DEC 18 1989

Bryant®

BRYANT GRINDER CORPORATION
257 Clinton Street, P.O. Box 852
Springfield, Vermont 05156-0852 USA
802/885-5161, Telex: 94-3427, FAX: 802/885-9444

December 14, 1989

Department of Environmental Conservation
Hazardous Material Management Division
103 South Main Street
Waterbury, VT 05676

Attention: Ms. Diane Conrad, Chief Hazardous Sites
Management Section

Dear Ms. Conrad:

Please find enclosed the Bryant Grinder Facility Final Report for the Quarterly Groundwater Sampling taken August 18, 1988 through July 17, 1989 by Wehran Engineering Corporation.

Also enclosed are the results of analyses on the additional ground water samples taken by Wehran Engineering November 7, 1989 and tested by Industrial and Environmental Analyists Inc. dated November 28, 1989 with a cover letter from Wehran Engineering dated December 5, 1989.

Sincerely,

John Schaefer
Manager Machining and Services

enclosure

JS/juh

D580CS

FINAL REPORT
FOR THE
QUARTERLY GROUNDWATER SAMPLING
AT THE
BRYANT GRINDER FACILITY

Prepared for

BRYANT GRINDER CORPORATION
257 Clinton Street
Springfield, Vermont 05156

Prepared by

WEHRAN ENGINEERING CORPORATION
1 Mill Street
Burlington, Vermont 05401

WE Project No. 08455.HF

October 1989

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1.0 INTRODUCTION

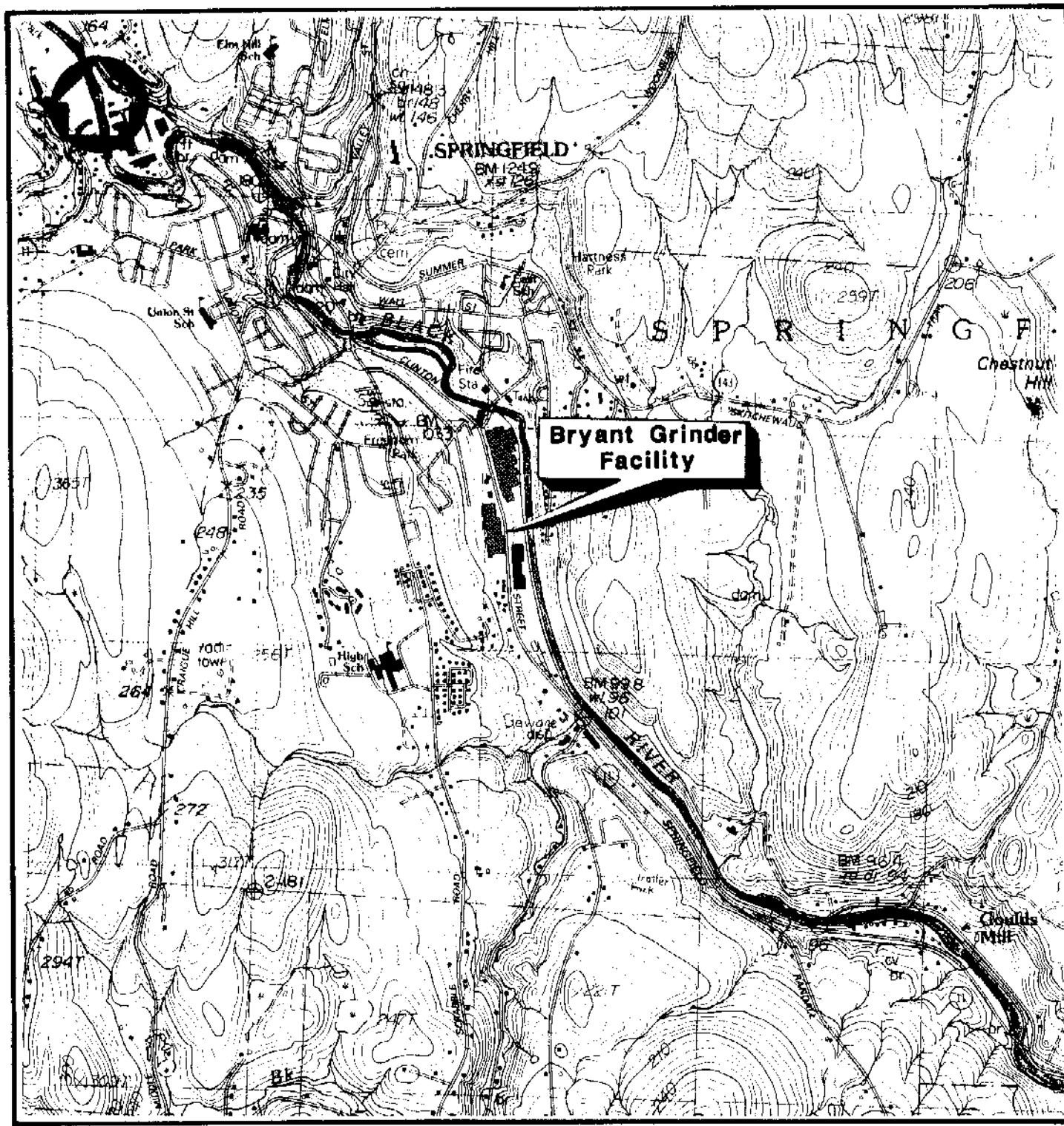
This final report is prepared for Bryant Grinder Corporation (Bryant Grinder) by Wehran Engineering Corporation (Wehran) to summarize the findings of the recently completed quarterly groundwater monitoring program. During the past year, groundwater samples were collected from the five existing groundwater monitoring wells and analyzed for volatile organic compounds. After each quarter's laboratory data was received, a letter report was prepared to summarize the data. The following report is a summary of the data collected over the entire monitoring period, including recommendations for additional monitoring.

1.1 SITE DESCRIPTION AND HISTORY

The Bryant Grinder facility is located at 257 Clinton Street (State Route 11) in the Town of Springfield, Vermont (Figure 1). The main body of the Town of Springfield is immediately to the north. A small subdivision and high school is south of the site. The areas outside of the town are hilly and relatively unpopulated. The property, which consists of approximately 16.2 acres, is located in the Black River Valley. The Black River flows from north to south approximately 500 feet to the east of the site. The western portion of the property is located on the steeply sloping valley wall which has been terraced by development.

The Bryant Grinder plant occupies approximately 4.5 acres of the site and consists of a complex of several buildings. The facility manufactures and repairs internal, external and multi-surface grinders and precision spindles for high speed machinery. During the manufacturing and/or repair process solid and hazardous waste are generated in the following forms:

- steel and aluminum chips and shavings;
- non-hazardous refuse, cardboard, paper, etc.;
- paint rack dregs;
- waste neutral degreaser bottoms;



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ref: USGS TOPOGRAPHIC MAP, SPRINGFIELD VT.- NY. QUADRANGLE, 1984

WEHRAN ENGINEERING
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FIGURE 1
SITE LOCATION MAP

- waste paint solids;
- waste solvents with oil and water;
- waste coolant concentrate;
- water soluble coolant;
- swarf/grinder residue filtered from coolants; and
- petroleum oil.

Each of the various hazardous wastes are handled individually by specified procedures within the plant. For example, solvents and degreasers, which are used in several wash tanks, and two vapor degreasers are removed periodically and accumulated temporarily in partially-filled drums at the various satellite stations. When full, the drums are removed to the main waste storage area to await shipping. The generation of hazardous waste, waste composition, and the waste handling procedures at the Bryant Grinder facility are discussed in more detail in Appendix A of the ERT report, "Environmental Site Assessment - Bryant Grinder Corporation, Springfield, Vermont" (Document Number 6630-004-000, May 13, 1988).

The Bryant Grinder facility was established in 1909 under the name "Bryant Chucking Grinder Company". It continued operation under that name until 1958 when it was acquired by the Ex-Cell-O Corporation and became part of the North American Machine Tool Division. In 1986 Ex-Cello-O was purchased by Textron, Inc. of Providence, Rhode Island and Bryant Grinder became an indirect, wholly owned subsidiary of Textron.

1.2 PREVIOUS INVESTIGATIONS

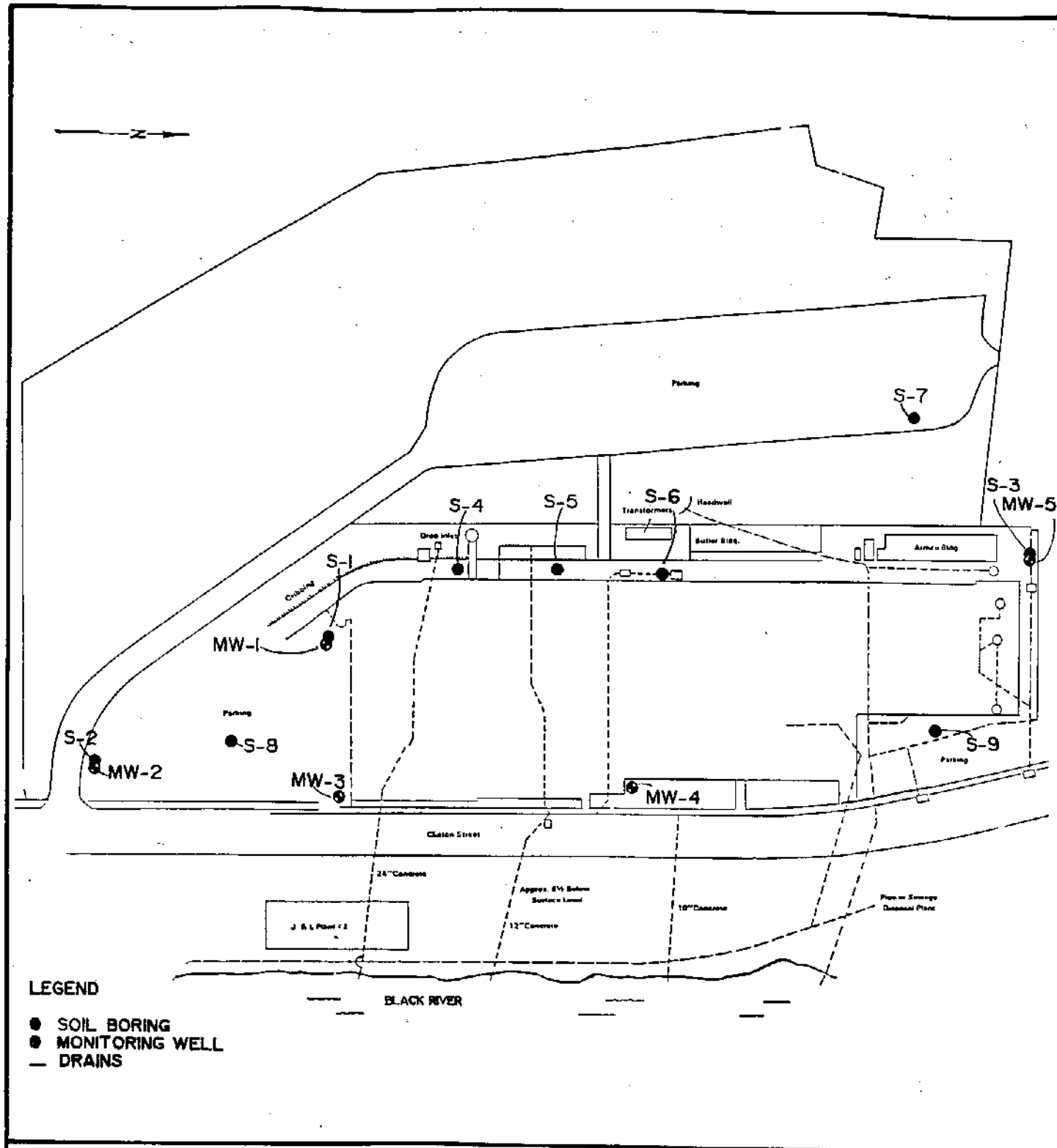
ERT, an ENSR company, was contracted by Textron in March of 1988 to perform an environmental assessment of the Bryant Grinder property. Their investigation and its results are discussed in detail in their report, "Environmental Site Assessment - Bryant Grinder Corporation, Springfield, Vermont" (1988). The ERT environmental assessment was based on information provided by Bryant Grinder, review of available files and documentation, discussions with State of

Vermont personnel, and site inspections. During the course of the investigation nine soil borings were conducted and five groundwater monitoring wells were installed. Figure 2 shows the location of these soil borings and monitoring wells. The monitoring wells were completed and developed by March 31, 1988. On March 31 and April 1, 1988 the first groundwater quality samples were collected and sent to Gascoyne Labs, Inc. in Baltimore, Maryland for chemical analyses. A second set of samples were collected on April 12, 1988, including three replicates from MW-4 and samples from two storm drains that empty into the Black River. These samples were analyzed by Toxicon Laboratories, Inc. of Woburn, Massachusetts.

The ERT soil boring program results indicated that, in general, the site is underlain by three to five feet of "fine sand and cobble fill". Beneath the fill, a brown sand with some silt, trace clay graded to a brown silt with some sand. At approximately eleven to twelve feet below grade a brown to grey clay was found. Bedrock, defined by auger refusal, was encountered at 14.3 feet below grade at S-3/MW-5 and 11.25 feet below grade at S-1/MW-1. MW-2, MW-3, and MW-4 were all sampled to 19.5 feet below grade and did not encounter bedrock.

The top of a water table aquifer was found to exist approximately ten feet beneath the facility. ERT measured the water level in the monitoring wells relative to an on-site datum on March 31, 1988 and contoured them to show that the general shallow groundwater flow was to the southeast, eventually intersecting the Black River. Because of the close proximity of the Black River to the monitoring wells, a more easterly flow direction would be anticipated. Unfortunately, surveyed elevation data for the monitoring wells are not available; therefore, it was not possible to contour the data collected during the quarterly sampling to compare with the data presented by ERT.

The results of the water quality sampling indicated the presence of one volatile organic compound (trichloroethene) above the Federal Safe Drinking Water Guidelines in MW-3 (10 parts per billion (ppb)) and MW-4 (50 ppb). Those samples analyzed for semi-volatiles, total petroleum hydrocarbons, and polychlorinated biphenyls (PCB) had none detected. Based on the results of their



NOT TO SCALE

FIGURE 2
APPROXIMATE MONITORING WELL LOCATIONS

ref: ERT REPORT no. 6630-004-000
MAY 13, 1988

WEHRAN ENGINEERING
CONSULTING ENGINEERS

field investigation, ERT recommended "continued sampling, analysis, and reporting of the ground water monitoring system".

2.0 OBJECTIVES

The objective of this investigation was to collect groundwater quality samples from the five existing monitoring wells quarterly for a period of one year. These samples were to be analyzed for volatile organic compounds according to EPA Method 624.

3.0 METHODS

Prior to collecting the groundwater samples, all wells were monitored with a portable photoionization detector (HNU), both in the breathing zone and in the borehole. This instrument was used to both monitor ambient conditions for personnel health and safety and to determine the well sampling order (the wells which show elevated levels are sampled last). In addition to monitoring with the HNU, static water level, groundwater temperature, and specific conductance were measured at each monitoring well. Table 1 shows the results of these measurements.

As indicated in our scope of services (July 15, 1988, letter to Paul Faxon, Esquire), all wells were purged of three well volumes or until evacuated, whichever came first, before the water quality samples were collected. All samples were collected with a Teflon® bailer utilizing bailer line that is dedicated to each well. All equipment utilized in the wells was decontaminated before introduction into the well by an Alconox® wash and methanol rinse, followed by three distilled water rinses. In addition to the groundwater samples, a field blank and a trip blank were also collected and analyzed during each quarter. Samples were collected by Wehran personnel on August 18, 1988, November 17, 1988, March 13, 1989 and July 17, 1989. All samples were analyzed by Industrial Environmental Analysts, Inc. (IEA) of Essex Junction, Vermont, following EPA Method 624 for volatile organic compounds.

TABLE 1

SUMMARY OF WATER LEVEL, TEMPERATURE,

AND

SPECIFIC CONDUCTANCE DATA

Monitor Well	Depth To Static Water Level (feet B.T.O.C.*)				Temperature (°C)				Specific Conductance (μmhos/cm^2)			
Date	8-18-88	11-17-88	3-13-89	7-17-89	8-18-88	11-17-88	3-13-89	7-17-89	8-18-88	11-17-88	3-13-89	7-17-89
MW-1	8.79	7.92	9.04	6.58	21.5**	14	8	17	430	360	175	220
MW-2	11.23	10.15	11.40	8.83	16.5**	16	9	12	170	400	100	202
MW-3	9.46	9.73	10.75	8.06	18.5**	17	12	14	385	435	235	325
MW-4	9.83	10.25	10.88	9.00	20.0**	17	14	19	620	630	485	750
MW-5	8.65	8.38	9.08	7.90	15.5**	11	13	12	550	1000	270	345

* below top of casing

** all the groundwater temperatures recorded on August 18, 1988 are higher than would typically be expected; however, this reflects the field measurement technique rather than actual groundwater conditions since the temperature was measured in an open vessel on an extremely hot day.

4.0 RESULTS AND RECOMMENDATIONS

The complete laboratory results for the four sampling events are included as Appendix 1. Table 1 presents the depth to static water level, temperature and specific conductance data for the sampling events. It should be noted that water table elevation data is not presented since surveyed elevation data for the wells is not available. Table 2 summarizes all the volatile organic data that has been collected. It presents only those compounds which have been detected. The data collected by ERT is included in Table 2 for completeness.

As can be seen from Table 2, water from MW-4 had detectable levels of trichloroethene, trans-1,2-dichloroethene, and tetrachloroethene. MW-4, as shown on Figure 2, is located immediately downgradient of the main body of the plant. From review of the ERT report (1988) and discussions with Bryant Grinder personnel, no current (post-1980) releases of these compounds have occurred. No historical source or possible pathway to the shallow aquifer has been identified to date. Wehran recommends that the ongoing review and documentation of on-site historical disposal practices be continued and completed. Moreover, considering the proportion of trichloroethene to the trichloroethene breakdown product, trans-1,2-dichloroethene, present in water from MW-4, it is likely that the release of trichloroethene occurred during past (pre-1980) operations at the facility.

Water from MW-3 had detectable levels for trichloroethene and tetrachloroethene on two occasions. Water from MW-1 had detectable levels for 1,1-dichloroethene on one occasion. The significance of these low levels are uncertain at this time. Consequently, it is recommended that one more round of sampling of the five groundwater wells be completed. After those data are available, then the nature of further environmental investigations at the site can be evaluated. Because there is no use of groundwater as a water source in the immediate area about the Bryant Grinder facility, the exceedance of State groundwater enforcement standards does not present a current risk to human

TABLE 2 BRYANT GRINDER - SUMMARY OF VOLATILE ORGANIC WATER QUALITY DATA (µg/L)

	VERMONT STANDARD	MW-1					MW-2					MW-3				
		01-Apr 1988 #	18-Aug 1988 ##	17-Nov 1988 ##	13-Mar 1989 ##	17-Jul 1989 ##	01-Apr 1988 #	18-Aug 1988 ##	17-Nov 1988 ##	13-Mar 1989 ##	17-Jul 1989 ##	01-Apr 1988 #	18-Aug 1988 ##	17-Nov 1988 ##	13-Mar 1989 ##	17-Jul 1989 ##
methylene chloride	5.0	2 b	---	---	---	---	---	---	---	---	---	2 b	---	---	---	---
tetrachloroethene	0.7	---	---	---	---	---	*	---	---	---	---	3	---	5	---	---
1,1,1-trichloroethane	200.	---	---	46	---	---	---	---	---	---	---	3	---	---	---	---
trichloroethene	5.0	---	---	---	---	---	---	---	---	---	---	10	---	---	8	---
1,1-dichloroethane	NS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
chloroform	NS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1,1-dichloroethene	7.0	---	---	21	---	---	---	---	---	---	---	---	---	---	---	---
1,2-dichloroethene	70.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1,1,2,2-tetrachloroethane	NS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
trans-1,2-dichloroethene	70.	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

	VERMONT STANDARD	MW-4						MW-5				
		01-Apr 1988 #	12-Apr 1988 **	18-Aug 1988 ##	17-Nov 1988 ##	13-Mar 1989 ##	17-Jul 1989 ##	01-Apr 1988 #	18-Aug 1988 ##	17-Nov 1988 ##	13-Mar 1989 ##	17-Jul 1989 ##
methylene chloride	5.0	---	---	---	---	---	---	*	---	---	---	---
tetrachloroethene	0.7	7	10,10,ND	---	---	---	10	---	---	---	---	---
1,1,1-trichloroethane	200.	---	---	---	---	---	---	4	---	---	---	---
trichloroethene	5.0	50	61,63,ND	38	230	330	140	---	---	---	---	---
1,1-dichloroethane	NS	*	---	---	---	---	---	4	---	---	5	---
chloroform	NS	2	---	---	---	---	---	---	---	---	---	---
1,1-dichloroethene	7.0	*	---	---	---	---	---	*	---	5	---	---
1,2-dichloroethene	70.	56	---	---	---	---	---	---	---	---	---	---
1,1,2,2-tetrachloroethane	NS	---	---	---	---	---	---	*	---	---	---	---
trans-1,2-dichloroethene	70.	---	66,71,ND	50	220	---	170	---	---	---	---	---

NOTES:
- b Found in blank at similar levels.
- * Detected below quantitation level.
- # Analysis by Gascoyne Laboratories, Inc. according to EPA Method 601 and 602.
- ** Analysis by TOXIKON according to EPA Method 624 only analyzed MW-4 (3 replicates).
- ## Analysis by IEA according to EPA Method 624.
- NS No Standard.
- --- Not Detected.
- ND Not Detected.

health. Since groundwater flow directions in the vicinity of MW-4 are toward the Black River, the volatile organic compounds found at MW-4 would be expected to migrate towards and eventually discharge to the river. This flow path is away from any water supply wells and therefore it is very unlikely that any human exposure would occur through the use of groundwater. If these compounds discharge to the river they would, because of volatilization and dilution, be significantly reduced in concentration.

APPENDIX 1

WATER QUALITY DATA

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Date: September 7, 1988

SEP 7 1988

Louise Lindsay
Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-15332

Reference: IEA Report No. 237232

Dear Ms. Lindsay:

Transmitted herewith are the results of analyses on 7 samples submitted to our laboratory on 8/19/88.
Please see the enclosed reports for your results.

Very truly yours,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Richard W Waldron

Richard Waldron, PhD.
Senior Chemist

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 1
Sample Identification Wehran B6-MW 1
Date Analyzed September 2, 1988 **By** Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 2
Sample Identification Wehran B6-MW 2
Date Analyzed September 2, 1988 **By** Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 3
Sample Identification Wehran B6-MW 3
Date Analyzed September 2, 1988 **By** Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 4
Sample Identification Wehran B6-MW 4
Date Analyzed September 2, 1988 **By** Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	50
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	38
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 5
Sample Identification Wehran B6-MW 5
Date Analyzed September 3, 1988 **By** Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 6
Sample Identification Wehran FB
Date Analyzed September 3, 1988 **By** Griffin

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

GC/MS Purgeables

IEA Sample No. 237232 7
Sample Identification Wehran TB
Date Analyzed September 3, 1988 **By** Griffin

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

2ND QUARTERLY SAMPLING

NOVEMBER 17, 1988

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

Date: January 6, 1989

RECEIVED BURLINGTON

JAN 9 1989

Louise Lindsay
Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-15332

Reference: IEA Report No. 2373232
Reissued

Dear Louise:

Transmitted herewith are the results of analyses on 6 samples submitted to our laboratory on 11/18/88.
Please see the enclosed reports for your results.

Very truly yours,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Richard W Waldron

Richard Waldron, PhD.
Senior Chemist

Offices and laboratories located in: Essex Junction, Vermont
Research Triangle Park, North Carolina

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 -1
Sample Identification BG-FB-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 2
Sample Identification BG-MW1-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	21
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	46
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 3
Sample Identification BG-MW2-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 4
Sample Identification BG-MW3-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	5
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

D - (8), (9)

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 5
Sample Identification BG-MW4-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	25	BQL
2	BROMODICHLOROMETHANE	25	BQL
3	BROMOFORM	25	BQL
4	BROMOMETHANE	50	BQL
5	CARBON TETRACHLORIDE	25	BQL
6	CHLOROBENZENE	25	BQL
7	CHLOROETHANE	50	BQL
8	2-CHLOROETHYLVINYL ETHER	25	BQL
9	CHLOROFORM	25	BQL
10	CHLOROMETHANE	50	BQL
11	DIBROMOCHLOROMETHANE	25	BQL
12	1,2-DICHLOROBENZENE	25	BQL
13	1,3-DICHLOROBENZENE	25	BQL
14	1,4-DICHLOROBENZENE	25	BQL
15	1,1-DICHLOROETHANE	25	BQL
16	1,2-DICHLOROETHANE	25	BQL
17	1,1-DICHLOROETHENE	25	BQL
18	trans-1,2-DICHLOROETHENE	25	220
19	1,2-DICHLOROPROPANE	25	BQL
20	cis-1,3-DICHLOROPROPENE	25	BQL
21	trans-1,3-DICHLOROPROPENE	25	BQL
22	ETHYL BENZENE	25	BQL
23	METHYLENE CHLORIDE	25	BQL
24	1,1,2,2-TETRACHLOROETHANE	25	BQL
25	TETRACHLOROETHENE	25	BQL
26	TOLUENE	25	BQL
27	1,1,1-TRICHLOROETHANE	25	BQL
28	1,1,2-TRICHLOROETHANE	25	BQL
29	TRICHLOROETHENE	25	230
30	TRICHLOROFLUOROMETHANE	25	BQL
31	VINYL CHLORIDE	50	BQL

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No. 2373232 6
Sample Identification BG-MW5-001-003
Date Analyzed December 1, 1988 **By** Cornwell

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	5
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

3RD QUARTERLY SAMPLING

MARCH 13, 1989

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

BURLINGTON
RECEIVED
APR 10 1989

Date: April 5, 1989

Gwen Buttles
Wehran Engineering
1 Mill Street, Chace Mill
Burlington, VT 05401-15332

Reference: IEA Report No. 23773

Dear Gwen Buttles:

Transmitted herewith are the results of analyses on 7 samples submitted to our laboratory on 3/14/89.
Please see the enclosed reports for your results.

Very truly yours,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Bradley J. Eldred

Bradley J. Eldred
Vice-President

Comments: BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 1
Sample Identification: BG-GW-1
Date Collected: March 13, 1989
Date Analyzed: March 20, 1989
By: O'Toole

Number	Compound	Quantitation Limit ug/L	Results Concentration ug/L q
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 2
Sample Identification: BG-GW-2
Date Collected: March 13, 1989
Date Analyzed: March 20, 1989
By: O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L q
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 3
Sample Identification: BG-GW-3
Date Collected: March 13, 1989
Date Analyzed: March 20, 1989
By: O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	8
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments

BQL - BELOW QUANTITATION LIMIT 9
Sample diluted due to high concentration of target /non-target compounds present.

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 4
Sample Identification: BG-GW-4
Date Collected: March 13, 1989
Date Analyzed: March 21, 1989
By: Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	10	BQL
2	BROMODICHLOROMETHANE	10	BQL
3	BROMOFORM	10	BQL
4	BROMOMETHANE	20	BQL
5	CARBON TETRACHLORIDE	10	BQL
6	CHLOROBENZENE	10	BQL
7	CHLOROETHANE	20	BQL
8	2-CHLOROETHYLVINYL ETHER	10	BQL
9	CHLOROFORM	10	BQL
10	CHLOROMETHANE	20	BQL
11	DIBROMOCHLOROMETHANE	10	BQL
12	1,2-DICHLOROBENZENE	10	BQL
13	1,3-DICHLOROBENZENE	10	BQL
14	1,4-DICHLOROBENZENE	10	BQL
15	1,1-DICHLOROETHANE	10	BQL
16	1,2-DICHLOROETHANE	10	BQL
17	1,1-DICHLOROETHENE	10	BQL
18	trans-1,2-DICHLOROETHENE	10	BQL
19	1,2-DICHLOROPROPANE	10	BQL
20	cis-1,3-DICHLOROPROPENE	10	BQL
21	trans-1,3-DICHLOROPROPENE	10	BQL
22	ETHYL BENZENE	10	BQL
23	METHYLENE CHLORIDE	10	BQL
24	1,1,2,2-TETRACHLOROETHANE	10	BQL
25	TETRACHLOROETHENE	10	BQL
26	TOLUENE	10	BQL
27	1,1,1-TRICHLOROETHANE	10	BQL
28	1,1,2-TRICHLOROETHANE	10	BQL
29	TRICHLOROETHENE	10	330
30	TRICHLOROFLUOROMETHANE	10	BQL
31	VINYL CHLORIDE	20	BQL

Comments | BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 5
Sample Identification: BG-GW-5 **Date Collected:** March 13, 1989
Date Analyzed: March 21, 1989 **By:** Olszewski

Number	Compound	Quantitation Limit ug/L	Results Concentration ug/L	ion
1	BENZENE	5	BQL	
2	BROMODICHLOROMETHANE	5	BQL	
3	BROMOFORM	5	BQL	
4	BROMOMETHANE	10	BQL	
5	CARBON TETRACHLORIDE	5	BQL	
6	CHLOROBENZENE	5	BQL	
7	CHLOROETHANE	10	BQL	
8	2-CHLOROETHYLVINYL ETHER	5	BQL	
9	CHLOROFORM	5	BQL	
10	CHLOROMETHANE	10	BQL	
11	DIBROMOCHLOROMETHANE	5	BQL	
12	1,2-DICHLOROBENZENE	5	BQL	
13	1,3-DICHLOROBENZENE	5	BQL	
14	1,4-DICHLOROBENZENE	5	BQL	
15	1,1-DICHLOROETHANE	5	5	
16	1,2-DICHLOROETHANE	5	BQL	
17	1,1-DICHLOROETHENE	5	BQL	
18	trans-1,2-DICHLOROETHENE	5	BQL	
19	1,2-DICHLOROPROPANE	5	BQL	
20	cis-1,3-DICHLOROPROPENE	5	BQL	
21	trans-1,3-DICHLOROPROPENE	5	BQL	
22	ETHYL BENZENE	5	BQL	
23	METHYLENE CHLORIDE	5	BQL	
24	1,1,2,2-TETRACHLOROETHANE	5	BQL	
25	TETRACHLOROETHENE	5	BQL	
26	TOLUENE	5	BQL	
27	1,1,1-TRICHLOROETHANE	5	BQL	
28	1,1,2-TRICHLOROETHANE	5	BQL	
29	TRICHLOROETHENE	5	BQL	
30	TRICHLOROFLUOROMETHANE	5	BQL	
31	VINYL CHLORIDE	10	BQL	

Comments: BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 6
Sample Identification: BG-FB1
Date Analyzed: March 21, 1989

Date Collected: March 13, 1989
By: Olszewski

Number	Compound	Quantitation Limit ug/L	Results Concentration ug/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL - BELOW QUANTITATION LIMIT

Method 624: GC/MS Purgeables

IEA Sample No.: 23773 7

Sample Identification: BG-TB1

Date Collected: March 13, 1989

Date Analyzed: March 21, 1989

By: Olszewski

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

4TH QUARTERLY SAMPLING

JULY 17, 1989

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

RECEIVED BURLINGTON
AUG 7 1989

Date: August 4, 1989

Wehran Engineering
1 Mill Street
Burlington, VT 05401

Reference: IEA Report No.: 237199
PO#: NA

Dear Gwen:

Transmitted herewith are the results of analyses on 7 samples submitted to our laboratory on 7/18/89.
Please see enclosed report for your results.

Very truly yours,

INDUSTRIAL & ENVIRONMENTAL ANALYSTS, INC.

Brad

Bradley J. Eldred
Vice-President

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 1
Sample Identification: Trip Blank
Date Collected: 7/17/89
Date Analyzed: 7/27/89
By: O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL = BELOW QUANTITATION LIMIT

Industrial & Environmental Analysts, Inc.
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EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 2
Sample Identification: Field blank #1 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL - BELOW QUANTITATION LIMIT

Industrial & Environmental Analysts, Inc.
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EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 3
Sample Identification: Bryant Grinder MW#1 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: **BQL = BELOW QUANTITATION LIMIT**

Industrial & Environmental Analysts, Inc.
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EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 4
Sample Identification: Bryant Grinder #MW2 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL = BELOW QUANTITATION LIMIT

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EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 5
Sample Identification: Bryant Grinder MW #3 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL = BELOW QUANTITATION LIMIT

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EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 6
Sample Identification: Bryant Grinder MW #4 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	170
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	10
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	140
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL = BELOW QUANTITATION LIMIT

Industrial & Environmental Analysts, Inc.
P.O. Box 626 • Essex Junction, Vermont 05453 • 802-878-5138

EPA Method 624 Compound
GC/MS Purgeables

IEA Sample No.: 237199 7
Sample Identification: Bryant Grinder MW #5 **Date Collected:** 7/17/89
Date Analyzed: 7/27/89 **By:** O'Toole

Number	Compound	Quantitation Limit µg/L	Results Concentration µg/L
1	BENZENE	5	BQL
2	BROMODICHLOROMETHANE	5	BQL
3	BROMOFORM	5	BQL
4	BROMOMETHANE	10	BQL
5	CARBON TETRACHLORIDE	5	BQL
6	CHLOROBENZENE	5	BQL
7	CHLOROETHANE	10	BQL
8	2-CHLOROETHYLVINYL ETHER	5	BQL
9	CHLOROFORM	5	BQL
10	CHLOROMETHANE	10	BQL
11	DIBROMOCHLOROMETHANE	5	BQL
12	1,2-DICHLOROBENZENE	5	BQL
13	1,3-DICHLOROBENZENE	5	BQL
14	1,4-DICHLOROBENZENE	5	BQL
15	1,1-DICHLOROETHANE	5	BQL
16	1,2-DICHLOROETHANE	5	BQL
17	1,1-DICHLOROETHENE	5	BQL
18	trans-1,2-DICHLOROETHENE	5	BQL
19	1,2-DICHLOROPROPANE	5	BQL
20	cis-1,3-DICHLOROPROPENE	5	BQL
21	trans-1,3-DICHLOROPROPENE	5	BQL
22	ETHYL BENZENE	5	BQL
23	METHYLENE CHLORIDE	5	BQL
24	1,1,2,2-TETRACHLOROETHANE	5	BQL
25	TETRACHLOROETHENE	5	BQL
26	TOLUENE	5	BQL
27	1,1,1-TRICHLOROETHANE	5	BQL
28	1,1,2-TRICHLOROETHANE	5	BQL
29	TRICHLOROETHENE	5	BQL
30	TRICHLOROFLUOROMETHANE	5	BQL
31	VINYL CHLORIDE	10	BQL

Comments: BQL = BELOW QUANTITATION LIMIT