Minnesota Pollution Control Agency

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 24, 1999

Mr. Douglas Hildre, P.E.
Environmental Control Manager
United Defense LP
Armament Systems Division
4800 East River Road
Minneapolis, Minnesota 55421-1498

RE: FMC Corporation Superfund Site

Dear Mr. Hildre:

Please find enclosed a Minnesota Pollution Control Agency (MPCA) memorandum from Mr. Paul Estuesta to me concerning contamination found in water collected in the 84-inch storm sewer and outfall (see attached map). The MPCA staff will be further evaluating this data, but believe that you need to be aware of the sampling results.

If you have any questions regarding this letter, please contact me at (651) 296-7818.

Sincerely,

David N. Douglas
Project Manager
RCRA/Superfund
Site Remediation Section
Metro District

DND:csa

Enclosure

cc: Thomas Bloom, U.S. Environmental Protection Agency
~~Joel Sanders, U.S. Navy~~

SF-00006-05 (4/86)

STATE OF MINNESOTA

Office Memorandum

DEPARTMENT: POLLUTION CONTROL AGENCY

DATE: May 24, 1999

TO: Dave Douglas, Project Leader
Metro District Office
Site Remediation Section

FROM: Paul Estuesta
On-Site Inspector
Metro District Office
Site Remediation Section
PHONE: 612 296-7997

SUBJECT: Sample Results from Sampling Manholes/Outfall in Fridley.

Dave,

On November 24,1998 I collected a water sample from the 84 inch outfall located in Fridley approximately 100 feet to the North of the Minneapolis Water Works facility. I was asked to sample the outfall to find out if the may be infiltration into the sewer by ground water. The area to the North of the outfall is currently under investigation by the Navy. During the sampling of the outfall I noted a foam and sheen associated with the discharge of water. I also collected a sample of the surface water and submitted 3 water samples to Interpoll Laboratories for analysis. Flow from the outfall was estimated to be approximately five gallons per minute. The results indicated that there are concentrations of 34 ug/l of Trichloroethene, 29ug/l above the discharge criteria. With that information there was a need to determine the possible area that infiltration may be occurring. I met with Dick Kable of the Emergency Response Team; Hazardous Waste Division and we selected two additional sample points. They were (East) manhole located on the East side of the Burlington Northern Santa Fe rail yard in Fridley. And (West) manhole located on the west side of the FMC property next to East River Road. Please see attachment 1 for location of sample points. On December 23,1998 a sample was collected from the manholes East and West to determine if infiltration was occurring. The East manhole results indicated no detection's of contaminates analyzed, however the West manhole results indicated concentrations of 4.0 ug/l of c-1, 2, DCE, 2.0 ug/l of Tetrachloroethene, 5.7 ug/l of 1,1,1-TCA and 32 ug/l of TCE. The samples were collected in low flow conditions. These results indicated that a confirmation sampling must take place. Several attempts were made to resample the manholes and outfall at the same time, either the outfall was frozen or flow was too low to collect a sample. On April 19,1999 a fourth attempt was undertaken and samples were successfully collected from the manholes and outfall. However the flow volume from the sewers was very high and the river level was high enough to flood the outfall. The results from the East manhole indicate concentrations of 0.2 ug/l of Toluene, no other detections. The results from the West manhole indicate concentrations of .6 ug/l 1,1,1 TCA and 2.4 ug/l of TCE. The outfall results indicate concentrations of 0.3 ug/l of Toluene, 0.3 ug/l of 1,1,1 TCA and 2.0 ug/l of TCE. Please review attachment I for sample dates, sample points and the analytical results for the three events. Please contact me if you have any questions or comments regarding this memo.

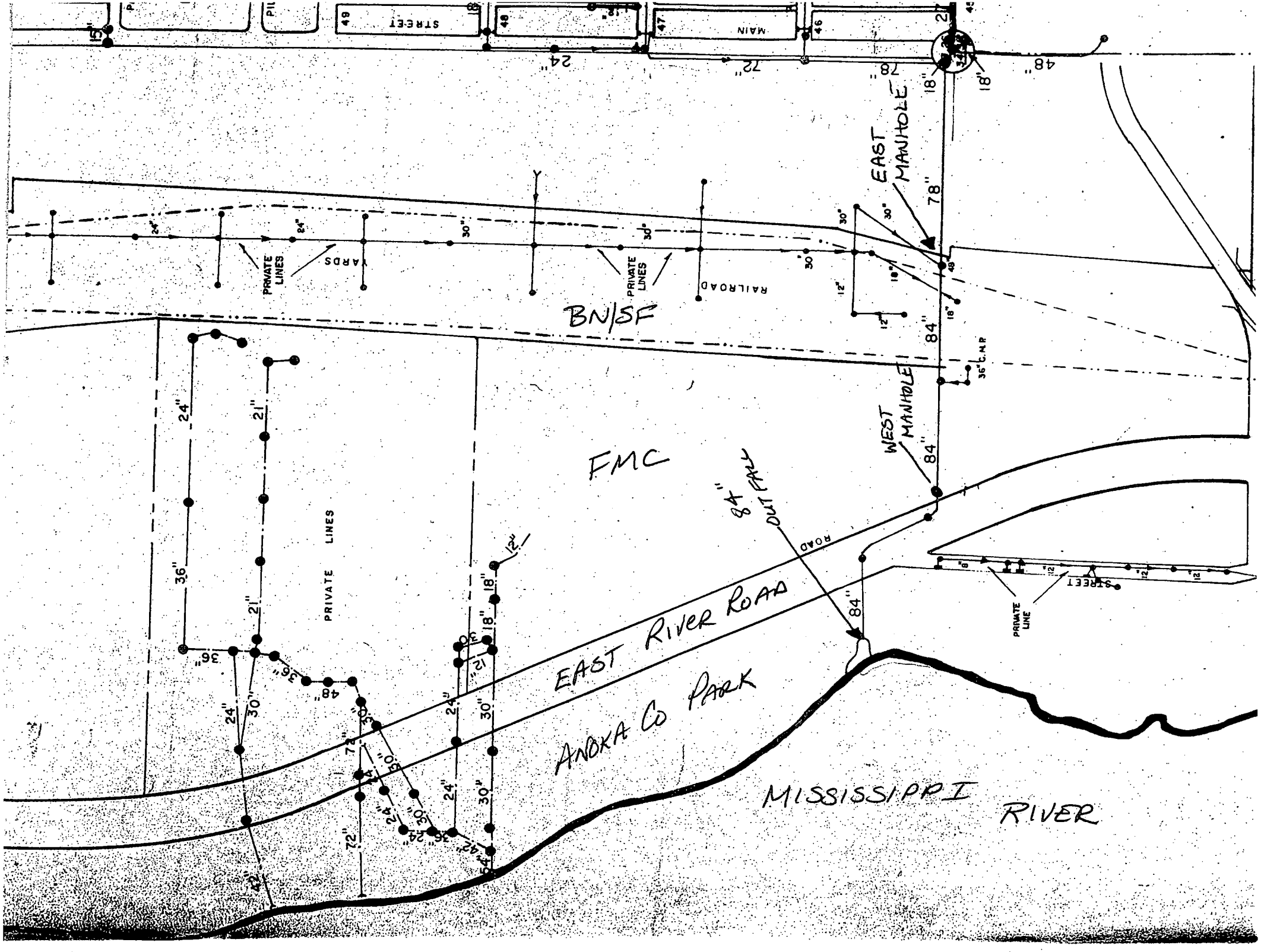
Paul Estuesta
On-Site Inspector
Metro District Office
Site Remediation Section
(651) 296-7997
(651) 296-9707
paul.estuesta@pca.state.mn.us

RECYCLED PAPER WITH A MINIMUM
OF 10% POSTCONSUMER WASTE

Sample Results from Fridley
84 inch outfall and Manholes

Attachment I

Location	Sample Date	TCE ug/l	1,1,1TCA ug/l	1,1,DCA ug/l	C-1,2 DCA ug/l	Toluene ug/l	PCE ug/l	Comments
Outfall	11/24/98	**5.3**	0.19	0.95	0.95	2.5	0.18	Low Flow
East MH	12/23/98	ND	1.00	ND	ND	ND	ND	Low Flow
West MH	12/23/98	**32.00**	5.70	1.00	4.00	ND	2.00	Low Flow
East MH	4/19/99	ND	0.2	ND	ND	0.2	ND	High Flow
West MH	4/19/99	2.4	0.3	0.6	ND	ND	ND	High Flow
Outfall	4/19/99	2.00	0.3	ND	ND	0.3	ND	High Flow


STREET
MAIN
EAST MANHOLE
WEST MANHOLE
PRIVATE LINES
YARDS
RAILROAD
BN/SF
FMC
84" OUT FALL
EAST RIVER ROAD
ANOKA CO PARK
MISSISSIPPI RIVER
PRIVATE LINE
STREET

Interpoll Laboratories, Inc.
4500 Ball Road N.E.
Circle Pines, Minnesota 55014-1819

TEL: (612) 786-6020
FAX: (612) 786-7854

ANALYTICAL RESULTS & QC DATA FOR THE MPCA'S NIROP PROJECT

Submitted to:

Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155

Attention: Paul Estuesta

Approved By:

Wayne A. Olson,
Quality Assurance Officer

David J. Schneider, Manager
Chemistry Department

Laboratory Report #12062
December 15, 1998

PROJECT SUMMARY

The following laboratory report contains the analytical results and QC data for three water samples submitted to Interpoll Laboratories by MPCA personnel for the MPCA's NIROP Project. The samples were collected on November 24, 1998 and received on November 24, 1998 according to Interpoll Labs documented sample acceptance procedures. The samples were analyzed for the parameters requested on Chain-of-Custody #022246 which accompanied the samples.

MPCA Sample ID	ILI Sample #
96" Outfall	12062-01
Trip Blank	12062-02
Surface Water	12062-03

Results are reported on an as received basis.

Note: Upon receipt at the laboratory, the pH of 5 for sample 12062-03 exceeded the preservation pH required by the method:

Footnote:

[a]The percent recovery of this matrix spike is below the lower control limit for accuracy because of matrix interferences.

Abbreviations:

EXTR DATE = extraction date
MDL = method detection limit
RL = reporting limit
QLFR = qualifier
FTNT = footnote
LCL = lower control limit
UCL = upper control limit
RPD = relative percent difference
PCL = precision control limit

Qualifiers

< = less than
J = identifies a reported value which is greater than the method detection limit (MDL), but less than the reporting limit (RL).
D = diluted
S = surrogate

WAO/DJS/cg

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-01
MPCA FIELD SAMPLE ID: 96" OUTFALL
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ACETONE	67641	UG/L	10	1.1	10	<
MDH 465E	12/5/98	12/5/98	ALLYL CHLORIDE	107051	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	BENZENE	71432	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	BROMOBENZENE	108861	UG/L	1.6	0.33	1.6	<
MDH 465E	12/5/98	12/5/98	BROMOCHLOROMETHANE	74975	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	BROMODICHLOROMETHANE	75274	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BROMOFORM	75252	UG/L	0.47	0.094	0.47	<
MDH 465E	12/5/98	12/5/98	BROMOMETHANE	74839	UG/L	0.40	0.081	0.40	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (N)	104518	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (SEC)	135988	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (TERT)	98066	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	CARBON TETRACHLORIDE	56235	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	CHLOROBENZENE	108907	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	CHLOROETHANE	75003	UG/L	0.38	0.075	0.38	<
MDH 465E	12/5/98	12/5/98	CHLOROFORM	67663	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	CHLOROMETHANE	74873	UG/L	0.34	0.069	0.34	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (2)	95498	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (4)	106434	UG/L	1.6	0.31	1.6	<
MDH 465E	12/5/98	12/5/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	UG/L	2.2	0.43	2.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOCHLOROMETHANE	124481	UG/L	0.60	0.12	0.60	<
MDH 465E	12/5/98	12/5/98	DIBROMOETHANE (1,2)	106934	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOMETHANE	74953	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (1,1)	563586	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (2,3)	78886	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,2)	95501	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,3)	541731	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,4)	106467	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLORODIFLUOROMETHANE	75718	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,1)	75343	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,2)	107062	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (1,1)	75354	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (CIS-1,2)	156592	UG/L	0.60	0.19	0.95	J
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (TRANS-1,2)	156605	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROFLUOROMETHANE	75434	UG/L	0.50	0.10	0.50	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,2)	78875	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,3)	142289	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (2,2)	594207	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (CIS-1,3)	10061015	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (TRANS-1,3)	10061026	UG/L	0.80	0.16	0.80	<

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-01
MPCA FIELD SAMPLE ID: 96" OUTFALL
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ETHYL ETHER	60297	UG/L	1.6	0.26	1.6	<
MDH 465E	12/5/98	12/5/98	ETHYLBENZENE	100414	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	HEXACHLOROBUTADIENE	87683	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLBENZENE	98828	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLTOLUENE (P)	99876	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	METHYL ETHYL KETONE	78933	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/5/98	METHYL ISOBUTYL KETONE	108101	UG/L	4.6	0.91	4.6	<
MDH 465E	12/5/98	12/5/98	METHYL TERTIARY BUTYL ETHER	1634044	UG/L	1.8	0.37	1.8	<
MDH 465E	12/5/98	12/5/98	METHYLENE CHLORIDE	75092	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/5/98	NAPHTHALENE	91203	UG/L	1.0	0.20	1.0	<
MDH 465E	12/5/98	12/5/98	PROPYLBENZENE (N)	103651	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	STYRENE	100425	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,1,2)	630206	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,2,2)	79345	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHENE	127184	UG/L	0.18	0.15	0.75	J
MDH 465E	12/5/98	12/5/98	TETRAHYDROFURAN	109999	UG/L	16	3.2	16	<
MDH 465E	12/5/98	12/5/98	TOLUENE	108883	UG/L	2.5	0.50	2.5	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,3)	87616	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,4)	120821	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,1)	71556	UG/L	0.19	0.17	0.85	J
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,2)	79005	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHENE	79016	UG/L	5.3	0.21	1.0	
MDH 465E	12/5/98	12/5/98	TRICHLOROFLUOROMETHANE	75694	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROPROPANE (1,2,3)	96184	UG/L	2.0	0.40	2.0	<
MDH 465E	12/5/98	12/5/98	TRICHLOROTRIFLUOROETHANE (1,1,2	76131	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,2,4)	95636	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,3,5)	108678	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	VINYL CHLORIDE	75014	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	XYLENE (M/P)	136777612	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	XYLENE (O)	95476	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-PID	460004	%	102			S
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	108			S

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(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-02
MPCA FIELD SAMPLE ID: TRIP BLANK
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/6/98	ACETONE	67641	UG/L	10	1.1	10	<
MDH 465E	12/5/98	12/6/98	ALLYL CHLORIDE	107051	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/6/98	BENZENE	71432	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/6/98	BROMOBENZENE	108861	UG/L	1.6	0.33	1.6	<
MDH 465E	12/5/98	12/6/98	BROMOCHLOROMETHANE	74975	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/6/98	BROMODICHLOROMETHANE	75274	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/6/98	BROMOFORM	75252	UG/L	0.47	0.094	0.47	<
MDH 465E	12/5/98	12/6/98	BROMOMETHANE	74839	UG/L	0.40	0.081	0.40	<
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (N)	104518	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (SEC)	135988	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (TERT)	98066	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/6/98	CARBON TETRACHLORIDE	56235	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/6/98	CHLOROBENZENE	108907	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/6/98	CHLOROETHANE	75003	UG/L	0.38	0.075	0.38	<
MDH 465E	12/5/98	12/6/98	CHLOROFORM	67663	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/6/98	CHLOROMETHANE	74873	UG/L	0.34	0.069	0.34	<
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (2)	95498	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (4)	106434	UG/L	1.6	0.31	1.6	<
MDH 465E	12/5/98	12/6/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	UG/L	2.2	0.43	2.2	<
MDH 465E	12/5/98	12/6/98	DIBROMOCHLOROMETHANE	124481	UG/L	0.60	0.12	0.60	<
MDH 465E	12/5/98	12/6/98	DIBROMOETHANE (1,2)	106934	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/6/98	DIBROMOMETHANE	74953	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/6/98	DICHLORO-1-PROPENE (1,1)	563586	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/6/98	DICHLORO-1-PROPENE (2,3)	78886	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,2)	95501	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,3)	541731	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,4)	106467	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	DICHLORODIFLUOROMETHANE	75718	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,1)	75343	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,2)	107062	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (1,1)	75354	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (CIS-1,2)	156592	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (TRANS-1,2)	156605	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/6/98	DICHLOROFLUOROMETHANE	75434	UG/L	0.50	0.10	0.50	<
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,2)	78875	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,3)	142289	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (2,2)	594207	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (CIS-1,3)	10061015	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (TRANS-1,3)	10061026	UG/L	0.80	0.16	0.80	<

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-02
MPCA FIELD SAMPLE ID: TRIP BLANK
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/6/98	ETHYL ETHER	60297	UG/L	1.6	0.26	1.6	<
MDH 465E	12/5/98	12/6/98	ETHYLBENZENE	100414	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/6/98	HEXACHLOROBUTADIENE	87683	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/6/98	ISOPROPYLBENZENE	98828	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	ISOPROPYLTOLUENE (P)	99876	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	METHYL ETHYL KETONE	78933	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/6/98	METHYL ISOBUTYL KETONE	108101	UG/L	4.6	0.91	4.6	<
MDH 465E	12/5/98	12/6/98	METHYL TERTIARY BUTYL ETHER	1634044	UG/L	1.8	0.37	1.8	<
MDH 465E	12/5/98	12/6/98	METHYLENE CHLORIDE	75092	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/6/98	NAPHTHALENE	91203	UG/L	1.0	0.20	1.0	<
MDH 465E	12/5/98	12/6/98	PROPYLBENZENE (N)	103651	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/6/98	STYRENE	100425	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,1,2)	630206	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,2,2)	79345	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHENE	127184	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	TETRAHYDROFURAN	109999	UG/L	16	3.2	16	<
MDH 465E	12/5/98	12/6/98	TOLUENE	108883	UG/L	2.5	0.50	2.5	<
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,3)	87616	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,4)	120821	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,1)	71556	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,2)	79005	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/6/98	TRICHLOROETHENE	79016	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/6/98	TRICHLOROFLUOROMETHANE	75694	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/6/98	TRICHLOROPROPANE (1,2,3)	96184	UG/L	2.0	0.40	2.0	<
MDH 465E	12/5/98	12/6/98	TRICHLOROTRIFLUOROETHANE (1,1,2	76131	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,2,4)	95636	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,3,5)	108678	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/6/98	VINYL CHLORIDE	75014	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/6/98	XYLENE (M/P)	136777612	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/6/98	XYLENE (O)	95476	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-PID	460004	%	107			S
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	101			S

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-03
MPCA FIELD SAMPLE ID: SURFACE WATER
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ACETONE	67641	UG/L	10	1.1	10	<
MDH 465E	12/5/98	12/5/98	ALLYL CHLORIDE	107051	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	BENZENE	71432	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	BROMOBENZENE	108861	UG/L	1.6	0.33	1.6	<
MDH 465E	12/5/98	12/5/98	BROMOCHLOROMETHANE	74975	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	BROMODICHLOROMETHANE	75274	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BROMOFORM	75252	UG/L	0.47	0.094	0.47	<
MDH 465E	12/5/98	12/5/98	BROMOMETHANE	74839	UG/L	0.40	0.081	0.40	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (N)	104518	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (SEC)	135988	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (TERT)	98066	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	CARBON TETRACHLORIDE	56235	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	CHLOROBENZENE	108907	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	CHLOROETHANE	75003	UG/L	0.38	0.075	0.38	<
MDH 465E	12/5/98	12/5/98	CHLOROFORM	67663	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	CHLOROMETHANE	74873	UG/L	0.34	0.069	0.34	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (2)	95498	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (4)	106434	UG/L	1.6	0.31	1.6	<
MDH 465E	12/5/98	12/5/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	UG/L	2.2	0.43	2.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOCHLOROMETHANE	124481	UG/L	0.60	0.12	0.60	<
MDH 465E	12/5/98	12/5/98	DIBROMOETHANE (1,2)	106934	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOMETHANE	74953	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (1,1)	563586	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (2,3)	78886	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,2)	95501	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,3)	541731	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,4)	106467	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLORODIFLUOROMETHANE	75718	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,1)	75343	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,2)	107062	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (1,1)	75354	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (CIS-1,2)	156592	UG/L	0.29	0.19	0.95	J
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (TRANS-1,2)	156605	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROFLUOROMETHANE	75434	UG/L	0.50	0.10	0.50	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,2)	78875	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,3)	142289	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (2,2)	594207	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (CIS-1,3)	10061015	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (TRANS-1,3)	10061026	UG/L	0.80	0.16	0.80	<

Interpoll Laboratories, Inc.
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MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062-03
MPCA FIELD SAMPLE ID: SURFACE WATER
MATRIX: WATER

MPCA PROJECT: NIROP
DATE COLLECTED: 11/24/98
DATE RECEIVED: 11/24/98

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ETHYL ETHER	60297	UG/L	1.6	0.26	1.6	<
MDH 465E	12/5/98	12/5/98	ETHYLBENZENE	100414	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	HEXACHLOROBUTADIENE	87683	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLBENZENE	98828	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLTOLUENE (P)	99876	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	METHYL ETHYL KETONE	78933	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/5/98	METHYL ISOBUTYL KETONE	108101	UG/L	4.6	0.91	4.6	<
MDH 465E	12/5/98	12/5/98	METHYL TERTIARY BUTYL ETHER	1634044	UG/L	1.8	0.37	1.8	<
MDH 465E	12/5/98	12/5/98	METHYLENE CHLORIDE	75092	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/5/98	NAPHTHALENE	91203	UG/L	1.0	0.20	1.0	<
MDH 465E	12/5/98	12/5/98	PROPYLBENZENE (N)	103651	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	STYRENE	100425	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,1,2)	630206	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,2,2)	79345	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHENE	127184	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRAHYDROFURAN	109999	UG/L	16	3.2	16	<
MDH 465E	12/5/98	12/5/98	TOLUENE	108883	UG/L	2.5	0.50	2.5	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,3)	87616	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,4)	120821	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,1)	71556	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,2)	79005	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHENE	79016	UG/L	1.3	0.21	1.0	
MDH 465E	12/5/98	12/5/98	TRICHLOROFLUOROMETHANE	75694	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROPROPANE (1,2,3)	96184	UG/L	2.0	0.40	2.0	<
MDH 465E	12/5/98	12/5/98	TRICHLOROTRIFLUOROETHANE (1,1,2	76131	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,2,4)	95636	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,3,5)	108678	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	VINYL CHLORIDE	75014	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	XYLENE (M/P)	136777612	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	XYLENE (O)	95476	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-PID	460004	%	104			S
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	109			S

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062
QC SAMPLE ID: METHOD BLANK

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ACETONE	67641	UG/L	10	1.1	10	<
MDH 465E	12/5/98	12/5/98	ALLYL CHLORIDE	107051	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	BENZENE	71432	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	BROMOBENZENE	108861	UG/L	1.6	0.33	1.6	<
MDH 465E	12/5/98	12/5/98	BROMOCHLOROMETHANE	74975	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	BROMODICHLOROMETHANE	75274	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BROMOFORM	75252	UG/L	0.47	0.094	0.47	<
MDH 465E	12/5/98	12/5/98	BROMOMETHANE	74839	UG/L	0.40	0.081	0.40	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (N)	104518	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (SEC)	135988	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	BUTYLBENZENE (TERT)	98066	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	CARBON TETRACHLORIDE	56235	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	CHLOROBENZENE	108907	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	CHLOROETHANE	75003	UG/L	0.38	0.075	0.38	<
MDH 465E	12/5/98	12/5/98	CHLOROFORM	67663	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	CHLOROMETHANE	74873	UG/L	0.34	0.069	0.34	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (2)	95498	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	CHLOROTOLUENE (4)	106434	UG/L	1.6	0.31	1.6	<
MDH 465E	12/5/98	12/5/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	UG/L	2.2	0.43	2.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOCHLOROMETHANE	124481	UG/L	0.60	0.12	0.60	<
MDH 465E	12/5/98	12/5/98	DIBROMOETHANE (1,2)	106934	UG/L	1.2	0.24	1.2	<
MDH 465E	12/5/98	12/5/98	DIBROMOMETHANE	74953	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (1,1)	563586	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	DICHLORO-1-PROPENE (2,3)	78886	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,2)	95501	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,3)	541731	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/5/98	DICHLOROBENZENE (1,4)	106467	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLORODIFLUOROMETHANE	75718	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,1)	75343	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHANE (1,2)	107062	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (1,1)	75354	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (CIS-1,2)	156592	UG/L	0.95	0.19	0.95	<
MDH 465E	12/5/98	12/5/98	DICHLOROETHENE (TRANS-1,2)	156605	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	DICHLOROFLUOROMETHANE	75434	UG/L	0.50	0.10	0.50	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,2)	78875	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (1,3)	142289	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPANE (2,2)	594207	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (CIS-1,3)	10061015	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	DICHLOROPROPENE (TRANS-1,3)	10061026	UG/L	0.80	0.16	0.80	<

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062
QC SAMPLE ID: METHOD BLANK

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/ EMMI NO.	UNITS	VALUE	MDL	RL	QLFR
MDH 465E	12/5/98	12/5/98	ETHYL ETHER	60297	UG/L	1.6	0.26	1.6	<
MDH 465E	12/5/98	12/5/98	ETHYLBENZENE	100414	UG/L	0.65	0.13	0.65	<
MDH 465E	12/5/98	12/5/98	HEXACHLOROBUTADIENE	87683	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLBENZENE	98828	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	ISOPROPYLTOLUENE (P)	99876	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	METHYL ETHYL KETONE	78933	UG/L	5.0	1.0	5.0	<
MDH 465E	12/5/98	12/5/98	METHYL ISOBUTYL KETONE	108101	UG/L	4.6	0.91	4.6	<
MDH 465E	12/5/98	12/5/98	METHYL TERTIARY BUTYL ETHER	1634044	UG/L	1.8	0.37	1.8	<
MDH 465E	12/5/98	12/5/98	METHYLENE CHLORIDE	75092	UG/L	3.8	1.0	5.0	J
MDH 465E	12/5/98	12/5/98	NAPHTHALENE	91203	UG/L	1.0	0.20	1.0	<
MDH 465E	12/5/98	12/5/98	PROPYLBENZENE (N)	103651	UG/L	0.90	0.18	0.90	<
MDH 465E	12/5/98	12/5/98	STYRENE	100425	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,1,2)	630206	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHANE (1,1,2,2)	79345	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRACHLOROETHENE	127184	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TETRAHYDROFURAN	109999	UG/L	16	3.2	16	<
MDH 465E	12/5/98	12/5/98	TOLUENE	108883	UG/L	2.5	0.50	2.5	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,3)	87616	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	TRICHLOROBENZENE (1,2,4)	120821	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,1)	71556	UG/L	0.85	0.17	0.85	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHANE (1,1,2)	79005	UG/L	0.80	0.16	0.80	<
MDH 465E	12/5/98	12/5/98	TRICHLOROETHENE	79016	UG/L	1.0	0.21	1.0	<
MDH 465E	12/5/98	12/5/98	TRICHLOROFLUOROMETHANE	75694	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	TRICHLOROPROPANE (1,2,3)	96184	UG/L	2.0	0.40	2.0	<
MDH 465E	12/5/98	12/5/98	TRICHLOROTRIFLUOROETHANE (1,1,2	76131	UG/L	0.55	0.11	0.55	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,2,4)	95636	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	TRIMETHYLBENZENE (1,3,5)	108678	UG/L	0.70	0.14	0.70	<
MDH 465E	12/5/98	12/5/98	VINYL CHLORIDE	75014	UG/L	1.2	0.23	1.2	<
MDH 465E	12/5/98	12/5/98	XYLENE (M/P)	136777612	UG/L	0.75	0.15	0.75	<
MDH 465E	12/5/98	12/5/98	XYLENE (O)	95476	UG/L	1.1	0.22	1.1	<
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-PID	460004	%	104			S
MDH 465E	12/5/98	12/5/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	102			S

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062
QC SAMPLE ID: LABORATORY CONTROL SAMPLE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/6/98	ACETONE	67641	%	81.9	126	111
MDH 465E	12/5/98	12/6/98	ALLYL CHLORIDE	107051	%	77.6	122	103
MDH 465E	12/5/98	12/6/98	BENZENE	71432	%	92.2	115	106
MDH 465E	12/5/98	12/6/98	BROMOBENZENE	108861	%	94.1	123	103
MDH 465E	12/5/98	12/6/98	BROMOCHLOROMETHANE	74975	%	87.6	115	106
MDH 465E	12/5/98	12/6/98	BROMODICHLOROMETHANE	75274	%	94.3	118	104
MDH 465E	12/5/98	12/6/98	BROMOFORM	75252	%	90.3	121	99.6
MDH 465E	12/5/98	12/6/98	BROMOMETHANE	74839	%	77.8	128	91.5
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (N)	104518	%	96.3	116	106
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (SEC)	135988	%	101	118	108
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (TERT)	98066	%	98.1	121	110
MDH 465E	12/5/98	12/6/98	CARBON TETRACHLORIDE	56235	%	100	123	113
MDH 465E	12/5/98	12/6/98	CHLOROBENZENE	108907	%	86.9	116	105
MDH 465E	12/5/98	12/6/98	CHLOROETHANE	75003	%	86.1	121	113
MDH 465E	12/5/98	12/6/98	CHLOROFORM	67663	%	93.9	120	113
MDH 465E	12/5/98	12/6/98	CHLOROMETHANE	74873	%	74.1	125	81.3
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (2)	95498	%	95.9	123	108
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (4)	106434	%	92.7	124	109
MDH 465E	12/5/98	12/6/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	%	83.9	127	100
MDH 465E	12/5/98	12/6/98	DIBROMOCHLOROMETHANE	124481	%	88.7	119	110
MDH 465E	12/5/98	12/6/98	DIBROMOETHANE (1,2)	106934	%	83.0	122	102
MDH 465E	12/5/98	12/6/98	DIBROMOMETHANE	74953	%	84.0	126	114
MDH 465E	12/5/98	12/6/98	DICHLORO-1-PROPENE (1,1)	563586	%	92.2	108	103
MDH 465E	12/5/98	12/6/98	DICHLORO-1-1PROPENE (2,3)	78886	%	95.4	122	116
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,2)	95501	%	96.2	116	106
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,3)	541731	%	87.1	116	107
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,4)	106467	%	96.4	120	109
MDH 465E	12/5/98	12/6/98	DICHLORODIFLUOROMETHANE	75718	%	28.4	121	80.2
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,1)	75343	%	83.5	120	113
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,2)	107062	%	91.8	116	110
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (1,1)	75354	%	77.6	115	106
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (CIS-1,2)	156592	%	80.0	120	110
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (TRANS-1,2)	156605	%	88.3	112	108
MDH 465E	12/5/98	12/6/98	DICHLOROFLUOROMETHANE	75434	%	86.2	123	112
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,2)	78875	%	88.2	119	104
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,3)	142289	%	103	122	104
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (2,2)/	594207				
			DICHLOROETHENE (CIS-1,2)	156592	%	79.4	114	104
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (CIS-1,3)	10061015	%	93.3	115	109
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (TRANS-1,3)	10061026	%	88.2	113	105

Interpoll Laboratories, Inc.
(612)786-6020

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12062
QC SAMPLE ID: LABORATORY CONTROL SAMPLE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/6/98	ETHYL ETHER	60297	%	84.0	119	100
MDH 465E	12/5/98	12/6/98	ETHYLBENZENE	100425	%	98.9	118	112
MDH 465E	12/5/98	12/6/98	HEXACHLOROBUTADIENE	87683	%	97.0	123	112
MDH 465E	12/5/98	12/6/98	ISOPROPYLBENZENE	98828	%	99.7	120	110
MDH 465E	12/5/98	12/6/98	ISOPROPYLTOLUENE (P)	99876	%	93.1	117	108
MDH 465E	12/5/98	12/6/98	METHYL ETHYL KETONE	78933	%	78.3	126	108
MDH 465E	12/5/98	12/6/98	METHYL ISOBUTYL KETONE	108112	%	84.7	128	103
MDH 465E	12/5/98	12/6/98	METHYL TERTIARY BUTYL ETHER	1634044	%	89.1	122	107
MDH 465E	12/5/98	12/6/98	METHYLENE CHLORIDE	75092	%	71.1	125	111
MDH 465E	12/5/98	12/6/98	NAPHTHALENE	91203	%	86.8	125	103
MDH 465E	12/5/98	12/6/98	PROPYLBENZENE (N)	103651	%	101	117	109
MDH 465E	12/5/98	12/6/98	STYRENE	100425	%	97.0	118	103
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,1,2)/	630206				
			CHLOROBENZENE	108907	%	92.0	122	114
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,2,2)	79345	%	104	120	109
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHENE	127184	%	103	118	110
MDH 465E	12/5/98	12/6/98	TETRAHYDROFURAN	109999	%	72.8	117	106
MDH 465E	12/5/98	12/6/98	TOLUENE	108883	%	94.4	115	106
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,3)	120821	%	86.7	126	110
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,4)	120821	%	80.9	120	102
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,1)	71556	%	97.8	119	116
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,2)	79005	%	86.6	125	104
MDH 465E	12/5/98	12/6/98	TRICHLOROETHENE	79016	%	103	123	108
MDH 465E	12/5/98	12/6/98	TRICHLOROFLUOROMETHANE	75694	%	86.1	122	110
MDH 465E	12/5/98	12/6/98	TRICHLOROPROPANE (1,2,3)	96184	%	104	120	115
MDH 465E	12/5/98	12/6/98	TRICHLOROTRIFLUOROETHANE (1,1,2)	76131	%	88.8	128	98.3
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,2,4)	95636	%	100	117	108
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,3,5)/	108678				
			CHLOROTOLUENE (2)	95498	%	80.0	120	104
MDH 465E	12/5/98	12/6/98	VINYL CHLORIDE	75014	%	74.3	121	104
MDH 465E	12/5/98	12/6/98	XYLENE (M/P)	108383/106423	%	97.1	117	108
MDH 465E	12/5/98	12/6/98	XYLENE (O)	56004616	%	96.3	116	105
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-PID	460004	%	80.0	120	108
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	80.0	120	108

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12077-02
QC SAMPLE ID: MATRIX SPIKE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/6/98	ACETONE	67641	%	82.5	125	106
MDH 465E	12/5/98	12/6/98	ALLYL CHLORIDE	107051	%	72.3	115	101
MDH 465E	12/5/98	12/6/98	BENZENE	71432	%	101	118	109
MDH 465E	12/5/98	12/6/98	BROMOBENZENE	108861	%	81.4	110	99.7
MDH 465E	12/5/98	12/6/98	BROMOCHLOROMETHANE	74975	%	97.2	106	105
MDH 465E	12/5/98	12/6/98	BROMODICHLOROMETHANE	75274	%	98.4	126	105
MDH 465E	12/5/98	12/6/98	BROMOFORM	75252	%	92.9	116	97.6
MDH 465E	12/5/98	12/6/98	BROMOMETHANE	74839	%	75.2	109	98.3
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (N)	104518	%	101	111	105
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (SEC)	135988	%	103	114	112
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (TERT)	98066	%	103	117	106
MDH 465E	12/5/98	12/6/98	CARBON TETRACHLORIDE	56235	%	104	118	112
MDH 465E	12/5/98	12/6/98	CHLOROBENZENE	108907	%	91.6	107	104
MDH 465E	12/5/98	12/6/98	CHLOROETHANE	75003	%	81.2	115	104
MDH 465E	12/5/98	12/6/98	CHLOROFORM	67663	%	97.4	118	111
MDH 465E	12/5/98	12/6/98	CHLOROMETHANE	74873	%	75.5	127	86.6
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (2)	95498	%	93.4	112	105
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (4)	106434	%	99.3	116	108
MDH 465E	12/5/98	12/6/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	%	82.3	117	103
MDH 465E	12/5/98	12/6/98	DIBROMOCHLOROMETHANE	124481	%	105	119	107
MDH 465E	12/5/98	12/6/98	DIBROMOETHANE (1,2)	106934	%	94.4	113	102
MDH 465E	12/5/98	12/6/98	DIBROMOMETHANE	74953	%	96.0	125	108
MDH 465E	12/5/98	12/6/98	DICHLORO-1-PROPENE (1,1)	563586	%	101	123	102
MDH 465E	12/5/98	12/6/98	DICHLORO-1-1PROPENE (2,3)	78886	%	98.7	123	109
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,2)	95501	%	102	115	111
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,3)	541731	%	92.4	108	107
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,4)	106467	%	99.8	114	111
MDH 465E	12/5/98	12/6/98	DICHLORODIFLUOROMETHANE	75718	%	32.6	133	72.2
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,1)	75343	%	84.2	127	113
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,2)	107062	%	99.2	117	108
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (1,1)	75354	%	83.7	114	106
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (CIS-1,2)	156592	%	80.0	120	112
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (TRANS-1,2)	156605	%	100	119	110
MDH 465E	12/5/98	12/6/98	DICHLOROFLUOROMETHANE	75434	%	83.9	124	112
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,2)	78875	%	99.1	116	104
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,3)	142289	%	93.8	122	103
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (2,2)/	594207				
			DICHLOROETHENE (CIS-1,2)	156592	%	88.0	112	109
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (CIS-1,3)	10061015	%	96.5	111	110
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (TRANS-1,3)	10061026	%	87.8	113	101

ILI LABORATORY LOG NO: 12077-02
QC SAMPLE ID: MATRIX SPIKE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/6/98	ETHYL ETHER	60297	%	85.1	119	108
MDH 465E	12/5/98	12/6/98	ETHYLBENZENE	100425	%	104	113	108
MDH 465E	12/5/98	12/6/98	HEXACHLOROBUTADIENE	87683	%	102	113	108
MDH 465E	12/5/98	12/6/98	ISOPROPYLBENZENE	98828	%	105	113	110
MDH 465E	12/5/98	12/6/98	ISOPROPYLTOLUENE (P)	99876	%	96.1	110	107
MDH 465E	12/5/98	12/6/98	METHYL ETHYL KETONE	78933	%	88.0	125	110
MDH 465E	12/5/98	12/6/98	METHYL ISOBUTYL KETONE	108112	%	84.5	127	114
MDH 465E	12/5/98	12/6/98	METHYL TERTIARY BUTYL ETHER	1634044	%	92.5	119	109
MDH 465E	12/5/98	12/6/98	METHYLENE CHLORIDE	75092	%	82.0	113	110
MDH 465E	12/5/98	12/6/98	NAPHTHALENE	91203	%	93.8	121	107
MDH 465E	12/5/98	12/6/98	PROPYLBENZENE (N)	103651	%	105	114	111
MDH 465E	12/5/98	12/6/98	STYRENE	100425	%	97.7	114	87.1[a]
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,1,2)/	630206				
			CHLOROBENZENE	108907	%	92.7	120	112
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,2,2)	79345	%	97.9	114	110
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHENE	127184	%	108	118	109
MDH 465E	12/5/98	12/6/98	TETRAHYDROFURAN	109999	%	86.2	123	109
MDH 465E	12/5/98	12/6/98	TOLUENE	108883	%	101	115	108
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,3)	120821	%	101	116	106
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,4)	120821	%	93.9	108	99.8
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,1)	71556	%	97.2	122	109
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,2)	79005	%	98.1	121	112
MDH 465E	12/5/98	12/6/98	TRICHLOROETHENE	79016	%	97.6	124	108
MDH 465E	12/5/98	12/6/98	TRICHLOROFLUOROMETHANE	75694	%	84.6	117	111
MDH 465E	12/5/98	12/6/98	TRICHLOROPROPANE (1,2,3)	96184	%	103	122	116
MDH 465E	12/5/98	12/6/98	TRICHLOROTRIFLUOROETHANE (1,1,2)	76131	%	77.5	122	92.3
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,2,4)	95636	%	106	117	114
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,3,5)/	108678				
			CHLOROTOLUENE (2)	95498	%	80.0	120	103
MDH 465E	12/5/98	12/6/98	VINYL CHLORIDE	75014	%	77.5	125	105
MDH 465E	12/5/98	12/6/98	XYLENE (M/P)	108383/106423	%	101	112	108
MDH 465E	12/5/98	12/6/98	XYLENE (O)	56004616	%	99.5	113	101
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-PID	460004	%	80.0	120	110
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	80.0	120	109

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12077-02
QC SAMPLE ID: MATRIX SPIKE DUPLICATE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	RPD	PCL	RESULT
MDH 465E	12/5/98	12/6/98	ACETONE	67641	%	3.6	12.0	110
MDH 465E	12/5/98	12/6/98	ALLYL CHLORIDE	107051	%	1.7	7.8	103
MDH 465E	12/5/98	12/6/98	BENZENE	71432	%	2.6	19.0	106
MDH 465E	12/5/98	12/6/98	BROMOBENZENE	108861	%	6.8	9.1	107
MDH 465E	12/5/98	12/6/98	BROMOCHLOROMETHANE	74975	%	2.6	4.5	102
MDH 465E	12/5/98	12/6/98	BROMODICHLOROMETHANE	75274	%	2.3	6.0	107
MDH 465E	12/5/98	12/6/98	BROMOFORM	75252	%	4.5	7.1	93.3
MDH 465E	12/5/98	12/6/98	BROMOMETHANE	74839	%	0.046	9.5	98.3
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (N)	104518	%	1.2	3.5	104
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (SEC)	135988	%	3.5	3.8	108
MDH 465E	12/5/98	12/6/98	BUTYLBENZENE (TERT)	98066	%	3.0	6.0	110
MDH 465E	12/5/98	12/6/98	CARBON TETRACHLORIDE	56235	%	2.0	6.3	114
MDH 465E	12/5/98	12/6/98	CHLOROBENZENE	108907	%	0.78	4.1	105
MDH 465E	12/5/98	12/6/98	CHLOROETHANE	75003	%	3.8	7.0	107
MDH 465E	12/5/98	12/6/98	CHLOROFORM	67663	%	4.1	5.4	115
MDH 465E	12/5/98	12/6/98	CHLOROMETHANE	74873	%	6.4	7.6	92.3
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (2)	95498	%	1.4	5.1	104
MDH 465E	12/5/98	12/6/98	CHLOROTOLUENE (4)	106434	%	1.8	6.7	110
MDH 465E	12/5/98	12/6/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	%	1.3	8.9	102
MDH 465E	12/5/98	12/6/98	DIBROMOCHLOROMETHANE	124481	%	0.67	6.3	106
MDH 465E	12/5/98	12/6/98	DIBROMOETHANE (1,2)	106934	%	3.9	7.3	106
MDH 465E	12/5/98	12/6/98	DIBROMOMETHANE	74953	%	0.98	12.0	109
MDH 465E	12/5/98	12/6/98	DICHLORO-1-PROPENE (1,1)	563586	%	3.3	6.1	105
MDH 465E	12/5/98	12/6/98	DICHLORO-1-1PROPENE (2,3)	78886	%	5.7	9.1	116
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,2)	95501	%	1.0	5.3	112
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,3)	541731	%	2.8	4.8	104
MDH 465E	12/5/98	12/6/98	DICHLOROBENZENE (1,4)	106467	%	2.9	5.6	114
MDH 465E	12/5/98	12/6/98	DICHLORODIFLUOROMETHANE	75718	%	0.079	9.9	72.3
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,1)	75343	%	1.6	8.3	115
MDH 465E	12/5/98	12/6/98	DICHLOROETHANE (1,2)	107062	%	2.9	4.1	111
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (1,1)	75354	%	4.3	6.2	110
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (CIS-1,2)	156592	%	3.1	20.0	108
MDH 465E	12/5/98	12/6/98	DICHLOROETHENE (TRANS-1,2)	156605	%	0.14	5.7	110
MDH 465E	12/5/98	12/6/98	DICHLOROFLUOROMETHANE	75434	%	2.3	12.0	114
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,2)	78875	%	0.55	5.8	104
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (1,3)	142289	%	0.71	5.9	103
MDH 465E	12/5/98	12/6/98	DICHLOROPROPANE (2,2)/	594207				
			DICHLOROETHENE (CIS-1,2)	156592	%	1.1	6.1	111
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (CIS-1,3)	10061015	%	0.12	4.0	110
MDH 465E	12/5/98	12/6/98	DICHLOROPROPENE (TRANS-1,3)	10061026	%	1.5	4.9	102

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12077-02
QC SAMPLE ID: MATRIX SPIKE DUPLICATE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	RPD	PCL	RESULT
MDH 465E	12/5/98	12/6/98	ETHYL ETHER	60297	%	2.9	7.7	111
MDH 465E	12/5/98	12/6/98	ETHYLBENZENE	100425	%	2.2	3.5	110
MDH 465E	12/5/98	12/6/98	HEXACHLOROBUTADIENE	87683	%	2.7	5.1	111
MDH 465E	12/5/98	12/6/98	ISOPROPYLBENZENE	98828	%	2.6	4.0	107
MDH 465E	12/5/98	12/6/98	ISOPROPYLTOLUENE (P)	99876	%	1.7	4.1	105
MDH 465E	12/5/98	12/6/98	METHYL ETHYL KETONE	78933	%	1.3	15	108
MDH 465E	12/5/98	12/6/98	METHYL ISOBUTYL KETONE	108112	%	6.9	12.5	106
MDH 465E	12/5/98	12/6/98	METHYL TERTIARY BUTYL ETHER	1634044	%	0.084	12.4	109
MDH 465E	12/5/98	12/6/98	METHYLENE CHLORIDE	75092	%	0.66	6.4	111
MDH 465E	12/5/98	12/6/98	NAPHTHALENE	91203	%	5.9	6.0	101
MDH 465E	12/5/98	12/6/98	PROPYLBENZENE (N)	103651	%	2.2	4.3	109
MDH 465E	12/5/98	12/6/98	STYRENE	100425	%	1.6	4.6	88.5
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,1,2)	630206				
			CHLOROBENZENE	108907	%	0.67	4.4	113
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHANE (1,1,2,2)	79345	%	1.7	9.2	108
MDH 465E	12/5/98	12/6/98	TETRACHLOROETHENE	127184	%	0.055	4.6	109
MDH 465E	12/5/98	12/6/98	TETRAHYDROFURAN	109999	%	2.5	16.0	112
MDH 465E	12/5/98	12/6/98	TOLUENE	108883	%	3.3	3.5	104
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,3)	120821	%	2.0	6.9	104
MDH 465E	12/5/98	12/6/98	TRICHLOROBENZENE (1,2,4)	120821	%	4.9	7.5	105
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,1)	71556	%	0.60	6.2	110
MDH 465E	12/5/98	12/6/98	TRICHLOROETHANE (1,1,2)	79005	%	0.64	3.5	113
MDH 465E	12/5/98	12/6/98	TRICHLOROETHENE	79016	%	1.3	6.4	109
MDH 465E	12/5/98	12/6/98	TRICHLOROFLUOROMETHANE	75694	%	0.73	7.1	112
MDH 465E	12/5/98	12/6/98	TRICHLOROPROPANE (1,2,3)	96184	%	3.9	8.1	112
MDH 465E	12/5/98	12/6/98	TRICHLOROTRIFLUOROETHANE (1,1,2)	76131	%	6.9	12.0	98.8
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,2,4)	95636	%	1.9	4.2	112
MDH 465E	12/5/98	12/6/98	TRIMETHYLBENZENE (1,3,5)/	108678				
			CHLOROTOLUENE (2)	95498	%	1.8	20.0	101
MDH 465E	12/5/98	12/6/98	VINYL CHLORIDE	75014	%	0.63	7.1	106
MDH 465E	12/5/98	12/6/98	XYLENE (M/P)	108383/106423	%	3.7	4.2	104
MDH 465E	12/5/98	12/6/98	XYLENE (O)	56004616	%	1.3	6.0	103
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-PID	460004	%			106
MDH 465E	12/5/98	12/6/98	4-BROMOFLUOROBENZENE-ELCD	460004	%			105

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12073-02
QC SAMPLE ID: MATRIX SPIKE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/7/98	ACETONE	67641	%	82.5	125	111
MDH 465E	12/5/98	12/7/98	ALLYL CHLORIDE	107051	%	72.3	115	104
MDH 465E	12/5/98	12/7/98	BENZENE	71432	%	101	118	105
MDH 465E	12/5/98	12/7/98	BROMOBENZENE	108861	%	81.4	110	104
MDH 465E	12/5/98	12/7/98	BROMOCHLOROMETHANE	74975	%	97.2	106	105
MDH 465E	12/5/98	12/7/98	BROMODICHLOROMETHANE	75274	%	98.4	126	101
MDH 465E	12/5/98	12/7/98	BROMOFORM	75252	%	92.9	116	98.6
MDH 465E	12/5/98	12/7/98	BROMOMETHANE	74839	%	75.2	109	94.1
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (N)	104518	%	101	111	108
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (SEC)	135988	%	103	114	109
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (TERT)	98066	%	103	117	107
MDH 465E	12/5/98	12/7/98	CARBON TETRACHLORIDE	56235	%	104	118	115
MDH 465E	12/5/98	12/7/98	CHLOROBENZENE	108907	%	91.6	107	101
MDH 465E	12/5/98	12/7/98	CHLOROETHANE	75003	%	81.2	115	106
MDH 465E	12/5/98	12/7/98	CHLOROFORM	67663	%	97.4	118	111
MDH 465E	12/5/98	12/7/98	CHLOROMETHANE	74873	%	75.5	127	88.1
MDH 465E	12/5/98	12/7/98	CHLOROTOLUENE (2)	95498	%	93.4	112	109
MDH 465E	12/5/98	12/7/98	CHLOROTOLUENE (4)	106434	%	99.3	116	107
MDH 465E	12/5/98	12/7/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	%	82.3	117	91.2
MDH 465E	12/5/98	12/7/98	DIBROMOCHLOROMETHANE	124481	%	105	119	107
MDH 465E	12/5/98	12/7/98	DIBROMOETHANE (1,2)	106934	%	94.4	113	102
MDH 465E	12/5/98	12/7/98	DIBROMOMETHANE	74953	%	96.0	125	111
MDH 465E	12/5/98	12/7/98	DICHLORO-1-PROPENE (1,1)	563586	%	101	123	104
MDH 465E	12/5/98	12/7/98	DICHLORO-1-1PROPENE (2,3)	78886	%	98.7	123	114
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,2)	95501	%	102	115	113
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,3)	541731	%	92.4	108	106
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,4)	106467	%	99.8	114	107
MDH 465E	12/5/98	12/7/98	DICHLORODIFLUOROMETHANE	75718	%	32.6	133	83.6
MDH 465E	12/5/98	12/7/98	DICHLOROETHANE (1,1)	75343	%	84.2	127	115
MDH 465E	12/5/98	12/7/98	DICHLOROETHANE (1,2)	107062	%	99.2	117	105
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (1,1)	75354	%	83.7	114	107
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (CIS-1,2)	156592	%	80.0	120	108
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (TRANS-1,2)	156605	%	100	119	112
MDH 465E	12/5/98	12/7/98	DICHLOROFLUOROMETHANE	75434	%	83.9	124	116
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (1,2)	78875	%	99.1	116	105
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (1,3)	142289	%	93.8	122	97.2
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (2,2)/	594207				
			DICHLOROETHENE (CIS-1,2)	156592	%	88.0	112	109
MDH 465E	12/5/98	12/7/98	DICHLOROPROPENE (CIS-1,3)	10061015	%	96.5	111	103
MDH 465E	12/5/98	12/7/98	DICHLOROPROPENE (TRANS-1,3)	10061026	%	87.8	113	97.7

ILI LABORATORY LOG NO: 12073-02
QC SAMPLE ID: MATRIX SPIKE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	LCL	UCL	RESULT
MDH 465E	12/5/98	12/7/98	ETHYL ETHER	60297	%	85.1	119	113
MDH 465E	12/5/98	12/7/98	ETHYLBENZENE	100425	%	104	113	112
MDH 465E	12/5/98	12/7/98	HEXACHLOROBUTADIENE	87683	%	102	113	111
MDH 465E	12/5/98	12/7/98	ISOPROPYLBENZENE	98828	%	105	113	107
MDH 465E	12/5/98	12/7/98	ISOPROPYLTOLUENE (P)	99876	%	96.1	110	109
MDH 465E	12/5/98	12/7/98	METHYL ETHYL KETONE	78933	%	88.0	125	109
MDH 465E	12/5/98	12/7/98	METHYL ISOBUTYL KETONE	108112	%	84.5	127	110
MDH 465E	12/5/98	12/7/98	METHYL TERTIARY BUTYL ETHER	1634044	%	92.5	119	109
MDH 465E	12/5/98	12/7/98	METHYLENE CHLORIDE	75092	%	82.0	113	111
MDH 465E	12/5/98	12/7/98	NAPHTHALENE	91203	%	93.8	121	95.4
MDH 465E	12/5/98	12/7/98	PROPYLBENZENE (N)	103651	%	105	114	107
MDH 465E	12/5/98	12/7/98	STYRENE	100425	%	97.7	114	99.0
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHANE (1,1,1,2)/	630206				
			CHLOROBENZENE	108907	%	92.7	120	113
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHANE (1,1,2,2)	79345	%	97.9	114	103
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHENE	127184	%	108	118	115
MDH 465E	12/5/98	12/7/98	TETRAHYDROFURAN	109999	%	86.2	123	107
MDH 465E	12/5/98	12/7/98	TOLUENE	108883	%	101	115	104
MDH 465E	12/5/98	12/7/98	TRICHLOROBENZENE (1,2,3)	120821	%	101	116	107
MDH 465E	12/5/98	12/7/98	TRICHLOROBENZENE (1,2,4)	120821	%	93.9	108	100
MDH 465E	12/5/98	12/7/98	TRICHLOROETHANE (1,1,1)	71556	%	97.2	122	113
MDH 465E	12/5/98	12/7/98	TRICHLOROETHANE (1,1,2)	79005	%	98.1	121	104
MDH 465E	12/5/98	12/7/98	TRICHLOROETHENE	79016	%	97.6	124	108
MDH 465E	12/5/98	12/7/98	TRICHLOROFLUOROMETHANE	75694	%	84.6	117	109
MDH 465E	12/5/98	12/7/98	TRICHLOROPROPANE (1,2,3)	96184	%	103	122	114
MDH 465E	12/5/98	12/7/98	TRICHLOROTRIFLUOROETHANE (1,1,2)	76131	%	77.5	122	103
MDH 465E	12/5/98	12/7/98	TRIMETHYLBENZENE (1,2,4)	95636	%	106	117	109
MDH 465E	12/5/98	12/7/98	TRIMETHYLBENZENE (1,3,5)/	108678				
			CHLOROTOLUENE (2)	95498	%	80.0	120	104
MDH 465E	12/5/98	12/7/98	VINYL CHLORIDE	75014	%	77.5	125	108
MDH 465E	12/5/98	12/7/98	XYLENE (M/P)	108383/106423	%	101	112	105
MDH 465E	12/5/98	12/7/98	XYLENE (O)	56004616	%	99.5	113	108
MDH 465E	12/5/98	12/7/98	4-BROMOFLUOROBENZENE-PID	460004	%	80.0	120	109
MDH 465E	12/5/98	12/7/98	4-BROMOFLUOROBENZENE-ELCD	460004	%	80.0	120	108

MPCA CONTRACT #411961

ILI LABORATORY LOG NO: 12073-02
QC SAMPLE ID: MATRIX SPIKE DUPLICATE

MPCA PROJECT: NIROP

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	RPD	PCL	RESULT
MDH 465E	12/5/98	12/7/98	ACETONE	67641	%	8.3	12.0	102
MDH 465E	12/5/98	12/7/98	ALLYL CHLORIDE	107051	%	1.7	7.8	103
MDH 465E	12/5/98	12/7/98	BENZENE	71432	%	0.31	19.0	105
MDH 465E	12/5/98	12/7/98	BROMOBENZENE	108861	%	2.5	9.1	107
MDH 465E	12/5/98	12/7/98	BROMOCHLOROMETHANE	74975	%	0.85	4.5	104
MDH 465E	12/5/98	12/7/98	BROMODICHLOROMETHANE	75274	%	0.37	6.0	101
MDH 465E	12/5/98	12/7/98	BROMOFORM	75252	%	3.5	7.1	95.3
MDH 465E	12/5/98	12/7/98	BROMOMETHANE	74839	%	1.6	9.5	95.6
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (N)	104518	%	1.1	3.5	109
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (SEC)	135988	%	0.42	3.8	109
MDH 465E	12/5/98	12/7/98	BUTYLBENZENE (TERT)	98066	%	4.1	6.0	111
MDH 465E	12/5/98	12/7/98	CARBON TETRACHLORIDE	56235	%	1.8	6.3	118
MDH 465E	12/5/98	12/7/98	CHLOROBENZENE	108907	%	3.1	4.1	104
MDH 465E	12/5/98	12/7/98	CHLOROETHANE	75003	%	1.2	7.0	105
MDH 465E	12/5/98	12/7/98	CHLOROFORM	67663	%	1.5	5.4	109
MDH 465E	12/5/98	12/7/98	CHLOROMETHANE	74873	%	0.42	7.6	88.5
MDH 465E	12/5/98	12/7/98	CHLOROTOLUENE (2)	95498	%	0.16	5.1	109
MDH 465E	12/5/98	12/7/98	CHLOROTOLUENE (4)	106434	%	2.0	6.7	110
MDH 465E	12/5/98	12/7/98	DIBROMO-3-CHLOROPROPANE (1,2)	96128	%	3.8	8.9	94.8
MDH 465E	12/5/98	12/7/98	DIBROMOCHLOROMETHANE	124481	%	0.30	6.3	107
MDH 465E	12/5/98	12/7/98	DIBROMOETHANE (1,2)	106934	%	4.0	7.3	98.2
MDH 465E	12/5/98	12/7/98	DIBROMOMETHANE	74953	%	1.7	12.0	109
MDH 465E	12/5/98	12/7/98	DICHLORO-1-PROPENE (1,1)	563586	%	2.1	6.1	106
MDH 465E	12/5/98	12/7/98	DICHLORO-1-1PROPENE (2,3)	78886	%	0.98	9.1	115
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,2)	95501	%	1.3	5.3	111
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,3)	541731	%	1.8	4.8	104
MDH 465E	12/5/98	12/7/98	DICHLOROBENZENE (1,4)	106467	%	0.30	5.6	107
MDH 465E	12/5/98	12/7/98	DICHLORODIFLUOROMETHANE	75718	%	3.8	9.9	88.1
MDH 465E	12/5/98	12/7/98	DICHLOROETHANE (1,1)	75343	%	1.4	8.3	117
MDH 465E	12/5/98	12/7/98	DICHLOROETHANE (1,2)	107062	%	0.89	4.1	106
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (1,1)	75354	%	0.54	6.2	108
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (CIS-1,2)	156592	%	0.49	20.0	107
MDH 465E	12/5/98	12/7/98	DICHLOROETHENE (TRANS-1,2)	156605	%	0.98	5.7	111
MDH 465E	12/5/98	12/7/98	DICHLOROFLUOROMETHANE	75434	%	0.41	12.0	115
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (1,2)	78875	%	0.98	5.8	104
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (1,3)	142289	%	1.1	5.9	98.3
MDH 465E	12/5/98	12/7/98	DICHLOROPROPANE (2,2)/	594207				
			DICHLOROETHENE (CIS-1,2)	156592	%	1.1	6.1	110
MDH 465E	12/5/98	12/7/98	DICHLOROPROPENE (CIS-1,3)	10061015	%	3.6	4.0	106
MDH 465E	12/5/98	12/7/98	DICHLOROPROPENE (TRANS-1,3)	10061026	%	4.6	4.9	102

ILI LABORATORY LOG NO: 12073-02 MPCA PROJECT: NIROP
QC SAMPLE ID: MATRIX SPIKE DUPLICATE

METHOD	EXTR DATE	ANALYSIS DATE	PARAMETER	CAS/EMMI NO.	UNITS	RPD	PCL	RESULT
MDH 465E	12/5/98	12/7/98	ETHYL ETHER	60297	%	2.3	7.7	111
MDH 465E	12/5/98	12/7/98	ETHYLBENZENE	100425	%	1.1	3.5	110
MDH 465E	12/5/98	12/7/98	HEXACHLOROBUTADIENE	87683	%	0.78	5.1	112
MDH 465E	12/5/98	12/7/98	ISOPROPYLBENZENE	98828	%	1.8	4.0	109
MDH 465E	12/5/98	12/7/98	ISOPROPYLTOLUENE (P)	99876	%	1.0	4.1	108
MDH 465E	12/5/98	12/7/98	METHYL ETHYL KETONE	78933	%	0.35	15	109
MDH 465E	12/5/98	12/7/98	METHYL ISOBUTYL KETONE	108112	%	0.89	12.5	109
MDH 465E	12/5/98	12/7/98	METHYL TERTIARY BUTYL ETHER	1634044	%	0.91	12.4	110
MDH 465E	12/5/98	12/7/98	METHYLENE CHLORIDE	75092	%	3.2	6.4	107
MDH 465E	12/5/98	12/7/98	NAPHTHALENE	91203	%	3.9	6.0	99.2
MDH 465E	12/5/98	12/7/98	PROPYLBENZENE (N)	103651	%	2.7	4.3	110
MDH 465E	12/5/98	12/7/98	STYRENE	100425	%	0.90	4.6	99.9
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHANE (1,1,1,2)	630206				
			CHLOROBENZENE	108907	%	0.94	4.4	114
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHANE (1,1,2,2)	79345	%	0.026	9.2	103
MDH 465E	12/5/98	12/7/98	TETRACHLOROETHENE	127184	%	4.1	4.6	110
MDH 465E	12/5/98	12/7/98	TETRAHYDROFURAN	109999	%	2.1	16.0	109
MDH 465E	12/5/98	12/7/98	TOLUENE	108883	%	0.094	3.5	104
MDH 465E	12/5/98	12/7/98	TRICHLOROBENZENE (1,2,3)	120821	%	1.8	6.9	109
MDH 465E	12/5/98	12/7/98	TRICHLOROBENZENE (1,2,4)	120821	%	3.6	7.5	96.6
MDH 465E	12/5/98	12/7/98	TRICHLOROETHANE (1,1,1)	71556	%	3.0	6.2	117
MDH 465E	12/5/98	12/7/98	TRICHLOROETHANE (1,1,2)	79005	%	0.61	3.5	105
MDH 465E	12/5/98	12/7/98	TRICHLOROETHENE	79016	%	5.0	6.4	114
MDH 465E	12/5/98	12/7/98	TRICHLOROFLUOROMETHANE	75694	%	3.4	7.1	105
MDH 465E	12/5/98	12/7/98	TRICHLOROPROPANE (1,2,3)	96184	%	1.9	8.1	112
MDH 465E	12/5/98	12/7/98	TRICHLOROTRIFLUOROETHANE (1,1,2)	76131	%	8.3	12.0	94.9
MDH 465E	12/5/98	12/7/98	TRIMETHYLBENZENE (1,2,4)	95636	%	1.1	4.2	108
MDH 465E	12/5/98	12/7/98	TRIMETHYLBENZENE (1,3,5)/	108678				
			CHLOROTOLUENE (2)	95498	%	0.52	20.0	104
MDH 465E	12/5/98	12/7/98	VINYL CHLORIDE	75014	%	2.2	7.1	106
MDH 465E	12/5/98	12/7/98	XYLENE (M/P)	108383/106423	%	1.1	4.2	106
MDH 465E	12/5/98	12/7/98	XYLENE (O)	56004616	%	1.3	6.0	109
MDH 465E	12/5/98	12/7/98	4-BROMOFLUOROBENZENE-PID	460004	%			109
MDH 465E	12/5/98	12/7/98	4-BROMOFLUOROBENZENE-ELCD	460004	%			107

10/26/6.?

11/24/98

11:00 AM -

INSPECT & sample outflow from 96" STORM SEWER outfall EAST OF UXP -

THE OUTFALL IS DIRECTLY WEST OF A PERMENENT MONITORING WELL #20 -

WELL Depth 38'
STEVENS WELL SERVICE } MASTER LOCK #10R55
6-OCT 1981
PLE

IF I LOOK DIRECTLY EAST IT APPEARS THAT THIS SEWER IS ON THE NORTH SIDE OF FMC's CELL.

THERE IS A SMALLER OUTFALL TO THE SOUTH OF THE 96" IT IS BROKEN OFF ≈ 2/3 RDS up the hill ≈ 32" NO FLOW -

11/24/98 16 sample

STEEP HILL TO OUTFALL

FLOW FROM THE OUT FALL APPEARS TO BE CLEAR IN COLOR, HOWEVER AROUND THE OUTFALL THE IS A WHITE/GREY FOAM ON THE WATER SURFACE. WIND IS FROM THE WEST. FOAM IS SPREADING.

NO LABELS FOR Sample Jars - 84 pcb

SAMPLE # 96" OUTFALL
ANALIZE - 465-E-
LAB - INTERPOL
Sample TIME: 11:21 AM - 11/24/98

As I took the sample I obseed INTO THE OUTFALL - THERE IS A DISCHARGE TO THIS OUTFALL.

THE FOAM APPEARS TO HAVE A SHEEN TO IT - IT DOES (FROM) my experience APPEARS TO BE A Hydrocarbon - (opinion)

I will collect AN ADDITONAL sample from THE FOAMY SURFACE for optional sample -
Sample TIME - 11:39 AM 11/24/98

flow volume COULD NOT BE ACCURATELY MEASURED, HOWEVER IT APPEARS TO BE LESS THAN 5 gallons per minute -

Observation this outfall is located between (well 20) and 19s & 9D.

11/24/98

09838768

Minnesota Department of Health
Chemical Laboratory
717Delaware Street S.E.
Minneapolis, Minnesota 55440

Public Health Laboratory

MDH Chain of Custody

09838769

MDH 1000 0515

Client/Agency MPCA

Project Name Superfund

Site ID

Program Code (2 letters) PL

Contact Name Paul Estuesta

Contact Phone # 296-7997

Report to Paul Estuesta

MPCA

Address if Needed

Potential Hazard: Yes/No/Unknown (Circle One)

If Yes: Chemical/Biological/Other_____(Circle One)

Standard/Civil/Criminal Chain of Custody (Circle One)

Sampled By (Print) Paul Estuesta

Affiliation MPCA

Sampler Signature Paul Estuesta

Phone 296-7997

#	Field ID	Sample Source/Point	Collection Date MM/DD/YYYY	Time (24 Hour Clock)	MDH Sample Number (Lab Use Only)	Matrix	General (None)	Nutrient (H2SO4)	Metals (HNO3)	VOC	Semivol	DRO	GRO	See attached	SAMPLER COMMENTS
1	EAST MH	MANHOLE	12/23	—	9838768	H20				X					
2	WEST MH	MANHOLE	12/23	—	9838769	H20				X					
3															
4															
5															
6															
7															
8															
9															
10															

SAMPLER COMMENTS:

RECEIVING COMMENTS:

LAB TEMP _____C

SEAL INTACT: YES / NO

ITEM NO.	RELINQUISHED BY/AFFIALIATION	TIME	DATE	ACCEPTED BY/AFFIALIATION	TIME	DATE
1-2	Paul Estuesta	12:36	12/23/98	D. Smith / MDH	12:36	12/23/98

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Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **1 of 6**
Date Reported:

Samples: 9838768 - 9838769

JAN 14 1999

Site ID	Site Name
-	-

Sample No: **9838768** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**EAST MI**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
Acetone	<	100	100	ug/L	
Allyl chloride	<	3.0	3	ug/L	
Benzene	<	1.0	1	ug/L	
Bromobenzene	<	1.0	1	ug/L	
Bromochloromethane	<	3.0	3	ug/L	
Bromodichloromethane	<	1.0	1	ug/L	
Bromoform	<	3.0	3	ug/L	
Bromomethane	<	3.0	3	ug/L	
n-Butylbenzene	<	3.0	3	ug/L	
sec-Butylbenzene	<	3.0	3	ug/L	
tert-Butylbenzene	<	3.0	3	ug/L	
Carbon tetrachloride	<	1.0	1	ug/L	
Chlorobenzene	<	1.0	1	ug/L	
Chlorodibromomethane	<	3.0	3	ug/L	
Chloroethane	<	3.0	3	ug/L	
Chloroform	<	0.5	0.5	ug/L	
Chloromethane	<	3.0	3	ug/L	
2-Chlorotoluene	<	3.0	3	ug/L	
4-Chlorotoluene	<	3.0	3	ug/L	
1,2-Dibromo-3-chloropropane	<	3.0	3	ug/L	
1,2-Dibromoethane	<	3.0	3	ug/L	
Dibromomethane	<	3.0	3	ug/L	
1,2-Dichlorobenzene	<	1.0	1	ug/L	
1,3-Dichlorobenzene	<	1.0	1	ug/L	
1,4-Dichlorobenzene	<	1.0	1	ug/L	
Dichlorodifluoromethane	<	3.0	3	ug/L	
1,1-Dichloroethane	<	1.0	1	ug/L	
1,2-Dichloroethane	<	1.0	1	ug/L	
1,1-Dichloroethene	<	3.0	3	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Cli nt Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9838768 - 9838769

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **2 of 6**
Date Reported: JAN 14 1999

Site ID	Site Name
-	-

Sample No: **9838768** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**EAST MI**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY
Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water (Cont.) — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
cis-1,2-Dichloroethene	<	1.0	1	ug/L	
trans-1,2-Dichloroethene	<	0.5	0.5	ug/L	
Dichlorofluoromethane	<	3.0	3	ug/L	
1,2-Dichloropropane	<	1.0	1	ug/L	
1,3-Dichloropropane	<	1.0	1	ug/L	
2,2-Dichloropropane	<	3.0	3	ug/L	
1,1-Dichloropropene	<	1.0	1	ug/L	
cis-1,3-Dichloropropene	<	1.0	1	ug/L	
trans-1,3-Dichloropropene	<	1.0	1	ug/L	
Ethylbenzene	<	1.0	1	ug/L	
Ethyl ether	<	10	10	ug/L	
Hexachlorobutadiene	<	3.0	3	ug/L	
Isopropylbenzene	<	3.0	3	ug/L	
p-Isopropyltoluene	<	3.0	3	ug/L	
Methylene chloride	<	3.0	3	ug/L	
Methyl ethyl ketone	<	50	50	ug/L	
Methyl isobutyl ketone	<	25	25	ug/L	
Methyl tertiary butyl ether	<	10	10	ug/L	
Naphthalene	<	3.0	3	ug/L	
n-Propylbenzene	<	3.0	3	ug/L	
Styrene	<	3.0	3	ug/L	
1,1,1,2-Tetrachloroethane	<	1.0	1	ug/L	
1,1,2,2-Tetrachloroethane	<	1.0	1	ug/L	
Tetrachloroethene	<	1.0	1	ug/L	
Tetrahydrofuran	<	50	50	ug/L	
Toluene	<	1.0	1	ug/L	
1,2,3-Trichlorobenzene	<	3.0	3	ug/L	
1,2,4-Trichlorobenzene	<	3.0	3	ug/L	
1,1,1-Trichloroethane	<	1.0	1	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9838768 - 9838769

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **3 of 6**
Date Reported:

JAN 14 1999

Site ID	Site Name
-	-

Sample No: **9838768** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**EAST MH**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water (Cont.) — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
1,1,2-Trichloroethane	<	1.0	1	ug/L	
Trichloroethene	<	0.5	0.5	ug/L	
Trichlorofluoromethane	<	3.0	3	ug/L	
1,2,3-Trichloropropane	<	3.0	3	ug/L	
1,1,2-Trichlorotrifluoroethane	<	1.0	1	ug/L	
1,2,4-Trimethylbenzene	<	3.0	3	ug/L	
1,3,5-Trimethylbenzene	<	3.0	3	ug/L	
Vinyl chloride	<	3.0	3	ug/L	
o-Xylene	<	1.0	1	ug/L	
p&m-Xylene	<	1.0	1	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9838768 - 9838769

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **4 of 6**
Date Reported:

JAN 1 4 1999

Site ID	Site Name
-	-

Sample No: **9838769** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**VEST MI**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY
Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
Acetone	<	100	100	ug/L	
Allyl chloride	<	3.0	3	ug/L	
Benzene	<	1.0	1	ug/L	
Bromobenzene	<	1.0	1	ug/L	
Bromochloromethane	<	3.0	3	ug/L	
Bromodichloromethane	<	1.0	1	ug/L	
Bromoform	<	3.0	3	ug/L	
Bromomethane	<	3.0	3	ug/L	
n-Butylbenzene	<	3.0	3	ug/L	
sec-Butylbenzene	<	3.0	3	ug/L	
tert-Butylbenzene	<	3.0	3	ug/L	
Carbon tetrachloride	<	1.0	1	ug/L	
Chlorobenzene	<	1.0	1	ug/L	
Chlorodibromomethane	<	3.0	3	ug/L	
Chloroethane	<	3.0	3	ug/L	
Chloroform	<	0.5	0.5	ug/L	
Chloromethane	<	3.0	3	ug/L	
2-Chlorotoluene	<	3.0	3	ug/L	
4-Chlorotoluene	<	3.0	3	ug/L	
1,2-Dibromo-3-chloropropane	<	3.0	3	ug/L	
1,2-Dibromoethane	<	3.0	3	ug/L	
Dibromomethane	<	3.0	3	ug/L	
1,2-Dichlorobenzene	<	1.0	1	ug/L	
1,3-Dichlorobenzene	<	1.0	1	ug/L	
1,4-Dichlorobenzene	<	1.0	1	ug/L	
Dichlorodifluoromethane	<	3.0	3	ug/L	
1,1-Dichloroethane	<	1.0	1	ug/L	
1,2-Dichloroethane	<	1.0	1	ug/L	
1,1-Dichloroethene	<	3.0	3	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9838768 - 9838769

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **5 of 6**
Date Reported:

JAN 14 1999

Site ID	Site Name
-	-

Sample No: **9838769** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**WEST MH**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water (Cont.) — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
cis-1,2-Dichloroethene		**4.0**	**1**	**ug/L**	
trans-1,2-Dichloroethene	<	0.5	0.5	ug/L	
Dichlorofluoromethane	<	3.0	3	ug/L	
1,2-Dichloropropane	<	1.0	1	ug/L	
1,3-Dichloropropane	<	1.0	1	ug/L	
2,2-Dichloropropane	<	3.0	3	ug/L	
1,1-Dichloropropene	<	1.0	1	ug/L	
cis-1,3-Dichloropropene	<	1.0	1	ug/L	
trans-1,3-Dichloropropene	<	1.0	1	ug/L	
Ethylbenzene	<	1.0	1	ug/L	
Ethyl ether	<	10	10	ug/L	
Hexachlorobutadiene	<	3.0	3	ug/L	
Isopropylbenzene	<	3.0	3	ug/L	
p-Isopropyltoluene	<	3.0	3	ug/L	
Methylene chloride	<	3.0	3	ug/L	
Methyl ethyl ketone	<	50	50	ug/L	
Methyl isobutyl ketone	<	25	25	ug/L	
Methyl tertiary butyl ether	<	10	10	ug/L	
Naphthalene	<	3.0	3	ug/L	
n-Propylbenzene	<	3.0	3	ug/L	
Styrene	<	3.0	3	ug/L	
1,1,1,2-Tetrachloroethane	<	1.0	1	ug/L	
1,1,2,2-Tetrachloroethane	<	1.0	1	ug/L	
Tetrachloroethene		**2.0**	**1**	**ug/L**	
Tetrahydrofuran	<	50	50	ug/L	
Toluene	<	1.0	1	ug/L	
1,2,3-Trichlorobenzene	<	3.0	3	ug/L	
1,2,4-Trichlorobenzene	<	3.0	3	ug/L	
1,1,1-Trichloroethane		**5.7**	**1**	**ug/L**	

MK

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9838768 - 9838769

Date Received: **23-DEC-1998**
Date Generated: **13-JAN-1999**
Request Page: **6 of 6**
Date Reported:

JAN 14 1999

Site ID	Site Name
-	-

Sample No: **9838769** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
23-DEC-1998	**0000**	**WEST MI**	**MANHOLE**

Trip Blank	Field Blank
-	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

465 VOCs in Water (Cont.) — 01-JAN-1999

Report Level has changed due to Sample dilution.

		Result	Rept Level	Units	Analysis Date
1,1,2-Trichloroethane	<	1.0	1	ug/L	
Trichloroethene		**32**	**0.5**	**ug/L**	
Trichlorofluoromethane	<	3.0	3	ug/L	
1,2,3-Trichloropropane	<	3.0	3	ug/L	
1,1,2-Trichlorotrifluoroethane	<	1.0	1	ug/L	
1,2,4-Trimethylbenzene	<	3.0	3	ug/L	
1,3,5-Trimethylbenzene	<	3.0	3	ug/L	
Vinyl chloride	<	3.0	3	ug/L	
o-Xylene	<	1.0	1	ug/L	
p&m-Xylene	<	1.0	1	ug/L	

09908379 09908380 09908381 09908382

MDH Chain of Custody

Public Health Laboratory

Minnesota Department of Health
Chemical Laboratory
717Delaware Street S.E.
Minneapolis, Minnesota 55440

Potential Hazard: Yes/No/Unknown (Circle One)

If Yes: Chemical/Biological/Other_____(Circle One)

Standard/Civil/Criminal Chain of Custody (Circle One)

Client/Agency: MPCA

Project Name:

Site ID:

Program Code (2 letters): PL

Contact Name: Paul Estuesta

Contact Phone #: 651-296-7997

MDH 1000 0528

Report to: Luke Charpentier

Address if Needed

Trip 9908382

Sampled By (Print): Paul Estuesta

Affiliation: MPCA

Sampler Signature: Paul Estuesta

Phone: 651-296-7997

Item #	Field ID	Sample Source/Point	Collection Date MM/DD/YYYY	Time (24 Hour Clock)	MDH Sample Number (Lab Use Only)	Matrix	General (None)	Nutrient (H2SO4)	Metals (HNO3)	VOC	Semivol	DRO	GRO	See attached		SAMPLER COMMENTS
1	EAST M.H	MANHOLE	4/19	–	9908379	H2O				X						
2	WEST M.H	MANHOLE	4/19	–	9908380	H2O				X						
3	81 OUTFALL	OUTFALL	4/19	–	9908381	H2O				X						
4	TRIP	—			9908382					X						
5																
6																
7																
8																
9																
10																

SAMPLER COMMENTS:

RECEIVING COMMENTS:

LAB TEMP _____C

SEAL INTACT: YES / NO

ITEM NO.	RELINQUISHED BY/AFFIALIATION		TIME	DATE	ACCEPTED BY/AFFIALIATION	TIME	DATE
1-4	Paul Est	MPCA	11:49	4/20/99	D. Smith / MDH	11:49am	4/20/99

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Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **1 of 12**
Date Reported: MAY 11 1999

Samples: 9908379 - 9908382

Site ID	Site Name
-	-

Sample No: **9908379** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**EAST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY	**Result**	**Rept Level**	**Units**	**Analysis Date**
Note: Positive Organic Results are indicated by **BOLD.**				
465 VOCs in Water				29-APR-1999
Acetone	< 20	20	ug/L	
Allyl chloride	< 0.5	0.5	ug/L	
Benzene	< 0.2	0.2	ug/L	
Bromobenzene	< 0.2	0.2	ug/L	
Bromochloromethane	< 0.5	0.5	ug/L	
Bromodichloromethane	< 0.2	0.2	ug/L	
Bromoform	< 0.5	0.5	ug/L	
Bromomethane	< 0.5	0.5	ug/L	
n-Butylbenzene	< 0.5	0.5	ug/L	
sec-Butylbenzene	< 0.5	0.5	ug/L	
tert-Butylbenzene	< 0.5	0.5	ug/L	
Carbon tetrachloride	< 0.2	0.2	ug/L	
Chlorobenzene	< 0.2	0.2	ug/L	
Chlorodibromomethane	< 0.5	0.5	ug/L	
Chloroethane	< 0.5	0.5	ug/L	
Chloroform	< 0.1	0.1	ug/L	
Chloromethane	< 0.5	0.5	ug/L	
2-Chlorotoluene	< 0.5	0.5	ug/L	
4-Chlorotoluene	< 0.5	0.5	ug/L	
1,2-Dibromo-3-chloropropane	< 0.5	0.5	ug/L	
1,2-Dibromoethane	< 0.5	0.5	ug/L	
Dibromomethane	< 0.5	0.5	ug/L	
1,2-Dichlorobenzene	< 0.2	0.2	ug/L	
1,3-Dichlorobenzene	< 0.2	0.2	ug/L	
1,4-Dichlorobenzene	< 0.2	0.2	ug/L	
Dichlorodifluoromethane	< 0.5	0.5	ug/L	
1,1-Dichloroethane	< 0.2	0.2	ug/L	
1,2-Dichloroethane	< 0.2	0.2	ug/L	
1,1-Dichloroethene	< 0.5	0.5	ug/L	
cis-1,2-Dichloroethene	< 0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **2 of 12**
Date Reported:

Site ID	Site Name
-	-

Sample No: **9908379** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**EAST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY		**Result**	**Rept Level**	**Units**	**Analysis Date**
Note: Positive Organic Results are indicated by **BOLD.**					
465 VOCs in Water (Cont.)					29-APR-1999
trans-1,2-Dichloroethene	<	0.1	0.1	ug/L	
Dichlorofluoromethane	<	0.5	0.5	ug/L	
1,2-Dichloropropane	<	0.2	0.2	ug/L	
1,3-Dichloropropane	<	0.2	0.2	ug/L	
2,2-Dichloropropane	<	0.5	0.5	ug/L	
1,1-Dichloropropene	<	0.2	0.2	ug/L	
cis-1,3-Dichloropropene	<	0.2	0.2	ug/L	
trans-1,3-Dichloropropene	<	0.2	0.2	ug/L	
Ethylbenzene	<	0.2	0.2	ug/L	
Ethyl ether	<	2.0	2.0	ug/L	
Hexachlorobutadiene	<	0.5	0.5	ug/L	
Isopropylbenzene	<	0.5	0.5	ug/L	
p-Isopropyltoluene	<	0.5	0.5	ug/L	
Methylene chloride	<	0.5	0.5	ug/L	
Methyl ethyl ketone	<	10	10	ug/L	
Methyl isobutyl ketone	<	5.0	5.0	ug/L	
Methyl tertiary butyl ether	<	2.0	2.0	ug/L	
Naphthalene	<	0.5	0.5	ug/L	
n-Propylbenzene	<	0.5	0.5	ug/L	
Styrene	<	0.5	0.5	ug/L	
1,1,1,2-Tetrachloroethane	<	0.2	0.2	ug/L	
1,1,2,2-Tetrachloroethane	<	0.2	0.2	ug/L	
Tetrachloroethene	<	0.2	0.2	ug/L	
Tetrahydrofuran	<	10	10	ug/L	
Toluene		**0.2**	**0.2**	**ug/L**	
1,2,3-Trichlorobenzene	<	0.5	0.5	ug/L	
1,2,4-Trichlorobenzene	<	0.5	0.5	ug/L	
1,1,1-Trichloroethane	<	0.2	0.2	ug/L	
1,1,2-Trichloroethane	<	0.2	0.2	ug/L	
Trichloroethene	<	0.1	0.1	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **3 of 12**
Date Reported:

Site ID	Site Name
-	-

Sample No: **9908379** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**EAST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water (Cont.)					29-APR-1999
Trichlorofluoromethane	<	0.5	0.5	ug/L	
1,2,3-Trichloropropane	<	0.5	0.5	ug/L	
1,1,2-Trichlorotrifluoroethane	<	0.2	0.2	ug/L	
1,2,4-Trimethylbenzene	<	0.5	0.5	ug/L	
1,3,5-Trimethylbenzene	<	0.5	0.5	ug/L	
Vinyl chloride	<	0.5	0.5	ug/L	
o-Xylene	<	0.2	0.2	ug/L	
p&m-Xylene	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **4 of 12**
Date Reported:

Samples: 9908379 - 9908382

Site ID	Site Name
-	-

Sample No: **9908380** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**WEST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water					29-APR-1999
Acetone	<	20	20	ug/L	
Allyl chloride	<	0.5	0.5	ug/L	
Benzene	<	0.2	0.2	ug/L	
Bromobenzene	<	0.2	0.2	ug/L	
Bromochloromethane	<	0.5	0.5	ug/L	
Bromodichloromethane	<	0.2	0.2	ug/L	
Bromoform	<	0.5	0.5	ug/L	
Bromomethane	<	0.5	0.5	ug/L	
n-Butylbenzene	<	0.5	0.5	ug/L	
sec-Butylbenzene	<	0.5	0.5	ug/L	
tert-Butylbenzene	<	0.5	0.5	ug/L	
Carbon tetrachloride	<	0.2	0.2	ug/L	
Chlorobenzene	<	0.2	0.2	ug/L	
Chlorodibromomethane	<	0.5	0.5	ug/L	
Chloroethane	<	0.5	0.5	ug/L	
Chloroform	<	0.1	0.1	ug/L	
Chloromethane	<	0.5	0.5	ug/L	
2-Chlorotoluene	<	0.5	0.5	ug/L	
4-Chlorotoluene	<	0.5	0.5	ug/L	
1,2-Dibromo-3-chloropropane	<	0.5	0.5	ug/L	
1,2-Dibromoethane	<	0.5	0.5	ug/L	
Dibromomethane	<	0.5	0.5	ug/L	
1,2-Dichlorobenzene	<	0.2	0.2	ug/L	
1,3-Dichlorobenzene	<	0.2	0.2	ug/L	
1,4-Dichlorobenzene	<	0.2	0.2	ug/L	
Dichlorodifluoromethane	<	0.5	0.5	ug/L	
1,1-Dichloroethane	<	0.2	0.2	ug/L	
1,2-Dichloroethane	<	0.2	0.2	ug/L	
1,1-Dichloroethene	<	0.5	0.5	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **5 of 12**
Date Reported:

Samples: 9908379 - 9908382

Site ID	Site Name
-	-

Sample No: **9908380** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**WEST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY		**Result**	**Rept Level**	**Units**	**Analysis Date**
Note: Positive Organic Results are indicated by **BOLD.**					
465 VOCs in Water (Cont.)					29-APR-1999
cis-1,2-Dichloroethene	<	0.2	0.2	ug/L	
Peak present below report level					
trans-1,2-Dichloroethene	<	0.1	0.1	ug/L	
Dichlorofluoromethane	<	0.5	0.5	ug/L	
1,2-Dichloropropane	<	0.2	0.2	ug/L	
1,3-Dichloropropane	<	0.2	0.2	ug/L	
2,2-Dichloropropane	<	0.5	0.5	ug/L	
1,1-Dichloropropene	<	0.2	0.2	ug/L	
cis-1,3-Dichloropropene	<	0.2	0.2	ug/L	
trans-1,3-Dichloropropene	<	0.2	0.2	ug/L	
Ethylbenzene	<	0.2	0.2	ug/L	
Ethyl ether	<	2.0	2.0	ug/L	
Hexachlorobutadiene	<	0.5	0.5	ug/L	
Isopropylbenzene	<	0.5	0.5	ug/L	
p-Isopropyltoluene	<	0.5	0.5	ug/L	
Methylene chloride	<	0.5	0.5	ug/L	
Methyl ethyl ketone	<	10	10	ug/L	
Methyl isobutyl ketone	<	5.0	5.0	ug/L	
Methyl tertiary butyl ether	<	2.0	2.0	ug/L	
Naphthalene	<	0.5	0.5	ug/L	
n-Propylbenzene	<	0.5	0.5	ug/L	
Styrene	<	0.5	0.5	ug/L	
1,1,1,2-Tetrachloroethane	<	0.2	0.2	ug/L	
1,1,2,2-Tetrachloroethane	<	0.2	0.2	ug/L	
Tetrachloroethene	<	0.2	0.2	ug/L	
Tetrahydrofuran	<	10	10	ug/L	
Toluene	<	0.2	0.2	ug/L	
1,2,3-Trichlorobenzene	<	0.5	0.5	ug/L	
1,2,4-Trichlorobenzene	<	0.5	0.5	ug/L	
1,1,1-Trichloroethane		**0.6**	**0.2**	**ug/L**	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **6 of 12**
Date Reported: MAY 11 1999

Site ID	Site Name
-	-

Sample No: **9908380** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**WEST MH**	**MANHOLE**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water (Cont.)					29-APR-1999
1,1,2-Trichloroethane	<	0.2	0.2	ug/L	
Trichloroethene		**2.4**	**0.1**	**ug/L**	
Trichlorofluoromethane	<	0.5	0.5	ug/L	
1,2,3-Trichloropropane	<	0.5	0.5	ug/L	
1,1,2-Trichlorotrifluoroethane	<	0.2	0.2	ug/L	
1,2,4-Trimethylbenzene	<	0.5	0.5	ug/L	
1,3,5-Trimethylbenzene	<	0.5	0.5	ug/L	
Vinyl chloride	<	0.5	0.5	ug/L	
o-Xylene	<	0.2	0.2	ug/L	
p&m-Xylene	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **7 of 12**
Date Reported: MAY 11 1999

Site ID	Site Name
-	-

Sample No: **9908381** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**81 OUTFALL**	**OUTFALL**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD**.

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water					29-APR-1999
Acetone	<	20	20	ug/L	
Allyl chloride	<	0.5	0.5	ug/L	
Benzene	<	0.2	0.2	ug/L	
Bromobenzene	<	0.2	0.2	ug/L	
Bromochloromethane	<	0.5	0.5	ug/L	
Bromodichloromethane	<	0.2	0.2	ug/L	
Bromoform	<	0.5	0.5	ug/L	
Bromomethane	<	0.5	0.5	ug/L	
n-Butylbenzene	<	0.5	0.5	ug/L	
sec-Butylbenzene	<	0.5	0.5	ug/L	
tert-Butylbenzene	<	0.5	0.5	ug/L	
Carbon tetrachloride	<	0.2	0.2	ug/L	
Chlorobenzene	<	0.2	0.2	ug/L	
Chlorodibromomethane	<	0.5	0.5	ug/L	
Chloroethane	<	0.5	0.5	ug/L	
Chloroform	<	0.1	0.1	ug/L	
Chloromethane	<	0.5	0.5	ug/L	
2-Chlorotoluene	<	0.5	0.5	ug/L	
4-Chlorotoluene	<	0.5	0.5	ug/L	
1,2-Dibromo-3-chloropropane	<	0.5	0.5	ug/L	
1,2-Dibromoethane	<	0.5	0.5	ug/L	
Dibromomethane	<	0.5	0.5	ug/L	
1,2-Dichlorobenzene	<	0.2	0.2	ug/L	
1,3-Dichlorobenzene	<	0.2	0.2	ug/L	
1,4-Dichlorobenzene	<	0.2	0.2	ug/L	
Dichlorodifluoromethane	<	0.5	0.5	ug/L	
1,1-Dichloroethane	<	0.2	0.2	ug/L	
1,2-Dichloroethane	<	0.2	0.2	ug/L	
1,1-Dichloroethene	<	0.5	0.5	ug/L	
cis-1,2-Dichloroethene	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **8 of 12**
Date Reported: MAY 1 1999

Site ID	Site Name
-	-

Sample No: **9908381** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**81 OUTFALL**	**OUTFALL**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Dat
465 VOCs in Water (Cont.)					29-APR-1999
trans-1,2-Dichloroethene	<	0.1	0.1	ug/L	
Dichlorofluoromethane	<	0.5	0.5	ug/L	
1,2-Dichloropropane	<	0.2	0.2	ug/L	
1,3-Dichloropropane	<	0.2	0.2	ug/L	
2,2-Dichloropropane	<	0.5	0.5	ug/L	
1,1-Dichloropropene	<	0.2	0.2	ug/L	
cis-1,3-Dichloropropene	<	0.2	0.2	ug/L	
trans-1,3-Dichloropropene	<	0.2	0.2	ug/L	
Ethylbenzene	<	0.2	0.2	ug/L	
Ethyl ether	<	2.0	2.0	ug/L	
Hexachlorobutadiene	<	0.5	0.5	ug/L	
Isopropylbenzene	<	0.5	0.5	ug/L	
p-Isopropyltoluene	<	0.5	0.5	ug/L	
Methylene chloride	<	0.5	0.5	ug/L	
Methyl ethyl ketone	<	10	10	ug/L	
Methyl isobutyl ketone	<	5.0	5.0	ug/L	
Methyl tertiary butyl ether	<	2.0	2.0	ug/L	
Naphthalene	<	0.5	0.5	ug/L	
n-Propylbenzene	<	0.5	0.5	ug/L	
Styrene	<	0.5	0.5	ug/L	
1,1,1,2-Tetrachloroethane	<	0.2	0.2	ug/L	
1,1,2,2-Tetrachloroethane	<	0.2	0.2	ug/L	
Tetrachloroethene	<	0.2	0.2	ug/L	
Peak present below report level					
Tetrahydrofuran	<	10	10	ug/L	
Toluene		**0.3**	**0.2**	**ug/L**	
1,2,3-Trichlorobenzene	<	0.5	0.5	ug/L	
1,2,4-Trichlorobenzene	<	0.5	0.5	ug/L	
1,1,1-Trichloroethane		**0.3**	**0.2**	**ug/L**	
1,1,2-Trichloroethane	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final R port - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **9 of 12**
Date Reported: MAY 1 [illegible]

Site ID	Site Name
-	-

Sample No: **9908381** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
19-APR-1999	**0000**	**81 OUTFALL**	**OUTFALL**

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water (Cont.)					29-APR-1999
Trichloroethene		**2.0**	**0.1**	**ug/L**	
Trichlorofluoromethane	<	0.5	0.5	ug/L	
1,2,3-Trichloropropane	<	0.5	0.5	ug/L	
1,1,2-Trichlorotrifluoroethane	<	0.2	0.2	ug/L	
1,2,4-Trimethylbenzene	<	0.5	0.5	ug/L	
1,3,5-Trimethylbenzene	<	0.5	0.5	ug/L	
Vinyl chloride	<	0.5	0.5	ug/L	
o-Xylene	<	0.2	0.2	ug/L	
p&m-Xylene	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **10 of 12**
Date Reported:

Site ID	Site Name
-	-

Sample No: **9908382** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
-	**0000**	**TRIP**	-

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY
Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Dat
465 VOCs in Water					29-APR-1999
Acetone	<	20	20	ug/L	
Allyl chloride	<	0.5	0.5	ug/L	
Benzene	<	0.2	0.2	ug/L	
Bromobenzene	<	0.2	0.2	ug/L	
Bromochloromethane	<	0.5	0.5	ug/L	
Bromodichloromethane	<	0.2	0.2	ug/L	
Bromoform	<	0.5	0.5	ug/L	
Bromomethane	<	0.5	0.5	ug/L	
n-Butylbenzene	<	0.5	0.5	ug/L	
sec-Butylbenzene	<	0.5	0.5	ug/L	
tert-Butylbenzene	<	0.5	0.5	ug/L	
Carbon tetrachloride	<	0.2	0.2	ug/L	
Chlorobenzene	<	0.2	0.2	ug/L	
Chlorodibromomethane	<	0.5	0.5	ug/L	
Chloroethane	<	0.5	0.5	ug/L	
Chloroform	<	0.1	0.1	ug/L	
Chloromethane	<	0.5	0.5	ug/L	
2-Chlorotoluene	<	0.5	0.5	ug/L	
4-Chlorotoluene	<	0.5	0.5	ug/L	
1,2-Dibromo-3-chloropropane	<	0.5	0.5	ug/L	
1,2-Dibromoethane	<	0.5	0.5	ug/L	
Dibromomethane	<	0.5	0.5	ug/L	
1,2-Dichlorobenzene	<	0.2	0.2	ug/L	
1,3-Dichlorobenzene	<	0.2	0.2	ug/L	
1,4-Dichlorobenzene	<	0.2	0.2	ug/L	
Dichlorodifluoromethane	<	0.5	0.5	ug/L	
1,1-Dichloroethane	<	0.2	0.2	ug/L	
1,2-Dichloroethane	<	0.2	0.2	ug/L	
1,1-Dichloroethene	<	0.5	0.5	ug/L	
cis-1,2-Dichloroethene	<	0.2	0.2	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Samples: 9908379 - 9908382

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **11 of 12**
Date Reported: MAY 1 - 1999

Site ID	Site Name
-	-

Sample No: **9908382** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
-	**0000**	**TRIP**	-

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	**Rept Level**	**Units**	**Analysis Date**
465 VOCs in Water (Cont.)					29-APR-1999
trans-1,2-Dichloroethene	<	0.1	0.1	ug/L	
Dichlorofluoromethane	<	0.5	0.5	ug/L	
1,2-Dichloropropane	<	0.2	0.2	ug/L	
1,3-Dichloropropane	<	0.2	0.2	ug/L	
2,2-Dichloropropane	<	0.5	0.5	ug/L	
1,1-Dichloropropene	<	0.2	0.2	ug/L	
cis-1,3-Dichloropropene	<	0.2	0.2	ug/L	
trans-1,3-Dichloropropene	<	0.2	0.2	ug/L	
Ethylbenzene	<	0.2	0.2	ug/L	
Ethyl ether	<	2.0	2.0	ug/L	
Hexachlorobutadiene	<	0.5	0.5	ug/L	
Isopropylbenzene	<	0.5	0.5	ug/L	
p-Isopropyltoluene	<	0.5	0.5	ug/L	
Methylene chloride	<	0.5	0.5	ug/L	
Methyl ethyl ketone	<	10	10	ug/L	
Methyl isobutyl ketone	<	5.0	5.0	ug/L	
Methyl tertiary butyl ether	<	2.0	2.0	ug/L	
Naphthalene	<	0.5	0.5	ug/L	
n-Propylbenzene	<	0.5	0.5	ug/L	
Styrene	<	0.5	0.5	ug/L	
1,1,1,2-Tetrachloroethane	<	0.2	0.2	ug/L	
1,1,2,2-Tetrachloroethane	<	0.2	0.2	ug/L	
Tetrachloroethene	<	0.2	0.2	ug/L	
Tetrahydrofuran	<	10	10	ug/L	
Toluene	<	0.2	0.2	ug/L	
1,2,3-Trichlorobenzene	<	0.5	0.5	ug/L	
1,2,4-Trichlorobenzene	<	0.5	0.5	ug/L	
1,1,1-Trichloroethane	<	0.2	0.2	ug/L	
1,1,2-Trichloroethane	<	0.2	0.2	ug/L	
Trichloroethene	<	0.1	0.1	ug/L	

Minnesota Department Of Health – Chemical Laboratory

Final Report - Client Copy - Report Of Analytical Results

Program: **PL**
Program Name: **MPCA-32 GW&SW STATE SUPERFUND**

Date Received: **20-APR-1999**
Date Generated: **10-MAY-1999**
Request Page: **12 of 12**
Date Reported: MAY 11 1999

Samples: 9908379 - 9908382

Site ID	Site Name
-	-

Sample No: **9908382** Receiving Comments: -

Coll Date	Coll Time	Field No	Sampling Point
-	**0000**	**TRIP**	-

Trip Blank	Field Blank
9908382	-

********** SAMPLE RESULTS **********

Unit: ORGANIC CHEMISTRY

Note: Positive Organic Results are indicated by **BOLD.**

		Result	Rept Level	Units	Analysis Date
465 VOCs in Water (Cont.)					29-APR-1999
Trichlorofluoromethane	<	0.5	0.5	ug/L	
1,2,3-Trichloropropane	<	0.5	0.5	ug/L	
1,1,2-Trichlorotrifluoroethane	<	0.2	0.2	ug/L	
1,2,4-Trimethylbenzene	<	0.5	0.5	ug/L	
1,3,5-Trimethylbenzene	<	0.5	0.5	ug/L	
Vinyl chloride	<	0.5	0.5	ug/L	
o-Xylene	<	0.2	0.2	ug/L	
p&m-Xylene	<	0.2	0.2	ug/L	