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PHASE IV
SUBSURFACE/REMEDIAL INVESTIGATION

URSULA BORGERDING ESTATE PROPERTY
433-437 WOODWARD AVENUE
BELOIT, WISCONSIN

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PHASE IV SUBSURFACE/REMEDIAL INVESTIGATION

URSULA BORGERDING ESTATE PROPERTY
433-437 WOODWARD AVENUE
BELOIT, WISCONSIN

1.0 INTRODUCTION

A Phase IV subsurface/remedial investigation was conducted jointly by Dames & Moore, Inc. and Foth & Van Dyke, at the Ursula Borgerding Estate property, 433-437 Woodward Avenue (formerly Portland Avenue), Beloit, Wisconsin (Property). The investigative activities were contracted to Foth & Van Dyke by the Wisconsin Department of Natural Resources (WDNR) under Wisconsin's Environmental Repair Program. The Borgerding Estate retained Dames & Moore, with the approval of the WDNR, to complete the scope of work initiated by Foth & Van Dyke. The investigative activities were conducted during the period June 1 through June 14, 1993 (Foth & Van Dyke) and June 24 through July 21, 1993 (Dames & Moore). Presented in this report are the results of findings of that investigation.

The WDNR has assigned a "high priority" ranking to the Property, particularly because municipal water well WPL#4 is located approximately 400 feet west of the Property and is scheduled to begin supplying the City of Beloit with drinking water in late September or early October of 1993.

1.1 Purpose and Scope

The purpose of the investigation was to more thoroughly assess the lateral and vertical boundaries of contamination at the Property and to provide data necessary to determine the most appropriate means of site remediation. The scope of work was defined by the Wisconsin Department of Natural Resources (letters dated November 11, 1992, revised December 2, 1992 and May 12, 1993). Based on an agreement among the WDNR, Borgerding Estate, Foth & Van Dyke and Dames & Moore, Foth & Van Dyke completed the following tasks:

- Drilling and Hydropunch® soil sampling.

- Installation of deep piezometers (50 feet below ground surface) at each of three existing well locations (MW-1, MW-2S/D and MW-3S/D). Installation of a well nest consisting of one ground water table observation well (14.5 feet below ground surface) and two piezometers (25 feet and 50 feet below ground surface).

- Collection of soil samples from the paint waste area for hazardous waste determination.

- Collection of ten soil samples for comparative enumeration assays (CEAs) of microbial populations.

- Retrofitting the existing ground water monitoring wells with flush mounted protective casings.

Dames & Moore completed the following tasks:

- Collection of two rounds of ground water sampling from all existing and new ground water monitoring wells and piezometers for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and dissolved lead and barium. Each sampling round included two sample duplicates and two field blanks.

- Measure pH, temperature and conductivity of the water in all new and existing wells during both rounds of ground water sampling.

- Conducting a well-casing and ground surface elevation survey and water-elevation survey at all existing and new ground water monitoring wells and piezometers.

- Evaluation of ground water flow patterns.
- Sampling the drilling spoil for waste characterization parameters.
- Performing slug tests on all existing and new ground water monitoring wells and piezometers.
- Evaluation of data gathered and recommendation for remedial action and/or additional site investigation, as appropriate.
- Preparation of investigative report, including data gathered by Foth & Van Dyke and Dames & Moore.

No significant deviations from the scope of work occurred with the following exceptions:

- Field Blank #2 (FB-2) was not analyzed for PAHs during the second round of ground water sampling because an insufficient number of PAH-sample bottles was inadvertently shipped to the site.
- Gasoline range organics (GRO; Wisconsin-modified method) was added to the drilling spoil waste characterization analytical list.
- Temperature and some conductivity measurements were not taken during the round two sampling event due to an equipment failure that could not be repaired in the field.

The site plan, including sampling locations, is presented as Figure 1.

1.2 Previous Work

Documentation of previous investigations conducted at the site can be found in the following documents:

- CBC Environmental Services, 1989, A report for an underground storage tank closure site assessment at 435 Woodward Avenue, Beloit, Wisconsin.

- Dames & Moore, 1990, Subsurface investigation, Ursula Borgerding Estate, 435 Woodward Avenue, Beloit, Wisconsin.

- Dames & Moore, 1992, Phase III subsurface investigation report, Ursula Borgerding Estate Property, 433-437 Woodward Avenue, Beloit, Wisconsin.

The investigative report prepared by Foth & Van Dyke for the tasks completed during the Phase IV activities is:

- Foth & Van Dyke, 1993, Borgerding ERP project contamination study.

2.0 SITE INVESTIGATION

2.1 Soil Sampling and Analyses

Foth & Van Dyke collected soil samples at ten locations for analysis of comparative enumeration assays (CEAs) to evaluate the natural microbial activity at the Property. The results were to be used to evaluate the potential for bioremediation, using the naturally-occurring microbial populations at the Property. The soil sampling activities are documented in the "Borgerding ERP Project Contamination Study" report prepared by Foth & Van Dyke (1993).

2.2 Ground Water Sampling and Analyses

Foth & Van Dyke collected ground water samples from two locations near well nest MW-3S/D/DD using a Hydropunch® and analyzed the samples for benzene, toluene, ethylbenzene, and total xylenes. The samples were collected and analyzed to optimize placement of the screened intervals of the deep ("DD;" 50-foot) piezometers at existing well MW-1, well nests MW-2S/D and MW-3S/D, and for installation of well nest MW-11S/D/DD. The results of the sampling are presented in the Foth & Van Dyke report (1993).

Two rounds of ground water samples were collected for laboratory analysis to evaluate ground water quality at the Property. Samples were collected from each of the existing and new ground water monitoring wells and piezometers at the site. Additionally, duplicate samples were collected from MW-2S (duplicate sample identified as "MW-2SA") and MW-3D (duplicate sample identified as "MW-3DA") during each sampling round. Field blanks were also collected during each sampling round (FB-1 and FB-2). The methodologies for well purging and sample collection were generally consistent with those utilized during previous investigations at the Property and are provided in Appendix A. Field blanks consisted of clean, distilled water, purchased from a vendor located adjacent to the Property. The water was containerized and processed in a manner similar to that of the ground water samples. Field blank sample preparation was conducted adjacent to the well nest, MW-3S/D/DD. Trip blanks were prepared by the laboratory and accompanied

the sample jars from the laboratory, through the site, and returned to the laboratory for analysis.

Each ground water sample and field blank was analyzed for VOCs (Wisconsin-modified SW846 method 8021), PAHs (SW846 method 8270), and dissolved lead and barium. Trip blanks were analyzed for VOCs only. Copies of the analytical reports are presented in Appendices B and C and are summarized in Tables 1 and 2 (round one and round two, respectively).

Ground water pH, conductivity and temperature measurements were taken in the field following well purging and sampling. Details of the field methodologies are presented in Appendix A. The in-field measurement results are summarized in Table 3.

2.3 Waste Sampling and Analyses

Soil samples were collected to characterize various wastes at the Property. Foth & Van Dyke (1993) collected samples to characterize the soils affected within the waste paint area. The samples were analyzed for TCLP volatiles (SW846 method 8240), TCLP semivolatiles (SW846 method 8270), TCLP pesticides/herbicides (SW846 methods 8080 and 8150), and TCLP RCRA metals (SW846 methods). The methodologies and results of sampling are presented in the Foth & Van Dyke report (1993).

Dames & Moore collected two composite soil samples from the drilling spoil generated during drilling and well installation activities. The samples were analyzed for TCLP VOCs (SW846 method 8240), PCBs (modified SW846 method 8080), reactive cyanide and sulfide (modified SW846 method 9030), gasoline range organics (Wisconsin-modified GRO method), diesel range organics (Wisconsin-modified DRO method), TCLP RCRA metals (SW846 methods), free liquids, total solids, and flash point. Details of the sample-collection methodologies are presented in Appendix A. The analytical reports are presented in Appendix D. A summary of the analytical results is presented in Table 4.

2.4 Well Elevation Survey and Ground Water Level Measurements

A well elevation survey and ground water level data were collected to evaluate the ground water flow patterns and gradients at the property. The well elevation survey was conducted on June 24, 1993 by Dames & Moore personnel for each of the new and existing ground water monitoring wells and piezometers. The benchmarks utilized for the survey were ground-control benchmarks previously established by Aero-Metric Engineering, Inc.

Ground water level measurements were made in each well and piezometer on June 25, July 20, and September 15, 1993. The water levels were measured at least one week after the wells were developed. Prior to measurement, the wells were opened and allowed to equilibrate for a period of at least one hour. Details of the methodologies are presented in Appendix A. The well and water elevations are summarized in Table 5.

2.5 Slug Tests

Slug tests, based on the methodologies presented by Bouwer and Rice (1979), were conducted on each well. The tests were conducted on June 24 and 25, 1993. Selected wells were re-tested on July 20 and 21, 1993 due to the poor quality of the data resulting from the first test. Because of the high hydraulic conductivities of the aquifer at the Property, some difficulty was encountered during the slug tests: the volume of the slug was often insufficient to stress the aquifer for effective testing and the water levels often recovered faster than the slug could be pulled from the well. The slug test methodologies are presented in Appendix A and the results summarized in Table 6.

3.0 SITE HYDROGEOLOGY

For a general discussion of regional and local aquifer characteristics, see the Phase III Subsurface Investigation Report prepared by Dames & Moore (1992).

3.1 Ground Water Flow

Ground water level data were analyzed using two statistical methods: kriging and least squares[1], and were cross-checked by hand plotting. The ground water flow patterns derived from the water level data are similar to those described in the Phase III report. The shallow horizontal ground water within approximately 150 feet of the riverbank appears to be flowing nearly due east, away from the Rock River. Farther east of the river, in the areas of MW-1, MW-9 and MW-10S/D/DD, the shallow horizontal ground water appears to be flowing nearly due west, toward the Rock River, with a gradient of 0.02. The horizontal gradient of the intermediate and deep wells is approximately 0.05 to 0.08 toward the south west.

A strong downward vertical gradient is observed at MW-2S/D. Lesser downward vertical gradients (0.005 to 0.01) are observed at MW-10S/D, MW-11S/D and MW-2D/DD. Slight upward gradients (0.001 to 0.02) are noted in MW-1/DD, MW-3D/DD and MW-11D/DD. The vertical gradient at MW-3S/D was not evaluated, due to the presence of free product on the ground water in MW-3S; however, if corrected water elevations were utilized for well MW-3S (assuming a correction factor of 0.8), it appears that a strong downward vertical gradient would generally be indicated.

[1] The least squares computer model is a method of analyzing the spatial distribution of the hydraulic heads by defining the trend surface, fitting a least squares surface to the water elevation data. The computer program also indicates the discrepancies between the trend surface and the actual measurements. The discrepancies can be used to analyze the broad range of phenomena that can interfere with the data, such as measurement errors, or heterogeneity.

3.2 Hydraulic Conductivity

Measured hydraulic conductivities at the site ranged from 10^{-5} cm/sec to 10^{-2} cm/sec. As noted in Table 6, the ground water recovery in some wells, including all of the deep ("DD;" 50-foot) wells, was so rapid that effective measurements could not be made. It should be noted that hydraulic conductivities based on slug tests represent a small volume of the aquifer in the immediate vicinity of the well screen.

4.0 NATURE AND EXTENT OF CONTAMINATION

4.1 Soil Quality

A limited number of soil samples were collected and analyzed during the Phase IV investigation. Soil samples from four areas were analyzed for various waste characterization parameters and ten soil samples analyzed for microbial populations. The limited data are discussed in the Foth & Van Dyke report (1993). The results of the waste characterization analyses (using the TCLP methods) indicate that none of the samples would be considered characteristically hazardous.

The comparative enumeration assay (CEA) study conducted by Foth & Van Dyke indicates that microbial populations exist within the soils at the Property and that fractions of those populations are gasoline and/or diesel degrader populations. Nutrient analyses, which would allow further interpretation of the results, were not performed during the Phase IV investigation. Additional discussion of the CEA results is provided in the Foth & Van Dyke report.

4.2 Ground Water Quality

The purpose of the Phase IV ground water study was to more fully assess the lateral and vertical boundaries of contamination originating at the Property. The analytical results from the Phase IV investigation generally support the conclusions made in the Phase III investigation with a few notable exceptions:

- Reported naphthalene concentrations increased to levels above the NR 140 Enforcement Standard in monitoring wells MW-1, MW-2S and MW-3S during the Phase IV investigation, relative to the concentrations measured during Phase III round of ground water samples collected during June 1991.

- Reported benzene concentrations increased markedly in MW-2D and decreased in MW-2S relative to the values reported in the Phase III report.

- Reported xylene concentrations increased to levels above the NR 140 Enforcement Standard in monitoring wells MW-2D and MW-3S during the Phase IV investigation.

- Reported concentrations of volatile compounds detected in MW-3S increased, while the concentrations of volatile compounds detected in MW-3D decreased from those reported in the Phase III report.

The two rounds of ground water samples collected during the Phase IV investigation are relatively consistent, with the following exceptions:

- MW-1: Generally, VOC concentrations were higher in the round two samples than in the round one samples. Toluene and xylenes exceeded the NR 140 Enforcement Standards in the round two samples.

- Naphthalene results fluctuated from round one to round two with no apparent pattern. Fluctuations were noted in VOC analyses and PAH analyses. Although the fluctuations resulted in sample locations exceeding or falling below the naphthalene Enforcement Standard, the actual difference in reported concentrations was generally within the accuracy of the methodologies.

- MW-3S: Benzo(*a*)pyrene was detected in the round one sample and not in the round two sample (any detection of this parameter results in an exceedence of the NR 140 Enforcement Standard).

- MW-11D: Reported benzene concentrations were substantially greater in the round one sample than in the round two sample.

The duplicate samples collected during both sampling rounds were consistent with the original samples. No detectible concentrations of any of the compounds analyzed were

found in the field blanks and trip blanks, with the exception of trace concentrations of toluene in both field blanks for both rounds of sampling.

Volatile compounds were detected in all of the deep ("DD;" 50-foot) wells; however, the compounds detected at this depth consisted primarily of chlorinated compounds. No chlorinated compounds have been confirmed within the shallow ground water or soil at the Property. Therefore, the source of the chlorinated compounds is not likely to be the result of operations at the Property. With this in mind, the vertical boundary of contamination associated with the Property appears to be at approximately 25 to 30 feet below ground surface. The NR 140 exceedences in the shallow ground water at the Property consist primarily of benzene, toluene, xylenes and naphthalene, consistent with the site's historical use of aboveground and underground petroleum storage tanks. PAH exceedences were limited to naphthalene and one occurrence of benzo(*a*)pyrene in MW-3S.

As described during the Phase III investigation, the lateral boundaries of contamination appear to remain near MW-9 to the east and near MW-5 to the north. South of the Property, monitoring wells MW-11S/D/DD were installed to evaluate the down-gradient lateral boundary of contamination. The shallow ("S;" 14-foot) well contained only trace concentrations of benzene, toluene and xylenes. The intermediate ("D;" 25-foot) well contained concentrations of benzene and naphthalene that exceed the NR 140 Enforcement Standards. Based on the ground water flow patterns observed at the Property, as described in the Phase III report and confirmed during the Phase IV investigation, it appears that at least a portion of this contamination may have originated from the Property. Free product has only been noted in MW-3S, indicating that the occurrence of free product in the subsurface is apparently localized.

5.0 SUMMARY AND CONCLUSIONS

A Phase IV subsurface/remedial investigation was conducted jointly by Dames & Moore, Inc. and Foth & Van Dyke, at the Ursula Borgerding Estate property, 433-437 Woodward Avenue, Beloit, Wisconsin (Property). Because of the Property's close proximity to a municipal water well, which is scheduled to begin supplying the City of Beloit with drinking water in late September, 1993, the WDNR initiated the Phase IV investigative activities under the Environmental Repair Program. Foth & Van Dyke was retained by the WDNR to conduct the soil investigative activities and install the additional ground water monitoring wells and piezometers. Dames & Moore was retained by the Ursula Borgerding Estate to conduct ground water sampling activities, and complete the scope of work defined by the WDNR. Site activities were conducted by Foth & Van Dyke during the period of June 1 through June 14, 1993 and are documented in a report titled, "Borgerding ERP Project Contamination Study" (Foth & Van Dyke, 1993). Site activities were conducted by Dames & Moore during the period June 24 through July 21, 1993.

The scope of work jointly completed consisted of installation of one ground water monitoring well and five piezometers, three of which were installed with existing well nests. Comparative enumeration assays were conducted on ten soil samples collected from various locations on the Property to evaluate the biologic populations present within the soils. Waste characterization samples were collected from the paint waste area (Foth & Van Dyke) and the drilling spoil (Dames & Moore) to facilitate waste disposal. Two rounds of ground water samples were analyzed for VOCs, PAHs, and dissolved lead and barium.

The results of the Phase IV investigation generally support the conclusions presented in the Phase III investigation report. The lateral boundaries of ground water contamination remain near MW-9 to the east and MW-5 to the north. Ground water impacts observed in the intermediate ("D;" 25-foot) well of the MW-11 well nest installed immediately south of Woodward Avenue may have originated from the Property, based on observed ground water flow patterns and the nature of the compounds found in the ground water.

The vertical boundary of contamination attributable to the former operations at the site, appears to be approximately 25 to 30 feet below ground surface. Although volatile compounds are detected in samples collected from the deep ("DD;" 50-foot) wells, the nature of the contaminants found are not similar to those found in the shallow and intermediate ground water samples nor soil samples collected from the Property.

6.0 RECOMMENDATIONS

Based on the information available regarding the environmental conditions of the Property and the potential for influence on ground water and contaminant migration resulting from eventual operation of water-supply well WPL#4 east of the site, potential remedial action was divided into three phases of priority:

1) Hydraulic gradient control.

2) Ground water remediation.

3) Soil remediation.

Control of the hydraulic gradient within the identified areas of ground water contamination is considered to be a major priority to minimize the effect (if any) of the municipal well on the migration of contaminants off the Property and toward the well. Ground water remediation is a second major priority after gradient control because the dissolved contaminants in the ground water may be mobile and, therefore, present a risk for off-site contamination and potential human contact.

Because the volume of soil impacted within the paint-waste area is minimal and the analytical results indicate that the soil may be managed as a non-hazardous waste, excavation and disposal is recommended. This area may be addressed during the initial remedial action activities.

Until the ground water remediation and gradient control measures are implemented, significant soil remediation on the Property will not be addressed in any detail because several issues key to evaluation of remedial technology feasibility for the site soils, such as naturally-occurring nutrient levels, are still unknown. Additionally, implementation of a ground water remediation system will likely cause the thickness of the unsaturated zone at the Property to change, depending on the technology utilized. Because the water content of the soil will be a critical factor in evaluating and designing a remedial system for the soil,

these conditions must be determined in the field during or following ground water remediation.

Additional information will also be required before gradient control and ground water remedial actions can be fully evaluated or designed. The actual effect of pumping the municipal well on the shallow ground water at the Property will have to be measured. If a significant effect on water levels is determined to be associated with pumping the municipal well, such influences may need to be taken into account during the evaluation and design of gradient control measures. The data required will be collected by measuring water levels in monitoring well nests on the Property during the pumping cycle of the municipal well.

Additionally, the hydrogeologic parameters of the aquifer will have to be estimated with more reliability than can be achieved from slug tests. A pumping test will likely be conducted on the aquifer before the ground water remedial action plan is developed. If a pumping test is to be conducted, a brief work plan for the test will be prepared for review by the WDNR.

Although additional information is required before remedial action can be designed and implemented, technically feasible remedial alternatives for hydraulic gradient control and ground water remediation have been selected for subsequent evaluation. Upon completion of the additional tests identified herein, the technologies will be evaluated for cost-effectiveness and to confirm their feasibility.

Hydraulic gradient control could be achieved by:

1) Constructing a physical barrier, such as sheet piling or a grout curtain;

2) Solidification/stabilization of the affected area; or

3) Ground water pumping.

Ground water remediation could be conducted using:

1) Bio-sparging (would have to be coupled with a physical barrier to maintain gradient control);

2) Pumping the ground water from the aquifer for *ex-situ* treatment (carbon adsorption, air stripping or bioremediation technologies could be used as treatment technologies); or

3) Solidification/stabilization of the entire affected area.

7.0 LIMITATIONS

Dames & Moore certifies, to the best of its knowledge and belief, that the information contained herein is accurate and complete. The subsurface investigation was conducted in accordance with accepted practices for the environmental consulting profession. Information provided by others was accepted as true and complete and the on-site inspection process was limited to only those activities that were immediately visible and obvious.

Due to the limitations of the inspections and investigative process and the necessary use of unverified data furnished by others, users of this report relying on information contained herein are cautioned that Dames & Moore cannot assume liability if the actual conditions vary from the information contained in this report. The information, conclusions and recommendations provided in this report apply only to the Ursula Borgerding Estate Property, 433-435 Woodward Avenue, Beloit, Wisconsin, as it existed at the time of the investigation. If site uses, conditions, regulations or laws change, conclusions and recommendations may no longer apply.

Respectfully submitted,

DAMES & MOORE, Inc.

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8.0 REFERENCES CITED

Bouwer, H. and Rice, R.C., 1976; A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells; Water Resources Research, v. 12, n. 3, pp. 423-428.

CBC Environmental Services, 1989, A report for an underground storage tank closure site assessment at 435 Woodward Avenue, Beloit, Wisconsin; 7 pp. plus attachments.

Dames & Moore, 1990, Subsurface investigation, Ursula Borgerding Estate, 435 Woodward Avenue, Beloit, Wisconsin; 16 pp. plus attachments.

Dames & Moore, 1992, Phase III subsurface investigation report, Ursula Borgerding Estate Property, 433-437 Woodward Avenue, Beloit, Wisconsin; 73 pp. plus attachments.

Foth & Van Dyke, 1993, Borgerding ERP project contamination study; 8 pp. plus attachments.

Table 1

Round One Ground Water Analytical Results (June 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Parameter	Monitoring Well											ES	PAL
	MW-1	MW-1DD	MW-2S	MW-2SA	MW-2D	MW-2DD	MW-3S	MW-3D	MW-3DA	MW-3DD	MW-4		
VOC (ppb)													
Benzene	1,600	1.3	83	86	3,100	1.0	7,500	2,400	2,000	ND	ND	5	0.067
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	4.4	0.44
n-Butylbenzene	ND	ND	58	73	59	ND	330	26	41	ND	ND	--	--
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
sec-Butylbenzene	ND	ND	6.8	7.1	ND	ND	ND	ND	ND	ND	ND	--	--
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	20
cis-1,2-Dichloroethene	ND	1.8	ND	ND	ND	16	ND	ND	ND	2.6	ND	100	10
1,1 -Dichloroethane	ND	42	ND	ND	ND	13	ND	ND	ND	2.0	ND	850	85
Ethylbenzene	ND	ND	43	48	430	ND	1,000	280	270	ND	ND	1,360	272
p-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Isopropylbenzene	ND	ND	21	22	ND	ND	ND	ND	23	ND	ND	--	--
Naphthalene	130	ND	99	87	ND	ND	510	100	140	ND	ND	40	8
n-Propylbenzene	43	ND	62	66	73	ND	240	41	41	ND	ND	--	--
Tetrachloroethene	ND	ND	ND	ND	ND	2.9	ND	ND	ND	ND	ND	1	0.1
1,1,1-Trichloroethane	ND	1.8	ND	ND	ND	3.4	ND	ND	ND	ND	ND	200	40
Trichloroethene	ND	2.9	ND	ND	ND	14	ND	ND	ND	3.5	ND	5	0.18
Toluene	ND	3.1	ND	7.2	82	4.0	810	39	22	3.3	ND	343	68.6
1,2,4-Trimethylbenzene	ND	ND	160	180	370	ND	1,300	96	110	ND	ND	--	--
1,3,5- Trimethylbenzene	ND	ND	54	62	120	ND	390	47	57	ND	ND	--	--
Styrenes & o-xylene	ND	ND	9.6	8.9	ND	ND	830	30	ND	ND	ND	-- *	-- *
p-, m-Xylenes	ND	ND	58	66	1,000	ND	3,300	460	440	ND	ND	620*	124*
MTBE	ND	ND	ND	ND	55	1.0	ND	31	34	ND	ND	60	12

Table 1

Round One Ground Water Analytical Results (June 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Parameter	Monitoring Well											ES	PAL
	MW-1	MW-1DD	MW-2S	MW-2SA	MW-2D	MW-2DD	MW-3S	MW-3D	MW-3DA	MW-3DD	MW-4		
PAH (ppb)													
Acenaphthene	ND	ND	ND	ND	ND	ND	74	ND	ND	ND	ND	--	--
Anthracene	ND	ND	ND	ND	ND	ND	59	ND	ND	ND	ND	--	--
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	100	ND	ND	ND	ND	--	--
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	89	ND	ND	ND	ND	--	--
Chrysene	ND	ND	ND	ND	ND	ND	83	ND	ND	ND	ND	--	--
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Fluorene	ND	ND	ND	ND	ND	ND	74	ND	ND	ND	ND	--	--
Fluoranthene	ND	ND	ND	ND	ND	ND	190	ND	ND	ND	ND	--	--
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	ND	0.003	0.0003
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	ND	--	--
Pyrene	ND	ND	ND	ND	ND	ND	130	ND	ND	ND	ND	--	--
Phenanthrene	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	37	ND	ND	ND	ND	--	--
Naphthalene	87	ND	44	38	36	ND	ND	64	38	ND	ND	40	8
Metals													
Lead	16	ND	ND	ND	2.9	ND	8.3	ND	2.4	ND	ND	50	5
Barium	130	160	190	190	140	130	220	130	55	44	110	1,000	200

Table 1

Round One Ground Water Analytical Results (June 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

	Monitoring Well							Blanks					
Parameter	MW-5	MW-9	MW-10S	MW-10D	MW-11S	MW-11D	MW-11DD	FB-1	FB-2	Trip		ES	PAL
VOC (ppb)													
Benzene	ND	ND	8.4	ND	2.7	1,900	ND	ND	ND	ND		5	0.067
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		4.4	0.44
n-Butylbenzene	ND	ND	27	ND	ND	ND	ND	ND	ND	ND		--	--
tert-Butylbenzene	ND	ND	3.4	ND	ND	ND	ND	ND	ND	ND		--	--
sec-Butylbenzene	ND	ND	9.3	ND	ND	ND	ND	ND	ND	ND		--	--
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		100	20
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND		100	10
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	44	ND	ND	ND		850	85
Ethylbenzene	ND	ND	3.2	ND	ND	ND	ND	ND	ND	ND		1,360	272
p-Isopropyltoluene	ND	ND	4.0	ND	ND	ND	ND	ND	ND	ND		--	--
Isopropylbenzene	ND	ND	16	ND	ND	140	ND	ND	ND	ND		--	--
Naphthalene	ND	ND	170	1.3	ND	210	ND	1.3	ND	ND		40	8
n-Propylbenzene	ND	ND	47	2.2	ND	240	ND	ND	ND	ND		--	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		1	0.1
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND		200	40
Trichloroethene	ND	ND	ND	ND	ND	ND	5.2	ND	ND	ND		5	0.18
Toluene	ND	ND	4.5	ND	3.2	ND	1.6	2.2	2.2	ND		343	68.6
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		--	--
1,3,5- Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		--	--
Styrenes + o-xylenes	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND		-- *	-- *
p-, m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		620*	124*
MTBE	22	ND	2.9	ND	ND	ND	ND	ND	ND	ND		60	12

Table 1

Round One Ground Water Analytical Results (June 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

	Monitoring Well							Blanks					
Parameter	MW-5	MW-9	MW-10S	MW-10D	MW-11S	MW-11D	MW-11DD	FB-1	FB-2	Trip		ES	PAL
PAH (ppb)													
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		0.003	0.0003
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA		--	--
Naphthalene	ND	ND	61	ND	ND	34	ND	ND	ND	NA		40	8
Metals													
Lead	ND	ND	15	5.0	ND	ND	ND	ND	ND	NA		50	5
Barium	220	50	73	30	160	130	150	ND	ND	NA		1,000	200

ES Wisconsin Administrative Code NR 140 Enforcement Standards (µg/l).
PAL Wisconsin Administrative Code NR 140 Preventive Action Limits (µg/l).
* Total concentration for p-, m-, and o-xylenes.
ND: Not detected above practical quantitation limit.
NA: Not analyzed.
Shaded areas denote exceedence of NR 140 Enforcement Standard.

Table 2

Round Two Ground Water Analytical Results (July 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Parameter	Monitoring Well											ES	PAL
	MW-1	MW-1DD	MW-2S	MW-2SA	MW-2D	MW-2DD	MW-3S	MW-3D	MW-3DA	MW-3DD	MW-4		
VOC (ppb)													
Benzene	7,000	5.2	78	74	2,700	2.4	6,900	1,400	1,300	1.1	ND	5	0.067
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	0.44
n-Butylbenzene	ND	ND	14	14	43	ND	220	ND	ND	ND	ND	--	--
tert-Butylbenzene	Co-elute with 1,2,4-Trimethylbenzene											--	--
sec-Butylbenzene	ND	ND	2.0	ND	ND	ND	ND	ND	ND	ND	ND	--	--
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	100	20
cis-1,2-Dichloroethene	ND	1.5	ND	ND	ND	34	ND	ND	ND	5.2	ND	100	10
1,1 -Dichloroethane	ND	51	ND	ND	ND	28	ND	ND	ND	7.2	ND	850	85
Ethylbenzene	1,000	ND	19	18	300	ND	1,200	70	64	ND	ND	1,360	272
p-Isopropyltoluene	300	ND	8.6	8.9	70	ND	380	37	35	ND	ND	--	--
Isopropylbenzene	ND	ND	11	10	ND	ND	68	ND	ND	ND	ND	--	--
Naphthalene	360	ND	56	56	150	ND	610	ND	ND	ND	ND	40	8
n-Propylbenzene	ND	ND	29	28	64	ND	210	ND	ND	ND	ND	--	--
Tetrachloroethene	ND	ND	ND	ND	ND	3.6	ND	ND	ND	1.5	ND	1	0.1
1,1,1-Trichloroethane	ND	1.8	ND	ND	ND	4.6	ND	ND	ND	1.1	ND	200	40
Trichloroethene	ND	1.6	ND	ND	ND	26	ND	ND	ND	6.3	ND	5	0.18
Toluene	1,300	2.2	7.5	7.8	29	5.4	1,500	ND	ND	5.2	ND	343	68.6
1,2,4-Trimethylbenzene & tert-Butylbenzene	1,100	ND	33	33	270	ND	1,300	ND	ND	ND	ND	--	--
1,3,5- Trimethylbenzene	250	ND	13	13	75	ND	330	23	21	ND	ND	--	--
o-Xylene	610	ND	ND	ND	ND	ND	740	ND	ND	ND	ND	620*	124*
p-, m-Xylenes	3,000	ND	28	28	710	ND	3,500	150	130	ND	ND	620*	124*
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	12

Table 2

Round Two Ground Water Analytical Results (July 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Parameter	Monitoring Well											ES	PAL
	MW-1	MW-1DD	MW-2S	MW-2SA	MW-2D	MW-2DD	MW-3S	MW-3D	MW-3DA	MW-3DD	MW-4		
PAH (ppb)													
Acenaphthene	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	ND	--	--
Anthracene	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	--	--
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	ND	--	--
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	--	--
Chrysene	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	--	--
Dibenzofuran	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	--	--
Fluorene	11	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	--	--
Fluoranthene	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	--	--
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003	0.0003
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Pyrene	ND	ND	ND	ND	ND	ND	34	ND	ND	ND	ND	--	--
Phenanthrene	25	ND	ND	ND	ND	ND	72	ND	ND	ND	ND	--	--
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Naphthalene	120	ND	13	18	56	ND	65	ND	ND	ND	ND	40	8
Metals													
Lead	7.1	ND	ND	2.4	2.2	5.0	13	2.5	ND	2.8	ND	50	5
Barium	190	120	160	160	150	130	230	110	100	78	130	1,000	200

Table 2

Round Two Ground Water Analytical Results (July 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

	Monitoring Well							Blanks					
Parameter	MW-5	MW-9	MW-10S	MW-10D	MW-11S	MW-11D	MW-11DD	FB-1	FB-2	Trip 1	Trip 2	ES	PAL
VOC (ppb)													
Benzene	ND	ND	10	ND	ND	430	ND	ND	ND	ND	ND	5	0.067
Bromoform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	0.44
n-Butylbenzene	ND	ND	7.1	1.5	ND	16	ND	ND	ND	ND	ND	--	--
tert-Butylbenzene	Co-elute with 1,2,4-Trimethylbenzene											--	--
sec-Butylbenzene	ND	ND	3.0	1.2	ND	12	ND	ND	ND	ND	ND	--	--
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	20
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	2.7	ND	ND	ND	ND	100	10
1,1-Dichloroethane	ND	ND	ND	ND	1.2	ND	65	ND	ND	ND	ND	850	85
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,360	272
p-Isopropyltoluene	ND	ND	3.9	ND	ND	ND	ND	ND	ND	ND	ND	--	--
Isopropylbenzene	ND	ND	5.4	ND	ND	79	ND	ND	ND	ND	ND	--	--
Naphthalene	ND	ND	94	5.6	ND	230	ND	ND	ND	ND	ND	40	8
n-Propylbenzene	ND	ND	12	2.9	ND	160	ND	ND	ND	ND	ND	--	--
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	0.1
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	200	40
Trichloroethene	ND	ND	ND	ND	ND	ND	3.6	ND	ND	ND	ND	5	0.18
Toluene	ND	ND	1.9	ND	1.2	ND	ND	1.5	1.0	ND	ND	343	68.6
1,2,4-Trimethylbenzene & tert-Butylbenzene	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	--	--
1,3,5- Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	620*	124*
p-, m-Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	620*	124*
MTBE	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	12

Table 2

Round Two Ground Water Analytical Results (July 1993)

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

	Monitoring Well							Blanks					
Parameter	MW-5	MW-9	MW-10S	MW-10D	MW-11S	MW-11D	MW-11DD	FB-1	FB-2	Trip 1	Trip 2	ES	PAL
PAH (ppb)													
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	0.003	0.0003
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA	--	--
Naphthalene	ND	ND	22	ND	ND	75	ND	ND	NA	NA	NA	40	8
Metals													
Lead	ND	ND	7.7	ND	ND	ND	ND	ND	ND	NA	NA .	50	5
Barium	190	54	130	38	190	110	160	ND	ND	NA	NA	1,000	200

ES Wisconsin Administrative Code NR 140 Enforcement Standards (µg/l).
PAL Wisconsin Administrative Code NR 140 Preventive Action Limits (µg/l).
* Total concentration for p-, m-, and o-xylenes.
ND: Not detected above practical quantitation limit.
NA: Not analyzed.
Shaded areas denote exceedence of NR 140 Enforcement Standard.

Table 3

pH, Conductivity, Temperature Results

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Parameter	Monitoring Well															
	MW-1	MW-1DD	MW-2S	MW-2D	MW-2DD	MW-3S	MW-3D	MW-3DD	MW-4	MW-5	MW-9	MW-10S	MW-10D	MW-11S	MW-11D	MW-11DD
Round One																
pH	6.84	7.52	7.37	7.34	7.25	6.87	7.22	7.27	7.05	6.91	6.37	6.98	6.78	7.08	6.61	7.54
Conductivity (μmhos)	700	800	680	680	800	620	680	700	600	900	1000	430	348	1400	900	850
Temperature (°C)	13	13.5	17	15	13	16	14	13.5	14	15	14	15	13	13	15	13
Round Two																
pH	6.87	7.19	7.38	7.25	7.10	6.83	6.90	6.77	7.62	7.19	7.00	7.04	7.12	7.35	7.04	7.14
Conductivity (μmhos)	NM	NM	900	700	700	NM	NM	NM	NM	800	900	400	300	NM	NM	NM
Temperature (°C)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM

NM: Not measured (equipment failure in field).

Table 4

Waste Characterization Analytical Results

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

	Sample Identification	
Parameter	SWC-1	SWC-2
TCLP VOCs (mg/l)	ND	ND
PCBs	ND	ND
Reactive cyanide	ND	ND
Reactive Sulfide (ppm)	28	29
GRO (mg/kg)	26	24
DRO (mg/kg)	29	ND
TCLP RCRA Metals (µg/l)		
Silver	ND	ND
Arsenic	ND	ND
Barium	640	240
Cadmium	ND	ND
Chromium	ND	ND
Mercury	ND	ND
Lead	ND	ND
Selenium	ND	ND
Free Liquids (%)	42	32
Total Solids (%)	23	22
Flash Point (°F)	>210	>210

ND: Not detected above practical quantitation limit.

Table 5

Well and Ground Water Elevation Survey

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Well Identification	Ground Elevation	Well Elevation	Screened Interval (feet below ground surface)	Ground Water Elevation - 6/25/93	Ground Water Elevation - 7/20/93	Ground Water Elevation - 9/15/93
MW-1	747.93	747.66	4-14	740.61	741.31	739.73
MW-1DD	747.89	748.47	45-50	741.52	742.25	740.65
MW-2S	748.22	747.84	2-12	744.32	743.62	743.55
MW-2D	748.29	747.94	23-28	740.49	741.21	739.64
MW-2DD	748.13	747.75	45-50	740.47	741.18	739.59
MW-3S	748.25	748.00	3-13	740.23/743.82*	743.81/744.01*	744.25/744.20*
MW-3D	748.44	748.13	23-28	740.39	741.12	739.51
MW-3DD	748.47	748.04	45-50	740.41	741.14	739.23
MW-4	750.05	749.73	5-15	744.53	744.59	744.65
MW-5	749.34	749.00	4-14	744.25	744.25	744.46
MW-9	749.76	749.41	5-15	741.38	741.43	741.39
MW-10S	747.95	747.74	7-12	740.75	741.44	740.25
MW-10D	747.95	747.73	25-30	740.64	741.38	739.81
MW-11S	749.08	748.76	4-14	740.41	741.08	739.40
MW-11D	749.14	748.89	20-25	740.18	740.91	739.26
MW-11DD	749.20	748.81	45-50	740.20	740.92	739.27

* Elevations for free product/water. No corrections for water displacement were made.

Table 6

Hydraulic Conductivities Based on Slug Test Results

Ursula Borgerding Estate Property
433-437 Woodward Avenue
Beloit, Wisconsin

Well	Hydraulic Conductivity (cm/sec)
MW-1	5.4 E-5
MW-1DD	data inconclusive
MW-2S	2.2 E-5
MW-2D	data inconclusive
MW-2DD	data inconclusive
MW-3S	data inconclusive
MW-3D	7.6 E-2
MW-3DD	data inconclusive
MW-4	1.1 E-3
MW-5	5.4 E-3
MW-9	4.2 E-2
MW-10S	5.2 E-5
MW-10D	1.6 E-3
MW-11S	data inconclusive
MW-11D	7.0 E-5
MW-11DD	data inconclusive

FIELD SAMPLING METHODOLOGIES

Ground-Water Sample Collection

Ground water monitoring wells were purged and sampled in accordance with chapter NR 141 of the Wisconsin Administrative Code. Ground water samples were collected using well-dedicated, PVC bailers. Samples were collected for in-field and laboratory analyses.

In-field analyses consisted of pH, conductivity and temperature. A bailer of water was removed from the well and placed in a glass beaker that had previously been rinsed in distilled water. The probes were placed in the beaker and measurements recorded in a bound field notebook used to record daily activities. The water was then discarded in the drum used to contain the purge water from that well.

Samples to be analyzed in the laboratory for volatile organic compounds (VOCs) were collected in laboratory-supplied 40-ml vials with teflon septa. Sample vials were filled until a positive meniscus was formed, preserved with hydrochloric acid (HCl) and securely capped. Following capping, the jars were inverted, firmly tapped and examined for presence of air bubbles. If bubbles were present, the sample was discarded and a new sample was collected.

Samples collected for laboratory analysis of polynuclear aromatic hydrocarbons (PAHs) were collected in one-liter amber glass jars with teflon-lined lids. Samples for dissolved lead and barium analyses were filtered in the field using 0.45 μm cellulose acetate filters. The filtered samples were containerized in 500 ml polypropylene jars and preserved with laboratory-supplied concentrated nitric acid (HNO_3).

After the sample jars were filled and closed, identification labeling was completed with respect to sampling location and identifier. The samples were placed in resealable plastic bags placed in insulated containers and chilled with ice to protect them from sunlight and temperature extremes. The samples were then transported to Ortek Environmental Laboratory in Green Bay, Wisconsin (WDNR Certification #405099530) via overnight courier. Samples were delivered to the laboratory within one business day of collection. All sampling locations and procedures were documented in a bound field notebook used to record all daily activities performed at the site.

Waste Characterization Sampling

Samples were composited from a minimum of three drums each. The samples were composited with minimal handling by collecting a portion of the total required volume of sample from each of the selected drums. The sample was not mixed prior to placing in the laboratory jars.

Each sample was collected in a total of five laboratory-provided jars: one 4-ounce glass jar with a teflon-lined lid, one 500-milliliter polypropylene jar, one 1-liter amber glass jar with a teflon-lined lid, and two 60-milliliter glass jars with teflon septa. The 4-ounce jar was packed tightly with soil to minimize headspace in the jar and securely capped. The 500-ml polypropylene and 1-liter amber glass jars were filled but not tightly packed. The 60-ml jars were filled with approximately 25 grams of sample. One of the jars was immediately capped. The other jar was filled with a laboratory-supplied vial (25 mls) of purge-and-trap grade methanol. The threads on the sample were wiped clean and the sample securely capped.

After the sample jars were filled and closed, identification labeling was completed with respect to sampling location and identifier. The samples were placed in resealable plastic bags and placed in insulated containers and chilled with ice to protect them from sunlight and temperature extremes. The samples were then transported to Ortek Environmental Laboratory in Green Bay, Wisconsin (WDNR Certification #405099530) via overnight courier. Samples were delivered to the laboratory within one business day of collection. All sampling locations and procedures were documented in a bound field notebook used to record all daily activities performed at the site.

Sample Custody

Sample custody procedures are designed to comply with U.S. EPA and National Enforcement Investigation Council (NEIC) requirements for sample control. Samples collected during the site investigation were the responsibility of identified persons from the time they were collected until they or their derived data were incorporated into the final report. Stringent chain-of-custody procedures were followed to maintain and document sample possession. A sample or evidence file is considered to be in the custody of the designated person if it is in possession; in view, after being in possession; was in possession and was placed in a secured location; or in a designated secure area.

Chain-of-custody forms were completed to the fullest extent possible prior to sample shipment (copies provided in Appendix B). They included the following information: sample number, date collected, source of sample (including type of sample and site identification) and name of sampler. The forms were filled out in a legible manner using waterproof ink and were signed by the sampler. Similar information was provided on the sample tag, which was securely attached to the sample bottle. Samples were always accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them signed, dated and noted the time on the record. The custody record documents sample custody transfer from the sampler, through the courier, to the laboratory.

Samples were packaged properly for shipment and dispatched for analysis to Ortek Environmental Laboratory, Green Bay, Wisconsin, with a separate custody record accompanying each shipment. The original record accompanied the shipment and a copy was retained by the field sampler and filed immediately upon return to the office. Proper documentation was maintained for shipment by common carrier.

Water Level Measurements

Water-level measurements were collected from each new and existing ground water monitoring well and piezometer. Complete rounds of measurements were collected on the same day. All measurements were taken after well development and an equilibration period (for wells with expandable caps). Measurements were made using a Keck oil-water interface probe, model KIR-89 (accuracy ±0.01 feet). The well casing was wiped clean and the survey measure mark on the top of the casing noted. The probe was lowered carefully into the well and the depth to water or separate-phase product measured from the survey mark on the top of the well casing. The depths were recorded in the field notebook.

Aerial Photography, Topographic Mapping and Elevation Survey

Aerial photographs of the site were taken as part of the Phase III investigation, previously conducted by Dames & Moore (Dames & Moore, March, 1992). The aerial and orthophotographs were developed by Aero-Metric Engineering, Inc. The maps conform to National Map Accuracy Standards and reference USGS benchmarks and the state-plane coordinate system. Using the ground-control points established by Aero-Metric Engineering, a monitoring well casing and ground elevation survey was conducted by Dames

& Moore personnel. The survey was conducted on June 24, 1993 using a Lietz/Sokkia automatic level, Model B1 (accurate to 0.005 feet at 200 feet). The raw survey data were recorded in a bound field notebook. A summary of the well and ground elevation survey is presented in Table 5.

Slug Tests

Slug tests were conducted on each ground water monitoring well and piezometer using a Hermit data logger and pressure transducer. The pressure transducer was lowered to within one foot of the base of the well and secured. The bailer dedicated to that well was then lowered to just below the water level in the well and the transducer allowed to equilibrate. Upon reaching equilibrium, the water-column length (as measured by the pressure transducer) was recorded in the field notebook as the "pre-test" water level. The data logger was then started and the slug (full bailer) rapidly removed from the well. The water recovered in the slug was placed in the appropriate drum with the purge water from that well. The water level in the well was allowed to recover to at least 90% of the pre-test water level (if possible) and the test terminated. Whenever possible, the test data were down-loaded into a computer and qualitatively evaluated in the field to confirm that the test provided useful data.

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ENVIRONMENTAL LABORATORY
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Green Bay, WI 54307-2435

July 15, 1993

Dame & Moore
250 East Wisconsin Ave
Suite 1500
Milwaukee, WI 53202

Attn: Duane A. Stillings

Subject: Sample Received June 29, 1993
Reference: Batch No. 9306263 Sample No. 135398-135414

Enclosed please find a report of analytical results for seventeen (17) groundwater samples received by ORTEK Environmental Laboratory. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties during analysis which may have compromised the enclosed results.

Should you have any questions regarding this report, please feel free to call me at 1(800) 236-4067. Please have both reference numbers listed above available when making inquiries regarding this report.

Sincerely,

Barb Rutten
Project Manager

Approval,

John Burnett
Laboratory Manager

Enclosure

cc: File

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

July 20, 1993

Dame & Moore
250 East Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

Attn: Duane A. Stillings

Subject: Sample Received June 29, 1993
Reference: Batch No. 9306263 Sample No. 135394-135414

Per the report and cover letter sent July 15, note this correction. There were in fact twenty (20) groundwater sample results sent and not seventeen (17), as were printed on the previous cover letter. Please accept my apology on this error.

Should you have any questions regarding the report, please feel free to call me at 1(800) 236-4067. Please have both reference numbers listed above available when making inquiries regarding the report.

Sincerely,

Barb Rutten
Project Manager

Approval,

John Burnett
Laboratory Manager

Enclosure

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GC/MS SEMIVOLATILE ORGANIC ANALYSIS

Client:	Dames & Moore	Project Name/Desc.:	
Address:	250 East Wisconsin Ave, Suite 1500	Project Number:	20255-004
	Milwaukee, WI 53202	Batch Number:	9306263
Phone:	(414) 347-0800	COC Number:	406401
FAX:	(414) 347-0288		
		Case No.:	D-M301
Contact:	K. Casper	SDG No.:	135394

SAMPLE SUMMARY

Client Sample No.	EPA Sample No.	Ortek Lab Sample ID
FB1	FB-1	135412
FB2	FB-2	135413
MW-1	MW-1	135402
MW-1DD	MW-1DD	135403
MW-2D	MW-2D	135406
MW-2DD	MW-2DD	135407
MW-2S	MW-2S	135404
MW-2SA	MW-2SA	135405
MW-3D	MW-3D	135409
MW-3DA	MW-3DA	135394
MW-3DD	MW-3DD	135395
MW-3S	MW-3S	135408
MW-3SDL	MW-3SDL	135408DL
MW-4	MW-4	135396
MW-5	MW-5	135397
MW-9	MW-9	135398
MW-10D	MW-10D	135400
MW-10S	MW-10S	135399
MW-11D	MW-11D	135410
MW-11DD	MW-11DD	135411
MW-11S	MW-11S	135401

COMMENTS: SEMIVOLATILE ORGANIC ANALYSIS PERFORMED BY MODIFIED EPA METHOD 8270 ON A DB-5MS CAPILLARY COLUMN

1.) The instrument ID for Semivolatile Organic Analysis is 50BB. The blanks associated with the samples are SBLK01 and SBLK02.

"Q" COLUMN QUALIFIERS:
- U - Compound analyzed for but not detected
- B - Indicates the analyte is found in the associated method blank
- J - Estimated value, concentration of analyte below quantitation limit
- E - Compound exceeds calibration range, but did not saturate the detector; actual concentrations could be higher than reported
- D - Compound identified in the analysis at a secondary dilution
- N - Indicates presumptive evidence of a compound (identified based on mass spectral library search)

Signed: _____ Name: John C. Rother

Title: GC/MS/EC Supervisor Date: 7/13/93

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GC/MS SEMIVOLATILE ORGANIC ANALYSIS

Client:	Dames & Moore	Project Name/Desc.:	
Address:	250 East Wisconsin Ave, Suite 1500	Project Number:	20255-004
	Milwaukee, WI 53202	Batch Number:	9307069
Phone:	(414) 347-0800	COC Number:	406413
FAX:	(414) 347-0288		
		Case No.:	D-M302
Contact:	K. Casper	SDG No.:	135673

SAMPLE SUMMARY

Client Sample No.	EPA Sample No.	Ortek Lab Sample ID
MW-11S	MW-11S	135673

COMMENTS: SEMIVOLATILE ORGANIC ANALYSIS PERFORMED BY MODIFIED EPA METHOD 8270 ON A DB-5MS CAPILLARY COLUMN

1.) The instrument ID for Semivolatile Organic Analysis is 50BB. The blank associated with the sample is SBLK09.

"Q" COLUMN QUALIFIERS:
- U - Compound analyzed for but not detected
- B - Indicates the analyte is found in the associated method blank
- J - Estimated value, concentration of analyte below quantitation limit
- E - Compound exceeds calibration range, but did not saturate the detector; actual concentrations could be higher than reported
- D - Compound identified in the analysis at a secondary dilution
- N - Indicates presumptive evidence of a compound (identified based on mass spectral library search)

Signed: John C. Rather Name: John C. Rather

Title: GC/MS/EC Supervisor Date: 7/21/93

original sample broken in transport - Re sampled.

ORTEK SAMPLE RECEIVING OUT OF CONTROL FORM

COMPANY NAME: DAMES & MOORE	CONTACT PERSON:
PROJECT NAME: 20255-004	REPORTED BY: Ken Webster
BATCH NUMBER: 9306263	SAMPLE NUMBERS: 135401, 135409
DATE: TIME: 6/29/93 14:17:40	PHONE NUMBER:
☐ HOLD TIME ☐ IMPROPER PRESERVATIVE ☐ PAPERWORK DISCREPANCY ☐ IMPROPER CONTAINER	☐ SAMPLE TEMPERATURE ___°F ☐ METHODOLOGY ☒ INSUFFICIENT VOLUME ☒ OTHER

DESCRIPTION:

Broken cap sample spilled out in cooler 135401 2-AMHC
Broken Vial No Sample (in cooler). 135409

PERSON RESPONSIBLE FOR RESOLUTION:

CLIENT RESPONSE: Called 6/29/93 Not in
Called 7/1/93 Not in
Returned call 7/1/93
She will resample 135401 for SHH

Client Resampled due to low volume on first Sample. Caused by a cracked cap.

SIGNATURE: Barbara Rutten TIME: 11:00 a.m. DATE: 7/1/93

cc: Working File
Mary Jo Nash
Tori Cook
Phil Scott
Barb Rutten
John Rather
Chris Groh
Bill Jackson
Jennifer Fazio

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CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-1
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	25	1,600	1,2-DICHLOROETHANE	25	ND
BROMOCHLOROMETHANE	25	ND	trans-1,2-DICHLOROETHENE	25	ND
BROMODICHLOROMETHANE	25	ND	cis-1,2-DICHLOROETHENE	25	ND
BROMOFORM	25	ND	1,1-DICHLOROETHENE	25	ND
BROMOBENZENE	25	ND	ETHYLBENZENE	25	ND
BROMOMETHANE	25	ND	HEXACHLOROBUTADIENE	25	ND
n-BUTYLBENZENE	25	ND	p-ISOPROPYLTOLUENE	25	ND
tert-BUTYLBENZENE	25	ND	ISOPROPYLBENZENE	25	ND
sec-BUTYLBENZENE	25	ND	METHYLENE CHLORIDE	250	ND
CARBON TETRACHLORIDE	25	ND	NAPHTHALENE	25	130
CHLOROETHANE	25	ND	n-PROPYLBENZENE	25	43
CHLOROMETHANE	25	ND	1,1,2,2-TETRACHLOROETHANE	25	ND
4-CHLOROTOLUENE	25	ND	1,1,1,2-TETRACHLOROETHANE	25	ND
2-CHLOROTOLUENE	25	ND	TETRACHLOROETHENE	25	ND
CHLOROBENZENE	25	ND	TRICHLOROFLUOROMETHANE	25	ND
CHLOROFORM	25	ND	1,2,3-TRICHLOROBENZENE	25	ND
DIBROMOCHLOROMETHANE	25	ND	1,2,4-TRICHLOROBENZENE	25	ND
1,2-DIBROMO-3-CHLOROPROPANE	25	ND	1,1,1-TRICHLOROETHANE	25	ND
1,2-DIBROMOETHANE (EDB)	25	ND	TRICHLOROETHENE	25	ND
DIBROMOMETHANE	25	ND	1,1,2-TRICHLOROETHANE	25	ND
DICHLORODIFLUOROMETHANE	25	ND	1,2,3-TRICHLOROPROPANE	25	ND
1,4-DICHLOROBENZENE	25	ND	1,3,5-TRIMETHYLBENZENE	25	ND
1,2-DICHLOROBENZENE	25	ND	1,2,4-TRIMETHYLBENZENE	25	ND
1,3-DICHLOROBENZENE	25	ND	TOLUENE	25	ND
1,3-DICHLOROPROPANE	25	ND	VINYL CHLORIDE	25	ND
1,2-DICHLOROPROPANE	25	ND	STYRENES + o-XYLENES	50	ND
2,2-DICHLOROPROPANE	25	ND	m & p-XYLENES	50	ND
1,1-DICHLOROETHANE	25	ND	METHYL-T-BUTYLETHER	25	ND
1,1-DICHLOROPROPENE	25	ND	DI-ISOPROPYLETHER	25	ND
cis-1,3-DICHLOROPROPENE	25	ND			
trans-1,3-DICHLOROPROPENE	25	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135402
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135402

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB013

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	87	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	4	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	5	J
85-01-8	Phenanthrene	11	
120-12-7	Anthracene	2	J
206-44-0	Fluoranthene	3	J
129-00-0	Pyrene	5	J
56-55-3	Benzo(a)Anthracene	1	J
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135402
Your sample ID: MW-1
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135402	Barium	130	UG/L	07/10/93
	Lead	16	UG/L	07/01/93

Signed Earl D Schmidt Date 7/14/93

Signed _____ Date _____

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-1DD
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	1.3	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	1.8
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	1.8
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	2.9
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	3.1
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	42	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135403
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: _____ Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1DD

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135403

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB014

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135403
Your sample ID: MW1DD
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135403	Barium		160	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl G Kimball Date 7/14/93

Signed _____ Date _____

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2S
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	5.0	83	1,2-DICHLOROETHANE	5.0	ND
BROMOCHLOROMETHANE	5.0	ND	trans-1,2-DICHLOROETHENE	5.0	ND
BROMODICHLOROMETHANE	5.0	ND	cis-1,2-DICHLOROETHENE	5.0	ND
BROMOFORM	5.0	ND	1,1-DICHLOROETHENE	5.0	ND
BROMOBENZENE	5.0	ND	ETHYLBENZENE	5.0	43
BROMOMETHANE	5.0	ND	HEXACHLOROBUTADIENE	5.0	ND
n-BUTYLBENZENE	5.0	58	p-ISOPROPYLTOLUENE	5.0	ND
tert-BUTYLBENZENE	5.0	ND	ISOPROPYLBENZENE	5.0	21
sec-BUTYLBENZENE	5.0	6.8	METHYLENE CHLORIDE	50	ND
CARBON TETRACHLORIDE	5.0	ND	NAPHTHALENE	5.0	99
CHLOROETHANE	5.0	ND	n-PROPYLBENZENE	5.0	62
CHLOROMETHANE	5.0	ND	1,1,2,2-TETRACHLOROETHANE	5.0	ND
4-CHLOROTOLUENE	5.0	ND	1,1,1,2-TETRACHLOROETHANE	5.0	ND
2-CHLOROTOLUENE	5.0	ND	TETRACHLOROETHENE	5.0	ND
CHLOROBENZENE	5.0	ND	TRICHLOROFLUOROMETHANE	5.0	ND
CHLOROFORM	5.0	ND	1,2,3-TRICHLOROBENZENE	5.0	ND
DIBROMOCHLOROMETHANE	5.0	ND	1,2,4-TRICHLOROBENZENE	5.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	5.0	ND	1,1,1-TRICHLOROETHANE	5.0	ND
1,2-DIBROMOETHANE (EDB)	5.0	ND	TRICHLOROETHENE	5.0	ND
DIBROMOMETHANE	5.0	ND	1,1,2-TRICHLOROETHANE	5.0	ND
DICHLORODIFLUOROMETHANE	5.0	ND	1,2,3-TRICHLOROPROPANE	5.0	ND
1,4-DICHLOROBENZENE	5.0	ND	1,3,5-TRIMETHYLBENZENE	5.0	54
1,2-DICHLOROBENZENE	5.0	ND	1,2,4-TRIMETHYLBENZENE	5.0	160
1,3-DICHLOROBENZENE	5.0	ND	TOLUENE	5.0	6.2
1,3-DICHLOROPROPANE	5.0	ND	VINYL CHLORIDE	5.0	ND
1,2-DICHLOROPROPANE	5.0	ND	STYRENES + o-XYLENES	10	9.6
2,2-DICHLOROPROPANE	5.0	ND	m & p-XYLENES	10	58
1,1-DICHLOROETHANE	5.0	ND	METHYL-T-BUTYLETHER	5.0	ND
1,1-DICHLOROPROPENE	5.0	ND	DI-ISOPROPYLETHER	5.0	ND
cis-1,3-DICHLOROPROPENE	5.0	ND			
trans-1,3-DICHLOROPROPENE	5.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135404
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Zahl Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2S

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135404

Sample wt/vol: 865 (g/mL) ML Lab File ID: 307BB019

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	44	
208-96-8	Acenaphthylene	12	U
83-32-9	Acenaphthene	12	U
132-64-9	Dibenzofuran	12	U
86-73-7	Fluorene	12	U
85-01-8	Phenanthrene	12	U
120-12-7	Anthracene	12	U
206-44-0	Fluoranthene	12	U
129-00-0	Pyrene	12	U
56-55-3	Benzo(a)Anthracene	12	U
218-01-9	Chrysene	12	U
205-99-2	Benzo(b)Fluoranthene	12	U
207-08-9	Benzo(k)Fluoranthene	12	U
50-32-8	Benzo(a)Pyrene	12	U
193-39-5	Indeno(1,2,3-cd)Pyrene	12	U
53-70-3	Dibenz(a,h)Anthracene	12	U
191-24-2	Benzo(g,h,i)Perylene	12	U

ORTEK
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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135404
Your sample ID: MW-2S
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135404	Barium		190	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl S Schmalz Date 7/14/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067
Green Bay, WI 54307-2435

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2SA
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	5.0	86	1,2-DICHLOROETHANE	5.0	ND
BROMOCHLOROMETHANE	5.0	ND	trans-1,2-DICHLOROETHENE	5.0	ND
BROMODICHLOROMETHANE	5.0	ND	cis-1,2-DICHLOROETHENE	5.0	ND
BROMOFORM	5.0	ND	1,1-DICHLOROETHENE	5.0	ND
BROMOBENZENE	5.0	ND	ETHYLBENZENE	5.0	48
BROMOMETHANE	5.0	ND	HEXACHLOROBUTADIENE	5.0	ND
n-BUTYLBENZENE	5.0	73	p-ISOPROPYLTOLUENE	5.0	ND
tert-BUTYLBENZENE	5.0	ND	ISOPROPYLBENZENE	5.0	22
sec-BUTYLBENZENE	5.0	7.1	METHYLENE CHLORIDE	50	ND
CARBON TETRACHLORIDE	5.0	ND	NAPHTHALENE	5.0	87
CHLOROETHANE	5.0	ND	n-PROPYLBENZENE	5.0	66
CHLOROMETHANE	5.0	ND	1,1,2,2-TETRACHLOROETHANE	5.0	ND
4-CHLOROTOLUENE	5.0	ND	1,1,1,2-TETRACHLOROETHANE	5.0	ND
2-CHLOROTOLUENE	5.0	ND	TETRACHLOROETHENE	5.0	ND
CHLOROBENZENE	5.0	ND	TRICHLOROFLUOROMETHANE	5.0	ND
CHLOROFORM	5.0	ND	1,2,3-TRICHLOROBENZENE	5.0	ND
DIBROMOCHLOROMETHANE	5.0	ND	1,2,4-TRICHLOROBENZENE	5.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	5.0	ND	1,1,1-TRICHLOROETHANE	5.0	ND
1,2-DIBROMOETHANE (EDB)	5.0	ND	TRICHLOROETHENE	5.0	ND
DIBROMOMETHANE	5.0	ND	1,1,2-TRICHLOROETHANE	5.0	ND
DICHLORODIFLUOROMETHANE	5.0	ND	1,2,3-TRICHLOROPROPANE	5.0	ND
1,4-DICHLOROBENZENE	5.0	ND	1,3,5-TRIMETHYLBENZENE	5.0	62
1,2-DICHLOROBENZENE	5.0	ND	1,2,4-TRIMETHYLBENZENE	5.0	180
1,3-DICHLOROBENZENE	5.0	ND	TOLUENE	5.0	7.2
1,3-DICHLOROPROPANE	5.0	ND	VINYL CHLORIDE	5.0	ND
1,2-DICHLOROPROPANE	5.0	ND	STYRENES + o-XYLENES	10	8.9
2,2-DICHLOROPROPANE	5.0	ND	m & p-XYLENES	10	66
1,1-DICHLOROETHANE	5.0	ND	METHYL-T-BUTYLETHER	5.0	ND
1,1-DICHLOROPROPENE	5.0	ND	DI-ISOPROPYLETHER	5.0	ND
cis-1,3-DICHLOROPROPENE	5.0	ND			
trans-1,3-DICHLOROPROPENE	5.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135405
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dyl Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2SA

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135405

Sample wt/vol: 920 (g/mL) ML Lab File ID: 307BB020

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	38	
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
132-64-9	Dibenzofuran	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)Fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)Anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135405
Your sample ID: MW-2SA
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135405	Barium		190	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl S Schmall Date 7/14/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2D
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	50	3,100	1,2-DICHLOROETHANE	50	ND
BROMOCHLOROMETHANE	50	ND	trans-1,2-DICHLOROETHENE	50	ND
BROMODICHLOROMETHANE	50	ND	cis-1,2-DICHLOROETHENE	50	ND
BROMOFORM	50	ND	1,1-DICHLOROETHENE	50	ND
BROMOBENZENE	50	ND	ETHYLBENZENE	50	430
BROMOMETHANE	50	ND	HEXACHLOROBUTADIENE	50	ND
n-BUTYLBENZENE	50	59	p-ISOPROPYLTOLUENE	50	ND
tert-BUTYLBENZENE	50	ND	ISOPROPYLBENZENE	50	ND
sec-BUTYLBENZENE	50	ND	METHYLENE CHLORIDE	500	ND
CARBON TETRACHLORIDE	50	ND	NAPHTHALENE	50	ND
CHLOROETHANE	50	ND	n-PROPYLBENZENE	50	73
CHLOROMETHANE	50	ND	1,1,2,2-TETRACHLOROETHANE	50	ND
4-CHLOROTOLUENE	50	ND	1,1,1,2-TETRACHLOROETHANE	50	ND
2-CHLOROTOLUENE	50	ND	TETRACHLOROETHENE	50	ND
CHLOROBENZENE	50	ND	TRICHLOROFLUOROMETHANE	50	ND
CHLOROFORM	50	ND	1,2,3-TRICHLOROBENZENE	50	ND
DIBROMOCHLOROMETHANE	50	ND	1,2,4-TRICHLOROBENZENE	50	ND
1,2-DIBROMO-3-CHLOROPROPANE	50	ND	1,1,1-TRICHLOROETHANE	50	ND
1,2-DIBROMOETHANE (EDB)	50	ND	TRICHLOROETHENE	50	ND
DIBROMOMETHANE	50	ND	1,1,2-TRICHLOROETHANE	50	ND
DICHLORODIFLUOROMETHANE	50	ND	1,2,3-TRICHLOROPROPANE	50	ND
1,4-DICHLOROBENZENE	50	ND	1,3,5-TRIMETHYLBENZENE	50	120
1,2-DICHLOROBENZENE	50	ND	1,2,4-TRIMETHYLBENZENE	50	370
1,3-DICHLOROBENZENE	50	ND	TOLUENE	50	82
1,3-DICHLOROPROPANE	50	ND	VINYL CHLORIDE	50	ND
1,2-DICHLOROPROPANE	50	ND	STYRENES + o-XYLENES	100	ND
2,2-DICHLOROPROPANE	50	ND	m & p-XYLENES	100	1,000
1,1-DICHLOROETHANE	50	ND	METHYL-T-BUTYLETHER	50	55
1,1-DICHLOROPROPENE	50	ND	DI-ISOPROPYLETHER	50	ND
cis-1,3-DICHLOROPROPENE	50	ND			
trans-1,3-DICHLOROPROPENE	50	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135406
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2D

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135406

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB021

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	36	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135406
Your sample ID: MW-2D
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135406	Barium	140	UG/L	07/10/93
	Lead	2.9	UG/L	07/01/93

Signed Earl G Schmidt Date 7/14/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2DD
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	1.0	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	16
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	2.9
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	3.4
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	14
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	4.0
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	13	METHYL-T-BUTYLETHER	1.0	1.0
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135407
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Zyda Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2DD

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135407

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB022

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135407
Your sample ID: MW-2DD
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135407	Barium		130	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl G Schwartz Date 7/14/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3S
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	100	7,500	1,2-DICHLOROETHANE	100	ND
BROMOCHLOROMETHANE	100	ND	trans-1,2-DICHLOROETHENE	100	ND
BROMODICHLOROMETHANE	100	ND	cis-1,2-DICHLOROETHENE	100	ND
BROMOFORM	100	ND	1,1-DICHLOROETHENE	100	ND
BROMOBENZENE	100	ND	ETHYLBENZENE	100	1,000
BROMOMETHANE	100	ND	HEXACHLOROBUTADIENE	100	ND
n-BUTYLBENZENE	100	330	p-ISOPROPYLTOLUENE	100	ND
tert-BUTYLBENZENE	100	ND	ISOPROPYLBENZENE	100	ND
sec-BUTYLBENZENE	100	ND	METHYLENE CHLORIDE	1000	ND
CARBON TETRACHLORIDE	100	ND	NAPHTHALENE	100	510
CHLOROETHANE	100	ND	n-PROPYLBENZENE	100	240
CHLOROMETHANE	100	ND	1,1,2,2-TETRACHLOROETHANE	100	ND
4-CHLOROTOLUENE	100	ND	1,1,1,2-TETRACHLOROETHANE	100	ND
2-CHLOROTOLUENE	100	ND	TETRACHLOROETHENE	100	ND
CHLOROBENZENE	100	ND	TRICHLOROFLUOROMETHANE	100	ND
CHLOROFORM	100	ND	1,2,3-TRICHLOROBENZENE	100	ND
DIBROMOCHLOROMETHANE	100	ND	1,2,4-TRICHLOROBENZENE	100	ND
1,2-DIBROMO-3-CHLOROPROPANE	100	ND	1,1,1-TRICHLOROETHANE	100	ND
1,2-DIBROMOETHANE (EDB)	100	ND	TRICHLOROETHENE	100	ND
DIBROMOMETHANE	100	ND	1,1,2-TRICHLOROETHANE	100	ND
DICHLORODIFLUOROMETHANE	100	ND	1,2,3-TRICHLOROPROPANE	100	ND
1,4-DICHLOROBENZENE	100	ND	1,3,5-TRIMETHYLBENZENE	100	390
1,2-DICHLOROBENZENE	100	ND	1,2,4-TRIMETHYLBENZENE	100	1,300
1,3-DICHLOROBENZENE	100	ND	TOLUENE	100	810
1,3-DICHLOROPROPANE	100	ND	VINYL CHLORIDE	100	ND
1,2-DICHLOROPROPANE	100	ND	STYRENES + o-XYLENES	200	830
2,2-DICHLOROPROPANE	100	ND	m & p-XYLENES	200	3,300
1,1-DICHLOROETHANE	100	ND	METHYL-T-BUTYLETHER	100	ND
1,1-DICHLOROPROPENE	100	ND	DI-ISOPROPYLETHER	100	ND
cis-1,3-DICHLOROPROPENE	100	ND			
trans-1,3-DICHLOROPROPENE	100	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135408
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dahl Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3S

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135408

Sample wt/vol: 820 (g/mL) ML Lab File ID: 307BB023

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	600	E
208-96-8	Acenaphthylene	12	U
83-32-9	Acenaphthene	74	
132-64-9	Dibenzofuran	12	U
86-73-7	Fluorene	74	
85-01-8	Phenanthrene	240	E
120-12-7	Anthracene	59	
206-44-0	Fluoranthene	190	
129-00-0	Pyrene	130	
56-55-3	Benzo(a)Anthracene	100	
218-01-9	Chrysene	83	
205-99-2	Benzo(b)Fluoranthene	89	
207-08-9	Benzo(k)Fluoranthene	12	U
50-32-8	Benzo(a)Pyrene	45	
193-39-5	Indeno(1,2,3-cd)Pyrene	25	
53-70-3	Dibenz(a,h)Anthracene	8	J
191-24-2	Benzo(g,h,i)Perylene	37	

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Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135408
Your sample ID: MW-3S
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135408	Barium	220	UG/L	07/10/93
	Lead	8.3	UG/L	07/06/93

Signed Carol R Klimek Date 7/14/93

Signed _____ Date _____

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3D
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	20	2,400	1,2-DICHLOROETHANE	20	ND
BROMOCHLOROMETHANE	20	ND	trans-1,2-DICHLOROETHENE	20	ND
BROMODICHLOROMETHANE	20	ND	cis-1,2-DICHLOROETHENE	20	ND
BROMOFORM	20	ND	1,1-DICHLOROETHENE	20	ND
BROMOBENZENE	20	ND	ETHYLBENZENE	20	280
BROMOMETHANE	20	ND	HEXACHLOROBUTADIENE	20	ND
n-BUTYLBENZENE	20	26	p-ISOPROPYLTOLUENE	20	ND
tert-BUTYLBENZENE	20	ND	ISOPROPYLBENZENE	20	ND
sec-BUTYLBENZENE	20	ND	METHYLENE CHLORIDE	200	ND
CARBON TETRACHLORIDE	20	ND	NAPHTHALENE	20	100
CHLOROETHANE	20	ND	n-PROPYLBENZENE	20	41
CHLOROMETHANE	20	ND	1,1,2,2-TETRACHLOROETHANE	20	ND
4-CHLOROTOLUENE	20	ND	1,1,1,2-TETRACHLOROETHANE	20	ND
2-CHLOROTOLUENE	20	ND	TETRACHLOROETHENE	20	ND
CHLOROBENZENE	20	ND	TRICHLOROFLUOROMETHANE	20	ND
CHLOROFORM	20	ND	1,2,3-TRICHLOROBENZENE	20	ND
DIBROMOCHLOROMETHANE	20	ND	1,2,4-TRICHLOROBENZENE	20	ND
1,2-DIBROMO-3-CHLOROPROPANE	20	ND	1,1,1-TRICHLOROETHANE	20	ND
1,2-DIBROMOETHANE (EDB)	20	ND	TRICHLOROETHENE	20	ND
DIBROMOMETHANE	20	ND	1,1,2-TRICHLOROETHANE	20	ND
DICHLORODIFLUOROMETHANE	20	ND	1,2,3-TRICHLOROPROPANE	20	ND
1,4-DICHLOROBENZENE	20	ND	1,3,5-TRIMETHYLBENZENE	20	47
1,2-DICHLOROBENZENE	20	ND	1,2,4-TRIMETHYLBENZENE	20	96
1,3-DICHLOROBENZENE	20	ND	TOLUENE	20	39
1,3-DICHLOROPROPANE	20	ND	VINYL CHLORIDE	20	ND
1,2-DICHLOROPROPANE	20	ND	STYRENES + o-XYLENES	40	30
2,2-DICHLOROPROPANE	20	ND	m & p-XYLENES	40	460
1,1-DICHLOROETHANE	20	ND	METHYL-T-BUTYLETHER	20	31
1,1-DICHLOROPROPENE	20	ND	DI-ISOPROPYLETHER	20	ND
cis-1,3-DICHLOROPROPENE	20	ND			
trans-1,3-DICHLOROPROPENE	20	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135409
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dyl Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3D

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135409

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB024

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	64	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	3	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	2	J
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135409
Your sample ID: MW-3D
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135409	Barium		130	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/06/93

Signed Earl G Schmall Date 7/14/93

Signed _____ Date _____

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3DA
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	20	2,000
BROMOCHLOROMETHANE	20	ND
BROMODICHLOROMETHANE	20	ND
BROMOFORM	20	ND
BROMOBENZENE	20	ND
BROMOMETHANE	20	ND
n-BUTYLBENZENE	20	41
tert-BUTYLBENZENE	20	ND
sec-BUTYLBENZENE	20	ND
CARBON TETRACHLORIDE	20	ND
CHLOROETHANE	20	ND
CHLOROMETHANE	20	ND
4-CHLOROTOLUENE	20	ND
2-CHLOROTOLUENE	20	ND
CHLOROBENZENE	20	ND
CHLOROFORM	20	ND
DIBROMOCHLOROMETHANE	20	ND
1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,2-DIBROMOETHANE (EDB)	20	ND
DIBROMOMETHANE	20	ND
DICHLORODIFLUOROMETHANE	20	ND
1,4-DICHLOROBENZENE	20	ND
1,2-DICHLOROBENZENE	20	ND
1,3-DICHLOROBENZENE	20	ND
1,3-DICHLOROPROPANE	20	ND
1,2-DICHLOROPROPANE	20	ND
2,2-DICHLOROPROPANE	20	ND
1,1-DICHLOROETHANE	20	ND
1,1-DICHLOROPROPENE	20	ND
cis-1,3-DICHLOROPROPENE	20	ND
trans-1,3-DICHLOROPROPENE	20	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	20	ND
trans-1,2-DICHLOROETHENE	20	ND
cis-1,2-DICHLOROETHENE	20	ND
1,1-DICHLOROETHENE	20	ND
ETHYLBENZENE	20	270
HEXACHLOROBUTADIENE	20	ND
p-ISOPROPYLTOLUENE	20	ND
ISOPROPYLBENZENE	20	23
METHYLENE CHLORIDE	200	ND
NAPHTHALENE	20	140
n-PROPYLBENZENE	20	41
1,1,2,2-TETRACHLOROETHANE	20	ND
1,1,1,2-TETRACHLOROETHANE	20	ND
TETRACHLOROETHENE	20	ND
TRICHLOROFLUOROMETHANE	20	ND
1,2,3-TRICHLOROBENZENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND
1,1,1-TRICHLOROETHANE	20	ND
TRICHLOROETHENE	20	ND
1,1,2-TRICHLOROETHANE	20	ND
1,2,3-TRICHLOROPROPANE	20	ND
1,3,5-TRIMETHYLBENZENE	20	57
1,2,4-TRIMETHYLBENZENE	20	110
TOLUENE	20	22
VINYL CHLORIDE	20	ND
STYRENES + o-XYLENES	40	ND
m & p-XYLENES	40	440
METHYL-T-BUTYLETHER	20	34
DI-ISOPROPYLETHER	20	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135394
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J Dyke Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3DA

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135394

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB005

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	38	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	2	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	2	J
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ORTEK
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P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135394
Your sample ID: MW-3DA
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135394	Barium	55	UG/L	07/10/93
	Lead	2.4	UG/L	07/01/93

Signed Carol G. Schmidt Date 7/14/93

Signed _____ Date _____

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3DD

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135395

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB006

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135395
Your sample ID: MW-3DD
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135395	Barium		44	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed _____ Date 7/14/93

Signed _____ Date _____

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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-4
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE	1.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
STYRENES + o-XYLENES	2.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135396
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Gryk Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135396

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB007

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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Green Bay, WI 54307-2435
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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135396
Your sample ID: MW-4
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135396	Barium		110	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl G Kilmer Date 7/14/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-5
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	22
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135397
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Swol Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135397

Sample wt/vol: 935 (g/mL) ML Lab File ID: 307BB008

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. ____ dec. ____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: ____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	11	U
208-96-8	Acenaphthylene	11	U
83-32-9	Acenaphthene	11	U
132-64-9	Dibenzofuran	11	U
86-73-7	Fluorene	11	U
85-01-8	Phenanthrene	11	U
120-12-7	Anthracene	11	U
206-44-0	Fluoranthene	11	U
129-00-0	Pyrene	11	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
205-99-2	Benzo(b)Fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)Anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135397
Your sample ID: MW-5
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135397	Barium		220	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Carol S Klimek Date 7/14/93

Signed _____ Date _____

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-9
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE	1.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
STYRENES + o-XYLENES	2.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135398
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135398

Sample wt/vol: 970 (g/mL) ML Lab File ID: 307BB009

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135398
Your sample ID: MW-9
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135398	Barium		50	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/01/93

Signed Earl G Schmidt Date 7/14/93

Signed _____ Date _____

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-10S
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	2.0	8.4	1,2-DICHLOROETHANE	2.0	ND
BROMOCHLOROMETHANE	2.0	ND	trans-1,2-DICHLOROETHENE	2.0	ND
BROMODICHLOROMETHANE	2.0	ND	cis-1,2-DICHLOROETHENE	2.0	ND
BROMOFORM	2.0	ND	1,1-DICHLOROETHENE	2.0	ND
BROMOBENZENE	2.0	ND	ETHYLBENZENE	2.0	3.2
BROMOMETHANE	2.0	ND	HEXACHLOROBUTADIENE	2.0	ND
n-BUTYLBENZENE	2.0	27	p-ISOPROPYLTOLUENE	2.0	4.0
tert-BUTYLBENZENE	2.0	3.4	ISOPROPYLBENZENE	2.0	16
sec-BUTYLBENZENE	2.0	9.3	METHYLENE CHLORIDE	20	ND
CARBON TETRACHLORIDE	2.0	ND	NAPHTHALENE	2.0	170
CHLOROETHANE	2.0	ND	n-PROPYLBENZENE	2.0	47
CHLOROMETHANE	2.0	ND	1,1,2,2-TETRACHLOROETHANE	2.0	ND
4-CHLOROTOLUENE	2.0	ND	1,1,1,2-TETRACHLOROETHANE	2.0	ND
2-CHLOROTOLUENE	2.0	ND	TETRACHLOROETHENE	2.0	ND
CHLOROBENZENE	2.0	ND	TRICHLOROFLUOROMETHANE	2.0	ND
CHLOROFORM	2.0	ND	1,2,3-TRICHLOROBENZENE	2.0	ND
DIBROMOCHLOROMETHANE	2.0	ND	1,2,4-TRICHLOROBENZENE	2.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	2.0	ND	1,1,1-TRICHLOROETHANE	2.0	ND
1,2-DIBROMOETHANE (EDB)	2.0	ND	TRICHLOROETHENE	2.0	ND
DIBROMOMETHANE	2.0	ND	1,1,2-TRICHLOROETHANE	2.0	ND
DICHLORODIFLUOROMETHANE	2.0	ND	1,2,3-TRICHLOROPROPANE	2.0	ND
1,4-DICHLOROBENZENE	2.0	ND	1,3,5-TRIMETHYLBENZENE	2.0	ND
1,2-DICHLOROBENZENE	2.0	ND	1,2,4-TRIMETHYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	2.0	ND	TOLUENE	2.0	4.5
1,3-DICHLOROPROPANE	2.0	ND	VINYL CHLORIDE	2.0	ND
1,2-DICHLOROPROPANE	2.0	ND	STYRENES + o-XYLENES	4.0	ND
2,2-DICHLOROPROPANE	2.0	ND	m & p-XYLENES	4.0	ND
1,1-DICHLOROETHANE	2.0	ND	METHYL-T-BUTYLETHER	2.0	2.9
1,1-DICHLOROPROPENE	2.0	ND	DI-ISOPROPYLETHER	2.0	ND
cis-1,3-DICHLOROPROPENE	2.0	ND			
trans-1,3-DICHLOROPROPENE	2.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135399
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10S

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135399

Sample wt/vol: 970 (g/mL) ML Lab File ID: 307BB010

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	61	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	6	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	6	J
85-01-8	Phenanthrene	4	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135399
Your sample ID: MW-10S
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135399	Barium	73	UG/L	07/10/93
	Lead	15	UG/L	07/01/93

Signed Earl D Schmidt Date 7/14/93

Signed _____ Date _____

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1609 Western Avenue
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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-10D
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	1.3
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	2.2
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135400
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-10D

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135400

Sample wt/vol: 950 (g/mL) ML Lab File ID: 307BB011

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	3	J
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ORTEK
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1609 Western Avenue
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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135400
Your sample ID: MW-10D
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135400	Barium	30	UG/L	07/10/93
	Lead	5.0	UG/L	07/01/93

Signed Paul D Schmoll Date 7/14/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11S
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	2.7	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	3.2
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	4.5
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135401
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Zuk Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11S

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M302 SAS No.: _____ SDG No.: 135673

Matrix: (soil/water) WATER Lab Sample ID: 135673

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB098

Level: (low/med) LOW Date Received: 07/12/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 07/14/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/15/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135401
Your sample ID: MW-11S
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test	Result	Units	Analysis Date
135401	Barium	160	UG/L	07/10/93
	Lead	2.0	UG/L	07/01/93

Signed _____ Date 7/14/93

Signed _____ Date _____

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CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11D
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	25	1,900	1,2-DICHLOROETHANE	25	ND
BROMOCHLOROMETHANE	25	ND	trans-1,2-DICHLOROETHENE	25	ND
BROMODICHLOROMETHANE	25	ND	cis-1,2-DICHLOROETHENE	25	ND
BROMOFORM	25	ND	1,1-DICHLOROETHENE	25	ND
BROMOBENZENE	25	ND	ETHYLBENZENE	25	ND
BROMOMETHANE	25	ND	HEXACHLOROBUTADIENE	25	ND
n-BUTYLBENZENE	25	ND	p-ISOPROPYLTOLUENE	25	ND
tert-BUTYLBENZENE	25	ND	ISOPROPYLBENZENE	25	140
sec-BUTYLBENZENE	25	ND	METHYLENE CHLORIDE	250	ND
CARBON TETRACHLORIDE	25	ND	NAPHTHALENE	25	210
CHLOROETHANE	25	ND	n-PROPYLBENZENE	25	240
CHLOROMETHANE	25	ND	1,1,2,2-TETRACHLOROETHANE	25	ND
4-CHLOROTOLUENE	25	ND	1,1,1,2-TETRACHLOROETHANE	25	ND
2-CHLOROTOLUENE	25	ND	TETRACHLOROETHENE	25	ND
CHLOROBENZENE	25	ND	TRICHLOROFLUOROMETHANE	25	ND
CHLOROFORM	25	ND	1,2,3-TRICHLOROBENZENE	25	ND
DIBROMOCHLOROMETHANE	25	ND	1,2,4-TRICHLOROBENZENE	25	ND
1,2-DIBROMO-3-CHLOROPROPANE	25	ND	1,1,1-TRICHLOROETHANE	25	ND
1,2-DIBROMOETHANE (EDB)	25	ND	TRICHLOROETHENE	25	ND
DIBROMOMETHANE	25	ND	1,1,2-TRICHLOROETHANE	25	ND
DICHLORODIFLUOROMETHANE	25	ND	1,2,3-TRICHLOROPROPANE	25	ND
1,4-DICHLOROBENZENE	25	ND	1,3,5-TRIMETHYLBENZENE	25	ND
1,2-DICHLOROBENZENE	25	ND	1,2,4-TRIMETHYLBENZENE	25	ND
1,3-DICHLOROBENZENE	25	ND	TOLUENE	25	ND
1,3-DICHLOROPROPANE	25	ND	VINYL CHLORIDE	25	ND
1,2-DICHLOROPROPANE	25	ND	STYRENES + o-XYLENES	50	ND
2,2-DICHLOROPROPANE	25	ND	m & p-XYLENES	50	ND
1,1-DICHLOROETHANE	25	ND	METHYL-T-BUTYLETHER	25	ND
1,1-DICHLOROPROPENE	25	ND	DI-ISOPROPYLETHER	25	ND
cis-1,3-DICHLOROPROPENE	25	ND			
trans-1,3-DICHLOROPROPENE	25	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135410
Date Analyzed: 7/13/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Frank Date: 7/14/93

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11D

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135410

Sample wt/vol: 970 (g/mL) ML Lab File ID: 307BB025

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	34	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	4	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	2	J
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

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ENVIRONMENTAL LABORATORY
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FAX (414) 498-4067
Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135410
Your sample ID: MW-11D
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135410	Barium		130	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/06/93

Signed Earl G Schmidt Date 7/14/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
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P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11DD
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	3.5
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	1.5
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	5.2
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	1.6
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	44	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135411
Date Analyzed: 7/12/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Doyle Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-11DD

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135411

Sample wt/vol: 985 (g/mL) ML Lab File ID: 307BB026

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ORTEK
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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135411
Your sample ID: MW-11DD
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135411	Barium		150	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/06/93

Signed Earl S Schmall Date 7/14/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: FB1
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	1.3
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	2.2
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135412
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dorh Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB1

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135412

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB027

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	2	J
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135412
Your sample ID: FB-1
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135412	Barium	<	10	UG/L	07/07/93
	Lead	<	2.0	UG/L	07/06/93

Signed Earl S Kilmer Date 7/14/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: FB2
Sample Desc: Groundwater
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	2.2
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	STYRENES + o-XYLENES	2.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135413
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB2

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135413

Sample wt/vol: 970 (g/mL) ML Lab File ID: 307BB028

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	2	J
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067
Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: DUANE A STILLINGS

Batch ID : 9306263
Our lab # : 135413
Your sample ID: FB-2
Sample Matrix : WATER

Report Date: 07/14/93

COLLECTION INFORMATION

Date/Time/By: 06/25/93
Location : 20255-004

Lab#	Test		Result	Units	Analysis Date
135413	Barium	<	10	UG/L	07/10/93
	Lead	<	2.0	UG/L	07/06/93

Signed_____ Date_____

Signed_____ Date_____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE, SUITE 1500
MILWAUKEE, WI 53202

ATTENTION: K Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: Trip Blank
Sample Desc:
Date Collected: 6/25/93
Date Received: 6/28/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
tert-BUTYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE	1.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
STYRENES + o-XYLENES	2.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9306263-135414
Date Analyzed: 7/8/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dyk Date: 7/14/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3SDL

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: 135408DL

Sample wt/vol: 820 (g/mL) ML Lab File ID: 307BB030

Level: (low/med) LOW Date Received: 06/29/93

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/06/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	590	D
208-96-8	Acenaphthylene	61	U
83-32-9	Acenaphthene	85	D
132-64-9	Dibenzofuran	61	U
86-73-7	Fluorene	82	D
85-01-8	Phenanthrene	290	D
120-12-7	Anthracene	60	DJ
206-44-0	Fluoranthene	230	D
129-00-0	Pyrene	160	D
56-55-3	Benzo(a)Anthracene	91	D
218-01-9	Chrysene	75	D
205-99-2	Benzo(b)Fluoranthene	93	D
207-08-9	Benzo(k)Fluoranthene	61	U
50-32-8	Benzo(a)Pyrene	32	DJ
193-39-5	Indeno(1,2,3-cd)Pyrene	61	U
53-70-3	Dibenz(a,h)Anthracene	61	U
191-24-2	Benzo(g,h,i)Perylene	61	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK01

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: SBLK063093

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB002

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/01/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK02

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M301 SAS No.: _____ SDG No.: 135394

Matrix: (soil/water) WATER Lab Sample ID: SBLK063093

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB016

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ dec. _____ Date Extracted: 06/30/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/02/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

ECC 4/6 4/01

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortech

Chain of Custody Seal #_____ #_____

Turnaround Time

☐ Rush (preapproved by Lab)
☒ Normal

PROJECT NAME:_____

PROJECT #: 23255-024

Send Results To:
PROJECT MANAGER: K. Cooper

BILL TO: Ursula Borgerding Estate

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature 0.2 C
Comments

Ref # K-1 4-4 11 (252)
Batch # 9306263

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: VOCs (8021)	PAHs (8270)	Pb (3050/7421)	Be (3050/7080)	REMARKS/PRESERVATIVES
135394	6-25-93		40 ml gl	3	MW-3DA	Ground H2O	X				HCl
			1 l amber	1	MW-3DA			X			
			500 ml pl	1	MW-3DA				X	X	HNO3
135395			40 ml gl	3	MW-3DD		X				HCl
			1 l amber	1	MW-3DD			X			
			500 ml pl	1	MW-3DD				X	X	HNO3
135396			40 ml gl	3	MW-4		X				HCl
			1 l amber	1	MW-4			X			
			500 ml pl	1	MW-4				X	X	HNO3
135391			40 ml gl	3	MW-5		X				HCl
			1 l amber	1	MW-5			X			I
			500 ml pl	1	MW-5				X	X	HNO3
						SUBTOTAL					TOTAL

Expect High Hits

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	6-25-93

COMMENTS

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	6-28 1700	UPS
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		[signature] 6/29/93 14:5

COC # 406401

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal #_____ #_____

Turnaround Time

☐ Rush (preapproved by Lab)
☒ Normal

PROJECT NAME:_____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: K. Casper

BILL TO: Ursula Bergerding Estate

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature 0.2 C
Comments

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: VOCs (8021)	PAH (8270)	Cl (3550/7421)	Ba (3050/7080)		REMARKS/PRESERVATIVES
135355	6-25-93		40ml gl	3	MW-9	Grnd H_2O	X					HCl
			1l amber	1	MW-9			X				
			500ml pl	1	MW-9				X	X		HNO_3
135359			40 ml gl	3	MW-10S		X					HCl
			1l amber	1	MW-10S			X				
			500ml pl	1	MW-10S				X	X		HNO_3
135400			40ml gl	3	MW-10D		X					HCl
			1l amber	1	MW-10D			X				
			500ml pl	1	MW-10D				X	X		HNO_3
135401			40ml gl	3	MW-11S		X					HCl
			1l amber	1	MW-11S			X				
			500ml pl	1	MW-11S				X	X		HNO_3
						SUBTOTAL					TOTAL	

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	6-25-93

COMMENTS

Broken CAP MW 10-S 1-Amber in Cooler
Broken CAP SAMPLE Spilled out MW 11S 1-Amber in Cooler

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	6-28 1700	UPS
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE)	DATE/TIME
		[signature]	6/29/93 14:15

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # _____ # _____

Turnaround Time
☐ Rush (preapproved by Lab)
☒ Normal

SHIPPING DETAILS:
Method of Shipment _____
Contents Temperature 3.2 C
Comments _____

PROJECT NAME: _____
PROJECT #: 20255-004
Send Results To:
PROJECT MANAGER: K. Casper
BILL TO: Ursula Borgerding Estate

Ref #
K-1
4-7
11(252)

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	VOC (8021)	PAH (8270)	Pb (3050/7421)	Ba (3050/7080)	REMARKS/PRESERVATIVES
			ANALYSIS REQUESTED								
135402	6-25	13	40 ml gl	3	MW-1	Grnd H_2O	X				HCl
↓			1 l amb.	1	MW-1			X			
			500 ml pl	1	MW-1				X	X	HNO_3
135403			40 ml gl	3	MW-1DD		X				HCl
↓			1 l amb.	1	MW-1DD			X			
			500 ml gl	1	MW-1DD				X	X	HNO_3
135404			40 ml gl	3	MW-2S		X				HCl
↓			1 l amb	1	MW-2S			X			
			500 ml gl	1	MW-2S				X	X	HNO_3
135405			40 ml gl	3	MW-2SA		X				HCl
↓			1 l amb	1	MW-2SA			X			
			500 ml gl	1	MW-2SA				X	X	HNO_3
						SUBTOTAL					TOTAL

Expect High Hits

Expect High Hits

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	6-25-93

COMMENTS: Broken EBL MW-1 1-L Amber

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	6-25 1700	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE)	DATE/TIME
		[signature]	6/28/93 14:15

Job# 116741

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab: Ortek

Chain of Custody Seal #: ______ #: ______

Turnaround Time

- [ ] Rush (preapproved by Lab)
- [x] Normal

SHIPPING DETAILS:

Method of Shipment: ______

Contents Temperature: 0.2 c

Comments: ______

PROJECT NAME: ______

PROJECT #: 20255-004

Send Results To:

PROJECT MANAGER: K. Casper

BILL TO: Ursula Borgerding Estate

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	VOCs (8021)	PAHs (8270)	Pb (3050/7421)	Ba (3050/7080)		REMARKS/PRESERVATIVES
135406	6-25-93		40 ml gl	3	MW-2D	Ground H₂O	X					HCl
↓	↓		1 l amber	1	MW-2D	↓		X				
↓	↓		500 ml pl	1	MW-2D	↓			X	X		HNO3
135407	↓		40 ml gl	3	MW-2DD	↓	X					HCl
↓	↓		1 l amber	1	MW-2DD	↓		X				
↓	↓		500 ml pl	1	MW-2DD	↓			X	X		HNO3
135408	↓		40 ml gl	3	MW-3S	↓	X					HCL
↓	↓		1 l amber	3	MW-3S	↓		X				
↓	↓		500 ml pl	1	MW-3S	↓			X	X		HNO3
135409	↓		40 ml gl	3	MW-3D	↓	X					HCl / Broke
↓	↓		1 l amber	1	MW-3D	↓		X				
↓	↓		500 ml pl	1	MW-3D	↓			X	X		HNO3

ANALYSIS REQUESTED — SUBTOTAL — TOTAL

Expect High Hits

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	6-25-93

COMMENTS

1 Vial Broke in Cooler MW 3-D VOC
Broken CAP

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	
[signature]	6-28 1700	UPS				
RELINQUISHED BY: (SIGNATURE)	**DATE/TIME**	**RECEIVED BY:** (SIGNATURE)	**RELINQUISHED BY:** (SIGNATURE)	**DATE/TIME**	**RECEIVED FOR LABORATORY: BY: (SIGNATURE)**	**DATE/TIME**
					[signature]	6/29/93 1415

COC# 406401

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Qtek

Chain of Custody Seal #_____ #_____

Turnaround Time

☐ Rush (preapproved by Lab)
☒ Normal

PROJECT NAME:_____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: K. Casper

BILL TO: Ursula Bargerding Estate

SHIPPING DETAILS:
Method of Shipment _____
Contents Temperature 0.4 C
Comments _____

Ref#
1K-1
4-4
11(252)

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: VOC (8021)	PAH (8270)	Pb (3020/7421)	Cr (3020/7051)		REMARKS/PRESERVATIVES
135410	6-25-93		40 ml gl	3	MW-11D	Ground H_2O	X					HCl
↓			1l amber	1	MW-11D			X				
			500 ml pl	1	MW-11D				X	X		HNO_3
135411			40 ml gl	3	MW-11DD		X					HCl
↓			1l amber	1	MW-11DD			X				
			500 ml pl	1	MW-11DD				X	X		HNO_3
135412			40 ml gl	3	FB1		X					HCl
↓			1l amber	1	FB1			X				
			500 ml pl	1	FB1				X	X		HNO_3
135413			40 ml gl	3	FB2		X					HCl
↓			1l amber	1	FB2			X				
			500 ml pl	1	FB2				X	X		HNO_3
						SUBTOTAL						TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
Kristin M Casper	6-25-93

COMMENTS

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Kristin M Casper	6-28 17:00	UPS
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE/TIME
		Lori Lubbert	6/29/93 14:15

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLK09

Lab Name: ORTEK Contract: 20255-004

Lab Code: ORTEK Case No.: D-M302 SAS No.: _____ SDG No.: 135673

Matrix: (soil/water) WATER Lab Sample ID: SBLK071493

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 307BB095

Level: (low/med) LOW Date Received: _____

% Moisture: not dec. _____ dec. _____ Date Extracted: 07/14/93

Extraction: (SepF/Cont/Sonc) SEPF Date Analyzed: 07/15/93

GPC Cleanup: (Y/N) N pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

2 of 2 40641

Lab Oltek

Chain of Custody Seal #_____ #_____

Turnaround Time
☐ Rush (preapproved by Lab)
☒ Normal

PROJECT NAME:_____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: K. Casper

BILL TO: Bargarding Estate

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature 0.5 C
Comments Cooler Secure

PART (8270)

9307069

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED	REMARKS/PRESERVATIVES
	7/9/93		1 Amber	1	MW-11S	g.w.	X	135673

SUBTOTAL TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
Kirk Kopfhamer	7/9/93

COMMENTS

Due 7/26/93
MF3

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Kirk Kopfhamer	7/12/93 9:00a	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		Mary Ike 7/13/93 10:30

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

August 3, 1993

Dames & Moore
250 E Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

Attn: Kristine Casper

Subject: Sample Received July 22,1993
Reference: Batch No. 9307162 Sample No. 135972-135992

Enclosed please find a report of analytical results for Sample No. 135972-135992. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties during analysis which may have compromised the enclosed results.

Should you have any questions regarding this report please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report.

Sincerely,

Barb Rutten

Barb Rutten
Project Manager

Approval,

Earl J Elmendorf

For John Burnett
Laboratory Manager

Enclosed

c: file

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Green Bay, WI 54307-2435

GC/MS SEMIVOLATILE ORGANIC ANALYSIS

Client:	Dames & Moore	Project Name/Desc.:	
Address:	250 East Wisconsin Ave, Suite 1500	Project Number:	20255-004
	Milwaukee, WI 53202	Batch Number:	9307162
Phone:	(414) 347-0800	COC Number:	406430
FAX:	(414) 347-0288		
		Case No.:	DAMES
Contact:	Kristine Casper	SDG No.:	FB1

SAMPLE SUMMARY

Client Sample No.	EPA Sample No.	Ortek Lab Sample ID
FB-1	FB1	135981
MW-1	MW1	135990
MW-1DD	MW1DD	135989
MW-2D	MW2D	135992
MW-2DD	MW2DD	135985
MW-2S	MW2S	135988
MW-2SA	MW2SA	135991
MW-3D	MW3D	135987
MW-3DA	MW3DA	135984
MW-3DD	MW3DD	135986
MW-3S	MW3S	135983
MW-4	MW4	135975
MW-5	MW5	135979
MW-9	MW9	135978
MW-10D	MW10D	135976
MW-10S	MW10S	135977
MW-11D	MW11D	135973
MW-11DD	MW11DD	135974
MW-11S	MW11S	135972

COMMENTS: SEMIVOLATILE ORGANIC ANALYSIS PERFORMED BY MODIFIED EPA METHOD 8270 ON A DB-5MS CAPILLARY COLUMN

1.) The instrument ID for Semivolatile Organic Analysis is HP-D. The blank associated with the samples is SBLK07.

2.) The surrogate recoveries for EPA Sample No.'s MW3D, MW3DA, and MW3DD were below QC limits. No sample remained for reextraction. This could be a matrix effect as all three samples were of similiar identification designation (MW-3D, MW-3DA and MW-3DD).

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"Q" COLUMN QUALIFIERS:

- U - Compound analyzed for but not detected
- B - Indicates the analyte is found in the associated method blank
- J - Estimated value, concentration of analyte below quantitation limit
- E - Compound exceeds calibration range, but did not saturate the detector; actual concentrations could be higher than reported
- D - Compound identified in the analysis at a secondary dilution
- N - Indicates presumptive evidence of a compound (identified based on mass spectral library search)

Signed: John C Ruther Name: John C. Ruther

Title: GC/MS/EC Supervisor Date: 8/2/93

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-1
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	250	7,000
BROMOCHLOROMETHANE	250	ND
BROMODICHLOROMETHANE	250	ND
BROMOFORM	250	ND
BROMOBENZENE	250	ND
BROMOMETHANE	250	ND
n-BUTYLBENZENE	250	ND
STYRENE	250	ND
sec-BUTYLBENZENE	250	ND
CARBON TETRACHLORIDE	250	ND
CHLOROETHANE	250	ND
CHLOROMETHANE	250	ND
4-CHLOROTOLUENE	250	ND
2-CHLOROTOLUENE	250	ND
CHLOROBENZENE	250	ND
CHLOROFORM	250	ND
DIBROMOCHLOROMETHANE	250	ND
1,2-DIBROMO-3-CHLOROPROPANE	250	ND
1,2-DIBROMOETHANE (EDB)	250	ND
DIBROMOMETHANE	250	ND
DICHLORODIFLUOROMETHANE	250	ND
1,4-DICHLOROBENZENE	250	ND
1,2-DICHLOROBENZENE	250	ND
1,3-DICHLOROBENZENE	250	ND
1,3-DICHLOROPROPANE	250	ND
1,2-DICHLOROPROPANE	250	ND
2,2-DICHLOROPROPANE	250	ND
1,1-DICHLOROETHANE	250	ND
1,1-DICHLOROPROPENE	250	ND
cis-1,3-DICHLOROPROPENE	250	ND
trans-1,3-DICHLOROPROPENE	250	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	250	ND
trans-1,2-DICHLOROETHENE	250	ND
cis-1,2-DICHLOROETHENE	250	ND
1,1-DICHLOROETHENE	250	ND
ETHYLBENZENE	250	1,000
HEXACHLOROBUTADIENE	250	ND
p-ISOPROPYLTOLUENE	250	300
ISOPROPYLBENZENE	250	ND
METHYLENE CHLORIDE	2500	ND
NAPHTHALENE	250	360
n-PROPYLBENZENE	250	ND
1,1,2,2-TETRACHLOROETHANE	250	ND
1,1,1,2-TETRACHLOROETHANE	250	ND
TETRACHLOROETHENE	250	ND
TRICHLOROFLUOROMETHANE	250	ND
1,2,3-TRICHLOROBENZENE	250	ND
1,2,4-TRICHLOROBENZENE	250	ND
1,1,1-TRICHLOROETHANE	250	ND
TRICHLOROETHENE	250	ND
1,1,2-TRICHLOROETHANE	250	ND
1,2,3-TRICHLOROPROPANE	250	ND
1,3,5-TRIMETHYLBENZENE	250	250
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	500	1,100
TOLUENE	250	1,300
VINYL CHLORIDE	250	ND
o-XYLENE	250	610
m & p-XYLENES	500	3,000
METHYL-T-BUTYLETHER	250	ND
DI-ISOPROPYLETHER	250	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135990
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Fyle Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135990

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S07

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	120	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	9	J
132-64-9	Dibenzofuran	6	J
86-73-7	Fluorene	11	
85-01-8	Phenanthrene	25	
120-12-7	Anthracene	4	J
206-44-0	Fluoranthene	8	J
129-00-0	Pyrene	6	J
56-55-3	Benzo(a)anthracene	2	J
218-01-9	Chrysene	2	J
205-99-2	Benzo(b)fluoranthene	2	J
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	1	J
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135990
Your sample ID: MW-1
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135990	Barium	190	UG/L	07/26/93
	Lead	7.1	UG/L	07/28/93

Signed Earl S Klindt Date 8/2/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-1DD
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	5.2
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	51
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	1.5
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	1.8
TRICHLOROETHENE	1.0	1.6
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	2.2
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135989
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW1DD

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135989

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S06

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135989
Your sample ID: MW-1DD
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135989	Barium		120	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl E Schmoll Date 8/2/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2S
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	2.0	78
BROMOCHLOROMETHANE	2.0	ND
BROMODICHLOROMETHANE	2.0	ND
BROMOFORM	2.0	ND
BROMOBENZENE	2.0	ND
BROMOMETHANE	2.0	ND
n-BUTYLBENZENE	2.0	14
STYRENE	2.0	ND
sec-BUTYLBENZENE	2.0	2.0
CARBON TETRACHLORIDE	2.0	ND
CHLOROETHANE	2.0	ND
CHLOROMETHANE	2.0	ND
4-CHLOROTOLUENE	2.0	ND
2-CHLOROTOLUENE	2.0	ND
CHLOROBENZENE	2.0	ND
CHLOROFORM	2.0	ND
DIBROMOCHLOROMETHANE	2.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	2.0	ND
1,2-DIBROMOETHANE (EDB)	2.0	ND
DIBROMOMETHANE	2.0	ND
DICHLORODIFLUOROMETHANE	2.0	ND
1,4-DICHLOROBENZENE	2.0	ND
1,2-DICHLOROBENZENE	2.0	ND
1,3-DICHLOROBENZENE	2.0	ND
1,3-DICHLOROPROPANE	2.0	ND
1,2-DICHLOROPROPANE	2.0	ND
2,2-DICHLOROPROPANE	2.0	ND
1,1-DICHLOROETHANE	2.0	ND
1,1-DICHLOROPROPENE	2.0	ND
cis-1,3-DICHLOROPROPENE	2.0	ND
trans-1,3-DICHLOROPROPENE	2.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	2.0	ND
trans-1,2-DICHLOROETHENE	2.0	ND
cis-1,2-DICHLOROETHENE	2.0	ND
1,1-DICHLOROETHENE	2.0	ND
ETHYLBENZENE	2.0	19
HEXACHLOROBUTADIENE	2.0	ND
p-ISOPROPYLTOLUENE	2.0	8.6
ISOPROPYLBENZENE	2.0	11
METHYLENE CHLORIDE	20	ND
NAPHTHALENE	2.0	56
n-PROPYLBENZENE	2.0	29
1,1,2,2-TETRACHLOROETHANE	2.0	ND
1,1,1,2-TETRACHLOROETHANE	2.0	ND
TETRACHLOROETHENE	2.0	ND
TRICHLOROFLUOROMETHANE	2.0	ND
1,2,3-TRICHLOROBENZENE	2.0	ND
1,2,4-TRICHLOROBENZENE	2.0	ND
1,1,1-TRICHLOROETHANE	2.0	ND
TRICHLOROETHENE	2.0	ND
1,1,2-TRICHLOROETHANE	2.0	ND
1,2,3-TRICHLOROPROPANE	2.0	ND
1,3,5-TRIMETHYLBENZENE	2.0	13
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	4.0	33
TOLUENE	2.0	7.5
VINYL CHLORIDE	2.0	ND
o-XYLENE	2.0	ND
m & p-XYLENES	4.0	28
METHYL-T-BUTYLETHER	2.0	ND
DI-ISOPROPYLETHER	2.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135988
Date Analyzed: 7/31/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Zink Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2S

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135988

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S05

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	13	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135988
Your sample ID: MW-2S
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135988	Barium		160	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl S Schmidt Date 8/2/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2SA
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	2.0	74	1,2-DICHLOROETHANE	2.0	ND
BROMOCHLOROMETHANE	2.0	ND	trans-1,2-DICHLOROETHENE	2.0	ND
BROMODICHLOROMETHANE	2.0	ND	cis-1,2-DICHLOROETHENE	2.0	ND
BROMOFORM	2.0	ND	1,1-DICHLOROETHENE	2.0	ND
BROMOBENZENE	2.0	ND	ETHYLBENZENE	2.0	18
BROMOMETHANE	2.0	ND	HEXACHLOROBUTADIENE	2.0	ND
n-BUTYLBENZENE	2.0	14	p-ISOPROPYLTOLUENE	2.0	8.9
STYRENE	2.0	ND	ISOPROPYLBENZENE	2.0	10
sec-BUTYLBENZENE	2.0	ND	METHYLENE CHLORIDE	20	ND
CARBON TETRACHLORIDE	2.0	ND	NAPHTHALENE	2.0	56
CHLOROETHANE	2.0	ND	n-PROPYLBENZENE	2.0	28
CHLOROMETHANE	2.0	ND	1,1,2,2-TETRACHLOROETHANE	2.0	ND
4-CHLOROTOLUENE	2.0	ND	1,1,1,2-TETRACHLOROETHANE	2.0	ND
2-CHLOROTOLUENE	2.0	ND	TETRACHLOROETHENE	2.0	ND
CHLOROBENZENE	2.0	ND	TRICHLOROFLUOROMETHANE	2.0	ND
CHLOROFORM	2.0	ND	1,2,3-TRICHLOROBENZENE	2.0	ND
DIBROMOCHLOROMETHANE	2.0	ND	1,2,4-TRICHLOROBENZENE	2.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	2.0	ND	1,1,1-TRICHLOROETHANE	2.0	ND
1,2-DIBROMOETHANE (EDB)	2.0	ND	TRICHLOROETHENE	2.0	ND
DIBROMOMETHANE	2.0	ND	1,1,2-TRICHLOROETHANE	2.0	ND
DICHLORODIFLUOROMETHANE	2.0	ND	1,2,3-TRICHLOROPROPANE	2.0	ND
1,4-DICHLOROBENZENE	2.0	ND	1,3,5-TRIMETHYLBENZENE	2.0	13
1,2-DICHLOROBENZENE	2.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	4.0	33
1,3-DICHLOROBENZENE	2.0	ND	TOLUENE	2.0	7.8
1,3-DICHLOROPROPANE	2.0	ND	VINYL CHLORIDE	2.0	ND
1,2-DICHLOROPROPANE	2.0	ND	o-XYLENE	2.0	ND
2,2-DICHLOROPROPANE	2.0	ND	m & p-XYLENES	4.0	28
1,1-DICHLOROETHANE	2.0	ND	METHYL-T-BUTYLETHER	2.0	ND
1,1-DICHLOROPROPENE	2.0	ND	DI-ISOPROPYLETHER	2.0	ND
cis-1,3-DICHLOROPROPENE	2.0	ND			
trans-1,3-DICHLOROPROPENE	2.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135991
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Duh Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2SA

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135991

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S08

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	18	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135991
Your sample ID: MW-2SA
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135991	Barium	160	UG/L	07/26/93
	Lead	2.4	UG/L	07/28/93

Signed Earl S Arnold Date 8/2/93

Signed _____ Date _____

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2D
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	25	2,700
BROMOCHLOROMETHANE	25	ND
BROMODICHLOROMETHANE	25	ND
BROMOFORM	25	ND
BROMOBENZENE	25	ND
BROMOMETHANE	25	ND
n-BUTYLBENZENE	25	43
STYRENE	25	ND
sec-BUTYLBENZENE	25	ND
CARBON TETRACHLORIDE	25	ND
CHLOROETHANE	25	ND
CHLOROMETHANE	25	ND
4-CHLOROTOLUENE	25	ND
2-CHLOROTOLUENE	25	ND
CHLOROBENZENE	25	ND
CHLOROFORM	25	ND
DIBROMOCHLOROMETHANE	25	ND
1,2-DIBROMO-3-CHLOROPROPANE	25	ND
1,2-DIBROMOETHANE (EDB)	25	ND
DIBROMOMETHANE	25	ND
DICHLORODIFLUOROMETHANE	25	ND
1,4-DICHLOROBENZENE	25	ND
1,2-DICHLOROBENZENE	25	ND
1,3-DICHLOROBENZENE	25	ND
1,3-DICHLOROPROPANE	25	ND
1,2-DICHLOROPROPANE	25	ND
2,2-DICHLOROPROPANE	25	ND
1,1-DICHLOROETHANE	25	ND
1,1-DICHLOROPROPENE	25	ND
cis-1,3-DICHLOROPROPENE	25	ND
trans-1,3-DICHLOROPROPENE	25	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	25	ND
trans-1,2-DICHLOROETHENE	25	ND
cis-1,2-DICHLOROETHENE	25	ND
1,1-DICHLOROETHENE	25	ND
ETHYLBENZENE	25	300
HEXACHLOROBUTADIENE	25	ND
p-ISOPROPYLTOLUENE	25	70
ISOPROPYLBENZENE	25	ND
METHYLENE CHLORIDE	250	ND
NAPHTHALENE	25	150
n-PROPYLBENZENE	25	64
1,1,2,2-TETRACHLOROETHANE	25	ND
1,1,1,2-TETRACHLOROETHANE	25	ND
TETRACHLOROETHENE	25	ND
TRICHLOROFLUOROMETHANE	25	ND
1,2,3-TRICHLOROBENZENE	25	ND
1,2,4-TRICHLOROBENZENE	25	ND
1,1,1-TRICHLOROETHANE	25	ND
TRICHLOROETHENE	25	ND
1,1,2-TRICHLOROETHANE	25	ND
1,2,3-TRICHLOROPROPANE	25	ND
1,3,5-TRIMETHYLBENZENE	25	75
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	50	270
TOLUENE	25	29
VINYL CHLORIDE	25	ND
o-XYLENE	25	ND
m & p-XYLENES	50	710
METHYL-T-BUTYLETHER	25	ND
DI-ISOPROPYLETHER	25	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135992
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Dahl Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2D

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135992

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S09

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	56	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	1	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	1	J
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135992
Your sample ID: MW-2D
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135992	Barium	150	UG/L	07/26/93
	Lead	2.2	UG/L	07/28/93

Signed Ed S Kinnard Date 8/2/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-2DD
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	2.4
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	28
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	1.3
cis-1,2-DICHLOROETHENE	1.0	34
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	3.6
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	4.6
TRICHLOROETHENE	1.0	26
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	5.4
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135985
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW2DD

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135985

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S02

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135985
Your sample ID: MW-2DD
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135985	Barium	130	UG/L	07/26/93
	Lead	5.0	UG/L	07/28/93

Signed Earl S Schmidt Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3S
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	20	6,900 E
BROMOCHLOROMETHANE	20	ND
BROMODICHLOROMETHANE	20	ND
BROMOFORM	20	ND
BROMOBENZENE	20	ND
BROMOMETHANE	20	ND
n-BUTYLBENZENE	20	220
STYRENE	20	ND
sec-BUTYLBENZENE	20	ND
CARBON TETRACHLORIDE	20	ND
CHLOROETHANE	20	ND
CHLOROMETHANE	20	ND
4-CHLOROTOLUENE	20	ND
2-CHLOROTOLUENE	20	ND
CHLOROBENZENE	20	ND
CHLOROFORM	20	ND
DIBROMOCHLOROMETHANE	20	ND
1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,2-DIBROMOETHANE (EDB)	20	ND
DIBROMOMETHANE	20	ND
DICHLORODIFLUOROMETHANE	20	ND
1,4-DICHLOROBENZENE	20	ND
1,2-DICHLOROBENZENE	20	ND
1,3-DICHLOROBENZENE	20	ND
1,3-DICHLOROPROPANE	20	ND
1,2-DICHLOROPROPANE	20	ND
2,2-DICHLOROPROPANE	20	ND
1,1-DICHLOROETHANE	20	ND
1,1-DICHLOROPROPENE	20	ND
cis-1,3-DICHLOROPROPENE	20	ND
trans-1,3-DICHLOROPROPENE	20	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	20	ND
trans-1,2-DICHLOROETHENE	20	ND
cis-1,2-DICHLOROETHENE	20	ND
1,1-DICHLOROETHENE	20	ND
ETHYLBENZENE	20	1,200
HEXACHLOROBUTADIENE	20	ND
p-ISOPROPYLTOLUENE	20	380
ISOPROPYLBENZENE	20	68
METHYLENE CHLORIDE	200	ND
NAPHTHALENE	20	610
n-PROPYLBENZENE	20	210
1,1,2,2-TETRACHLOROETHANE	20	ND
1,1,1,2-TETRACHLOROETHANE	20	ND
TETRACHLOROETHENE	20	ND
TRICHLOROFLUOROMETHANE	20	ND
1,2,3-TRICHLOROBENZENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND
1,1,1-TRICHLOROETHANE	20	ND
TRICHLOROETHENE	20	ND
1,1,2-TRICHLOROETHANE	20	ND
1,2,3-TRICHLOROPROPANE	20	ND
1,3,5-TRIMETHYLBENZENE	20	330
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	40	1,300
TOLUENE	20	1,500
VINYL CHLORIDE	20	ND
o-XYLENE	20	740
m & p-XYLENES	40	3,500
METHYL-T-BUTYLETHER	20	ND
DI-ISOPROPYLETHER	20	ND

ND = Not Detected
E = Compound exceeds calibration range

COMMENTS: Lab Sample ID: 9307162-135983
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Hyde Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3S

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135983

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R14

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	65	
208-96-8	Acenaphthylene	2	J
83-32-9	Acenaphthene	23	
132-64-9	Dibenzofuran	12	
86-73-7	Fluorene	25	
85-01-8	Phenanthrene	72	
120-12-7	Anthracene	15	
206-44-0	Fluoranthene	50	
129-00-0	Pyrene	34	
56-55-3	Benzo(a)anthracene	18	
218-01-9	Chrysene	17	
205-99-2	Benzo(b)fluoranthene	17	
207-08-9	Benzo(k)fluoranthene	6	J
50-32-8	Benzo(a)pyrene	9	J
193-39-5	Indeno(1,2,3-cd)pyrene	5	J
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	5	J

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135983
Your sample ID: MW-3S
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135983	Barium	230	UG/L	07/26/93
	Lead	13	UG/L	07/28/93

Signed Earl G Kimball Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3D
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	20	1,400
BROMOCHLOROMETHANE	20	ND
BROMODICHLOROMETHANE	20	ND
BROMOFORM	20	ND
BROMOBENZENE	20	ND
BROMOMETHANE	20	ND
n-BUTYLBENZENE	20	ND
STYRENE	20	ND
sec-BUTYLBENZENE	20	ND
CARBON TETRACHLORIDE	20	ND
CHLOROETHANE	20	ND
CHLOROMETHANE	20	ND
4-CHLOROTOLUENE	20	ND
2-CHLOROTOLUENE	20	ND
CHLOROBENZENE	20	ND
CHLOROFORM	20	ND
DIBROMOCHLOROMETHANE	20	ND
1,2-DIBROMO-3-CHLOROPROPANE	20	ND
1,2-DIBROMOETHANE (EDB)	20	ND
DIBROMOMETHANE	20	ND
DICHLORODIFLUOROMETHANE	20	ND
1,4-DICHLOROBENZENE	20	ND
1,2-DICHLOROBENZENE	20	ND
1,3-DICHLOROBENZENE	20	ND
1,3-DICHLOROPROPANE	20	ND
1,2-DICHLOROPROPANE	20	ND
2,2-DICHLOROPROPANE	20	ND
1,1-DICHLOROETHANE	20	ND
1,1-DICHLOROPROPENE	20	ND
cis-1,3-DICHLOROPROPENE	20	ND
trans-1,3-DICHLOROPROPENE	20	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	20	ND
trans-1,2-DICHLOROETHENE	20	ND
cis-1,2-DICHLOROETHENE	20	ND
1,1-DICHLOROETHENE	20	ND
ETHYLBENZENE	20	70
HEXACHLOROBUTADIENE	20	ND
p-ISOPROPYLTOLUENE	20	37
ISOPROPYLBENZENE	20	ND
METHYLENE CHLORIDE	200	ND
NAPHTHALENE	20	ND
n-PROPYLBENZENE	20	ND
1,1,2,2-TETRACHLOROETHANE	20	ND
1,1,1,2-TETRACHLOROETHANE	20	ND
TETRACHLOROETHENE	20	ND
TRICHLOROFLUOROMETHANE	20	ND
1,2,3-TRICHLOROBENZENE	20	ND
1,2,4-TRICHLOROBENZENE	20	ND
1,1,1-TRICHLOROETHANE	20	ND
TRICHLOROETHENE	20	ND
1,1,2-TRICHLOROETHANE	20	ND
1,2,3-TRICHLOROPROPANE	20	ND
1,3,5-TRIMETHYLBENZENE	20	23
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	40	ND
TOLUENE	20	ND
VINYL CHLORIDE	20	ND
o-XYLENE	20	ND
m & p-XYLENES	40	150
METHYL-T-BUTYLETHER	20	ND
DI-ISOPROPYLETHER	20	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135987
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Fink Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3D

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135987

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S04

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	1	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135987
Your sample ID: MW-3D
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135987	Barium	110	UG/L	07/26/93
	Lead	2.5	UG/L	07/28/93

Signed Carl S Edwards Date 8/2/93

Signed _____ Date _____

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3DA
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	20	1,300	1,2-DICHLOROETHANE	20	ND
BROMOCHLOROMETHANE	20	ND	trans-1,2-DICHLOROETHENE	20	ND
BROMODICHLOROMETHANE	20	ND	cis-1,2-DICHLOROETHENE	20	ND
BROMOFORM	20	ND	1,1-DICHLOROETHENE	20	ND
BROMOBENZENE	20	ND	ETHYLBENZENE	20	64
BROMOMETHANE	20	ND	HEXACHLOROBUTADIENE	20	ND
n-BUTYLBENZENE	20	ND	p-ISOPROPYLTOLUENE	20	35
STYRENE	20	ND	ISOPROPYLBENZENE	20	ND
sec-BUTYLBENZENE	20	ND	METHYLENE CHLORIDE	200	ND
CARBON TETRACHLORIDE	20	ND	NAPHTHALENE	20	ND
CHLOROETHANE	20	ND	n-PROPYLBENZENE	20	ND
CHLOROMETHANE	20	ND	1,1,2,2-TETRACHLOROETHANE	20	ND
4-CHLOROTOLUENE	20	ND	1,1,1,2-TETRACHLOROETHANE	20	ND
2-CHLOROTOLUENE	20	ND	TETRACHLOROETHENE	20	ND
CHLOROBENZENE	20	ND	TRICHLOROFLUOROMETHANE	20	ND
CHLOROFORM	20	ND	1,2,3-TRICHLOROBENZENE	20	ND
DIBROMOCHLOROMETHANE	20	ND	1,2,4-TRICHLOROBENZENE	20	ND
1,2-DIBROMO-3-CHLOROPROPANE	20	ND	1,1,1-TRICHLOROETHANE	20	ND
1,2-DIBROMOETHANE (EDB)	20	ND	TRICHLOROETHENE	20	ND
DIBROMOMETHANE	20	ND	1,1,2-TRICHLOROETHANE	20	ND
DICHLORODIFLUOROMETHANE	20	ND	1,2,3-TRICHLOROPROPANE	20	ND
1,4-DICHLOROBENZENE	20	ND	1,3,5-TRIMETHYLBENZENE	20	21
1,2-DICHLOROBENZENE	20	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	40	ND
1,3-DICHLOROBENZENE	20	ND	TOLUENE	20	ND
1,3-DICHLOROPROPANE	20	ND	VINYL CHLORIDE	20	ND
1,2-DICHLOROPROPANE	20	ND	o-XYLENE	20	ND
2,2-DICHLOROPROPANE	20	ND	m & p-XYLENES	40	130
1,1-DICHLOROETHANE	20	ND	METHYL-T-BUTYLETHER	20	ND
1,1-DICHLOROPROPENE	20	ND	DI-ISOPROPYLETHER	20	ND
cis-1,3-DICHLOROPROPENE	20	ND			
trans-1,3-DICHLOROPROPENE	20	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135984
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Groh Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3DA

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135984

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S01

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	1	J
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	1	J
85-01-8	Phenanthrene	1	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135984
Your sample ID: 3DA
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135984	Barium		100	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl S Schmoll Date 8/2/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-3DD
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	1.1
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	7.2
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	5.2
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	1.5
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	1.1
TRICHLOROETHENE	1.0	6.3
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	5.2
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135986
Date Analyzed: 7/29/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW3DD

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135986

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7S03

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135986
Your sample ID: MW-3DD
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135986	Barium	78	UG/L	07/26/93
	Lead	2.8	UG/L	07/28/93

Signed Earl S Klimek Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-4
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
STYRENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	o-XYLENE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135975
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Fink Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW4

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135975

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R08

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135975
Your sample ID: MW 4
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/20/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135975	Barium		130	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl S Schmidt Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-5
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
STYRENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	o-XYLENE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	18
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135979
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: Christine Casper Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW5

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135979

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R12

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135979
Your sample ID: MW 5
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135979	Barium		190	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl S Schmidt Date 8/2/93

Signed _____ Date _____

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-9
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135978
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW9

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135978

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R11

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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(800) 236-4067
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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135978 Report Date: 08/02/93
Your sample ID: MW 9
Sample Matrix : GRNDWATER

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135978	Barium		54	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl G Schmidt Date 8/2/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-10S
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	10
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	7.1
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	3.0
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	3.9
ISOPROPYLBENZENE	1.0	5.4
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	94
n-PROPYLBENZENE	1.0	12
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	2.2
TOLUENE	1.0	1.9
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135977
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Zahn Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10S

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135977

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R10

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	22	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	4	J
132-64-9	Dibenzofuran	2	J
86-73-7	Fluorene	4	J
85-01-8	Phenanthrene	3	J
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135977
Your sample ID: MW 10S
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test	Result	Units	Analysis Date
135977	Barium	130	UG/L	07/26/93
	Lead	7.7	UG/L	07/28/93

Signed Earl D. Schmall Date 8/2/93

Signed _____ Date _____

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Green Bay, WI 54307-2435
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- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135976
Your sample ID: MW 10D
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135976	Barium		38	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl D Schmall Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-10D
Sample Desc: Groundwater
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	1.5
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	1.2
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	5.6
n-PROPYLBENZENE	1.0	2.9
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135976
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW10D

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135976

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R09

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11S
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
STYRENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	1.2
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	o-XYLENE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	1.2	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135972
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Strub Date: 8/2/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11S
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	1.2
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	1.2
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135972
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: Christine Q. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11S

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135972

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R05

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135972
Your sample ID: MW 11S
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/20/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135972	Barium		190	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/27/93

Signed Earl S Arnold Date 8/2/93

Signed _____ Date _____

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11D
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	10	430	1,2-DICHLOROETHANE	10	ND
BROMOCHLOROMETHANE	10	ND	trans-1,2-DICHLOROETHENE	10	ND
BROMODICHLOROMETHANE	10	ND	cis-1,2-DICHLOROETHENE	10	ND
BROMOFORM	10	ND	1,1-DICHLOROETHENE	10	ND
BROMOBENZENE	10	ND	ETHYLBENZENE	10	ND
BROMOMETHANE	10	ND	HEXACHLOROBUTADIENE	10	ND
n-BUTYLBENZENE	10	16	p-ISOPROPYLTOLUENE	10	ND
STYRENE	10	ND	ISOPROPYLBENZENE	10	79
sec-BUTYLBENZENE	10	12	METHYLENE CHLORIDE	100	ND
CARBON TETRACHLORIDE	10	ND	NAPHTHALENE	10	230
CHLOROETHANE	10	ND	n-PROPYLBENZENE	10	160
CHLOROMETHANE	10	ND	1,1,2,2-TETRACHLOROETHANE	10	ND
4-CHLOROTOLUENE	10	ND	1,1,1,2-TETRACHLOROETHANE	10	ND
2-CHLOROTOLUENE	10	ND	TETRACHLOROETHENE	10	ND
CHLOROBENZENE	10	ND	TRICHLOROFLUOROMETHANE	10	ND
CHLOROFORM	10	ND	1,2,3-TRICHLOROBENZENE	10	ND
DIBROMOCHLOROMETHANE	10	ND	1,2,4-TRICHLOROBENZENE	10	ND
1,2-DIBROMO-3-CHLOROPROPANE	10	ND	1,1,1-TRICHLOROETHANE	10	ND
1,2-DIBROMOETHANE (EDB)	10	ND	TRICHLOROETHENE	10	ND
DIBROMOMETHANE	10	ND	1,1,2-TRICHLOROETHANE	10	ND
DICHLORODIFLUOROMETHANE	10	ND	1,2,3-TRICHLOROPROPANE	10	ND
1,4-DICHLOROBENZENE	10	ND	1,3,5-TRIMETHYLBENZENE	10	ND
1,2-DICHLOROBENZENE	10	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	20	ND
1,3-DICHLOROBENZENE	10	ND	TOLUENE	10	ND
1,3-DICHLOROPROPANE	10	ND	VINYL CHLORIDE	10	ND
1,2-DICHLOROPROPANE	10	ND	o-XYLENE	10	ND
2,2-DICHLOROPROPANE	10	ND	m & p-XYLENES	20	ND
1,1-DICHLOROETHANE	10	ND	METHYL-T-BUTYLETHER	10	ND
1,1-DICHLOROPROPENE	10	ND	DI-ISOPROPYLETHER	10	ND
cis-1,3-DICHLOROPROPENE	10	ND			
trans-1,3-DICHLOROPROPENE	10	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135973
Date Analyzed: 7/30/93
Analyzed by Modified EPA Method 8021.

Signed: _____ Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11D

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135973

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R06

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	75	
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	3	J
132-64-9	Dibenzofuran	1	J
86-73-7	Fluorene	2	J
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135973
Your sample ID: MW 11D
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/20/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135973	Barium		110	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/27/93

Signed Earl G Arnold Date 8/2/93

Signed _____ Date _____

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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: MW-11DD
Sample Desc: Groundwater
Date Collected: 7/20/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	65
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	2.7
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	1.8
TRICHLOROETHENE	1.0	3.6
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135974
Date Analyzed: 7/26/93
Analyzed by Modified EPA Method 8021.

Signed: [signature] Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW11DD

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135974

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R07

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135974
Your sample ID: MW 11DD
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/20/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135974	Barium		160	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/27/93

Signed Paul D Richard Date 8/2/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
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FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: FB-1
Sample Desc: Water
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
STYRENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	1.5
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	o-XYLENE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135981
Date Analyzed: 7/29/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Smith Date: 8/2/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB1

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 135981

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R13

Level: (low/med) LOW Date Received: 07/22/93

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/28/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

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Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135981
Your sample ID: FB-1
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135981	Barium	<	10	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl G Schmidt Date 8/2/93

Signed _____ Date _____

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: FB-2
Sample Desc: Water
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l	PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND	1,2-DICHLOROETHANE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND	trans-1,2-DICHLOROETHENE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND	cis-1,2-DICHLOROETHENE	1.0	ND
BROMOFORM	1.0	ND	1,1-DICHLOROETHENE	1.0	ND
BROMOBENZENE	1.0	ND	ETHYLBENZENE	1.0	ND
BROMOMETHANE	1.0	ND	HEXACHLOROBUTADIENE	1.0	ND
n-BUTYLBENZENE	1.0	ND	p-ISOPROPYLTOLUENE	1.0	ND
STYRENE	1.0	ND	ISOPROPYLBENZENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND	METHYLENE CHLORIDE	10	ND
CARBON TETRACHLORIDE	1.0	ND	NAPHTHALENE	1.0	ND
CHLOROETHANE	1.0	ND	n-PROPYLBENZENE	1.0	ND
CHLOROMETHANE	1.0	ND	1,1,2,2-TETRACHLOROETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND	1,1,1,2-TETRACHLOROETHANE	1.0	ND
2-CHLOROTOLUENE	1.0	ND	TETRACHLOROETHENE	1.0	ND
CHLOROBENZENE	1.0	ND	TRICHLOROFLUOROMETHANE	1.0	ND
CHLOROFORM	1.0	ND	1,2,3-TRICHLOROBENZENE	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND	1,2,4-TRICHLOROBENZENE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND	1,1,1-TRICHLOROETHANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND	TRICHLOROETHENE	1.0	ND
DIBROMOMETHANE	1.0	ND	1,1,2-TRICHLOROETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND	1,2,3-TRICHLOROPROPANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND	1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND	1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
1,3-DICHLOROBENZENE	1.0	ND	TOLUENE	1.0	1.0
1,3-DICHLOROPROPANE	1.0	ND	VINYL CHLORIDE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND	o-XYLENE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND	m & p-XYLENES	2.0	ND
1,1-DICHLOROETHANE	1.0	ND	METHYL-T-BUTYLETHER	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND	DI-ISOPROPYLETHER	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND			
trans-1,3-DICHLOROPROPENE	1.0	ND			

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135982
Date Analyzed: 7/29/93
Analyzed by Modified EPA Method 8021.

Signed: Christine J. Dash Date: 8/2/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067
Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORT -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307162
Our lab # : 135982
Your sample ID: FB-2
Sample Matrix : GRNDWATER

Report Date: 08/02/93

COLLECTION INFORMATION

Date/Time/By: 07/21/93 K K
Location : 20255-004/BORGERDING EST.

Lab#	Test		Result	Units	Analysis Date
135982	Barium	<	10	UG/L	07/26/93
	Lead	<	2.0	UG/L	07/28/93

Signed Earl G Schmidt Date 8/2/93

Signed _____ Date _____

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: Trip Blank 1
Sample Desc: Water
Date Collected: 7/21/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135980
Date Analyzed: 7/29/93
Analyzed by Modified EPA Method 8021.

Signed: Christopher J. Erb Date: 8/2/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE, WISCONSIN 53202

ATTENTION: Kristine Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No: 405099530

Sample ID: Trip Blank 2
Sample Desc: Water
Date Collected: 7/22/93
Date Received: 7/22/93
Job #: 20255-004

VOLATILE ORGANIC WATER ANALYSIS

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
BENZENE	1.0	ND
BROMOCHLOROMETHANE	1.0	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	1.0	ND
BROMOBENZENE	1.0	ND
BROMOMETHANE	1.0	ND
n-BUTYLBENZENE	1.0	ND
STYRENE	1.0	ND
sec-BUTYLBENZENE	1.0	ND
CARBON TETRACHLORIDE	1.0	ND
CHLOROETHANE	1.0	ND
CHLOROMETHANE	1.0	ND
4-CHLOROTOLUENE	1.0	ND
2-CHLOROTOLUENE	1.0	ND
CHLOROBENZENE	1.0	ND
CHLOROFORM	1.0	ND
DIBROMOCHLOROMETHANE	1.0	ND
1,2-DIBROMO-3-CHLOROPROPANE	1.0	ND
1,2-DIBROMOETHANE (EDB)	1.0	ND
DIBROMOMETHANE	1.0	ND
DICHLORODIFLUOROMETHANE	1.0	ND
1,4-DICHLOROBENZENE	1.0	ND
1,2-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROBENZENE	1.0	ND
1,3-DICHLOROPROPANE	1.0	ND
1,2-DICHLOROPROPANE	1.0	ND
2,2-DICHLOROPROPANE	1.0	ND
1,1-DICHLOROETHANE	1.0	ND
1,1-DICHLOROPROPENE	1.0	ND
cis-1,3-DICHLOROPROPENE	1.0	ND
trans-1,3-DICHLOROPROPENE	1.0	ND

PARAMETERS	DETECTION LIMITS	RESULTS ug/l
1,2-DICHLOROETHANE	1.0	ND
trans-1,2-DICHLOROETHENE	1.0	ND
cis-1,2-DICHLOROETHENE	1.0	ND
1,1-DICHLOROETHENE	1.0	ND
ETHYLBENZENE	1.0	ND
HEXACHLOROBUTADIENE	1.0	ND
p-ISOPROPYLTOLUENE	1.0	ND
ISOPROPYLBENZENE	1.0	ND
METHYLENE CHLORIDE	10	ND
NAPHTHALENE	1.0	ND
n-PROPYLBENZENE	1.0	ND
1,1,2,2-TETRACHLOROETHANE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	1.0	ND
TETRACHLOROETHENE	1.0	ND
TRICHLOROFLUOROMETHANE	1.0	ND
1,2,3-TRICHLOROBENZENE	1.0	ND
1,2,4-TRICHLOROBENZENE	1.0	ND
1,1,1-TRICHLOROETHANE	1.0	ND
TRICHLOROETHENE	1.0	ND
1,1,2-TRICHLOROETHANE	1.0	ND
1,2,3-TRICHLOROPROPANE	1.0	ND
1,3,5-TRIMETHYLBENZENE	1.0	ND
1,2,4-TRIMETHYLBENZENE+tert-BUTYLBENZENE	2.0	ND
TOLUENE	1.0	ND
VINYL CHLORIDE	1.0	ND
o-XYLENE	1.0	ND
m & p-XYLENES	2.0	ND
METHYL-T-BUTYLETHER	1.0	ND
DI-ISOPROPYLETHER	1.0	ND

ND = Not Detected

COMMENTS: Lab Sample ID: 9307162-135993
Date Analyzed: 7/29/93
Analyzed by Modified EPA Method 8021.

Signed: _____ Date: 8/2/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

VOLATILE SURROGATE RECOVERY

CUSTOMER NAME: Dames & Moore
PROJECT: 20255-004
DATE RECEIVED: 7/20/93

BATCH #: 9307162
DATE RUN: 7/26,29,30/93

LAB SAMPLE #	SURROGATE 1 % RECOVERY	SURROGATE 2 % RECOVERY
135972	105.0	109.0
135973	89.3	89.3
135974	82.6	83.8
135975	86.4	89.1
135976	86.9	88.6
135977	88.4	88.3
135978	88.4	86.9
135979	85.7	88.5
135980	95.1	97.6
135981	82.6	85.6
135982	82.9	86.4
135983	89.6	96.5

SURROGATE 1 = 1-CHLORO-2-FLUOROBENZENE
SURROGATE 2 = ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE

Reviewed by: Christopher J. Smith
Date: 8/3/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue
P.O. Box 12435
Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

VOLATILE SURROGATE RECOVERY

CUSTOMER NAME: Dames & Moore
PROJECT: 20255-004
DATE RECEIVED: 7/20/93

BATCH #: 9307162
DATE RUN: 7/26,29,30/93

LAB SAMPLE #	SURROGATE 1 % RECOVERY	SURROGATE 2 % RECOVERY
135984	82.3	80.2
135985	87.2	87.8
135986	83.3	86.6
135987	89.2	88.2
135988	80.6	71.7
135989	89.2	89.9
135990	84.7	84.7
135991	76.2	64.1
135992	85.3	85.3
135993	91.8	94.9
	0.0	0.0
	0.0	0.0

SURROGATE 1 = 1-CHLORO-2-FLUOROBENZENE
SURROGATE 2 = ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE

Reviewed by: Christopher J. Zoch
Date: 8/3/93

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CUSTOMER NAME: Dames & Moore PROJECT: 20255-004 DATE RECIEVED: 7/20/93

BATCH NUMBER: 9307162 DATE RUN: 7/26/93

SAMPLE SPIKED: 135975

COMPOUND	SPIKE ADDED (ug/L)	MS CONCENTRATION (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS % RECOVERY
1,1-DICHLOROETHENE	25	39.0	0.0	156
BENZENE	25	27.9	0.0	112
TRICHLOROETHENE	25	28.9	0.0	115
TOLUENE	25	24.2	0.0	97
CHLOROBENZENE	25	23.4	0.0	94
ETHYLBENZENE	25	23.2	0.0	93
p-XYLENE	25	23.2	0.0	93
o-XYLENE	25	22.7	0.0	91
BROMOBENZENE	25	22.4	0.0	90
2-CHLOROTOLUENE	25	21.7	0.0	87
124-TRIMETHYLBENZENE	25	26.5	0.0	106
13-DICHLOROBENZENE	25	22.1	0.0	88
sec-BUTYLBENZENE	25	22.6	0.0	90
n-BUTYLBENZENE	25	22.1	0.0	88
124-TRICHLOROBENZENE	25	25.6	0.0	102

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % RECOVERY	% RPD
1,1-DICHLOROETHENE	25	41.0	164	5.0
BENZENE	25	29.7	119	6.3
TRICHLOROETHENE	25	30.5	122	5.4
TOLUENE	25	25.8	103	6.2
CHLOROBENZENE	25	25.1	100	7.0
ETHYLBENZENE	25	23.3	93	0.3
p-XYLENE	25	23.3	93	0.4
o-XYLENE	25	22.8	91	0.6
BROMOBENZENE	25	22.7	91	1.2
2-CHLOROTOLUENE	25	21.8	87	0.3
124-TRIMETHYLBENZENE	25	26.3	105	0.8
13-DICHLOROBENZENE	25	22.2	89	0.2
sec-BUTYLBENZENE	25	22.4	89	1.0
n-BUTYLBENZENE	25	21.7	87	1.8
124-TRICHLOROBENZENE	25	25.3	101	1.2

Reviewed by: Chris Frank Date: 8/3/93

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK07

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: FB1

Matrix: (soil/water) WATER Lab Sample ID: 0726BLK

Sample wt/vol: 1000 (g/ml) ML Lab File ID: >D7R02

Level: (low/med) LOW Date Received:

% Moisture: not dec. dec. Date Extracted: 07/26/93

Extraction: (Sepf/Cont/Sonc) SEPF Date Analyzed: 07/27/93

GPC Cleanup: (Y/N) N pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
91-20-3	Naphthalene	10	U
208-96-8	Acenaphthylene	10	U
83-32-9	Acenaphthene	10	U
132-64-9	Dibenzofuran	10	U
86-73-7	Fluorene	10	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
56-55-3	Benzo(a)anthracene	10	U
218-01-9	Chrysene	10	U
205-99-2	Benzo(b)fluoranthene	10	U
207-08-9	Benzo(k)fluoranthene	10	U
50-32-8	Benzo(a)pyrene	10	U
193-39-5	Indeno(1,2,3-cd)pyrene	10	U
53-70-3	Dibenz(a,h)anthracene	10	U
191-24-2	Benzo(g,h,i)perylene	10	U

1pg COC 406430

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab OrteK

Chain of Custody Seal # _____ # _____

Turnaround Time
- ☐ Rush (preapproved by Lab)
- ☒ Normal

PROJECT NAME: _____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: Kristine Casper
BILL TO: Borgerding Estate

SHIPPING DETAILS:
Method of Shipment URS
Contents Temperature 0.2c
Comments Due Date

Ref# L-2 4(
11/20/92
Rec Date 8-31-92
BATCH # 930762

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	8021 (WIT)	8270 (PAH)	Pb/Ba	REMARKS/PRESERVATIVES
135972	7/20/93		40ml vial	3	MW-11S	Ground wtr	X			HCl
↓		GD	1qt amb gls	1	MW-11S			X		
↓			1 500ml Hdpe pls	1	MW-11S				X	HNO_3
135973			40ml vial	3	MW-11D		X			HCl
↓			1qt amb gls	1	↓			X		
↓		GD	1 500ml Hdpe pls	1	↓				X	HNO_3
135974			40ml vial	3	MW-11DD		X			HCl
↓			1qt amb gls	1	↓			X		[illegible]
↓	↓		1 Hdpe pls	1	↓	↓			X	HNO_3
135975			40ml vial	3	MW-4		X			
↓			1qt amber	1	↓			X		
↓		GD	1 500ml Hdpe plastic	1	↓				X	
						SUBTOTAL				TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	7/21/93

COMMENTS

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	7/21/93	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		[signature] 7/22/93 10:30

2/B COC # 406438

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # _____ # _____

Turnaround Time
- ☐ Rush (preapproved by Lab)
- ☒ Normal

REFER L-2 4/6 11/20/3

PROJECT NAME: _____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: Kristine Casper
BILL TO: Borgerding Estate

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature ~~0.2°~~
Comments _____

BATCH # 9307 162

Due Date 8-4

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: 8021 (WI)	8270 (PAH)	PB/Ba			REMARKS/PRESERVATIVES
135926	7/21/93		40ml vials	2	MW-10D	water	X					HCL 1-VIAL BROKEN IN Shipment
			1 liter amber	1	"			X				
			500ml plastic	1	"				X			HNO_3
135927			40ml vials	3	MW-10S		X					HCL
			1 liter amber	1	↓			X				
			500ml plastic	1	↓				X			HNO_3
135928			40ml vials	3	MW-9		X					HCL
			1 liter amber	1	↓			X				
			500ml plastic	1	↓				X			HNO_3
135929			40ml vials	3	MW-5		X					HCL
			1 liter amber	1	↓			X				
			500ml plastic	1	↓	↓			X			HNO_3
						SUBTOTAL						TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
Jeffrey K Clark	7/21/93

COMMENTS

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Jeffrey K Clark	7/21/93				
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) / DATE/TIME
					Ron Walden 7/22/93 10:30

3 of 6 Coc # 406430

DAMES & MOORE

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Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # _____ # _____

Turnaround Time
- ☐ Rush (preapproved by Lab)
- ☑ Normal

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature 0.2°C
Comments _____

PROJECT NAME: _____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: Kristine Casper

Ref 2-2 4-0 & 2-2

Batch # 9307167

Due Date 8/2/93

LAB USE ONLY	DATE	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: 8021 (WI)	8270 (PAH)	Pb (13a)	REMARKS/PRESERVATIVES
135980	7/21/93	40ml Vial	1	Trip Blank 1 TBLK0107-12	Water	X			

CHAIN OF CUSTODY RECORD

COMMENTS

SAMPLER: (SIGNATURE)	DATE
Jeffrey K Dale	7/21/93

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Jeffrey K Dale	7/21/93	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		Lori Walden 7/22/93 10:30

4/6 406430

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab: Ortek

Chain of Custody Seal #______ #______

Turnaround Time
☐ Rush (preapproved by Lab)
☒ Normal

SHIPPING DETAILS:
Method of Shipment: UPS
Contents Temperature: 0.6 C
Comments:

Analysis requested: 8021 (WI) | 8270 (PAH) | Pb/Ba

Batch # 9307162

PROJECT NAME:
PROJECT #: 20255-004
Send Results To:
PROJECT MANAGER: Kristine Casper
BILL TO: Borgerding Estate

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	8021 (WI)	8270 (PAH)	Pb/Ba			REMARKS/PRESERVATIVES
135980 981	7/21/93 (7/22/93)		40ml vial	3	FB-1	Water	X					HCl
↓	↓		1qt amb gls	1	↓	↓		X				
↓	↓		500ml pls	1	↓	↓			X			HNO_3
135981 982	↓		40ml vial	3	FB-2	↓	X					HCl
~~↓~~	~~↓~~		~~1qt amb gls~~	~~1~~	~~↓~~	~~↓~~						
↓	↓		500ml pls	1	↓	↓			X			HNO_3
135982 983	↓		40ml vial	3	MW-3S	Ground wtr	X					HCl
↓	↓		1qt amb gls	1	↓	↓		X				↓
↓	↓		500ml pls	1	↓	↓			X			HNO_3
135983 984	↓		40ml vial	3	MW-3DA		X					HCl
↓	↓		1qt amb gls	1	↓			X				
↓	↓		500ml pls	1	↓				X			

SUBTOTAL | TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
[signature]	7/21/93

COMMENTS

Due Date 8/3/93
L2 (11-(202) 40

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
[signature]	7/21/93				
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)	RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE) [signature] — DATE/TIME 7/22/93 10:30

40643 2of2 446 5 of 6

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # _____ # _____

Turnaround Time
☐ Rush (preapproved by Lab)
☒ Normal

PROJECT NAME: _____

PROJECT #: 20255-004

Send Results To:
PROJECT MANAGER: Kristine Cagner

BILL TO: Bargerding Estate

SHIPPING DETAILS:
Method of Shipment _____
Contents Temperature _____ C
Comments 0.6

Batch # 9307162

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	8021 (WI)	8270 (PAH)	Pb & Ba	REMARKS/PRESERVATIVES
135984	7/21/93		40ml vial	3	MW-2DD'	Ground wtr	X			HCl
985			1ltr pls	1				X		HNO_3
			1qt amb gls	1				X		
135985			40ml vial	3	MW-3DD'		X			HCl
986			1ltr pls	1				X		HNO_3
			1qt amb gls	1				X		
135986			40ml vial	3	MW-3D'		X			HCl
987			1ltr pls	1				X		HNO_3
			1qt amb gls	1				X		
135987			40ml vial	3	MW-25		X			HCl
988			1ltr pls	1				X		HNO_3
	✓		1qt amb gls	1		✓		X		
						SUBTOTAL				TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
Kirk Dahlstrom	7/21/93

COMMENTS

Due 8/[illegible]93
L2 11 (262)
4 Q

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
Kirk Dahlstrom	7/21/93	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		[illegible] 7/22/93 10:30

Batch# 9307162 6 of 6 COC 406430

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # 406430 #

Turnaround Time
☐ Rush (preapproved by Lab)
☒ Normal

SHIPPING DETAILS:
Method of Shipment URS
Contents Temperature 0.3 °C
Comments

PROJECT NAME:
PROJECT #: 20255-004
Send Results To:
PROJECT MANAGER: Kristine Casper
BILL TO: Bargerding Estate

Temp. 0.3°C

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	ANALYSIS REQUESTED: VOC 8021 (WI)	8270 (BAH)	Pb/Ba	REMARKS/PRESERVATIVES
135988	7/21/93		40 ml vial	3	MW-1DD	Ground wtr	X			HCl
989			1 500 ml pls	1				X		HNO_3
			1 qt amb gls	1			X			
135990			40 ml vial	3	MW-1		X			HCl
990			1 500 ml pls	1				X		HNO_3
			1 qt amb gls	1			X			
135991			40 ml vial	3	MW-25A		X			HCl
991			1 500 ml pls	1				X		HNO_3
			1 qt amb gls	1			X			
135992			40 ml vial	3	MW-2D		X			HCl
992			1 500 ml pls	1				X		HNO_3
			1 qt amb gls	1			X			
135993	7/22/93				Trip Blank #2					
						SUBTOTAL				TOTAL

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
	7/21/93

COMMENTS

Due Date 8/12/93

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
	7/21/93	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		7/22/93 10:45

LZ 4Q 11(202)

COC# 406430

ORTEK SAMPLE RECEIVING OUT OF CONTROL FORM

COMPANY NAME: Dames & Moore	CONTACT PERSON: Kristine Casper
PROJECT NAME: Borgerding Estate	REPORTED BY: Mary Ann
BATCH NUMBER:	SAMPLE NUMBERS:
DATE: TIME: 7/22/93 13:00	PHONE NUMBER: 1-347-0800
☐ HOLD TIME ☐ IMPROPER PRESERVATIVE ☐ PAPERWORK DISCREPANCY ☐ IMPROPER CONTAINER	☐ SAMPLE TEMPERATURE ___°F ☐ METHODOLOGY ☐ INSUFFICIENT VOLUME ☒ OTHER

DESCRIPTION: Sent trip blank W/O orders on the COC.

PERSON RESPONSIBLE FOR RESOLUTION:

CLIENT RESPONSE: Please analyze Trip Blank.

SIGNATURE: Barbara Rutten	TIME: 3:30	DATE: 7/22/93

cc: Working File
Mary Jo Nash
Tori Cook
Phil Scott
Barb Rutten
John Rather
Chris Groh
Bill Jackson
Jennifer Fazio

ORTEK
ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

August 2, 1993

Dames & Moore
250 Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

Attn: Kristine Casper

Subject: Sample Received July 15, 1993
Reference: Batch No. 9307069 Sample No. 135671-135673

Enclosed please find a report of analytical results for Sample No. 135671-135673. The samples were analyzed in accordance to the Chain of Custody form contained herewith. We did not experience any difficulties during analysis which may have compromised the enclosed results.

Should you have any questions regarding this report please feel free to call me at 1-800-236-4067. Please have both reference numbers listed above available when making inquiries regarding this report.

Sincerely,

Barb Rutten

Barb Rutten
Project Manager

Approval,

Earl G Schmoll

For John Burnett
Laboratory Manager

Enclosed

c: file

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GC/MS TCLP (ZHE) VOLATILE ORGANIC ANALYSIS

Client:	Dames & Moore	Project Name/Desc.:	
Address:	250 E. Wisconsin Ave, Suite 1500	Project Number:	20255-004
	Milwaukee, Wisconsin 53202	Batch Number:	9307069
Phone:	(414) 347-0800	COC Number:	406413
FAX:	(414) 347-0288		
		Case No.:	DAMES
Contact:	K. Casper	SDG No.:	SWC1

SAMPLE SUMMARY

Client Sample No.	EPA Sample No.	Ortek Lab Sample ID
SWC-1	SWC1	135671
SWC-2	SWC2	135672

COMMENTS: VOLATILE ORGANIC ANALYSIS PERFORMED BY MODIFIED EPA METHOD 8240 ON A DB-624 CAPILLARY COLUMN

1.) The instrument ID for Volatile Organic Analysis is HP-B. The blank associated with the samples is VBLK04. The TCLP extraction blank is EPA Sample No. TBLK03, extracted on 07/13/93.

2.) All ZHE samples are diluted 1:20 to reduce matrix problems due to the TCLP buffers.

"Q" COLUMN QUALIFIERS:
- U - Compound analyzed for but not detected
- B - Indicates the analyte is found in the associated method blank
- J - Estimated value, concentration of analyte below quantitation limit
- E - Compound exceeds calibration range, but did not saturate the detector; actual concentrations could be higher than reported
- D - Compound identified in the analysis at a secondary dilution
- N - Indicates presumptive evidence of a compound (identified based on mass spectral library search)

Signed: _____ Name: John C. Rather

Title: GC/MS/EC Supervisor Date: 7/22/93

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SWC1

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: SWC1

Matrix: (soil/water) WATER Lab Sample ID: 135671

Sample wt/vol: 5 (g/ml) ML Lab File ID: >B7F02

Level: (low/med) LOW Date Received: 07/10/93

% Moisture: not dec. Date Analyzed: 07/15/93

Column: (pack/cap) CAP Dilution Factor: 20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
75-01-4	Vinyl Chloride	.10	U
75-35-4	1,1-Dichloroethene	.10	U
67-66-3	Chloroform	.10	U
107-06-2	1,2-Dichloroethane	.10	U
78-93-3	Methyl Ethyl Ketone	.20	U
56-23-5	Carbon Tetrachloride	.10	U
79-01-6	Trichloroethene	.10	U
71-43-2	Benzene	.10	U
127-18-4	Tetrachloroethene	.10	U
108-90-7	Chlorobenzene	.10	U
106-46-7	1,4-Dichlorobenzene	.10	U

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FAX (414) 498-4067

COMPANY:	Dames & Moore	CLIENT SAMPLE ID:	SWC-1
ADDRESS:	250 E. Wis. Ave Suite 1500 Milwaukee, WI 53202	PROJECT JOB #: PROJECT DESC:	20255-004
TELEPHONE:	(414) 347-0800		
FAX:	(414) 347-0288	SAMPLE MATRIX: DATE COLLECTED:	SOIL 07/09/93
ATTENTION:	K. Casper	DATE RECEIVED:	07/12/93

PCB SOIL ANALYSIS

PARAMETERS	DETECTION LIMITS (ug/Kg) Dry Weight Basis	CONCENTRATION (ug/Kg) Dry Weight Basis
Aroclor-1016	140	U
Aroclor-1221	290	U
Aroclor-1232	140	U
Aroclor-1242	140	U
Aroclor-1248	140	U
Aroclor-1254	140	U
Aroclor-1260	140	U

- Batch: 9307069 — **Extraction Date:** 07/15/93
- Lab Sample ID: 135671 — **Analysis Date:** 07/19/93
- Analyzed by modified EPA Method 8080 on a PTE-5 capillary column and confirmed with a SPB-608 capillary column.

Comments:

U = Compound analyzed for but not detected
B = Detected in associated method blank
J = Estimated value, concentration of analyte below method detection limit

Analyst: Kim Campbell | Date: 7/21/93

APPROVED: [signature] | TITLE: GC/MS/EC Supervisor | DATE: 7/21/93

Wisconsin DNR Laboratory Certification No. 405099530

ENVIRONMENTAL LABORATORIES INC.

07/23/93 LABORATORY REPORT

0168 9304318 W04

ORTEK
1609 WESTERN AVENUE
GREEN BAY ,WI 54307
ATTN: BARBARA RUTTEN

CHAIN OF CUSTODY

SAMPLE 93196-003756 135671/SOIL/PROJECT# 9307069
DATE COLLECTED 07/09/93 DATE RECEIVED 07/15/93
PRESERVED: YES TEMPERATURE: ON ICE
CONT. INTEGRITY: MEETS STANDARD SAMPLE INTEG: MEETS STANDARD

TEST NAME	RESULT	UNITS	ANALYZED	METHOD	LIMIT
REACTIVE CYANIDE	<10	PPM	07/16/93	******	
	SEMI-QUANTITATIVE SCREENING PROCEDURE				
REACTIVE SULFIDE	28	PPM	07/21/93	SW846 9030 MOD	

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL SAMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.
@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.
$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE QUANTITY. + = ELEVATED DETECTION LIMIT DUE TO EXTRACT VOLUME.
AIHA ACCREDITED APPROVAL

140 East Ryan Road, Oak Creek, WI 53154-4599 • 414-764-7005 • FAX 414-764-0486 • 1-800-422-2195
Client Services Direct Line 414-768-7460 • WI DNR Lab Certification #241283020 • IEPA Lab Certification #100243

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ENVIRONMENTAL LABORATORY
1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E. Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

ATTENTION: K. Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No.
405099530

Sample ID: SWC-1
Sample Desc: Soil
Date Collected: 7/9/93
Date Received: 7/13/93
Job #: 20255-004

WISCONSIN MODIFIED GRO

Purge & Trap Gas Chromatographic Method

PARAMETER	DETECTION LIMIT	CONCENTRATION mg/kg*
Gasoline	21	26

ND = Not Detected
* = Dry Weight Basis

Comments: Lab Sample ID: 9307069-135671
Date Analyzed: 7/13/92
Analyzed by GC/FID.

Peaks noted outside of GRO retention time window.

Signed: Christopher J. Smith Date: 7/19/93

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Green Bay, WI 54307-2435

CLIENT: Dames & Moore
ADDRESS: 250 E. Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

ATTENTION: K. Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No.
405099530

Sample ID: SWC-1
Sample Desc: Soil
Date Collected: 7/9/93
Date Received: 7/13/93
Job #: 20255-004

WISCONSIN MODIFIED DRO

Solvent Extraction Gas Chromatographic Method

PARAMETER	DETECTION LIMIT	CONCENTRATION mg/kg*
Diesel Fuel	20	29

ND = Not Detected
* = Dry Weight Basis

Comments: Lab Sample ID: 9307069-135671
Date Extracted: 7/13/93
Date Analyzed: 7/14/93
Analyzed by GC/FID.

Signed: Christopher J. Dyk Date: 7/19/93

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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

- SAMPLE ANALYSIS REPORTS -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307069
Our Lab # : 135671
Your Sample ID: SWC-1
Sample Matrix : SOIL

Report Date: 07/23/93

COLLECTION INFORMATION

Date/Time/By: 07/09/93 K K
Location : 20255-004/BORGERDING

Lab#	Test		Result	Units	Analysis Date
135671	TCLP Silver	<	90	UG/L	07/23/93
	TCLP Arsenic	<	300	UG/L	07/21/93
	TCLP Barium		640	UG/L	07/23/93
	TCLP Cadmium	<	50	UG/L	07/23/93
	TCLP Chromium	<	130	UG/L	07/23/93
	Free Liquids		42	%	07/16/93
	TCLP Mercury	<	20	UG/L	07/19/93
	Non-Volatile TCLP Extraction		EXTRACTED		07/15/93
	TCLP Lead	<	580	UG/L	07/23/93
	TCLP Selenium	<	300	UG/L	07/22/93
	Total Solids		23	%	07/15/93
	Volatile TCLP Extraction		EXTRACTED		07/13/93
	Flash Point		>210	o F	07/23/93

Signed Earl G. Schmidt Date 8/2/93

Signed Mary Unger Date 8-2-93

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SWC2

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: SWC1

Matrix: (soil/water) WATER Lab Sample ID: 135672

Sample wt/vol: 5 (g/ml) ML Lab File ID: >B7F03

Level: (low/med) LOW Date Received: 07/10/93

% Moisture: not dec. Date Analyzed: 07/15/93

Column: (pack/cap) CAP Dilution Factor: 20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
75-01-4	Vinyl Chloride	.10	U
75-35-4	1,1-Dichloroethene	.10	U
67-66-3	Chloroform	.10	U
107-06-2	1,2-Dichloroethane	.10	U
78-93-3	Methyl Ethyl Ketone	.20	U
56-23-5	Carbon Tetrachloride	.10	U
79-01-6	Trichloroethene	.10	U
71-43-2	Benzene	.10	U
127-18-4	Tetrachloroethene	.10	U
108-90-7	Chlorobenzene	.10	U
106-46-7	1,4-Dichlorobenzene	.10	U

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Green Bay, WI 54307-2435
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(800) 236-4067
FAX (414) 498-4067

COMPANY:	Dames & Moore	CLIENT SAMPLE ID:	SWC-2
ADDRESS:	250 E. Wis. Ave Suite 1500 Milwaukee, WI 53202	PROJECT JOB #: PROJECT DESC:	20255-004
TELEPHONE:	(414) 347-0800		
FAX:	(414) 347-0288	SAMPLE MATRIX: DATE COLLECTED:	SOIL 07/09/93
ATTENTION:	K. Casper	DATE RECEIVED:	07/12/93

PCB SOIL ANALYSIS

PARAMETERS	DETECTION LIMITS (ug/Kg) Dry Weight Basis	CONCENTRATION (ug/Kg) Dry Weight Basis
Aroclor-1016	150	U
Aroclor-1221	300	U
Aroclor-1232	150	U
Aroclor-1242	150	U
Aroclor-1248	150	U
Aroclor-1254	150	U
Aroclor-1260	150	U

- Batch: 9307069 — Extraction Date: 07/15/93
- Lab Sample ID: 135672 — Analysis Date: 07/19/93
- Analyzed by modified EPA Method 8080 on a PTE-5 capillary column and confirmed with a SPB-608 capillary column.

Comments:

U = Compound analyzed for but not detected
B = Detected in associated method blank
J = Estimated value, concentration of analyte below method detection limit

Analyst: Kim Campbell — Date: 7/21/93

APPROVED: [signature] — TITLE: GC/MS/EC Supervisor — DATE: 7/21/93

Wisconsin DNR Laboratory Certification No. 405099530

ENVIRONMENTAL LABORATORIES INC.

07/23/93 LABORATORY REPORT

0168 9304318 W04

ORTEK
1609 WESTERN AVENUE
GREEN BAY ,WI 54307
ATTN: BARBARA RUTTEN

CHAIN OF CUSTODY

SAMPLE 93196-003757 135672/SOIL/PROJECT# 9307069
DATE COLLECTED 07/09/93 DATE RECEIVED 07/15/93
PRESERVED: YES TEMPERATURE: ON ICE
CONT. INTEGRITY: MEETS STANDARD SAMPLE INTEG: MEETS STANDARD

TEST NAME	RESULT	UNITS	ANALYZED	METHOD	LIMIT
REACTIVE CYANIDE	<10	PPM	07/16/93	******	
	SEMI-QUANTITATIVE SCREENING PROCEDURE				
REACTIVE SULFIDE	29	PPM	07/21/93	SW846 9030 MOD	

PLEASE CONTACT CLIENT SERVICES WITH ANY QUESTIONS. WATER SAMPLES ARE DISPOSED OF 30 DAYS AFTER RECEIPT; SOIL SAMPLES WILL BE DISPOSED OF 6 WEEKS AFTER RECEIPT; WASTE SAMPLES (NON-WATER, NON-SOIL) WILL BE RETURNED 6 WEEKS AFTER RECEIPT. N/T = NOT TESTED, N/A = NOT APPLICABLE, N/D = NOT DETECTED.
@ = ELEVATED DETECTION LIMIT DUE TO MATRIX INTERFERENCE. # = ELEVATED DETECTION LIMIT DUE TO SAMPLE CONCENTRATION.
$ = ELEVATED DETECTION LIMIT DUE TO SAMPLE QUANTITY. + = ELEVATED DETECTION LIMIT DUE TO EXTRACT VOLUME.
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1609 Western Avenue P.O. Box 12435 Green Bay, WI 54307-2435
(414) 498-2222
(800) 236-4067
FAX (414) 498-4067

CLIENT: DAMES & MOORE
ADDRESS: 250 E. Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

ATTENTION: K. Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No.
405099530

Sample ID: SWC-2
Sample Desc: Soil
Date Collected: 7/9/93
Date Received: 7/13/93
Job #: 20255-004

WISCONSIN MODIFIED GRO

Purge & Trap Gas Chromatographic Method

PARAMETER	DETECTION LIMIT	CONCENTRATION mg/kg*
Gasoline	18	24

ND = Not Detected
* = Dry Weight Basis

Comments: Lab Sample ID: 9307069-135672
Date Analyzed: 7/13/92
Analyzed by GC/FID.

Peaks noted outside of GRO retention time window.

Signed: Christopher J. [illegible] Date: 7/19/93

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Green Bay, WI 54307-2435

CLIENT: Dames & Moore
ADDRESS: 250 E. Wisconsin Avenue
Suite 1500
Milwaukee, WI 53202

ATTENTION: K. Casper
TELEPHONE: (414) 347-0800

Wisconsin Certification No.
405099530

Sample ID: SWC-2
Sample Desc: Soil
Date Collected: 7/9/93
Date Received: 7/13/93
Job #: 20255-004

WISCONSIN MODIFIED DRO

Solvent Extraction Gas Chromatographic Method

PARAMETER	DETECTION LIMIT	CONCENTRATION mg/kg*
Diesel Fuel	15	ND

ND = Not Detected
* = Dry Weight Basis

Comments: Lab Sample ID: 9307069-135672
Date Extracted: 7/13/93
Date Analyzed: 7/14/93
Analyzed by GC/FID.

Signed: Christopher J. Smith Date: 7/19/93

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Green Bay, WI 54307-2435

- SAMPLE ANALYSIS REPORTS -

To: DAMES & MOORE
250 E WISCONSIN AVE
SUITE 1500
MILWAUKEE WI 53202

Attn: KRISTINE CASPER

Batch ID : 9307069
Our Lab # : 135672
Your Sample ID: SWC-2
Sample Matrix : SOIL

Report Date: 07/23/93

COLLECTION INFORMATION

Date/Time/By: 07/09/93 K K
Location : 20255-004/BORGERDING

Lab#	Test		Result	Units	Analysis Date
135672	TCLP Silver	<	90	UG/L	07/23/93
	TCLP Arsenic	<	300	UG/L	07/21/93
	TCLP Barium		240	UG/L	07/23/93
	TCLP Cadmium	<	50	UG/L	07/23/93
	TCLP Chromium	<	130	UG/L	07/23/93
	Free Liquids		32	%	07/16/93
	TCLP Mercury	<	20	UG/L	07/19/93
	Non-Volatile TCLP Extraction		EXTRACTED		07/15/93
	TCLP Lead	<	580	UG/L	07/23/93
	TCLP Selenium	<	300	UG/L	07/22/93
	Total Solids		22	%	07/15/93
	Volatile TCLP Extraction		EXTRACTED		07/13/93
	Flash Point		>210	o F	07/23/93

Signed Earl G Schmall Date 8/2/93

Signed Mary Unger Date 8-2-93

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TBLK03

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: SWC1

Matrix: (soil/water) WATER Lab Sample ID: 0713BLK

Sample wt/vol: 5 (g/ml) ML Lab File ID: >B7G01

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/16/93

Column: (pack/cap) CAP Dilution Factor: 20

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
75-01-4	Vinyl Chloride	.10	U
75-35-4	1,1-Dichloroethene	.10	U
67-66-3	Chloroform	.10	U
107-06-2	1,2-Dichloroethane	.10	U
78-93-3	Methyl Ethyl Ketone	.20	U
56-23-5	Carbon Tetrachloride	.10	U
79-01-6	Trichloroethene	.10	U
71-43-2	Benzene	.10	U
127-18-4	Tetrachloroethene	.10	U
108-90-7	Chlorobenzene	.10	U
106-46-7	1,4-Dichlorobenzene	.10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK04

Lab Name: ORTEK Contract:

Lab Code: ORTEK Case No.: DAMES SAS No.: SDG No.: SWC1

Matrix: (soil/water) WATER Lab Sample ID: 0715BLK

Sample wt/vol: 5 (g/ml) ML Lab File ID: >B7FB1

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 07/15/93

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-01-4	Vinyl Chloride	5.00	U
75-35-4	1,1-Dichloroethene	5.00	U
67-66-3	Chloroform	5.00	U
107-06-2	1,2-Dichloroethane	5.00	U
78-93-3	Methyl Ethyl Ketone	10.0	U
56-23-5	Carbon Tetrachloride	5.00	U
79-01-6	Trichloroethene	5.00	U
71-43-2	Benzene	5.00	U
127-18-4	Tetrachloroethene	5.00	U
108-90-7	Chlorobenzene	5.00	U
106-46-7	1,4-Dichlorobenzene	5.00	U

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WI GRO BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY

Customer Name: DAMES & MOORE Project: 20255-004 Date Received: 7/13/93

Batch No: 9307069 Date Run: 7/13/93

Compound	Spike Added ug/L	Blank Concentration ug/L	BS Concentration ug\L	BS % REC
GRO Components	500.0	0.0	596.7	119.3

Compound	Spike Added ug/L	BSD Concentration ug/L	BSD % Rec.	% RPD
GRO Components	500.0	592.4	118.5	0.7

Soil Spike

Compound	Spike Added ug/L	Soil Spike Concentration ug/L	Soil Spike % Recovery
GRO Components	720.0	799.6	111.1

Reviewed by: Christopher J. Zoda Date: 7/19/93

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FAX (414) 498-4067
Green Bay, WI 54307-2435

WI DRO BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY

Customer Name: Dames & Moore Project: 20255-004 Date Received: 7/12/93

Batch No: 9307068 Date Run: 7/14/93

Compound	Spike Added mg/L	Blank Concentration mg/L	BS Concentration mg\L	BS % REC
DRO Components	500.0	0.0	418.1	83.6

Compound	Spike Added mg/L	BSD Concentration mg/L	BSD % Rec.	% RPD
DRO Components	500.0	407.6	81.5	2.5

Reviewed by: Christopher J. Smith Date: 7/19/93

1 of 4064

DAMES & MOORE

250 East Wisconsin Ave, Suite 1500
Milwaukee, Wisconsin 53202
(414) 347-0800 FAX:(414) 347-0288

Lab Ortek

Chain of Custody Seal # _____ # _____

Turnaround Time
- ☐ Rush (preapproved by Lab)
- ☒ Normal

PROJECT NAME: _____

PROJECT #: 20255-002-4

Send Results To:
PROJECT MANAGER: L. Casper

BILL TO: Borgerding Estate

SHIPPING DETAILS:
Method of Shipment UPS
Contents Temperature 0.5 C
Comments Cooler Secure

9300706

LAB USE ONLY	DATE	SAMPLE TIME	CONTAINERS	No.	SAMPLE ID	SAMPLE TYPE	VOLX	TCLP VOCs	Basics NonVX TCLP Metals	PCBs, Reactive S+CN	WI GRO	WI DRO	REMARKS/PRESERVATIVES
	7/9/93		1 x 4oz gl	1	SWC-1	Soil	X						135671-135673
			1 x 500ml pl	1	SWC-1			X					
			1 Liter	1	SWC-1				X				
			60 ml gl	1	SWC-1					X			Field pres w/ MeOH
			60 ml gl	1	SWC-1						X		
			4 oz gl	1	SWC-2		X						135672
			500 ml pl	1	SWC-2			X					
			1 Liter	1	SWC-2				X				
			60 ml gl	1	SWC-2					X			Field pres w/ MeOH
	↓		60 ml gl	1	SWC-2	↓					X		

SUBTOTAL _____ TOTAL _____

CHAIN OF CUSTODY RECORD

SAMPLER: (SIGNATURE)	DATE
D.L. Hoffmann	7/9/93

COMMENTS

Due 7/26/93

F-3

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
D.L. Hoffmann	7/12/93 9:00a.	
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)

RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED BY: (SIGNATURE)
RELINQUISHED BY: (SIGNATURE)	DATE/TIME	RECEIVED FOR LABORATORY: BY: (SIGNATURE) / DATE/TIME
		Mary Ske 7/13/93 10:00