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GROUND WATER MONITORING REPORT

6980601

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4th Quarter 1994 Ground Water Monitoring Report

AlliedSignal, Inc.

South Bend, Indiana

March 10, 1995 St. Joseph

Environmental Resources Management, Inc.
450 West Wilson Bridge Road
Columbus, Ohio 43085

ERM

A MEMBER OF THE ENVIRONMENTAL RESOURCES MANAGEMENT GROUP

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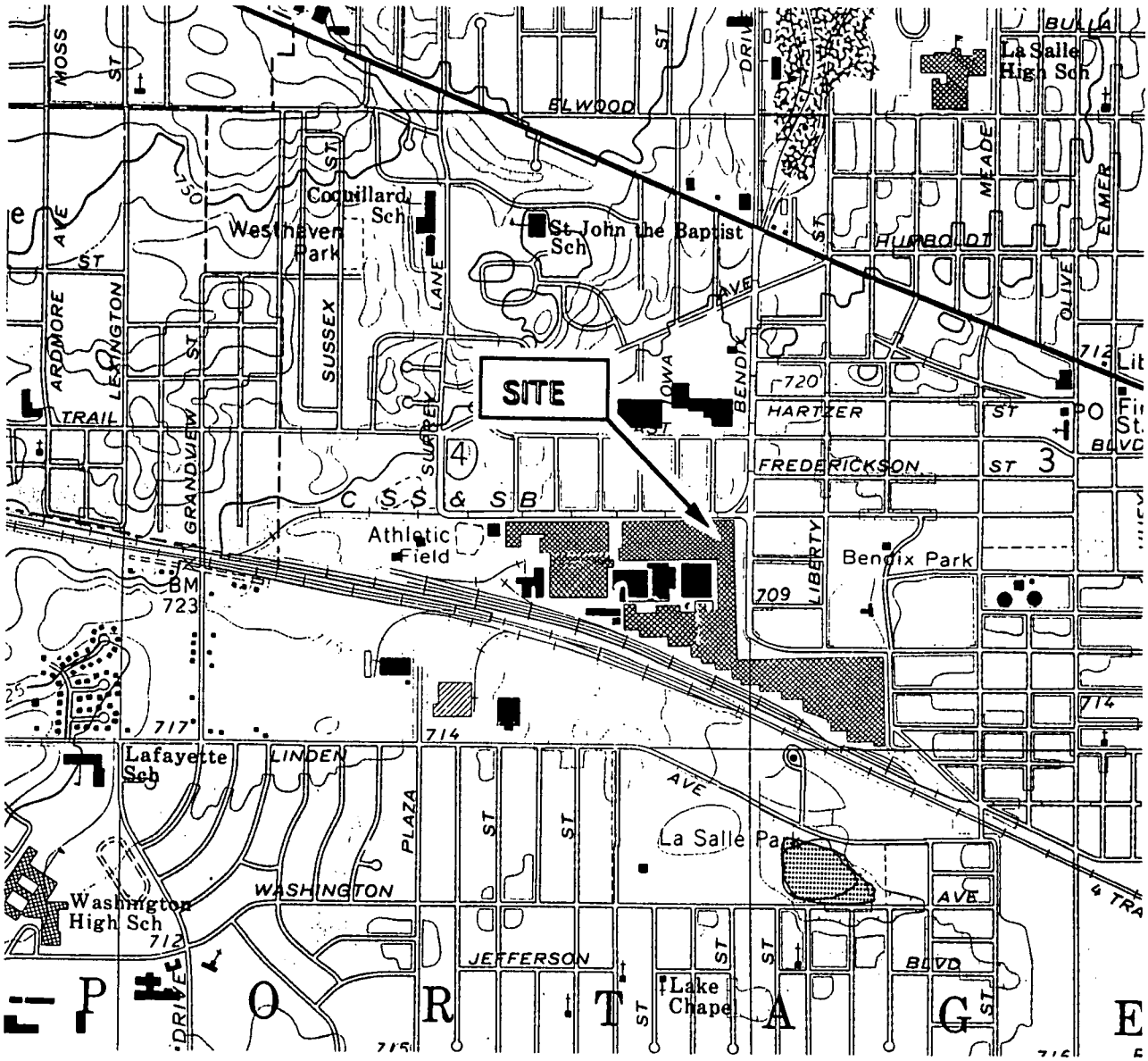
1.0 INTRODUCTION

This report presents the results of the 4th quarter 1994 ground water monitoring program performed by ERM Inc. at the AlliedSignal, Inc. South Bend complex in South Bend, Indiana (Figure 1). Ground water samples were collected during the week of December 5, 1994 and represent the completion of the 13th year of ground water monitoring at the AlliedSignal facility.

1.1 BACKGROUND

Environmental assessments of the AlliedSignal facility, dating back to the 1970s, show the existence of two contaminate plumes in the ground water beneath the facility. The two plumes are characterized as a naphtha plume in the area of Plant 6/16 and a plume of volatile organic compounds (VOCs) in the area of Plant 1 (Figure 2). Remedial measures conducted at the facility have involved the installation of a network of recovery wells in each of the plumes of contamination and the installation of a network of monitor wells on-site and downgradient to the site to monitor the efficiency of the recovery systems and any movement of the contaminants.

The naphtha plume, discovered in 1978, is composed primarily of the compounds naphtha and stoddard solvent. Five naphtha recovery well systems were installed on the complex in 1978 for removal of naphtha free product from the top of the water table. Each of the five naphtha recovery well systems consists of a pumping well and a product collection well. Two of the five naphtha recovery wells have been deactivated because floating product is not present. The remaining three systems continue to be operated even though they produce relatively negligible amounts of naphtha free product. The purpose for their continued operation is to contain the naphtha plume on-site. Naphtha recovery system locations are shown on attached Figure 2 and are identified in Table 1.



SCALE

2000' 0 2000'

QUADRANGLE LOCATION

SOURCE: SOUTHBEND EAST, INDIANA

SITE LOCATION MAP
ALLIEDSIGNAL INC.
SOUTHBEND, INDIANA

FIGURE 1

ERM, inc.
Environmental Resources Management

PROJECT\32063.00.01\32063-1.DWG

TABLE 1
Naphtha Recovery Wells Included in Quarterly Sampling Program:

Recovery Well	In Operation	Ground Water Level Collected	Ground Water Sample Collected
E-3	YES	YES	YES
RWB-6	NO	YES	NO
RWB-16	YES	NO*	YES
RWB-21	NO	YES	NO
RWB-22	YES	YES	YES

* - Could not access the well with the water level probe

Early delineation of the VOC plume, composed primarily of chlorinated hydrocarbons and their degradation products, indicated some migration off-site to the east of the AlliedSignal complex. In the mid-to-late 1980s, a VOC recovery well system was installed at the downgradient limits of the AlliedSignal complex to capture the contaminants before further migration from the site. The complete VOC recovery well system includes 20 shallow and 1 deep VOC recovery wells. Four shallow VOC recovery wells were disconnected in December 1993 because of low yield. The active system includes 16 shallow and 1 deep VOC recovery wells that pump into seven discharge points. The discharge sampling points and the recovery wells they represent are presented in Table 2 and their locations are shown in Figure 3.

TABLE 2
VOC Recovery Wells Included in Quarterly Sampling Program:

VOC Sample/Discharge Location	VOC Recovery Well(s) Included In Sample	Relative Well Depth	Ground Water Sample Collected
MH-2	RW-1, RW-2	Shallow	YES
MH-3A	RW-3, RW-3A, RW-4	Shallow	YES
MH-5	RW-5, RW-6, RW-7	Shallow	YES
MH-8	RW-8, RW-9, RW-9A RW-10, RW-11	Shallow	YES
MH-17	RW-17	Shallow	YES
MH-18	RW-18	Shallow	YES
MH-19	RW-19	Shallow	YES
P-13	RW-13	Deep	YES

Note - because the VOC recovery wells are part of a closed system, water levels can not be taken.

To monitor the efficiency of the naphtha and VOC recovery systems, and to delineate and monitor any movement of the contaminants at the water table, and in the deeper portions of the aquifer, a ground water monitoring system was installed on the site and downgradient of the site. The ground water monitoring system consists of 27 shallow wells that monitor the top of the water table aquifer and 17 intermediate and deep ground water monitoring wells that monitor the deeper portions of the aquifer. Table 3 presents the monitoring wells where ground water levels and/or samples were collected for this quarterly ground water monitoring report. Figure 2 shows the location of each of these monitoring wells.

TABLE 3
Monitor Wells Included in Quarterly Sampling Program:

Monitor Well	Total Depth (Feet)	Water Level Taken	Ground Water Sample Collected	Associated Clustered Monitor well(s)
Shallow Wells				
S-1	31	"A"	YES	
S-3	30	YES	NO	
S-4A	NA	YES	YES	
S-5	30	YES	NO	
S-8	25	YES	NO	D-3
S-9	22	YES	YES	D-4
S-12	30	YES	NO	
S-14	27	YES	YES	D-5
S-15	22	YES	YES	
S-16	22	YES	YES	D-8
S-17	30	"A"	YES	D-9
S-18	30	YES	NO	D-10
S-19	40	"B"	NO	
S-20	20	YES	YES	
S-21	25	"A"	YES	5-D
S-22	27	"A"	YES	
S-23	30	"A"	YES	I-1, D-12
S-24	NA	"A"	YES	
S-25	NA	YES	YES	
S-26	NA	YES	YES	
S-27	NA	YES	YES	
7-25	25	YES	NO	7-50
86-6	NA	YES	NO	
86-7	NA	YES	NO	
86-10	26	YES	YES	
86-15	24	YES	YES	
9-33	NA	YES	YES	

Table 3 Continued
Monitor Wells Included In Quarterly Sampling Program

Monitor Well	Total Depth (Feet)	Water Level Taken	Ground Water Sample Collected	Associated Clustered Monitor well(s)
Intermediate Wells (50 - 76 feet)				
I-1	50	YES	NO	S-23, D-12
7-50	50	YES	NO	7-25
D-8	60	YES	NO	S-16
D-7	76	YES	YES	
8-D	60	YES	YES	7-D
Deep Wells (95 -149 feet)				
D-3	131	YES	NO	S-8
D-4	113	YES	YES	S-9
D-10	95	YES	NO	S-18
7-D	96	YES	YES	8-D
D-12	149	YES	NO	S-23, I-1
Deep Wells (191 - 207 feet)				
D-5	183	YES	NO	S-14
1-D	207	YES	YES	
2-D	191	YES	NO	
5-D	191	YES	YES	S-21

NA - Not available
"A" - Water level could not be taken because the water level was below the top of the dedicated bladder pump
"B" - Could not locate the monitor well

1.2 *QUARTERLY MONITORING PROGRAM*

To meet the limitations and monitoring requirements set forth in a discharge permit issued November 9, 1994 by the Department of Public Works for the city of South Bend, Indiana, AlliedSignal must report, on a quarterly basis, the analytical results of ground water samples collected from all wells discharging into the city sewers. The active recovery wells included under the discharge permit are 16 shallow and 1 deep VOC recovery wells and 3 naphtha recovery wells.

To monitor the efficiency of the naphtha and VOC recovery systems and to delineate and monitor any movement of the contaminants, AlliedSignal also collects quarterly ground levels from 27 shallow aquifer monitor wells, 14 intermediate/deep aquifer monitor wells and 5 naphtha recovery wells. Ground water samples are also collected for laboratory analyses from 18 of the shallow aquifer monitor wells and 7 of the intermediate/deep aquifer monitor wells.

Necessary QA/QC samples included in the sampling program are duplicate samples collected at a frequency of 10 % and laboratory trip blanks collected at a frequency of one per day per shipping cooler containing samples for volatile organic analyses. The sampling program is presented in Table 4, and the sampling locations are shown on Figure 2.

2.0 *WATER LEVEL MEASUREMENTS*

Depth to ground water was measured and the ground water elevations calculated for the shallow and deeper aquifer wells and naphtha recovery wells (Table 4). Depths were measured to the nearest 0.01 foot using a Solinist electronic water level indicator. The top of casing elevation for each of the monitor wells was provided by AlliedSignal. In monitor wells S-1, S-17, S-21, S-22, S-23 and S-24 the water level was below the top of the dedicated bladder pump, and the water level could not be taken. In the naphtha recovery well RWB-16, the probe of the water level meter could not be inserted into the access slot at the top of the well.

The potentiometric maps for the shallow and deep aquifers showing depth and direction of ground water flow are presented in Figures 4 and 5, respectively. It should be noted that due to the sparse number of control points for each of the three subdivisions of the deeper wells (i.e. intermediate 50 - 76 feet, deep 95 - 149 feet and deep 191 - 207 feet), the potentiometric map for the deeper portion of the aquifer (Figure 5) includes ground water level data from wells ranging in depth from 50 feet to over 200 feet deep. The potentiometric map for the deeper portion of the aquifer represents the general direction of ground water flow but does not consider the potential for vertical gradients within the aquifer or the potential existence of an aquitard separating shallow and deeper aquifer.

Table 4

Monitor Well, Ground Water and Sample Information

AlliedSignal South Bend, IN

Well No.	Well Depth (Ft)	Top of Casing Elevation	Depth to Water (Feet)	Water Elevation (MSL)	Locations Sampled	Standing Water (Feet)	Well Diameter (Inches)	Purge Volume (Gallons)	Method used to Purge Well
Shallow Monitor Wells									
S-1	31	728.09	>24.35	NA	X	Assume 7'	4.0		Bladder Pump
S-3	30	716.65	20.22	696.43			4.0		
S-4A	NA	711.00	14.08	696.92	X	Assume 16'	1.5	4	Bladder Pump
S-5	30	712.83	13.41	699.42			4.0		
S-8	25	714.65	18.54	696.11			4.0		
S-9	22	714.17	17.20	696.97	X	5	4.0	9	Bladder Pump
S-12	30	721.45	19.67	701.78			4.0		
S-14	27	711.86	15.63	696.23	X & Dupe	11	4.0	22	Bladder Pump
S-15	22	714.37	18.69	695.68	X	3	4.0	6	Bladder Pump
S-16	22	716.18	18.45	697.73	X	4	4.0	7	Disposable Bailer
S-17	30	716.97	>19.3	NA	X	Assume 11'	4.0	22	Bladder Pump
S-18	30	715.41	16.36	699.05			4.0		
S-19	40	723.38	Not located	NA			4.0		
S-20	20	709.97	14.90	695.07	X	5	4.0	20	Bladder Pump
S-21	25	711.33	>14.2	NA	X	Assume 11'	4.0	22	Bladder Pump
S-22	27	709.33	>13.12	NA	X	Assume 14'	4.0	27	Bladder Pump
S-23	30	710.24	>16.1	NA	X	Assume 14'	4.0	27	Bladder Pump
S-24	NA	713.03	>16.0	NA	X	Assume 14'	1.5	4	Bladder Pump
S-25	NA	710.60	15.33	695.27	X	Assume 10'	1.5	3	Bladder Pump
S-26	NA	714.50	17.54	696.96	X	Assume 13'	1.5	4	Bladder Pump
S-27	NA	715.40	19.19	696.21	X	Assume 11'	1.5	3	Bladder Pump
7-25	25	720.47	20.54	699.93			1.5		
9-33	NA	716.69	18.14	698.55	X	Assume 15'	1.5	4	Bladder Pump
86-6	NA	715.00	16.12	698.88			1.5		
86-7	NA	714.15	15.63	698.52			1.5		
86-10	26	715.06	16.61	698.45	X	9	1.5	3	PVC Bailer
86-15	24	715.06	16.92	698.14	X	7	1.5	2	PVC Bailer
Intermediate Monitor Wells (50 - 76 feet)									
I-1	50	711.58	18.31	693.27			4.0		
7-50	50	NA	20.06	NA			1.5		
D-8	60	717.07	19.25	697.82			4.0		
D-7	76	713.83	16.22	697.61	X	60	4.0	117	Grundfos Pump
8-D	60	714.56	17.05	697.51	X	43	1.5	12	Bladder Pump
Deep Monitor Wells (95 - 149 feet)									
D-3	131	714.45	17.64	696.81			4.0		
D-4	113	717.85	20.41	697.44	X & Dupe	93	4.0	181	Grundfos Pump
D-10	95	716.43	17.13	699.30			4.0		
7-D	96	714.85	18.58	696.27	X	77	1.5	21	Bladder Pump
D-12	149	710.35	21.37	688.98			4.0		
Deep Monitor Wells (191 - 207 feet)									
D-5	183	712.07	14.93	697.14			4.0		
1-D	207	714.17	15.90	698.27	X	191	1.5	53	Bladder Pump
2-D	191	715.36	17.45	697.91		174	1.5		
5-D	191	712.01	23.61	688.40	X	167	1.5	46	Bladder Pump

MSL - Elevations referenced to Mean Sea Level

NA - Not Available

Dupe - Duplicate analysis conducted on the sample

Table 4 (Continued)

Monitor Well, Ground Water and Sample Information

AlliedSignal South Bend, IN

Well No.	Well Depth (Ft)	Top of Casing Elevation	Depth to Water (Feet)	Water Elevation (MSL)	Locations Sampled	Standing Water (Feet)	Well Diameter (Inches)	Purge Volume (Gallons)	Method used to Purge Well
Naptha Recovery Wells									
RWB-6	NA	715.80	20.27	695.53					
RWB-16	NA	715.30	No access	NA	X			5 min.	Spigot
RWB-21	NA	717.62	20.93	696.69					
RWB-22	NA	715.11	22.60	692.51	X & Dupe			5 min.	Spigot
E-3	NA	714.50	18.13	696.37	X			5 min.	Spigot
VOC Recovery Sampling Locations									
MH-2					X			5 min.	Spigot
MH 3A					X & Dupe			5 min.	Spigot
MH-5					X			5 min.	Spigot
MH-8					X			5 min.	Spigot
P-13					X			5 min.	Spigot
MH-17					X			5 min.	Spigot
MH-18					X			5 min.	Spigot
MH-19					X			5 min.	Spigot

MSL - Elevations referenced to Mean Sea Level

NA - Not Available

Dupe - Duplicate analysis conducted on the sample

3.0 *SAMPLING METHODOLOGY*

3.1 *PURGING*

All monitor wells were purged a total of three (3) well volumes prior to sample collection. Table 4 includes the volume of water purged from each monitor well and the method used to purge each well. The dedicated bladder bump in monitor well 2-D malfunctioned and could not be field repaired. Therefore, no sample could be collected from this well during this sample round.

To purge the naphtha recovery wells and VOC recovery wells, the spigots were opened and allowed to discharge into a pail for approximately five (5) minutes before samples were collected.

The purged water was collected and disposed into collection sewers on site for all monitor wells with historic occurrences of ground water contaminants.

3.2 *SAMPLE COLLECTION*

All monitor wells (except S-16, 86-10, and 86-15) were sampled directly from the outlet of the dedicated bladder pump after the well had been purged. Monitor wells 86-10, and 86-15 were sampled with a dedicated PVC bailer and monitor well S-16 was sampled with a disposable bailer. Samples from the naphtha recovery wells were collected directly from a tap at each recovery well and samples from the VOC recovery wells were collected from taps at representative locations along the recovery system. Figure 3 shows the VOC recovery system and the sample locations.

All ground water samples were measured in quadruplicate in the field for pH, specific conductance, and temperature and the results recorded onto sample data sheets. Table 5 contains the average results of these field measurements. All field notes were recorded in a site specific field note book. Samples were placed in insulated coolers with sealed bags of crushed ice and shipped, via over-night delivery service, to Aqua Tech Environmental Laboratories, Inc. under the appropriate chain of custody. Samples were analyzed from this 4th quarter 1994 sampling event for VOCs by EPA Method 8240.

Table 5
Results of Ground Water Field Parameters
AlliedSignal Facility South Bend, IN
Week of December 5, 1994

Well/ Location	pH Std Units	Cond. umhos/cm	Temp degree C
SHALLOW Monitor Wells			
S-1	7.58	828	10.7
S-4A	7.01	923	11.4
S-9	7.09	1198	12.5
S-14	7.25	1410	14.0
S-15	6.95	1753	8.3
S-16	7.12	1500	9.8
S-17	7.24	1238	13.5
S-20	7.04	1708	10.4
S-21	7.07	1420	10.9
S-22	7.19	1325	11.4
S-23	7.38	788	11.9
S-24	7.14	1898	12.1
S-25	7.07	1193	11.7
S-26	7.34	1320	10.1
S-27	7.22	1435	11.2
MW 9-33	7.59	580	12.4
MW 86-10	7.47	1540	13.2
MW 86-15	7.13	2878	13.9
Intermediate Monitor Wells (50 - 76 feet)			
D-7	7.53	553	10.9
8-D	7.04	1560	11.4
DEEP Monitor Wells (95 -149 feet)			
7-D	6.99	1320	12.9
D-4	7.38	878	12.3

Well/ Location	pH Std Units	Cond. umhos/cm	Temp degree C
DEEP Monitor Wells (191 - 207 feet)			
1-D	7.28	1340	9.5
2-D	NA	NA	NA
5-D	7.51	1240	9.3
NAPTHA Recovery Wells			
E-3	7.29	1260	13.8
RWB-16	7.37	1238	15.9
RWB-22	7.30	1325	13.6
VOC Recovery Sample Locations			
MH-2	7.23	1158	11.7
MH-3A	7.22	1088	10.7
MH-5	7.58	1403	10.7
MH-8	7.15	2133	12.8
P-13	7.28	1455	14.2
MH-17	7.13	2168	17.1
MH-18	7.24	1418	14.5
MH-19	7.30	1208	13.3

4.0 *QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)*

In accordance with QA/QC procedure, duplicate samples were collected at a frequency of 10 %. Duplicate samples were collected from each of the four well types sampled. For the monitor wells, a duplicate sample was collected from the shallow well S-14 and the deep well D-4. For the recovery wells, a duplicate sample was collected of the VOC sample collection point MH-3A and naphtha recovery well RWB-22. Laboratory trip blanks were included in each shipping cooler containing samples for VOC analyses and were submitted for analyses along with the other samples. Laboratory results were submitted to ERM in the form of laboratory data sheets along with a magnetic file of the results on computer disc. The data was electronically transferred, from the computer disc into a data base maintained by ERM. Sample data sheets of ground water and QA/QC are maintained in ERM files and are available upon request.

5.0 *ANALYTICAL RESULTS*

The analytical data tables containing the complete list of analytical results for the December 1994 sampling event are presented in Appendix A. Appendix B contains both the current and historic data showing only the constituents detected above the laboratory detection limit for each sampling location.

The most recent VOC analytical results of ground water samples are generally consistent with the results of analyses from previous sampling events. The primary constituents of concern are:

Parent Compounds

Trichloroethene (TCE)
1,1,1-Trichloroethane (1,1,1-TCA)

Degradation products of the parent compounds

trans-1,2-Dichloroethene (*considered together as DCE)*
cis-1,2-Dichloroethene
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethane (1,2-DCA)
1,1-Dichloroethene (1,1-DCE)
Vinyl Chloride

Other VOC compounds detected in the ground water samples include Acetone, Benzene and 2-Butanone (MEK).

5.1 *VOC RESULTS SHALLOW MONITOR WELLS*

VOC concentrations in the shallow monitor wells are greatest in the on-site wells and decrease to the north and east of the facility. Three monitor wells, upgradient to the VOC recovery system, show increasing concentrations of some VOC compounds. These wells include; monitor wells S-17, 86-15 and S-16.

The compound 1,1,1-TCA showed an increase in concentration in monitor well S-17 during this sampling event. 1,1,1-TCA was also detected in monitor well 86-15 for the first time since September of 1993. Vinyl chloride was detected for the second straight sampling event in monitor well 86-15. Historically, the vinyl chloride concentration has been non-detect in this well.

Monitor well S-16 continues to show an increase in the TCE concentration. TCE concentrations have steadily increased, with minor fluctuations, from a March, 1991 level of 35.8 µg/l to the highest level ever of 261 µg/l detected in this event.

Upgradient monitor well S-1, has again detected low concentrations of VOC 's. In this sampling event, cis-1,2-DCE was detected at 6.3 µg/l.

5.2 *VOC RESULTS DEEP MONITOR WELLS*

Total VOC concentrations in all deep monitor wells are consistent with historical results and generally indicate a stable or decreasing trend. The most significant decreasing trend is apparent in well 7-D where it has decreased from a high of 286 µg/l total VOCs in July of 1987 to the current level of 11 µg/l detected during this sample round. Well D-4 has detected vinyl chloride in eight (8) consecutive episodes.

5.3 *NAPHTHA RECOVERY WELLS*

The naphtha recovery wells are generally consistent with previous sampling events but show an increase in total VOC concentrations primarily due to the detection of 2-Butanone (MEK) in wells E-3 and RWB-22. In well E-3, MEK was detected at a level of 215 µg/l and in well RWB-22 it was detected at 385 µg/l. Acetone was also detected in

RWB-22 at a level of 129 µg/l. MEK and acetone have occasionally been detected in past sampling events.

5.4 *VOC RECOVERY WELLS*

The VOC Recovery System has been changed so that there are now seven (7) shallow well pumping stations recovering ground water from a series of sixteen (16) shallow recovery wells located along Bendix Drive. Additionally, there is one (1) deep recovery well, RW-13.

Analytical results from this sampling event are generally consistent with the previous sampling events for all locations except MH-19. In the ground water sample collected from MH-19 which monitors the water being pumped from recovery well RW-19, the compound 1,1,1-TCA showed an increase in concentration from its first detection of 17.5 µg/l in February of 1994 to the current level of 220 µg/l. The ground water sample from MH-8 which monitors ground water from recovery wells RW-8, RW-9, RW-10 and RW-11 also shows a general increase in the level of vinyl chloride from 71 µg/l in September of 1988 to its current all time high of 185 µg/l.

5.5 *FIELD BLANKS, DUPLICATES, QA/QC*

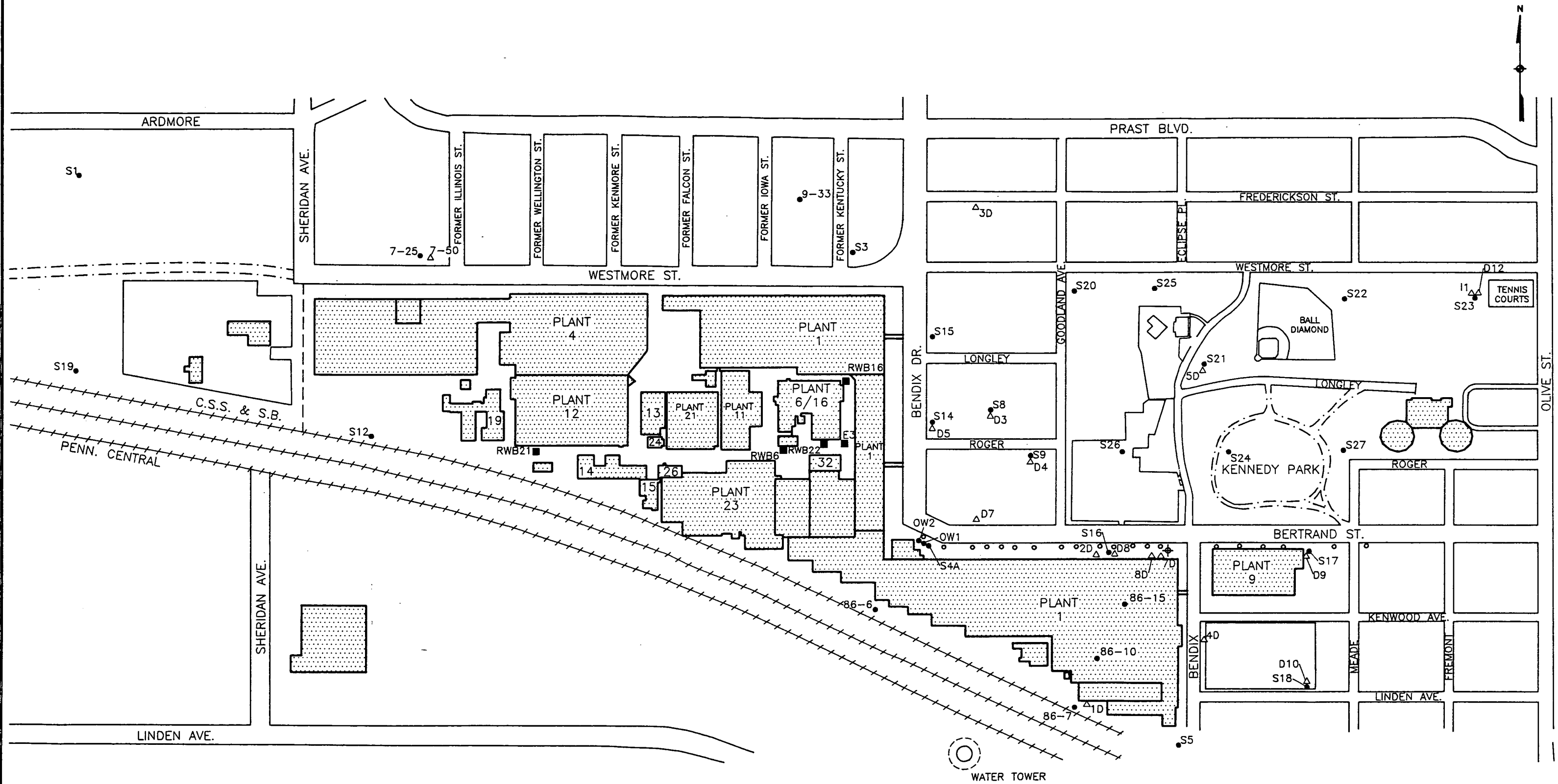
VOCs were not detected in any of the field blanks. The two duplicate sample results show that all compounds were within acceptable limits for comparability.

6.0 *SCHEDULE*

The 1st quarter 1995 sampling episode is scheduled for the week of March 13, 1995. Samples will be collected for both VOC and inorganic analyses.

Appendix A

Analytical Results
December 1994



LEGEND:

- • SHALLOW (TOP OF WATER TABLE)
- △ DEEP MONITOR WELL
- ■ NAPHTHA RECOVERY WELL
- ○ SHALLOW VOC RECOVERY WELL
- ⊕ DEEP VOC RECOVERY WELL

0 200' 400'

SCALE: 1" = 400'

MONITOR WELL & RECOVERY WELL NETWORK

ALLIEDSIGNAL INC.
SOUTH BEND, INDIANA

FIGURE 2

ERM, inc.
Environmental Resources Management

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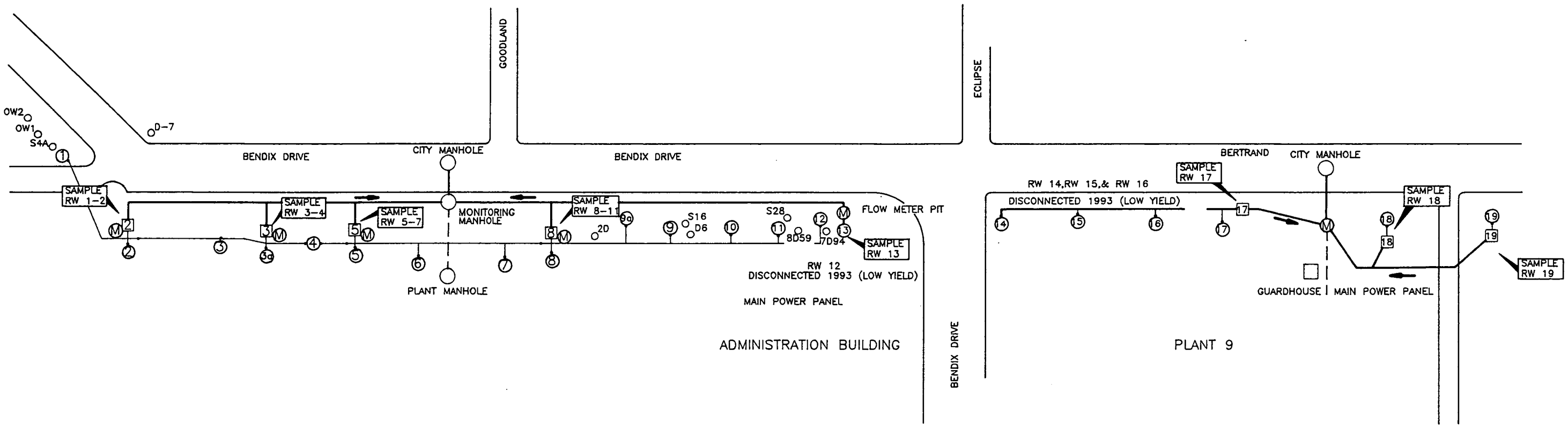

LEGEND:

- ② RECOVERY WELL
- [3] PUMP AND DISCHARGE LINE
- ——— FACILITY DISCHARGE LINE
- D-7 MONITOR/OBSERVATION WELL
- Ⓜ FLOW METER
- SAMPLE RW 1-2 DISCHARGE SAMPLE LOCATION

ERM	VOC RECOVERY SYSTEM ALLIEDSIGNAL INC. SOUTH BEND COMPLEX SOUTH BEND, INDIANA	FIGURE 3

ERM, inc.
Environmental Resources Management

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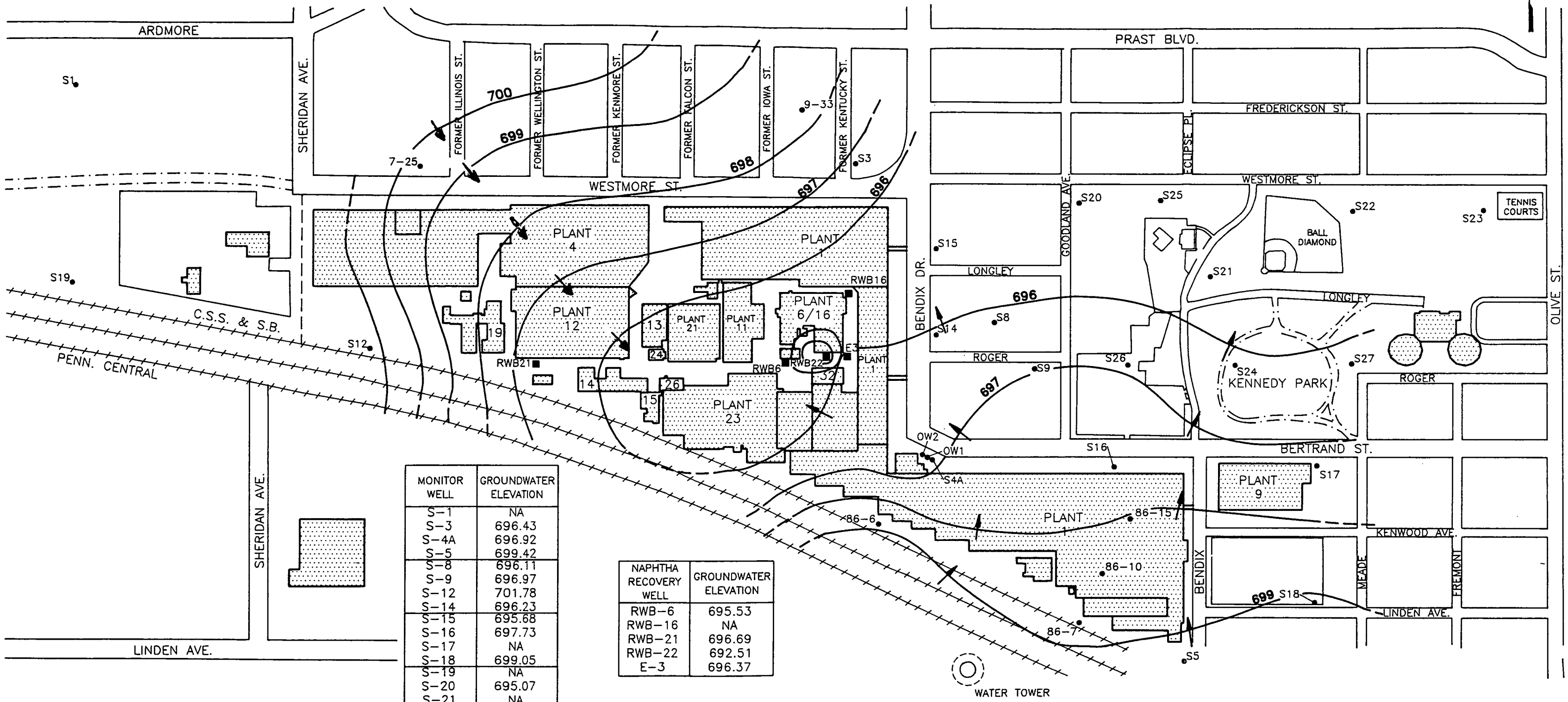


MONITOR WELL	GROUNDWATER ELEVATION
S-1	NA
S-3	696.43
S-4A	696.92
S-5	699.42
S-8	696.11
S-9	696.97
S-12	701.78
S-14	696.23
S-15	695.68
S-16	697.73
S-17	NA
S-18	699.05
S-19	NA
S-20	695.07
S-21	NA
S-22	NA
S-23	NA
S-24	NA
S-25	695.27
S-26	696.96
S-27	696.21
7-25	699.93
9-33	698.55
86-6	698.88
86-7	698.52
86-10	698.45
86-15	698.14

NAPHTHA RECOVERY WELL	GROUNDWATER ELEVATION
RWB-6	695.53
RWB-16	NA
RWB-21	696.69
RWB-22	692.51
E-3	696.37

NA – NOT AVAILABLE

LEGEND:

- • SHALLOW (TOP OF WATER TABLE)
- ■ NAPHTHA RECOVERY WELL
- POTENTIOMETRIC CONTOUR LINES WITH ARROW POINTING THE DIRECTION OF GROUNDWATER FLOW

0 200' 400'

SCALE: 1"=400'

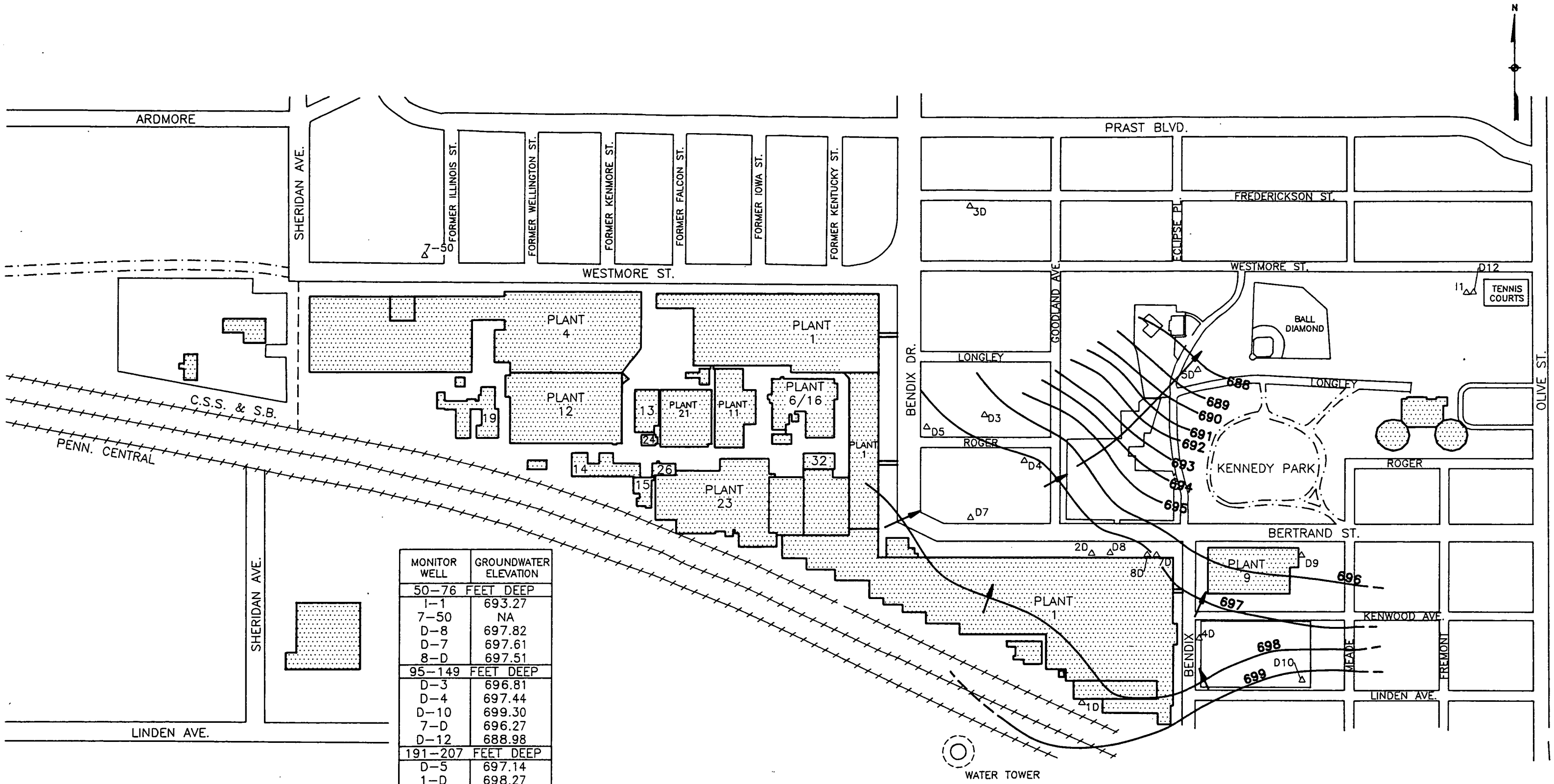
POTENTIOMETRIC MAP SHALLOW WELLS
DECEMBER 6, 1994
ALLIEDSIGNAL INC.
SOUTH BEND, INDIANA

FIGURE 4

ERM

ERM, inc.
Environmental Resources Management

PROJECT\32063.00.01\32063-4.DWG



MONITOR WELL	GROUNDWATER ELEVATION
50–76	FEET DEEP
I–1	693.27
7–50	NA
D–8	697.82
D–7	697.61
8–D	697.51
95–149	FEET DEEP
D–3	696.81
D–4	697.44
D–10	699.30
7–D	696.27
D–12	688.98
191–207	FEET DEEP
D–5	697.14
1–D	698.27
2–D	697.91
5–D	688.40

LEGEND:

△ DEEP MONITOR WELL

POTENTIOMETRIC CONTOUR LINE WITH ARROW POINTING THE DIRECTION OF GROUNDWATER FLOW

0 200' 400'

SCALE: 1" = 400'

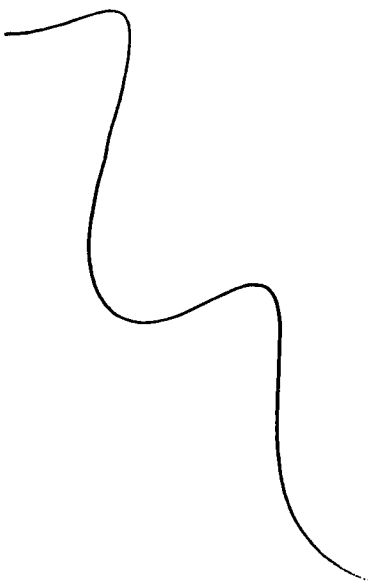
POTENTIOMETRIC MAP DEEP WELLS
DECEMBER 6, 1994
ALLIEDSIGNAL INC.
SOUTH BEND, INDIANA

FIGURE 5

ERM, inc.
Environmental Resources Management

PROJECT\32063.00.01\32063-5.DWG

Shallow Monitor Wells



SHALLOW MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 86-10 DATE COLLECTED 08 DEC 94 AMOUNT	Q	86-15 08 DEC 94 AMOUNT	Q	9-33 07 DEC 94 AMOUNT	Q	S-1 06 DEC 94 AMOUNT	Q	S-4A 07 DEC 94 AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	500	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	500	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	25	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	25	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	50	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	25	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	25	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	25	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	50	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	50	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	25	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	50	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	25	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	50	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	25	U	5	U	5	U	62	
	1,2-DICHLOROETHANE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	25	U	5	U	5	U	9.1	
	TRANS-1,2-DICHLOROETHENE	UG/L	18		47		5	U	5	U	40	
	CIS-1,2-DICHLOROETHENE	UG/L	90		61		5	U	6.3		200	
	1,2-DICHLOROPROPANE	UG/L	5	U	25	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	25	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	25	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	25	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	43		5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	25	U	5	U	5	U	6.5	
	TRICHLOROETHENE	UG/L	141		625		5	U	5	U	10	U
	TRICHLOROFLUOROMETHANE	UG/L	10	U	50	U	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	138		10	U	10	U	100	U
	ACETONE	UG/L	100	U	500	U	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	500	U	100	U	100	U	100	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.
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Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

SHALLOW MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID							
			86-10		86-15		9-33		S-1		S-4A	
			DATE COLLECTED							
			08 DEC 94		08 DEC 94		07 DEC 94		06 DEC 94		07 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	25	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	50	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	250	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	250	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	250	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	25	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	25	U	5	U	5	U	5	U

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ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-9 DATE COLLECTED 07 DEC 94 AMOUNT	Q	S-14 08 DEC 94 AMOUNT	Q	S-15 08 DEC 94 AMOUNT	Q	S-16 07 DEC 94 AMOUNT	Q	S-17 08 DEC 94 AMOUNT	Q
A.VOA	ACROLEIN	UG/L	200	U	100	U	100	U	200	U	500	U
	ACRYLONITRILE	UG/L	200	U	100	U	100	U	200	U	500	U
	BENZENE	UG/L	10	U	5	U	5	U	10	U	25	U
	BROMOFORM	UG/L	10	U	5	U	5	U	10	U	25	U
	BROMOMETHANE	UG/L	20	U	10	U	10	U	20	U	50	U
	CARBON TETRACHLORIDE	UG/L	10	U	5	U	5	U	10	U	25	U
	CHLOROBENZENE	UG/L	10	U	5	U	5	U	10	U	25	U
	CHLORODIBROMOMETHANE	UG/L	10	U	5	U	5	U	10	U	25	U
	CHLOROETHANE	UG/L	20	U	10	U	10	U	20	U	50	U
	2-CHLOROETHYL VINYL ETHER	UG/L	20	U	10	U	10	U	20	U	50	U
	CHLOROFORM	UG/L	10	U	5	U	5	U	10	U	25	U
	CHLOROMETHANE	UG/L	20	U	10	U	10	U	20	U	50	U
	DICHLOROBROMOMETHANE	UG/L	10	U	5	U	5	U	10	U	25	U
	DICHLORODIFLUOROMETHANE	UG/L	20	U	10	U	10	U	20	U	50	U
	1,1-DICHLOROETHANE	UG/L	10	U	22		11		10	U	88	
	1,2-DICHLOROETHANE	UG/L	363		39			U	10	U	25	U
	1,1-DICHLOROETHENE	UG/L	10	U	5	U	5	U	10	U	65	
	TRANS-1,2-DICHLOROETHENE	UG/L	10	U	5	U	5	U	12		25	U
	CIS-1,2-DICHLOROETHENE	UG/L	21		60		19		59		25	U
	1,2-DICHLOROPROPANE	UG/L	10	U	5	U	5	U	10	U	25	U
	CIS-1,3-DICHLOROPROPENE	UG/L	10	U	5	U	5	U	10	U	25	U
	ETHYLBENZENE	UG/L	10	U	5	U	5	U	10	U	25	U
	METHYLENE CHLORIDE	UG/L	10	U	5	U	5	U	10	U	25	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	10	U	5	U	5	U	10	U	25	U
	TOLUENE	UG/L	10	U	21		5	U	25		1000	
	1,1,1-TRICHLOROETHANE	UG/L	10	U	5	U	5	U	10	U	25	U
	1,1,2-TRICHLOROETHANE	UG/L	10	U	32		5	U	261		51	
	TRICHLOROETHENE	UG/L	20	U	10	U	10	U	20	U	50	U
	TRICHLOROFLUOROMETHANE	UG/L	20	U	10	U	23		56		50	U
	VINYL CHLORIDE	UG/L	200	U	100	U	100	U	200	U	500	U
	ACETONE	UG/L	200	U	100	U	100	U	200	U	500	U
	2-BUTANONE	UG/L										

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SHALLOW MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID S-9 DATE COLLECTED 07 DEC 94		S-14 08 DEC 94		S-15 08 DEC 94		S-16 07 DEC 94		S-17 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	10	U	5	U	5	U	10	U	25	U
	XYLENE (TOTAL)	UG/L	20	U	10	U	10	U	20	U	50	U
	VINYL ACETATE	UG/L	100	U	50	U	50	U	100	U	250	U
	2-HEXANONE	UG/L	100	U	50	U	50	U	100	U	250	U
	4-METHYL-2-PENTANONE	UG/L	100	U	50	U	50	U	100	U	250	U
	CARBON DISULFIDE	UG/L	10	U	5	U	5	U	10	U	25	U
	1,2-DICHLOROBENZENE	UG/L	10	U	5	U	5	U	10	U	25	U
	1,3-DICHLOROBENZENE	UG/L	10	U	5	U	5	U	10	U	25	U
	1,4-DICHLOROBENZENE	UG/L	10	U	5	U	5	U	10	U	25	U

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ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-20 DATE COLLECTED 06 DEC 94 AMOUNT	Q	S-21 06 DEC 94 AMOUNT	Q	S-22 08 DEC 94 AMOUNT	Q	S-23 08 DEC 94 AMOUNT	Q	S-24 08 DEC 94 AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	7.9		66		5	U	147	
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	14		54		5	U	101	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	16		5	U	5	U	23	
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U	10	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
	2-BUTANONE	UG/L	100	U	100	U	100	U	100	U	100	U

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Rev. 0
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SHALLOW MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID S-20 DATE COLLECTED 06 DEC 94		S-21 06 DEC 94		S-22 08 DEC 94		S-23 08 DEC 94		S-24 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U	5	U

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ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-25 DATE COLLECTED 08 DEC 94 AMOUNT	Q	S-26 07 DEC 94 AMOUNT	Q	S-27 08 DEC 94 AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	15	
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	5.8		22	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	22		52	
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	10	U	10	U
	ACETONE	UG/L	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U	100	U

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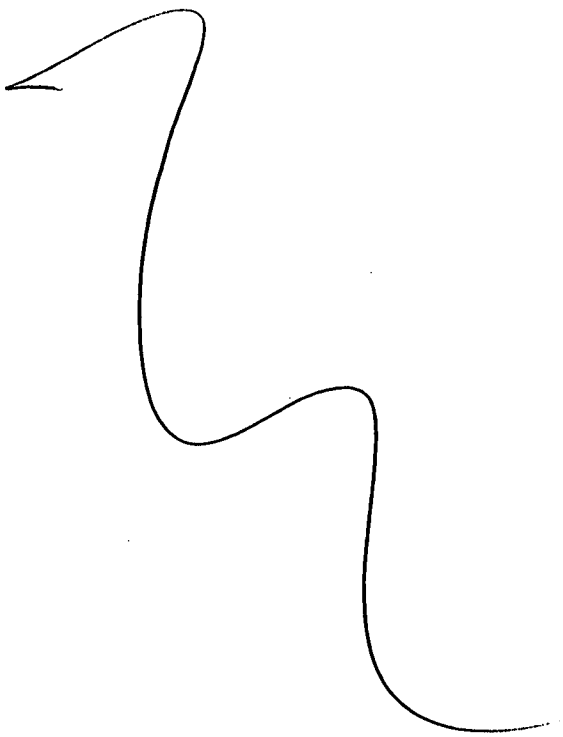
SHALLOW MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID S-25 DATE COLLECTED 08 DEC 94		S-26 07 DEC 94		S-27 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

Deep Monitor Wells



DEEP MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID 1-D		5-D		7-D		8-D	
			DATE COLLECTED 08 DEC 94		07 DEC 94		07 DEC 94		07 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	5	U	33	
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	11		244	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	5	U	5	U	5	U
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	10	U	10	U	10	U
	ACETONE	UG/L	100	U	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U	100	U	100	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality Assurance Release by:
Valene Davis
Rev. 0
Date 2/23/95

DEEP MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID 1-D		5-D		7-D		8-D	
			DATE COLLECTED 08 DEC 94		07 DEC 94		07 DEC 94		07 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U

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DEEP MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID D-4 DATE COLLECTED 07 DEC 94		SAMPLE ID D-7 07 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U
	BENZENE	UG/L	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U
	1,2-DICHLOROETHANE	UG/L	5	U	25	
	1,1-DICHLOROETHENE	UG/L	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	5	U
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U
	TOLUENE	UG/L	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	5	U
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U
	VINYL CHLORIDE	UG/L	16		10	U
	ACETONE	UG/L	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U

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Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
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DEEP MONITOR WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID D-4 DATE COLLECTED 07 DEC 94		SAMPLE ID D-7 07 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U

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Valene Davis Rev. 0
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Naphtha Recovery Wells

NAPHTHA RECOVERY WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID E-3 DATE COLLECTED 09 DEC 94 AMOUNT	Q	RWB-16 09 DEC 94 AMOUNT	Q	RWB-22 09 DEC 94 AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U
	BENZENE	UG/L	5	U	45		5	U
	BROMOFORM	UG/L	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	8.9		5	U	8.0	
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	38		5	U	27	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	5	U	5	U
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	20		10	U	10	U
	ACETONE	UG/L	100	U	100	U	129	
	2-BUTANONE	UG/L	215		100	U	385	

QUALIFIER CODES (Q):
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NAPHTHA RECOVERY WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID E-3		RWB-16		RWB-22	
			DATE COLLECTED 09 DEC 94		09 DEC 94		09 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U

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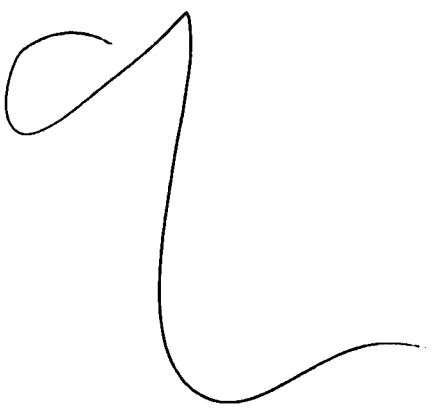
VOC Recovery Wells



VOC RECOVERY WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID MH-2 DATE COLLECTED 08 DEC 94		MH-3A 08 DEC 94		MH-5 08 DEC 94		MH-8 09 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	58		46		86		14	
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	8.0		5.6		8.5		12	
	TRANS-1,2-DICHLOROETHENE	UG/L	47		16		19		41	
	CIS-1,2-DICHLOROETHENE	UG/L	150		113		128		406	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	25		38		46		11	
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	119		124		166		419	
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	10	U	11		185	
	ACETONE	UG/L	100	U	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U	100	U	100	U

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Valerie Wells Rev. 0
Date 2/23/95

VOC RECOVERY WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID MH-2 DATE COLLECTED 08 DEC 94		MH-3A 08 DEC 94		MH-5 08 DEC 94		MH-8 09 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U

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VOC RECOVERY WELLS
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ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID MH-17 DATE COLLECTED 08 DEC 94		MH-18 08 DEC 94		MH-19 08 DEC 94		P-13 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U	35		5	U
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U	9.7	
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	20		5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	125		26		5	U	70	
	CIS-1,2-DICHLOROETHENE	UG/L	60		21		5	U	298	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	220		5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	78		21		33		15	
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	10	U	10	U	15	
	ACETONE	UG/L	100	U	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U	100	U	100	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality Assurance Release by:
Valerie Davis Per [illegible]
2/23/95

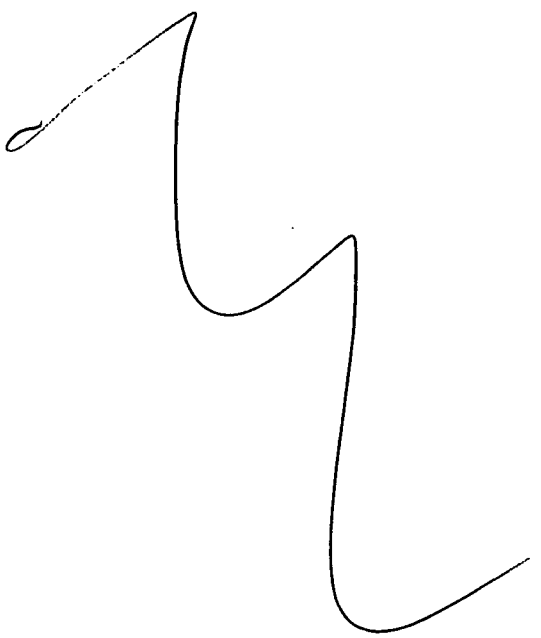
VOC RECOVERY WELLS
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID MH-17 DATE COLLECTED 08 DEC 94		MH-18 08 DEC 94		MH-19 08 DEC 94		P-13 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

QA/QC Data



DUPLICATE SAMPLES
ANALYTICAL RESULTS FOR DUPLICATE GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID							
			D-4 DUPLICATE		MH-3A DUPLICATE		RWB-22 DUPLICATE		S-14 DUPLICATE	
			DATE COLLECTED							
			07 DEC 94		08 DEC 94		09 DEC 94		08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	43		7.7		24	
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U	44	
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	8.7		5	U	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	86		29		55	
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	27		5	U	21	
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	107		5	U	36	
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	14		10	U	10	U	10	U
	ACETONE	UG/L	100	U	100	U	118		100	U
	2-BUTANONE	UG/L	100	U	100	U	362		100	U

QUALIFIER CODES (Q):
J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
2/23/95

DUPLICATE SAMPLES
ANALYTICAL RESULTS FOR DUPLICATE GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID D-4 DUPLICATE DATE COLLECTED 07 DEC 94		MH-3A DUPLICATE 08 DEC 94		RWB-22 DUPLICATE 09 DEC 94		S-14 DUPLICATE 08 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U	5	U

QUALIFIER CODES (Q):
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B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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; NOT OBSERVED FOR TICS.

Approved for Quality
Assurance Release by:
Valerie Davis Rev. 0
2/23/95

TRAVEL BLANK SAMPLES
ANALYTICAL RESULTS FOR TRAVEL BLANK SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID TRIP BLANK DATE COLLECTED 07 DEC 94		TRIP BLANK #2 08 DEC 94		TRIP BLANK #3 09 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	ACROLEIN	UG/L	100	U	100	U	100	U
	ACRYLONITRILE	UG/L	100	U	100	U	100	U
	BENZENE	UG/L	5	U	5	U	5	U
	BROMOFORM	UG/L	5	U	5	U	5	U
	BROMOMETHANE	UG/L	10	U	10	U	10	U
	CARBON TETRACHLORIDE	UG/L	5	U	5	U	5	U
	CHLOROBENZENE	UG/L	5	U	5	U	5	U
	CHLORODIBROMOMETHANE	UG/L	5	U	5	U	5	U
	CHLOROETHANE	UG/L	10	U	10	U	10	U
	2-CHLOROETHYL VINYL ETHER	UG/L	10	U	10	U	10	U
	CHLOROFORM	UG/L	5	U	5	U	5	U
	CHLOROMETHANE	UG/L	10	U	10	U	10	U
	DICHLOROBROMOMETHANE	UG/L	5	U	5	U	5	U
	DICHLORODIFLUOROMETHANE	UG/L	10	U	10	U	10	U
	1,1-DICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROPROPANE	UG/L	5	U	5	U	5	U
	CIS-1,3-DICHLOROPROPENE	UG/L	5	U	5	U	5	U
	ETHYLBENZENE	UG/L	5	U	5	U	5	U
	METHYLENE CHLORIDE	UG/L	5	U	5	U	5	U
	1,1,2,2-TETRACHLOROETHANE	UG/L	5	U	5	U	5	U
	TOLUENE	UG/L	5	U	5	U	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	1,1,2-TRICHLOROETHANE	UG/L	5	U	5	U	5	U
	TRICHLOROETHENE	UG/L	5	U	5	U	5	U
	TRICHLOROFLUOROMETHANE	UG/L	10	U	10	U	10	U
	VINYL CHLORIDE	UG/L	10	U	10	U	10	U
	ACETONE	UG/L	100	U	100	U	100	U
	2-BUTANONE	UG/L	100	U	100	U	100	U

QUALIFIER CODES (Q):
- J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
- B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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Approved by
Valerie Davis
2/23/95

TRAVEL BLANK SAMPLES
ANALYTICAL RESULTS FOR TRAVEL BLANK SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

			SAMPLE ID TRIP BLANK DATE COLLECTED 07 DEC 94		TRIP BLANK #2 08 DEC 94		TRIP BLANK #3 09 DEC 94	
GROUP	PARAMETER NAME	UNITS	AMOUNT	Q	AMOUNT	Q	AMOUNT	Q
A.VOA	STYRENE	UG/L	5	U	5	U	5	U
	XYLENE (TOTAL)	UG/L	10	U	10	U	10	U
	VINYL ACETATE	UG/L	50	U	50	U	50	U
	2-HEXANONE	UG/L	50	U	50	U	50	U
	4-METHYL-2-PENTANONE	UG/L	50	U	50	U	50	U
	CARBON DISULFIDE	UG/L	5	U	5	U	5	U
	1,2-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,3-DICHLOROBENZENE	UG/L	5	U	5	U	5	U
	1,4-DICHLOROBENZENE	UG/L	5	U	5	U	5	U

QUALIFIER CODES (Q):
- J : THIS RESULT SHOULD BE CONSIDERED A QUANTITATIVE ESTIMATE.
- B : THIS RESULT IS QUALITATIVELY INVALID BECAUSE THE COMPOUND/ANALYTE WAS ALSO DETECTED IN A BLANK AT A SIMILAR CONCENTRATION.
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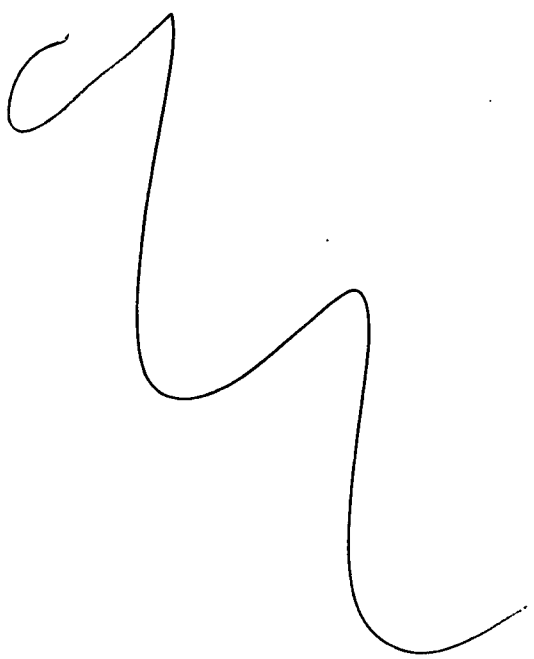
Approved for Quality Assurance Release by:
Arlene Dicks
Rev. 0
Date 2/23/95

Appendix B

Current and Historic Analytical Data Tables

Shallow Wells



SOURCE: 7-25

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NOTES	
11/07/86	31	AQUA			No VOC Detected
06/05/87	2	AQUA			No VOC Detected
09/08/87	2	AQUA			No VOC Detected
01/13/88	2	AQUA			No VOC Detected
02/08/88	2	AQUA			No VOC Detected
05/18/88	2	AQUA			No VOC Detected
09/22/88	2	AQUA			No VOC Detected
12/09/88	13	AQUA			No VOC Detected
03/31/92	22	AQUA	8240		No VOC Detected
09/02/92	43	AQUA	8240		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

t a gleason
associates
Environmental and Geotechnical Services

Location Not Sampled
December 1994

SOURCE: 86-10				1, 1-DI-CHLORO-ETHANE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NPL UG/L	P=70 UG/L	P=100 UG/L	200 UG/L	5 UG/L	2 UG/L	UG/L		
08/02/86	7	AQUA		ND	ND	85.4	ND	308	ND	393		
10/10/86	18	AQUA		5.7	ND	130	99.7	440	ND	675		
02/24/89	22	AQUA		ND	100	41	ND	340	19.8	501		
06/08/89	10	AQUA	624	ND	67.3	35.3	ND	380	ND	483		
09/07/89	3	AQUA	8240	ND	75.7	35.1	15.5	230	16.3	373		
12/12/89	15	AQUA	8240	ND	92.4	48.6	ND	440	15.5	597		
02/28/90	7	AQUA	8240	ND	150	61.8	ND	270	22.1	504		
06/01/90	3	AQUA	8240	ND	81.7	48.5	ND	360	ND	490		
08/23/90	12	AQUA	8240	ND	55.2	30.8	ND	350	ND	436		
10/29/90	24	AQUA	8240	ND	87.4	39.7	10.4	327	ND	465		
03/01/91	14	AQUA	8240	21.2	68.9	46.2	6.0	330	ND	472		
05/31/91	6	AQUA	8240	ND	85.2	78.6	16.9	342.5	ND	523		
08/30/91	18	AQUA	8240	ND	42.4	21.5	32.6	282	ND	379		
11/13/91	10	AQUA	8240	ND	57.3	28.1	15.4	270	ND	371		
01/23/92	7	AQUA	8240	5.8	53.7	24.0	14.5	243	ND	341		
01/23/92	8	AQUA	8240	6.1	53.9	24.7	13.5	248	ND	346		
04/01/92	26	AQUA	8240	ND	47.7	18.0	15.1	246	ND	327		
08/21/92	5	AQUA	8240	ND	64.1	20.1	45.7	272	ND	402		
11/02/92	36	AQUA	8240	9.3	61.9	18.5	61.0	191	ND	342		
02/05/93	23	AQUA	8240	ND	90.2	21.8	17.9	224	ND	354		
05/12/93	21	AQUA	8240	ND	91.8	24.0	12.0	225	ND	353		
09/01/93	21	AQUA	8240	ND	76.4	15.8	ND	143	ND	235		
12/02/93	15	AQUA	8240	5.7	115	32.6	29.1	255	ND	437		
02/18/94	16	AQUA	8240	ND	39.7	23.7	ND	102	ND	165		
05/06/94	23	AQUA	8240	ND	78.9	12.5	27.1	158	ND	277		
09/15/94	18	AQUA	8240	8.7	80.1	10.6	62.7	171	ND	333		

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

t a gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 86-10 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L		5 U
	1,2-DICHLOROETHANE	UG/L		5 U
	1,1-DICHLOROETHENE	UG/L		5 U
	TRANS-1,2-DICHLOROETHENE	UG/L	18	
	CIS-1,2-DICHLOROETHENE	UG/L	90	
	1,1,1-TRICHLOROETHANE	UG/L		5 U
	TRICHLOROETHENE	UG/L	141	
	VINYL CHLORIDE	UG/L		10 U
TOTAL VOCS:			249	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie David Rev. 0
Date 2/23/95

SOURCE: 86-15				1, 1-DI-CHLORO-ETHANE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NPL UG/L	P-70 UG/L	P-100 UG/L	200 UG/L	5 UG/L	2 UG/L	UG/L		
08//02/86	4	AQUA		ND	ND	48.1	64.9	1620	ND	1733		
10/10/86	13	AQUA		ND	ND	33.7	38.0	1280	ND	1352		
02/24/89	24	AQUA		ND	ND	9.2	9.1	400	ND	418		
06/08/89	9	AQUA	624	ND	18.2	33.5	7.6	600	ND	659		
09/07/89	2	AQUA	8240	ND	20.8	36.0	ND	470	ND	527		
12/12/89	14	AQUA	8240	ND	12.2	20.5	10.6	440	ND	483		
02/28/90	8	AQUA	8240	ND	16.5	32.7	11.8	520	ND	581		
06/01/90	2	AQUA	8240	ND	6.7	11.8	10.8	390	ND	419		
08/23/90	11	AQUA	8240	ND	ND	6.1	7.6	370	ND	384		
10/29/90	23	AQUA	8240	ND	8.6	10.8	11.2	404	ND	435		
03/01/91	13	AQUA	8240	6.1	7.9	13.9	18.1	322	ND	368		
05/31/91	5	AQUA	8240	ND	ND	39.1	9.3	449.6	ND	498		
08/30/91	15	AQUA	8240	ND	8.4	13.8	8.8	323	ND	354		
11/13/91	8	AQUA	8240	ND	12.5	14.2	7.4	381	ND	415		
11/13/91	9	AQUA	8240	ND	10.4	15.2	7.1	345	ND	378		
01/23/92	6	AQUA	8240	5.6	12.1	21.3	11.5	350	ND	401		
04/01/92	25	AQUA	8240	ND	11.9	21.1	7.5	404	ND	445		
08/21/92	4	AQUA	8240	ND	20.9	18.2	8.8	546	11.1	605		
11/02/92	34	AQUA	8240	ND	28.6	34.1	7.6	408	ND	478		
11/02/92	35	AQUA	8240	ND	28.7	33.4	8.3	376	ND	446		
02/05/93	22	AQUA	8240	ND	33.1	36.2	7.0	440	ND	516		
05/12/93	19	AQUA	8240	ND	28.7	34.1	6.8	364	ND	434		
05/12/93	20	AQUA	8240	ND	33.9	40.9	7.8	383	ND	466		
09/01/93	20	AQUA	8240	7.3	47.4	41.6	8.1	373	ND	477		
12/02/93	14	AQUA	8240	ND	76.1	53.9	ND	891	ND	1021		
02/10/94	15	AQUA	8240	ND	39.7	31.1	ND	374	ND	445		
05/06/94	21	AQUA	8240	ND	31.9	37.8	ND	370	ND	440		
05/06/94	22	AQUA	8240	ND	37.2	36.3	ND	344	ND	418		
09/15/94	17	AQUA	8240	ND	54.5	62.0	ND	575	109	801		

NOTES:

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ND = NOT DETECTED AT DETECTION LIMIT SPECIFIED BY LABORATORY. SEE LAB REPORT.

NPL = ND 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

t a gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 86-15 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	25	U
	1,2-DICHLOROETHANE	UG/L	25	U
	1,1-DICHLOROETHENE	UG/L	25	U
	TRANS-1,2-DICHLOROETHENE	UG/L	47	
	CIS-1,2-DICHLOROETHENE	UG/L	61	
	1,1,1-TRICHLOROETHANE	UG/L	43	
	TRICHLOROETHENE	UG/L	625	
	VINYL CHLORIDE	UG/L	138	
TOTAL VOCS:			914	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
D. 2/23/95

SOURCE: 9-33

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NOTES	
01/08/87	11	AQUA			No VOC Detected
06/05/87	3	AQUA			No VOC Detected
09/03/87	3	AQUA			No VOC Detected
01/13/88	3	AQUA			No VOC Detected
02/10/88	31	AQUA			No VOC Detected
05/18/88	3	AQUA			No VOC Detected
09/22/88	3	AQUA			No VOC Detected
12/09/88	15	AQUA			No VOC Detected
02/22/89	4	AQUA			No VOC Detected
06/10/89	35	AQUA	624		No VOC Detected
09/07/89	4	AQUA	8240		No VOC Detected
12/13/89	32	AQUA	8240		No VOC Detected
02/28/90	5	AQUA	8240		No VOC Detected
06/04/90	33	AQUA	8240		No VOC Detected
06/04/90	34	AQUA	8240		No VOC Detected
08/22/90	2	AQUA	8240		No VOC Detected
10/27/90	3	AQUA	8240		No VOC Detected
02/28/91	11	AQUA	8240		No VOC Detected
06/01/91	24	AQUA	8240		No VOC Detected
08/29/91	11	AQUA	8240		No VOC Detected
11/12/91	5	AQUA	8240		No VOC Detected
01/23/92	12	AQUA	8240		No VOC Detected
04/01/92	32	AQUA	8240		No VOC Detected
08/22/92	11	AQUA	8240		No VOC Detected
02/04/93	8	AQUA	8240		No VOC Detected
02/10/93	1	AQUA	8240		No VOC Detected
05/11/93	12	AQUA	8240		No VOC Detected
05/11/93	13	AQUA	8240		No VOC Detected
08/31/93	2	AQUA	8240		No VOC Detected
12/02/93	19	AQUA	8240		No VOC Detected
02/17/94	7	AQUA	8240		No VOC Detected
05/05/94	12	AQUA	8240		No VOC Detected
05/05/94	13	AQUA	8240		No VOC Detected
09/14/94	9	AQUA	8240		No VOC Detected

NOTES:

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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 DUE TO LAB ERROR.

PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 9-33 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

SOURCE: S-1				CIS-1, 2-DICHLORO-ETHENE	TETRA-CHLORO ETHENE	TRI-CHLORO-ETHENE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	P=70 UG/L	P=5 UG/L	5 UG/L	UG/L	
11/05/86	1	AQUA		No VOC Detected				
12/17/86	18	AQUA		No VOC Detected				
06/05/87	1	AQUA		No VOC Detected				
09/03/87	1	AQUA		No VOC Detected				
01/13/88	1	AQUA		No VOC Detected				
02/08/88	1	AQUA		No VOC Detected				
05/18/88	1	AQUA		No VOC Detected				
09/22/88	1	AQUA		No VOC Detected				
12/09/88	12	AQUA		No VOC Detected				
02/22/89	1	AQUA		No VOC Detected				
02/22/89	2	AQUA		No VOC Detected				
06/08/89	14	AQUA	624	No VOC Detected				
06/08/89	15	AQUA	624	No VOC Detected				
09/09/89	20	AQUA	8240	No VOC Detected				
12/11/89	2	AQUA	8240	No VOC Detected				
02/28/90	8	AQUA	8240	No VOC Detected				
06/03/90	24	AQUA	8240	No VOC Detected				
08/24/90	33	AQUA	8240	No VOC Detected				
10/27/90	2	AQUA	8240	No VOC Detected				
02/28/91	4	AQUA	8240	11.2	ND	ND	11	
05/01/91	23	AQUA	8240	No VOC Detected				
08/29/91	10	AQUA	8240	9.3	6.2	ND	16	
11/12/91	4	AQUA	8240	10.9	ND	ND	11	
01/22/92	3	AQUA	8240	10.0	ND	ND	10	
01/22/92	4	AQUA	8240	10.8	ND	ND	11	
03/31/92	20	AQUA	8240	7.3	ND	ND	7	
03/31/92	21	AQUA	8240	6.3	ND	ND	6	
08/22/92	10	AQUA	8240	5.6	ND	ND	6	
10/30/92	10	AQUA	8240	No VOC Detected				
10/30/92	11	AQUA	8240	No VOC Detected				
02/04/93	7	AQUA	8240	No VOC Detected				
05/11/93	11	AQUA	8240	7.5	5.2	ND	13	
08/31/93	1	AQUA	8240	5.3	ND	ND	5	
12/01/93	12	AQUA	8240	7.1	5.8	ND	13	
02/16/94	1	AQUA	8240	6.1	ND	ND	6	
05/04/94	4	AQUA	8240	6.7	ND	ND	7	
09/14/94	8	AQUA	8240	6.4	5.6	ND	12	

NOTES:

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P = PROPOSED

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PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-1 DATE COLLECTED 06 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	6.3	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			6.3	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by: Valerie Davis Rev. 0 Date 2/23/95

SOURCE: S-4A				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NPL UG/L	5 UG/L	7 UG/L	P=70 UG/L	P=100 UG/L	200 UG/L	5 UG/L	2 UG/L	UG/L	
06/05/87	22	AQUA		1100	ND	200	820	110	200	120	ND	2550	A
09/04/87	27	AQUA		1100	ND	80.0	2000	170	ND	17.0	790	4157	
01/14/88	25	AQUA		1600	ND	180	1800	112	ND	ND	700	4392	
02/08/88	2	AQUA		1500	ND	165	1770	160	ND	ND	900	4495	
05/18/88	7	AQUA		1700	ND	165	2800	ND	ND	ND	437	5102	
05/18/88	8	AQUA		1640	ND	200	2750	ND	ND	ND	373	4963	
09/22/88	7	AQUA		1810	7.0	292	940	154	11.0	40.0	1570	4824	
09/22/88	8	AQUA		1820	7.3	281	920	155	10.0	39.0	1620	4852	
12/10/88	26	AQUA		970	ND	114	1600	135	ND	23.7	633	3476	
02/27/89	43	AQUA		700	ND	110	1400	150	8.7	17.2	270	2656	
06/10/89	37	AQUA	624	660	ND	120	1080	190	ND	ND	ND	2050	
06/10/89	38	AQUA	624	620	ND	110	1040	190	ND	ND	ND	1960	
09/09/89	25	AQUA	8240	580	ND	120	840	190	34	19.7	69.5	1853	
12/13/89	27	AQUA	8240	880	ND	151	760	180	34.1	32.5	41	2079	
03/02/90	37	AQUA	8240	670	ND	92.1	1000	210	27	19	27.4	2046	
06/03/90	23	AQUA	8240	430	ND	84.0	640	180	20.8	19.1	20.9	1395	
08/24/90	22	AQUA	8240	231	ND	9.0	500	60.2	9.5	16.6	ND	826	
10/28/90	14	AQUA	8240	408	ND	86.2	677	178	16.8	25.9	ND	1392	
03/02/91	25	AQUA	8240	176	5.7	39.7	311	58.0	6.2	16.0	12.7	625	
06/02/91	28	AQUA	8240	228	ND	47.2	ND	ND	9.5	26.6	ND	311	
08/31/91	30	AQUA	8240	140	ND	53.8	182	46.6	11.3	34.1	10.3	478	
11/13/91	21	AQUA	8240	156	ND	45.2	179	47.2	8.6	36.9	ND	473	
11/13/91	22	AQUA	8240	131	ND	41.5	173	40.6	8.6	37.0	ND	432	
01/25/92	27	AQUA	8240	342	ND	51.8	197	46.3	ND	39.8	ND	677	
01/25/92	28	AQUA	8240	322	ND	48.9	180	45.7	ND	34.6	ND	631	
04/01/92	36	AQUA	8240	127	ND	40.5	169	41.0	6.7	25.1	ND	409	
08/22/92	24	AQUA	8240	171	ND	46.4	238	72.4	ND	26.0	ND	554	
10/31/92	18	AQUA	8240	103	ND	37.2	171	46.6	ND	16.7	ND	375	
10/31/92	19	AQUA	8240	94.1	ND	32.2	149	37.1	ND	15.3	ND	328	
02/04/93	18	AQUA	8240	108	ND	37.8	216	46.7	ND	21.8	ND	430	
05/11/93	16	AQUA	8240	90.5	ND	27.0	161	32.8	ND	13.7	ND	325	
08/31/93	16	AQUA	8240	68.4	ND	17.7	125	20.6	ND	20.6	ND	252	
12/03/93	28	AQUA	8240	89.7	ND	55.2	234	26.4	ND	29.4	ND	435	
12/03/93	29	AQUA	8240	83.2	ND	55.6	223	27.7	ND	29.7	ND	419	
02/18/94	18	AQUA	8240	66.8	ND	17.5	201	22.7	ND	16.8	ND	325	
05/05/94	18	AQUA	8240	77.7	ND	17.9	174	31.0	ND	9.9	ND	311	
09/15/94	31	AQUA	8240	96.7	ND	19.9	230	57.7	ND	10.8	ND	415	

NOTES:

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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 06/25/87 WELL S-4 WAS REPLACED BY WELL S-4A.

PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t.a. gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-4A DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	62	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	9.1	
	TRANS-1,2-DICHLOROETHENE	UG/L	40	
	CIS-1,2-DICHLOROETHENE	UG/L	200	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	6.5	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			317.6	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valene DaVis Rev. 0
2/23/95

SOURCE: S-9

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,2-DICHLOROETHANE UG/L	CIS-1,2-DICHLOROETHENE P=70 UG/L	TRANS-1,2 DICHLOROETHENE P=100 UG/L	SUM UG/L	NOTES
				5				
10/01/86	12	AQUA		81.3	ND	2.2	84	
11/05/86	4	AQUA		29	ND	2.3	31	
12/18/86	20	AQUA		210	15	ND	225	
12/18/86	30	AQUA		43.3	ND	ND	43	
02/12/87	12	AQUA		313	ND	23	336	
06/05/87	7	AQUA		460	17	ND	477	
09/03/87	9	AQUA		170	13	ND	183	
01/13/88	6	AQUA		810	43	ND	853	
02/08/88	9	AQUA		440	ND	ND	440	
05/18/88	9	AQUA		440	47.6	ND	488	
09/23/88	9	AQUA		240	ND	ND	240	
12/08/88	4	AQUA		12.3	ND	ND	12	
02/23/89	13	AQUA		9.2	ND	ND	9	
06/10/89	33	AQUA	624	6.7	ND	ND	7	
09/08/89	15	AQUA	8240	No VOC Detected				
12/13/89	28	AQUA	8240	40.3	ND	ND	40	
02/27/90	4	AQUA	8240	40.0	ND	ND	40	
06/01/90	6	AQUA	8240	34.2	ND	ND	34	
08/22/90	4	AQUA	8240	No VOC Detected				
10/27/90	9	AQUA	8240	No VOC Detected				
02/28/91	3	AQUA	8240	7.6	ND	ND	8	
05/31/91	9	AQUA	8240	16.3	ND	ND	16	
08/29/91	14	AQUA	8240	11.7	ND	ND	12	
11/14/91	33	AQUA	8240	15.0	ND	ND	15	
01/22/92	5	AQUA	8240	42.8	ND	ND	43	
03/30/92	12	AQUA	8240	66.0	ND	ND	66	
08/22/92	20	AQUA	8240	127	5.4	ND	132	
10/31/92	27	AQUA	8240	155	7.9	ND	163	
02/03/93	5	AQUA	8240	221	13.9	ND	235	
05/12/93	29	AQUA	8240	223	11.9	ND	235	
09/02/93	34	AQUA	8240	220	16.8	ND	237	
12/02/93	17	AQUA	8240	324	25.7	5.1	355	
02/17/94	9	AQUA	8240	259	18.9	ND	278	
05/05/94	17	AQUA	8240	215	15.6	ND	231	
09/15/94	24	AQUA	8240	240	18.9	ND	259	

NOTES:

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P = PROPOSED

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PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-9 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L		10 U
	1,2-DICHLOROETHANE	UG/L	363	
	1,1-DICHLOROETHENE	UG/L		10 U
	TRANS-1,2-DICHLOROETHENE	UG/L		10 U
	CIS-1,2-DICHLOROETHENE	UG/L	21	
	1,1,1-TRICHLOROETHANE	UG/L		10 U
	TRICHLOROETHENE	UG/L		10 U
	VINYL CHLORIDE	UG/L		20 U
TOTAL VOCS:			384	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie David Rev. 0
2/23/95

SOURCE: S-14

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1, 1-DI-CHLORO-ETHANE NPL UG/L	1, 2-DI-CHLORO-ETHANE 5 UG/L	1, 1-DI-CHLORO-ETHENE 7 UG/L	CIS-1, 2-DICHLORO-ETHENE P-70 UG/L	TRANS-1, 2 DICHLORO-ETHENE P-100 UG/L	1, 1, 1-TRI CHLORO-ETHANE 200 UG/L	TRI-CHLORO-ETHENE 5 UG/L	VINYL CHLORIDE 2 UG/L	SUM UG/L	NOTES
11/06/86	21	AQUA		ND	120	ND	ND	42.2	ND	3.8	ND	166	
02/12/87	15	AQUA		77	217	20	ND	ND	ND	ND	ND	314	
06/05/87	5	AQUA		58	180	ND	150	12	ND	8.5	ND	409	
09/03/87	7	AQUA		ND	140	ND	120	ND	ND	8.0	ND	268	
01/14/88	23	AQUA		113	108	15	240	ND	21	14.0	55.0	566	
02/08/88	5	AQUA		120	115	ND	250	16	15	11.0	ND	527	
05/18/88	5	AQUA		135	59.3	8.9	396	12.3	12.7	10.1	ND	634	
09/23/88	5	AQUA		62	55	9.3	98	10.9	ND	ND	ND	235	
12/10/88	23	AQUA		30.5	43.1	ND	91	6.6	6.5	11.5	ND	189	
02/23/89	16	AQUA		170	ND	12.8	155	8.6	17.9	16.1	15.1	395	
06/10/89	32	AQUA	624	170	30.5	25.4	180	18.1	44.7	15.2	ND	484	
09/09/89	23	AQUA	8240	84.5	19.3	14.7	124	10.2	34.7	12.4	ND	300	
01/09/90	24	AQUA	8240	79.6	16.4	14.8	120	9.8	33	12.2	ND	288	
12/12/89	23	AQUA	8240	270	29.3	56.1	220	18.4	260	59.8	ND	914	
03/03/90	42	AQUA	8240	180	14	33.3	240	19.9	88.2	51.8	23.2	650	
03/03/90	43	AQUA	8240	190	14.4	35.9	240	19.4	96.3	49.8	26.6	672	
06/02/90	18	AQUA	8240	160	13.1	36.2	170	15.7	120	57.5	ND	573	
08/24/90	21	AQUA	8240	120	18.1	24.2	139	12.7	107	54.1	ND	475	
10/27/90	11	AQUA	8240	142	23.5	29.6	181	11.9	127	67.5	ND	583	
10/27/90	12	AQUA	8240	128	19.9	31.3	174	13.0	123	64.2	ND	553	
03/02/91	22	AQUA	8240	67.1	58.8	15.3	88.2	ND	78.4	57.4	ND	365	
03/02/91	23	AQUA	8240	60.2	62.0	ND	79.1	ND	65.4	54.8	ND	322	
06/01/91	26	AQUA	8240	86.5	6.4	18.1	113	23.4	68.3	47.4	ND	363	
06/01/91	27	AQUA	8240	144	ND	ND	ND	ND	113	75.1	ND	332	
08/31/91	27	AQUA	8240	86.5	170	19.9	122	11.5	88.9	62.0	ND	559	
08/31/91	28	AQUA	8240	90.6	182	18.9	124	11.9	86.3	65.9	ND	580	
11/13/91	20	AQUA	8240	79.6	79.3	13.1	114	11.1	63.2	55.8	ND	416	
01/25/92	35	AQUA	8240	191	58.2	13.9	110	8.0	65.6	60.5	ND	507	
04/01/92	34	AQUA	8240	72.9	29.7	15.3	85.9	8.4	72.1	66.0	ND	350	
04/01/92	35	AQAUA	8240	77.2	29.5	16.4	91.9	9.6	75.3	70.3	ND	370	
08/22/92	22	AQUA	8240	86.2	41.7	13.0	101	9.6	74.2	78.6	ND	404	
08/22/92	23	AQUA	8240	81.3	38.6	13.7	97.1	9.1	71.6	76.0	ND	387	
10/31/92	17	AQUA	8240	54.8	17.9	10.9	72.8	6.0	50.3	46.3	ND	259	
02/04/93	20	AQUA	8240	55.8	97.8	10.4	99.0	8.3	62.1	72.1	ND	396	
05/11/93	17	AQUA	8240	37.2	17.6	7.1	75.4	7.8	40.4	55.1	ND	241	
08/31/93	18	AQUA	8240	35.3	37.9	ND	71.3	9.0	31.3	41.2	ND	226	
12/03/93	26	AQUA	8240	41.5	291	14.7	117	11.1	29.5	43.6	ND	548	
02/17/94	13	AQUA	8240	31.7	150	5.1	78.0	8.4	25.6	35.3	ND	334	
05/06/94	31	AQUA	8240	29.8	45.6	ND	62.6	5.0	29.6	29.5	ND	202	
09/15/94	29	AQUA	8240	31.7	105	8.0	69.1	5.3	27.4	31.9	ND	278	

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.

PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

SOURCE: S-14 (CONT'D)				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NPL UG/L	5 UG/L	7 UG/L	P-70 UG/L	P-100 UG/L	200 UG/L	5 UG/L	2 UG/L	UG/L	
09/15/94	30	AQUA	8240	38.3	138	5.9	90.1	6.9	33.6	40.4	ND	351	

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ORGANIC COMPOUNDS

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SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-14 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	22	
	1,2-DICHLOROETHANE	UG/L	39	
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	60	
	1,1,1-TRICHLOROETHANE	UG/L	21	
	TRICHLOROETHENE	UG/L	32	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			174	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Qual Assurance Release by:
Valene Davis
2/23/95

SOURCE: S-15

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DI-CHLORO-ETHANE NPL UG/L	1,2-DI-CHLORO-ETHANE 5 UG/L	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	VINYL CHLORIDE 2 UG/L	OTHER VOC UG/L	SUM UG/L	NOTES
11/06/86	27	AQUA		ND	1.2	ND	1.5	ND	ND	3	
12/18/86	22	AQUA		No VOC Detected							
06/05/87	6	AQUA		No VOC Detected							
09/03/87	6	AQUA		ND	ND	ND	ND	76	ND	76	
09/03/87	5	AQUA		No VOC Detected							
01/14/88	24	AQUA		22.0	ND	ND	ND	ND	ND	22	
02/08/88	4	AQUA		19.0	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	5	
12/10/88	24	AQUA		ND	ND	ND	ND	10.9	121	132	
02/23/89	15	AQUA		No VOC Detected							
06/10/89	31	AQUA	624	No VOC Detected							
09/09/89	22	AQUA	8240	ND	ND	ND	ND	10.5	140	151	
12/12/89	22	AQUA	8240	ND	100	240	26.6	18.5	280	665	
03/03/90	40	AQUA	8240	69.3	ND	ND	ND	31.3	42.6	143	
03/03/90	41	AQUA	8240	71.8	ND	ND	ND	32.0	46.1	150	
06/03/90	25	AQUA	8240	37.9	ND	ND	ND	22.4	ND	60	
08/24/90	20	AQUA	8240	12.8	ND	ND	ND	ND	ND	13	
10/28/90	13	AQUA	8240	27.2	ND	ND	178	ND	ND	205	
03/01/91	12	AQUA	8240	26.8	28.8	27.4	ND	40.9	ND	124	
06/01/91	25	AQUA	8240	22.5	24.5	28.8	10.7	25.2	ND	112	
08/31/91	26	AQUA	8240	23.8	17.3	ND	ND	44.4	ND	86	
11/12/91	6	AQUA	8240	ND	5.7	6.1	ND	36.8	ND	49	
01/25/92	34	AQUA	8240	ND	ND	7.5	ND	ND	ND	8	
04/01/92	33	AQUA	8240	21.5	ND	6.0	ND	22.0	ND	50	
08/22/92	21	AQUA	8240	40.0	12.4	5.8	ND	36.8	ND	95	
10/31/92	16	AQUA	8240	17.8	ND	6.9	ND	17.8	ND	43	
02/04/93	19	AQUA	8240	26.2	83.9	50.7	6.7	40.0	ND	208	
05/11/93	18	AQUA	8240	19.1	69.4	45.1	8.9	36.8	ND	179	
08/31/93	15	AQUA	8240	15.4	48.4	36.8	7.0	25.2	ND	133	
12/03/93	25	AQUA	8240	15.6	17.6	38.9	7.9	29.8	ND	110	
02/17/94	14	AQUA	8240	12.3	ND	17.3	ND	30.0	ND	60	
05/05/94	20	AQUA	8240	11.2	ND	8.0	ND	22.5	ND	42	
09/15/94	28	AQUA	8240	10.8	7.6	21.0	ND	23.8	ND	63	

NOTES:

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P = PROPOSED

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o = Date Sampled

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ORGANIC COMPOUNDS

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SOUTH BEND, INDIANA

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SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-15 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	11	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	19	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	23	
TOTAL VOCS:			53	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

SOURCE: S-16

DATE SAMPLED	SAMPLE NO.	LAB	MCL / METHOD	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	1,1,1-TRI CHLORO-ETHANE 200 UG/L	TRI-CHLORO-ETHENE 5 UG/L	SUM UG/L	NOTES
11/16/86	11	AQUA		No VOC Detected					
12/18/86	19	AQUA		ND	ND	22.5	70.1	93	
12/18/86	29	AQUA		ND	ND	21.5	63.8	85	
02/12/87	11	AQUA		ND	4.4	23.3	95.0	123	
06/05/87	12	AQUA		5.6	5.6	18.0	57.0	86	
09/04/87	28	AQUA		ND	ND	ND	65.0	65	
01/15/88	27	AQUA		ND	ND	15.0	58.0	73	
02/09/88	12	AQUA		ND	ND	13.5	53.0	67	
05/19/88	25	AQUA		6.8	ND	10.9	52.0	70	
09/23/88	14	AQUA		ND	ND	20.0	76.0	96	
12/10/88	29	AQUA		6.2	ND	18.7	62.1	87	
02/24/89	20	AQUA		6.1	ND	15.7	60.4	82	
06/08/89	12	AQUA	624	9.2	9.4	18.4	66.7	104	
09/10/89	34	AQUA	8240	9.1	8.7	20.2	58.2	96	
12/13/89	31	AQUA	8240	10.8	9.0	22.5	94.6	137	
03/03/90	44	AQUA	8240	19.9	ND	17.9	73.4	111	
06/03/90	19	AQUA	8240	19.4	8.6	19.4	83.6	131	
08/23/90	16	AQUA	8240	No VOC Detected					
10/29/90	30	AQUA	8240	11.3	ND	20.9	82.0	114	
03/04/91	36	AQUA	8240	ND	ND	ND	35.8	36	
06/02/91	29	AQUA	8240	ND	ND	10.3	46.7	57	
08/31/91	33	AQUA	8240	5.1	ND	ND	64.5	70	
11/13/91	32	AQUA	8240	6.1	ND	15.5	67.1	91	
01/26/92	37	AQUA	8240	16.4	ND	19.4	95.5	131	
04/02/92	45	AQUA	8240	28.1	ND	19.9	98.7	147	
08/22/92	18	AQUA	8240	37.3	5.8	22.1	141	206	
10/31/92	20	AQUA	8240	42.6	ND	19.1	91.4	153	
02/05/93	24	AQUA	8240	48.3	ND	20.1	155	223	
05/12/93	23	AQUA	8240	42.1	ND	16.5	109	168	
09/01/93	27	AQUA	8240	26.8	ND	19.8	136	183	
12/03/93	32	AQUA	8240	ND	38.1	21.4	188	248	
02/18/94	25	AQUA	8240	17.9	ND	8.9	81.0	108	
05/06/94	27	AQUA	8240	32.3	8.7	21.8	143	206	
09/15/94	23	AQUA	8240	49.6	6.2	18.1	148	222	

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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

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SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-16 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	10	U
	1,2-DICHLOROETHANE	UG/L	10	U
	1,1-DICHLOROETHENE	UG/L	10	U
	TRANS-1,2-DICHLOROETHENE	UG/L	12	
	CIS-1,2-DICHLOROETHENE	UG/L	59	
	1,1,1-TRICHLOROETHANE	UG/L	25	
	TRICHLOROETHENE	UG/L	261	
	VINYL CHLORIDE	UG/L	56	
TOTAL VOCS:			413	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valene Davis
Rev. 0
2/23/95

SOURCE: S-17

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1, 1-DI-CHLORO-ETHANE NPL UG/L	1, 2-DI-CHLORO-ETHANE 5 UG/L	1, 1-DI-CHLORO-ETHENE 7 UG/L	CIS-1, 2-DICHLORO-ETHENE P=70 UG/L	TRANS-1, 2 DICHLORO-ETHENE P=100 UG/L	1, 1, 1-TRI CHLORO-ETHANE 200 UG/L	TRI-CHLORO-ETHENE 5 UG/L	SUM UG/L	NOTES
11/16/86	16	AQUA		4.3	1.5	ND	ND	ND	ND	12.0	18	
01/07/87	4	AQUA		ND	ND	ND	ND	ND	ND	94.8	95	
02/12/87	3	AQUA		ND	ND	ND	ND	7.9	ND	116	124	
06/05/87	15	AQUA		ND	ND	ND	5.6	ND	ND	80.0	86	
09/03/87	20	AQUA		ND	ND	ND	ND	ND	ND	86.0	86	
01/14/88	22	AQUA		ND	ND	ND	8.8	ND	ND	68.0	77	
02/10/88	33	AQUA		ND	ND	ND	5.8	ND	ND	75.0	81	
05/19/88	26	AQUA		ND	ND	ND	ND	ND	ND	60.7	61	
09/23/88	12	AQUA		ND	ND	ND	ND	ND	ND	78.0	78	
02/23/89	17	AQUA		ND	ND	ND	ND	ND	ND	75.9	78	
06/09/89	27	AQUA	624	ND	ND	ND	ND	ND	ND	65.7	68	
09/08/89	13	AQUA	8240	ND	ND	ND	ND	ND	ND	53.8	54	
12/12/89	25	AQUA	8240	ND	ND	ND	5.1	ND	ND	62.4	68	
03/02/90	25	AQUA	8240	ND	ND	ND	6.9	ND	ND	42.4	49	
06/04/90	35	AQUA	8240	ND	ND	ND	6.2	ND	ND	42.8	49	
08/24/90	34	AQUA	8240	ND	ND	ND	6.9	ND	ND	35.0	42	
08/24/90	35	AQUA	8240	ND	ND	ND	6.5	ND	ND	33.6	40	
10/28/90	22	AQUA	8240	ND	ND	ND	ND	9.6	ND	40.4	50	
03/02/91	24	AQUA	8240	ND	ND	ND	8.2	ND	ND	29.6	38	
06/02/91	30	AQUA	8240	ND	ND	ND	ND	ND	ND	27.2	27	
08/31/91	31	AQUA	8240	ND	ND	ND	ND	ND	ND	32.6	33	
08/31/91	32	AQUA	8240	ND	ND	ND	ND	ND	ND	33.0	33	
11/13/91	23	AQUA	8240	ND	ND	ND	5.5	ND	ND	27.6	33	
01/26/92	39	AQUA	8240	ND	ND	ND	ND	ND	ND	24.5	25	
04/02/92	42	AQUA	8240	ND	ND	ND	7.6	ND	ND	31.2	39	
04/02/92	43	AQUA	8240	ND	ND	ND	10.3	ND	ND	38.9	49	
08/23/92	27	AQUA	8240	ND	ND	ND	5.7	ND	ND	27.0	33	
10/31/92	24	AQUA	8240	ND	ND	ND	ND	ND	ND	17.3	17	
02/06/93	34	AQUA	8240	ND	ND	ND	19.3	ND	ND	28.9	48	
02/06/93	35	AQUA	8240	ND	ND	ND	20.5	ND	ND	36.6	57	
05/11/93	15	AQUA	8240	ND	ND	ND	ND	ND	ND	16.9	17	
08/31/93	13	AQUA	8240	ND	ND	ND	ND	ND	ND	23.7	24	
08/31/93	14	AQUA	8240	ND	ND	ND	ND	ND	ND	22.5	23	
12/02/93	20	AQUA	8240	ND	ND	ND	5.2	ND	ND	34.0	39	
12/02/93	21	AQUA	8240	ND	ND	ND	5.2	ND	ND	35.3	41	
02/19/94	40	AQUA	8240	ND	ND	ND	ND	ND	ND	23.8	24	
05/05/94	19	AQUA	8240	12.8	ND	ND	ND	ND	37.7	16.1	67	
09/15/94	25	AQUA	8240	136	ND	44.5	ND	ND	537	43.2	761	

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.

PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-17 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	88	
	1,2-DICHLOROETHANE	UG/L	25	U
	1,1-DICHLOROETHENE	UG/L	65	
	TRANS-1,2-DICHLOROETHENE	UG/L	25	U
	CIS-1,2-DICHLOROETHENE	UG/L	25	U
	1,1,1-TRICHLOROETHANE	UG/L	1000	
	TRICHLOROETHENE	UG/L	51	
	VINYL CHLORIDE	UG/L	50	U
TOTAL VOCS:			1204	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Dixon Date 2/23/95

SOURCE: S-20

DATE SAMPLED	SAMPLE NO.	LAB	MCL / METHOD	NOTES	
11/07/86	30	AQUA			No VOC Detected
02/12/87	9	AQUA			No VOC Detected
06/05/87	16	AQUA			No VOC Detected
09/03/87	10	AQUA			No VOC Detected
01/13/88	7	AQUA			No VOC Detected
02/09/88	19	AQUA			No VOC Detected
05/19/88	19	AQUA			No VOC Detected
09/25/88	23	AQUA			No VOC Detected
09/25/88	24	AQUA			No VOC Detected
12/08/88	5	AQUA			No VOC Detected
02/22/89	9	AQUA			No VOC Detected
06/09/89	22	AQUA	624		No VOC Detected
09/09/89	29	AQUA	8240		No VOC Detected
12/11/89	3	AQUA	8240		No VOC Detected
12/11/89	4	AQUA	8240		No VOC Detected
03/02/90	36	AQUA	8240		No VOC Detected
06/01/90	7	AQUA	8240		No VOC Detected
08/22/90	5	AQUA	8240		No VOC Detected
10/27/90	4	AQUA	8240		No VOC Detected
02/28/91	5	AQUA	8240		No VOC Detected
06/01/91	13	AQUA	8240		No VOC Detected
08/28/91	6	AQUA	8240		No VOC Detected
11/12/91	7	AQUA	8240		No VOC Detected
01/25/92	31	AQUA	8240		No VOC Detected
03/31/92	17	AQUA	8240		No VOC Detected
08/22/92	12	AQUA	8240		No VOC Detected
10/30/92	5	AQUA	8240		No VOC Detected
02/04/93	9	AQUA	8240		No VOC Detected
05/11/93	6	AQUA	8240		No VOC Detected
08/31/93	4	AQUA	8240		No VOC Detected
12/01/93	2	AQUA	8240		No VOC Detected
02/17/94	4	AQUA	8240		No VOC Detected
05/05/94	8	AQUA	8240		No VOC Detected
09/14/94	11	AQUA	8240		No VOC Detected

NOTES:

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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

t a gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-20 DATE COLLECTED 06 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Inus
Rev. 0
Date 2/23/95

SOURCE: S-21

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	TRI-CHLORO-ETHENE 5 UG/L	SUM UG/L	NOTES
11/06/86	17	AQUA		ND	116	ND	116	
12/17/86	13	AQUA		ND	69.3	ND	69	
02/11/87	5	AQUA		ND	88.5	ND	89	
06/05/87	17	AQUA		5.0	30.0	ND	35	
06/05/87	18	AQUA		5.6	34.0	ND	40	
09/03/87	14	AQUA		50.0	13.0	ND	63	
01/14/88	11	AQUA		53.2	20.4	ND	74	
02/09/88	22	AQUA		60.0	33.0	ND	93	
05/18/88	13	AQUA		137	11.1	ND	148	
09/23/88	13	AQUA		58.0	49.0	ND	107	
12/08/88	10	AQUA		68.0	32.8	ND	99	
02/23/89	10	AQUA		64.1	32.7	ND	97	
06/09/89	24	AQUA	624	48.3	24.0	ND	72	
09/10/89	41	AQUA	8240	72.5	41.6	ND	114	
12/11/89	9	AQUA	8240	9.3	ND	ND	9	
03/02/90	32	AQUA	8240	98.6	46.0	6.0	151	
06/02/90	15	AQUA	8240	87.3	52.5	ND	140	
08/23/90	10	AQUA	8240	48.4	28.0	5.7	82	
10/28/90	19	AQUA	8240	110	58.7	ND	169	
10/28/90	20	AQUA	8240	107	56.1	ND	163	
03/03/91	28	AQUA	8240	69.3	36.2	ND	106	
06/01/91	18	AQUA	8240	31.1	121	ND	152	
08/28/91	3	AQUA	8240	33.5	21.6	6.1	61	
11/12/91	3	AQUA	8240	33.7	19.7	6.7	60	
01/21/92	2	AQUA	8240	28.2	14.8	ND	43	
03/30/92	8	AQUA	8240	28.6	14.8	7.5	51	
08/20/92	3	AQUA	8240	28.1	14.3	8.4	51	
10/30/92	13	AQUA	8240	47.8	28.0	8.6	84	
02/03/93	3	AQUA	8240	78.1	51.7	5.6	135	
05/11/93	3	AQUA	8240	70.3	55.0	ND	125	
08/31/93	12	AQUA	8240	41.4	33.6	5.1	80	
12/01/93	7	AQUA	8240	79.5	67.8	5.3	153	
02/16/94	3	AQUA	8240	36.9	27.5	5.9	70	
05/04/94	3	AQUA	8240	26.1	18.7	5.4	50	
09/12/94	2	AQUA	8240	11.3	6.3	8.5	26	

NOTES:

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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

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Environmental and Geotechnical Services

A:\T3\S-21.VT1, 10-18-1994

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-21 DATE COLLECTED 06 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	7.9	
	CIS-1,2-DICHLOROETHENE	UG/L	14	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	16	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			37.9	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: S-22

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	SUM UG/L	NOTES
11/06/86	18	AQUA		ND	164	164	
01/07/87	6	AQUA		50	75.8	126	
01/07/87	7	AQUA		50	73.6	124	
02/12/87	6	AQUA		ND	132	132	
02/12/87	7	AQUA		ND	109	109	
06/05/87	20	AQUA		41	69	110	
09/03/87	12	AQUA		57	41	98	
01/13/88	8	AQUA		41.5	ND	42	
02/09/88	23	AQUA		48	61	109	
05/18/88	15	AQUA		77.5	27.7	105	
05/18/88	16	AQUA		82	25.2	107	
09/25/88	22	AQUA		21	45	66	
02/22/89	6	AQUA		43.1	38.8	82	
02/22/89	7	AQUA		35.7	37.5	73	
06/09/89	19	AQUA	624	33	40.7	74	
06/09/89	20	AQUA	624	37.9	42.1	80	
09/09/89	26	AQUA	8240	38.4	45.8	84	
12/11/89	6	AQUA	8240	37.7	56.8	95	
03/01/90	21	AQUA	8240	59.9	74.4	134	
06/01/90	11	AQUA	8240	45.1	71.9	117	
08/22/90	7	AQUA	8240	39.9	60.1	100	
08/22/90	8	AQUA	8240	40.7	61.4	102	
10/27/90	6	AQUA	8240	59.3	82.9	142	
02/28/91	7	AQUA	8240	35.9	48.4	84	
06/01/91	16	AQUA	8240	52.5	168.0	221	
08/28/91	5	AQUA	8240	34.1	61.5	96	
11/13/91	12	AQUA	8240	45.9	76.5	122	
01/25/92	33	AQUA	8240	50.6	86.8	137	
03/31/92	14	AQUA	8240	41.3	64.5	105	
08/22/92	15	AQUA	8240	61.7	100.0	162	
08/22/92	16	AQUA	8240	53.9	91.3	145	
02/04/93	11	AQUA	8240	56.7	91.5	148	
02/04/93	12	AQUA	8240	63.7	96.0	160	
02/10/93	2	AQUA	8240	54.7	80.0	135	
05/11/93	9	AQUA	8240	57.0	90.0	147	
08/31/93	7	AQUA	8240	45.6	78.6	124	A
12/01/93	6	AQUA	8240	65.1	113.0	178	
02/18/94	23	AQUA	8240	46.8	79.1	126	
05/04/94	6	AQUA	8240	38.3	62.1	100	
09/14/94	7	AQUA	8240	55.5	88.3	144	

NOTES:

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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.

NO RESULTS FOR 10/92 SAMPLING EPISODE DUE TO LAB ERROR.

A = METHYLENE CHLORIDE 18.3 UG/L

PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-22 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	66	
	CIS-1,2-DICHLOROETHENE	UG/L	54	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			120	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: S-23

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	SUM UG/L	NOTES
11/06/86	19	AQUA		ND	4.5	5	A
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			
05/18/88	17	AQUA		6.4	ND	6	
09/24/88	17	AQUA		No VOC Detected			
12/08/88	7	AQUA		No VOC Detected			
02/22/89	5	AQUA		No VOC Detected			
06/09/89	17	AQUA	624	No VOC Detected			
09/09/89	27	AQUA	8240	No VOC Detected			
12/11/89	7	AQUA	8240	No VOC Detected			
03/02/90	23	AQUA	8240	No VOC Detected			
06/01/90	10	AQUA	8240	No VOC Detected			
08/22/90	9	AQUA	8240	No VOC Detected			
10/27/90	7	AQUA	8240	No VOC Detected			
02/28/91	8	AQUA	8240	No VOC Detected			
06/01/91	17	AQUA	8240	No VOC Detected			
08/28/91	4	AQUA	8240	No VOC Detected			
11/13/91	19	AQUA	8240	No VOC Detected			
03/31/92	15	AQUA	8240	No VOC Detected			
08/22/92	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	6	AQUA	8240	No VOC Detected			
12/01/93	5	AQUA	8240	No VOC Detected			
03/29/94	47	AQUA	8240	No VOC Detected			
05/04/94	5	AQUA	8240	No VOC Detected			
09/14/94	6	AQUA	8240	No VOC Detected			

NOTES:

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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 = BIS (2-ETHYLHEXYL) PHTHALATE REPORTED 3.4 UG/L

WELL NOT SAMPLED 01/92.

NO RESULTS FOR 10/92 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

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Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-23 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie David
Rev. 0
2/23/95

SOURCE: S-24

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1,2-DICHLORO-ETHENE P=70 UG/L	TRANS-1,2 DICHLORO-ETHENE P=100 UG/L	TRI-CHLORO-ETHENE 5 UG/L	SUM UG/L	NOTES
07/10/87	2	AQUA		170	145	150	465	
09/04/87	25	AQUA		150	140	170	460	
05/19/88	28	AQUA		277	230	105	612	
09/25/88	26	AQUA		75	124	85	284	
12/08/88	1	AQUA		119	129	66	314	
02/25/89	33	AQUA		107	146	58.6	312	
06/09/89	26	AQUA	624	92.7	110	52.1	255	
09/08/89	16	AQUA	8240	110	130	44.7	285	
09/08/89	17	AQUA	8240	110	130	46	286	
12/11/89	10	AQUA	8240	60.8	79.8	33.6	174	
02/28/90	10	AQUA	8240	81.9	77.9	20.3	180	
06/02/90	16	AQUA	8240	110	150	32.2	292	
08/24/90	31	AQUA	8240	78.1	92.1	39.1	209	
10/28/90	18	AQUA	8240	103	104	105	312	
02/28/91	10	AQUA	8240	61.5	63.6	76.1	201	
06/01/91	21	AQUA	8240	95.0	256.0	78.5	430	
08/21/91	9	AQUA	8240	91.7	139	75.3	306	
11/13/91	17	AQUA	8240	89.5	122.0	51.4	263	
01/25/92	29	AQUA	8240	84.9	139	46.0	270	
03/31/92	18	AQUA	8240	63.8	86.3	31.8	182	
08/23/92	29	AQUA	8240	49.3	66.3	23.1	139	
02/04/93	15	AQUA	8240	132	178	30.5	341	
02/10/93	6	AQUA	8240	116	165	28.0	309	
05/11/93	4	AQUA	8240	138	175	36.3	349	
08/31/93	9	AQUA	8240	118	175	53.4	346	
12/01/93	9	AQUA	8240	152	224	45.5	422	
02/19/94	39	AQUA	8240	67.0	92.0	22.8	182	
05/05/94	9	AQUA	8240	63.0	98.1	13.6	175	
09/14/94	14	AQUA	8240	93.6	134	18.5	246	

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.

NO RESULTS FOR 10/92 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

ta gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-24 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	147	
	CIS-1,2-DICHLOROETHENE	UG/L	101	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	23	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			271	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
2/23/95

SOURCE: S-25

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1, 1-DI-CHLORO-ETHANE NPL UG/L	1, 2-DI-CHLORO-ETHANE 5 UG/L	CIS-1, 2-DICHLORO-ETHENE P=70 UG/L	TRANS-1, 2 DICHLORO-ETHENE P=100 UG/L	1, 1, 1-TRI CHLORO-ETHANE P=100 UG/L	TRI-CHLORO-ETHENE 5 UG/L	SUM UG/L	NOTES
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							
05/18/88	18	AQUA		ND	ND	7.3	ND	ND	ND	7	
09/25/88	25	AQUA		No VOC Detected							
12/08/88	8	AQUA	8240	25.2	38.0	79.0	5.9	6.5	9.6	164	
02/22/89	8	AQUA		No VOC Detected							
02/25/89	32	AQUA		No VOC Detected							
06/09/89	21	AQUA	624	No VOC Detected							
09/09/89	28	AQUA	8240	No VOC Detected							
12/11/89	5	AQUA	8240	No VOC Detected							
03/03/90	39	AQUA	8240	No VOC Detected							
06/01/90	9	AQUA	8240	No VOC Detected							
08/22/90	6	AQUA	8240	No VOC Detected							
12/27/90	5	AQUA	8240	No VOC Detected							
02/28/91	6	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:

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NPL = NO U.S EPA PUBLISHED LEVEL

P = PROPOSED

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PARAMETER

o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

ta gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-25 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: S-26				CIS-1,2-DICHLORO-ETHENE	TRI-CHLORO-ETHENE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	P=70 UG/L	5 UG/L	UG/L	
07/10/87	7	AQUA		ND	16	16	
09/03/87	16	AQUA		ND	14	14	
01/15/88	31	AQUA		ND	17	17	
02/09/88	18	AQUA		ND	18	18	
05/19/88	29	AQUA		5.1	15.6	21	
09/24/88	21	AQUA		ND	17	17	
02/23/89	18	AQUA		ND	20.1	20	
06/10/89	29	AQUA	624	ND	17.8	18	
06/10/89	30	AQUA	624	ND	17.6	18	
09/08/89	19	AQUA	8240	ND	14.4	14	
12/11/89	12	AQUA	8240	ND	19.2	19	
02/28/90	13	AQUA	8240	ND	15.1	15	
06/01/90	12	AQUA	8240	ND	9.3	9	
08/24/90	32	AQUA	8240	ND	18.3	18	
10/28/90	16	AQUA	8240	ND	17.9	18	
03/01/91	18	AQUA	8240	ND	17.2	17	
06/01/91	20	AQUA	8240	ND	15.3	15	
08/29/91	12	AQUA	8240	ND	15.8	16	
11/13/91	16	AQUA	8240	ND	16.0	16	
01/23/92	13	AQUA	8240	ND	14.9	15	
04/01/92	38	AQUA	8240	ND	12.4	12	
08/23/92	28	AQUA	8240	ND	9.8	10	
02/04/93	17	AQUA	8240	ND	20.8	21	
02/10/93	7	AQUA	8240	ND	20.3	20	
05/11/93	10	AQUA	8240	ND	13.9	14	
08/31/93	10	AQUA	8240	ND	17.8	18	
12/01/93	10	AQUA	8240	ND	21.7	22	
12/01/93	11	AQUA	8240	ND	21.2	21	
02/18/94	19	AQUA	8240	ND	16.8	17	
05/05/94	11	AQUA	8240	ND	12.9	13	
09/14/94	10	AQUA	8240	ND	14.6	15	

NOTES:

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NO RESULTS FOR 10/92 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

t a gleason associates
Environmental and Geotechnical Services

SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-26 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L		5 U
	1,2-DICHLOROETHANE	UG/L		5 U
	1,1-DICHLOROETHENE	UG/L		5 U
	TRANS-1,2-DICHLOROETHENE	UG/L		5 U
	CIS-1,2-DICHLOROETHENE	UG/L	5.8	
	1,1,1-TRICHLOROETHANE	UG/L		5 U
	TRICHLOROETHENE	UG/L	22	
	VINYL CHLORIDE	UG/L		10 U
TOTAL VOCS:			27.8	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: S-27

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	CIS-1, 2-DICHLORD-ETHENE P=70 UG/L	TRANS-1, 2 DICHLORD-ETHENE P=100 UG/L	TRI-CHLORD-ETHENE 5 UG/L	SUM UG/L	NOTES
07/10/87	8	AQUA		9.4	10	90	109	
09/04/87	26	AQUA		7.5	8	100	116	
01/15/88	33	AQUA		9.8	19	96	125	
02/10/88	32	AQUA		12	16	81	109	
05/19/88	27	AQUA		24.5	18.4	74.6	118	
09/25/88	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	624	10.6	12.3	86	109	
09/08/89	18	AQUA	8240	14.8	19.5	78.9	113	
12/11/89	11	AQUA	8240	14.6	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	84.6	126	
06/02/90	17	AQUA	8240	17.4	21.6	84.5	124	
08/24/90	23	AQUA	8240	17.5	17.9	78.0	113	
10/28/90	17	AQUA	8240	20.0	20.9	91.4	132	
02/28/91	9	AQUA	8240	18.1	12.4	76.4	107	
06/01/91	22	AQUA	8240	22.5	60.0	68.7	151	
08/29/91	8	AQUA	8240	14.8	21.9	56.0	93	
11/13/91	18	AQUA	8240	20.0	23.1	54.1	97	
01/25/92	30	AQUA	8240	17.1	18.9	55.2	91	
03/31/92	19	AQUA	8240	16.0	17.9	57.0	91	
08/23/92	25	AQUA	8240	16.5	16.8	58.9	92	
02/04/93	16	AQUA	8240	23.5	19.8	75.3	119	
02/10/93	5	AQUA	8240	28.4	24.2	90.2	143	
05/11/93	5	AQUA	8240	21.4	21.8	58.2	101	
08/31/93	8	AQUA	8240	21.1	21.7	46.5	89	
12/01/93	8	AQUA	8240	59.2	40.3	59.2	159	
02/17/94	6	AQUA	8240	27.3	23.8	ND	51	
05/05/94	10	AQUA	8240	21.1	19.0	34.8	75	
09/14/94	13	AQUA	8240	20.7	16.7	44.0	81	

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o = Date Sampled

SHALLOW MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

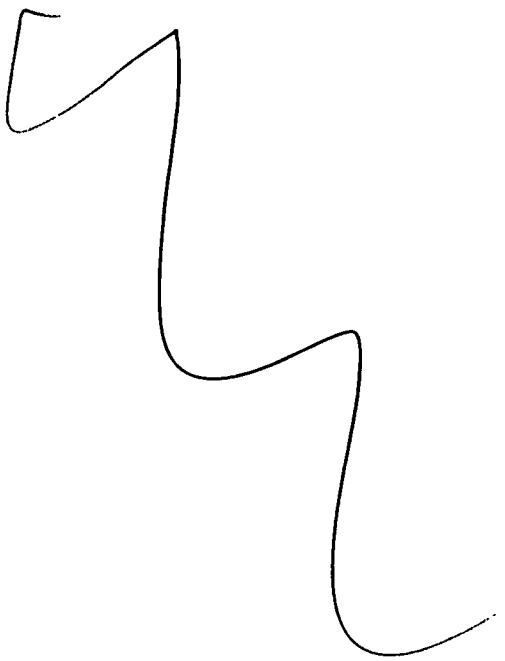
SHALLOW MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID S-27 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	15	
	CIS-1,2-DICHLOROETHENE	UG/L	22	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	52	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			89	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

Deep Wells



SOURCE: 1-D				TRI-CHLORO-ETHENE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	5 UG/L	UG/L	
01/08/87	13	AQUA		No VOC Detected		
02/12/87	1	AQUA		19.5	20	
06/05/87	13	AQUA		12	12	
06/05/87	22	AQUA		29	29	
01/14/88	13	AQUA		5.8	6	
02/09/88	16	AQUA		11	11	
05/18/88	11	AQUA		No VOC Detected		
09/23/88	11	AQUA		No VOC Detected		
12/11/88	33	AQUA		No VOC Detected		
02/24/89	23	AQUA		No VOC Detected		
06/08/89	7	AQUA	624	No VOC Detected		
09/08/89	11	AQUA	8240	No VOC Detected		
12/14/89	36	AQUA	8240	No VOC Detected		
02/27/90	2	AQUA	8240	No VOC Detected		
06/01/90	4	AQUA	8240	No VOC Detected		
08/23/90	13	AQUA	8240	No VOC Detected		
10/29/90	26	AQUA	8240	No VOC Detected		
03/01/91	15	AQUA	8240	No VOC Detected		
05/31/91	7	AQUA	8240	No VOC Detected		
08/30/91	17	AQUA	8240	No VOC Detected		
11/13/91	11	AQUA	8240	No VOC Detected		
01/23/92	9	AQUA	8240	No VOC Detected		
04/01/92	31	AQUA	8240	No VOC Detected		
08/21/92	6	AQUA	8240	No VOC Detected		
11/02/92	37	AQUA	8240	No VOC Detected		
02/05/93	25	AQUA	8240	No VOC Detected		
05/12/93	22	AQUA	8240	No VOC Detected		
09/01/93	22	AQUA	8240	No VOC Detected		
12/02/93	16	AQUA	8240	No VOC Detected		
02/18/94	17	AQUA	8240	No VOC Detected		
05/06/94	24	AQUA	8240	No VOC Detected		
09/15/94	19	AQUA	8240	No VOC Detected		

NOTES:

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PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t.a gleason associates
Environmental and Geotechnical Services

DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 1-D DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valene Davis Rev. C
Date 2/23/95

SOURCE: 2-D				1,2-DI-CHLORO-ETHANE	CIS-1,2-DICHLORO-ETHENE	TRI-CHLORO-ETHENE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	5 UG/L	P=70 UG/L	5 UG/L	UG/L	
12/18/86	2	AQUA		20.4	ND	ND	20	
06/05/87	11	AQUA		25	ND	ND	25	
09/03/87	19	AQUA		24	ND	ND	24	
01/15/88	34	AQUA		34	ND	ND	34	
02/09/88	11	AQUA		25	ND	ND	25	
05/19/88	24	AQUA		34.2	ND	ND	34	
09/24/88	20	AQUA		26	ND	ND	26	
12/10/88	27	AQUA		22	ND	ND	22	
12/10/88	28	AQUA		21.4	ND	ND	21	
02/24/89	19	AQUA		24.8	13.4	ND	38	
06/08/89	16	AQUA	624	26.6	22.4	ND	49	
09/09/89	31	AQUA	8240	22.6	24.6	ND	47	
12/13/89	30	AQUA	8240	21	14.6	ND	36	
03/01/90	20	AQUA	8240	23.8	31.8	ND	56	
06/03/90	20	AQUA	8240	20.8	26.3	ND	47	
08/23/90	19	AQUA	8240	16.0	17.7	ND	34	
10/29/90	27	AQUA	8240	20.6	26.8	ND	47	
10/29/90	28	AQUA	8240	19.4	25.1	ND	45	
03/02/91	26	AQUA	8240	14.7	13.7	ND	28	
05/30/91	4	AQUA	8240	14.7	5.1	ND	20	
08/31/91	35	AQUA	8240	15.0	14.6	ND	30	
11/14/91	41	AQUA	8240	16.0	12.7	ND	29	
01/24/92	25	AQUA	8240	16.2	9.3	ND	26	
04/02/92	46	AQUA	8240	17.4	12.2	ND	30	
08/21/92	7	AQUA	8240	23.6	13.1	ND	37	
10/31/92	33	AQUA	8240	ND	9.4	16.0	25	
02/05/93	31	AQUA	8240	22.9	21.3	ND	44	
05/12/93	37	AQUA	8240	17.8	11.1	ND	29	
09/02/93	28	AQUA	8240	20.0	11.1	ND	31	
12/03/93	31	AQUA	8240	21.2	15.7	ND	37	
02/18/94	26	AQUA	8240	19.1	12.6	ND	32	
05/06/94	30	AQUA	8240	13.9	10.6	ND	25	
09/13/94	5	AQUA	8240	16.8	11.3	ND	28	

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PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t.a gleason associates
Environmental and Geotechnical Services

Location Not Sampled
December 1994

SOURCE: 5-D				CIS-1, 2-DICHLORD-ETHENE	TOLUENE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	P=70 UG/L	P=2000 UG/L	UG/L	
12/18/86	4	AQUA		10	ND	10	
12/18/86	5	AQUA		10	ND	10	
02/11/87	4	AQUA		No VOC Detected			
06/05/87	19	AQUA		No VOC Detected			
09/03/87	15	AQUA		No VOC Detected			
01/14/88	12	AQUA		No VOC Detected			
02/09/88	21	AQUA		ND	6.7	7	A
03/14/88	2	AQUA		6.1	ND	6	
05/18/88	14	AQUA		10.4	ND	10	
09/23/88	15	AQUA		No VOC Detected			
12/08/88	9	AQUA		No VOC Detected			
02/25/89	31	AQUA		5.4	ND	5	
06/09/89	23	AQUA	624	No VOC Detected			
09/10/89	36	AQUA	8240	5.5	ND	6	
12/11/89	8	AQUA	8240	7.5	ND	8	
02/28/90	9	AQUA	8240	6.2	ND	6	
06/02/90	14	AQUA	8240	6.4	ND	6	
08/24/90	29	AQUA	8240	No VOC Detected			
10/28/90	21	AQUA	8240	5.7	ND	6	
03/03/91	27	AQUA	8240	No VOC Detected			
05/30/91	2	AQUA	8240	No VOC Detected			
08/28/91	2	AQUA	8240	No VOC Detected			
11/12/91	2	AQUA	8240	No VOC Detected			
01/21/92	1	AQUA	8240	No VOC Detected			
03/30/92	7	AQUA	8240	No VOC Detected			
08/20/92	2	AQUA	8240	No VOC Detected			
10/30/92	12	AQUA	8240	No VOC Detected			
02/03/93	2	AQUA	8240	No VOC Detected			
05/11/93	1	AQUA	8240	No VOC Detected			
08/31/93	11	AQUA	8240	No VOC Detected			
12/01/93	1	AQUA	8240	No VOC Detected			
02/16/94	2	AQUA	8240	No VOC Detected			
05/04/94	2	AQUA	8240	No VOC Detected			
09/12/94	1	AQUA	8240	No VOC Detected			

NOTES:

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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 = TOLUENE WAS NOT DETECTED IN 5 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 ANOMALOUS.

PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 5-D DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			0	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Dillo Rev. 0
Date 2/23/95

SOURCE: 7-D				CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL / METHOD	P=70 / UG/L	P=100 / UG/L	5 / UG/L	2 / UG/L	UG/L	
07/10/87	3	AQUA		250	17	19	ND	286	
07/10/87	4	AQUA		250	16	17	ND	283	
09/04/87	29	AQUA		220	14.0	20	ND	254	
01/15/88	30	AQUA		142	10	17	ND	169	
02/09/88	15	AQUA		148	20	14	ND	182	
05/19/88	22	AQUA		210	ND	16.8	ND	227	
09/24/88	18	AQUA		52	7.8	9.2	ND	69	
12/10/88	31	AQUA		No VOC Detected					
02/25/89	34	AQUA		106	7	ND	12.6	126	
06/08/89	13	AQUA	624	110	5.7	ND	ND	116	
09/10/89	33	AQUA	8240	110	7.1	ND	ND	117	
12/11/89	37	AQUA	8240	40.2	ND	ND	ND	40	
03/02/90	34	AQUA	8240	150	8	ND	ND	158	
06/03/90	21	AQUA	8240	91.9	ND	ND	ND	92	
08/23/90	14	AQUA		54.6	ND	ND	ND	55	
10/29/90	29	AQUA	8240	70.5	ND	ND	ND	71	
03/01/91	19	AQUA	8240	59.3	ND	ND	ND	59	
03/01/91	20	AQUA	8240	77.1	ND	ND	ND	77	
05/31/91	10	AQUA	8240	36.9	ND	ND	ND	37	
08/30/91	24	AQUA	8240	36.1	ND	ND	12.3	48	
11/14/91	34	AQUA	8240	41.0	ND	ND	ND	41	
01/28/92	38	AQUA	8240	40.2	ND	ND	ND	40	
04/02/92	40	AQUA	8240	70.3	ND	ND	24.0	94	
08/21/92	8	AQUA	8240	69.7	7.1	5.7	12.2	95	
10/31/92	21	AQUA	8240	52.8	ND	ND	ND	53	
02/05/93	32	AQUA	8240	85.8	8.8	5.6	15.2	115	
05/12/93	25	AQUA	8240	77.4	11.8	ND	ND	89	
09/02/93	30	AQUA	8240	59.2	11.1	17.9	ND	88	
12/02/93	22	AQUA	8240	60.9	13.1	17.7	ND	92	
02/18/94	20	AQUA	8240	17.1	ND	5.2	ND	22	
05/06/94	25	AQUA	8240	38.3	ND	ND	ND	38	
09/15/94	20	AQUA	8240	8.8	ND	ND	ND	9	

NOTES:

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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

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 7-D DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	11	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			11	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

SOURCE: 8-D

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1, 1-DI-CHLORO-ETHENE 7 UG/L	CIS-1, 2-DICHLORO-ETHENE P=70 UG/L	TRANS-1, 2 DICHLORO-ETHENE P=100 UG/L	1, 1, 1-TRI CHLORO-ETHANE 200 UG/L	VINYL CHLORIDE 2 UG/L	SUM UG/L	NOTES
07/10/87	5	AQUA		ND	720	27	ND	ND	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						
02/25/89	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	468	
12/13/89	34	AQUA	8240	ND	440	27.8	ND	ND	468	
03/02/90	35	AQUA	8240	ND	780	41.5	ND	11.6	833	
06/03/90	22	AQUA	8240	ND	430	35.6	ND	ND	466	
08/23/90	15	AQUA	8240	No VOC Detected						
10/29/90	31	AQUA	8240	5.4	449	42.3	ND	16.5	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	288	42.0	ND	ND	330	
12/02/93	23	AQUA	8240	6.8	344	58.5	ND	ND	409	
02/18/94	21	AQUA	8240	ND	247	27.6	ND	ND	275	
02/18/94	22	AQUA	8240	ND	324	35.1	ND	ND	359	
05/06/94	29	AQUA	8240	ND	240	29.2	ND	ND	269	
09/15/94	22	AQUA	8240	ND	260	32.2	ND	ND	292	

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PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID 8-D DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	33	
	CIS-1,2-DICHLOROETHENE	UG/L	244	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			277	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie David
Rev. 0
Date 2/23/95

SOURCE: D-4

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	VINYL CHLORIDE 2 UG/L	OTHER VOC UG/L	SUM UG/L	NOTES
10/01/86	11	AQUA		No VOC Detected			
02/12/87	13	AQUA		No VOC Detected			
06/05/87	8	AQUA		No VOC Detected			
09/03/87	8	AQUA		No VOC Detected			
01/13/88	4	AQUA		No VOC Detected			
01/13/88	5	AQUA		No VOC Detected			
02/08/88	7	AQUA		No VOC Detected			
02/08/88	8	AQUA		No VOC Detected			
05/18/88	10	AQUA		No VOC Detected			
09/22/88	10	AQUA		No VOC Detected			
12/08/88	3	AQUA		No VOC Detected			
02/23/89	14	AQUA		ND	140	140	
06/10/89	34	AQUA	624	No VOC Detected			
09/08/89	14	AQUA	8240	No VOC Detected			
12/13/89	29	AQUA	8240	No VOC Detected			
02/27/90	3	AQUA	8240	No VOC Detected			
06/01/90	5	AQUA	8240	No VOC Detected			
08/22/90	3	AQUA	8240	No VOC Detected			
10/27/90	8	AQUA	8240	No VOC Detected			
02/28/91	2	AQUA	8240	No VOC Detected			
05/31/91	8	AQUA	8240	No VOC Detected			
08/29/91	13	AQUA	8240	No VOC Detected			
11/13/91	30	AQUA	8240	No VOC Detected			
01/22/92	4	AQUA	8240	No VOC Detected			
03/30/92	11	AQUA	8240	No VOC Detected			
08/22/92	19	AQUA	8240	No VOC Detected			
10/31/92	25	AQUA	8240	No VOC Detected			
02/03/93	4	AQUA	8240	14.7	ND	15	
05/12/93	28	AQUA	8240	14.9	ND	15	
09/02/93	33	AQUA	8240	11.7	ND	12	
12/02/93	18	AQUA	8240	16.5	ND	17	
02/17/94	8	AQUA	8240	16.3	ND	16	
05/05/94	16	AQUA	8240	10.3	ND	10	
09/13/94	4	AQUA	8240	10.4	ND	10	

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PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID D-4 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	16	
TOTAL VOCS:			16	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
2/23/95

SOURCE: D-7				1,2-DI-CHLORO-ETHANE	CIS-1,2-DICHLORO-ETHENE	TRANS-1,2 DICHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	5 UG/L	P=70 UG/L	P=100 UG/L	2 UG/L	UG/L		
10/01/86	10	AQUA		689	ND	20.2	ND	709		
11/09/86	28	AQUA		437	ND	15.7	ND	453		
01/07/87	9	AQUA		902	40	ND	ND	942		
02/12/87	14	AQUA		812	ND	30	ND	842		
05/05/87	9	AQUA		890	33	ND	ND	923		
06/05/87	10	AQUA		900	31	ND	ND	931		
09/03/87	17	AQUA		800	ND	ND	ND	800		
09/03/87	18	AQUA		750	ND	ND	ND	750		
01/14/88	14	AQUA		710	30	ND	ND	740		
02/08/88	10	AQUA		680	ND	ND	ND	680		
05/18/88	20	AQUA		1105	48.2	ND	19.1	1232		
09/24/88	29	AQUA		780	26	ND	ND	806		
12/09/88	16	AQUA		483	22.1	ND	10	515		
12/09/88	17	AQUA		435	21.9	ND	10	467		
02/24/89	21	AQUA		380	16.4	ND	ND	396		
06/10/89	35	AQUA	624	310	15.5	ND	ND	326		
09/09/89	30	AQUA	8240	300	14	ND	ND	314		
12/12/89	24	AQUA	8240	290	10.9	ND	ND	301		
03/01/90	22	AQUA	8240	340	15.3	ND	ND	355		
06/03/90	27	AQUA	8240	340	11.8	ND	ND	352		
08/23/90	17	AQUA	8240	284	9.3	ND	ND	293		
10/27/90	10	AQUA	8240	437	12.9	ND	ND	450		
03/01/91	16	AQUA	8240	239	17.7	ND	ND	257		
06/01/91	19	AQUA	8240	227	ND	ND	ND	227		
08/31/91	29	AQUA	8240	151	6.7	ND	ND	158		
11/13/91	14	AQUA	8240	123	8.4	ND	ND	131		
01/23/92	10	AQUA	8240	149	5.5	ND	ND	155		
04/01/92	39	AQUA	8240	78.5	ND	ND	ND	79		
08/23/92	30	AQUA	8240	82.1	ND	ND	ND	82		
10/30/92	14	AQUA	8240	60.9	ND	ND	ND	61		
02/03/93	8	AQUA	8240	69.4	ND	ND	ND	69		
05/12/93	38	AQUA	8240	34.9	ND	ND	ND	35		
08/31/93	19	AQUA	8240	20.4	ND	ND	ND	20		
12/03/93	30	AQUA	8240	11.0	ND	ND	ND	11		
02/17/94	11	AQUA	8240	13.4	ND	ND	ND	13		
02/17/94	12	AQUA	8240	13.6	ND	ND	ND	14		
05/05/94	15	AQUA	8240	19.0	ND	ND	ND	19		
09/14/94	15	AQUA	8240	19.4	ND	ND	ND	19		
09/14/94	16	AQUA	8240	19.9	ND	ND	ND	20		

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PARAMETER

o = Date Sampled

DEEP MONITOR WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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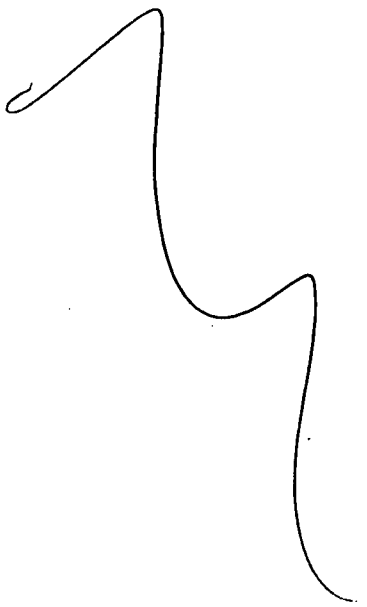
DEEP MONITOR WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID D-7 DATE COLLECTED 07 DEC 94 AMOUNT	Q
A.VOA	1,2-DICHLOROETHANE	UG/L	25	
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			25	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis Rev. 0
Date 2/23/95

Naphtha Recovery Wells



SOURCE: E-3				BENZENE	1, 1-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	ETHYL BENZENE	TOLUENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L		
03/25/87	7	AQUA		72	56	ND	10	10	53	ND	201		
01/14/88	19	AQUA		60	25	ND	9.4	9.2	48	ND	152		
02/10/88	29	AQUA		60	26	ND	11	8.5	81	70	237		
05/19/88	34		8240	43	26.6	ND	7.8	ND	86	ND	163		
09/25/88	32	AQUA		51	28	ND	5.6	ND	28	11	124		
12/09/88	21	AQUA		30.4	21.6	ND	ND	ND	64.2	ND	116		
02/24/89	28	AQUA		42.7	26.8	ND	ND	ND	74	7.2	151		
06/07/89	5	AQUA	624	92.1	18.7	ND	ND	ND	45.8	6.9	164		
09/07/89	8	AQUA	8240	46.3	18.1	ND	ND	9.7	52.4	7.8	134		
12/12/89	20	AQUA	8240	77.6	24.4	ND	7.4	24.1	32.5	8	172		
03/01/90	18	AQUA	8240	72.3	20.1	ND	7.4	25.1	59.2	7	191		
06/04/90	31	AQUA	8240	56.7	23.3	ND	ND	ND	50.6	8	139		
08/24/90	26	AQUA	8240	30.6	13.8	ND	ND	ND	32.0	5.2	82		
08/24/90	27	AQUA	8240	30.9	13.7	ND	ND	ND	31.9	5.1	82		
10/30/90	36	AQUA	8240	31.5	20.2	ND	ND	ND	51.4	6.0	109		
03/04/91	34	AQUA	8240	15.8	13.5	ND	ND	ND	35.9	5.3	71		
06/03/91	35	AQUA	8240	15.8	12.2	ND	ND	ND	9.7	ND	38	A	
08/30/91	20	AQUA	8240	11.7	8.7	ND	ND	ND	20.0	ND	40		
11/14/91	37	AQUA	8240	11.9	13.8	ND	ND	ND	30.5	ND	56		
01/24/92	17	AQUA	8240	13.3	ND	ND	ND	ND	27.2	ND	41		
03/30/92	5	AQUA	8240	14.5	9.7	ND	ND	ND	22.1	ND	46		
08/24/92	34	AQUA	8240	14.3	ND	ND	ND	ND	17.7	8.7	41		
11/02/92	44	AQUA	8240	10.7	ND	ND	ND	ND	8.1	ND	19		
02/09/93	41	AQUA	8240	8.7	ND	ND	ND	ND	ND	ND	9		
06/18/93	1	AQUA	8240	8.4	ND	9.1	ND	ND	21.4	5.1	44		
12/11/93	40	AQUA	8240	ND	ND	ND	ND	ND	ND	ND	ND		
05/09/94	43	AQUA	8240	ND	7.9	ND	ND	ND	12.4	ND	20		
09/16/94	42	AQUA	8240	ND	6.8	ND	ND	ND	21.4	ND	28		

NOTES:

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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 6.5 UG/L

WELL NOT SAMPLED AUGUST, 1993 DUE TO INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

SOURCE: E-3 (CONT'D)				CARBON TETRA-CHLORIDE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	TOTAL XYLENES	OTHER VOC	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
03/25/87	7	AQUA		ND	ND	ND	23	ND	23	
01/14/88	19	AQUA		ND	ND	ND	ND	ND	0	
02/10/88	29			ND	ND	ND	ND	ND	0	
05/19/88	34		8240	29.5	22.9	18.3	15	ND	86	
09/25/88	32	AQUA		ND	ND	ND	9.2	ND	9	
12/09/88	21	AQUA		41.7	ND	26.7	ND	489	557	
02/24/89	28	AQUA		49.5	ND	26.3	ND	520	596	
06/07/89	5	AQUA	624	100	ND	19.2	7.1	ND	126	
09/07/89	8	AQUA	8240	ND	ND	29.2	7.6	400	437	
12/12/89	20	AQUA	8240	ND	ND	ND	13.8	670	684	
03/01/90	18	AQUA	8240	74.4	ND	16.8	10.8	620	722	
06/04/90	31	AQUA	8240	51.2	ND	22.7	6.3	550	630	
08/24/90	26	AQUA	8240	34.7	ND	14.4	ND	ND	49	
08/24/90	27	AQUA	8240	33.3	ND	14.0	ND	ND	47	
10/30/90	36	AQUA	8240	66.5	ND	35.9	ND	ND	102	
03/04/91	34	AQUA	8240	ND	ND	ND	ND	ND	0	
06/03/91	35	AQUA	8240	ND	ND	13.1	ND	ND	13	A
08/30/91	20	AQUA	8240	ND	ND	13.6	ND	ND	14	
11/14/91	37	AQUA	8240	ND	ND	ND	ND	ND	0	
01/24/92	17	AQUA	8240	ND	ND	ND	ND	ND	0	
03/30/92	5	AQUA	8240	ND	ND	ND	ND	ND	0	
08/24/92	34	AQUA	8240	12.0	ND	12.2	ND	ND	24	
11/02/92	44	AQUA	8240	14.7	ND	ND	ND	ND	15	
02/09/93	41	AQUA	8240	ND	ND	ND	ND	ND	0	
06/18/93	1	AQUA	8240	ND	ND	17.2	ND	ND	17	
12/11/93	40	AQUA	8240	ND	ND	ND	ND	ND	ND	
05/09/94	43	AQUA	8240	17.2	ND	10.9	ND	ND	28	
09/16/94	42	AQUA	8240	ND	ND	14.1	ND	ND	14	

NOTES:

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A = METHYLENE CHLORIDE 6.5 UG/L

WELL NOT SAMPLED AUGUST, 1993 DUE TO INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

NAPHTHA RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID E-3 DATE COLLECTED 09 DEC 94 AMOUNT	Q
A.VOA	BENZENE	UG/L	5	U
	1,1-DICHLOROETHANE	UG/L	8.9	
	CIS-1,2-DICHLOROETHENE	UG/L	38	
	VINYL CHLORIDE	UG/L	20	
	ACETONE	UG/L	100	U
	2-BUTANONE	UG/L	215	
TOTAL VOCS:			281.9	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RWB-6				BENZENE	1,1-DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHENE	ETHYL BENZENE	CIS-1,2-DICHLORO-ETHENE	TRANS-1,2 DICHLORO-ETHENE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	5 UG/L	NPL UG/L	7 UG/L	P=700 UG/L	P=70 UG/L	P=100 UG/L	UG/L		
03/25/87	10	AQUA		ND	300	8.7	50	410	54	823		
03/25/87	11	AQUA		ND	300	12	50	410	72	844		
09/04/87	33	AQUA		ND	ND	ND	ND	700	45	745		
01/14/88	16	AQUA		ND	ND	ND	ND	460	ND	460		
02/10/88	26	AQUA		ND	ND	ND	ND	550	55	605		
05/19/88	31	AQUA		ND	ND	ND	23.4	672	41.8	737		
09/25/88	31	AQUA		29	8.3	ND	30	230	35	332		
12/09/88	19	AQUA		25.5	ND	ND	22.6	305	27.5	381		
02/24/89	26	AQUA		30.3	6.2	ND	22.5	370	32.9	462		
06/07/89	3	AQUA	624	30.6	ND	ND	18.7	400	40.2	490		
09/07/89	8	AQUA	8240	24.8	ND	ND	58.3	360	38.7	480		
12/12/89	18	AQUA	8240	No VOC Detected								
03/01/90	16	AQUA	8240	ND	ND	ND	13.8	380	33.7	428		
08/29/90	42	AQUA	8240	6.5	ND	ND	ND	51.8	8.4	67		
10/30/90	33	AQUA	8240	15.4	8.7	ND	29.6	237	22.7	313		
10/30/90	34	AQUA	8240	ND	7.7	ND	31.6	255	25.1	319		
03/04/91	31	AQUA	8240	10.8	ND	ND	11.3	137	16.3	175		
08/30/91	19	AQUA	8240	10.4	ND	ND	22.9	81.5	11.9	127		
01/24/92	15	AQUA	8240	9.9	ND	ND	24.4	89.0	15.5	139		
03/31/92	23	AQUA	8240	ND	11.5	ND	ND	29.4	5.5	46		
08/24/92	32	AQUA	8240	ND	35.1	ND	ND	83.3	5.5	124		
11/02/92	39	AQUA	8240	ND	15.4	ND	ND	45.7	ND	61		
11/02/92	40	AQUA	8240	ND	12.8	ND	ND	40.0	ND	53		
02/05/93	26	AQUA	8240	ND	30.5	ND	ND	125	10.1	166		
02/05/93	27	AQUA	8240	ND	32.6	ND	ND	134	10.9	178		
05/12/93	31	AQUA	8240	ND	27.4	ND	ND	67.0	9.5	104		
05/12/93	32	AQUA	8240	ND	30.5	ND	ND	76.6	10.9	118		

NOTES:

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P = PROPOSED

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WELL NOT SAMPLED JUNE, 1991 DUE TO INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

SOURCE: RWB-6 (CONT'D)				CARBON TETRA-CHLORIDE	1, 2-DI-CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	TOTAL XYLENES	OTHER VOC	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	NPL UG/L	5 UG/L	5 UG/L	2 UG/L	P=10000 UG/L	UG/L	UG/L		
03/25/87	10	AQUA		ND	ND	ND	ND	65	ND	65		
03/25/87	11	AQUA		ND	ND	ND	ND	69	ND	69		
09/04/87	33	AQUA		ND	290	ND	ND	ND	ND	290		
01/14/88	16	AQUA		ND	250	ND	ND	ND	ND	250		
02/10/88	26	AQUA		ND	230	ND	ND	57	ND	287		
05/19/88	31	AQUA		ND	391	ND	ND	ND	ND	391		
09/25/88	31	AQUA		ND	ND	17	ND	49	ND	66		
12/09/88	19	AQUA		ND	133	ND	23.7	40	443	640		
02/24/89	26	AQUA		13.4	180	ND	30.1	35.5	400	659		
06/07/89	3	AQUA	624	ND	180	ND	28.9	25.3	ND	234		
09/07/89	8	AQUA	8240	ND	140	ND	32.8	28.7	360	562		
12/12/89	18	AQUA	8240	ND	ND	ND	21.4	ND	110	131		
03/01/90	16	AQUA	8240	ND	110	ND	20.9	ND	350	481		
08/29/90	42	AQUA	8240	ND	5.4	ND	ND	ND	ND	5		
10/30/90	33	AQUA	8240	ND	72.5	ND	19.9	7.5	ND	100		
10/30/90	34	AQUA	8240	15.6	82.4	ND	21.3	7.7	ND	127		
03/04/91	31	AQUA	8240	No VOC Detected								
08/30/91	18	AQUA	8240	ND	17.8	ND	ND	ND	ND	18		
01/24/92	15	AQUA	8240	ND	18.8	ND	ND	26.6	ND	45		
03/31/92	23	AQUA	8240	No VOC Detected								
08/24/92	32	AQUA	8240	ND	ND	ND	27.3	ND	ND	27		
11/02/92	39	AQUA	8240	No VOC Detected								
11/02/92	40	AQUA	8240	No VOC Detected								
02/05/93	26	AQUA	8240	ND	ND	ND	40.5	ND	ND	41		
02/05/93	27	AQUA	8240	ND	ND	ND	44.8	ND	ND	45		
05/12/93	31	AQUA	8240	ND	ND	ND	13.3	ND	ND	13		
05/12/93	32	AQUA	8240	ND	ND	ND	13.0	ND	ND	13		

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WELL NOT SAMPLED JUNE, 1991 DUE TO INOPERATIVE PUMP.

PARAMETER

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NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

Location Not Sampled
December 1994

SOURCE: RWB-16				BENZENE	CARBON TETRA-CHLORIDE	1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	TRI-CHLORO-ETHENE	OTHER VOC	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	MCL / METHOD	5 / UG/L	NPL / UG/L	NPL / UG/L	5 / UG/L	P=70 / UG/L	P=100 / UG/L	5 / UG/L	UG/L	UG/L	
03/25/87	8	AQUA		22	ND	16	ND	16	ND	ND	ND	54	
09/04/87	35	AQUA		No VOC Detected									
01/14/88	20	AQUA		ND	220	ND	ND	ND	8.5	ND	ND	229	
02/10/88	30	AQUA		ND	ND	ND	ND	ND	8.2	ND	ND	8	
05/19/88	35	AQUA		ND	149	ND	ND	ND	ND	22.5	ND	172	
09/25/88	33	AQUA		152	ND	ND	ND	ND	6	ND	ND	158	
12/09/88	22	AQUA		ND	140	ND	ND	ND	5.4	ND	15	160	
02/24/89	29	AQUA		100	170	ND	ND	ND	ND	ND	140	410	
06/07/89	6	AQUA	624	53	170	ND	ND	ND	13	ND	ND	236	
09/07/89	9	AQUA	8240	52.1	270	ND	ND	ND	8.2	ND	41.2	372	
09/07/89	10	AQUA	8240	53.2	250	ND	ND	ND	7.4	ND	62.4	373	
12/12/89	21	AQUA	8240	150	140	8.3	ND	ND	9	ND	50	357	
03/01/90	19	AQUA	8240	120	320	10.3	ND	ND	6.3	ND	83.9	541	
06/04/90	32	AQUA	8240	110	380	7.6	ND	ND	10.4	ND	250	758	
08/24/90	28	AQUA	8240	ND	114	ND	7.5	ND	5.3	ND	ND	127	
10/30/90	37	AQUA	8240	150	110	ND	ND	7.2	ND	ND	ND	267	
03/04/91	35	AQUA	8240	65.4	106	ND	ND	ND	ND	ND	ND	171	
06/03/91	36	AQUA	8240	100	93.6	ND	ND	ND	ND	ND	74.0	268	A
06/03/91	37	AQUA	8240	102	110	ND	ND	ND	ND	ND	83.0	295	
08/30/91	21	AQUA	8240	ND	46.5	ND	ND	ND	ND	ND	ND	47	
11/14/91	38	AQUA	8240	6.1	93.1	ND	ND	ND	ND	ND	ND	99	
11/14/91	39	AQUA	8240	ND	89.2	ND	ND	ND	ND	ND	ND	89	
01/24/92	18	AQUA	8240	ND	50.0	ND	ND	ND	ND	ND	ND	50	
01/24/92	19	AQUA	8240	ND	49.8	ND	ND	ND	ND	ND	ND	50	
03/30/92	6	AQUA	8240	82.2	ND	ND	ND	ND	ND	ND	ND	82	
08/24/92	35	AQUA	8240	54.5	49.7	ND	ND	ND	ND	ND	ND	104	
11/02/92	43	AQUA	8240	74.8	29.3	ND	ND	ND	ND	ND	ND	104	
02/05/93	30	AQUA	8240	ND	19.2	ND	ND	ND	ND	ND	ND	19	
05/12/93	34	AQUA	8240	72.4	ND	ND	ND	ND	ND	ND	ND	72	
09/01/93	24	AQUA	8240	No VOC Detected									
09/01/93	25	AQUA	8240	No VOC Detected									
12/04/93	35	AQUA	8240	ND	18.2	ND	ND	ND	ND	ND	ND	18	
02/19/94	37	AQUA	8240	43.2	12.7	ND	ND	ND	ND	ND	ND	56	
02/19/94	38	AQUA	8240	45.7	13.4	ND	ND	ND	ND	ND	ND	59	
05/07/94	41	AQUA	8240	38.6	ND	ND	ND	ND	ND	ND	ND	39	
09/15/94	43	AQUA	8240	No VOC Detected									

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NPL = ND 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

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

NAPHTHA RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID RWB-16 DATE COLLECTED 09 DEC 94 AMOUNT	Q
A.VOA	BENZENE	UG/L	45	
	1,1-DICHLOROETHANE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	VINYL CHLORIDE	UG/L	10	U
	ACETONE	UG/L	100	U
	2-BUTANONE	UG/L	100	U
TOTAL VOCS:			45	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RWB-21

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	1,1-DI-CHLORO-ETHANE NPL UG/L	TRI-CHLORO-ETHENE 5 UG/L	OTHER VOC UG/L	SUM UG/L	NOTES
03/25/87	12	AQUA		15	ND	ND	15	
09/04/87	32	AQUA		No VOC Detected				
01/14/88	15	AQUA		7	ND	ND	7	
02/10/88	25	AQUA		No VOC Detected				
05/19/88	30	AQUA		5.9	ND	ND	6	
12/09/88	18	AQUA		5.9	ND	ND	6	
02/24/89	25	AQUA		ND	ND	77	77	
06/07/89	2	AQUA	624	No VOC Detected				
09/07/89	5	AQUA	8240	ND	ND	64.6	65	
12/12/89	16	AQUA	8240	7.1	5.2	32	44	
12/12/89	17	AQUA	8240	ND	ND	44	44	
03/01/90	15	AQUA	8240	No VOC Detected				
06/04/90	28	AQUA	8240	No VOC Detected				
08/24/90	24	AQUA	8240	No VOC Detected				
10/30/90	32	AQUA	8240	No VOC Detected				
03/04/91	30	AQUA	8240	No VOC Detected				
05/30/91	3	AQUA	8240	No VOC Detected				
08/30/91	18	AQUA	8240	No VOC Detected				
11/14/91	40	AQUA	8240	No VOC Detected				
01/24/92	14	AQUA	8240	No VOC Detected				
03/30/92	2	AQUA	8240	No VOC Detected				
03/30/92	3	AQUA	8240	No VOC Detected				
08/24/92	31	AQUA	8240	No VOC Detected				
11/02/92	38	AQUA	8240	No VOC Detected				
06/22/93	4	AQUA	8240	No VOC Detected				

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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 FEBRUARY, 1993 AND MAY, 1993 DUE TO INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

Location Not Sampled
December 1994

SOURCE: RWB-22

DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	BENZENE 5 UG/L	CARBON TETRA-CHLORIDE NPL UG/L	1,1-DI-CHLORO-ETHANE NPL UG/L	ETHYL BENZENE P=700 UG/L	TOLUENE P=2000 UG/L	TOTAL XYLENES P=10000 UG/L	SUM UG/L	NOTES
03/26/87	9	AQUA		184	ND	124	94	ND	199	601	
09/04/87	34	AQUA		ND	420	ND	81	ND	160	661	
01/14/88	17	AQUA		117	70	48	47	22	85	389	
01/14/88	18	AQUA		122	90	53	51	24	91	431	
02/10/88	27	AQUA		170	110	59	73	61	140	613	
02/10/88	28	AQUA		151	ND	51	70	140	140	552	
05/19/88	32	AQUA		119	33.6	48.2	103	79.5	133	516	
05/19/88	33	AQUA		118	35.7	47.9	58.8	34.7	113	408	
09/25/88	30	AQUA		ND	ND	8.3	ND	ND	ND	8	
12/09/88	20	AQUA		65.6	ND	29.7	41	16.4	90	243	
02/24/89	27	AQUA		110	52.6	29.9	52.9	34.4	100	380	
06/07/89	4	AQUA	624	150	64.8	23.4	51.9	42.1	97.1	429	
09/07/89	7	AQUA	8240	100	ND	19.3	47.1	13.1	84.7	264	
12/12/89	19	AQUA	8240	ND	ND	24.2	27	ND	36.8	88	
03/01/90	17	AQUA	8240	82.9	ND	17.4	37.3	5.2	44.1	187	
06/04/90	29	AQUA	8240	76.7	ND	19.4	35.4	12.3	44.2	188	
06/04/90	30	AQUA	8240	76.3	ND	19.3	35.2	12.2	44	187	
08/24/90	26	AQUA	8240	45.7	10.1	16.7	32.0	8.1	54.7	167	
10/30/90	35	AQUA	8240	53.8	26.9	21.9	30.6	7.4	48.2	189	
03/04/91	32	AQUA	8240	21.2	ND	25.1	15.7	ND	24.4	86	
03/04/91	33	AQUA	8240	26.2	ND	13.0	20.0	ND	34.8	94	
06/03/91	38	AQUA	8240	5.6	ND	14.2	ND	ND	ND	20	
11/14/91	36	AQUA	8240	10.8	ND	ND	ND	ND	ND	11	
01/24/92	16	AQUA	8240	14.4	ND	ND	5.9	ND	11.9	32	
03/30/92	4	AQUA	8240	5.9	ND	10.7	ND	ND	ND	17	
08/24/92	33	AQUA	8240	6.1	ND	15.7	ND	ND	ND	22	
11/02/92	42	AQUA	8240	5.8	ND	9.1	ND	ND	ND	15	
02/05/93	29	AQUA	8240	ND	ND	17.4	ND	ND	ND	17	
05/12/93	33	AQUA	8240	ND	ND	12.9	ND	ND	ND	13	
09/01/93	23	AQUA	8240	ND	ND	12.5	ND	ND	ND	13	
12/04/93	33	AQUA	8240	ND	ND	23.3	ND	ND	ND	23	
12/04/93	34	AQUA	8240	ND	ND	21.1	ND	ND	ND	21	
02/19/94	38	AQUA	8240	ND	ND	7.9	ND	ND	ND	8	
05/07/94	39	AQUA	8240	ND	ND	8.6	ND	ND	ND	9	
05/07/94	40	AQUA	8240	ND	ND	8.9	ND	ND	ND	9	
09/18/94	39	AQUA	8240	ND	ND	5.7	ND	ND	ND	6	
09/15/94	40	AQUA	8240	ND	ND	8.0	ND	ND	ND	8	

NOTES:

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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 INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

SOURCE: RWB-22 (CONT'D)				CIS-1,2-DICHLORO-ETHENE	TRANS-1,2 DICHLORO-ETHENE	1,1,1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	OTHER VOC	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	MCL METHOD	P=70 UG/L	P=100 UG/L	200 UG/L	5 UG/L	UG/L	UG/L		
03/25/87	9	AQUA		ND	ND	ND	ND	ND	0		
09/04/87	34	AQUA		ND	ND	ND	ND	ND	0		
01/14/88	17	AQUA		ND	ND	ND	ND	ND	0		
01/14/88	18	AQUA		ND	ND	ND	ND	ND	0		
02/10/88	27	AQUA		ND	ND	ND	ND	ND	0		
02/10/88	28	AQUA		ND	ND	ND	ND	ND	0		
05/19/88	32	AQUA		ND	ND	ND	ND	ND	0		
05/19/88	33	AQUA		ND	ND	ND	ND	ND	0		
09/25/88	30	AQUA		ND	ND	ND	ND	ND	0		
12/09/88	20	AQUA		ND	ND	ND	ND	ND	0		
02/24/89	27	AQUA		ND	ND	ND	ND	ND	0		
06/07/89	4	AQUA	624	ND	ND	ND	ND	ND	0		
09/07/89	7	AQUA	8240	ND	ND	ND	ND	ND	0		
12/12/89	19	AQUA	8240	ND	ND	ND	ND	ND	0		
03/01/90	17	AQUA	8240	ND	ND	ND	ND	ND	0		
06/04/90	29	AQUA	8240	ND	ND	ND	ND	ND	0		
06/04/90	30	AQUA	8240	ND	ND	ND	ND	ND	0		
08/24/90	25	AQUA	8240	ND	ND	ND	ND	ND	0		
10/30/90	35	AQUA	8240	ND	ND	ND	ND	ND	0		
03/04/91	32	AQUA	8240	ND	ND	ND	ND	ND	0		
03/04/91	33	AQUA	8240	ND	ND	ND	ND	ND	0		
06/03/91	38	AQUA	8240	ND	ND	ND	ND	ND	0		
11/14/91	36	AQUA	8240	ND	ND	ND	ND	ND	0		
01/24/92	16	AQUA	8240	ND	ND	ND	ND	ND	0		
03/30/92	4	AQUA	8240	ND	ND	ND	ND	ND	0		
08/24/92	33	AQUA	8240	ND	ND	ND	ND	ND	0		
11/02/92	42	AQUA	8240	ND	ND	ND	ND	ND	0		
02/05/93	29	AQUA	8240	ND	ND	ND	ND	ND	0		
05/12/93	33	AQUA	8240	ND	ND	ND	ND	ND	0		
09/01/93	23	AQUA	8240	ND	ND	ND	ND	ND	0		
12/04/93	33	AQUA	8240	ND	ND	ND	ND	ND	0		
12/04/93	34	AQUA	8240	ND	ND	ND	ND	ND	0		
02/19/94	35	AQUA	8240	ND	ND	ND	ND	ND	0		
05/07/94	39	AQUA	8240	ND	ND	ND	ND	ND	0		
05/07/94	40	AQUA	8240	ND	ND	ND	ND	ND	0		
09/16/94	39	AQUA	8240	32.4	ND	ND	ND	ND	32		
09/16/94	40	AQUA	8240	32.4	ND	ND	ND	ND	32		

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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 INOPERATIVE PUMP.

PARAMETER

o = Date Sampled

NAPHTHA RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

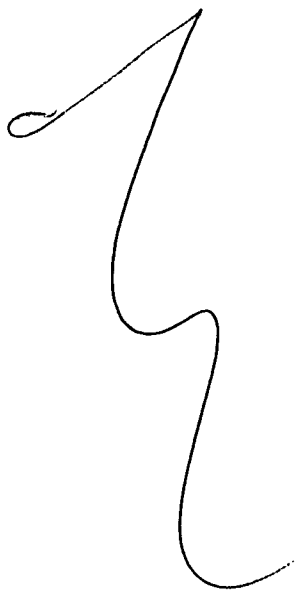
NAPHTHA RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID RWB-22 DATE COLLECTED 09 DEC 94 AMOUNT	Q
A.VOA	BENZENE	UG/L	5	U
	1,1-DICHLOROETHANE	UG/L	8.0	
	CIS-1,2-DICHLOROETHENE	UG/L	27	
	VINYL CHLORIDE	UG/L	10	U
	ACETONE	UG/L	129	
	2-BUTANONE	UG/L	385	
TOTAL VOCS:			549	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. C
Date 2/23/95

VOC Recovery Wells



SOURCE: AW-1-2				1,1-DI-CHLORO-ETHANE	1,2-DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHENE	CIS-1,2-DICHLORO-ETHENE	TRANS-1,2 DICHLORO-ETHENE	1,1,1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
12/09/93	36	AQUA	8240	117	ND	31.0	202	77.6	27.1	187	25.1	667	
02/19/94	27	AQUA	8240	54.1	ND	7.8	123	43.0	19.5	115	ND	362	
05/07/94	32	AQUA	8240	50.3	ND	7.3	113	34.9	22.0	100	ND	328	
09/15/94	32	AQUA	8240	"	"	"	"	"	"	"	"	"	A

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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 = ANALYTICAL RESULTS INVALID DUE TO CONTAMINATION DURING SAMPLING.

PARAMETER

o = Date Sampled

VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-2 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	58	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	8.0	
	TRANS-1,2-DICHLOROETHENE	UG/L	47	
	CIS-1,2-DICHLOROETHENE	UG/L	150	
	1,1,1-TRICHLOROETHANE	UG/L	25	
	TRICHLOROETHENE	UG/L	119	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			407	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by: Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RW 3-4				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
12/09/93	37	AQUA	8240	150	ND	34.0	115	25.1	70.6	226	ND	621	
02/19/94	28	AQUA	8240	57.4	ND	5.8	66.6	12.0	37.7	136	ND	316	A
05/07/94	33	AQUA	8240	34.3	ND	ND	43.1	ND	11.8	47.8	ND	137	
09/15/94	33	AQUA	8240	"	"	"	"	"	"	"	"	"	B
09/15/94	34	AQUA	8240	No VOC Detected									B

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A = CHLOROFORM 5.4 UG/L

B = ANALYTICAL RESULTS INVALID DUE TO CONTAMINATION DURING SAMPLING

PARAMETER

o = Date Sampled

VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-3A DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	46	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5.6	
	TRANS-1,2-DICHLOROETHENE	UG/L	16	
	CIS-1,2-DICHLOROETHENE	UG/L	113	
	1,1,1-TRICHLOROETHANE	UG/L	38	
	TRICHLOROETHENE	UG/L	124	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			342.6	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RW 5-7				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
12/09/93	38	AQUA	8240	173	ND	41.8	167	38.5	80.2	242	16.7	759	
02/19/94	29	AQUA	8240	102	ND	11.1	143	22.5	50.3	153	21.8	504	
05/07/94	34	AQUA	8240	150	ND	13.9	151	19.8	75.1	164	19.2	593	
09/15/94	35	AQUA	8240	"	"	"	"	"	"	"	"	"	A

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VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-5 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	86	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	8.5	
	TRANS-1,2-DICHLOROETHENE	UG/L	19	
	CIS-1,2-DICHLOROETHENE	UG/L	128	
	1,1,1-TRICHLOROETHANE	UG/L	46	
	TRICHLOROETHENE	UG/L	166	
	VINYL CHLORIDE	UG/L	11	
TOTAL VOCS:			464.5	

QUALIFIER CODES (Q):
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Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RW 8-11				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
10/04/88	NSM-2	AQUA		6.2	ND	7.1	88	14	ND	215	71	401	
10/06/88	NSM-6	AQUA		5.6	ND	5.6	75	23	ND	187	ND	296	
02/26/89	38	AQUA		ND	49.4	ND	500	110	ND	26.3	96.8	783	
05/11/89	40	AQUA	624	ND	31.4	ND	760	69.1	ND	280	56.7	1197	
09/10/89	38	AQUA	8240	ND	53.8	6	500	120	ND	39.1	64.5	783	
12/14/89	39	AQUA	8240	10	21.5	9.9	620	110	ND	83	19.4	874	
03/02/90	31	AQUA	8240	8.2	77.6	6.1	610	130	ND	49.6	53.4	935	
05/04/90	38	AQUA	8240	56.8	ND	8.2	210	26.3	11.3	380	18.2	711	
08/25/90	38	AQUA	8240	6.7	57.7	ND	231	43.2	ND	63.5	22.0	424	
10/31/90	39	AQUA	8240	ND	ND	ND	744	5.5	ND	1190	50	1990	
03/04/91	38	AQUA	8240	16.0	50.1	ND	212	20.8	ND	131	32.7	463	
06/03/91	34	AQUA	8240	29.2	20.9	ND	82.4	22.1	7.0	293	34.3	489	
11/14/91	27	AQUA	8240	43.1	8.2	5.9	187	18.6	6.8	251	14.6	535	
01/29/92	40	AQUA	8240	67.5	21.9	ND	205	28.5	ND	185	ND	508	
04/01/92	30	AQUA	8240	37.5	7.8	10.9	298	28.0	8.6	371	147	909	
08/24/92	36	AQUA	8240	ND	25.7	ND	292	77.7	ND	32.1	26.4	454	
10/31/92	28	AQUA	8240	7.5	14.8	ND	265	71.0	ND	59.9	54.0	472	
10/31/92	29	AQUA	8240	7.5	13.9	ND	261	69.5	ND	59.4	52.8	464	
02/05/93	38	AQUA	8240	42.5	10.5	11.6	660	74.9	9.1	498	135	1442	
05/12/93	35	AQUA	8240	29.4	8.7	10.0	655	85.3	7.7	548	144	1488	
05/12/93	36	AQUA	8240	30.9	8.5	11.8	649	84.5	7.0	547	150	1489	
12/09/93	39	AQUA	8240	20.8	ND	24.0	514	73.3	12.0	985	44.0	1673	A
02/19/94	30	AQUA	8240	ND	ND	ND	572	37.7	ND	882	141	1633	
02/19/94	31	AQUA	8240	ND	ND	ND	496	40.4	ND	720	116	1372	
05/07/94	42	AQUA	8240	12.0	ND	17.1	523	33.9	11.9	753	134	1485	
09/18/94	38	AQUA	8240	-	-	-	-	-	-	-	-	-	B

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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 = 6.7 UG/L CHLOROFORM

B = ANALYTICAL RESULTS INVALID DUE TO CONTAMINATION DURING SAMPLING.

PARAMETER

o = Date Sampled

VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

t a gleason associates
Environmental and Geotechnical Services

VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-8 DATE COLLECTED 09 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	14	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	12	
	TRANS-1,2-DICHLOROETHENE	UG/L	41	
	CIS-1,2-DICHLOROETHENE	UG/L	406	
	1,1,1-TRICHLOROETHANE	UG/L	11	
	TRICHLOROETHENE	UG/L	419	
	VINYL CHLORIDE	UG/L	185	
TOTAL VOCS:			1088	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie David
Rev. 0
Date 2/23/95

SOURCE: RW 17				CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES	
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L		
10/04/88	NSM-4	AQUA		66	218	27	ND	311		
10/06/88	NSM-7	AQUA		63	197	30	ND	290		
12/11/88	NSM-4	AQUA		ND	26.7	49.1	ND	76		
02/26/89	40	AQUA		97.5	200	54.4	ND	352		
09/19/89	43	AQUA	8240	150	380	66.9	ND	597		
12/14/89	42	AQUA	8240	120	290	87.5	ND	498		
03/20/90	27	AQUA	8240	180	380	79.9	ND	640		
06/04/90	40	AQUA	8240	77.7	190	54.9	ND	323		
08/25/90	40	AQUA	8240	66.6	127	41.1	ND	235		
11/14/91	29	AQUA	8240	81.8	192	43.2	ND	317		
01/24/92	23	AQUA	8240	67.2	169	58.0	ND	294		
01/24/92	24	AQUA	8240	51.3	136	56.0	ND	243		
03/30/92	10	AQUA	8240	55.1	122	56.2	ND	233		
08/24/92	41	AQUA	8240	105	310	77.4	ND	492		
10/31/92	31	AQUA	8240	56.7	126	47.9	ND	231		
02/09/93	42	AQUA	8240	100	242	58.1	ND	400		
06/18/93	3	AQUA	8240	86.1	198	12.4	ND	297		
02/19/94	33	AQUA	8240	55.7	124	47.9	ND	228		
05/07/94	35	AQUA	8240	50.0	115	46.5	ND	212		
05/07/94	36	AQUA	8240	47.3	111	47.2	ND	206		
09/15/94	37	AQUA	8240	-	-	-	-	-	A	

NOTES:

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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 10/90, 03/91, 06/91, 08/91, AND 05/93 DUE TO INOPERATIVE PUMP.

A = ANALYTICAL RESULTS INVALID DUE TO CONTAMINATION DURING SAMPLING.

PARAMETER

o = Date Sampled

VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-17 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	125	
	CIS-1,2-DICHLOROETHENE	UG/L	60	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	78	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			263	

QUALIFIER CODES (Q):
U : THIS ANALYTE WAS NOT DETECTED. THE NUMERIC VALUE REPRESENTS THE SAMPLE QUANTITATION/DETECTION LIMIT FOR THIS ANALYTE.

Approved for Quality Assurance Release by:
Valerie Davis
Rev. 0
Date 2/23/95

SOURCE: RW 18				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
02/19/94	34	AQUA	8240	ND	ND	ND	18.7	22.7	ND	19.0	ND	60	
05/07/94	37	AQUA	8240	ND	ND	ND	15.3	20.3	ND	14.0	ND	50	
09/15/94	27	AQUA	8240	"	"	"	"	"	"	"	"	"	A

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VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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Environmental and Geotechnical Services

VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-18 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	5	U
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	5	U
	TRANS-1,2-DICHLOROETHENE	UG/L	26	
	CIS-1,2-DICHLOROETHENE	UG/L	21	
	1,1,1-TRICHLOROETHANE	UG/L	5	U
	TRICHLOROETHENE	UG/L	21	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			68	

QUALIFIER CODES (Q):
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Valerie Davis
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SOURCE: RW 19				1, 1-DI-CHLORO-ETHANE	1, 2-DI-CHLORO-ETHANE	1, 1-DI-CHLORO-ETHENE	CIS-1, 2-DICHLORO-ETHENE	TRANS-1, 2 DICHLORO-ETHENE	1, 1, 1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
12/93	-	-	-	-	-	-	-	-	-	-	-	-	
02/19/94	35	AQUA	8240	6.9	ND	ND	7.9	ND	17.5	18.9	ND	51	
09/15/94	26	AQUA	8240	"	"	"	"	"	"	"	"	"	A

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VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID MH-19 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L	35	
	1,2-DICHLOROETHANE	UG/L	5	U
	1,1-DICHLOROETHENE	UG/L	20	
	TRANS-1,2-DICHLOROETHENE	UG/L	5	U
	CIS-1,2-DICHLOROETHENE	UG/L	5	U
	1,1,1-TRICHLOROETHANE	UG/L	220	
	TRICHLOROETHENE	UG/L	33	
	VINYL CHLORIDE	UG/L	10	U
TOTAL VOCS:			308	

QUALIFIER CODES (Q):
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SOURCE: RW 13				1,1-DI-CHLORO-ETHANE	1,2-DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHENE	CIS-1,2-DICHLORO-ETHENE	TRANS-1,2 DICHLORO-ETHENE	1,1,1-TRI CHLORO-ETHANE	TRI-CHLORO-ETHENE	VINYL CHLORIDE	SUM	NOTES
DATE SAMPLED	SAMPLE NO.	LAB	METHOD	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	
10/06/88	NSM-9	AQUA		ND	27	ND	328	65	ND	ND	84	504	
12/11/88	NSM-5	AQUA		ND	ND	33.4	517	81.4	ND	ND	93.3	725	
02/26/89	39	AQUA		ND	47.1	ND	450	110	ND	12	85.6	705	
06/11/89	41	AQUA	624	ND	50.1	ND	500	120	ND	33	ND	703	
09/10/89	39	AQUA	8240	ND	53.5	6.5	490	120	ND	41.4	66.8	778	
09/10/89	40	AQUA	8240	ND	52.4	6.7	480	120	ND	41.8	66.3	767	
12/14/89	40	AQUA	8240	ND	25	9.5	610	120	ND	56.8	17.9	839	
12/14/89	41	AQUA	8240	ND	24.1	8.5	550	110	ND	48.5	18.1	759	
03/02/90	33	AQUA	8240	9	81.5	6.7	640	140	ND	50	51.7	979	
06/04/90	39	AQUA	8240	9.8	80.1	5.9	420	93.9	ND	66.4	47.2	723	
08/25/90	39	AQUA	8240	6.7	54.3	ND	240	48.6	ND	63.0	27.4	440	
10/31/90	41	AQUA	8240	104	6.8	17.0	164	28.3	68.1	173	26.5	588	
10/31/90	42	AQUA	8240	10.6	78.3	ND	335	62.7	ND	65.7	52.9	605	
03/04/91	39	AQUA	8240	ND	75.2	ND	133	10.3	ND	18.6	ND	237	A
03/04/91	40	AQUA	8240	ND	63.3	ND	149	20.0	ND	17.7	14.6	265	
06/02/91	33	AQUA	8240	5.3	62.6	ND	227	90.6	ND	20.2	29.3	435	
08/30/91	23	AQUA	8240	ND	40.7	ND	169	35.7	ND	13.7	26.2	285	
11/14/91	28	AQUA	8240	ND	40.3	5.9	216	43.8	ND	14.8	22.5	343	
01/24/92	21	AQUA	8240	ND	45.4	ND	201	42.7	ND	20.2	ND	309	
04/01/92	27	AQUA	8240	ND	25.6	ND	227	53.5	ND	23.6	27.3	357	
04/01/92	28	AQUA	8240	ND	25.1	ND	219	53.8	ND	23.5	29.4	351	
08/24/92	38	AQUA	8240	ND	31.2	ND	384	112	ND	34.5	40.4	602	
10/31/92	22	AQUA	8240	7.3	17.2	ND	303	87.3	ND	26.8	40.6	482	
02/06/93	40	AQUA	8240	ND	19.5	ND	390	118	ND	51.7	46.5	626	
05/12/93	26	AQUA	8240	7.2	16.5	ND	317	80.0	ND	40.1	20.0	481	
09/01/93	26	AQUA	8240	10.5	20.0	ND	314	109	ND	34.6	31.8	520	
12/03/93	24	AQUA	8240	12.6	20.6	9.1	411	153	ND	36.2	41.6	684	
03/29/94	48	AQUA	8240	11.4	9.7	ND	287	90.3	ND	32.7	26.4	458	
05/06/94	28	AQUA	8240	9.6	30.0	ND	275	84.0	ND	26.5	35.9	461	
09/18/94	36	AQUA	8240	-	-	-	-	-	-	-	-	-	B

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A = BROMOFORM 17.4 UG/L

B = ANALYTICAL RESULTS INVALID DUE TO CONTAMINATION DURING SAMPLING.

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VOC RECOVERY WELLS
GROUNDWATER QUALITY ANALYSIS
ORGANIC COMPOUNDS

ALLIEDSIGNAL INC.
GROUNDWATER INVESTIGATIONS
SOUTH BEND, INDIANA

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VOC RECOVERY WELLS
SUMMARY OF ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
ALLIED SIGNAL, INC.
SOUTH BEND, INDIANA
REPORT DATE 02/23/95

GROUP	PARAMETER NAME	UNITS	SAMPLE ID P-13 DATE COLLECTED 08 DEC 94 AMOUNT	Q
A.VOA	1,1-DICHLOROETHANE	UG/L		5 U
	1,2-DICHLOROETHANE	UG/L	9.7	
	1,1-DICHLOROETHENE	UG/L		5 U
	TRANS-1,2-DICHLOROETHENE	UG/L	70	
	CIS-1,2-DICHLOROETHENE	UG/L	298	
	1,1,1-TRICHLOROETHANE	UG/L		5 U
	TRICHLOROETHENE	UG/L	15	
	VINYL CHLORIDE	UG/L	15	
TOTAL VOCS:			407.7	

QUALIFIER CODES (Q):
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2/23/95