene chloride		5	<5.0	<5.0	<5.0	<5
Tetrachloroethene		5	<5.0	<5.0	<5.0	<5
Toluene		1000	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane		200	<5.0	<5.0	<5.0	<5
Trichloroethene		5	<5.0	<5.0	<5.0	<5
Acetone			<100	<100	<100	<100
Xylene (total)		10000	<10	<10	<10	<10
Carbon disulfide			<5.0	<5.0	<5.0	<5
1,2-Dichloropropane		5	<5.0	<5.0	<5.0	<5
Chloroethane			<10	<10	<10	19

Summary of Detected Constituents during Quarterly Monitoring []=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
Total Phenols	RWB16	03/18/1997	Primary		20
	RWB16	09/26/1997	Primary		<10
	RWB16	03/17/1998	Primary		<10
	RWB16	06/22/1999	Primary		<10
	RWB16	06/22/1999	Duplicate 1		<10

Summary of Detected Constituents during Quarterly Monitoring
 ---=Not analyzed

Analytical Summary - Phenols in Groundwater
Naphtha Recovery Wells
Quarterly Monitoring Program - 12/99
Honeywell Industrial Complex
South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL	
Total Phenols	RWB16	12/13/1999	Primary		<10

(ug/l)

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	RWB16	RWB16	RWB16	RWB16	RWB16
	(ug/l)				03/18/1997	09/26/1997	03/17/1998	06/22/1999	06/22/1999
					Primary	Primary	Primary	Primary	Duplicate 1
Cyanide	(ug/l)		200		<5	<5	<5	20	<5
Chromium (T), Dissolved	(ug/l)				---	<5	---	---	---
Lead, Dissolved	(ug/l)				---	<2.0	---	---	---
Nickel, Dissolved	(ug/l)				---	<20	---	---	---
Chromium, Total	(ug/l)		100		<5	---	24	<5.0	<5.0
Lead, Total	(ug/l)		15		<2	---	<2.0	<2.0	<2.0
Nickel, Total	(ug/l)		100		<20	---	<20	<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US:PMCL
Cyanide	RWB16	12/13/1999	10	---
Chromium (T), Dissolved			---	
Lead, Dissolved			---	
Nickel, Dissolved			---	
Chromium, Total			<5	
Lead, Total			15	
Nickel, Total			100	

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

WAPRTHA RECOVERY WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLIEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			RWB-16	12 MAR 96	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	25	33	18	22						
	CHLOROETHANE	UG/L		5.0		7.1						J
	1,1-DICHLOROETHANE	UG/L		5.0 U		3.2		10 U				5.0 U
	1,1-DICHLOROETHANE	UG/L		5.0 U		5.0 U		5.0 U				5.0 U
	TRANS-1,2-DICHLOROETHENE	UG/L	3.0	6.0	4.5	3.7						J
	CIS-1,2-DICHLOROETHENE	UG/L	2.2	12	4.1	3.0						J
	VINYL CHLORIDE	UG/L		6.5				10 U				10 U
	ACETONE	UG/L		100 U				100 U				100 U
	2-BUTANONE	UG/L		100 U				100 U				100 U
	CARBON DISULFIDE	UG/L		5.0 U				5.0 U				5.0 U
TOTAL VOCS:		UG/L	30.2	62.5	29.8	35.8						
E.METALS	LEAD	UG/L	18	-	1.7	-						
H.MISC	CYANIDE, TOTAL	UG/L	5 U	-	-	-						

QUALIFIER CODES (Q):
 J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 - : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
 NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

NAPHTHA RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		09 DEC 94		15 MAR 95		07 JUN 95		19 SEP 95		05 DEC 95	
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	45		44		37		24		16			
	CHLOROETHANE	UG/L		10 U		10 U		6.9		5.4		5.4		6.3
	1,1-DICHLOROETHANE	UG/L		5 U		5.0 U		5.0 U		6.7		6.7		3.0
	TRANS-1,2-DICHLOROETHENE	UG/L		5 U		5.0 U		5.0 U		3.5		3.5		3.4
	CIS-1,2-DICHLOROETHENE	UG/L		5 U	5		4.1		3.7		3.7		3.4	3.6
	VINYL CHLORIDE	UG/L		10 U		10 U		10 U		5.4		5.4		2.6
	ACETONE	UG/L		100 U		100 U		100 U		100 U		100 U		100 U
	2-BUTANONE	UG/L		100 U		100 U		100 U		100 U		100 U		100 U
	TOTAL VOCs:	UG/L	45		49		48		48.7		34.9			
E-METALS	LEAD	UG/L							13					
E-METALS (DIS.)	LEAD (DISSOLVED)	UG/L			2.1									
H-MISC	CYANIDE, TOTAL	UG/L					5 U					5 U		

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: RWD-16

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	BENZENE		CARBON TETRA-CHLORIDE		1,1-DICHLOROETHANE		1,2-DICHLOROETHANE		TRANS-1,2-DICHLOROETHENE		TRI-CHLOROETHENE		OTHER VOC	SUM	NOTES
				g	UG/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L			
03/25/87	8	AQJA		22	NO	16	NO	16	NO	16	NO	NO	NO	NO	NO	NO	64	
09/04/87	35	AQJA		No VOC Detected														
01/14/88	20	AQJA		NO	220	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	220	
02/10/88	30	AQJA		NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	0	
05/19/88	35	AQJA		NO	149	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	172	
09/23/88	33	AQJA		152	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	158	
12/09/88	22	AQJA		NO	140	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	160	
02/24/89	29	AQJA		100	170	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	410	
06/07/89	8	AQJA	824	83	170	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	238	
09/07/89	9	AQJA	8240	82.1	270	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	372	
09/07/89	10	AQJA	8240	83.2	250	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	373	
12/12/89	21	AQJA	8240	150	140	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	357	
03/01/90	19	AQJA	8240	120	320	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	541	
06/04/90	32	AQJA	8240	110	300	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	760	
08/24/90	28	AQJA	8240	NO	114	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	127	
10/30/90	37	AQJA	8240	150	110	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	267	
03/04/91	35	AQJA	8240	65.4	106	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	171	
06/03/91	36	AQJA	8240	100	97.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	266	A
06/03/91	37	AQJA	8240	182	110	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	205	
08/30/91	21	AQJA	8240	NO	46.5	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	47	
11/14/91	38	AQJA	8240	6.1	93.1	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	99	
11/14/91	39	AQJA	8240	NO	89.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	89	
01/24/92	18	AQJA	8240	NO	80.0	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	50	
01/24/92	19	AQJA	8240	NO	49.8	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	50	
03/30/92	8	AQJA	8240	82.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	82	
08/24/92	35	AQJA	8240	84.5	49.7	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	104	
11/02/92	43	AQJA	8240	74.8	28.3	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	104	
02/05/93	30	AQJA	8240	NO	19.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	19	
05/12/93	34	AQJA	8240	72.4	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	22	
09/01/93	24	AQJA	8240	No VOC Detected														
09/01/93	25	AQJA	8240	No VOC Detected														
12/04/93	35	AQJA	8240	NO	18.2	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	16	
07/19/94	37	AQJA	8240	43.2	12.7	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	56	
07/19/94	38	AQJA	8240	45.7	13.4	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	50	
05/07/94	41	AQJA	8240	38.6	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	38	
09/18/94	43	AQJA	8240	No VOC Detected														

PARAMETER
o - Date Sampled

NOTES:
OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
NO - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
NPL - NO U.S. EPA PUBLISHED LEVEL
P - PROPOSED
VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
A - METHYLENE CHLORIDE 9.0 UG/L

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLENSTIGNAL, INC.
GROUNDWATER INVESTIGATIONS
SOUTH DEER, INDIANA

Halodon
Associates
Environmental and Geotechnical Services

SOURCE: E-3 (CONT'D)

DATE SAMPLED	SAMPLE NO.	LAB	METHOD	CARBON TETRA-CHLORIDE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	TOTAL ETHYLENES	OTHER VOC	SUM	NOTES
				UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
01/26/87	7	ADJA		ND	ND	ND	23	ND	23	
01/14/88	19	ADJA		ND	ND	ND	ND	ND	0	
02/10/88	29			ND	ND	ND	ND	ND	0	
03/19/88	34		8240	29.6	22.8	18.3	15	ND	86	
09/25/88	32	ADJA		ND	ND	ND	9.2	ND	9	
12/09/88	21	ADJA		41.7	ND	26.7	ND	489	557	
02/24/89	28	ADJA		49.5	ND	28.3	ND	520	596	
06/07/89	5	ADJA	824	100	ND	19.2	7.1	ND	126	
09/07/89	8	ADJA	8240	ND	ND	29.2	7.6	400	437	
12/12/89	20	ADJA	8240	ND	ND	ND	13.6	070	684	
03/01/90	18	ADJA	8240	74.4	ND	18.8	10.8	620	722	
06/04/90	31	ADJA	8240	81.2	ND	22.7	6.3	550	630	
08/24/90	26	ADJA	8240	34.7	ND	16.4	ND	ND	49	
08/24/90	27	ADJA	8240	33.3	ND	14.0	ND	ND	47	
10/30/90	36	ADJA	8240	66.5	ND	35.9	ND	ND	102	
03/04/01	34	ADJA	8240	ND	ND	ND	ND	ND	0	
06/03/01	35	ADJA	8240	ND	ND	13.1	ND	ND	13	A
08/30/01	20	ADJA	8240	ND	ND	13.5	ND	ND	14	
11/14/01	37	ADJA	8240	ND	ND	ND	ND	ND	0	
01/24/02	17	ADJA	8240	ND	ND	ND	ND	ND	0	
03/30/02	5	ADJA	8240	ND	ND	ND	ND	ND	0	
08/24/02	34	ADJA	8240	12.6	ND	12.2	ND	ND	24	
11/02/02	44	ADJA	8240	14.7	ND	ND	ND	ND	15	
02/09/03	41	ADJA	8240	ND	ND	ND	ND	ND	0	
06/18/03	1	ADJA	8240	ND	ND	17.2	ND	ND	17	
12/11/03	40	ADJA	8240	ND	ND	ND	ND	ND	ND	
05/08/04	43	ADJA	8240	17.2	ND	10.8	ND	ND	28	
08/18/04	42	ADJA	8240	ND	ND	14.1	ND	ND	14	

PARAMETER
o - Data Sampled

NOTES:
OUR INTERPRETATIONS OF THESE DATA ARE LIMITED TO OUR WRITTEN REPORTS.
ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
MPL - NO U.S. EPA PUBLISHED LEVEL
P - PROPOSED
VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.

A - METHYLENE CHLORIDE 6.6 UG/L
WELL NOT SAMPLED AUGUST, 1993
DUE TO IMPROVATIVE PUMP.

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	SITING			
				DATE	TYPE	DATE	
Benzene				RWB22 03/18/1997 Primary	RWB22 06/04/1997 Primary	RWB22 12/10/1997 Primary	RWB22 03/17/1998 Primary
Vinyl Chloride	(ug/l)	5		<5	<5	<5.0	<5.0
Chloroform	(ug/l)	2		<10	<2	<10	<10
1,1-Dichloroethane	(ug/l)	100		<5	<5	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5		<5	5.6	7.0	9.9
1,1-Dichloroethene	(ug/l)	7		<5	<5	<5.0	<5.0
trans-1,2-Dichloroethene	(ug/l)	100		<5	<5	<5.0	<5.0
cis-1,2-Dichloroethene	(ug/l)	70		15	<5	<5.0	<5.0
Methylene chloride	(ug/l)	5		<5	18	19	24
Tetrachloroethene	(ug/l)	5		<5	<5	<5.0	<5.0
Toluene	(ug/l)	1000		<5	<5	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200		<5	<5	<5.0	<5.0
Trichloroethene	(ug/l)	5		<5	<5	<5.0	<5.0
Acetone	(ug/l)	10000		<100	<5	<5.0	<5.0
Xylene (total)	(ug/l)	10000		<10	<5	<5.0	<5.0
Carbon disulfide	(ug/l)	5		<5	<5	<5.0	<5.0
2-Dichloropropane	(ug/l)	5		<5	<5	<5.0	<5.0
Chloroethane	(ug/l)	5		<5	<5	<5.0	<5.0

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	RESULT TYPE	RWB22 06/12/1998	RWB22 09/17/1998	RWB22 12/14/1998	RWB22 06/22/1999	RWB22 12/13/1999
				Primary	Primary	Primary	Primary	Primary
Benzene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2		<10	<10	<10	<10	<10
Chloroform	(ug/l)	100		<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)			5.2	6.3	5.2	6.7	7.2
1,2-Dichloroethane	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7		<5.0	<5.0	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100		<5.0	<5.0	<5.0	<5.0	<5
cis-1,2-Dichloroethene	(ug/l)	70		17	23	18	20	19
Methylene chloride	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Toluene	(ug/l)	1000		<5.0	<5.0	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200		<5.0	<5.0	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Acetone	(ug/l)			<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000		<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)			<5.0	<5.0	<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5		<5.0	<5.0	<5.0	<5.0	<5
Chloroethane	(ug/l)			<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	SITE DATE	RWB22	RWB22	RWB22	RWB22
Total Phenols			03/18/1997	03/17/1998	06/22/1999	12/13/1999
		(ug/l)	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	U.S. PMCL	RWB22 03/18/1997	RWB22 03/17/1998	RWB22 06/22/1999	RWB22 12/13/1999
Cyanide	(ug/l)	200	<5	<5	<5	<5
Chromium, Total	(ug/l)	100	<5	20	7.4	<5
Lead, Total	(ug/l)	15	<2	<2.0	3.9	<2.0
Nickel, Total	(ug/l)	100	<20	<20	<20	<20

Summary of Detected Constituents during Quarterly Monitoring

---Not analyzed

NAPHTHA RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIEDSIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 01/28/97

GROUP	PARAMETER NAME	UNITS	SAMPLE ID		DATE COLLECTED		04 JUN 96		04 SEP 96		10 DEC 96	
			RWB-22		12 MAR 96		AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	BENZENE	UG/L	2.4	J	3.3	J	3.7	J				
	CHLOROETHANE	UG/L	10 U		10 U		10 U		5.0 U		10 U	
	1,1-DICHLOROETHANE	UG/L	5.9		8.0		8.8		8.8		8.1	
	1,1-DICHLOROETHENE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		5.0 U	
	TRANS-1,2-DICHLOROETHENE	UG/L	5.4		4.8	J	5.3		5.3		4.9	J
	CIS-1,2-DICHLOROETHENE	UG/L	25		26		27		27		24	
	VINYL CHLORIDE	UG/L	10 U		10 U		10 U		10 U		10 U	
	ACETONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	2-BUTANONE	UG/L	100 U		100 U		100 U		100 U		100 U	
	CARBON DISULFIDE	UG/L	5.0 U		5.0 U		5.0 U		5.0 U		15	J
	TOTAL VOCs:	UG/L	38.7		42.1		41.1		41.1		55.7	
E.METALS	LEAD	UG/L	2.0 U		-		-		2.0 U		-	
H.MISC	CYANIDE, TOTAL	UG/L	5 U		-		-		5 U		-	

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
- : INDICATES THAT SAMPLE WAS NOT ANALYZED FOR COMPOUND/ANALYTE.
NOTE: THESE SAMPLES HAVE NOT UNDERGONE ERM'S COMPREHENSIVE QUALITY ASSURANCE DATA VALIDATION. ALL RESULTS PRESENTED ARE AS RECEIVED FROM THE LABORATORY.

NAPHTHA RECOVERY WELLS
 SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 ALLEDSIGNAL, INC.
 SOUTH BEND, INDIANA
 REPORT DATE 01/29/96

GROUP	PARAMETER NAME	UNITS	DATE COLLECTED		SAMPLE ID		09 DEC 94		15 MAR 95		07 JUN 95		19 SEP 95		05 DEC 95		
			AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	
A.VOA	BENZENE	UG/L	5	U	5.0	U	3.5	J	3.2	J	2.1	J					
	CHLOROETHANE	UG/L	10	U	10	U	8.6	10	6.4	10	5.4	10	U				
	1,1-DICHLOROETHANE	UG/L	8.0		8		32	5.0	4.4	J	4.1	J					
	TRANS-1,2-DICHLOROETHENE	UG/L	27	5	6				25		23						
	CIS-1,2-DICHLOROETHENE	UG/L			30												
	VINYL CHLORIDE	UG/L		10	10	U											
	ACETONE	UG/L	129		100	U											
	2-BUTANONE	UG/L	385		100	U											
	TOTAL VOCS:	UG/L	549		44		44.1		39							34.6	
E.METALS	LEAD	UG/L											2.0	U			
E.METALS (DIS.)	LEAD (DISSOLVED)	UG/L						2.0	U								
H.MISC	CYANIDE, TOTAL	UG/L														5	U

QUALIFIER CODES (Q):
 U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
 NOTE: THIS DATA DID NOT UNDERGO AN ERM QUALITY ASSURANCE COMPREHENSIVE REVIEW.

SOURCE: RMB-22

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	BENZENE		CARBON TETRA-CHLORIDE		1,1-DI-CHLORO-ETHANE		ETHYL BENZENE		TOLUENE		TOTAL XYLENES		SUK	NOTES
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L		
03/26/87	8	ADJA		184	140	124	84	ND	159	601							
03/04/87	34	ADJA		ND	420	ND	81	ND	160	661							
01/14/88	17	ADJA		117	70	48	47	22	85	309							
01/14/88	18	ADJA		122	90	53	51	24	91	431							
02/10/88	27	ADJA		170	110	89	73	51	140	613							
02/10/88	28	ADJA		151	100	51	70	140	140	552							
05/19/88	32	ADJA		119	33.8	48.2	103	79.5	133	518							
05/19/88	33	ADJA		118	35.7	47.9	98.8	34.7	113	408							
05/25/88	30	ADJA		ND	ND	8.3	ND	ND	ND	ND							
12/08/88	20	ADJA		65.8	100	28.7	41	18.4	90	243							
07/24/89	27	ADJA		110	62.8	28.8	62.9	34.4	100	308							
06/07/89	4	ADJA	624	150	64.8	23.4	51.9	42.1	97.1	429							
05/07/89	7	ADJA	8240	100	ND	19.3	47.1	13.1	84.7	284							
12/12/89	19	ADJA	8240	140	140	24.2	27	ND	36.8	ND							
03/01/90	17	ADJA	8240	82.8	140	17.4	37.3	5.2	44.1	107							
06/04/90	29	ADJA	8240	76.7	140	19.4	35.4	12.3	44.2	100							
06/04/90	30	ADJA	8240	78.3	140	18.3	35.2	12.2	44	107							
08/24/90	26	ADJA	8240	48.7	10.1	16.7	32.0	8.1	64.7	167							
10/30/90	35	ADJA	8240	93.8	26.8	21.9	30.6	7.4	48.2	109							
03/04/91	32	ADJA	8240	21.2	140	25.1	15.7	ND	24.4	ND							
03/04/91	33	ADJA	8240	26.2	140	13.0	20.0	ND	34.8	94							
06/03/91	36	ADJA	8240	8.8	140	14.2	140	ND	ND	20							
11/14/91	38	ADJA	8240	10.8	ND	ND	ND	ND	ND	11							
01/24/92	16	ADJA	8240	14.4	ND	ND	8.9	ND	11.8	32							
03/30/92	4	ADJA	8240	8.8	ND	10.7	140	ND	ND	17							
06/24/92	33	ADJA	8240	6.1	ND	16.7	140	ND	ND	22							
11/02/92	42	ADJA	8240	9.8	ND	9.1	140	ND	ND	15							
02/05/93	29	ADJA	8240	ND	ND	17.4	140	ND	ND	17							
05/12/93	33	ADJA	8240	ND	ND	12.9	140	ND	ND	13							
09/01/93	23	ADJA	8240	ND	ND	12.5	140	ND	ND	13							
12/04/93	33	ADJA	8240	ND	ND	23.3	140	ND	ND	23							
12/06/93	34	ADJA	8240	ND	ND	21.1	140	ND	ND	21							
02/19/94	38	ADJA	8240	ND	ND	7.9	140	ND	ND	8							
05/07/94	39	ADJA	8240	ND	ND	6.8	140	ND	ND	9							
05/07/94	40	ADJA	8240	ND	ND	8.9	140	ND	ND	9							
09/18/94	39	ADJA	8240	ND	ND	9.7	140	ND	ND	6							
09/18/94	40	ADJA	8240	ND	ND	6.0	140	ND	ND	8							

PARAMETER
o - Date Sampled

NOTES:
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ND - NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.
NPL - NO U.S. EPA PUBLISHED LEVEL
P - PROPOSED
VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
WELL NOT SAMPLED AUGUST, 1991 DUE TO IMPROVATIVE PUMP.

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIED STORAGE, INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA



SOURCE: RWB-22
(CONT'D)

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	C18-1,8-DICHLORO-ETHENE		TRANS-1,2-DICHLORO-ETHENE		1,1,1-TRI-CHLORO-ETHENE		TRI-CHLORO-ETHENE		OTHER VOC	SUM	NOTES
				P-70	UG/L	P-100	UG/L	200	UG/L	5	UG/L			
03/26/87	9	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
05/04/87	31	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
01/14/88	17	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
01/14/88	18	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
02/10/88	27	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
02/10/88	28	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
05/19/88	32	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
05/19/88	33	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
05/23/88	30	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
12/09/88	20	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
02/24/89	27	AQUA		ND	ND	ND	ND	ND	ND	ND	ND	0		
06/07/89	4	AQUA	624	ND	ND	ND	ND	ND	ND	ND	ND	0		
09/07/89	7	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
12/12/89	19	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
03/01/90	17	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
06/04/90	29	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
06/04/90	30	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
08/27/90	25	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
10/30/90	35	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
03/07/91	32	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
03/07/91	33	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
06/03/91	36	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
11/14/91	36	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
01/24/92	16	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
03/30/92	4	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
08/24/92	31	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
11/02/92	42	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
03/03/93	29	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
05/12/93	33	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
09/01/93	23	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
12/04/93	33	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
12/04/93	34	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
02/19/94	36	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
05/07/94	38	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
05/07/94	40	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND	0		
08/19/94	38	AQUA	8240	32.4	32.4	ND	ND	ND	ND	ND	ND	32		
09/15/94	40	AQUA	8240	32.4	32.4	ND	ND	ND	ND	ND	ND	32		

PARAMETER

o - Date Sampled

NOTES:
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 MPL - NO U.S. EPA PUBLISHED LEVEL
 P - PROPOSED
 VOC RESULTS ARE A SUMMARY OF A GCMS SCAN FOR PRIORITY POLLUTANT VOLATILE ORGANIC COMPOUNDS FOR EACH LOCATION AND SAMPLING DATE. SEE LAB REPORT.
 WELL NOT SAMPLED AROUND 1991 DUE TO INOPERATIVE PUMP.

HAPHTHA RECOVERY WELLS
 GROUNDWATER QUALITY ANALYSIS
 ORGANIC COMPOUNDS

ALLIEDSTONE, INC.
 GROUNDWATER INVESTIGATIONS
 SOUTH VEVO, MONTANA

Hydrogeon
 associates
 Environmental and Geotechnical Services

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	RWB23	RWB23	RWB23	RWB23	RWB23	RWB23
	DATE	03/02/1999	03/02/1999	06/22/1999	09/08/1999	12/13/1999	
	RESULT TYPE	Primary	Duplicate 1	Primary	Duplicate 1	Primary	
	US-PMCL						
Benzene	(ug/l)	5	[100]	<5.0	[65]	[65]	
Vinyl Chloride	(ug/l)	2	[580]	[370]	[340]	[600]	
Chloroform	(ug/l)	100	<5.0	<5.0	<10	<10	
1,1-Dichloroethane	(ug/l)		33	16	14	14	
1,2-Dichloroethane	(ug/l)	5	[44]	<5.0	[50]	[45]	
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<10	<10	
trans-1,2-Dichloroethene	(ug/l)	100	98	<5.0	<10	42	
cis-1,2-Dichloroethene	(ug/l)	70	[1900]	[1400]	<10	[1100]	
Methylene chloride	(ug/l)	5	[16]J	<5.0	<10	<10	
Tetrachloroethene	(ug/l)	5	[20]	<5.0	[28]	[14]	
Toluene	(ug/l)	1000	37	54	18	12	
1,1,1-Trichloroethane	(ug/l)	200	20	<5.0	<10	<10	
Trichloroethene	(ug/l)	5	[230]	<5.0	[57]	[69]	
Acetone	(ug/l)		<100	<100	<200	<200	
Xylene (total)	(ug/l)	10000	<10	<10	<20	<20	
Carbon disulfide	(ug/l)		<5.0	<5.0	<10	<10	
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<10	<10	
Chloroethane	(ug/l)		<10	<10	<20	<20	

Summary of Detected Constituents during Quarterly Monitoring

[[]=Greater than Action Level The following qualifier(s) exist: J ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	
Benzene	RWB23	12/13/1999	(ug/l)	5	[63]
Vinyl Chloride			(ug/l)	2	[580]
Chloroform			(ug/l)	100	<5
1,1-Dichloroethane			(ug/l)	13	
1,2-Dichloroethane			(ug/l)	5	[36]
1,1-Dichloroethene			(ug/l)	7	<5
trans-1,2-Dichloroethene			(ug/l)	100	34
cis-1,2-Dichloroethene			(ug/l)	70	[1000]
Methylene chloride			(ug/l)	5	<5
Tetrachloroethene			(ug/l)	5	[14]
Toluene			(ug/l)	1000	12
1,1,1-Trichloroethane			(ug/l)	200	<5
Trichloroethene			(ug/l)	5	[64]
Acetone			(ug/l)		<100
Xylene (total)			(ug/l)	10000	<10
Carbon disulfide			(ug/l)		<5
1,2-Dichloropropane			(ug/l)	5	<5
Chloroethane			(ug/l)		<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Phenols in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	(ug/l)
Total Phenols	RWB23	06/22/1999	Primary		<10
	RWB23	12/13/1999	Primary		<10
	RWB23	12/13/1999	Duplicate 1		<10

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 Naphtha Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	US-PMCL	US-PMCL
Cyanide	RWB23	06/22/1999	Primary	20	9	<5
Chromium, Total	RWB23	12/13/1999	Primary	<5.0	<5	<5
Lead, Total	RWB23	12/13/1999	Primary	<2.0	<2.0	<2.0
Nickel, Total	RWB23	12/13/1999	Duplicate 1	<20	<20	<20

Summary of Detected Constituents during Quarterly Monitoring

----=Not analyzed



VOC RECOVERY WELLS



Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	EW-1		EW-1		EW-1		EW-1	
				06/03/1997	06/03/1997	09/24/1997	12/11/1997	09/24/1997	12/11/1997	06/03/1997	12/11/1997
Benzene	(ug/l)		5	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Vinyl Chloride	(ug/l)		2	<2	[15]	<2	<10UJ	[20]	<10UJ	[20]	Duplicate 1
Chloroform	(ug/l)		100	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
1,1-Dichloroethane	(ug/l)		27	27	23	23	<5.0	<5.0	<5.0	<5.0	Duplicate 1
1,2-Dichloroethane	(ug/l)		5	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
1,1-Dichloroethene	(ug/l)		7	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
trans-1,2-Dichloroethene	(ug/l)		100	86	61	61	56	60	56	60	Duplicate 1
cis-1,2-Dichloroethene	(ug/l)		70	[260]	[200]	[200]	[210]	[230]	[210]	[230]	Duplicate 1
Methylene chloride	(ug/l)		5	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Tetrachloroethene	(ug/l)		5	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Toluene	(ug/l)		1000	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
1,1,1-Trichloroethane	(ug/l)		200	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Trichloroethene	(ug/l)		5	[19]	[61]	[61]	[84]	[87]	[84]	[87]	Duplicate 1
Acetone	(ug/l)			<100	<100	<100	<100	<100	<100	<100	Duplicate 1
Xylene (total)	(ug/l)		10000	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Carbon disulfide	(ug/l)			<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
1,2-Dichloropropane	(ug/l)		5	<5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Duplicate 1
Chloroethane	(ug/l)			<10	<10	<10	<10	<10	<10	<10	Duplicate 1

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level The following qualifier(s) exist: U, J ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US:PMCL	EW-1 03/17/1998 Primary	EW-1 03/17/1998 Duplicate 1	EW-1 06/16/1998 Primary	EW-1 09/17/1998 Primary	EW-1 12/13/1998 Primary
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<10	[15]	[27]	[27]
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5.0	19	20	26	26
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	[7.0]	[6.3]
1,1,1-Trichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5.0	5.8
trans-1,2-Dichloroethane	(ug/l)	100	52	58	57	77	69
cis-1,2-Dichloroethane	(ug/l)	70	[210]	[200]	[200]	[270]	[240]
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	[5.9]B
Tetrachloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethane	(ug/l)	5	[170]	[150]	[150]	[200]	[180]
Acetone	(ug/l)		<100	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level The following qualifier(s) exist: B --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	EW-1 03/02/1999 Primary	EW-1 06/22/1999 Primary	EW-1 12/13/1999 Primary
Benzene	(ug/l)	5	<5.0		<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	[39]		[15]	[34]	[34]
Chloroform	(ug/l)	100	<5.0		<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)	32	33		[12]	26	[7]
1,2-Dichloroethane	(ug/l)	5	[9.0]		<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	6.7		72	55	50
trans-1,2-Dichloroethene	(ug/l)	100	[280]		[210]	[180]	[180]
cis-1,2-Dichloroethene	(ug/l)	70	[280]		<5.0	<5.0	<5
Methylene chloride	(ug/l)	5	[6.9]		<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0		<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0		<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0		<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	[200]		[120]	[120]	[120]
Acetone	(ug/l)	<100	<100		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10		<10	<10	<10
Carbon disulfide	(ug/l)	<5.0	<5.0		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0		<5.0	<5.0	<5
Chloroethane	(ug/l)	<10	<10		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level The following qualifier(s) exist: J --- = Not analyzed

Analytical Summary - Phenols in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	EW-1	EW-1	EW-1	EW-1	EW-1
					09/24/1997	03/17/1998	03/17/1998	06/22/1999	12/13/1999
					Primary	Primary	Duplicate 1	Primary	Primary
			(ug/l)		<10	<10	<10	<10	<10
Total Phenols									

---=Not analyzed

Summary of Detected Constituents during Quarterly Monitoring

Analytical Summary - Inorganics in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT	TYPE	US-PMCL	EW-1 09/24/1997 Primary	EW-1 03/17/1998 Primary	EW-1 03/17/1998 Duplicate 1	EW-1 06/22/1999 Primary	EW-1 12/13/1999 Primary
Cyanide			(ug/l)		200	7	20	20	40?	30
Chromium (T), Dissolved			(ug/l)			<5	--	--	--	--
Lead, Dissolved			(ug/l)			<2.0	--	--	--	<5
Nickel Dissolved			(ug/l)		100	<20	12	15	<57	5.5
Chromium, Total			(ug/l)		15	--	[132]	2.7	<2.07	<20
Lead, Total			(ug/l)		100	--	<20	<20	<207	<20
Nickel, Total			(ug/l)			--	--	--	--	--

?=Duplicate records found, Data review required. []=Greater than Action Level
 ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	RESULT TYPE	US-PMCL	EW-2 06/18/1998	EW-2 09/17/1998	EW-2 09/17/1998	EW-2 12/13/1998	EW-2 03/02/1999
				Primary	Primary	Duplicate 1	Primary	Primary
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		41	47	48	43	42	42
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene	(ug/l)	7	<5.0	6.5	6.5	5.8	5.6	5.6
trans-1,2-Dichloroethene	(ug/l)	100	8.6	22	22	28	26	26
cis-1,2-Dichloroethene	(ug/l)	70	[150]	[190]	[190]	[180]	[180]	[180]
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	39	39	40	33	30	30
Trichloroethene	(ug/l)	5	[59]	[82]	[83]	[68]	[67]	[67]
Acetone	(ug/l)		<100	110	<100	<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 []=Greater than Action Level ---=Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	DATE	RESULT TYPE	US-PMCL	EW-2	EW-2
	(ug/l)				06/22/1999	12/13/1999
					Primary	Primary
Benzene		5			<5.0	<5
Vinyl Chloride		2			<10	<10
Chloroform		100			<5.0	<5
1,1-Dichloroethane					44	38
1,2-Dichloroethane		5			<5.0	<5
1,1-Dichloroethene		7			<5.0	6
trans-1,2-Dichloroethene		100			26	24
cis-1,2-Dichloroethene		70			[150]	[140]
Methylene chloride		5			<5.0	<5
Tetrachloroethene		5			<5.0	<5
Toluene		1000			<5.0	<5
1,1,1-Trichloroethane		200			34	32
Trichloroethene		5			[56]	[79]
Acetone					<100	<100
Xylene (total)		10000			<10	<10
Carbon disulfide					<5.0	<5
1,2-Dichloropropane		5			<5.0	<5
Chloroethane					<10	<10

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	US-PMCL	EW-2 06/22/1999	EW-2 12/13/1999
Cyanide (ug/l)	200	60	20
Chromium, Total (ug/l)	100	<5	<5
Lead, Total (ug/l)	15	4.1	[36]
Nickel, Total (ug/l)	100	<20	<20

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	EW-3 09/24/1997	EW-3 03/17/1998	EW-3 06/16/1998	EW-3 09/17/1998	EW-3 12/13/1998
Benzene	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Vinyl Chloride	(ug/l)	2	<10	<10	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	6.7	51	<5.0	<5.0
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	7	<5.0	<5.0	<5.0	<5.0	<5.0
trans-1,2-Dichloroethane	(ug/l)	100	[110]	75	93	[100]	94
cis-1,2-Dichloroethane	(ug/l)	70	65	36	[74]	45	43
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Tetrachloroethane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Toluene	(ug/l)	1000	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5.0	<5.0	<5.0
Trichloroethane	(ug/l)	5	[39]	[29]	[28]	[39]	[34]
Acetone	(ug/l)		<100	<100	<100	140	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5.0	<5.0	<5.0
Chloroethane	(ug/l)		<10	<10	<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring
 [] = Greater than Action Level --- = Not analyzed

Analytical Summary - VOCs in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE DATE	US-PMCL	EW-3 03/02/1999	EW-3 06/22/1999	EW-3 12/13/1999
Benzene	(ug/l)	5	<5.0	<5.0	<5
Vinyl Chloride	(ug/l)	2	<10	<10	<10
Chloroform	(ug/l)	100	<5.0	<5.0	<5
1,1-Dichloroethane	(ug/l)		<5.0	<5.0	<5
1,2-Dichloroethane	(ug/l)	5	<5.0	<5.0	<5
1,1-Dichloroethene	(ug/l)	7	<5.0	<5.0	<5
trans-1,2-Dichloroethene	(ug/l)	100	[100]	98	90
cis-1,2-Dichloroethene	(ug/l)	70	57	48	42
Methylene chloride	(ug/l)	5	<5.0	<5.0	<5
Tetrachloroethene	(ug/l)	5	<5.0	<5.0	<5
Toluene	(ug/l)	1000	<5.0	<5.0	<5
1,1,1-Trichloroethane	(ug/l)	200	<5.0	<5.0	<5
Trichloroethene	(ug/l)	5	[35]	[27]	[26]
Acetone	(ug/l)		<100	<100	<100
Xylene (total)	(ug/l)	10000	<10	<10	<10
Carbon disulfide	(ug/l)		<5.0	<5.0	<5
1,2-Dichloropropane	(ug/l)	5	<5.0	<5.0	<5
Chloroethane	(ug/l)		<10	<10	<10

Summary of Detected Constituents during Quarterly Monitoring

Summary of Detected Constituents during Quarterly Monitoring

[]=Greater than Action Level ---Not analyzed

Analytical Summary - Phenols in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive
 SAMPLE TYPE: Water

CONSTITUENT	SITE	US:PMCL	EW:3	EW:3	EW:3	EW:3
	DATE		09/24/1997	03/17/1998	06/22/1999	12/13/1999
	(ug/l)		<10	<10	<10	<10
Total Phenols						

Summary of Detected Constituents during Quarterly Monitoring

---=Not analyzed

Analytical Summary - Inorganics in Groundwater
 VOC Recovery Wells
 Quarterly Monitoring Program - 12/99
 Honeywell Industrial Complex
 South Bend, Indiana

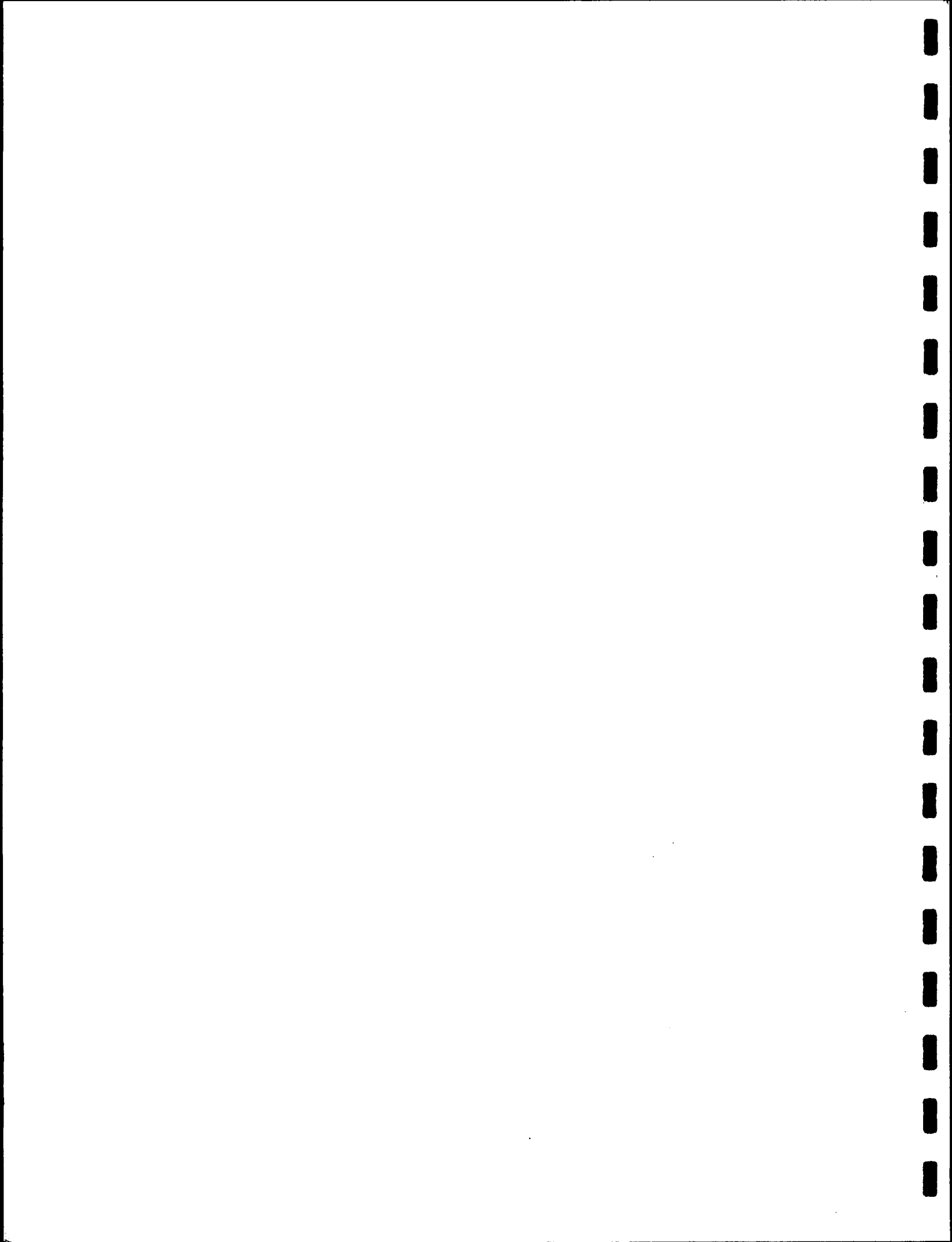
PERIOD: From 03/01/1997 thru 12/20/1999 - Inclusive

SAMPLE TYPE: Water

CONSTITUENT	SITE	U.S. PMCL	EW-3	EW-3	EW-3	EW-3
	DATE		09/24/1997	03/17/1998	06/22/1999	12/13/1999
Cyanide	(ug/l)	200	<5	<10	<5	40
Chromium (T), Dissolved	(ug/l)		<5	--	--	--
Lead, Dissolved	(ug/l)		<2.0	--	--	--
Nickel, Dissolved	(ug/l)		<20	--	--	--
Chromium, Total	(ug/l)	100	--	15	7.1	<5
Lead, Total	(ug/l)	15	--	5.1	3.6	[18]
Nickel, Total	(ug/l)	100	--	<20	<20	<20

Summary of Detected Constituents during Quarterly Monitoring

[] = Greater than Action Level --- = Not analyzed



TRENDLINE PLOTS

- **SHALLOW MONITORING WELLS**
- **DEEP MONITORING WELLS**



**SHALLOW MONITORING WELLS
NEAR ORIGIN OF GROUNDWATER PLUME**

86-10

86-15

S4A



+1,1,1-Trichloroethane
▼ 1,2-Dichloroethane

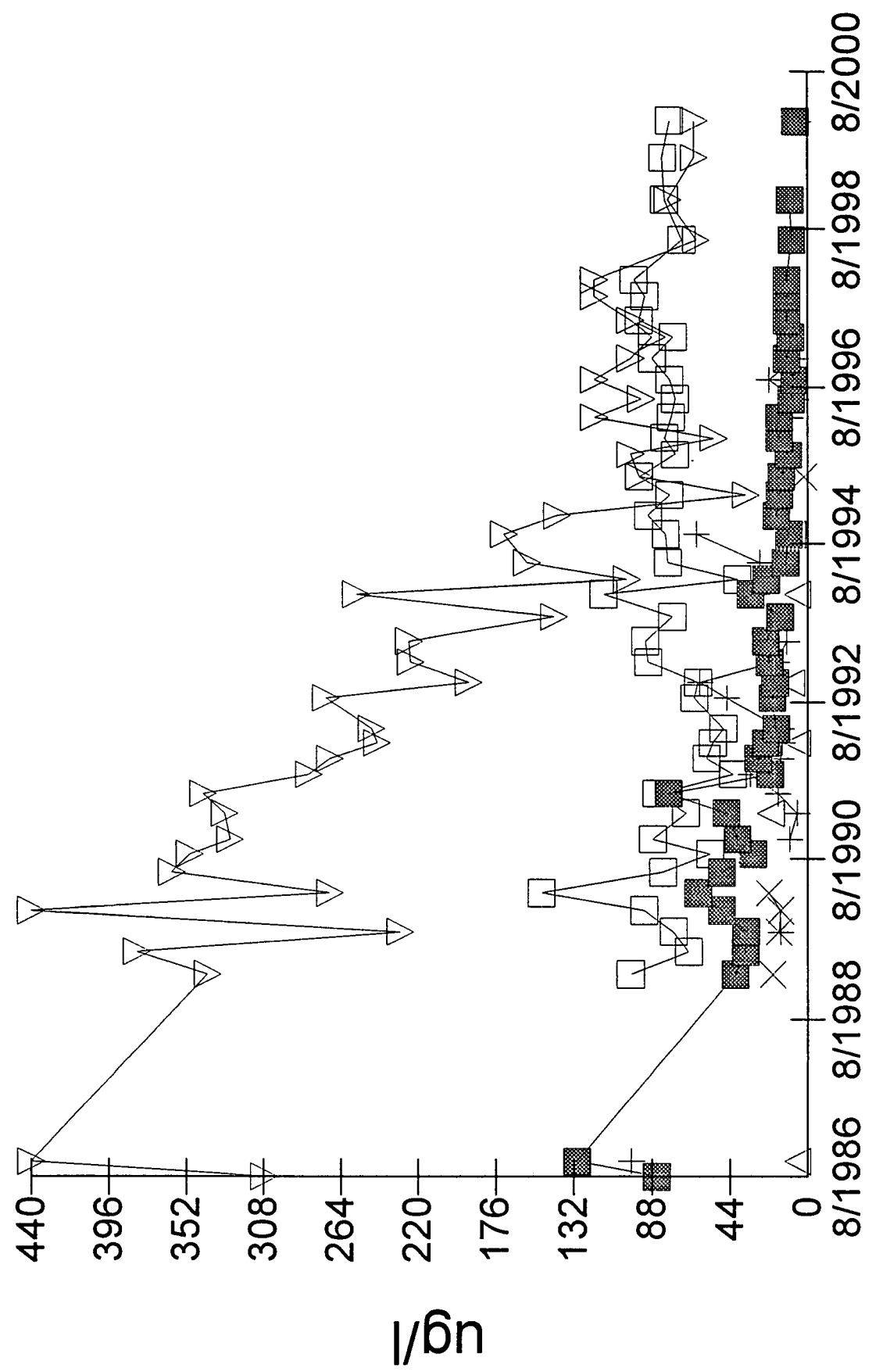
× Vinyl Chloride
□ cis-1,2-Dichloroethane

△ 1,1-Dichloroethane
▨ trans-1,2-Dichloroethane

▲ 1,1-Dichloroethene

▽ Trichloroethene

86-10



+ 1,1,1-Trichloroethane
▼ 1,2-Dichloroethane

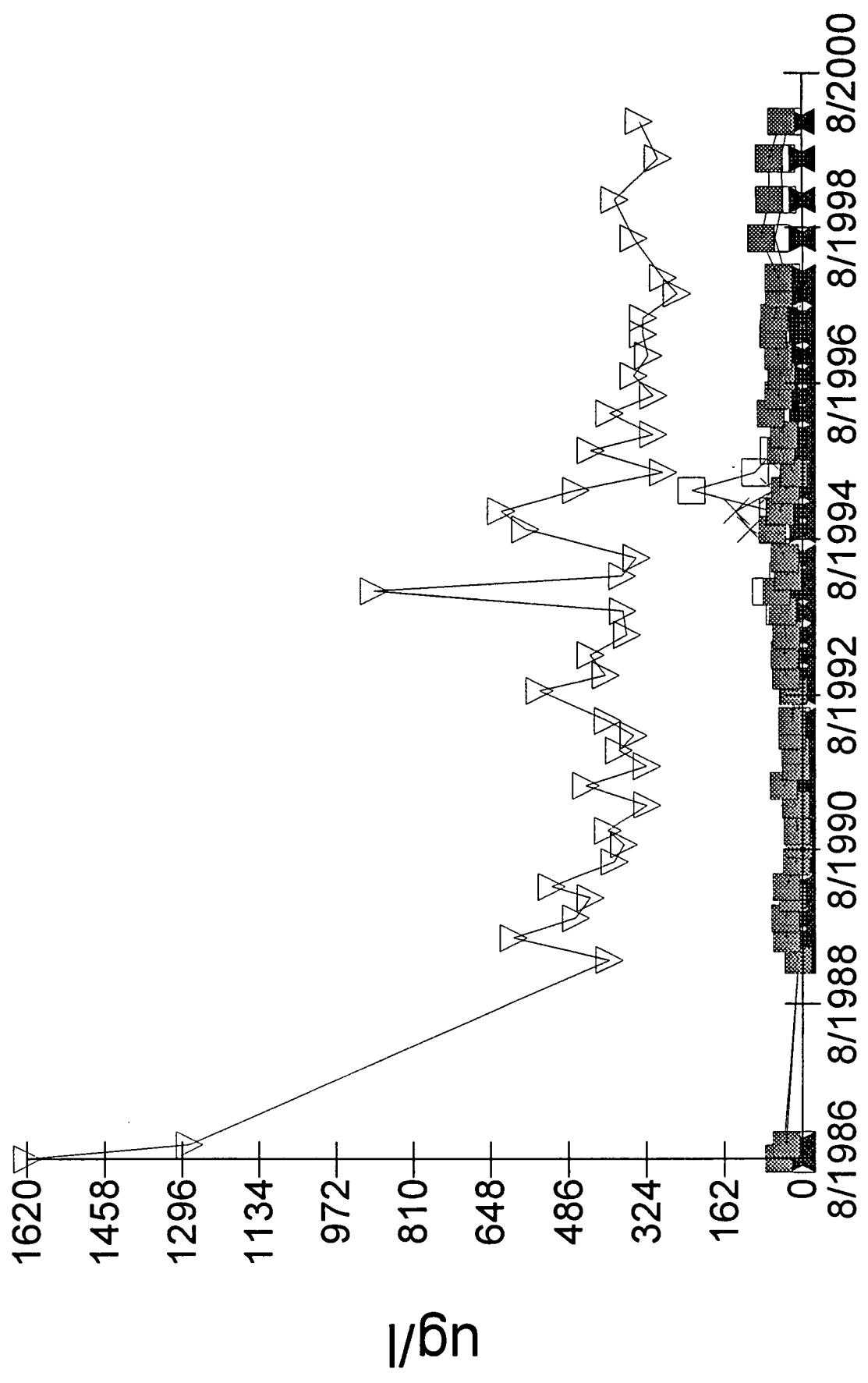
× Vinyl Chloride
□ cis-1,2-Dichloroethane

△ 1,1-Dichloroethane
■ trans-1,2-Dichloroethane

▲ 1,1-Dichloroethene

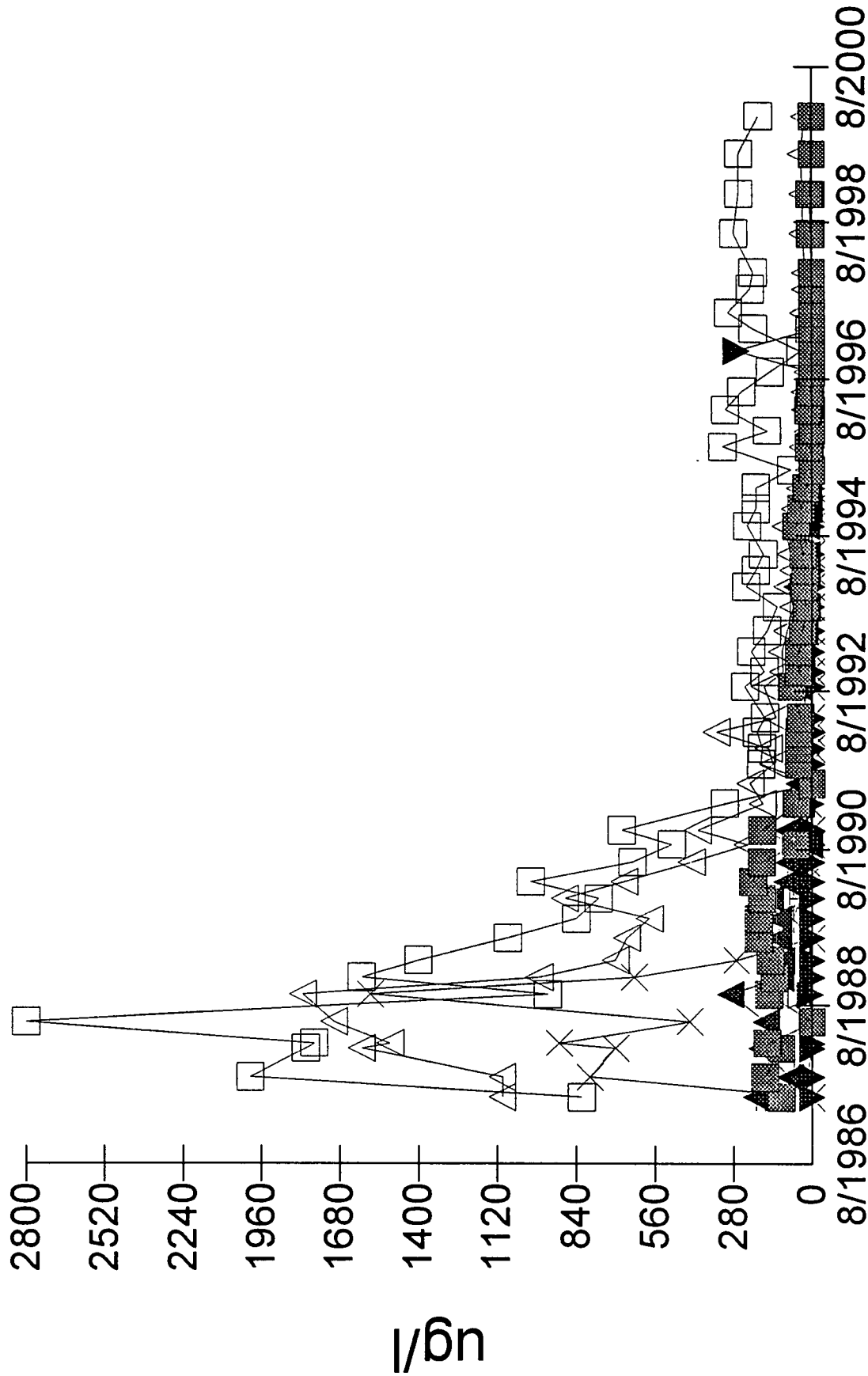
▽ Trichloroethene

86-15



- +1,1,1-Trichloroethane
- ▼ 1,2-Dichloroethane
- × Vinyl Chloride
- cis-1,2-Dichloroethane
- △ 1,1-Dichloroethane
- ▣ trans-1,2-Dichloroethane
- ▲ 1,1-Dichloroethene
- ▽ Trichloroethene

S4A





**SHALLOW MONITORING WELLS
IN CENTRAL PORTION OF GROUNDWATER PLUME**

**S9
S24
S27**



+1,1,1-Trichloroethane
▼ 1,2-Dichloroethane

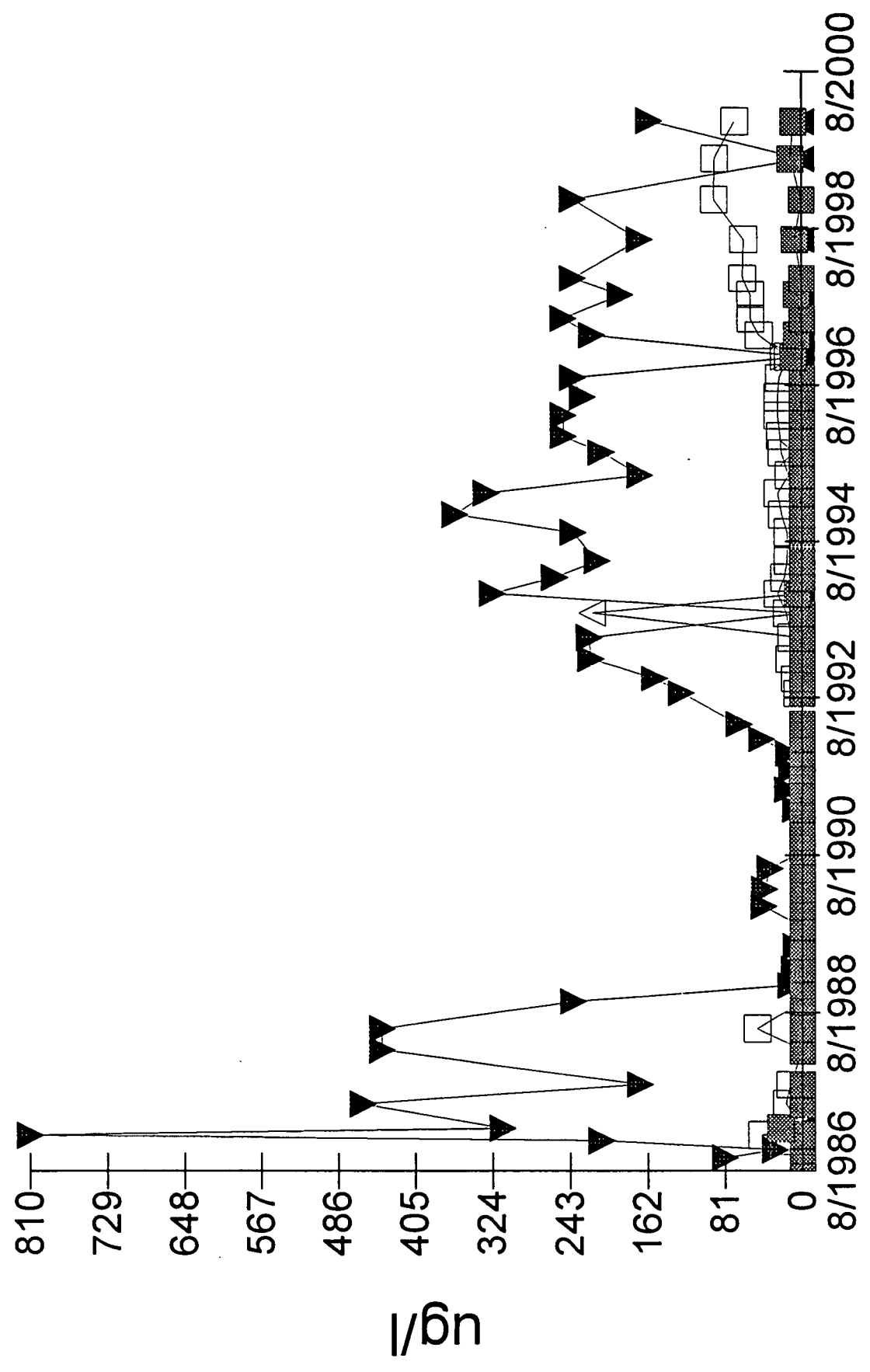
× Vinyl Chloride
□ cis-1,2-Dichloroethane

△ 1,1-Dichloroethane
■ trans-1,2-Dichloroethane

▲ 1,1-Dichloroethene

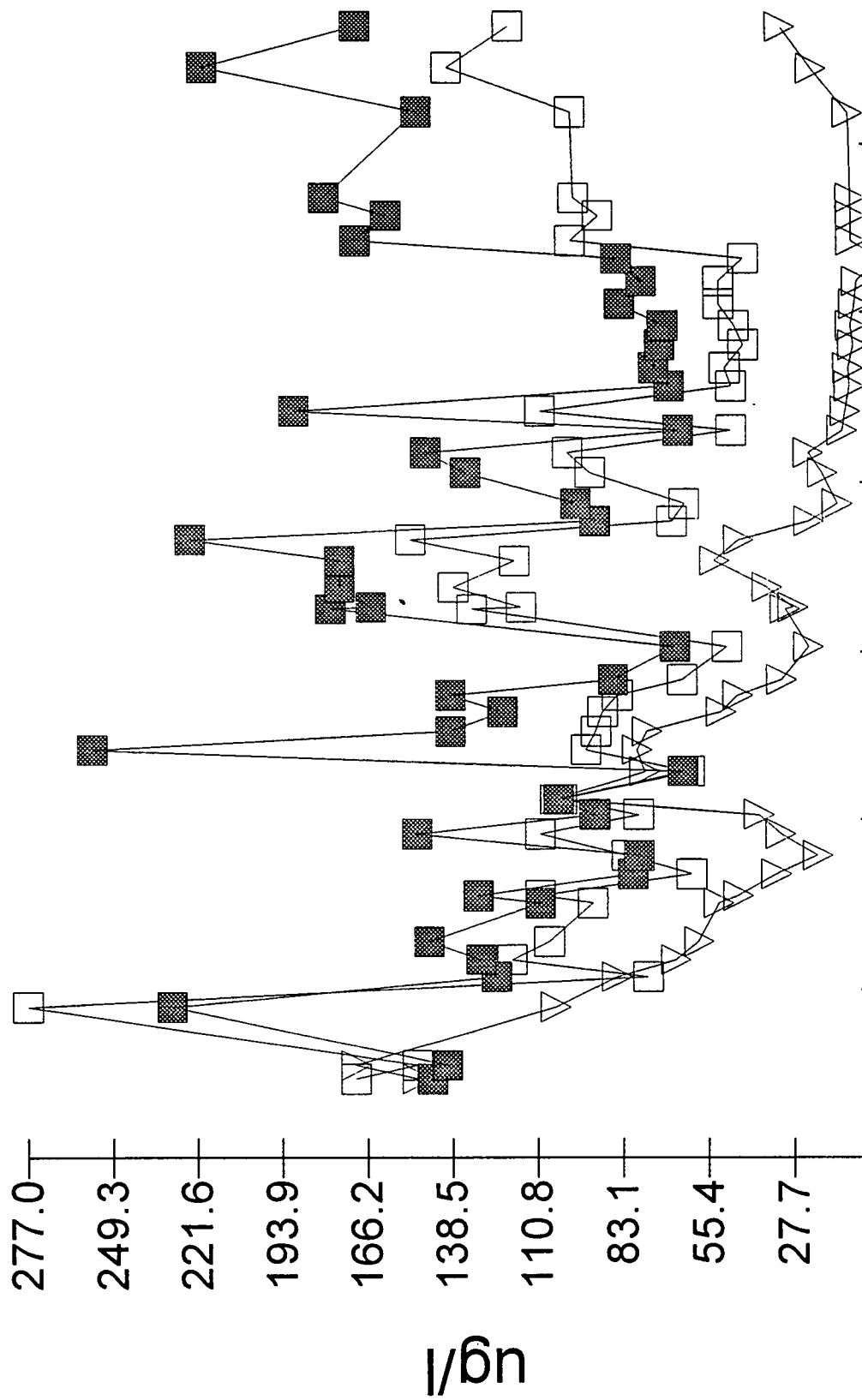
▽ Trichloroethene

S9



- + 1,1,1-Trichloroethane
- ▼ 1,2-Dichloroethane
- × Vinyl Chloride
- cis-1,2-Dichloroethane
- △ 1,1-Dichloroethane
- trans-1,2-Dichloroethane
- ▲ 1,1-Dichloroethene
- ▽ Trichloroethene

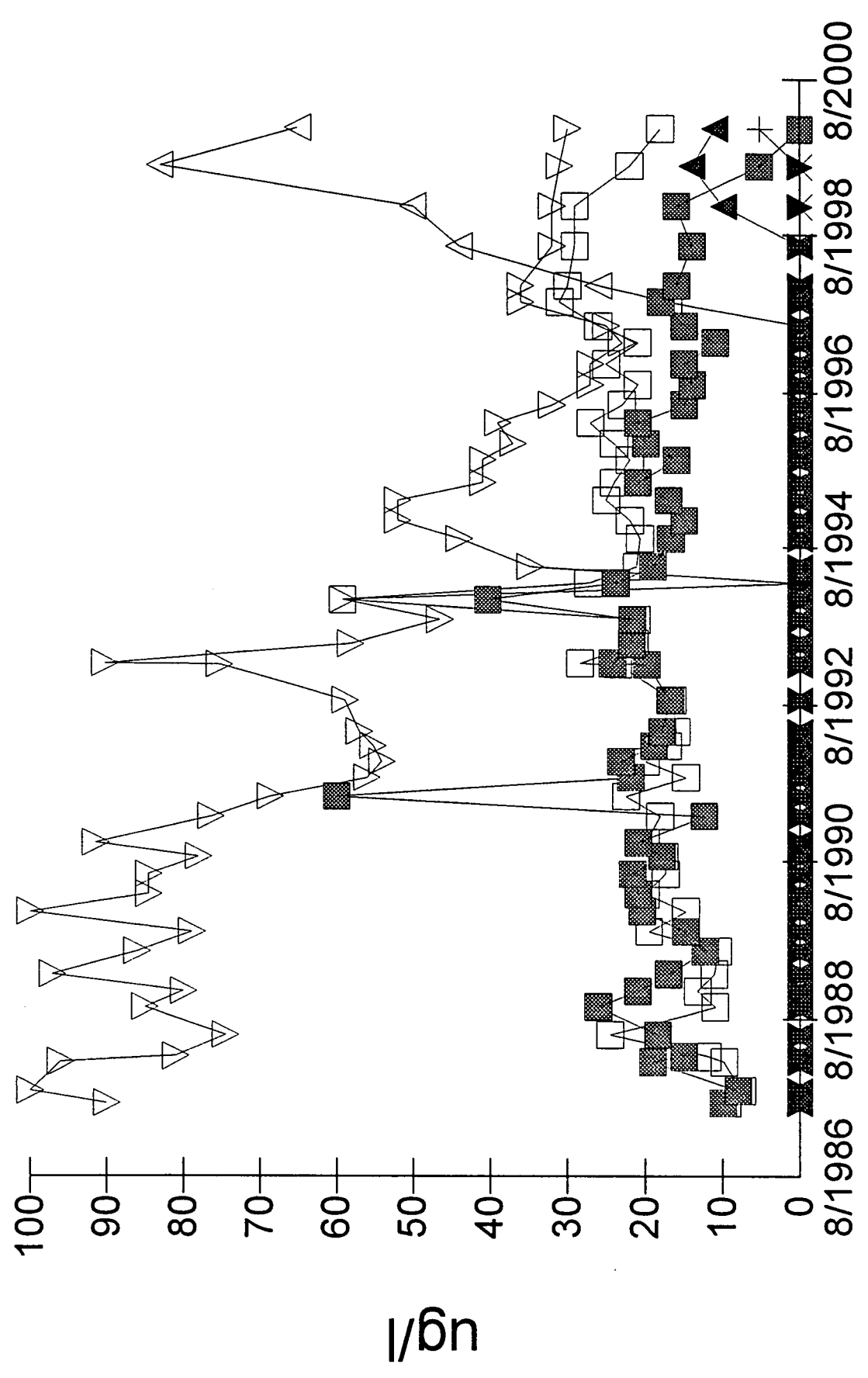
S24



8/1986 8/1988 8/1990 8/1992 8/1994 8/1996 8/1998 8/2000

+ 1,1,1-Trichloroethane X Vinyl Chloride Δ 1,1-Dichloroethane ▲ 1,1-Dichloroethene ▽ Trichloroethene
 ▽ 1,2-Dichloroethane □ cis-1,2-Dichloroethene ▣ trans-1,2-Dichloroethene

S27





**SHALLOW MONITORING WELLS
DOWNGRAIDENT BOUNDARY OF GROUNDWATER PLUME**

S21

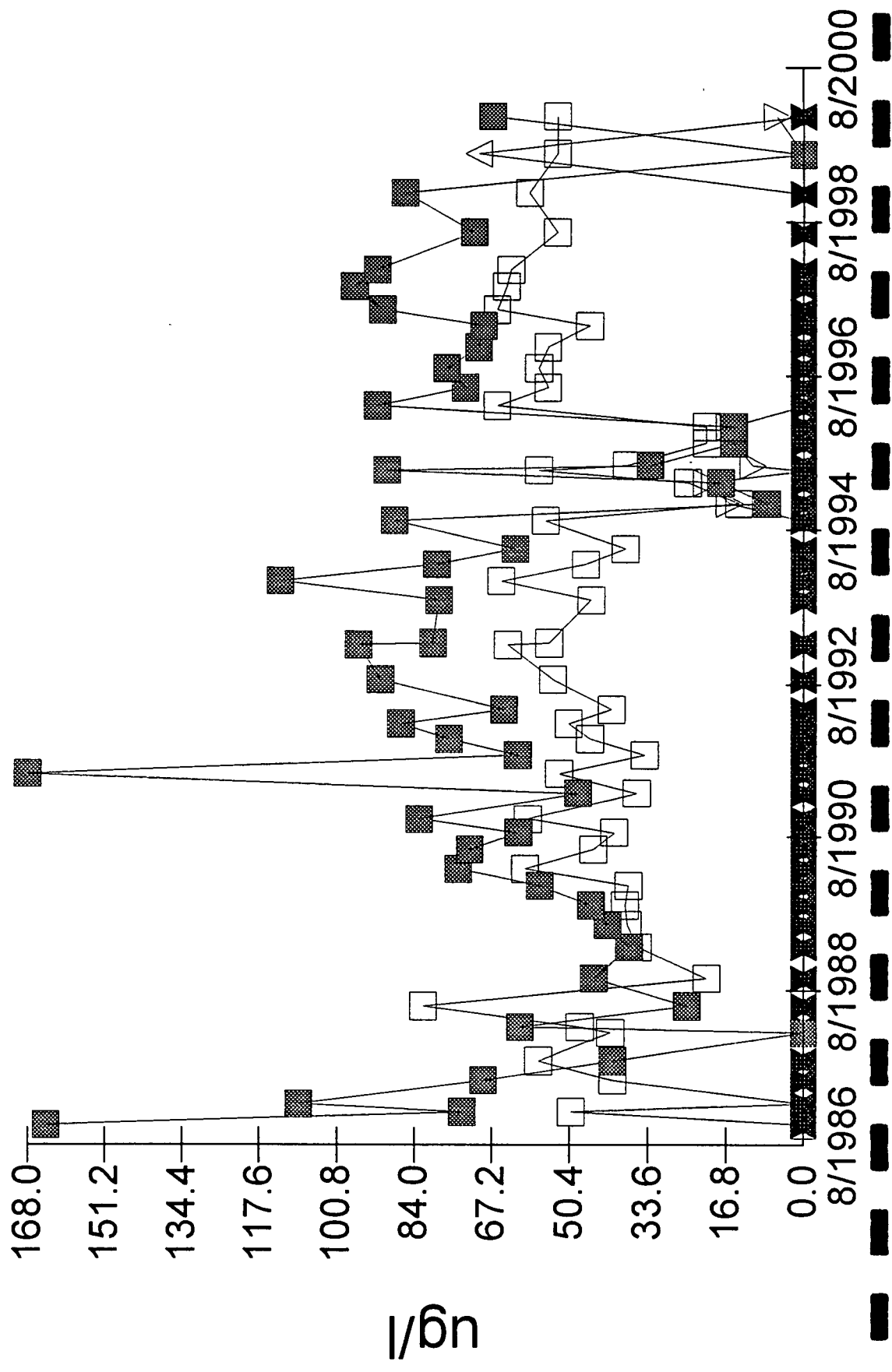
S22

S25



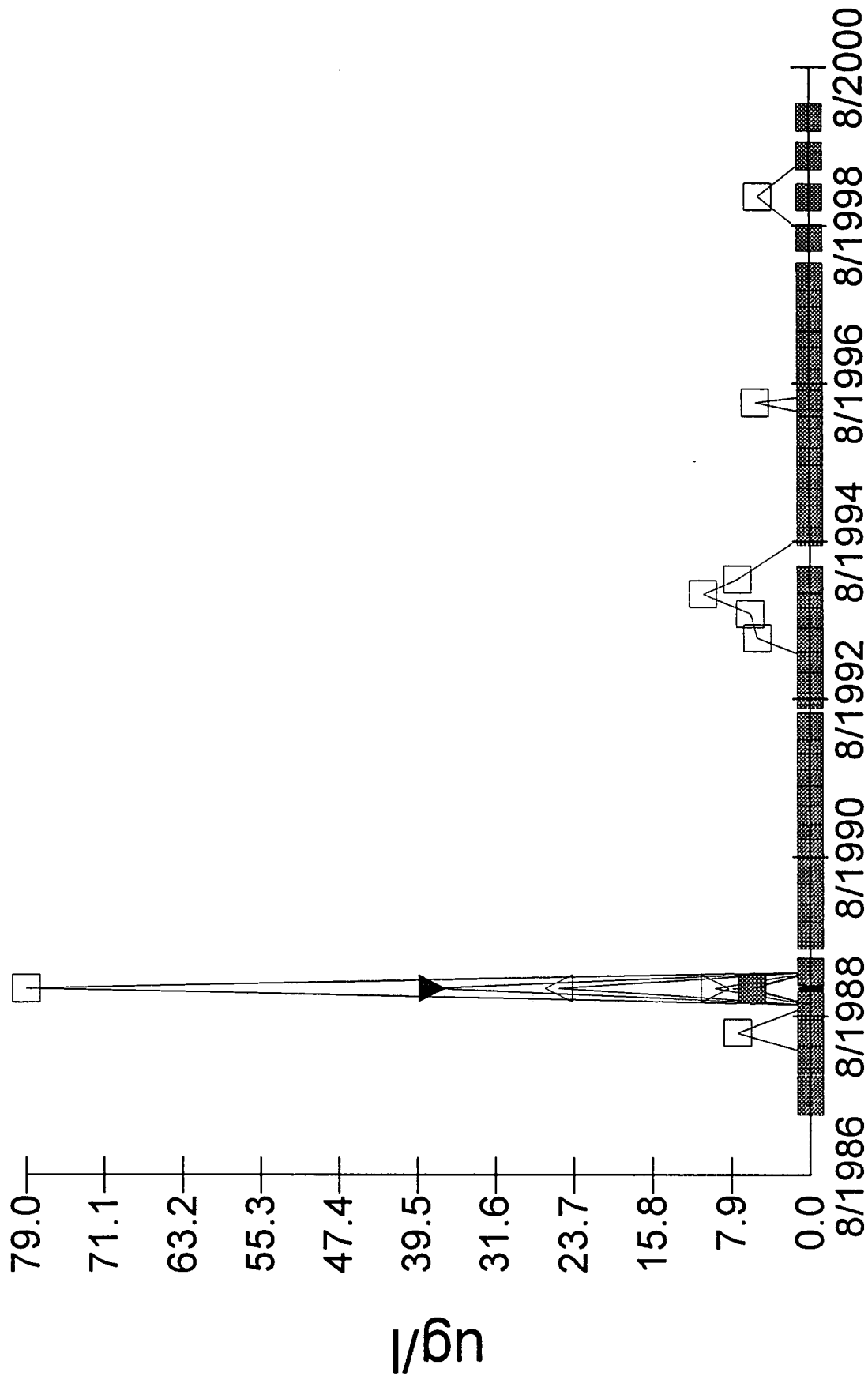
- + 1,1,1-Trichloroethane
- ▼ 1,2-Dichloroethane
- × Vinyl Chloride
- cis-1,2-Dichloroethane
- △ 1,1-Dichloroethane
- trans-1,2-Dichloroethane
- ▲ 1,1-Dichloroethene
- ▽ Trichloroethene

S22



+ 1,1,1-Trichloroethane X Vinyl Chloride Δ 1,1-Dichloroethane ▲ 1,1-Dichloroethene ▽ Trichloroethene
 ▼ 1,2-Dichloroethane □ cis-1,2-Dichloroethene ▢ trans-1,2-Dichloroethene

S25





DEEP MONITORING WELLS

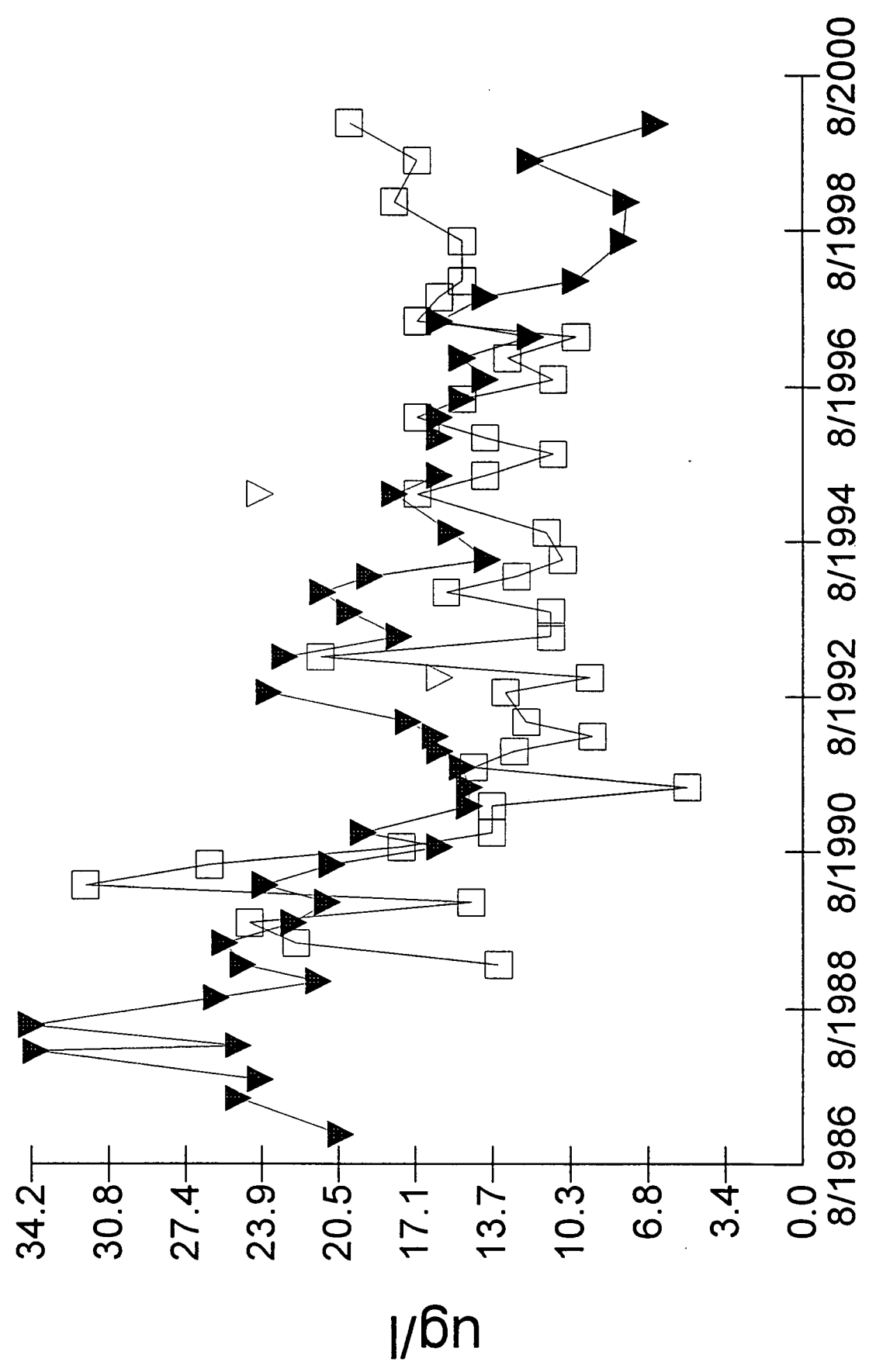
2D

5D



+1,1,1-Trichloroethane
 ▼1,2-Dichloroethane
 X Vinyl Chloride
 □ cis-1,2-Dichloroethane
 △ 1,1-Dichloroethane
 ■ trans-1,2-Dichloroethane
 ▲ 1,1-Dichloroethene
 ▼ Trichloroethene

2D



- +1,1,1-Trichloroethane
- ▽ 1,2-Dichloroethane
- × Vinyl Chloride
- cis-1,2-Dichloroethane
- △ 1,1-Dichloroethane
- ▣ trans-1,2-Dichloroethane
- ▲ 1,1-Dichloroethene
- ▽ Trichloroethene

5D

