923645

US EPA RECORDS CENTER REGION 5
XXXX

SAMPLING DATA

D.6

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

RECEIVED
GROUNDWATER QUALITY DIV.
DEC 2 1985
DISTRICT 9
GRAND RAPIDS

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

November 25, 1985

[redacted]

Please find enclosed, the test results of the Kent County Department of Public Works groundwater survey. The test ran, "Volatile Hydrocarbon Scan", showed the chemical compound,1,1,1 - Trichloroethane at 2 ppb (parts per billion). The EPA has set a maximum contamination level (MCL) of 200 ppb for this compound.

At this time, the 1,1,1 - Trichloroethane is at a low enough concentration and should not cause any problems. We will be monitoring it with further tests, and if it does rise above accepted levels, we will notify you immediately.

If you have any questions, please contact me.

Sincerely,

Michael J. Winchester

Michael J. Winchester,
Environmental Toxicologist
Environmental Health Division
Kent County Health Department

MJW/mi
ENC.
cc: Jerry Powell, K.C.D.P.W.
Bonnie White, M.D.N.R.
Jan Kohler, M.D.P.H., Water Supply Division

D.C

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

February 3, 1986

[redacted]

GQD COMPLIANCE
GRAND RAPIDS
FEB 11 1986
RECEIVED

Please find enclosed the test results of the Kent County Department of Public Works groundwater survey. The test ran were a "Volatile Organic Analysis". The test results did not show any signs of contamination. Previous results on November 8, 1985, did show 1,1,1,-Trichloroethane at 0.002 mg/l. This time the test results did not show any signs of that compound.

At this time, we would advise you not to consume your water by drinking or cooking until we have completed one more round of sampling. At that time, if we receive at the next round of sampling negative results on the 1,1,1,-Trichloroethane, then, we can determine that your water is safe for drinking.

If you have any questions, please free to contact us.

Sincerely,

Michael J. Winchester
Environmental Toxicologist

MJW/ch
Enc.
cc: Jerry Powell, Kent County Department of Public Works
Bonnie White, Michigan Department of Natural Resources
Jan Kohler, Michigan Department of Public Health, Groundwater Supply Division

D.6 File: 10mile (Plainfield LE

KENT COUNTY HEALTH DEPARTMENT

GQD COMPLIANCE
GRAND RAPIDS

FEB 19 1986

RECEIVED

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

February 10, 1986

[redacted]

Please find enclosed the test results of the Kent County Department of Public Works groundwater survey. The test ran were a "Volatile Organic Analysis". The test results did not show any signs of contamination. Previous results on November 8, 1985, did show 1,1,1,-Trichloroethane at 0.002 mg/l. This time the test results did not show any signs of that compound.

We would still advise that the 1,1,1,-Trichloroethane is at low enough concentration, or non-detectable, that it should not cause any problems.

If you have any questions, please feel free to contact us.

Sincerely,

Michael J. Winchester,
Environmental Toxicologist

MJW/mi
ENC.
cc: Jerry Powell, Kent County Department of Public Works
Bonnie White, Michigan Department of Natural Resources
Jan Kohler, Michigan Department of Public Health, Groundwater Supply Division

D.6

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 17, 1985

RECEIVED
GROUNDWATER QUALITY DIV.
SEP 19 1985
DISTRICT 9
GRAND RAPIDS

[redacted]

Please find enclosed the results of our analysis of your well. The tests ran were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scam". The Volatile Hydrocarbon Scam showed no signs of contamination. The Partial Chemicial Analysis showed an elevated level of Nitrates, 11.7 mg/l.

The State of Michigan under Act 399, P.A. 1976, has set a maximum level for Nitrates at 10.0 mg/l. The level of 11.7 mg/l does not pose any serious health effects, but we would like to resample your well again in two months.

If you wish to resample your well before this time, you may come down to the Health Department, pick up the bottle needed, take the sample yourself and mail it to the state laboratory.

If you have any questions, please contact me.

Sincerely,

Michael J. Winchester, Sanitarian
Environmental Health Division
Kent County Health Department

MJW/mi
ENC.
cc: Jerry Powell, Department of Public Works
Bonnie White, Department of Natural Resources

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 198

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

September 19, 1986

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

North Kent LF
(10 mile)
Kent Co.

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results run on your well. The tests that we conducted were a "Partial Chemical Analysis" and a "Volatile Hydrocarbon Scan". Test results do not indicate contamination.

We will follow up in six months to resample your well and run the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

KENT COUNTY HEALTH DEPARTMENT

700 FULLER, N.E.
GRAND RAPIDS, MICHIGAN 49503
774-3030

DOUGLAS A. MACK, M.D., M.P.H.
PUBLIC HEALTH DIRECTOR

September 19, 1986

GQD COMPLIANCE
GRAND RAPIDS
SEP 29 1986
RECEIVED

[redacted]

Please find enclosed a copy of the test results for water samples collected from your home. A partial chemical analysis and a volatile hydrocarbon scan were performed. The results of these tests show ~~1 ppb of 1,1,1, Trichloroethane.~~ This indicates no significant change from results obtained from testing conducted on November 5, 1985 which showed 2 ppb of 1,1,1, Trichloroethane. Be advised that this level is at low enough concentration that it should not cause a problem.

We will resample your well in six months to perform the same analysis.

If you have any questions, please contact us.

Sincerely,

Mary R. Reading

Mary R. Reading, Sanitarian
Environmental Health Division

MRR:bk
Enclosure
c.c.: Kurt Kemppainen, DPW
Ann Przybyla, DNR

SAMPLE PROPOSAL
FIT REGION V

1. Date Form Completed 9/15/88

2. Account # FMI0310SA TDD # F05-8711-063

EPA I.D. # MID 000265066

3. Site Name, City, State Kent County Plainfield Landfill, Grand Rapids, Michigan

4. Team Leader Steve Bunsen Sampler Frank Santella

5. Number and Type of Samples:

Soil/Sediment 10 Surface Water ____ Ground Water 8

Residential/Municipal Wells 5 Other ____

Number of Blanks 2 Number of Duplicates 2

6. RAS Parameters Requested:

A/B/N ✓ Pest/PCB ✓ Volatiles ✓ Metals ✓ Cyanide ✓

SAS Parameters Requested: None

7. Expected Sampling Date(s): Week of October ~~[illegible]~~ 24

Expected Shipping Date(s): ____

8. Lab Used For Analysis: Organic (soils & groundwater) IT Cenitor ~~[illegible]~~ CompuChem

Inorganic Enseco/RMAL ~~[illegible]~~ NANCO

SAS ____

9. Case Number 10716 SAS Number 4062E

10. Airbill Numbers: 10/25

Organic Lab (Comp) 3523958876 # Coolers 3 # Samples 7 res

Inorganic Lab (Nanco) 3523958885 # Coolers 1 # Samples 7 res

CRL/SAS Lab (IT Cen) 3523958933 # Coolers 1 # Samples 10 soils

RMAL 3523958922 1 10 soils

10/26 IT 3523958911 4 10 waters

RMAL 3523958900 1 10 waters

complete

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / FOS-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW1 / RESIDENTIAL WELL 1

SAMPLING DATE 10/25/88 SAMPLING TIME 16:10

ORGANIC TRAFFIC NUMBER EAB 64

INORGANIC TRAFFIC NUMBER MEBB 87

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1 l AMBER	EXTRACTABLE	5-006473-75	H8267014
2 - 40ml.	VOA	5-006476-77	B8176064
2 - 1 l PLASTIC	METAL / CYANIDE	5-006478-79	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.39

CONDUCTIVITY 360 omh

TEMPERATURE 10°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / FOS-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW2 & MSD / RESIDENTIAL WELL 2

SAMPLING DATE 10/25/88 SAMPLING TIME 16:20

ORGANIC TRAFFIC NUMBER EAB 65

INORGANIC TRAFFIC NUMBER MEBB 88

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
6 - 1l AMBER	EXTRACTABLE	5-006480-82 / 5-006522-524	H8267014
4 - 40ml.	VOA	5-006483-84 / 5-006525-26	B8176064
2 - 1l PLASTIC	METAL / CYANIDE	5-006485-86	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS

pH 7.57

CONDUCTIVITY 600 omh

TEMPERATURE 10°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW3 / RESIDENTIAL WELL 3

SAMPLING DATE 10/25/88 SAMPLING TIME 16:30

ORGANIC TRAFFIC NUMBER EAB 66

INORGANIC TRAFFIC NUMBER MEBB 89

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3-1l AMBER	EXTRACTABLE	5-006487-89	H8267014
2-40ml.	VOA	5-006490-91	B8176064
2-1l PLASTIC	METAL/CYANIDE	5-006492-93	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.80

CONDUCTIVITY 400 omh

TEMPERATURE 12°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW 4 / RESIDENTIAL WELL 4

SAMPLING DATE 10/25/88 SAMPLING TIME 17:30

ORGANIC TRAFFIC NUMBER EAB 67

INORGANIC TRAFFIC NUMBER MEBB 90

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1l AMBER	EXTRACTABLE	5-006494-96	H8267014
2-40ml.	VOA	5-006497-98	B8176064
2-1l PLASTIC	METAL/CYANIDE	5-006499-500	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS

pH 7.90

CONDUCTIVITY 550 omh

TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW5 / RESIDENTIAL WELL 5

SAMPLING DATE 10/25/88 SAMPLING TIME 18:10

ORGANIC TRAFFIC NUMBER EAB 68

INORGANIC TRAFFIC NUMBER MEBB 91

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1l AMBER	EXTRACTABLE	5-006501-03	H82670 14
2 - 40ml.	VOA	5-006504-05	B8176064
2 - 1l PLASTIC.	METAL / CYANIDE	5-006506-07	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.78

CONDUCTIVITY 560 omh

TEMPERATURE 10°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RW0 / RESIDENTIAL WELL DUPLICATE OF RW1

SAMPLING DATE 10/25/88 SAMPLING TIME 16:10

ORGANIC TRAFFIC NUMBER EAB 69

INORGANIC TRAFFIC NUMBER MEBB 92

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3- 1l AMBER	EXTRACTABLE	5-006508-510	H8267014
2- 40ml.	VOA	5-006511-12	B8176064
2- 1l PLASTIC	METAL/CYANIDE	5-006513-14	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.39

CONDUCTIVITY 360 omh

TEMPERATURE 10°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD CANOPELL/FOS-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION RWB/ RESIDENTIAL WELL BLANK

SAMPLING DATE 10/25/88 SAMPLING TIME 15:00

ORGANIC TRAFFIC NUMBER EAB 70

INORGANIC TRAFFIC NUMBER MEBB 93

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
3 - 1l AMBER	EXTRACTABLE	5-006515-17	H8267134
2 - 40ml.	VOA	5-006518-19	B8176064
2 - 1l PLASTIC	METAL/CYANIDE	5-006520-21	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 8.9

CONDUCTIVITY 0 omh

TEMPERATURE 7°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION S1 / SOIL 1

SAMPLING DATE 10/25/88 SAMPLING TIME 12:55

ORGANIC TRAFFIC NUMBER EAB 54
INORGANIC TRAFFIC NUMBER MEBB 77

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006433	F8140024
120ml.	VOA	5-006434	D8202014
120ml	VOA	5-006435	D8202014
8oz.	METAL/CYANIDE	5-006436	F8140024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: WET BROWN SAND

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION 52 / SO02 2

SAMPLING DATE 10/25/88 SAMPLING TIME 13:10

ORGANIC TRAFFIC NUMBER EAB 55
INORGANIC TRAFFIC NUMBER MEBB 78

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006437	F8140024
120ml.	VOA	5-006438	D8202014
120ml	VOA	5-006439	D8202014
8oz.	METAL/CYANIDE	5-006440	F8140024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: WET BROWN SAND.

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION S3 / SOIL 3

SAMPLING DATE 10/25/88 SAMPLING TIME 13:20

ORGANIC TRAFFIC NUMBER EAB 56
INORGANIC TRAFFIC NUMBER MEBB 79

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006441	F8140024
120ml.	VOA	5-006442	D8202014
120ml	VOA	5-006443	D8202014
8oz.	METAL/CYANIDE	5-006444	F8140024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: BROWN - BLACK CLAY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION S4 / SO12 4

SAMPLING DATE 10/25/88 SAMPLING TIME 13:35

ORGANIC TRAFFIC NUMBER EAB 57
INORGANIC TRAFFIC NUMBER MEBB 80

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006445	F8140024
120ml.	VOA	5-006446	D8202014
120ml	VOA	5-006447	D8202014
8oz.	METAL/CYANIDE	5-006448	F8140024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: MEDIUM BROWN SANDY CLAY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION 55 / SOIL 5

SAMPLING DATE 10/25/88 SAMPLING TIME 13:50

ORGANIC TRAFFIC NUMBER EAB 58
INORGANIC TRAFFIC NUMBER MEBB 81

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006449	F8140024
120ml.	VOA	5-006450	D8202014
120ml	VOA	5-006451	D8202014
8oz.	METAL/CYANIDE	5-006452	F8140024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: BROWN - BLACK CLAY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL / FOS-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION 56 / SOIL 6

SAMPLING DATE 10/25/88 SAMPLING TIME 14:00

ORGANIC TRAFFIC NUMBER EAB 59
INORGANIC TRAFFIC NUMBER MEBB 82

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006453	F8140134
120ml.	VOA	5-006454	D8202014
120ml	VOA	5-006455	D8202014
8oz.	METAL/CYANIDE	5-006456	F8140134

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: WET BROWN SANDY CLAY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION S7 / SOIL 7

SAMPLING DATE 10/25/88 SAMPLING TIME 14:10

ORGANIC TRAFFIC NUMBER EAB 60
INORGANIC TRAFFIC NUMBER MEBB 83

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006457	F8140134
120ml.	VOA	5-006458	D8202014
120ml	VOA	5-006459	D8202014
8oz.	METAL/CYANIDE	5-006460	F8140134

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: LT. BROWN SANDY CLAY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/FOS-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION 58 / SOIL 8

SAMPLING DATE 10/25/88 SAMPLING TIME 14:35

ORGANIC TRAFFIC NUMBER EAB 61
INORGANIC TRAFFIC NUMBER MEBB 84

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006461	F8140134
120ml.	VOA	5-006462	D8202014
120 ml	VOA	5-006463	D8202014
8 oz.	METAL/CYANIDE	5-006464	F8140134

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: BROWN SAND

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/FOS-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION S9 / SOIL 9

SAMPLING DATE 10/25/88 SAMPLING TIME 14:31

ORGANIC TRAFFIC NUMBER EAB 62
INORGANIC TRAFFIC NUMBER MEBB 85

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz.	EXTRACTABLE	5-006465	F8140134
120ml.	VOA	5-006466	D8202014
120 ml	VOA	5-006467	D8202014
8 oz.	METAL/CYANIDE	5-006468	F8140134

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: WET BROWN SAND

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH N/A
CONDUCTIVITY N/A
TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION S10 / SOIL 10

SAMPLING DATE 10/25/88 SAMPLING TIME 14:35

ORGANIC TRAFFIC NUMBER EAB 63

INORGANIC TRAFFIC NUMBER MEBB 86

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz.	EXTRACTABLE	5-006469	F8120094
120 ml.	VOA	5-006470	08202014
120 ml	VOA	5-006471	08202014
8 oz.	METAL/CYANIDE	5-006472	F8120094

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: LT. BROWN WET SAND

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH N/A

CONDUCTIVITY N/A

TEMPERATURE N/A

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW62/MONITORING WELL 62

SAMPLING DATE 10/26/88 SAMPLING TIME 13:30

ORGANIC TRAFFIC NUMBER EAB 71
INORGANIC TRAFFIC NUMBER MEBB 94

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2 - 80 oz.	EXTRACTABLE	5-006527 - 28	A8084064
2-40 ml.	VOA	5-006529-30	B8176064
2-1 l PLASTIC	METAL/CYANIDE	5-006531-32	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS
pH 6.8
CONDUCTIVITY 1000 omh
TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-065

CASE NUMBER 10716

SAMPLE #/STATION LOCATION TW03 & MSD / TEST WELL 03

SAMPLING DATE 10/26/88 SAMPLING TIME 14:10

ORGANIC TRAFFIC NUMBER EAB 72

INORGANIC TRAFFIC NUMBER MEBU 00

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
4- 80 oz.	EXTRACTABLE	5-006533-34/5-006587-88	A8084064/A8084074
4- 40ml.	VOA	5-006535-36/5-006589-90	B8176064
2- 1l PLASTIC	METAL/CYANIDE	5-006537-38	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY & CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.8

CONDUCTIVITY 750 omh

TEMPERATURE 7°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW53 / MONITORING WELL 53

SAMPLING DATE 10/26/88 SAMPLING TIME 15:50

ORGANIC TRAFFIC NUMBER EAB 73

INORGANIC TRAFFIC NUMBER MERU 01

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2- 80 oz.	EXTRACTABLE	5-006539-40	A8084074
2- 40 ml.	VOA	5-006541-42	B8176064
2- 1l PLASTIC	METAL/CYANIDE	5-006543-44	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY + CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.25

CONDUCTIVITY 1000 omh

TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063
CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW54 / MONITORING WELL 54

SAMPLING DATE 10/26/88 SAMPLING TIME 16:20

ORGANIC TRAFFIC NUMBER EAB 74
INORGANIC TRAFFIC NUMBER MERU 02

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2- 80 oz.	EXTRACTABLE	5-006545-46	A8084074
2-40 ml.	VOA	5-006547-48	B8176064
2-1 l PLASTIC	METAL/CYANIDE	5-006549-50	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY & CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS
pH 6.98
CONDUCTIVITY 1250 umh
TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW55 / MONITORING WELL 55

SAMPLING DATE 10/26/88 SAMPLING TIME 18:55

ORGANIC TRAFFIC NUMBER EAB 75

INORGANIC TRAFFIC NUMBER MERU 03

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2- 80 oz.	EXTRACTABLE	5-006551-52	A8084074
2- 40 ml.	VOA	5-006553-54	B8176064
2-1 l PLASTIC	METAL/CYANIDE	5-006555-56	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY + CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS

pH 6.8

CONDUCTIVITY 1500 omh

TEMPERATURE 9.9°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW56 / MONITORING WELL 56

SAMPLING DATE 10/26/88 SAMPLING TIME 16:45

ORGANIC TRAFFIC NUMBER EAB 76

INORGANIC TRAFFIC NUMBER MEBU 04

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2 - 8 oz.	EXTRACTABLES	5-006557-58	A8174044
2 - 40 ml.	VOA	5-006559-60	B8176064
2 - 1 l PLASTIC	METAL / CYANIDE	5-006561-62	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY + CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.15

CONDUCTIVITY 800 omh

TEMPERATURE 7°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW70 / MONITORING WELL 70

SAMPLING DATE 10/26/88 SAMPLING TIME 18:45

ORGANIC TRAFFIC NUMBER EAB 77

INORGANIC TRAFFIC NUMBER MERU 05

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80 oz.	EXTRACTABLE	5-006563-64	A8174044
2-40 ml.	VOA	5-006565-66	B8176064
2-1 l PLASTIC	METAL/CYANIDE	5-006567-68	C8271024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SLIGHTLY CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED.

INSTRUMENT READINGS

pH 9.9

CONDUCTIVITY 400 omh

TEMPERATURE 7.64°C.

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW74 / MONITORING WELL 74

SAMPLING DATE 10/26/88 SAMPLING TIME 18:30

ORGANIC TRAFFIC NUMBER EAB 78

INORGANIC TRAFFIC NUMBER MERU 06

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2- 80 oz.	EXTRACTABLE	5-006569-70	A8174044
2- 40 ml.	VOA	5-006571-72	B8176064
2- 1 l PLASTIC	METAL/CYANIDE	5-006573-74	C8271024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: SILTY & CLOUDY

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 7.4

CONDUCTIVITY 400 omh

TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MW0 / MONITORING WELL DUPLICATE OF MW62

SAMPLING DATE 10/26/88 SAMPLING TIME 13:30

ORGANIC TRAFFIC NUMBER EAB 79

INORGANIC TRAFFIC NUMBER MERU 07

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2 - 80 oz.	EXTRACTABLE	5-006575-76	A8084064
2 - 40 ml.	VOA	5-006577-78	B8176064
2 - 1 l PLASTIC	METAL / CYANIDE	5-006579-80	C8272074

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 6.8

CONDUCTIVITY 1000 omh

TEMPERATURE 8°C

SAMPLE DESCRIPTION

SITE NAME/TDD# KENT COUNTY PLAINFIELD LANDFILL/F05-8711-063

CASE NUMBER 10716

SAMPLE #/STATION LOCATION MWB/MONITORING WELL BLANK

SAMPLING DATE 10/26/88 SAMPLING TIME 15:10

ORGANIC TRAFFIC NUMBER EAB 80

INORGANIC TRAFFIC NUMBER MEBU 08

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
2-80 oz.	EXTRACTABLE	5-006581-82	A8174044
2-40 ml.	VOA	5-006583-84	B8176064
2-1 l PLASTIC	METAL/CYANIDE	5-006585-86	C8271024

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: CLEAR

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE OBSERVED

INSTRUMENT READINGS

pH 8.39

CONDUCTIVITY 1 mh

TEMPERATURE 7.0°C.

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 209

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI 0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santelle

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8 oz. extractable	120ml VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
S1	10/25/88	12 55		✓	Soil 1	3	1	2					EAB 54	MEBB77	SOIL
S2	10/25/88	13:10		✓	Soil 2	3	1	2					EAB 55	MEBB 78	SOIL
S3	10/25/88	13:20		✓	Soil 3	3	1	2					EAB 56	MEBB 79	SOIL
S4	10/25/88	13:35		✓	Soil 4	3	1	2					EAB 57	MEBB 80	SOIL
S5	10/25/88	13:50		✓	Soil 5	3	1	2					EAB 58	MEBB 81	SOIL
S6	10/25/88	14:00		✓	Soil 6	3	1	2					EAB 59	MEBB 82	SOIL
S7	10/25/88	14:10		✓	Soil 7	3	1	2					EAB 60	MEBB 83	SOIL
S8	10/25/88	14:35		✓	Soil 8	3	1	2					EAB 61	MEBB 84	SOIL
S9	10/25/88	14:31		✓	Soil 9	3	1	2					EAB 62	MEBB 85	SOIL
S10	10/25/88	14:35		✓	Soil 10	3	1	2					EAB 63	MEBB 86	SOIL

LOT # 8oz. F8140024 (S1-5)
F8140134 (S6-9)
F8120094 (S10)
120ml. D8202014

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santelle	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Shipped FED EXP. TO IT CORP. Airbill 3523958933 Custody Seals 12369-70	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05-02600

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 513

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santelle

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTRACTABLE ~~AMBERS~~	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
~~MW62~~	~~10/26/88~~			✓	~~MW62 + MSD~~	~~8 4~~	~~4 2~~	~~4 2~~					~~EAB 71~~	~~MEBB 94~~	~~WATER~~
MW62	10/26/88	1330		✓	MW62	4	2	2					EAB 71	MEBB 94	WATER
MW0	10/26/88	1330		✓	MW0 - DUPLICATE	4	2	2					EAB 79	MEBU 07	WATER
MW53	10/26/88	1550		✓	MW53	4	2	2					EAB 73	MEBU 01	WATER

LOT # 80 oz. A8084064 (MW62 + DUPLICATE).
A8084074 (MW53).
40 ml. VOA B8176064

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santelle	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXP. TO JT CORP. AIRBILL 3523958911 CUSTODY SEALS 12381-82	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09206

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 243

PROJ. NO.: F05-8711-067
PROJECT NAME: FMI0310 / CASE 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTRACTABLE	40 ml. VOA				REMARKS OTR	ITR	LOW CONC. MATRIX
~~TW03~~	~~10/26/88~~			✓	~~TW03~~	~~4~~	~~2~~	~~2~~	~~VOID~~	~~FS~~		~~EAB 72~~	~~MEBU00~~	~~WATER~~
~~TW0~~	~~10/26/88~~			✓	~~DUPLICATE~~	~~4~~	~~2~~	~~2~~	~~VOID~~	~~FS~~		~~EAB~~		~~WATER~~
TW03	10/26/88	1410		✓	TW03 + MSD	8 ~~4~~ FS	4 FS	4 FS				EAB 72	~~MEBU~~ MEBU00	WATER
MW54	10/26/88	1620		✓	MW54	4	2	2				EAB 74	MEBU02	water
												LOT #	80 oz A8084064 (TW03)	
													A8084074 (MSD+MW54)	
													40 ml - B8176064	
													OTR IN COOLER # 513	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXPR. TO IT CORP. AIRBILL 3523958911 CUSTODY SEALS 12383-84	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09207

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 6603

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI 0310 / CASE 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTRACTABLE	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
MW55	10/26/88	1855		✓	MW55	4	2	2					EAB 75	MEBU 03	WATER
MW56	10/26/88	1645		✓	MW56	4	2	2					EAB 76	MEBU 04	WATER
MW70	10/26/88	1845		✓	MW70	4	2	2					EAB 77	MEBU 05	WATER

LOT # 80 oz. A8084074 (MW55)
A8174044 (MW56 & 70)
40 ml. B8186064

* OTR IN COOLER # 513

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXP. TO IT CORP. AIRBILL 3523958911 CUSTODY SEALS 12385-86	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09208

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 92

PROJ. NO.: F05-8711-03
PROJECT NAME: FMI0310 / CASE 10716
SAMPLERS: (Signature) Frank Sattler

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTractable	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
MW 74	10/26/88	1830		✓	MW 74	4	2	2					EAB 78	MEBU 06	WATER
	10/26/88			✓	FS VOID	4	2	2					EAB		~~WATER~~
MW B	10/26/88	1510		✓	MW B	4	2	2					EAB 80	MEBU 08	
													LOT # 80 oz. A8174044		
													40 ml. B8176064		
													* OTR IN COOLER #513		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Sattler	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXP. TO IT CORP. AIRBILL 3523958911 CUSTODY SEALS 12387-88	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09209

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 70

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE #10716 / SAS# 4062E
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTRACTABLE ~~AMBER~~	40 ml VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW1	10/25/88	1610		✓	RW1	5	3	2					EAB 64	MEBB 87	WATER
~~RW2~~															
~~MSD~~															
RW0	10/25/88	1610		✓	RW0	5	3	2					EAB 69	MEBB 92	WATER
RW3	10/25/88	1630		✓	RW3	5	3	2					EAB 66	MEBB 89	WATER
													LOT # 1l AMBER H8267014		
													40ml VOA B8176064		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXP. TO COMPUCHEM. AIRBILL 8523958896 CUSTODY SEALS 12373-74	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory Files

5-09202

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER #237

PROJ. NO.: F05-8711-063
PROJECT NAME: EMI 0310 / CASE # 10716 / SAS # 4062E
SAMPLERS: (Signature) Frank Lentilla

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTRACTABLE AMBER	40 ml VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW2	10/25/88	1620		✓	RW2	5	3	2					EAB 65	MEBB 88	WATER
RW4	10/25/88	1730		✓	RW4	5	3	2					EAB 67	MEBB 90	WATER
MSD	10/25/88	1620		✓	MSD	5	3	2					EAB 65	—	WATER
													COT #	1L AMBER H8267014	
														40ml. VOA B8176064	
													(OTR IN COOLER #70)		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Lentilla	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXP. TO COMPUCHEM AIRBILL 3523958896 CUSTODY SEALS 12375-76	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09203

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

000058 # 166

PROJ. NO.	PROJECT NAME
F05-8711-063	FMI 0310 / CASE # 10716 / SAS # 4062E

SAMPLERS: (Signature) Frank Santillo

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTRACTABLE	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW5	10/25/88	1810		✓	RW5	5	3	2					EAB 68	MEBB 91	WATER
RW8	10/25/88	1500		✓	RW8	5	3	2					EAB 70	MEBB 93	WATER
													LOT # 1L AMBR H8267014 (5)		
													H8267134 (BLANK)		
													40ml. VOA 88176064		
													(OTR IN COOLER # 70)		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santillo	10/25/88 1700				
Relinquished by: (Signature)	**Date / Time**	**Received by: (Signature)**	**Relinquished by: (Signature)**	**Date / Time**	**Received by: (Signature)**
Relinquished by: (Signature)	**Date / Time**	**Received for Laboratory by: (Signature)**	**Date / Time**	**Remarks** SHIPPED FED. EXP. TO COMPOSITE	

AIRBILL 3523958896
CUSTODY SEALS 12377-781

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09204

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 27

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz metal/cyanide						REMARKS ITR	OTR	LOW CONC MATRIX
S1	10/25/88	12:55		✓	Soil 1	1	1						MEBB 77	EAB54	Soil
S2	10/25/88	13:10		✓	Soil 2		1						MEBB 78	EAB55	Soil
S3	10/25/88	13:20		✓	Soil 3	1	1						MEBB 79	EAB56	Soil
S4	10/25/88	13:35		✓	Soil 4	1	1						MEBB 80	EAB57	Soil
S5	10/25/88	13:50		✓	Soil 5	1	1						MEBB 81	EAB58	Soil
S6	10/25/88	14:00		✓	Soil 6	1	1						MEBB 82	EAB 59	Soil
S7	10/25/88	14:10		✓	Soil 7	1	1						MEBB 83	EAB 60	Soil
S8	10/25/88	14:35		✓	Soil 8	1	1						MEBB 84	EAB 61	Soil
S9	10/25/88	14:31		✓	Soil 9	1	1						MEBB 85	EAB 62	Soil
S10	10/25/88	14:35		✓	Soil 10	1	1						MEBB 86	EAB 63	Soil
													LOT # 8oz. F8140024 (S1-5)		
													F8140134 (S6-9)		
													F8120094 (S10)		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Shipped FED EXP. TO ENSECO/RMAL Airbill 3523958922 Custody Seals 12371-2	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09201

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

COOLER # 228

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santelle

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	LITER METALS (HNO3)	LITER CN- (NaOH)					REMARKS ITR	OTR	LOW CONC. MATRIX
FS ~~MW62~~	~~10/26/88~~	~~VO~~	~~D~~	~~✓~~	~~MW63 + MSD~~ FS	~~VO~~	~~#~~	~~#~~			FS		~~MEBB94~~ ~~EAB~~	~~EAB 71~~ FS	~~WATER~~
TW03	10/26/88	1410		✓	TW03	2	1	1					MEBU 00	EAB 72	WATER
MW53 FS ~~MW62~~	10/26/88	1550		✓	MW53 FS ~~MW62 + MSD~~ FS	2	1	1					MEBU 01	EAB 73	WATER
MW54	10/26/88	1620		✓	MW54	2	1	1					MEBU 02	EAB 74	WATER
MW55	10/26/88	1855		✓	MW55	2	1	1					MEBU 03	EAB 75	WATER
MW56	10/26/88	1645		✓	MW56	2	1	1					MEBU 04	EAB 76	WATER
MW70	10/26/88	1845		✓	MW70	2	1	1					MEBU 05	EAB 77	WATER
MW74	10/26/88	1830		✓	MW74	2	1	1					MEBU 06	EAB 78	WATER
MWD	10/26/88	1330		✓	MWD	2	1	1					MEBU 07	EAB 79	WATER
MWB	10/26/88	1510		✓	MWB	2	1	1					MEBU 08	EAB 80	WATER
MW62	10/26/88	1330		✓	MW62	2	FS 1	1					MEBB94	EAB 71	WATER
													LOT # C8272074 (MW62, TW03,		
													MW53-56)		
													C8271024 (MW70 & MW74)		
													Metal waters have been filtered!!		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santelle	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: SHIPPED FED. EXP. TO ENSECO/[illegible] AIRBILL 3523958900 CUSTODY SEALS 12389-90	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09210

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

657

COOLER # 92 FS

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F05-8711-023

PROJECT NAME: FMI0310 / CASE # 10716 / SAS # 4062E

SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	LITER METALS (HNO3)	LITER CN - (NaOH)					REMARKS ITR	OTR	LOW CONC. MATRIX
RW1	10/25/88	1610		✓	RW1	2	1	1					MEBB 87	EAB 64	WATER
RW2	10/25/88	1620		✓	RW2	2	1	1					MEBB 88	EAB 65	WATER
RW3	10/25/88	1630		✓	RW3	2	1	1					MEBB 89	EAB 66	WATER
RW4	10/25/88	1730		✓	RW4	2	1	1					MEBB 90	EAB 67	WATER
RW5	10/25/88	1810		✓	RW5	2	1	1					MEBB 91	EAB 68	WATER
RWD	10/25/88	1611D		✓	RWD	2	1	1					MEBB 92	EAB 69	WATER
RWB	10/25/88	1500		✓	RWB	2	1	1					MEBB 93	EAB 70	WATER
~~MSD~~	~~10/25/88~~	~~FS~~		✓	~~MSD~~	~~2~~	~~1~~	~~1~~	~~FS~~					~~FS~~	
													LOT # 1L PLASTIC C82272074		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FEDERAL EXPRESS TO NANCO LAB. AIRBILL # 3523958885 CUSTODY SEALS 12379-80	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09205

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO MID000265066

PROJ. ACCT. NO. FMI 0310SB

TDD FD5-8711-063

SPLIT SAMPLES ACCEPTED(✓) DECLINED( )

FACILITY/OCCUPANT NAME: Kent County Plainfield Landfill c/o Jerry Powell

FACILITY/OCCUPANT ADDRESS: 2908 10 Mile Road Rockford, MI 49341

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
MW62	10/26/88	1330	✓	EAB71	MEBU 94	Monitoring Well MW62	✓	✓	✓	✓	✓			Water
TW03	10/26/88	1410	✓	EAB72	MEBU 00	Monitoring Well TW03	✓	✓	✓	✓	✓			Water
MW53	10/26/88	1550	✓	EAB73	MEBU 01	Monitoring Well MW53	✓	✓	✓	✓	✓			Water
MW54	10/26/88	1620	✓	EAB74	MEBU 02	Monitoring Well MW54	✓	✓	✓	✓	✓			Water
MW55	10/26/88	1855	✓	EAB75	MEBU 03	Monitoring Well MW55	✓	✓	✓	✓	✓			Water
MW56	10/26/88	1645	✓	EAB76	MEBU 04	Monitoring Well MW56	✓	✓	✓	✓	✓			Water
MW70	10/26/88	1945	✓	EAB77	MEBU 05	Monitoring Well MW70	✓	✓	✓	✓	✓			Water
MW74	10/26/88	1830	✓	EAB78	MEBU 06	Monitoring Well MW74	✓	✓	✓	✓	✓			Water

TRANSFERRED BY: Stephen Beunen (Signature) 10/26/88 (Date) 1500 (Time)

RECEIVED BY: [signature] (Signature) 11/3/88 (Date) 11:45 (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE: CIVIL ENGINEER

TELEPHONE: (616) 774-3694

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U.S. EPA ID NO MID 000265066

PROJ. ACCT. NO. FMI 03105B

TDD F05-8711-063

SPLIT SAMPLES ACCEPTED(✓) DECLINED( )

FACILITY/OCCUPANT NAME: Kent County Plainfield Landfill c/o Jerry Powell

FACILITY/OCCUPANT ADDRESS: 2909 10 Mile Road Rockford, MI 49341

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
S1	10/25/88	1255	✓	EAB 54	MEBB 77	Soil 1	✓	✓	✓	✓	✓			Soil
S2	10/25/88	1310	✓	EAB55	MEBB 78	Soil 2	✓	✓	✓	✓	✓			Soil
S3	10/25/88	1320	✓	EAB 56	MEBB 79	Soil 3	✓	✓	✓	✓	✓			Soil
S4	10/25/88	1335	✓	EAB 57	MEBB 80	Soil 4	✓	✓	✓	✓	✓			Soil
S5	10/25/88	1350	✓	EAB 58	MEBB 81	Soil 5	✓	✓	✓	✓	✓			Soil
S6	10/25/88	1400	✓	EAB 59	MEBB 82	Soil 6	✓	✓	✓	✓	✓			Soil
S7	10/25/88	1410	✓	EAB 60	MEBB 83	Soil 7	✓	✓	✓	✓	✓			Soil
S8	10/25/88	1435	✓	EAB 61	MEBB 84	Soil 8	✓	✓	✓	✓	✓			Soil
S9	10/25/88	1431	✓	EAB 62	MEBB 85	Soil 9	✓	✓	✓	✓	✓			Soil
S10	10/25/88	1435	✓	EAB 63	MEBB 86	Soil 10	✓	✓	✓	✓	✓			Soil
RW1	10/25/88	1610	✓	EAB 64	MEBB 87	2770 10 Mile Road	✓	✓	✓	✓	✓			Water
RW2	10/25/88	1620	✓	EAB 65	MEBB 88	8040 Belmont Street	✓	✓	✓	✓	✓			Water
RW3	10/25/88	1630	✓	EAB 66	MEBB 89	3232 10 Mile Road	✓	✓	✓	✓	✓			Water
RW4	10/25/88	1730	✓	EAB 67	MEBB 90	8246 Belmont Street	✓	✓	✓	✓	✓			Water
RW5	10/25/88	1810	✓	EAB 68	MEBB 91	7740 House Court	✓	✓	✓	✓	✓			Water

TRANSFERRED BY: Stephen Bunsen 10/28/88 1500
(Signature) (Date) (Time)

RECEIVED BY: [illegible] 11/3/88 11:45
(Signature) (Date) (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE: CIVIL ENGINEER

TELEPHONE: (616) 774-3694

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW1 (EAB64/MEBB87)

CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[19] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	64,700P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	[74] P							80	
LEAD		50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	26,400P							0.1	
MANGANESE								5	
MERCURY		2	1 1					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM		10						2	
SILVER		50						6	
SODIUM	131070P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	136PJN							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW2 (EAB65/MEBB88						LABORATORY QUALITY CONTROL DATA (ppb)			
CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE	2	200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL	2							2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NA					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[78] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	115,000P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	641 P							80	
LEAD	[4.2] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	51,900 P							0.1	
MANGANESE	[4] P							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM	[1820] P							2	

Table 1 (cont.)

CONTAMINANT INORGANIC ANALYTES	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SELENIUM		10						2	
SILVER		50						6	
SODIUM	25,500 P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	561 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW3 (EAB66/MEBB 89) CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[17] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	63,400 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	[84] P							80	
LEAD	[1.5] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	24,900 P							0.1	
MANGANESE	[2] P							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM		10						2	
SILVER		50						6	
SODIUM	15,900P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	183 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommendod to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW4 (EAB67/MEBB90)									
CONTAMINANT						LABORATORY QUALITY CONTROL DATA (ppb)			
VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC (LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[37] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	75,900 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	[87] P							80	
LEAD	56.9 SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	32,300 P							0.1	
MANGANESE								5	
MERCURY		2	1 1					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM		10						2	
SILVER		50						6	
SODIUM	29,300P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	152 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW5 (EAB68/MEBB91)									
CONTAMINANT						LABORATORY QUALITY CONTROL DATA (ppb)			
VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
SEMI-VOLATILE ORGANIC COMPOUNDS									
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[69] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	96,600 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	256 P							80	
LEAD	[1.4] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	43,200 P							0.1	
MANGANESE	40 P							5	
MERCURY		2	1 1					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
INORGANIC ANALYTES									
SELENIUM		10						2	
SILVER		50						6	
SODIUM	[4300] P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	220PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	R	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination ✓
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW1 (EAB64/MEBB87) CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[19] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	64,700P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	[74] P							80	
LEAD		50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	26,400P							0.1	
MANGANESE								5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT INORGANIC ANALYTES	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
SELENIUM		10						2	
SILVER		50						6	
SODIUM	0.3107P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	1.36PJN							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination ✓ Sodium
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

check 1,1,1-trichloroethane, lead

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS AND APPLICABLE FEDERAL DRINKING WATER STANDARDS AND HEALTH ADVISORIES

SAMPLE: RW2 (EAB65/MEBB88

CONTAMINANT VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE	2	200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL	2							2	possible artifact
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA		–			(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[78] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	115,000P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	641 P							80	
LEAD	[4.2] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	51,900 P							0.1	
MANGANESE	[4] P							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM	[1820] P							2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
INORGANIC ANALYTES						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SELENIUM		10						2	
SILVER		50						6	
SODIUM	25,500 P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	561 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscop
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Lov Level Contamination _____
Hits just above health-related standards.

Significant Contamination ✓ Iodeum
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW3 (EAB66/MEBB89)

CONTAMINANT VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[17] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	63,400 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	[84] P							80	
LEAD	[1.5] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	24,900 P							0.1	
MANGANESE	[2] P							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT INORGANIC ANALYTES	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
SELENIUM		10						2	
SILVER		50						6	
SODIUM	15,900P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	183PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrosc
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative i it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloric acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination _____
No hits above any health-related standards.

Low Level Contamination ✓ Sodium
Hits just above health-related standards.

Significant Contamination ✓ Lead
Hits are above health-related standards.

0099:3

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS AND APPLICABLE FEDERAL DRINKING WATER STANDARDS AND HEALTH ADVISORIES

SAMPLE: RW4 (EAB67/MEBB90) CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	52					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	32 P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	75,900 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	~~38 P~~							80	
LEAD	56.9 SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	32,300 P							0.1	
MANGANESE								5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT INORGANIC ANALYTES	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
SELENIUM		10						2	
SILVER		50						6	
SODIUM	29,300P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	152 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrosco;
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative i: it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chlorid acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	N	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

M E M O R A N D U M

DATE: 12/29/88

TO: William Messenger, U.S. EPA

FROM: Stephen Bunsen

[redacted]

Action Level

No Contamination ✓
No hits above any health-related standards.

Low Level Contamination _____
Hits just above health-related standards.

Significant Contamination _____
Hits are above health-related standards.

0099:3

Check lead

Table 1

DATA OF RESIDENTIAL WELL SAMPLE ANALYSIS
AND APPLICABLE FEDERAL DRINKING WATER STANDARDS
AND HEALTH ADVISORIES

SAMPLE: RW5 (EAB68/MEBB91) CONTAMINANT / VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb): LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	COMMENTS
BENZENE		5	NR					1.5	
BROMODICHLOROMETHANE								1.5	
BROMOFORM								1.5	
BROMOMETHANE								10	
CARBON TETRACHLORIDE		5	NR					1.5	
CHLOROBENZENE			300					1.5	
CHLOROETHANE								1.5	
2-CHLOROETHYL VINYL ETHER								1.5	
CHLOROFORM								1.5	
CHLOROMETHANE								10	
DIBROMOCHLOROMETHANE								1.5	
1,1-DICHLOROETHANE								1.5	
1,2-DICHLOROETHANE		5	NR					1.5	
1,1-DICHLOROETHENE		7	7					1.5	
trans-1,2-DICHLOROETHENE			70					1.5	
1,2-DICHLOROPROPANE			NA					1.5	
cis-1,3-DICHLOPROPROPENE								2	
trans-1,3-DICHLOROPROPENE								1	
ETHYL BENZENE			680					1.5	
METHYLENE CHLORIDE			NR					1	
1,1,2,2-TETRACHLOROETHANE								1.5	
TETRACHLOROETHENE			NR					1.5	
TOLUENE			2420					1.5	
1,1,1-TRICHLOROETHANE		200	200					1.5	
1,1,2-TRICHLOROETHANE								1.5	
TRICHLOROETHENE		5	NR					1.5	
VINYL CHLORIDE		2	NR					10	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
VOLATILE ORGANIC COMPOUNDS									
ACROLEIN								100	
ACETONE								75	
ACRYLONITRILE								50	
CARBON DISULFIDE								3	
2-BUTANONE			170					(50)	
VINYL ACETATE								15	
4-METHYL-2-PENTANONE								(3)	
2-HEXANONE								(50)	
STYRENE			140					1	
XYLENE, TOTAL			440					2	
SEMI-VOLATILE ORGANIC COMPOUNDS									
ANILINE								1.5	
BIS(2-CHLOROETHYL)ETHER								1.5	
PHENOL								2	
2-CHLOROPHENOL								2	
1,3-DICHLOROBENZENE			620					2	
1,4-DICHLOROBENZENE		75	75					2	
1,2-DICHLOROBENZENE			620					2.5	
BENZYL ALCOHOL								2	
BIS(2-CHLOROISOPROPYL) ETHER								2.5	
2-METHYLPHENOL								1	
HEXACHLOROETHANE								2	
N-NITROSODIPROPYLAMINE								1.5	
NITROBENZENE								2.5	
4-METHYLPHENOL								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
ISOPHORONE								2.5	
2-NITROPHENOL								2	
2,4-DIMETHYLPHENOL								2	
BIS(2-CHLOROETHOXY) METHANE								2.5	
2,4-DICHLOROPHENOL								2	
1,2,4-TRICHLOROBENZENE								2	
NAPHTHALENE								2	
4-CHLOROANILINE								2	
HEXACHLOROBUTADIENE								2.5	
BENZOIC ACID								(30)	
2-METHYLNAPTHALENE								2	
4-CHLORO-3-METHYLPHENOL								1.5	
HEXACHLOROCYCLOPENTADIENE								2	
2,4,6-TRICHLOROPHENOL								1.5	
2,4,5-TRICHLOROPHENOL		10	62					1.5	
2-CHLORONAPTHALENE								1.5	
ACENAPTHYLENE								1.5	
DIMETHYL PHTHALATE								1.5	
2,6-DINITROTOLUENE								1	
ACENAPHTHENE								1.5	
3-NITROANILINE								2.5	
DIBENZOFURAN								1	
2,4-DINITROPHENOL								(15)	
2,4-DINITROTOLUENE								1	

Table 1 (cont.)

CONTAMINANT SEMI-VOLATILE ORGANIC COMPOUNDS	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
FLUORENE								1	
4-NITROPHENOL								1.5	
4-CHLOROPHENYL PHENYL ETHER								1	
DIETHYL PHTHALATE								1	
4,6-DINITRO-2-METHYLPHENOL								(15)	
1,2-DIPHENYLHYDRAZINE								1	
N-NITROSODIPHENYLAMINE									
DIPHENYLAMINE								1.5	
4-NITROANILINE								3	
4-BROMOPHENYL PHENYL ETHER								1.5	
HEXACHLOROBENZENE			NR					1.5	
PENTACHLOROPHENOL			220					2	
PHENANTHRENE								1	
ANTHRACENE								2.5	
DI-n-BUTYL PHTHALATE								2	
FLUORANTHENE								1.5	
PYRENE								1.5	
BUTYL BENZYL PHTHALATE								3.5	
CHRYSENE									
BENZO(a)ANTHRACENE								1.5	
BIS(2-ETHYLHEXYL) PHTHALATE								1	
DI-n-OCTYL PHTHALATE								1.5	
BENZO(b)FLUORANTHENE									
BENZO(k)FLUORANTHENE								1.5	
BENZO(a)PYRENE								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SEMI-VOLATILE ORGANIC COMPOUNDS									
INDENO(1,2,3-cd)PYRENE								3.5	
DIBENZO(a,h)ANTHRACENE								2.5	
BENZO(g,h,i)PERYLENE								4	
2-NITROANILINE								1	
PESTICIDES AND PCBS									
ALDRIN								0.005	
alpha BHC								(0.010)	
beta BHC								(0.005)	
delta BHC								(0.005)	
gama BHC(LINDANE)		4	2					0.005	
CHLORDANE			NR					(0.020)	
4,4'-DDD								(0.020)	
4,4'-DDE								(0.005)	
4,4'-DDT								0.020	
DIELDRIN								0.010	
ENDOSULFAN I								0.010	
ENDOSULFAN II								0.010	
ENDOSULFAN SULFATE								(0.10)	
ENDRIN		0.2	0.32					0.010	
ENDRIN ALDEHYDE								(0.030)	
ENDRIN KETONE								(0.030)	
HEPTACHLOR			NR					0.030	
HEPTACHLOR EPOXIDE			NR					0.005	
4,4'-METHOXYCHLOR		5	340					0.020	
TOXAPHENE		100	NA					(0.25)	
PCB-1242			NA					(0.10)	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
PESTICIDES AND PCBS									
PCB-1248			NA					(0.10)	
PCB-1254			NA					(0.10)	
PCB-1260			NA					(0.10)	
INORGANIC ANALYTES									
ALUMINUM								80	
ANTIMONY								2	
ARSENIC		50	50R					2	
BARIUM	[69] P	1000	1500					6	
BERYLLIUM								1	
BORON								80	
CADMIUM		10	5					10	
CADMIUM		10	5					0.2	
CALCIUM	96,600 P							0.5	
CHROMIUM		50	120					8	
COBALT								6	
COPPER		1000						6	
IRON	256 P							80	
LEAD	[1.4] SF	50						2	
LEAD		50						70	
LITHIUM								10	
MAGNESIUM	43,200 P							0.1	
MANGANESE	40 P							5	
MERCURY		2	11					0.1	
MOLYBDENUM								15	
NICKEL			150					15	
POTASSIUM								2	

Table 1 (cont.)

CONTAMINANT	CONCENTRATION OF DETECTED CONTAMINANT (ppb)	MAXIMUM CONTAMINANT LEVEL (ppb)	HEALTH ADVISORY LEVEL (ppb)	OTHER HEALTH-RELATED GUIDANCE VALUE	RANGE	LABORATORY QUALITY CONTROL DATA (ppb)			COMMENTS
INORGANIC ANALYTES						LAB BLANK	SAMPLE DUPLICATE	DETECTION LIMIT	
SELENIUM		10						2	
SILVER		50						6	
SODIUM	[4300] P			20,000				1	
STRONTIUM								10	
SULFIDE								1	
SULFATE		250,000						0.05	
THALLIUM								2	
TITANIUM								25	
TIN								40	
VANADIUM								5	
YTTRIUM								5	
ZINC	220 PNJ							40	
CYANIDE			154					8	
SPECIAL ORGANIC ANALYSIS									
ANILINE								50	
ACROLEIN								100	
ACRYLONITRILE								10	

A SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - mg/kg or ppm (parts per million)

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectrosco;
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative i: it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chlorid acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

B. Inorganics

FOOTNOTE OLD	FOOTNOTE NEW	DEFINITION	INTERPRETATION
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	R	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
( )	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	M	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (85-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.

C. Other Symbols Used

NA Value not available due to insufficient data.
NR Value not recommended to be calculated, since chemical has proven to be a human carcinogen.
( ) Estimated value.

D. Analytical Method Qualifiers for Inorganic

"P" for ICP

"A" for Flame AA

"F" for Furnance AA

"CV" for Manual Cold Vapor AA

"AV" for Automated Cold Vapor AA

"AS" for Semi-automated Spectrophotometric

"C" for Manual Spectrophotometric

"T" for Titrimetric

"NR" if the analyte is not required to be analyzed.

Kent Co. Plainfield Twp - Randall

RKW

BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

1500 Scribner Ave., N.W. Grand Rapids, Michigan 49504
Telephone: (616) 774-3694

RECEIVED
JUL 1 5 1985
SURFACE WATER QUALITY DIV.
GRAND RAPIDS

DATE: July 12, 1985

DPW FILE REF. _____

YOUR FILE NO. _____

TO: Ron Woods
S.W.Q. Division
Grand Rapids office of M.D.N.R.

FROM: ____ Water & Sewer Operations
X Solid Waste
____ Resource Recovery

We are sending you: ( ) Herewith ( ) Under Separate Cover
(X) At Your Request

AS FOLLOWS:

____ Plans ____ Specifications
____ Certified Copies ____ Change Orders
X Other

FOR YOUR: ( ) Files ( ) Approval
(X) Information ( ) Signature

REMARKS: Organic Report for month of June, 1985. Outfalls 004, 005, 006, 007. It should be noted that there was an extreme amount of rain surface runoff for sampling on the 11th of June. Also, during the 1st week of June, the outlet levels on ponds 4 & 5 were raised to obtain better discharge water quality as previously planned.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

By: J.P. - JK
Jerry Powell, P.E.

CC:

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #004 (PLAINFIELD TWP.)

DATE SAMPLED: 06/11/85 TIME:
DATE RECEIVED: 06/11/85 TIME: 12:50 PM
DATE COMPLETED: 06/12/85

SAMPLE NO. 52110

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.079	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.014	0.001
1,1-DICHLOROETHANE	0.035	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	0.006	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.015	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	0.004	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #005 (PLAINFIELD TWP.)

DATE SAMPLED: 06/11/85 TIME: 10:50 AM
DATE RECEIVED: 06/11/85 TIME: 12:50 PM
DATE COMPLETED: 06/13/85

SAMPLE NO. 52111

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	0.003	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	0.022	0.010	BENZENE	0.009	0.001
CHLOROETHANE	0.032	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.052	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	0.047	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.18	0.001
1,1-DICHLOROETHANE	0.21	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	0.058	0.001	ETHYL BENZENE	0.051	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	0.004	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.012	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	0.049	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE
ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W PKWY. S.E., GRAND RAPIDS, MI 49506, (616) 942-0370

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #006 (PLAINFIELD TWP.)

DATE SAMPLED: 06/11/85 TIME: 10:15 AM
DATE RECEIVED: 06/11/85 TIME: 12:50 PM
DATE COMPLETED: 06/12/85

SAMPLE NO. 52112

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.004	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #007 (PLAINFIELD TWP.)

DATE SAMPLED: 06/11/85 TIME: 10:35 AM
DATE RECEIVED: 06/11/85 TIME: 12:50 PM
DATE COMPLETED: 06/12/85

SAMPLE NO. 52113

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Alkalinity mg/l	pH s.u.	Conductivity umhos/cm	Carbonate mg/l	Bicarbonate mg/l	Sulfate mg/l	Chloride mg/l	Groundwater Table Elevation Meters
MW 47	282	7.8	1091	K 5	282	195	69.9	*
MW 64	232	8.0	614	"	232	40.4	34.9	*
MW 62	740	7.2	1870	"	740	15.8	187	*
MW 65	322	8.0	759	"	322	25.4	42.0	252.39
MW 63	178	8.2	420	"	178	20.6	13.3	*
Outfall 004	430	7.7	975	"	430	37.5	37.4	—
Outfall 007	368	8.2	846	"	368	35.9	36.6	--
Outfall 005	430	7.0	954	"	430	29.8	36.3	--
Outfall 006	387	8.2	890	"	387	24.3	47.2	--
Preservative Blank	7.0	—	1.9	"	7.0	K 1	K 1	--

* = Information needed not obtainable
" = Same as above
T = Total
D = Dissolved
K = Less than

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ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Potassium mg/l	Magnesium mg/l	Sodium mg/l	Calcium mg/l	Nickel D ug/l	Lead D ug/l	Zinc D ug/l	Hex Chromium ug/l	Chromium D ug/l	Cadmium D ug/l	Copper D ug/l	Iron D ug/l
MW 47	1.2	50.0	18.7	136	K 50	K 50	190	K 5	K 50	K 20	K 20	170
MW 64	0.5	31.9	8.0	65.1	"	"	715	"	"	"	"	100
MW 62	1.2	89.0	128	156	"	"	180	7	"	"	"	15300
MW 65	1.5	35.7	19.4	82.6	"	"	1400	K 5	"	"	"	360
MW 63	0.6	20.0	6.3	45.0	"	"	K 50	"	"	"	"	K 100
Outfall 004	2.4	42.0	18.5	126	"	"	170	"	"	"	"	"
Outfall 007	2.7	40.0	18.1	95.0	"	"	110	"	"	"	"	"
Outfall 005	0.9	39.0	17.2	125	"	"	190	"	"	"	"	1850
Outfall 006	2.2	41.0	22.9	101.4	"	"	90	"	"	"	"	K 100
	K 0.1	K 1	K 1	K 1	"	"	K 50	"	"	"	"	"

" = Same as above
T = Total
D = Dissolved
K = Less than

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ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Purgeable Halocarbons ug/l								Purgeable Aromatic Hydrocarbons ug/l				
	Tetrachloro-ethane	1,2 Dichloro-ethene	1,1,1 Trichloro-ethane	Trichloro-ethene	1,1 Dichloro-ethane	1,2 Dichloro-ethane	Methylene chloride	All Others	Toluene	Xylenes	Ethyl Benzene	Benzene	All Others
MW 47	K 1	K 1	5.6	K 1	2.8	K 1	K 1	K 1	K 5	K 5	K 5	K 5	K 5
MW 64	"	"	K 1	"	K 1	"	"	"	"	"	"	"	"
MW 62*	"	12	7.5	2.4	46	K 2 Int.	"	"	"	"	"	"	"
MW 65	"	K 1	K 1	K 1	1.8	K 1	"	"	"	"	"	"	"
MW 63	"	"	"	"	"	"	"	"	"	"	"	"	"
Outfall 004	"	13	12	3.6	32	"	130	"	11	5.7	"	"	"
Outfall 007	"	K 1	K 1	K 1	1.3	K 1	K 1	K 1	K 5	K 5	"	"	"
Outfall 005	28	78	K 10	39	190	K 10	K 10	K 10	150	96	39	9.6	"
Outfall 006		K 1	K 1	K 1	3.6	K 1	K 1	K 1	K 5	K 5	K 5	K 5	"
Preservative Blank		"	"	"	K 1	"	"	"	"	"	"	"	"

" = Same as above

K = Less than
Int= Interference
*Note: MW 62-low boiling compounds present in significant quantities

ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Alkalinity mg/l	pH S.U.	Conductivity umhos/cm	Carbonate mg/l	Bicarbonate mg/l	Sulfate mg/l	Chloride mg/l	Groundwater Table Elevation Meters
MW 67	176	8.0	374	K 5	176	18.0	K 1	262.84
MW 68	198	8.1	418	"	198	21.1	"	263.96
MW 35	154	8.2	341	"	154	21.0	"	263.54
MW 69	332	7.7	819	"	332	30.1	42.4	260.71
MW 55	730	7.1	1359	"	730	26.7	25.7	263.97
MW 53	1000	6.6	1920	"	1000	36.4	68.1	265.89
MW 54	730	6.9	2850	"	730	60.5	474	267.43
MW 48	288	7.6	635	"	288	30.9	4.6	264.83
MW 56	640	7.3	1360	"	640	37.0	77.5	258.14
MW 57	293	7.7	881	"	293	141	21.1	262.60
MW 66	610	7.6	1890	"	610	13.7	245	264.51

" = Same as above
T = Total
D = Dissolved

ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Potassium mg/l	Magnesium mg/l	Sodium mg/l	Calcium mg/l	Nickel D ug/l	Lead D ug/l	Zinc D ug/l	Hex Chromium ug/l	Chromium D ug/l	Cadmium D ug/l	Copper D ug/l	Iron D ug/l
MW 67	0.4	18.9	2.1	46.6	K 50	K 50	620	K 5	K 50	K 20	K 20	K 100
MW 68	0.7	22.5	4.3	50.0	"	"	2200	"	"	"	"	100
MW 35	0.2	24.0	2.8	30.9	"	"	90	"	"	"	"	K 100
MW 69	0.6	40.1	14.8	91.8	"	"	1700	"	"	"	"	"
MW 55	0.6	70.0	7.4	198	"	"	190	"	"	"	"	6000
MW 53	1.7	105	22	267	"	"	250	"	"	"	"	8350
MW 54	2.7	74	168	341	"	"	150	"	"	"	"	8400
MW 48	0.3	24.9	4.9	85.3	"	"	775	"	"	"	"	K 100
MW 56	0.9	70.0	24.9	169	"	"	190	"	"	"	"	875
MW 57	0.5	44.0	6.0	115	"	"	120	"	"	"	"	870
MW 66	2.4	91.0	69.1	188	"	"	5150	"	"	"	"	3 :00

" = Same as above
T = Total
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K = Less than

ANALYTICAL RESULTS
OF SAMPLES COLLECTED AT

Ten Mile Landfill
Kent County, Michigan

June 10 & 11, 1985

Monitoring Point	Purgeable Halocarbons ug/l							Purgeable Aromatic Hydrocarbons ug/l				
	1,2 Di-chloroethene	1,1,1 Tri-chloroethane	Tri-chloroethene	1,1 Di-chloroethane	1,2 Di-chloroethane	Methylene chloride	All Others	Toluene	Xylenes	Ethyl Benzene	Benzene	All Others
MW 67	K 1	1.6	51	K 1	K 1	K 1	K 1	K 5	K 5	K 5	K 5	K 5
MW 68	"	1.8	76	"	"	"	"	"	"	"	"	"
MW 35	"	K 1	7	"	"	"	"	"	"	"	"	"
MW 69	"	"	K 1	"	"	"	"	"	"	"	"	"
MW 55	K 10	31	32	410	K 15 Int	K 10	K 10	"	"	"	"	"
MW 53 *	K 5	K 5	64	27	K 5	210	K 5	"	"	"	"	"
MW 54 *	"	"	25	20	"	140	"	"	"	"	"	"
MW 48	K 1	K 1	3	K 1	K 1	K 1	K 1	"	"	"	"	"
MW 56	"	1.8	59	"	"	"	"	"	"	"	"	"
MW 57	"	2.8	87	"	"	"	"	"	"	"	"	"
MW 66	K 1	K 1	K 1	K 1	K 1	K 1	K 1	"	"	"	"	"

" = Same as above
K = Less than
Int= Interference
*Note: MW 53, 54, have low boiling compounds present in significant quantities

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Analytical Results
of Samples collected at
Ten Mile Landfill
Kent County, Michigan
June 10 & 11, 1985

Monitoring Point	Total Diss. Solids mg/l	Chem. Oxygen Demand mg/l	Total Organic Carbon mg/l	Nitrate-Nitrite Nitrogen mg/l	Ammonia Nitrogen mg/l	Kjeldahl Nitrogen mg/l	Organic Nitrogen mg/l	Total Phosphorus mg/l	Total Phenol mg/l
MW 67	250	K 3	0.16	0.22	0.01	K 0.05	K 0.05	0.06	3.3
MW 68	240	5	1.1	K 0.01	0.02	0.08	0.06	0.27	3.0
MW 35	200	K 3	0.08	0.01	K 0.01	0.09	0.09	0.01	2.2
MW 69	500	K 3	0.72	0.67	0.01	0.14	0.13	0.02	1.9
MW 55	K 20	3	1.2	0.02	0.01	0.15	0.14	K 0.01	2.6
MW 53	1200	K 3	2.0	0.01	0.02	0.20	0.18	0.05	2.5
MW 54	1800	28	2.8	0.01	0.03	0.25	0.22	0.02	2.6
MW 48	380	K 3	0.08	1.9	0.01	0.06	0.05	K 0.01	2.0
MW 56	740	K 3	0.98	1.3	0.04	0.20	0.16	K 0.01	2.5
MW 57	580	K 3	0.60	0.02	0.03	0.10	0.07	0.01	2.3
MW 66	1100	34	9.5	0.02	0.02	0.36	0.34	0.36	3.7
MW 47	750	K 3	0.26	0.03	0.01	0.10	0.09	0.01	2.2
MW 64	400	K 3	0.03	0.01	0.01	0.09	0.08	K 0.01	2.1
MW 62	1400	530	190.	K 0.01	0.13	0.96	0.83	0.05	110.
MW 65	450	K 3	1.7	0.76	0.01	0.11	0.10	0.05	3.0
MW 63	240	K 3	0.15	1.0	K 0.01	K 0.05	K 0.05	K 0.01	2.1
Outfall 004	540	6	4.2	0.04	1.4	1.6	0.22	K 0.01	5.7
Outfall 007	540	13	6.7	0.31	1.2	1.6	0.35	0.02	2.6
Outfall 005	550	10	5.1	0.36	0.11	0.25	0.14	0.01	6.1
Outfall 006	560	20	8.0	0.23	0.08	0.61	0.53	0.08	2.6

K= Less than

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BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

1500 Scribner Ave., N.W. Grand Rapids, Michigan 49504

Telephone: (616) 774-3694

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Department of Public Works

April 16, 1984

RECEIVED
GROUNDWATER QUALITY DIV.
APR 18 1984
DISTRICT

Mr. Gerard Heyt
Ground Water Division
Department of Natural Resources
State Building
350 Ottawa, NW
Grand Rapids, Michigan 49503

Dear Mr. Heyt:

This is to inform you that on April 10, 1984 a force main break was repaired at the Kentwood Landfill. It appeared to us that the break was due to a faulty wye fitting in a clean-out. The system is now operating properly.

In addition, please find a copy of the First Quarter Monitoring Well Sampling Data for the Plainfield Township Landfill.

If there are any questions or comments, please contact me at 774-3693.

Yours very truly,

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

Lee A. Bartlett, P.E.,
Civil Engineer.

LAB:ehr
Enclosure

Water Level and Field Record Form

Client: Kent County
Project No: 25010
Date: March 28 and March 29, 1984

Job Description: Quarterly Monitoring
10 Mile Road Landfill

	(a)	(b)	(c)	(d)	(e)	
Well No.	**Elevation Top Of Casing (T.O.C.)**	**Point Held On Tape (ft.)**	**Distance Wet On Tape**	**Depth To Water Below T.O.C. (b-c)**	**Elevation Of Water (a-d)**	**Remarks (weather, etc.)**
55				30.03		TD 48
53				22.05		TD 28.2
69				40.53		TD 48.1
68				38.41		TD 94.5
35				37.03		TD 65
66				3.58		TD 30.5
63				Farm House Well	----------	----------
47				Flowing----	----------	----------
54				36.80		
62			From Leachate Treatment Trailer			----------
56				21.1		TD 58.4
65				7.68		TD 23
67				43.43		TD 66
57				35.88		TD 50
48				34.25		TD 53.30

Groundwater Sampling Field Record Form

Client: Kent County
Project No: 25010
Date: March 28 and March 29, 1984

Job Description: Quarterly Monitoring
10 Mile Road Landfill

Well No.	Date Sampled	Priming Water Used (gal.)	Pumping Rate (gpm.)	Time Pumped (min.)	Volume Discharged (gal.)	Sampling Method	Remarks
55	3/28/84	None	12.5	5	62.5	*	
53	3/28/84	"	Measured	----------	----------	*	
35	3/28/84	"	10	30	300	*	
63	3/28/84	"	10	10	100	Taken from faucet	
47	3/28/84	"	----------	----------	----------	Taken from faucet	
54	3/28/84	"	Measured		20	*	
48	3/28/84	"	Measured		40	*	
62	3/28/84	"	10	10	100	Taken from running hose	
56	3/28/84	"	10	10	100	*	
65	3/29/84	"	1	12	12	*	
69	3/29/84	"	1	15	15	*	
67	3/29/84	"	1	15	15	*	
68	3/29/84	"	1	30	30	*	
57	3/29/84	"	5	15	75	*	

* Sampling method is: collect all samples with the exception of the VOA's from pump discharge. VOA's collected with stainless steel bailer.

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE RD. LANDFILL
SAMPLED BY: DJJ
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 03/01/84 TIME:
DATE RECEIVED: 03/01/84 TIME: [illegible]
DATE COMPLETED: 03/13/84
SCHEDULED COMPLETION: 3/14/84
ANALYST: CMP,DMP,DJJ,DEK,
QUALITY CONTROL REVIEW BY: DMP
WORKSHEET NO: 1

	OUTFALL-004 12:40	OUTFALL-005 12:43	OUTFALL-006 12:52	OUTFALL-007-DRY	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00039630	00039631	00039632	00039633		
BOD-5	6.6	2.1	4.3	***	----	[illegible]
CHLORIDE	44	50	67	***	1.0	[illegible]
COD	18	14	27	***	5.0	MG/L
NITROGEN, AMMONIA	0.22	0.09	0.12	***	0.05	MG/L
NITROGEN, NITRATE	0.02	0.74	0.48	DRY	0.05	MG/L
OIL SEVERITY	0	0	0	***	------	----------
PH VALUE	7.9	7.4	7.7	***	------	-------
IRON	0.59	0.22	<0.02	***	0.02	MG/L
PHOSPHORUS, TOTAL	<0.005	<0.005	0.290	***	0.005	MG/L

** OUTFALL 007 DRY, NO SAMPLE COLLECTED **

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE RD. LANDFILL
SAMPLED BY: C. COTTON
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 03/08/84 TIME: PM
DATE RECEIVED: 03/08/84 TIME: 3:50 PM
DATE COMPLETED: 03/16/84
SCHEDULED COMPLETION: 3/22/84
ANALYST: CMP,DMF,DJO
QUALITY CONTROL REVIEW BY: DMF
WORKSHEET NO: 2

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00039803	00039804				
BOD-5	6.6	2.7	**********	**********	------	MG/L
CHLORIDE	40	42	**********	**********	1.0	MG/L
COD	22	8.2	**********	**********	5.0	MG/L
NITROGEN, AMMONIA	0.17	0.07	**********	**********	0.05	MG/L
NITROGEN, NITRATE	0.07	0.94	**FROZEN**	***DRY****	0.05	MG/L
OIL SEVERITY	0	0	**********	**********	------	---------
pH VALUE	8.0	7.4	**********	**********	------	pH UNITS
IRON	0.60	0.10	**********	**********	0.02	MG/L
PHOSPHORUS,TOTAL	0.820	0.040	**********	**********	0.005	MG/L

ANLAYSIS BY STANDARD METHODS 15TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA,1983.

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE RD. LANDFILL
SAMPLED BY: C. COTTON
DESCRIPTION: OUTFALLS-WEEKLY MONITORING

DATE SAMPLED: 03/15/84 TIME:
DATE RECEIVED: 03/15/84 TIME: 1:30 PM
DATE COMPLETED: 03/26/84
SCHEDULED COMPLETION: 3/29/84
ANALYST: CMP,MKH,NJB,DMF
QUALITY CONTROL REVIEW BY: DMF
WORKSHEET NO: 5

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007-DRY	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00039877	00039878	00039879			
BOD-5	8.4	4.9	30		-----	MG/L
CHLORIDE	39	40	37		1.0	MG/L
COD	23	12	76		5.0	MG/L
NITROGEN, AMMONIA	0.16	0.06	0.70		0.05	MG/L
NITROGEN, NITRATE	0.05	0.80	1.1	---DRY----	0.05	MG/L
OIL SEVERITY	0	0	0		-----	----
pH VALUE	7.98	7.76	7.63		-----	----
IRON,TOTAL	0.65	0.30	5.6		0.02	MG/L
PHOSPHORUS,TOTAL	<0.005	<0.005	0.200		0.005	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: C. COTTON
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 03/23/84 TIME: PM
DATE RECEIVED: 03/23/84 TIME: 2:00 PM
DATE COMPLETED: 03/29/84
SCHEDULED COMPLETION: 3/30/84
ANALYST: DJO,MKH,CMP,DMF,
QUALITY CONTROL REVIEW BY: DMF
WORKSHEET NO: 2

	OUTFALL 004	OUTFALL 005	OUTFALL 006	OUTFALL DRY-007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040321	00040322	00040323			
BOD-5	6.4	4.1	5.4		-----	MG/L
CHLORIDE	34	41	48		1.0	MG/L
COD	12	6.7	14		5.0	MG/L
NITROGEN, AMMONIA	0.08	<0.05	<0.05		0.05	MG/L
NITROGEN, NITRATE	0.07	0.80	0.30	---DRY----	0.05	MG/L
OIL SEVERITY	0	0	0		-----	---------
pH VALUE	7.91	7.66	8.17		-----	---------
IRON,TOTAL	0.54	0.28	0.07		0.02	MG/L
PHOSPHORUS,TOTAL	0.008	0.009	0.100		0.005	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE RD. LANDFILL
SAMPLED BY: C. COTTON
DESCRIPTION: WEEKLY MONITONING-OUTFALLS

DATE SAMPLED: 03/30/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 4:20 PM
DATE COMPLETED: 04/09/84
SCHEDULED COMPLETION: 4/06/84
ANALYST: CMP,MKH,NJB,MS,D
QUALITY CONTROL REVIEW BY: DMF
WORKSHEET NO: 4

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040627	00040628	00040629			
BOD-5	7.9	5.6	6.2		------	MG/L
CHLORIDE	36	46	54		1.0	MG/L
COD	61	11	16		5.0	MG/L
NITROGEN, AMMONIA	0.09	<0.05	0.05		0.05	MG/L
NITROGEN, NITRATE	<0.05	0.70	0.21		0.05	MG/L
OIL SEVERITY	0	0	0	---DRY----	------	----------
pH VALUE	8.19	8.05	8.42		------	pH UNITS
IRON,TOTAL	0.08	<0.02	<0.02		0.02	MG/L
PHOSPHORUS,TOTAL	0.019	0.020	0.025		0.005	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: ELC, RSC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 03/28/84 TIME:
DATE RECEIVED: 03/28/84 TIME:
DATE COMPLETED: 04/09/84
SCHEDULED COMPLETION: 9/04/84
ANALYST: DJO,CMP,DJJ,
QUALITY CONTROL REVIEW BY: DMF,DEK
WORKSHEET NO: 6

	WELL #35 12:00	WELL #47 2:00	WELL #48 3:15	WELL #53 10:00	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040440	00040441	00040442	00040443		
CHLORIDE	1.4	84	16	72	0.5	MG/L
COD	<5.0	<5.0	<5.0	8.8	5.0	MG/L
IRON,TOTAL	0.52	0.19	0.13	4.4	0.02	MG/L
NITROGEN, AMMONIA	0.19	0.06	<0.05	<0.05	0.05	MG/L
NITROGEN, NITRATE	0.27	0.10	2.7	0.24	0.05	MG/L
pH VALUE	8.07	7.68	7.53	6.86	-----	PH
RESIDUE,DISSOLVED	270	805	471	1110	2.0	MG/L
SULFATE	28	210	17	27	5.0	MG/L
CARBON,TOTAL ORGANIC	<5.0	<5.0	<5.0	<5.0	5.0	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: ELC, RSC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 03/28/84 TIME:
DATE RECEIVED: 03/28/84 TIME:
DATE COMPLETED: 04/09/84
SCHEDULED COMPLETION: 4/09/84
ANALYST: DJO,CMP,DJJ,
QUALITY CONTROL REVIEW BY: DMF,DEK
WORKSHEET NO: 7

	WELL #54 2:45	WELL #55 9:35	WELL #56 3:50	WELL #57	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040444	00040445	00040446	00040447		
CHLORIDE	250	19	32	16	0.5	MG/L
COD	6.4	<5.0	<5.0	<5.0	5.0	MG/L
IRON,TOTAL	3.8	2.7	0.89	1.2	0.02	MG/L
NITROGEN, AMMONIA	<0.05	0.10	<0.05	0.07	0.05	MG/L
NITROGEN, NITRATE	0.27	0.10	1.4	<0.05	0.05	MG/L
pH VALUE	7.05	7.09	7.72	7.62	-----	PH
RESIDUE,DISSOLVED	1310	925	445	558	2.0	MG/L
SULFATE	49	20	27	150	5.0	MG/L
CARBON,TOTAL ORGANIC	<5.0	<5.0	<5.0	<5.0	5.0	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: ELC, RSC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 03/28/84 TIME:
DATE RECEIVED: 03/28/84 TIME:
DATE COMPLETED: 04/09/84
SCHEDULED COMPLETION: 4/09/84
ANALYST: DJO,CMP,DJJ,
QUALITY CONTROL REVIEW BY: DMF,DEK
WORKSHEET NO: 8

	WELL #61	WELL #62	WELL #63	WELL #65	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040448	00040449	00040450	00040451		
CHLORIDE	----------	250	16	40	0.5	MG/L
COD	----------	1700	<5.0	23	5.0	MG/L
IRON,TOTAL	----------	25	0.22	1.7	0.02	MG/L
NITROGEN, AMMONIA	----------	0.06	<0.05	0.15	0.05	MG/L
NITROGEN, NITRATE	----------	<0.05	0.72	0.07	0.05	MG/L
pH VALUE	----------	7.28	7.96	7.74	-----	PH
RESIDUE,DISSOLVED	----------	2260	207	453	2.0	MG/L
SULFATE	----------	<5.0	22	56	5.0	MG/L
CARBON,TOTAL ORGANIC	----------	59	<5.0	<5.0	5.0	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: ELC, RSC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 03/28/84 TIME:
DATE RECEIVED: 03/28/84 TIME:
DATE COMPLETED: 04/09/84
SCHEDULED COMPLETION: 4/09/84
ANALYST: DJO,CMP,DJJ,
QUALITY CONTROL REVIEW BY: DMF,DEK
WORKSHEET NO: 9

	WELL #66	WELL #67	WELL #68	WELL #69	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	00040452	00040453	00040454	00040455		
CHLORIDE	----------	5.2	6.1	25	0.5	MG/L
COD	----------	12	210	11	5.0	MG/L
IRON,TOTAL	----------	0.92	0.46	10	0.02	MG/L
NITROGEN, AMMONIA	----------	<0.05	0.07	<0.05	0.05	MG/L
NITROGEN, NITRATE	----------	0.24	0.05	1.1	0.05	MG/L
pH VALUE	----------	7.70	8.16	7.49	-----	PH
RESIDUE,DISSOLVED	----------	33	286	1340	2.0	MG/L
SULFATE	----------	35	31	31	5.0	MG/L
CARBON,TOTAL ORGANIC	----------	<5.0	<5.0	<5.0	5.0	MG/L

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #35

DATE SAMPLED: 03/29/84 TIME: 12:00 PM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40440

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.0
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.0
VINYL CHLORIDE	*	0.010	BENZENE	*	0.0
CHLOROETHANE	*	0.010	BROMOFORM	*	0.0
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.0
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.0
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.0
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.0
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.0
CHLOROFORM	*	0.001	ACROLEIN	*	0.0
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE		.0
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLU		0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMO		0
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHL		0
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DIC		0
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROME		

*COMPOUND NOT PRESENT AT DETECTION LIMIT

More MW for 1984

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #47

DATE SAMPLED: 03/29/84 TIME: 2:00 PM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40441

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.003	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	0.004	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.014	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #48

DATE SAMPLED: 03/29/84 TIME: 3:15 PM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40442

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	0.001	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.002	0.001	DICHLORODIFLUOROMETHANE	0.032	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #53

DATE SAMPLED: 03/29/84 TIME: 10:00 AM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40443

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	0.001	0.00
CHLOROETHANE	0.053	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.021	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	0.003	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	0.007	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.001	0.001	DICHLORODIFLUOROMETHANE	0.29	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #54

DATE SAMPLED: 03/29/84 TIME: 2:45 PM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40444

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	0.002	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	0.003	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.001	0.001	DICHLORODIFLUOROMETHANE	0.16	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #55

DATE SAMPLED: 03/29/84 TIME: 9:35 AM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40445

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	0.001	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.24	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	0.006	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.001	0.00
1,1-DICHLOROETHANE	0.10	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.027	0.001	DICHLORODIFLUOROMETHANE	0.077	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #56

DATE SAMPLED: 03/29/84 TIME: 3:50 AM
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40446

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #57

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40447

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #62

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40449

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	0.075	0.010	BENZENE	*	0.00
CHLOROETHANE	0.030	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.002	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	0.010	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	0.033	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #63

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40450

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.0
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.0
VINYL CHLORIDE	*	0.010	BENZENE	*	0.0
CHLOROETHANE	*	0.010	BROMOFORM	*	0.0
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.0
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.0
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.0
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.0
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.0
CHLOROFORM	*	0.001	ACROLEIN	*	0.0
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.0
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.0
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.0
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.0
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.0

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #65

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40451

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.0
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.0
VINYL CHLORIDE	*	0.010	BENZENE	*	0.0
CHLOROETHANE	*	0.010	BROMOFORM	*	0.0
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.0
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	0.001	0.0
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.0
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.0
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.0
CHLOROFORM	*	0.001	ACROLEIN	*	0.0
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.0
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.0
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.0
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.0
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.0

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #67

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40453

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #68

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40454

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: WELL #69

DATE SAMPLED: 03/29/84 TIME:
DATE RECEIVED: 03/30/84 TIME: 8:00 AM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40455

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.0
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.0
VINYL CHLORIDE	*	0.010	BENZENE	*	0.0
CHLOROETHANE	*	0.010	BROMOFORM	*	0.0
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.0
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.0
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.0
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.0
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.0
CHLOROFORM	*	0.001	ACROLEIN	*	0.0
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.0
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.0
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.0
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.0
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.0

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL 004

DATE SAMPLED: 03/30/84 TIME: 3:00 PM
DATE RECEIVED: 03/30/84 TIME: 5:00 PM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40764

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.0
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.0
VINYL CHLORIDE	*	0.010	BENZENE	*	0.0
CHLOROETHANE	*	0.010	BROMOFORM	*	0.0
METHYLENE CHLORIDE	0.005	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.0
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.0
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.001	0.0
1,1-DICHLOROETHANE	0.001	0.001	CHLOROBENZENE	*	0.0
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.0
CHLOROFORM	*	0.001	ACROLEIN	*	0.0
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.0
1,1,1-TRICHLOROETHANE	0.001	0.001	DICHLORODIFLUOROMETHANE	*	0.0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.0
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.0
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.0
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.0

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL 005

DATE SAMPLED: 03/30/84 TIME: 2:30 PM
DATE RECEIVED: 03/30/84 TIME: 5:00 PM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40765

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	0.002	0.00
CHLOROETHANE	0.049	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.008	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	0.004	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.009	0.00
1,1-DICHLOROETHANE	0.035	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	0.018	0.001	ETHYL BENZENE	0.002	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	0.005	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	0.007	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE, INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL 006

DATE SAMPLED: 03/30/84 TIME: 3:10 PM
DATE RECEIVED: 03/30/84 TIME: 5:00 PM
DATE COMPLETED: 04/05/84

SAMPLE NO. 40766

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.00
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.00
VINYL CHLORIDE	*	0.010	BENZENE	*	0.00
CHLOROETHANE	*	0.010	BROMOFORM	*	0.00
METHYLENE CHLORIDE	0.003	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.00
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.00
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.00
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.00
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.00
CHLOROFORM	*	0.001	ACROLEIN	*	0.01
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.01
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.01
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.00
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.00
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.00
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.01

*COMPOUND NOT PRESENT AT DETECTION LIMIT

Kent Co: 10 Mile (Plainfield Twp) landfill RKW

BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

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RECEIVED
SEP 7 1984
SURFACE WATER QUALITY DIV.
GRAND RAPIDS

September 6, 1984

Mr. Ernie Joulsma
Michigan DNR
350 Ottawa Avenue, NW
Grand Rapids, Michigan 49503

RE: Organic Analysis for Leachate
Plainfield Landfill

Dear Mr. Joulsma:

At your request, I have enclosed a copy of a priority pollutant analysis performed by Environmental Data, Inc., on a raw leachate sample collected at the Plainfield Landfill on August 22, 1983. The GC/MS analysis included all three fractions of organic compounds as you desired, namely, volatile, base neutral and acid, plus the pesticides fraction. Please note that the leachate sample tested was untreated, and therefore is not representative of the pretreated leachate which is all that we are currently allowed to discharge to the Grand Rapids Wastewater System. A priority pollutant analysis for the treated leachate has never been done.

If you have any questions regarding the enclosed test data or this letter, please call us.

Sincerely,

James P. Lamancusa

James P. Lamancusa
Civil Engineer

JPL/mm
Encl.

cc: Full analysis of a leachate - not just VOA

Environmental Data Inc.
ENVIRONMENTAL SCIENTISTS/ENGINEERS/GEOLOGISTS/CHEMISTS
611 CASCADE WEST PARKWAY, S.E. P.O. BOX 6510, GRAND RAPIDS, MICHIGAN 49508

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE I
VOLATILE FRACTION

PROJECT: Kent County DPW DATE SAMPLED: 8/22/83 TIME: _____
PROJECT No.: 25010 DATE RECEIVED: 8/22/83 TIME: 3:30 PM
SAMPLING LOCATION: 10 Mile Landfill DATE COMPLETED: 8/31/83

SAMPLE: LEACHATE

SAMPLE No.

COMPOUND	RESULTS (mg/l)	DETECTION LIMIT	COMPOUND	RESULTS (mg/l)	DETECTION LIMIT
Chloromethane	*	0.1	1,2-Dichloropropane	*	0.01
Bromomethane	*	"	1,1,2-Trichloroethane	*	"
Vinyl chloride	*	"	Benzene	0.02	"
Chloroethane	*	"	Bromoform	*	"
Methylene chloride	7.5	0.01	1,1,2,2-Tetrachloroethane	*	"
Trichlorofluoromethane	*	"	Tetrachloroethylene	0.01	"
1,1-Dichloroethylene	*	"	Toluene	1.4	"
1,1-Dichloroethane	0.77	"	Chlorobenzene	*	"
trans-1,2-Dichloroethylene	0.17	"	Ethyl benzene	0.11	"
Chloroform	*	"	Acrolein	*	0.1
1,2-Dichloroethane	0.02	"	Acrylonitrile	*	"
1,1,1-Trichloroethane	0.07	"	Dichlorodifluoromethane	*	"
Carbon tetrachloride	*	"	Chlorodibromomethane	*	0.01
Bromodichloromethane	*	"	cis-1,3-Dichloropropylene	*	"
Trichloroethylene	0.23	"	trans-1,3-Dichloropropylene	*	"

* COMPOUND NOT PRESENT AT DETECTION LIMIT

ENVIRONMENTAL DATA INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 2
BASE-NEUTRAL FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLING LOCATION: 10 MILE RD LANDFILL

DATE SAMPLED: 08/22/83 TIME:
DATE RECEIVED: 08/22/83 TIME: 3:30
DATE COMPLETED: 09/25/83

SAMPLE NO. 34613

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
HEXACHLOROTHANE	*	0.020	BENZIDINE	*	0.030
HEXACHLOROBUTADIENE	*	0.020	PYRENE	*	0.020
1,2,4-TRICHLOROBENZENE	*	0.020	FLUORANTHENE	*	0.020
NAPHTHALENE	0.036	0.020	CHRYSENE	*	0.020
HEXACHLOROCYCLOPENTADIENE	*	0.020	BIS-(2-ETHYL HEXYL)-PHTHALATE	*	0.020
NITROBENZENE	*	0.020	BENZO (A) ANTHRACENE	*	0.030
2-CHLORONAPHTHALENE	*	0.020	BENZO (K) FLUORANTHENE	*	0.030
ACENAPHTHENE	*	0.020	BENZO (A) PYRENE	*	0.030
ISOPHORONE	0.95	0.020	INDENO (1,2,3-CD) PYRENE	*	0.030
FLUORENE	*	0.020	DIBENZO (A,H) ANTHRACENE	*	0.030
2,4-DINITROTOLUENE	*	0.020	BENZO (G,H,I) PERYLENE	*	0.030
1,2-DIPHENYLHYDRAZINE	*	0.020	3,3'-DICHLOROBENZIDINE	*	0.030
2,6-DINITROTOLUENE	*	0.020	TETRACHLORODIBENZO-P-DIOXIN	*	0.030
N-NITROSODIPHENYLAMINE	*	0.020	N-NITROSO-N-PROPYLAMINE	*	0.020
HEXACHLOROBENZENE	*	0.020	ACENAPHTHYLENE	*	0.020
4-BROMOPHENYL PHENYL ETHER	*	0.020	BIS(2-CHLOROISOPROPYL)-ETHER	*	0.02
4-CHLOROPHENYL PHENYL ETHER	*	0.020	BIS(2-CHLOROEXTHOXY)-METHANE	*	0.02
ANTHRACENE	*	0.020	1,2-DICHLOROBENZENE	*	0.02
PHENANTHRENE	*	0.020	1,3-DICHLOROBENZENE	*	0.02
DIMETHYL PHTHALATE	0.021	0.020	1,4-DICHLOROBENZENE	*	0.020
BIS-(2-CHLOROETHYL) ETHER	*	0.020	N-NITROSODIMETHYLAMINE	*	0.020
DI-N-BUTYL PHTHALATE	*	0.020	BIS-(CHLOROMETHYL) ETHER	*	0.020
DIETHYL PHTHALATE	0.20	0.020	DI-N-OCTYLPHTHALATE	*	0.02
BUTYL BENZYL PHTHALATE	*	0.020	BENZO (B) FLUORANTHENE	*	0.03

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ENVIRONMENTAL DATA INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 3
ACID FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLING LOCATION: 10 MILE RD LANDFILL

DATE SAMPLED: 08/22/83 TIME:
DATE RECEIVED: 08/22/83 TIME: 3:30
DATE COMPLETED: 00/00/00

SAMPLE NO. 34613

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
2-CHLOROPHENOL	*	0.010	PHENOL	0.83	0.010
2,4-DICHLOROPHENOL	*	0.010	2-NITROPHENOL	*	0.010
4-CHLORO-3-METHYLPHENOL	*	0.010	2,4,6-TRICHLOROPHENOL	0.090	0.010
2,4-DIMETHYLPHENOL	*	0.010	2-METHYL-4,6-DINITROPHENOL	*	0.050
4-NITROPHENOL	*	0.050	PENTACHLOROPHENOL	*	0.050
2,4-DINITROPHENOL	*	0.050			

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ENVIRONMENTAL DATA INC.
611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 4
PESTICIDES FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLING LOCATION: 10 MILE RD LANDFILL

DATE SAMPLED: 08/22/83 TIME:
DATE RECEIVED: 08/22/83 TIME: 3:30
DATE COMPLETED: 09/08/83

SAMPLE NO. 34613

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
ALDRIN	*	0.0003	ENDRIN ALDEHYDE	*	0.001
A-BHC	*	0.0003	HEPTACHLOR	*	0.000
B-BHC	*	0.0008	HEPTACHLOR EPOXIDE	*	0.001
D-BHC	*	0.01	TOXAPHENE	*	0.02
G-BHC	*	0.01	CHLORDANE	*	0.004
4-4'DDD	*	0.002	PCB-1016	*	0.02
4-4'DDE	*	0.002	PCB-1221	*	0.02
4-4'DDT	*	0.002	PCB-1232	*	0.02
DIELDRIN	*	0.0008	PCB-1242	*	0.02
A-ENDOSULFAN	*	0.0007	PCB-1248	*	0.02
B-ENDOSULFAN	*	0.002	PCB-1254	*	0.02
ENDOSULFAN SULFATE	*	0.003	PCB-1260	*	0.02
ENDRIN	*	0.006			

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 35

DATE SAMPLED: 09/19/84 TIME: 3:10 PM
DATE RECEIVED: 09/19/84 TIME: 4:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45366

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE		
CHLOROFORM	*	0.001	ACROLEIN		
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE		
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUORO		0
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETH		01
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLORO		01
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOR		001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL		010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

1984 M
- also only
- also no

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GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 47

DATE SAMPLED: 09/19/84 TIME: 2:45 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45325

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.002	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.002	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.007	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 48

DATE SAMPLED: 09/19/84 TIME: 12:20 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45326

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	0.002	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	0.026	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 53

DATE SAMPLED: 09/19/84 TIME: 2:25 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45327

COMPOUND	RESULT (MF/L)	D.L.	COMPOUND	RESULT (MF/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	0.012	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.011	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	0.002	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	0.002	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.011	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.001	0.001	DICHLORODIFLUOROMETHANE	0.025	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 54

DATE SAMPLED: 09/19/84 TIME: 11:20 AM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/04/84

SAMPLE NO. 45328

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.003	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.002	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	0.028	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 55

DATE SAMPLED: 09/19/84 TIME: 10:20 AM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45329

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	0.002	0.001
CHLOROETHANE	0.032	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.096	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	0.002	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	0.002	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.22	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.035	0.001	DICHLORODIFLUOROMETHANE	0.046	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	0.002	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 56

DATE SAMPLED: 09/19/84 TIME: 3:50 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45330

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	0.015	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 57

DATE SAMPLED: 09/19/84 TIME: 1:15 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45331

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 62

DATE SAMPLED: 09/19/84 TIME: 12:45 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45332

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.005	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	0.012	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 63

DATE SAMPLED: 09/21/84 TIME: 11:10 PM
DATE RECEIVED: 09/21/84 TIME: PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45388

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 64

DATE SAMPLED: 09/19/84 TIME: 2:15 PM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45333

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 65

DATE SAMPLED: 09/19/84 TIME: 11:00 AM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45367

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	0.001	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 66

DATE SAMPLED: 09/19/84 TIME: 10:15 AM
DATE RECEIVED: 09/19/84 TIME: 3:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45368

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	0.002	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.002	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	0.008	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 67

DATE SAMPLED: 09/19/84 TIME: 3:50 PM
DATE RECEIVED: 09/19/84 TIME: 4:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45369

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 68

DATE SAMPLED: 09/20/84 TIME: 1:10 PM
DATE RECEIVED: 09/20/84 TIME: 4:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45371

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	0.023	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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611 CASCADE WEST PARKWAY, S.E.
GRAND RAPIDS, MICHIGAN 49506

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW 69

DATE SAMPLED: 09/20/84 TIME: 12:00 PM
DATE RECEIVED: 09/20/84 TIME: 4:10 PM
DATE COMPLETED: 10/05/84

SAMPLE NO. 45370

COMPOUND	RESULT (MG/L)	D.L.	COMPOUND	RESULT (MG/L)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

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February 28, 1985

RECEIVED
GROUNDWATER QUALITY DIV
MAR 05 1985
DISTRICT 9
GRAND RAPIDS

Mr. Gary Marx
Environmental Enforcement Division
Department of Natural Resources
PO Box 30028
Lansing, MI 48909

REF: Ten Mile Rd. Landfill - Plainfield Township

Dear Mr. Marx:

This letter sets forth the position of the Kent County Department of Public Works with respect to the Notice of Noncompliance issued by the Department of Natural Resources ("DNR") on January 30, 1985, and with respect to the discussion that took place at an informal conference held on February 15, 1985 at which you presided.

I. PROCEDURAL COMMENTS

In light of the efforts that have been made by the Department of Public Works to resolve the few problems associated with the North Kent Landfill, and in light of the on-going correspondence and communication with the DNR with respect to that effort, the DPW fails to understand why the DNR felt that it had to resort to these proceedings at this time. As we have repeated time and again, we acknowledge that there is a problem at the North Kent Landfill; we acknowledge that certain steps have to be taken in order to understand and then address that problem; the DPW is not turning its head away from this problem. There are certain disputes that have persisted throughout the discussions between the DPW and the DNR which the DPW still feels could be resolved to the satisfaction of everyone. In the meantime, the DPW has been working diligently and in good faith to improve the operation of the landfill and to better understand the problems associated with the landfill so that it can focus intently on reasonable solutions. The initiation of more formal proceedings by the DNR forces us to go on record with certain legal positions that we would rather not have to assert.

First, the "Notice of Noncompliance" dated January 30, 1985 does not comply with the requirements of the Michigan Administrative

Procedures Act ("MAPA") as interpreted by the Michigan courts. Specifically, the Notice does not set forth specific facts or conduct that constitute the alleged violations that became the subject of the informal hearing. Further, MAPA requires that the Notice state facts or conduct which warrant "the intended action." The apparent action intended to be initiated by this notice is to "deny reissuance of the waste disposal license for the North Kent Landfill." The Notice clearly does not set forth any facts or conduct which would warrant that action. In addition, MAPA contemplates that the agency (DNR) can take the intended action only if the DNR finds that protection of the "public health, safety or welfare requires emergency action. ." The Notice does not set forth any facts which would justify such finding; nor do we believe that any facts exist whether recited in the Notice or not.

As we noted above, it is not the wish of the DPW to resolve the problems associated with the North Kent Landfill through the use of formal administrative or judicial machinery. We would be remiss, however, if we did not protect the legal rights of the DPW by stating our position on the record with respect to the adequacy of the proceedings that have been initiated by the DNR.

II. RESPONSE TO STAFF SUMMARY DATED FEBRUARY 15, 1985

We appreciate the opportunity to respond to the comments of staff as provided in a two page summary dated February 15 although we continue to feel that the problems with the North Kent Landfill can be appropriately and probably more adequately addressed through informal meetings and communication. In any event, we will respond to various points in that staff summary as follows:

A. **"Groundwater contamination was first detected at the Kent County Ten Mile Landfill in late 1982 with the presence of volatile chlorinated organic solvents in monitoring wells and the groundwater underdrainage system."**

To begin with, it is important to put "groundwater contamination" in proper context with respect to the North Kent Landfill or in effect, to define what is meant and what is not meant by groundwater contamination in this matter. The staff has specifically asserted that the "groundwater contamination" involved in this matter is in violation of Section 6(a) of Act 245, PA of 1929, and the associated Rule, 323.2205. See Page 2, Staff Summary. For obvious reasons, the DPW cannot admit that it is acting in violation of either Section 6(a) or Rule 323.2205. Section 6(a) makes it unlawful for any person directly or indirectly to discharge into the waters of the state any substance which is or may become injurious to the public health, safety or welfare. Whether a particular discharge is or may

become injurious to the public health, safety or welfare is largely a matter of opinion and reputable experts in the field often cannot agree as to when a discharge is or may be injurious. Furthermore, the law is somewhat unsettled in this area because of certain court challenges.

The DNR, in past discussions, has focused on Rule 323.2205 which states that the quality of groundwaters in all usable aquifers shall not be degraded from local background groundwater quality as the result of a discharge. This, the staff has maintained, is an absolute standard: that is, absolutely no degradation is acceptable to the DNR. While there may be evidence demonstrating that the groundwater underlying the site has been "degraded" in absolute terms, this does not necessarily mean that there has been "groundwater contamination" as that phrase is commonly perceived by the public; nor does that mean that there has been or that there may be any injury to the public health, safety or welfare. Any change in the quality of the groundwater, no matter how harmless, would violate Rule 323.2205 as interpreted and applied by the staff. However, no standard for degradation has ever been duly promulgated by the Department.

Before we discuss the historical development of evidence that relates to the groundwater under the landfill, we would like to make some additional comments about the reliability of such data. Experience has shown that there is a wide range in the level of reliability of data obtained through the monitoring, testing and analysis of groundwater associated with landfills. Too often, enforcement personnel and the public over-react to the results of limited testing and analysis. In connection with the groundwater associated with this landfill, much of the data that has been collected to date has been inconsistent; we believe that some of the test results are not reliable for a variety of reasons; and finally the timing of the data does not allow for current scientific analysis or design of appropriate solutions. It was for these and other reasons that the DPW has proposed and has now completed a thorough review and study of the hydrogeologic features of the site, based on the data which exists to date. Phase I of the study has been completed and filed with the DNR and we incorporate that study by reference.

As the DPW has noted in the hydrogeologic study (Phase I), there is some evidence of organic compounds in some of the monitoring wells that require further evaluation. The DPW has recommended that certain steps be implemented, in cooperation with DNR staff, to further investigate and evaluate these conditions, hopefully leading towards a logical, scientifically reliable solution.

While the evidence does support a finding that some organic compounds exist in some portions of the groundwater under the landfill, it is very important to note that the evidence to date demonstrates that the groundwater flow regime on the site

indicates that these compounds are moving to the groundwater collection underdrain system and not off the site. This is extremely important in light of the standard required under Section 92 of MAPA because we feel it demonstrates at this time, beyond dispute, that there is no threat to public health, safety or welfare, which "requires emergency action." This contention is further supported by the undisputed evidence that there has been no invasion of any private well in the area by either organic or inorganic contaminants. The analyses of private wells by both the State Health Department Laboratory and the independent laboratory retained by the DPW confirms this statement.

latest MOR's 006

Since the presence of organic compounds was first detected in 1982, the DPW has not simply sat on its hands. Quite to the contrary, the DPW has taken a host of steps to address the presence of those organic compounds, ultimately aimed at determining the extent, nature, and horizontal and vertical presence of those compounds, in anticipation of one or more solutions to remove, contain or control them. The steps taken by the DPW since 1982 include, among others, the following:

1. The DPW promptly installed vents and aerobic stabilization ponds at the ends of the groundwater collection underdrain systems. These installations have been very effective in reducing discharges of organic compounds, high BOD and low pH at outfalls 004 and 005. We believe that this step, along with others, has assured that there is no risk to public health, safety or welfare with respect to the transmigration of organic compounds from the landfill to any waters of the state.

2. As we have explained on many prior occasions, we believe that the presence of small amounts of organic compounds in the groundwater was due to a blockage in the leachate collection system. We believe the DNR staff concurs with our analysis and so states at the top of the first page of its staff summary. Locating and alleviating these blockages has been extremely difficult but the DPW has already eliminated those blockages and has installed mid-level grates in the deeper leachate collection manholes to prevent future blockages. The DPW is currently working on special custom made grates for the bottom of the manholes which should further protect the manholes from debris. At the time of the installation of these special bottom grates, a liquid level sensing system will be installed. When these improvements are completed, the leachate collection system will far exceed the original approved design requirements for this facility.

3. Since 1982 there have been no less than nine new monitoring wells set in place on the site to aid in defining the groundwater flow and groundwater quality. Also, more than ten additional borings on site have been drilled to improve our knowledge of the site geology.

4. In early 1983 the DPW stepped up its monitoring program by including analyses for volatile organic compounds as a minimum on a quarterly basis for the monitoring wells and a monthly basis for the groundwater collection system outfalls. This additional monitoring by the DPW resulted in a total cost for 1984 in excess of $30,000.

5. During 1984 the DPW hired a consulting engineering firm to assess the methane generation rate of the site and the feasibility of a methane collection system installation. The draft of the study is now complete and the firm is preparing preliminary engineering plans for a proposed methane collection system. This preliminary investigation cost the DPW in excess of $40,000 during 1984.

6. In addition to the leachate collection system improvements mentioned in item 2 above, the DPW has expended considerable time and money during 1984 to evaluate new techniques for relining of manholes and pipelines already in place, should this become necessary during the course of the landfill's life. This evaluation process is ongoing in conjunction with attempts to improve flow in a restricted leachate collection pipeline.

7. In response to the intermediate cover concerns of the DNR, the DPW has worked diligently during the last half of 1984 to upgrade the intermediate cover. Also, during the course of placing this intermediate cover the DPW has made a major effort to improve the surface drainage of the site such that rainfall will not come into contact with open refuse nor will it enter the body of the landfill. The Department expended approximately $35,000 in late 1984 for this additional earthwork.

8. In response to odor concerns expressed by the neighbors of the site, the DPW in September of 1984 rented odor control equipment at a cost of $3,300. This equipment was evaluated for a period of three months to determine its usefulness in controlling odors emanating from the leachate collection ponds. It has been determined that this foam blanket technology is useful for short term reductions of odors emanating from the ponds and may be used in the future as needed.

9. During 1984, the leachate pretreatment system which removes trace metals from the leachate before discharge to the Grand Rapids sewer system was the subject of a great deal of engineering evaluation and mechanical modification. These efforts were directed at improving the pretreated leachate quality as well as its leachate treatment capacity. As the evaluation progressed it became apparent that a substantially different treatment methodology must be employed to remove the intended metals. Thus, a pretreatment pilot program was initiated to evaluate newly proposed treatment methods. The

pilot program has shown conclusively the benefits of the new treatment methods; engineering effort is now being directed to designing a permanent pretreatment facility based on these new methods. Several consulting engineers are presently under contract to the DPW for aid and development of the structure and the treatment process equipment involved in this new facility. This facility will cost hundreds of thousands of dollars.

10. As indicated in this letter, the DPW submitted to the DNR a draft closure agreement on February 10, 1984. Part of this closure agreement dealt with early closure of the landfill. The DPW proposed reducing the final elevations in closing the landfill in June of 1987. This reduction of the rim elevation of the refuse mound has been voluntarily made by the DPW and new final contours have been established reducing the volume of the facility as it is now approved. The rim of the mound was reduced from 290 meters to 287.5 meters (U.S.G.S.).

B. **"Rule 308(1) of the Act 641 Rules limit the liquid level of leachate at the lowest point in the system to not more than 6 inches."**

It is appropriate to set forth Rule 308(1) in its entirety:

> "All type II sanitary landfills, except for those established under provisions of R299.4307(1)(b) shall have systems to collect and remove leachate and shall be capable of limiting the head at the lowest point of the system to not more than 6 inches." (emphasis supplied)

Even though the North Kent Landfill was designed prior to the effective date of Act 641 and its rules, we fully believe that the landfill design satisfied the requirement of Rule 308(1). Thus, there has been no violation of that design requirement, even if it were sought to be applied prior to the effective date of the Act. The evidence to date would suggest that notwithstanding the capability of the leachate collection system, the site has experienced a head greater than 6 inches in the system. As we have explained previously, we are convinced that the problems with leachate collection were the result of blockages in the system which have been eliminated and for which additional corrective action is underway as outlined above.

C. **"No plans were submitted for the ponds to the Department as required under Rule 305 of Act 641 Rules."**

As noted above, when the DPW learned of the evidence of organic compounds in the groundwater under the landfill, it promptly moved to install vents in the groundwater collection underdrain systems and also to install aerobic stabilization ponds at the ends of these systems. We believe this action was reasonable and effective in addressing the organic compound discharge problem.

The DNR staff was advised by letter from the DPW dated October 14, 1983 of the County's intention to construct these collection ponds. Specifically that letter stated:

> "The County will be installing collection lagoons which will be located near the outlet of each outfall. At this point in time I believe simple ponding will be adequate for the removal of the remaining trace organics. Weather conditions permitting, it is estimated that these lagoons will be completed within 60 to 90 days."

The DNR responded to this in Mr. Heyt's letter dated November 3, 1983 by stating in part:

> "The Surface Water Quality Division would like the opportunity to review the basis for design of the collection lagoons proposed for construction at the outlets of the underdrains prior to construction. Additionally, based upon discussions with Air Quality Division, it appears that an air permit will be necessary for the ponds.
>
> It is our position that although simple ponding of the discharge water may have a positive impact on the levels of volatile organic compounds currently being identified in the discharge, you must be capable of demonstrating compliance with your NPDES permit limitations."

Because of seasonal constraints and the need to act promptly, the ponds were already under construction by this time. As-built plans were submitted on April 9, 1984 to the Surface Water Quality Division for their review.

Rule 305(1) of Act 641 Rules states that "alterations or deviations from these plans shall also be submitted to the Solid Waste Control Agency". The reference is obviously to alterations or deviations from the original landfill design plans initially filed with the Solid Waste Control Agency by the applicant. The Solid Waste Control Agency in this case is the DNR. We clearly have been in communication with the DNR and in fact filed the as-built plans with the DNR and do not believe that there has been any violation of the rules in that respect. Rule 305 does not seem to contemplate the need for advance approval before proceeding with the change.

D. **In the summary at the end of the two page staff summary, staff also refers to an unspecified violation of Section 14(2) of Act 641 and Rules R299.4302, R299.4305, R299.4308(1), and R299.4310 (2).**

Section 14(2) of Act 641 does not impose any specific or direct responsibility on the owner or operator of a sanitary landfill disposal facility. That section of the Act describes the duties and responsibilities of the department under certain circumstances. Apparently reference is being made to this section by the staff with respect to the limitation imposed upon the Department for devising remedial measures or plans which lead to compliance with the Act "which shall not extend beyond September 1, 1984." Reference was made at the informal conference to this constraint on the DNR. The DPW believes, as we understand the DNR believes, that there are mechanisms available to work out remedial measures or compliance plans to correct any violation of Act 641 and its rules, if indeed any violations exist. Remedial measures are bound to be required from time to time in connection with numerous landfills licensed under Act 641 and we do not believe it was the intention of the legislature to prevent reasonable remedial measures beyond September 1, 1984 in all circumstances. We are prepared to work with the DNR in developing appropriate mechanisms which will lead to full compliance, once the DPW and the DNR have agreed upon which measures will be the most appropriate and effective.

Act 641, Rule 302 also makes reference to the schedule of remedial measures "not extending beyond September 1, 1984." Our comments above adequately address, we would hope, this concern of the DNR.

Rule 305 of Act 641 is extremely detailed and extensive and we do not know how to respond to a general reference to a violation of that rule. We assume that the only specific violation claimed under Rule 305 is the failure on the part of the DPW to file its plans with the agency in connection with the establishment of the ponds at the end of the groundwater collection underdrain system. We believe we have adequately addressed that concern in part C above.

Rule 308(1) sets forth the design requirement with respect to the capability of limiting the head at the lowest point in the leachate collection system to not more than 6 inches. We have responded directly to that concern in part B above.

Rule 301(2) also sets forth a design requirement for Type II lined sanitary landfills. We believe that the landfill satisfied this design requirement at the time it was constructed, even though that was prior to the effective date of Act 641 and its rules. As with the matter concerning the limitation with respect to the amount of head, even though the landfill satisfies this design requirement, during operation there is some evidence that we have varied from this objective. We believe that our ongoing improvement of the collection system and the elimination of the blockages in that system have overcome that operational problem, all as discussed in parts A.2 and A.6 above.

E. **The balance of the comments made in the staff summary deal primarily with the recitation of the history of discussions and negotiations between the DPW and the DNR and the various estimated time schedules that have been proposed during those discussions.**

The only way we feel we can effectively address those statements is to set forth a complete history of the discussions and negotiations that have taken place between the DNR and DPW to date.

Before we set forth a chronological discussion of the communications between the DPW and the DNR with respect to this problem, we would like to make this general comment. It would appear from both the Notice of Noncompliance and the staff summary that the DPW is being accused of failing to meet certain scheduled deadlines that have been estimated and proposed by the DPW from time to time. Specifically, the staff summary seeks to hold the County to compliance with schedules that have been proposed by the DPW in documents such as the proposed DPW drafted closure plan, even though such proposals or drafts of closure plans have never been formally accepted by the DNR. If the DPW's closure plan has not been accepted by the DNR (and it has not) then it is unfair for the DNR to seek to enforce the specific proposal or timetables contained in that closure plan.

For all practical purposes, all of the discussions, negotiations, and draft closure agreements from either side, have been superseded by the four part plan proposed by the DPW in its letter of August 31, 1984, the first step of which was to prepare the Phase I hydrogeological study which was recently filed with the DNR on February 4. We acknowledge that we did not make the estimated schedule for filing that Phase I report with the DNR. However, we repeat in our defense:

(a) The deadline of December 1, 1984 was an "estimated deadline;

(b) On November 28, 1984, Mr. Powell of the DPW wrote to Mr. Przybysz of the DNR informing him that the December 1, 1984 deadline could not be met;

(c) At that time it was anticipated that completion would be on or about December 10;

(d) On December 21, Mr. Powell contacted Mr. Przybysz by telephone and informed him that due to clerical problems and the upcoming holiday vacation season, the report unfortunately could not be completed until mid-January; the exact status of the report was discussed in detail and Mr. Przybysz was most understanding and seemed satisfied that the County was not

dragging its feet and that it was in fact expending considerable manpower and effort in completion of the Phase I report; in that same conversation Mr. Przybysz stated that he was quite pleased with the progress made in obtaining proper cover on the site and with the better drainage grading arrangement for the surface of the site;

(e) When mid-January arrived, the report was essentially complete but required the review of both the Director and Assistant Director of the DPW, which further delayed the actual mailing of the report to the DNR until February 1, 1985.

In summary, while we missed the original estimated deadline, we believe it is undisputed that the entire DPW staff expended every reasonable effort to complete the report as soon as reasonably possible, that we kept the DNR advised with respect to our delays, and that the ultimate filing of the report on February 4 under the above circumstances was a good faith substantial compliance with the duty and obligation of the DPW in this respect.

Now for a complete history of the communications, discussions and negotiations between the DNR and the DPW, we submit the following:

November 30, 1982:

The Department of Natural Resources sampled monitoring wells 48, 53 and 54, outfalls 004, 005 and 006 at the Plainfield Landfill site. The results of these analyses indicate certain organic compounds present in the groundwaters.

February 8, 1983:

The DNR and the DPW split samples from a number of monitoring wells and outfalls on the site.

March 25, 1983:

Mr. Lee Bartlett of the DPW discusses by phone the results of these analysis with Mr. Gerry Heyt of the DNR.

March 30, 1983:

Mr. Heyt forwards a letter to Mr. Bartlett confirming the content of their discussion and requesting a number of specific actions to be taken to correct the situation at the landfill.

April 14, 1983:

Letter from Mr. John Bantjes of the DNR to Mr. Bartlett pointing out that the discharge outfalls 004 and 005 are not meeting their NPDES permit limitations and requesting that a plan to correct these problems be submitted by May 15, 1983.

April 27, 1983:

Letter from Mr. Bartlett to Mr. Heyt responding to Mr. Heyt's letter of March 30, 1983. In this letter Mr. Bartlett informs the DNR that the leachate collection system has been partially disassembled for inspection of all the leachate manholes. Upon inspection it has been found that there is a restriction in the line between manholes 2 and 3 and the DPW has contracted the services of a sewer cleaning contractor to remove the constraint. Mr. Bartlett goes on to point out that the contractor is expected to complete the work within 60 days. He also transmits with this letter a copy of a graph showing the BOD concentrations vs time, and points out the correlation between the 1979 and the 1982/83 leachate collection system restrictions and their correspondingly high BOD concentrations. With this in mind Mr. Bartlett points out that correction of the flow in the leachate collection system will correct the increase in contaminant load found in the underdrain system. Thus, no further remedial action is expected to take place.

Mr. Bartlett goes on to comment on Mr. Heyt's points No. 1, 2, 3 and 4. In regard to the reintroduction of leachate, Mr. Bartlett points out an attached article which suggests that leachate recycling be viewed as a treatment method as well as a method of enhancing gas production. In regard to items 2 and 3, Mr. Bartlett points out that continued progress is being made to properly slope and grade the landfill for improved drainage. He goes on to request that a member of the DNR staff review the site to allow Mr. Bartlett the opportunity to point out the progress that has been made. In regard to Mr. Heyt's item 4, Mr. Bartlett points out that the leachate collection system has been inspected as per Mr. Heyt's request. Lastly, Mr. Bartlett points out that the boring records and the records of attempts to place wells on the southern end of the site have been shown to be very unsuccessful in finding water. He goes on to point out that the addition of wells upgradient of the area of known impact would not be beneficial.

April 28, 1983:

Letter from Mr. Bartlett to Mr. Bantjes. In this letter Mr. Bartlett forwards a copy of his letter to Mr. Heyt in response to Mr. Bantjes' letter of April 14, 1983. Mr. Bartlett reiterates his belief that the increased contaminant loading in the underdrain outfall locations is the result of the flow blockage

of the leachate collection system. He further points out that removal of the blockage in the leachate collection system will resolve the NPDES permit violation problem.

May 12, 1983:

Mr. Roger Przybysz replies to April 27 letter of Mr. Bartlett. This correspondence suggests increased monitoring of the leachate levels in the collection manholes. Monthly sampling of monitoring wells 53 and 55 and outfalls 004 and 005 is also requested in this letter.

May 18, 1983:

Mr. Bartlett replies to Mr. Przybysz' letter of May 12 pointing out a number of incorrect statements made by Mr. Przybysz in his May 12 letter and requesting that Mr. Przybysz visit the site in order to review the leachate collection system during the cleaning operation then in progress and to discuss the difficulties involved in inspection programs of that system.

May 26, 1983:

Letter from Mr. Bartlett to Mr. Przybysz informing the DNR of the completion of the leachate collection system cleaning, installation of a stainless steel cable within the collection system pipelines, completion of arrangements to sample all outfalls for organics beginning in June, 1983 and completion of arrangements to begin quarterly sampling of wells 48, 53, 54 and 55 for organics beginning in June, 1983.

June 8, 1983:

Quarterly sampling of the monitoring wells was completed in the presence of Mr. Heyt of the DNR. Samples from the wells were split between the DPW lab and the DNR lab.

September 22, 1983:

A meeting was held between Mr. Bartlett, Mr. Kemppainen and Mr. Despres of the DPW and Mr. Heyt, Mr. Przybysz and Mr. Janiczek of the DNR. At this meeting a number of topics were discussed ranging from air quality considerations to monitoring program results and plans for placement of additional monitoring wells on site.

Sept. 30, 1983:

Correspondence from Mr. Heyt to Mr. Bartlett requesting that a remedial action plan be developed to address all the aspects of the alleged environmental degradation occurring at the site including the outfall discharges, the alleged groundwater

contamination and the physical closure of the site. Mr. Heyt requests that a plan be developed to capture and treat the groundwater discharged from the underdrains in order to comply with the discharge limitations of the NPDES permit for the site. In the area of the alleged groundwater contamination Mr. Heyt requested that additional monitoring wells be installed to determine the horizontal and vertical extent of contamination and that a system be developed to capture and treat the contaminated groundwater or to contain the plume on site. Mr. Heyt also suggested that the site be evaluated for possible avenues of escape of contaminants in order to abate any discharge via those avenues. Mr. Heyt goes on to request all available information relative to the existing monitoring well physical parameters along with a plan for locating additional monitoring wells along the western perimeter of the property, all of which was to be provided to the DNR by October 21, 1983. Lastly, in the area of closure, Mr. Heyt requests site closure and suggests that an agreement document to that effect be developed.

October 14, 1983:

Correspondence from Mr. Curt Kemppainen to Mr. Heyt responding to Mr. Heyt's September 30 correspondence. In this correspondence Mr. Kemppainen informs the DNR that the vent structures installed on the outfall outlet pipes have reduced the volatile organics levels in those outfall waters. Also, he requests that the unexplained discrepancies in the levels of the compound methylene chloride be resolved through the use of a third independent laboratory for that specific analysis. Outfall organic analysis results were forwarded with that letter. The DNR is also informed in this letter of the DPW's plans to construct collection lagoons at the ends of the outfalls and it is pointed out that the water quality of the water being discharged is improving at that point due to the vent structure installations. Mr. Kemppainen goes on to discuss the DPW's plans for a grate system in the bottoms of the leachate manholes and a high water alarm early warning device to be installed in those manholes. In part B of this letter Mr. Kemppainen discusses the source of contaminants and suggests that a study be conducted to determine whether these contaminants are derived from liquid leakage or from gas migration. It was estimated in that letter that a 10-15 month time interval would be required before an answer could be found to this question. Mr. Kemppainen goes on to point out the County's intention to contain the contaminants within the landfill by use of a properly designed control system on site. In topic C, Closure, Mr. Kemppainen requests that the DNR submit a letter detailing reasons why the landfill should be closed ahead of its scheduled 1987 completion date. He also points out that early closure would provide little benefit in solving the problem of groundwater contamination.

October 17, 1983:

Letter from Mr. Bartlett to Mr. Heyt enclosing information requested at the September 22nd meeting. The information included existing and future monitoring well locations with associated well point depths and static water levels, cross sections showing details of proposed monitoring wells and updated boring log locations for existing monitoring wells.

November 3, 1983:

Correspondence from Mr. Heyt to Mr. Kemppainen. In this correspondence Mr. Heyt requests, in the name of the Surface Water Quality Division, to review the basis for design of the collection lagoons proposed. Mr. Heyt also points out the possibility of a need for an air quality permit for the ponds. In reply to the discussion of a third independent laboratory analyzing the methylene chloride samples from the site, Mr. Heyt suggests that the County's laboratory contact the Environmental Services lab to discuss the proper analytical procedures and techniques for this compound. In the area of groundwater, Mr. Heyt states that the additional monitoring well locations have been reviewed and accepted by the staff geologist and restates the DNR's position that a remedial action plan will have to be developed to capture all the contaminants emanating from the landfill. Mr. Heyt goes on to say "We cannot accept your projections of 10-15 months to review and investigate possible avenues for escape..." This is an apparent misinterpretation of Mr. Kemppainen's earlier remarks regarding the sources of contamination. In Section 3 regarding closure, Mr. Heyt goes on to reiterate the Department's position that closure is necessary to minimize the impact on the groundwater and that an acceptable document which addresses this matter will be developed by the DNR for the DPW's review.

December 8, 1983:

Letter from Mr. Przybysz to Mr. Despres of the DPW transmitting the DNR's draft of a proposed closure agreement. Mr. Przybysz goes on to request comments and a statement of the DPW's direction in this matter before December 19, 1983.

January 18, 1984:

Telephone conversation between Mr. Kemppainen and Mr. Heyt informing the DNR of the DPW's intent to prepare a draft closure agreement for the DNR's review.

January 30, 1984:

Letter from Mr. Kemppainen to Mr. Heyt confirming the January 30th telephone call informing the DNR that the DPW will prepare a draft closure agreement to be submitted to the DNR by February 15, 1984.

February 10, 1984:

Letter from Mr. Kemppainen to Mr. Heyt transmitting the DPW's draft of a proposed closure agreement between the DPW and the DNR. A meeting to discuss the closure drafts scheduled for February 13, 1984 at the DPW's offices is mentioned. Also, enclosed in this letter are some additional groundwater monitoring data.

March 16, 1984:

Letter from Mr. Bartlett to Mr. Przybysz informing the DNR of the present status of well installations at the Plainfield Landfill and transmitting well log information regarding that project.

April 9, 1984:

Letter from Mr. Przybysz to Mr. Despres regarding the February 10, 1984 draft closure agreement submitted to the DNR. Mr. Przybysz particularly expresses his disagreement with the proposed closure time schedule and items E.4, 5, 6 and 7, but states that some of the elements contained in the document are worthy of further discussion. He goes on to request that the County voluntarily continue to pursue completion of a hydrogeologic study of the site and that the hydrogeologic work be organized into a complete work plan and time schedule. He points out the merit of the placement of interim cover and of the evaluation of the causes of gas migration outside the landfill. He also reiterates the DNR position that early closure of the landfill is necessary, but that further discussion of this document may proceed "based upon the premise that groundwater sampling data continue to show improvement from the 1983 sampling".

August 7, 1984:

A meeting is held between Mr. Kemppainen and Mr. Powell of the DPW and Mr. Przybysz and Mr. Heyt of the DNR. At that meeting work plans are discussed for a hydrogeologic study, for collection treatment and final disposal of landfill leachate, for mitigation of odors and for grading, contouring and placement of interim cover on the fill area.

August 8, 1984:

Letter from Mr. Przybysz to Mr. Kemppainen confirming the content of the August 7, 1984 meeting at which time it was agreed that the above mentioned work plans would be developed and submitted on or before August 30, 1984. In this letter Mr. Przybysz also requests copies of the quarterly well monitoring results from June of 1984.

August 21, 1984:

Letter from Mr. Powell to Mr. Przybysz transmitting the above mentioned quarterly well monitoring results for June, 1984.

August 31, 1984:

Letter from Mr. Powell to Mr. Przybysz transmitting the requested work plans and time schedules outlined in the August 7th meeting.

Sept. 11, 1984:

Letter from Mr. James Janiczek of the DNR to Mr. Kemppainen regarding placement of the four well cluster located at or near coordinates 385 N, 65 W.

Sept. 14, 1984:

Letter from Mr. Powell to Mr. Przybysz transmitting the requested monitoring well organic analyses for June of 1984 along with the outfall organic analyses for June, July and August of 1984.

Sept. 19, 1984:

Letter from Mr. Przybysz to Mr. Powell acknowledging receipt of Mr. Powell's August 31, 1984 letter transmitting the requested work plans. Mr. Przybysz comments at length regarding the work plans, requesting monthly status reports on the hydrogeologic study, requesting a report on the leachate pretreatment trailer by December 31, requesting as-built plans of the leachate recycling system as soon as possible and requesting a report on the leachate holding pond odor control measures by October 30. We understood this letter to authorize us to proceed with the work plan set forth in the August 31 letter.

October 19, 1984:

Letter from Mr. Powell to Mr. Przybysz responding to his September 19th letter. It is pointed out that the monthly status reports are, in effect, duplication of the bi-monthly status documents to be generated according to the work plan for hydrogeologic study, and it is suggested that closer progress monitoring be conducted on a personal inspection or over-the-

phone basis. Mr. Przybysz is also advised of the status of the hydrogeologic study being conducted. A lengthy rebuttal of Mr. Przybysz' comments regarding leachate collection, treatment and final disposal is contained in this letter. Also a brief discussion of the alternatives available in regard to odor control are discussed and, lastly, Mr. Przybysz is informed that the intermediate cover plan is progressing well and will be completed on schedule before the onset of winter.

November 19, 1984:

Letter from Mr. Przybysz to Mr. Powell. In this letter Mr. Przybysz responds briefly to Mr. Powell's comments in his letter of October 19th regarding the various work plans. Mr. Przybysz suggests that after receipt of the Phase I evaluation the DNR and DPW staffs should sit down and discuss the work plan for Phase II of the hydrogeologic work plan (which is where we are right now.) Mr. Przybysz points out under leachate collection, treatment and final disposal that he is happy to see the leachate pretreatment trailer finally working and that a permanent pretreatment facility is planned. He then asks when final plans will be submitted for approval. Mr. Przybysz again requests plans for the leachate recycling system. Under odor control, Mr. Przybysz makes his own evaluation of the spray foam blanket technique suggesting that it is not adequate and that the County should commit to some other type of odor control plan by spring. Under the intermediate cover plan section, Mr. Przybysz points out that the cover is almost complete and that it has made a dramatic improvement in the appearance of the landfill.

November 20, 1984:

Letter from Mr. Powell to Mr. Przybysz transmitting the requested plans of the leachate recycle pipelines.

November 28, 1984:

Letter from Mr. Powell to Mr. Przybysz informing the DNR that the Phase I hydrogeologic study will not be complete on December 1 due to considerable delays encountered in locating and verifying old data, updating site plans and computer data files, obtaining private well logs, and plotting and compiling base data in usable forms. This letter also assures the DNR that the DPW is doing all within its power to expedite the completion of the Phase I study and goes on to estimate completion on or about December 10.

December 21, 1984:

Phone call from Mr. Powell to Mr. Przybysz of the DNR to inform him that the Phase I Hydrogeologic Report was not yet complete. Mr. Przybysz was assured that the Department was doing all within its power to complete the report pointing out that Mr. Powell had

personally been putting in 50-60 hour work weeks on the project and that the engineering aides had also been putting in 50 hour work weeks to press for the study's completion. Unfortunately, as it was the Christmas holiday season, Mr. Przybysz was informed that Mr. Powell would be out of town until the first week of January and that also the clerical staff of the Department would be on vacation to some extent, and also preoccupied with the Act 641 County Plan and the Department's 1985 budget reports. Therefore, the completion of Phase I would not likely occur until mid-January. Mr. Przybysz was most understanding and seemed satisfied that the DPW was not stalling on this issue. At that point the conversation turned to the specific North Kent site activities and Mr. Przybysz mentioned that he was quite pleased with the progress made in obtaining the proper cover on site and with the better drainage grading. The conversation turned to a lengthy discussion of the status of the leachate pretreatment facility being developed for the site. The leachate pond odor problem was briefly discussed, at which point Mr. Przybysz pointed out that the odors had subsided considerably and a brief discussion of the County's options to correct the odor problem ensued.

January 30, 1985:

Letter from Mr. Przybysz to Mr. Despres via certified mail with the Notice of Noncompliance. This letter is already part of the proceeding and speaks for itself.

February 1, 1985:

Letter from Mr. Powell to Mr. Przybysz transmitting a copy of the Phase I North Kent Landfill Hydrogeologic Study.

February 6, 1985:

Letter from Mr. Despres to Mr. Przybysz in response to his letter of January 30th. Mr. Despres points out that the Phase I report was being printed at the time of receipt of Mr. Przybysz' letter; that the report certainly shows that the County has not lacked initiative and that an immense amount of time and energy had been spent in compiling and evaluating the data enclosed within the report. Mr. Despres goes on to point out that the December 1st completion date was an estimated completion date and further states that the estimated Phase II completion date was based on the December 1st estimate of completing Phase I. Thus, the Phase II completion would also be delayed. Mr. Despres points out clearly that it was the Department's intention to submit a report which would be "complete in all aspects to the best of our ability whether we meet the 60 day timeline or not". In response to the DNR's complaint of lack of communication, he then goes on to point out that the continuous communication between the two offices is a twofold responsibility and that the DNR could

certainly have requested an update if it felt one was needed. Finally, Mr. Despres agrees that DPW staff will appear at the February 15th meeting to further discuss the DNR's concerns.

February 15, 1985:

Mr. Powell, Mr. Kemppainen, Mr. Despres and Mr. Jon DeWitt of the DPW meet with Mr. Przybysz, Mr. Heyt and Mr. Marx of the DNR. At that meeting Mr. Przybysz presented a copy of the DNR's Groundwater Quality Division summary of events regarding the above mentioned site. During the course of the meeting it was agreed that the DPW would reply in writing on or before March 4, 1985.

CONCLUSIONS

We apologize for the length of this document, but we feel that it is important to go into this amount of detail in light of the formal nature of the proceedings now being initiated by the DNR. As we noted at the outset, we do not believe that circumstances justify or require the use of such proceedings in connection with the problems which have been attributed to the North Kent Landfill. We believe that our position and the fundamental disputes between the DNR and the DPW can be summarized as follows:

1. There has been an extensive amount of communication between the DNR and the DPW with respect to the problems experienced at the North Kent Landfill. This has been in the form of correspondence, meetings, and telephone conferences beginning in 1982 and continuing to date. It appears that the DNR staff is not satisfied with the level of communication between the two departments and we are certainly willing to improve those lines of communications.

2. The DPW has engaged in extensive action seeking to improve the operation of the North Kent Landfill and to overcome any and all problems that have been attributed to that landfill. Notwithstanding the inability of the two departments to reach full agreement on all of the elements of dispute, the DPW has made substantial progress at significant cost to address and deal with the concerns of the DNR. We have engaged in extensive conduct to address the groundwater contamination problem; we have taken substantial steps towards resolving the problems with the leachate collection system; we have embarked on a significant course of conduct that will ultimately lead to the control of methane gas on the site; we have proceeded with extraordinary interim cover procedures that have improved the functional aspects of the site and significantly mitigated the problems attributed to the site; we have completed a thorough Phase I hydrogeological study which has for the first time collected all

of the existing data about the site; and we are now prepared, with the cooperation and involvement of the DNR, to move on to Phase II of the hydrogeologic study program as previously agreed, albeit with somewhat altered time estimates.

3. We have responded to proposed closure plans submitted by the DNR and we have submitted our own proposed closure plans to the DNR. While the two agencies seem to be able to agree on a number of details, there remain certain disputes between the agencies, the most notable of which is the DNR's absolute insistence that the North Kent Landfill be closed immediately, and the DPW's response that the most logical, valid and economical way to address both the problem and the closing of the site is to do so over a planned period of time. Clearly, the evidence demonstrates that there is no immediate threat to public health, safety or welfare that would justify the emergency type action which has been proposed in the past and now apparently is again being proposed by the DNR staff. The fact that this problem has been under study and evaluation since 1982 without off-site impacts clearly demonstrates that there is indeed no emergency.

4. The DPW is willing to continue discussions with the DNR towards resolving any and all problems that have been attributed to the North Kent Landfill; we are willing to work with reasonable remedial measures and compliance schedules in order to fully protect the public health, safety and welfare. We see no reason or basis for formal proceedings or emergency action of any kind under the present circumstances.

Very truly yours,

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

David R. Despres
Director

DRD:ad

cc: G. Heyt
R. Przybysz
J. DeWitt

NKlandfill#60

Mead

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COMPUCHEM SAMPLE NO. 24418
COMPUCHEM SAMPLE NO. 24419
COMPUCHEM SAMPLE NO. 24420
COMPUCHEM SAMPLE NO. 24421
COMPUCHEM SAMPLE NO. 24422
COMPUCHEM SAMPLE NO. 24423
COMPUCHEM SAMPLE NO. 24424
COMPUCHEM SAMPLE NO. 24425
COMPUCHEM SAMPLE NO. 24426

EXHIBITS (Exhibits are included for each sample above if they pertain to that sample)

I	LABORATORY CHRONICLE	
II	COMPOUND LISTS	
III	VOLATILE	RIC
III-1	VOLATILE	SPECTRA (ABOVE DETECTION LIMITS)
III-2	VOLATILE	STANDARD RIC
IV	ACID	RIC
IV-1	ACID	SPECTRA (ABOVE DETECTION LIMITS)
IV-2	ACID	STANDARD RIC
V	BASE-NEUTRAL/PESTICIDE	RIC
V-1	BASE-NEUTRAL/PESTICIDE	SPECTRA (ABOVE DETECTION LIMITS)
V-2	BASE-NEUTRAL/PESTICIDE	STANDARD RIC
*VI	GC PESTICIDE CHROMATOGRAM (METHOD 608)	
*VI-1	PESTICIDE	RIC
*VI-2	PESTICIDE	SPECTRA (ABOVE DETECTION LIMITS)
*VI-3	PESTICIDE	STANDARD CHROMATOGRAMS
*VII	20 PEAK SPECTRAL MATCH DIAGRAM(s)	
*VIII	CHAIN-OF-CUSTODY	

* if ordered

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2. ANALYTICAL METHODS, DEFINITIONS AND EXPLANATIONS

3. REPORT OF QUALITY CONTROL DATA *

A. MATRIX SPIKE ANALYSIS
B. DUPLICATE ANALYSIS
C. METHOD BLANK ANALYSIS
D. SURROGATE SPIKE RECOVERIES

EXHIBITS

I	VOA	BLANK RIC**
II	VOA	BFB TUNING
III	ACID	BLANK RIC**
IV	ACID	DFTPP TUNING
V	B/N/P	BLANK RIC**
VI	B/N/P	DFTPP TUNING
VII	PESTICIDE	BLANK (Method 608)

* if ordered
** Spectra and Spectral Match Diagrams included only if compounds in blank are above EPA specified detection limits.

CompuChem employs Methods 624 and 625 for priority pollutant analysis. These methods were proposed by the U.S.E.P.A. in volume 44 of the Federal Register on December 3, 1979. As these methods are currently in a "proposed" status, all aspects of the methods may not be validated until the U.S.E.P.A promulgates the methods in "final" form. Further, these methods were proposed for water and wastewater. CompuChem has applied various EPA approved modifications where necessary to accommodate other types of sample matrices such as soils.

Mead

REPORT OF DATA

SAMPLE IDENTIFIER:	COMPUCHEM SAMPLE NUMBER:
S5-	24417
K1	24418
K2-	24419
K3	24420
K4	24421
K5	24422
K6	24423
K7	24424
K8	24425
K9	24426

SUBMITTED TO:

Mr. T. K. Wu
Environmental Lab
Dept. of Natural Resources
315 North Clippert
Lansing, MI 48912

S-5-
K1
K2
K3 35
K4 63 63
K5 47
K6 54
K7 48
K8
K9

Richard L Bloom

RICHARD L. BLOOM, ASST. MANAGER
PRODUCTION PLANNING AND CONTROL

R. L. MYERS, PH.D., PRESIDENT

ROBERT E. MEIERER
DIRECTOR OF QUALITY ASSURANCE

EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K1
COMPUCHEM SAMPLE NUMBER: 24418

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K1
COMPUCHEM SAMPLE NUMBER: 24418

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	51	10	125
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	240	10	189
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	110	10	308
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	27	10	406
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

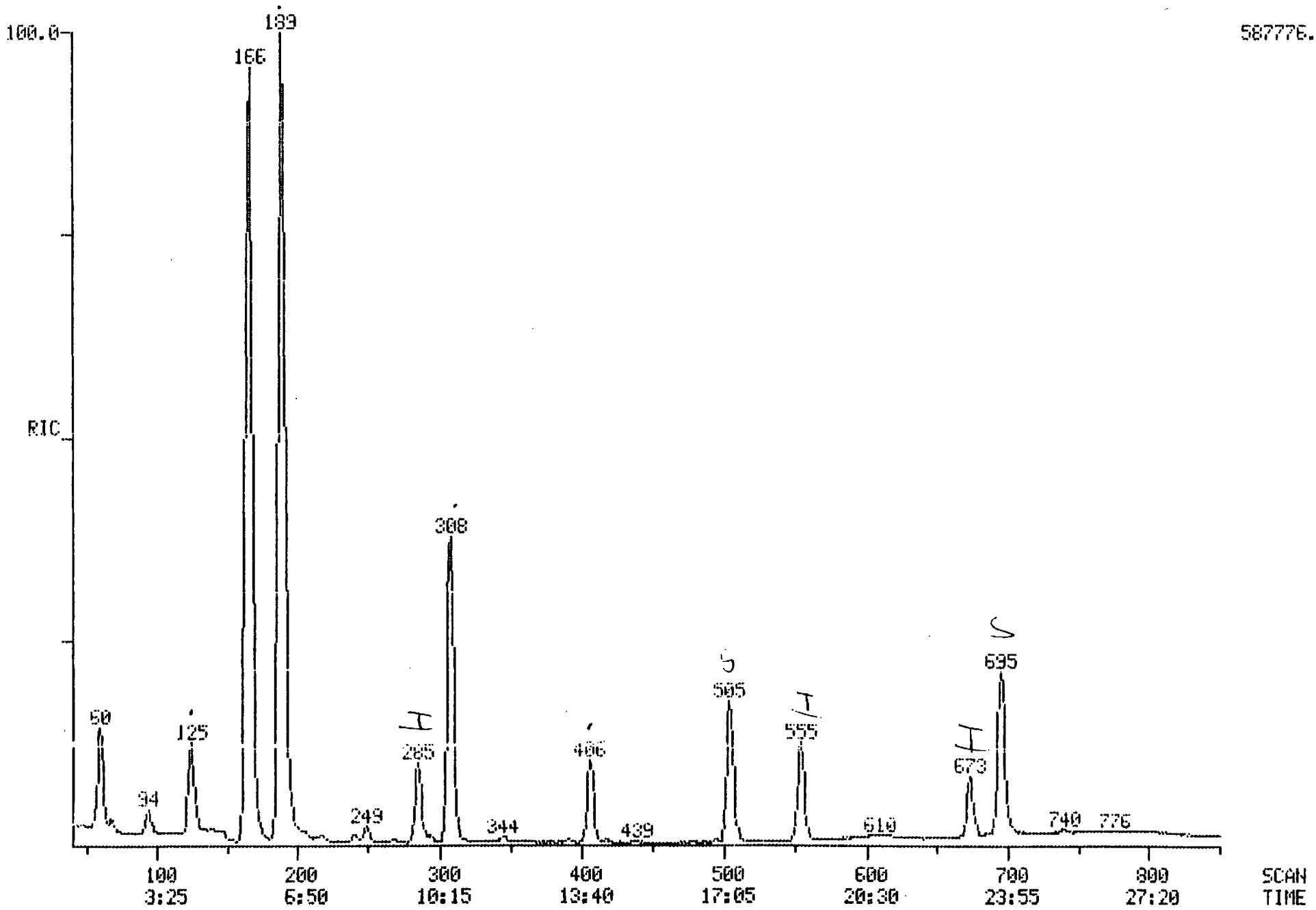
BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC DATA: VN024418C12 SCANS 40 TO 850

04/11/84 1:28:00

SAMPLE: 5ML#24418 + 5UL(11495+11502)



204

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 1:28:00 + 4:16
SAMPLE: 5ML#24418 + 5UL(11495+11502)
ENHANCED (S 15B 2ND)

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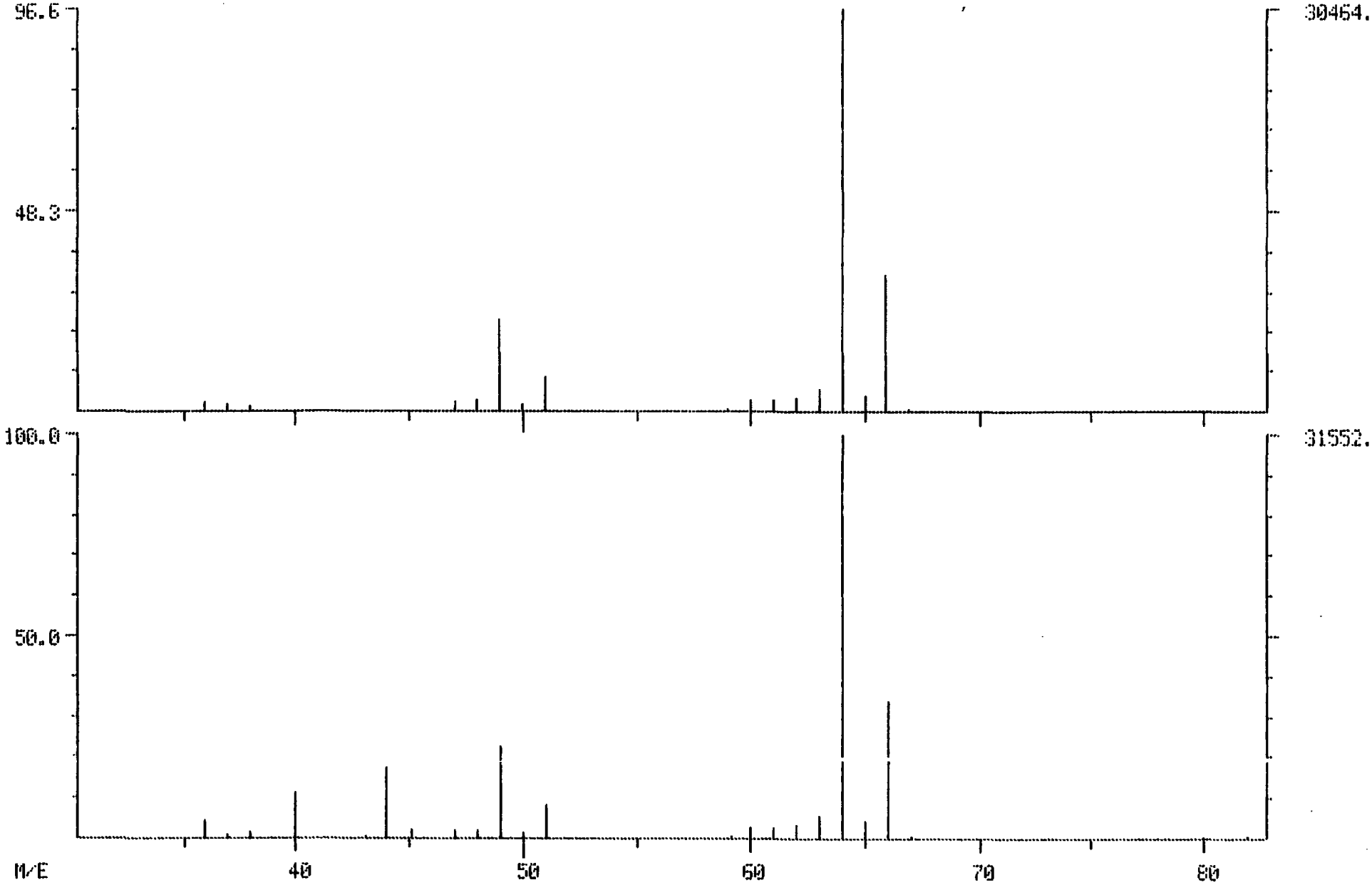
RIC: 60223./ 73343.



122

MEAD COMPUCHEM

DUAL MASS SPECTRUM
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SAMPLE: 5ML#24418 + 5UL(11495+11502)
ENHANCED (5 15B 2N)

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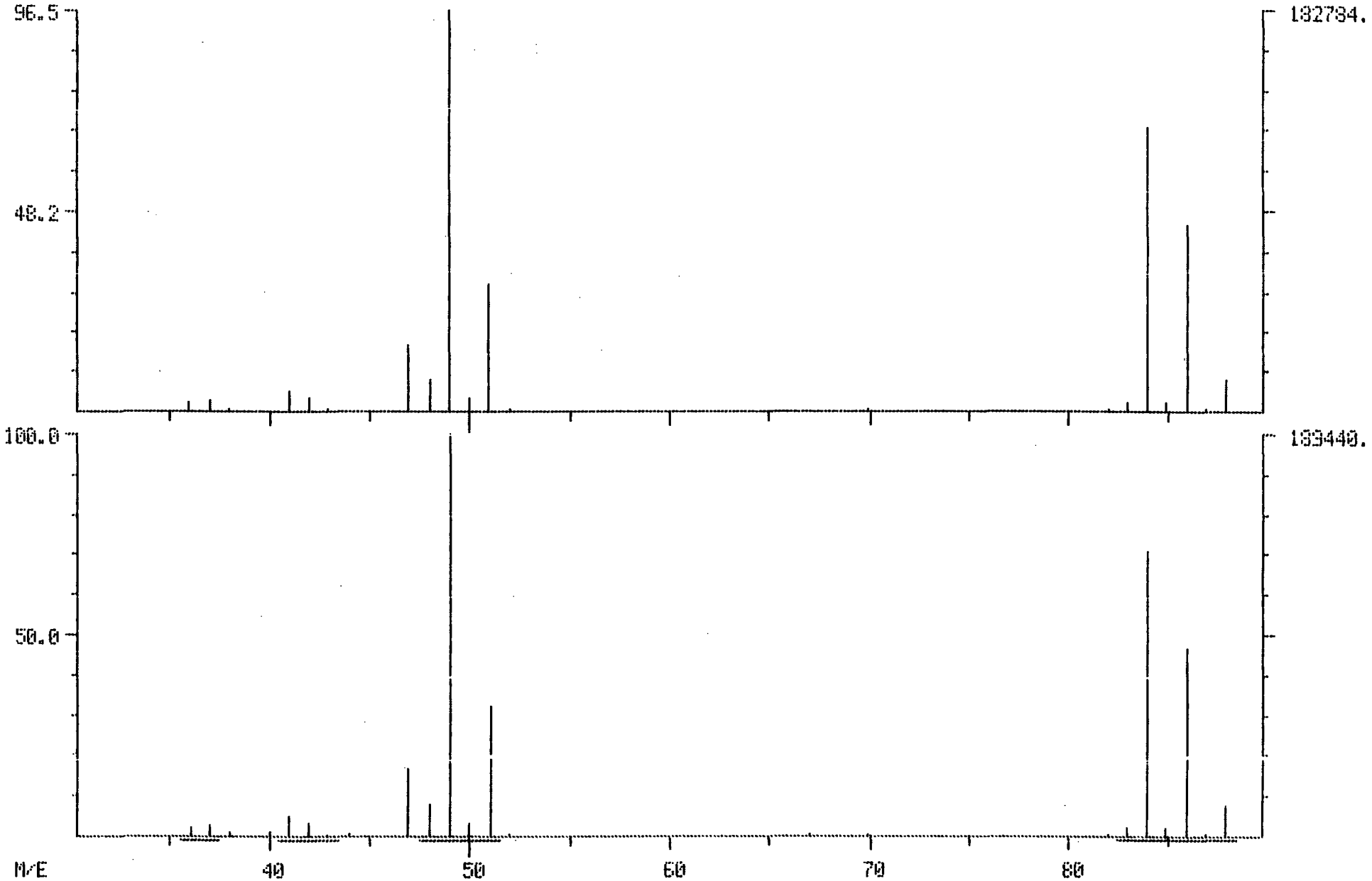

214

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 1:28:00 + 10:31
SAMPLE: 5ML#24418 + 5UL(11495+11502)
ENHANCED (S 15B 2ND)

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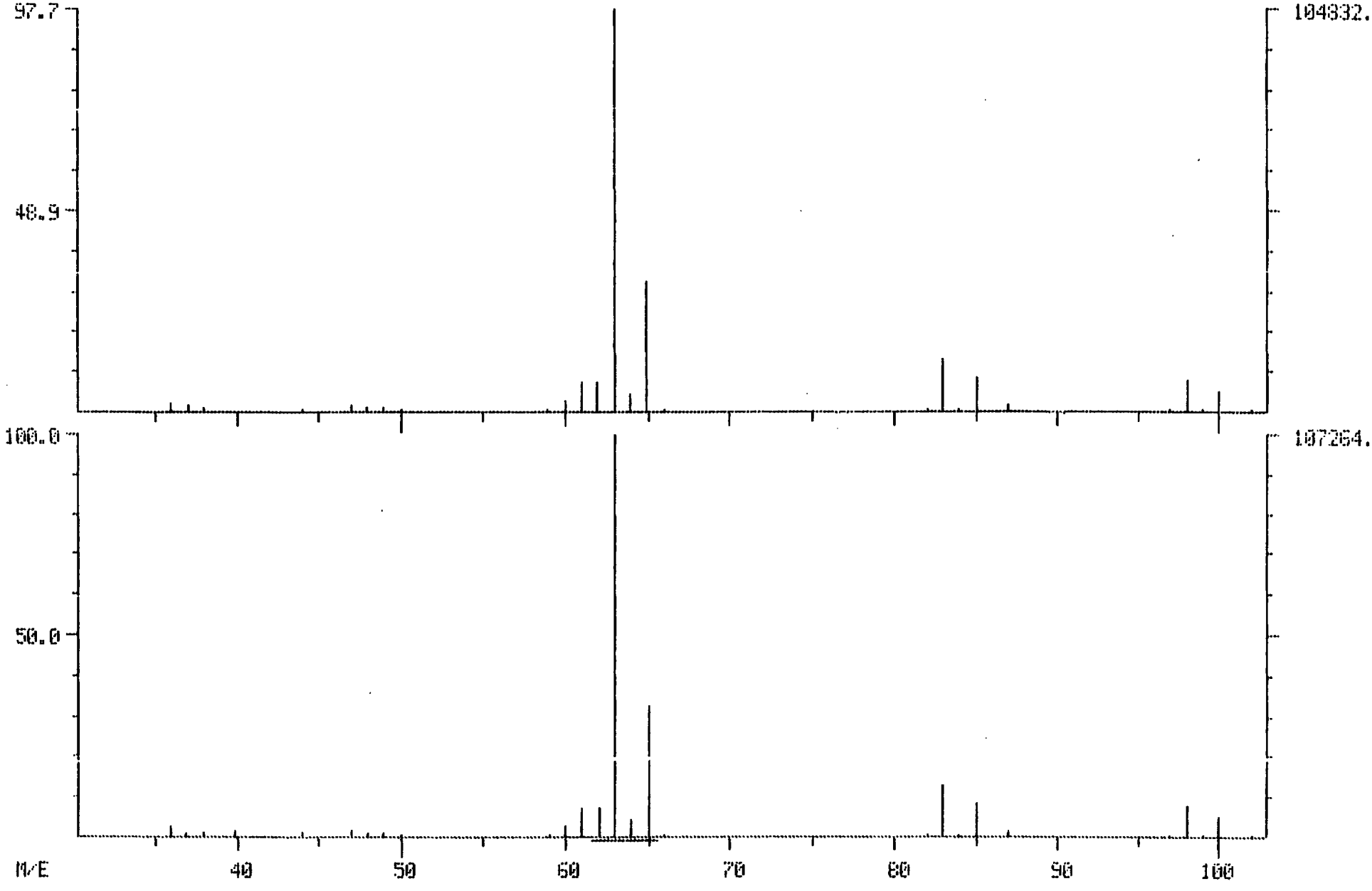
RIC: 215039./ 222719.



L2 1

MEAD COMPUCHEM

DUAL MASS SPECTRUM
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SAMPLE: 5ML#24418 + 5UL(11495+11502)
ENHANCED (S 15B 2ND)

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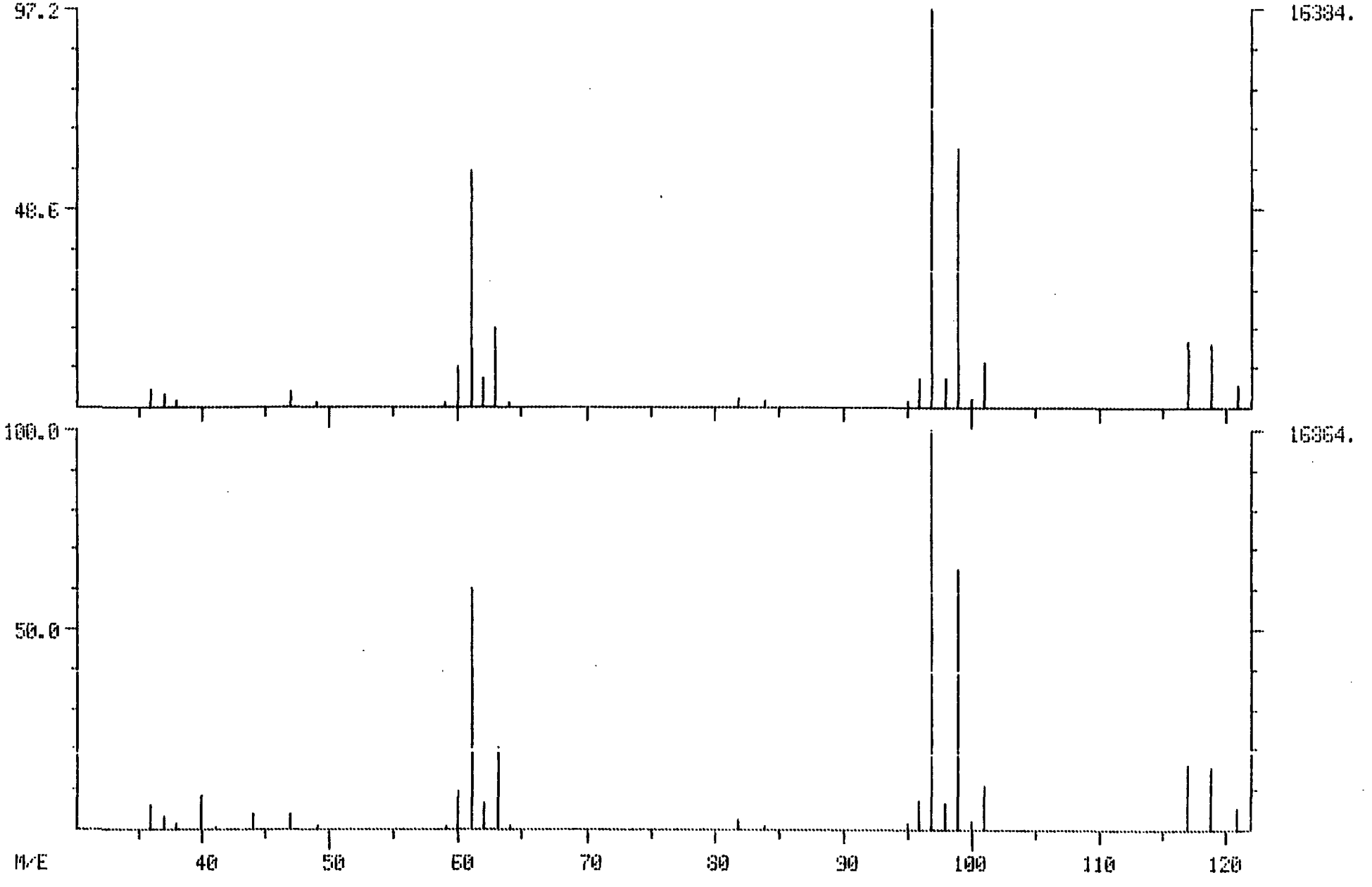
RIC: 57727./ 61439.



MEAD COMPUCHEM

RIC

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12

SCANS 40 TO 850

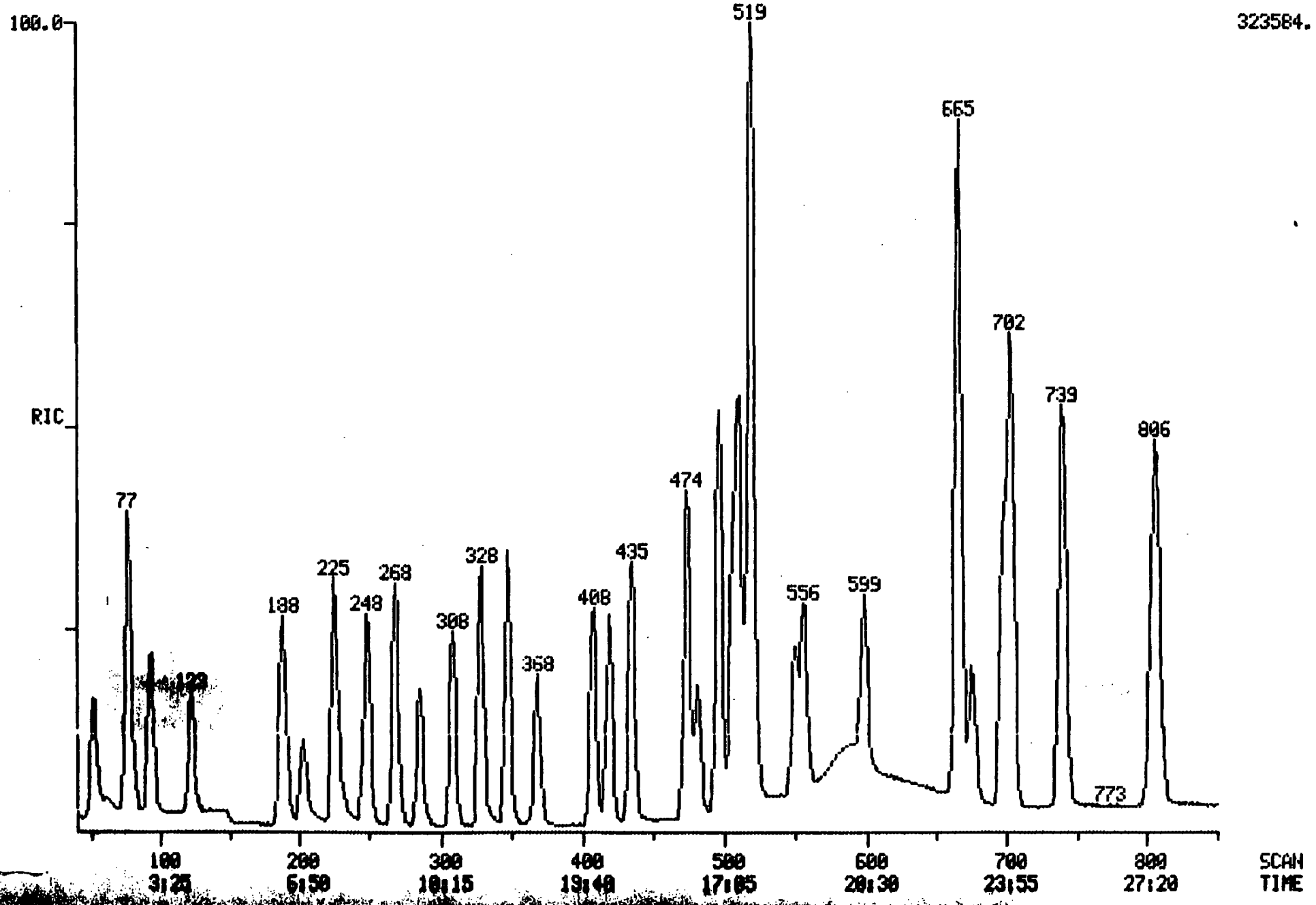


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K2
COMPUCHEM SAMPLE NUMBER: 24419

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K2
COMPUCHEM SAMPLE NUMBER: 24419

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	11	10	126
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	24	10	189
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

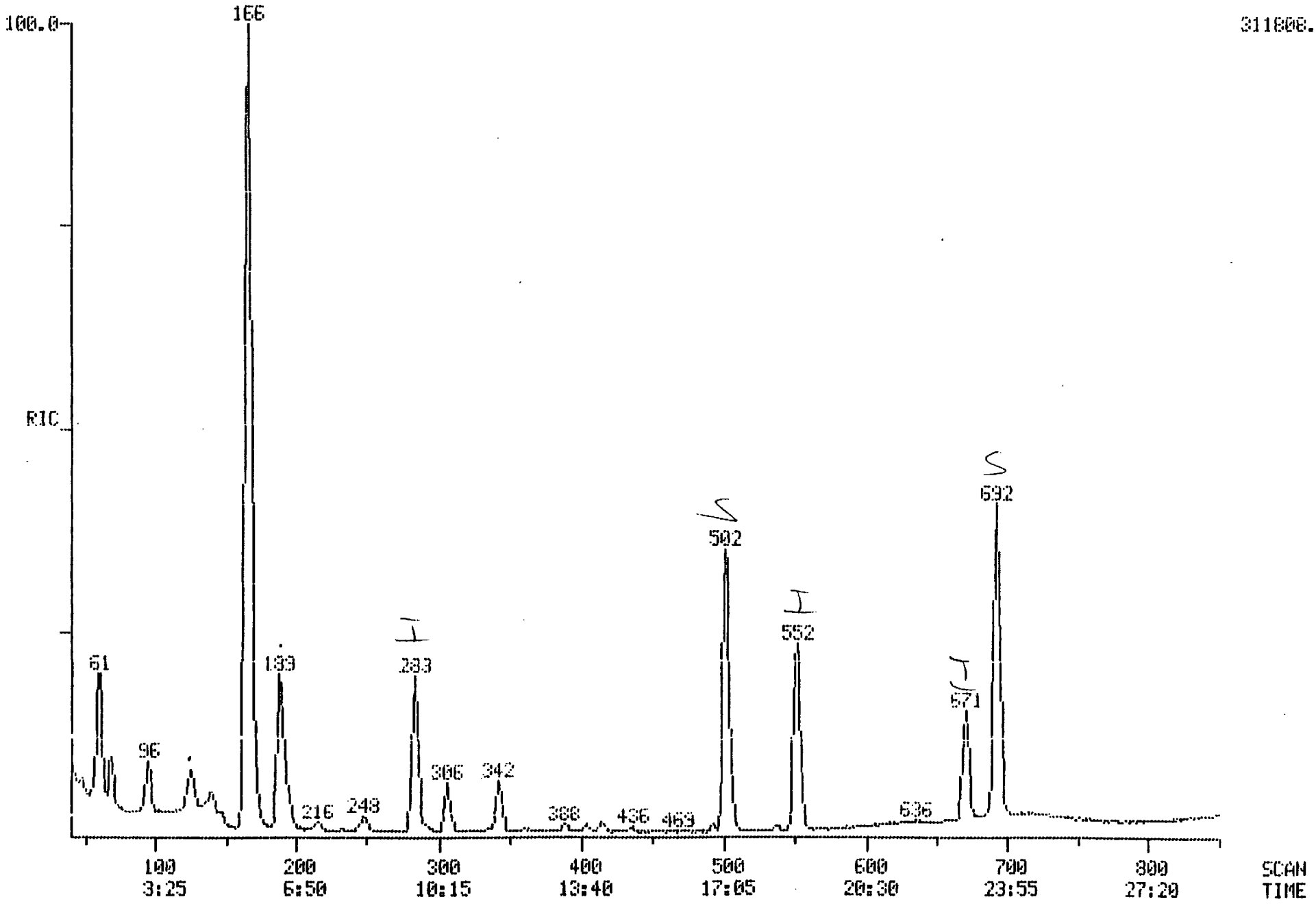
BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC DATA: VN024419C12 SCANS 40 TO 850

04/11/84 2:15:00

SAMPLE: 5ML#24419 + 5UL(11495+11502)



~~204~~ 209

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 2:15:00 + 4:18
SAMPLE: 5ML#24419 + 5UL(11495+11502)
ENHANCED (5 15B 2N)

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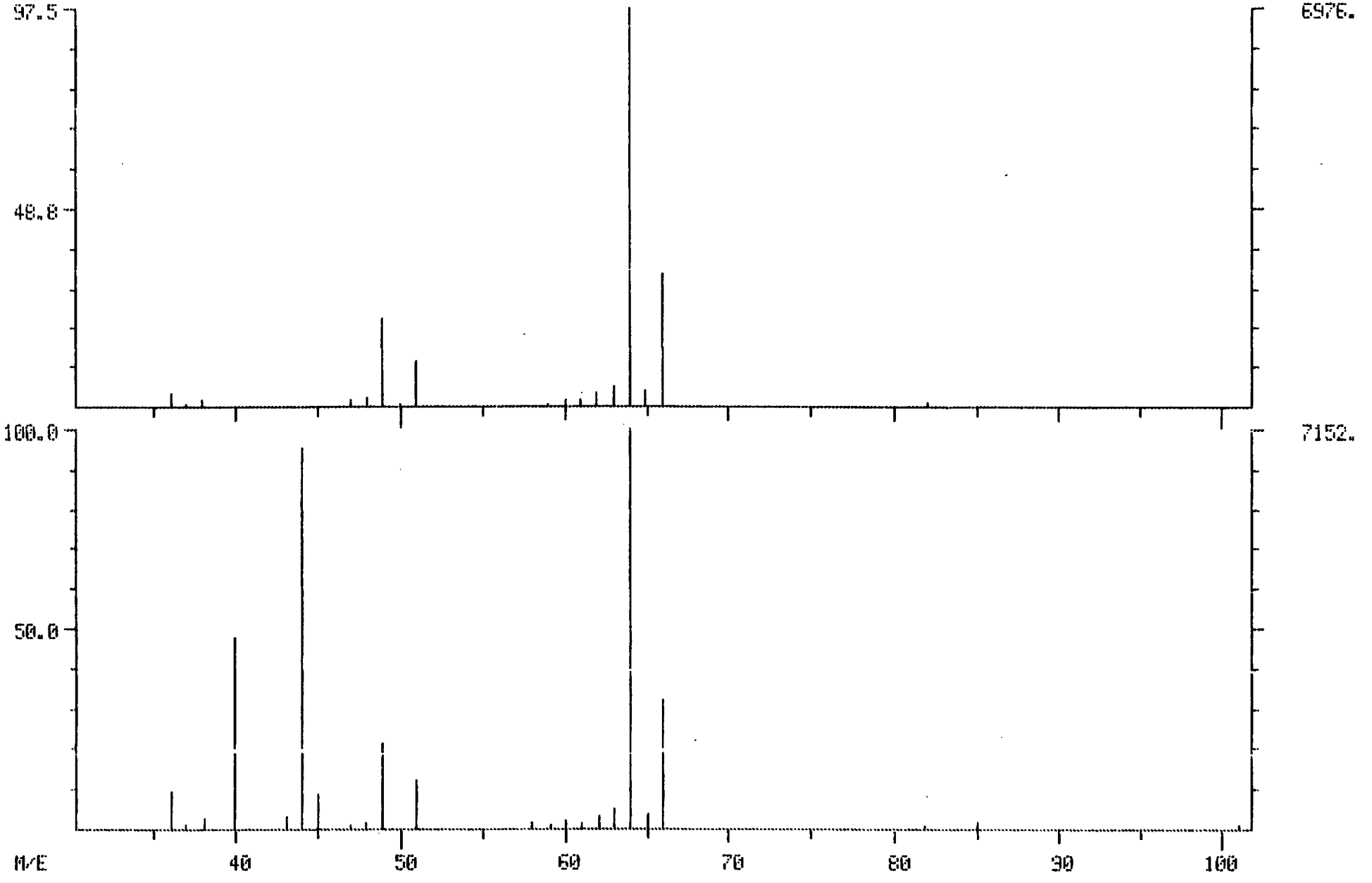
RIC: 13599./ 25759.

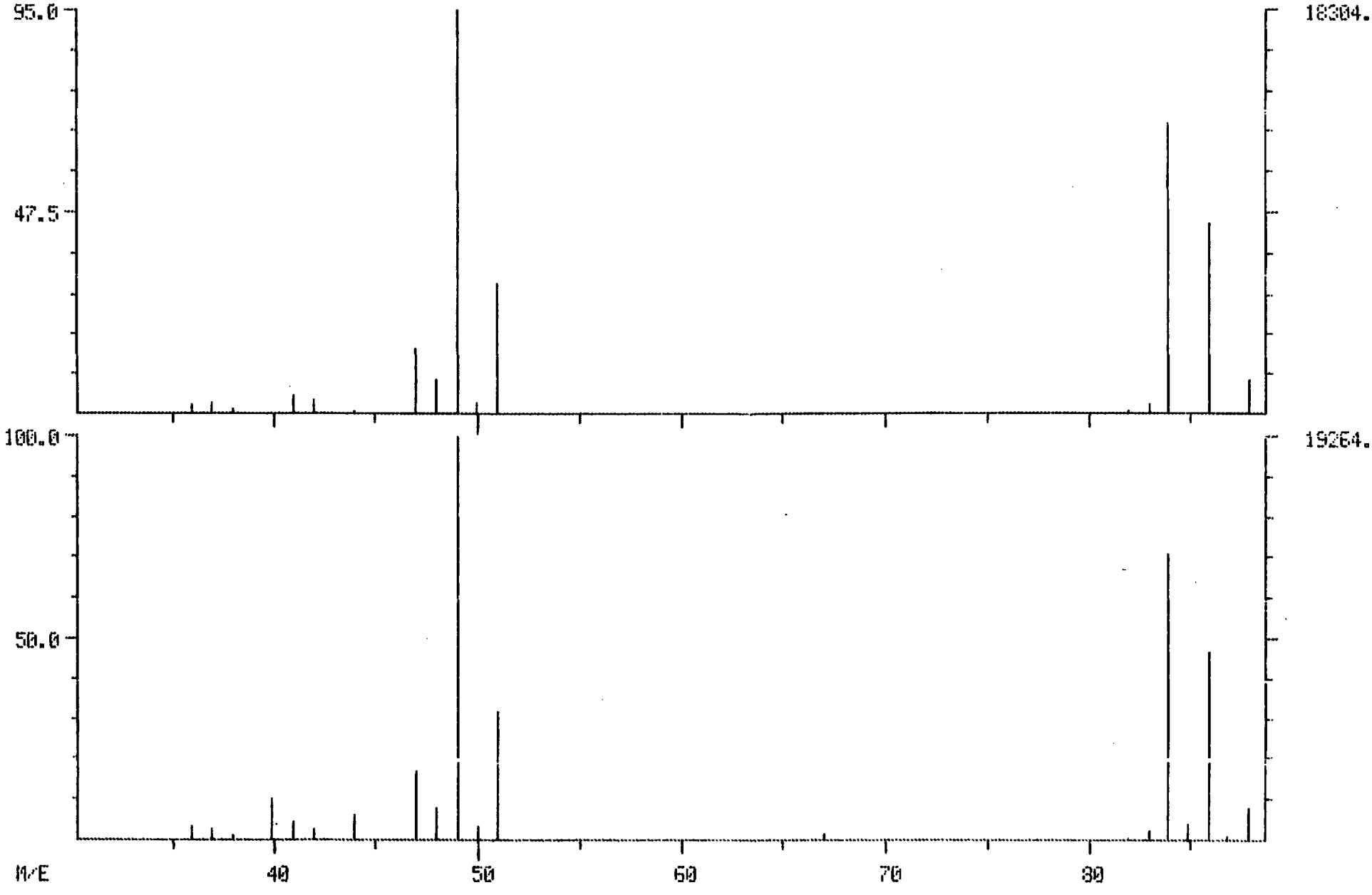


222

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 2:15:00 + 6:27
SAMPLE: 5ML#24419 + 5UL(11495+11502)
ENHANCED (5 15B 2N)

DATA: VN024419C12 #189 BASE M/E: 49/ 49
RIC: 55807./ 62975.



MEAD COMPUCHEM

RIC

DATA: V5840411C12

SCANS 40 TO 850

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

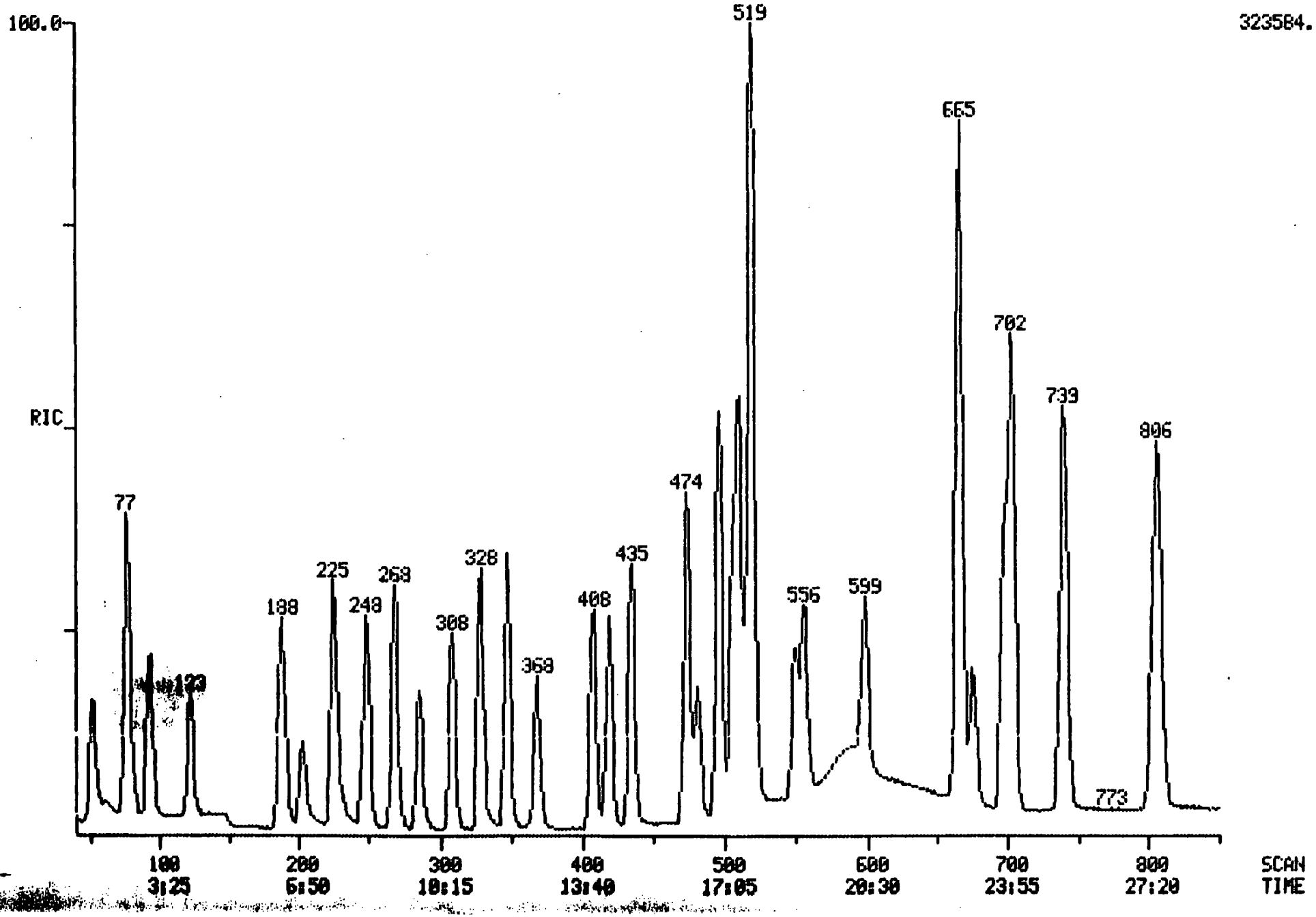


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K3
COMPUCHEM SAMPLE NUMBER: 24420

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K3
COMPUCHEM SAMPLE NUMBER: 24420

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

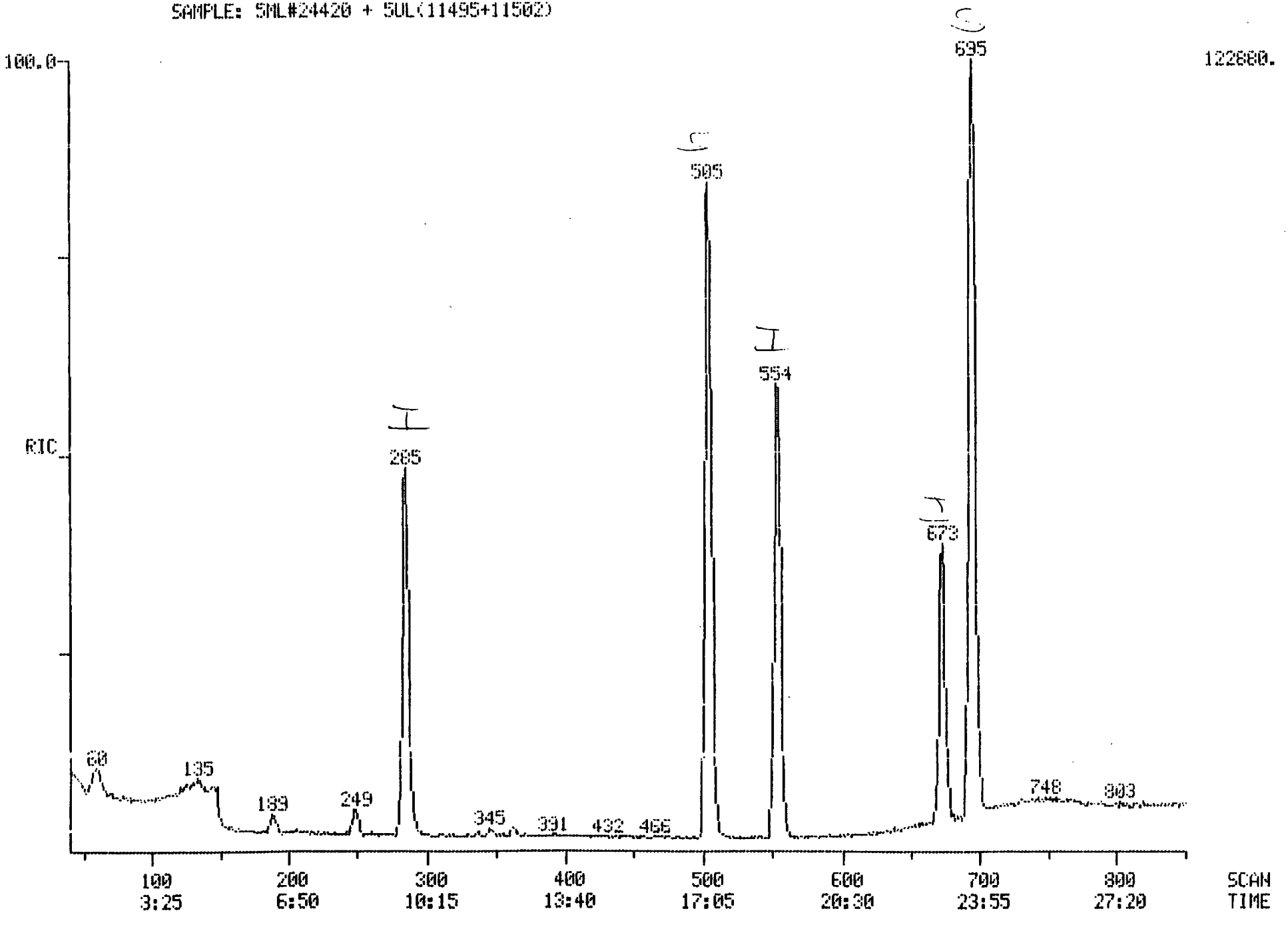
RIC

04/11/84 2:59:00

SAMPLE: 5ML#24420 + 5UL(11495+11502)

DATA: VN024420C12

SCANS 40 TO 850



MEAD COMPUCHEM

RIC

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12

SCANS 40 TO 850

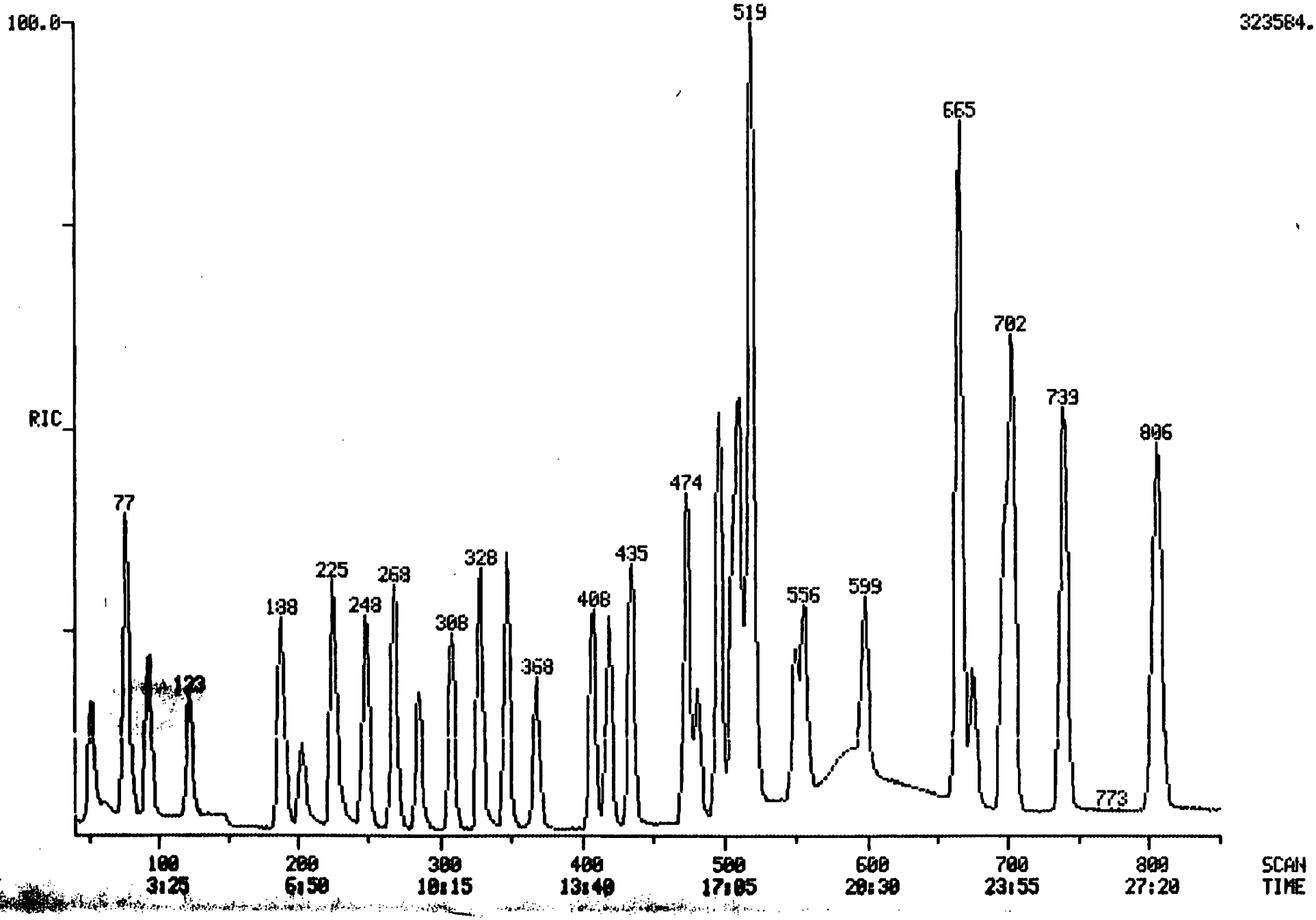


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K4
COMPUCHEM SAMPLE NUMBER: 24421

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K4
COMPUCHEM SAMPLE NUMBER: 24421

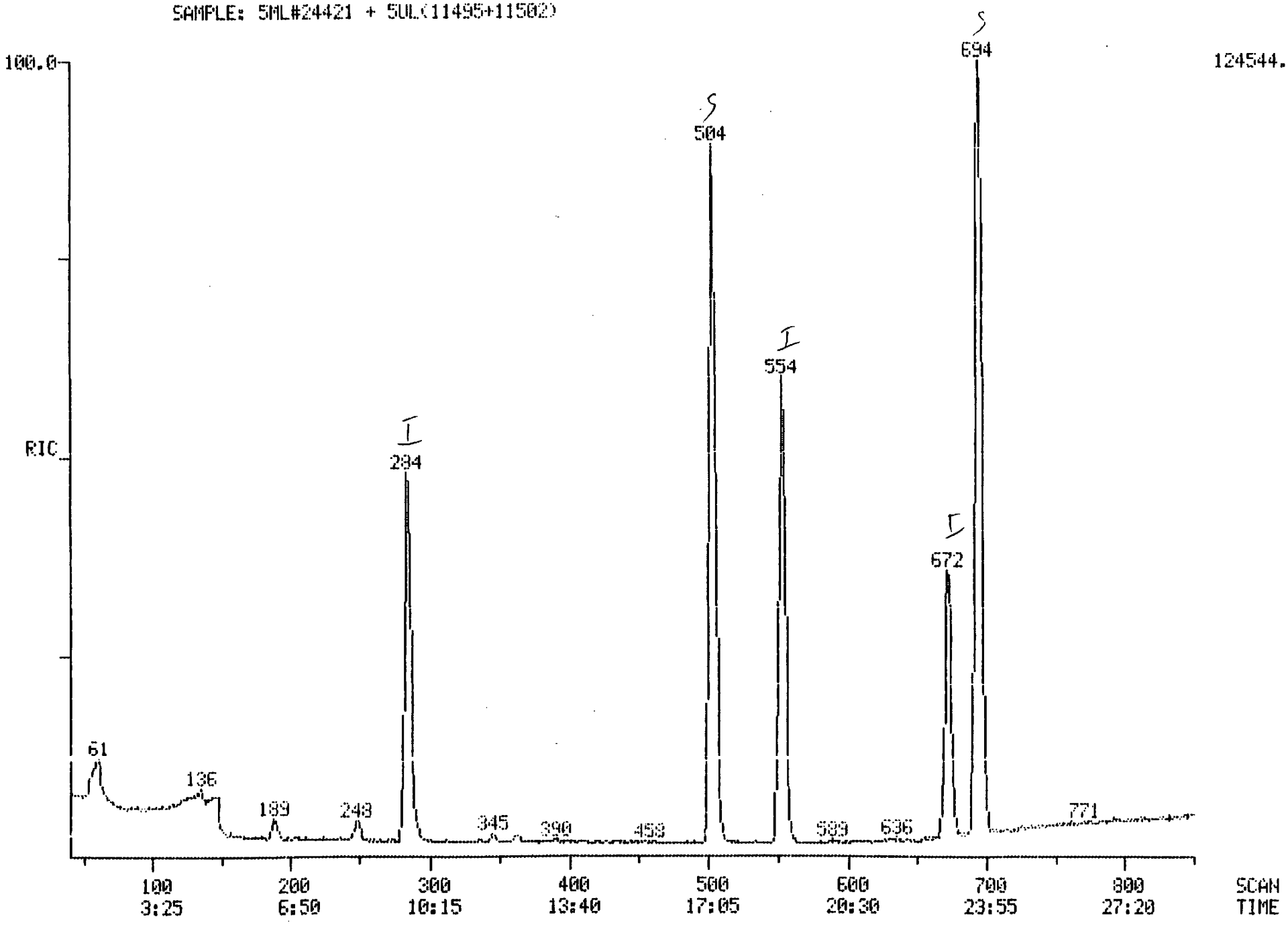
	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC
04/11/84 3:48:00
SAMPLE: 5ML#24421 + 5UL(11495+11502)

DATA: VN024421C12 SCANS 40 TO 850



MEAD COMPUCHEM

RIC

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12

SCANS 40 TO 850

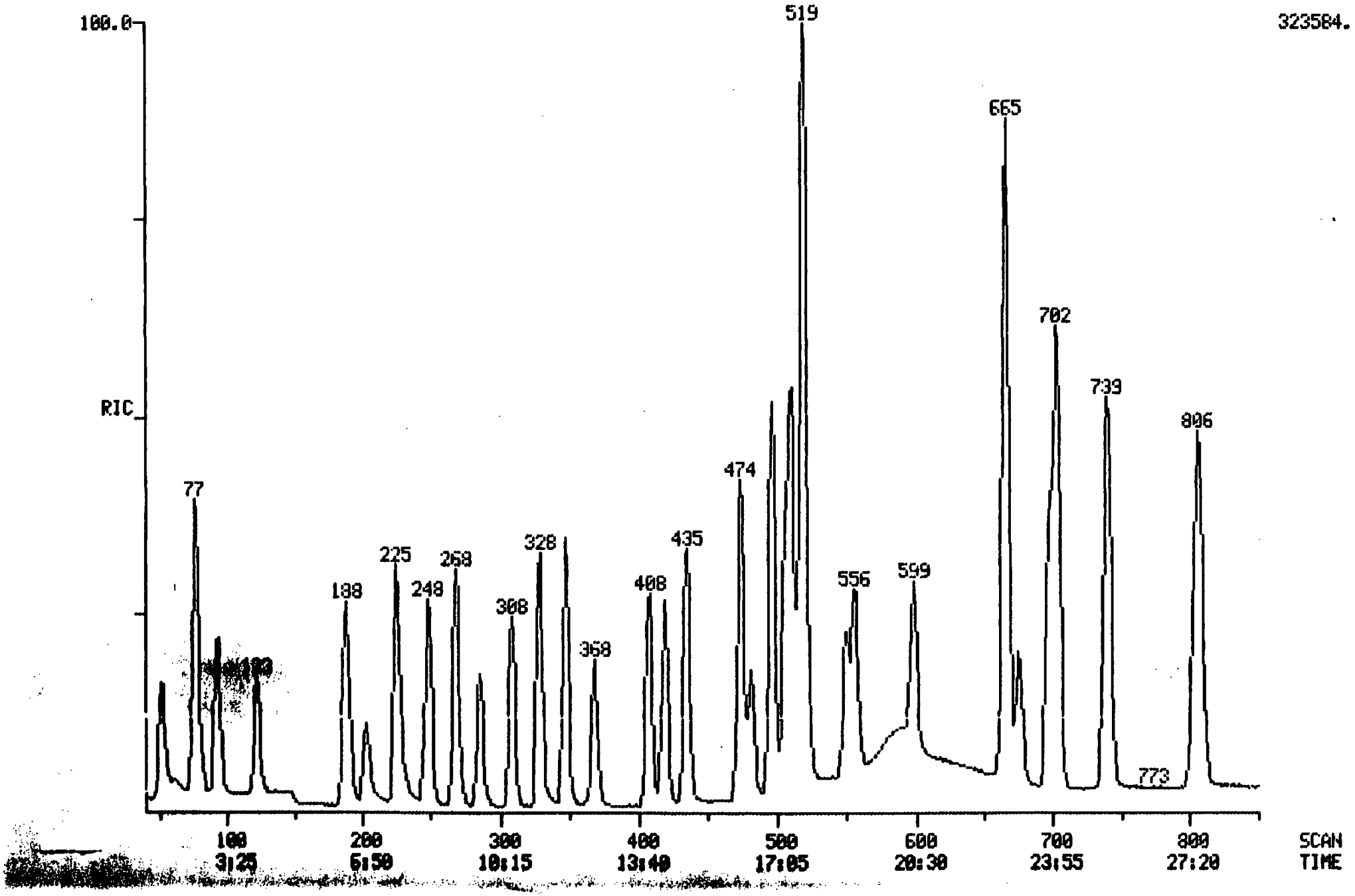


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K5
COMPUCHEM SAMPLE NUMBER: 24422

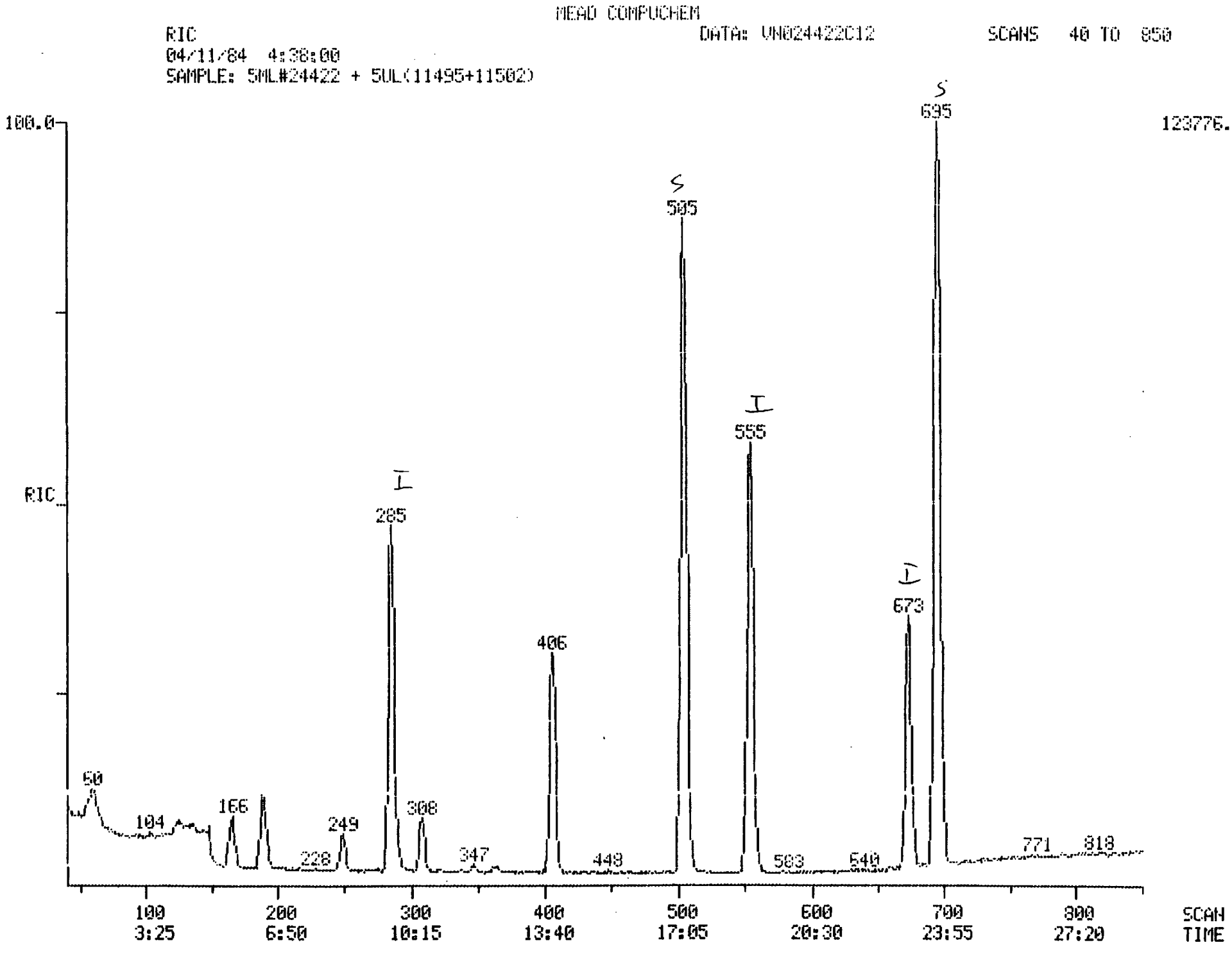
	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K5
COMPUCHEM SAMPLE NUMBER: 24422

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	16	10	406
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

BDL=BELOW DETECTION LIMIT

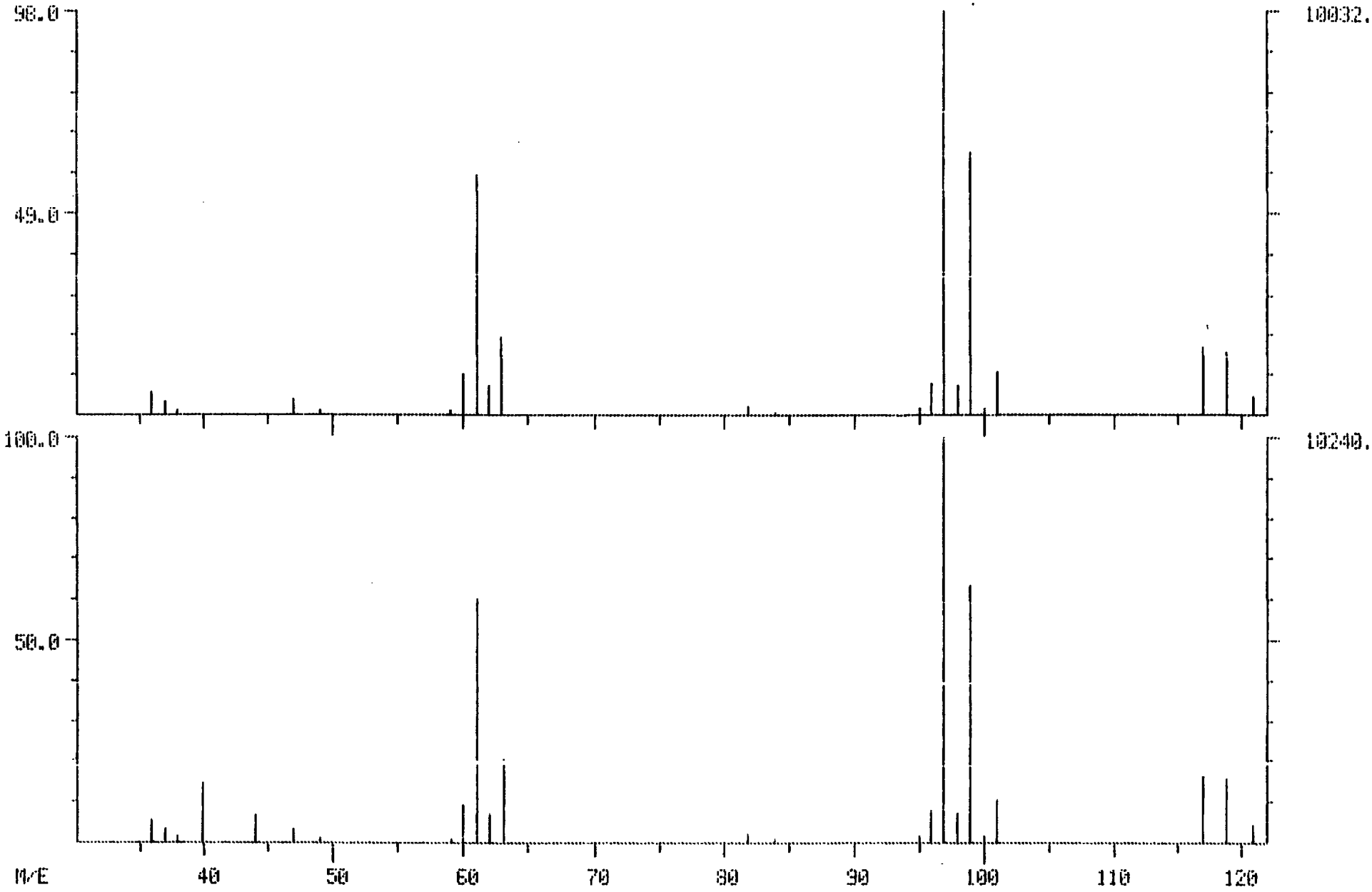

MEAD COMPUCHEM
RIC
04/11/84 4:38:00
SAMPLE: 5ML#24422 + 5UL(11495+11502)
DATA: VN024422C12
SCANS 40 TO 850
100.0
RIC
123776.
50
104
166
228
249
285
308
347
406
448
505
555
583
540
673
695
771
818
100
3:25
200
6:50
300
10:15
400
13:40
500
17:05
600
20:30
700
23:55
800
27:20
SCAN
TIME

~~415~~ 227

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 4:38:00 + 13:52
SAMPLE: 5ML#24422 + 5UL(11495+11502)
ENHANCED (S 15B 2N)

DATA: VN024422C12 #406 BASE M/E: 97/ 97
RIC: 34879./ 37759.



MEAD COMPUCHEM

RIC

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12

SCANS 40 TO 850

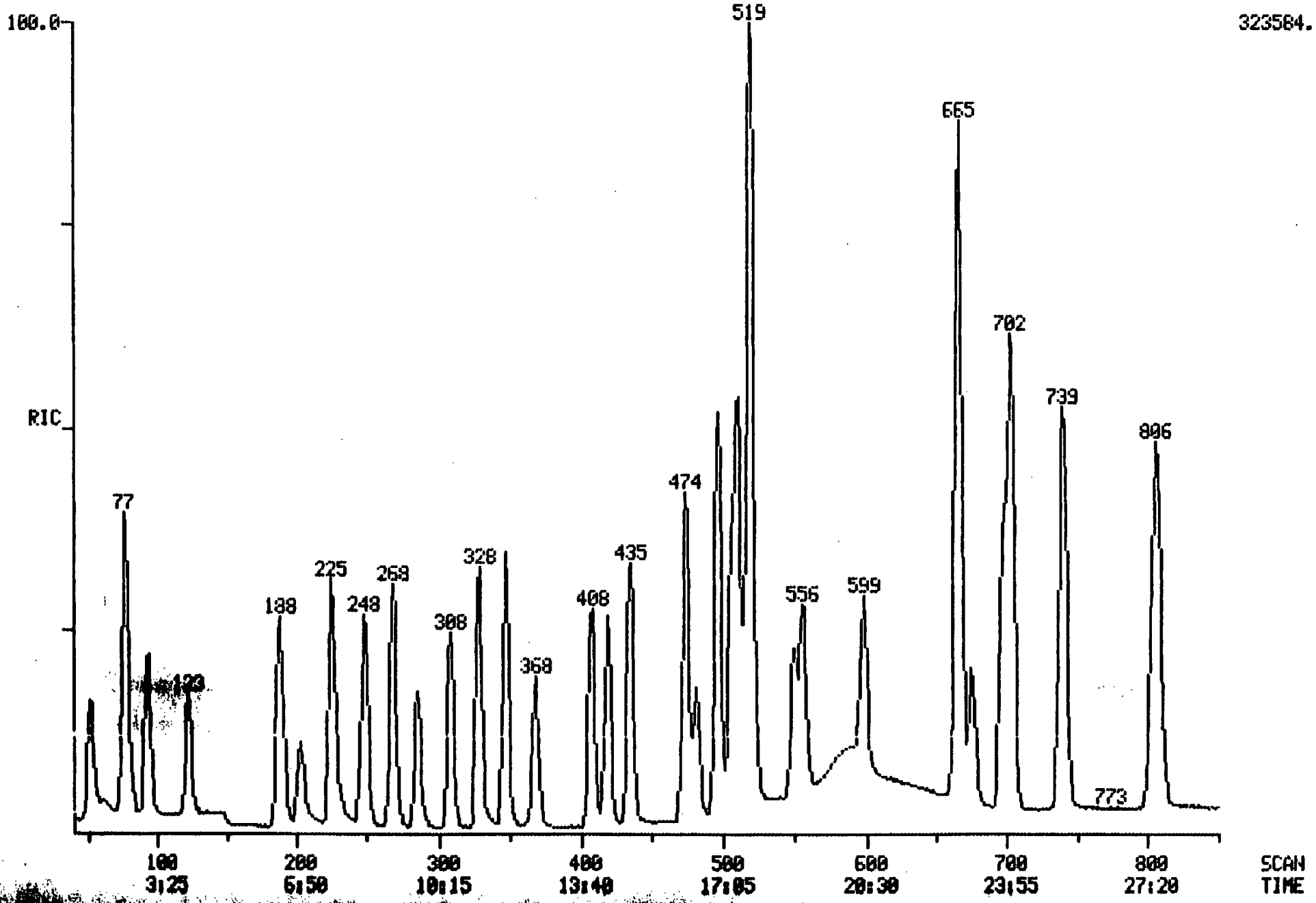


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K6
COMPUCHEM SAMPLE NUMBER: 24423

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K6
COMPUCHEM SAMPLE NUMBER: 24423

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

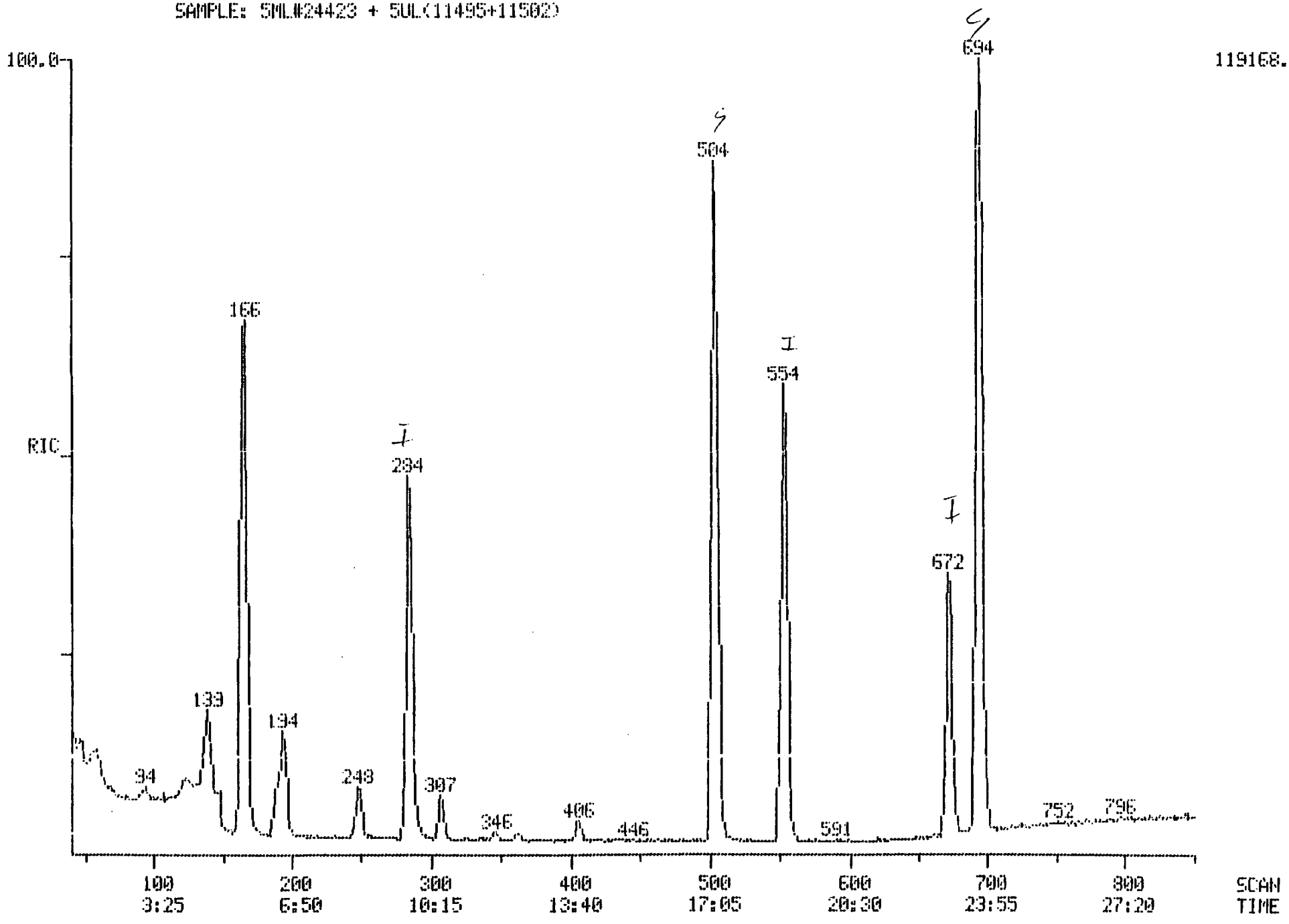
RIC

04/11/84 5:20:00

SAMPLE: 5ML#24423 + 5UL(11495+11502)

DATA: VN024423C12

SCANS 40 TO 850



MEAD COMPUCHEM

RIC

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12

SCANS 40 TO 850

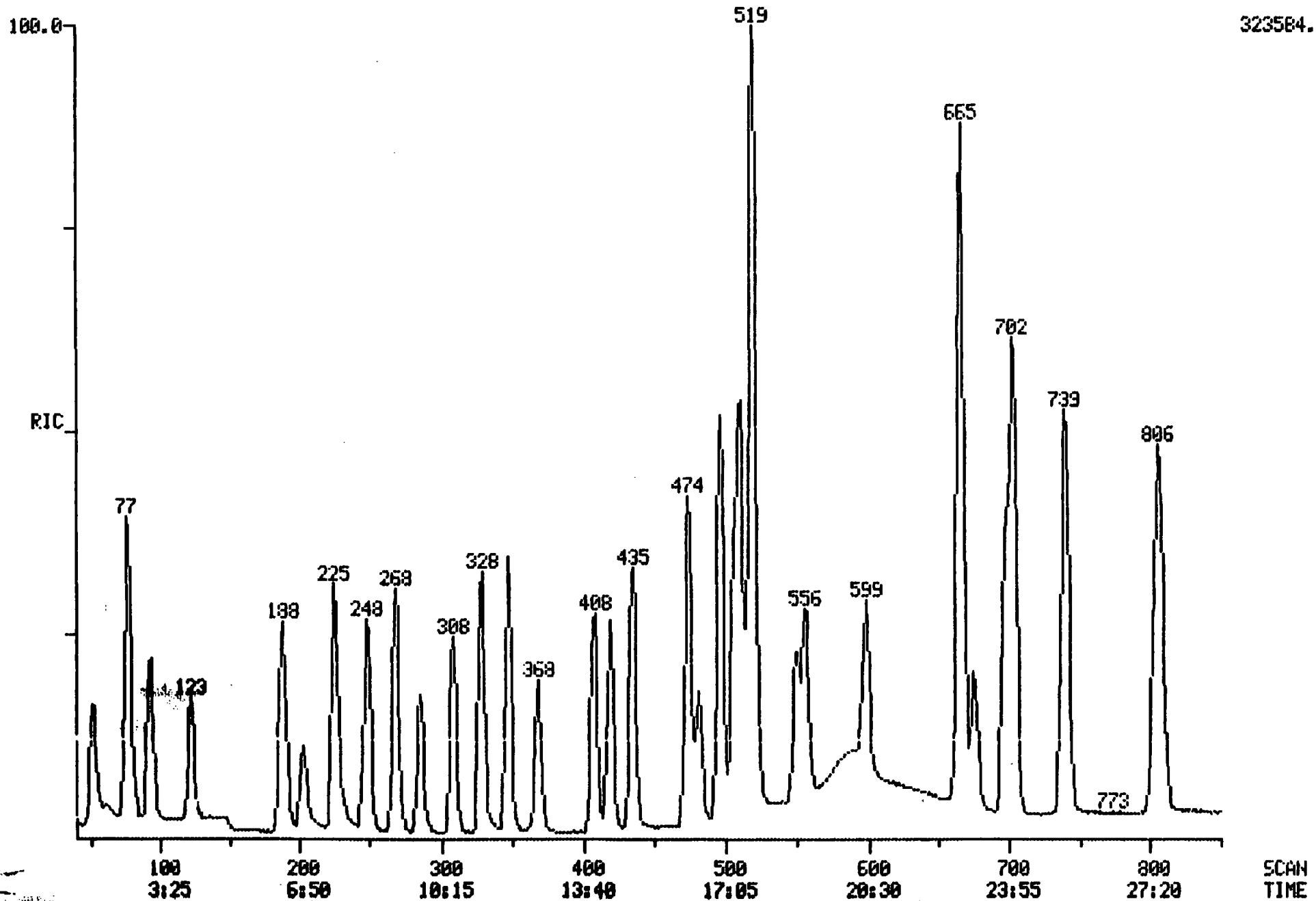


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K7
COMPUCHEM SAMPLE NUMBER: 24424

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K7
COMPUCHEM SAMPLE NUMBER: 24424

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	BDL	10	
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	BDL	10	
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

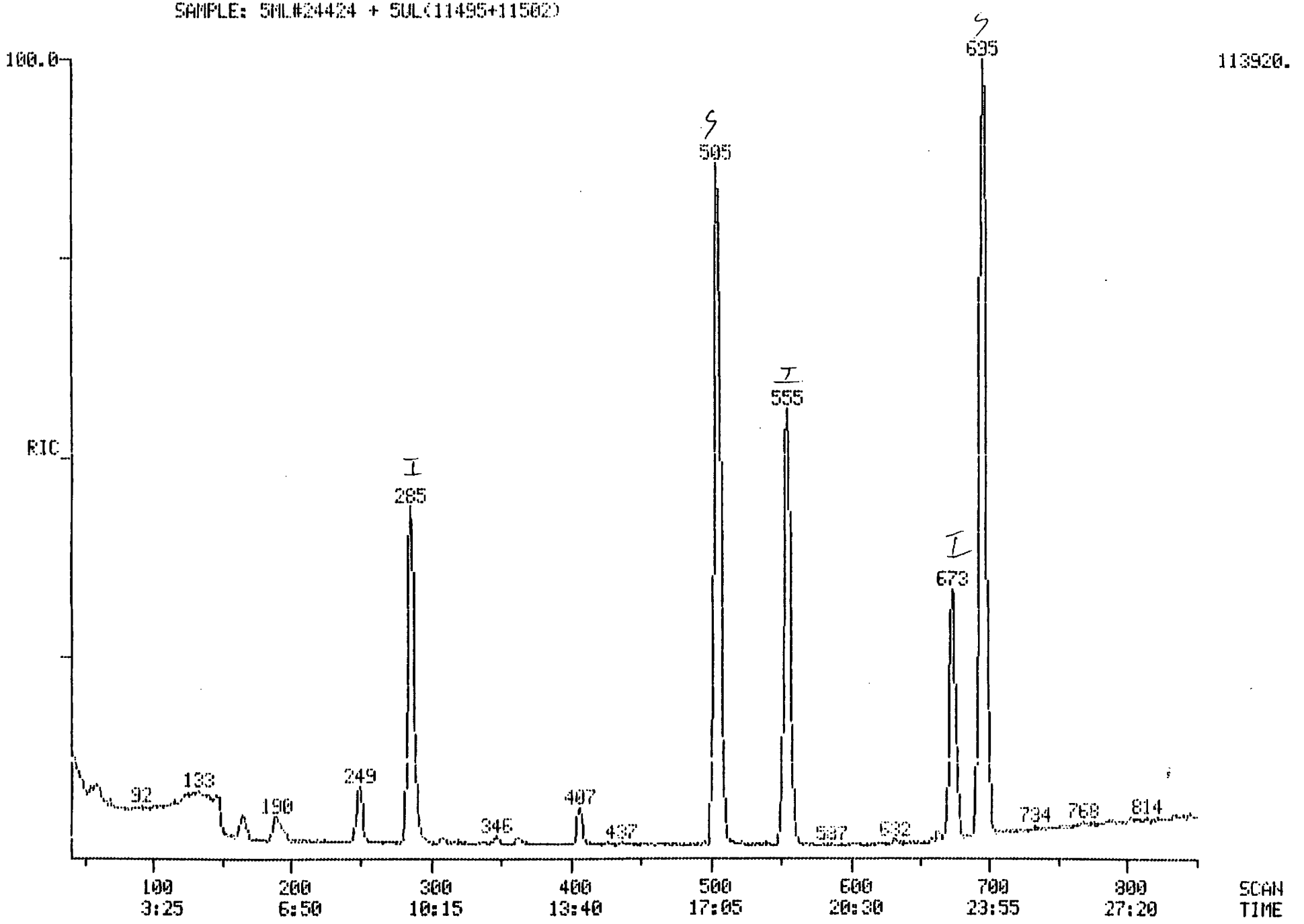
BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC DATA: VN024424C12 SCANS 40 TO 850

04/11/84 6:07:00

SAMPLE: 5ML#24424 + 5UL(11495+11502)



MEAD COMPUCHEM

RIC

DATA: VS840411C12

SCANS 40 TO 850

04/11/84 0:41:00

SAMPLE: 5ML H20 + COMM. STD.#1819

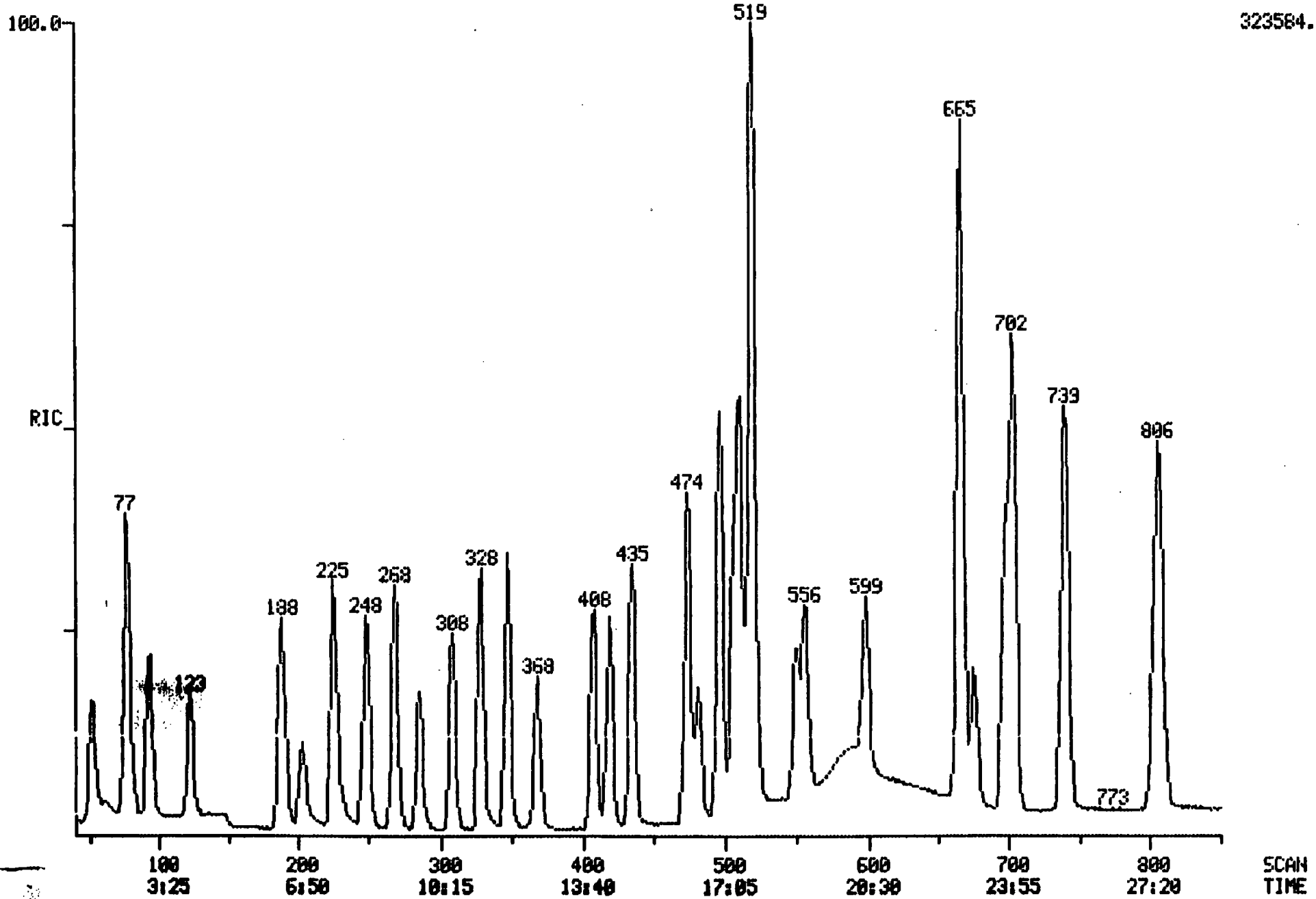


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K8
COMPUCHEM SAMPLE NUMBER: 24425

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K8
COMPUCHEM SAMPLE NUMBER: 24425

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	BDL	10	
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	46	10	190
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	12	10	308
11V.	TRANS-1,2-DICHLOROETHYLENE	BDL	10	
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	BDL	10	
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	BDL	10	
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

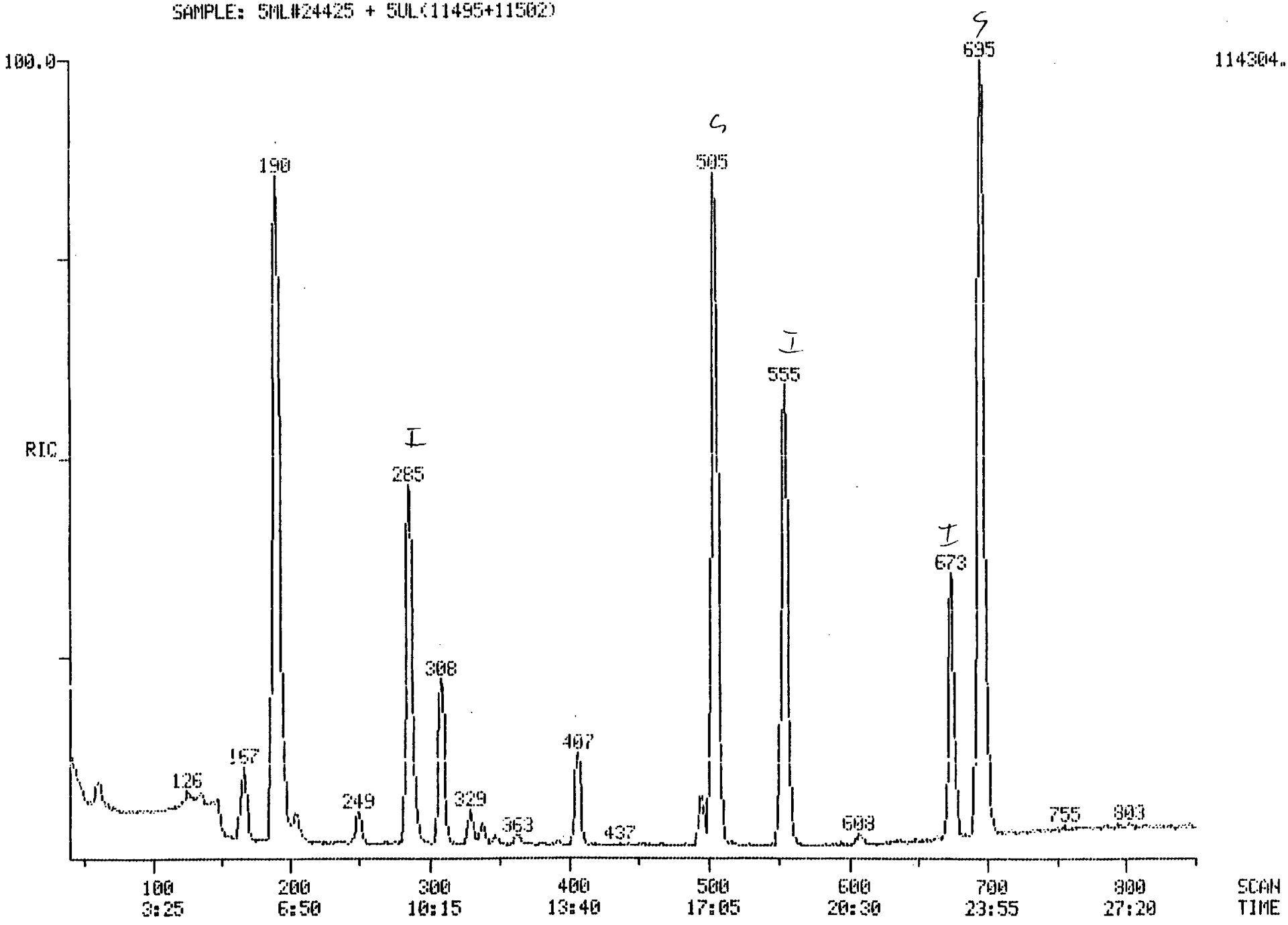
BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC DATA: VN024425C12 SCANS 40 TO 850

04/11/84 6:50:00

SAMPLE: 5ML#24425 + 5UL(11495+11502)

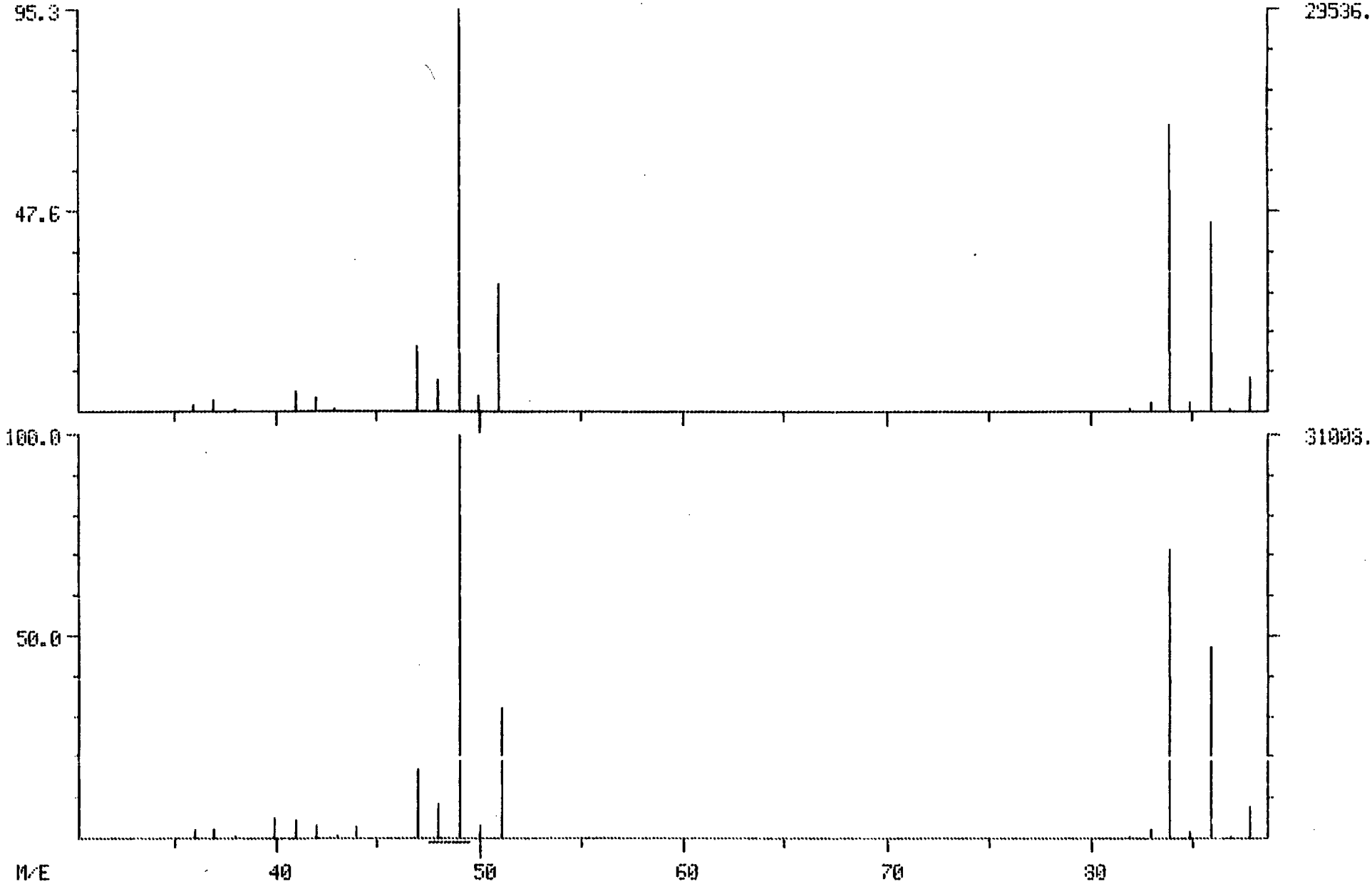


222

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 6:50:00 + 6:29
SAMPLE: 5ML#24425 + 5UL(11495+11502)
ENHANCED (S 15B 2N)

DATA: VN024425C12 #190 BASE M/E: 49/ 49
RIC: 90879./ 97919.

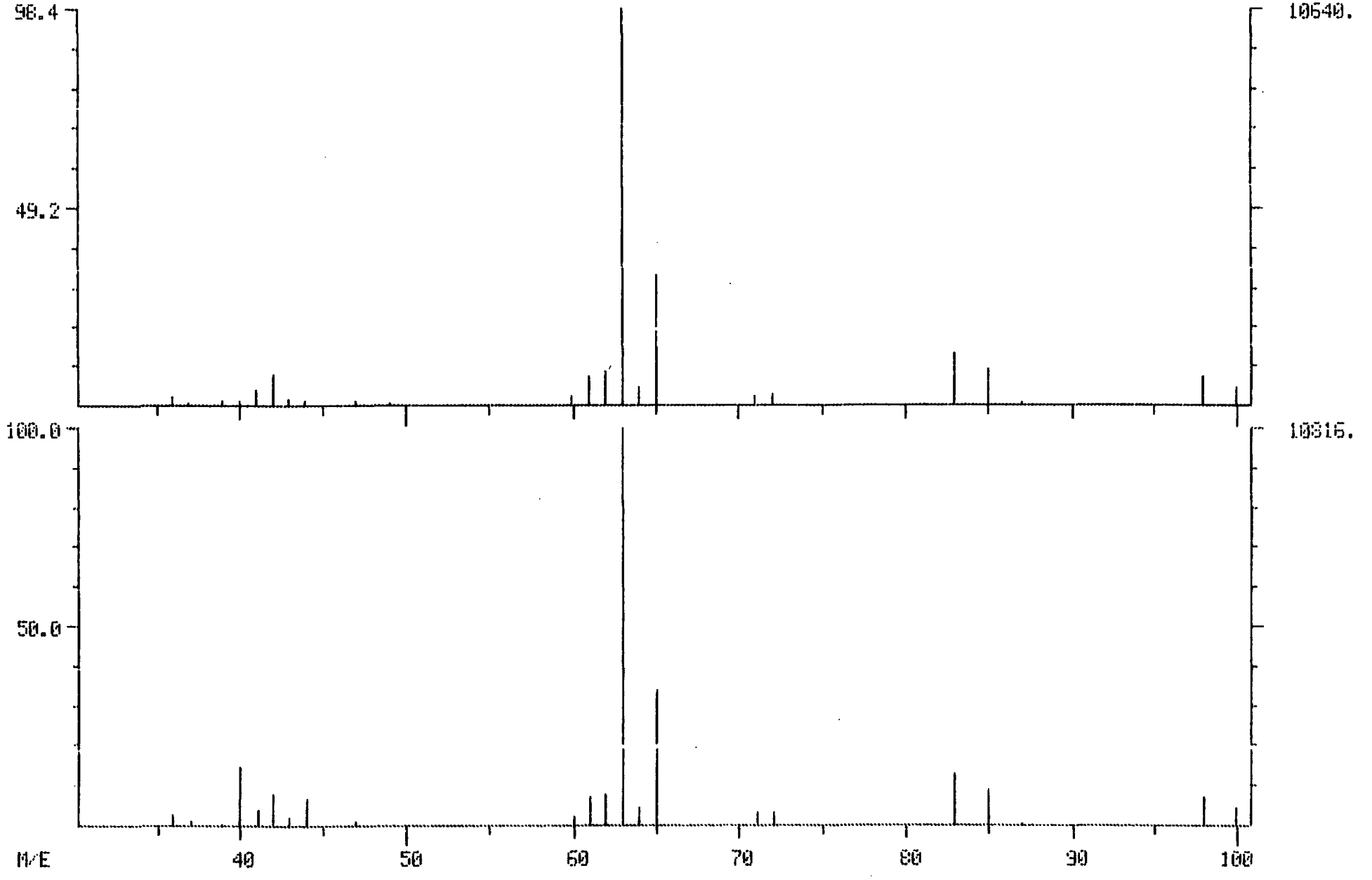


C14*

MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 6:50:00 + 10:31
SAMPLE: 5ML#24425 + 5UL(11495+11502)
ENHANCED (S 15B 2N)

DATA: VN024425C12 #308 BASE M/E: 63/ 63
RIC: 23135./ 25727.



MEAD COMPUCHEM

RIC
04/11/84 0:41:00
SAMPLE: 5ML H20 + COMM. STD.#1819

DATA: VS840411C12 SCANS 40 TO 850

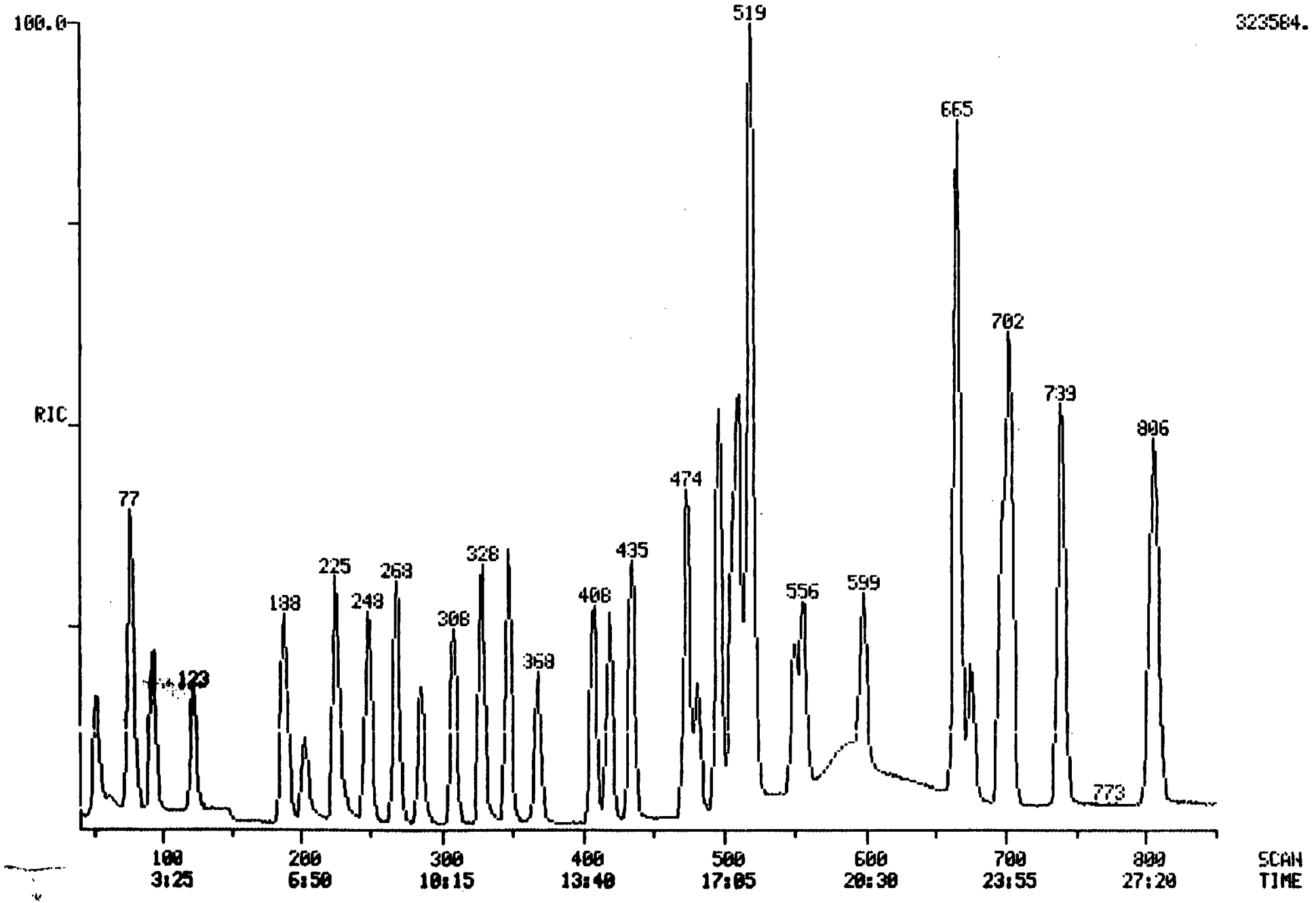


EXHIBIT I. LABORATORY CHRONICLE

SAMPLE IDENTIFIER: K9
COMPUCHEM SAMPLE NUMBER: 24426

	Date
Received/Refrigerated	04/03/84
Organics	
Extracted	Not Required
Analyzed	
1. Volatiles	04/11/84
2. Acids	Not Requested
3. Base/Neutrals	Not Requested
4. Pesticides/PCBS	Not Requested
Inorganics	
1. Metals	Not Requested
2. Cyanide	Not Requested
3. Phenol	Not Requested

EXHIBIT II - COMPOUND LIST

SAMPLE IDENTIFIER: K9
COMPUCHEM SAMPLE NUMBER: 24426

	VOLATILE ORGANICS	CONCENTRATION (UG/L)	DETECTION LIMIT (UG/L)	SCAN NUMBER
1V.	CHLOROMETHANE	BDL	10	
2V.	VINYL CHLORIDE	BDL	10	
3V.	CHLOROETHANE	42	10	122
4V.	BROMOMETHANE	BDL	10	
5V.	ACROLEIN	BDL	100	
6V.	ACRYLONITRILE	BDL	100	
7V.	METHYLENE CHLORIDE	21	10	185
8V.	TRICHLOROFLUOROMETHANE	BDL	10	
9V.	1,1-DICHLOROETHYLENE	BDL	10	
10V.	1,1-DICHLOROETHANE	73	10	306
11V.	TRANS-1,2-DICHLOROETHYLENE	48	10	327
12V.	CHLOROFORM	BDL	10	
13V.	1,2-DICHLOROETHANE	BDL	10	
14V.	1,1,1-TRICHLOROETHANE	BDL	10	
15V.	CARBON TETRACHLORIDE	BDL	10	
16V.	BROMODICHLOROMETHANE	BDL	10	
17V.	1,2-DICHLOROPROPANE	BDL	10	
18V.	TRANS-1,3-DICHLOROPROPENE	BDL	10	
19V.	TRICHLOROETHYLENE	16	10	495
20V.	BENZENE	BDL	10	
21V.	CIS-1,3-DICHLOROPROPENE	BDL	10	
22V.	1,1,2-TRICHLOROETHANE	BDL	10	
23V.	DIBROMOCHLOROMETHANE	BDL	10	
24V.	BROMOFORM	BDL	10	
25V.	1,1,2,2-TETRACHLOROETHYLENE	BDL	10	
26V.	1,1,2,2-TETRACHLOROETHANE	BDL	10	
27V.	TOLUENE	61	10	701
28V.	CHLOROBENZENE	BDL	10	
29V.	ETHYLBENZENE	BDL	10	
30V.	2-CHLOROETHYL VINYL ETHER	BDL	10	

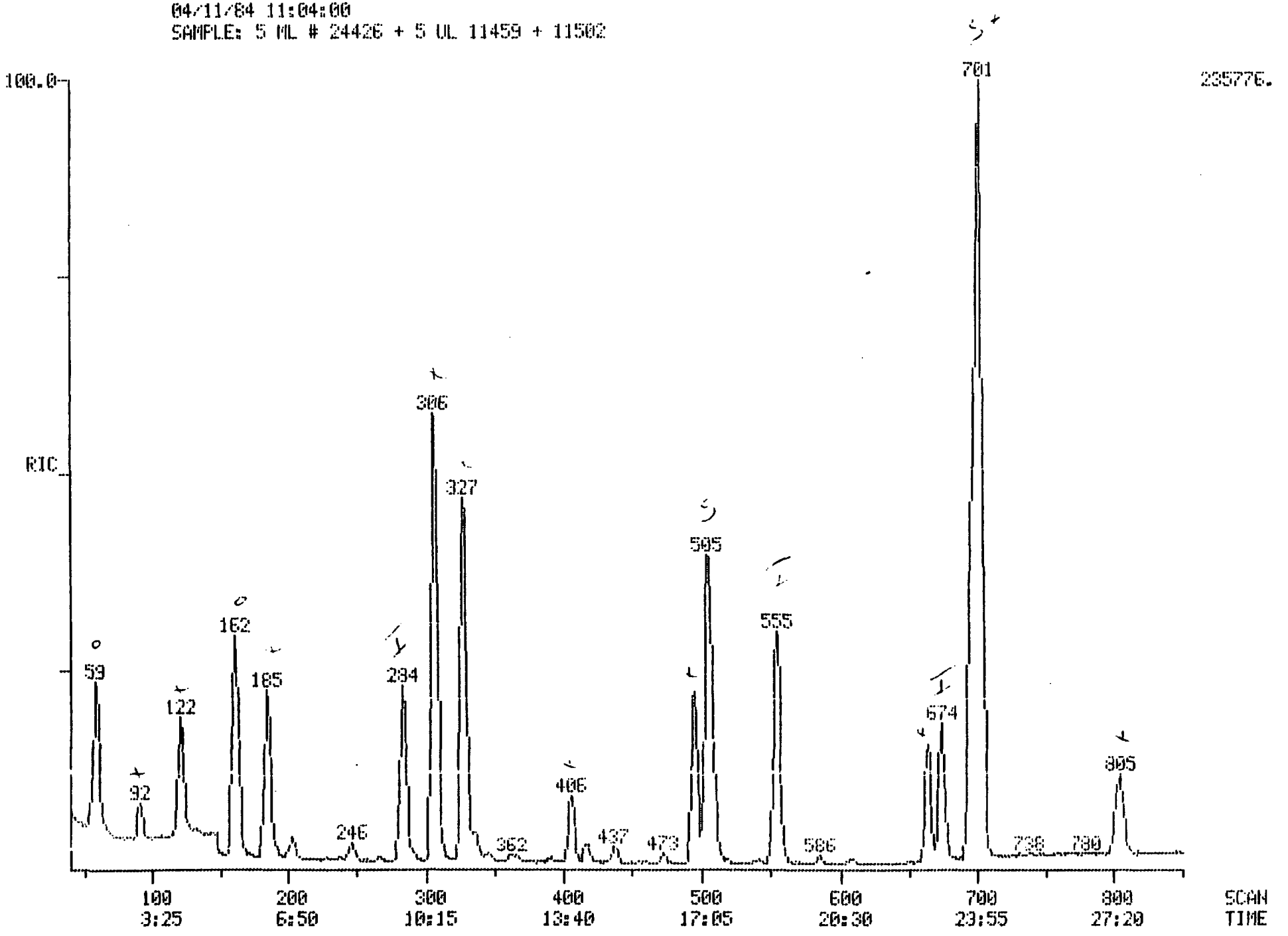
BDL=BELOW DETECTION LIMIT

MEAD COMPUCHEM

RIC DATA: VN02442GA12 SCANS 40 TO 850

04/11/84 11:04:00

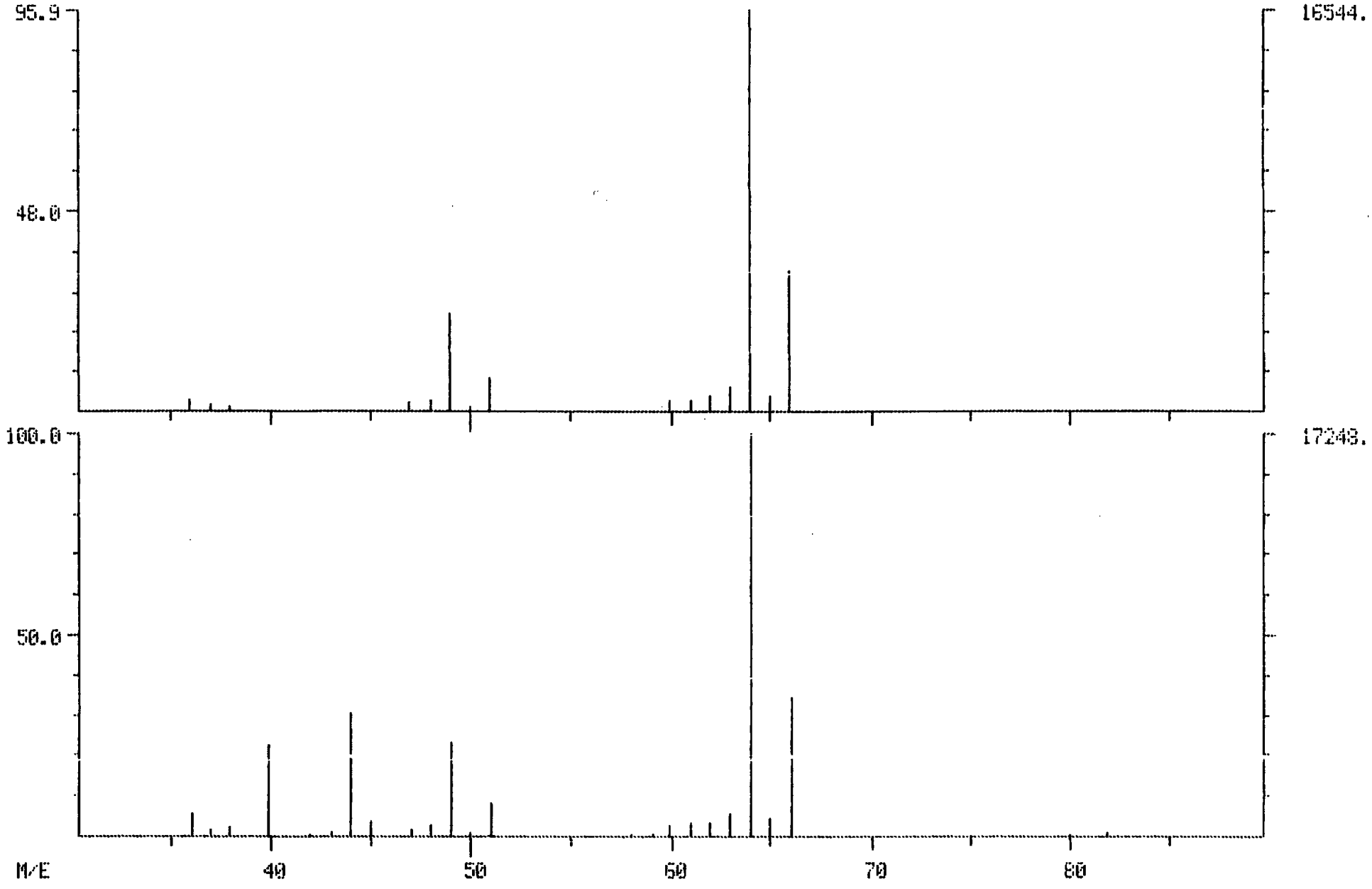
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 4:10
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (S 15B 2N)

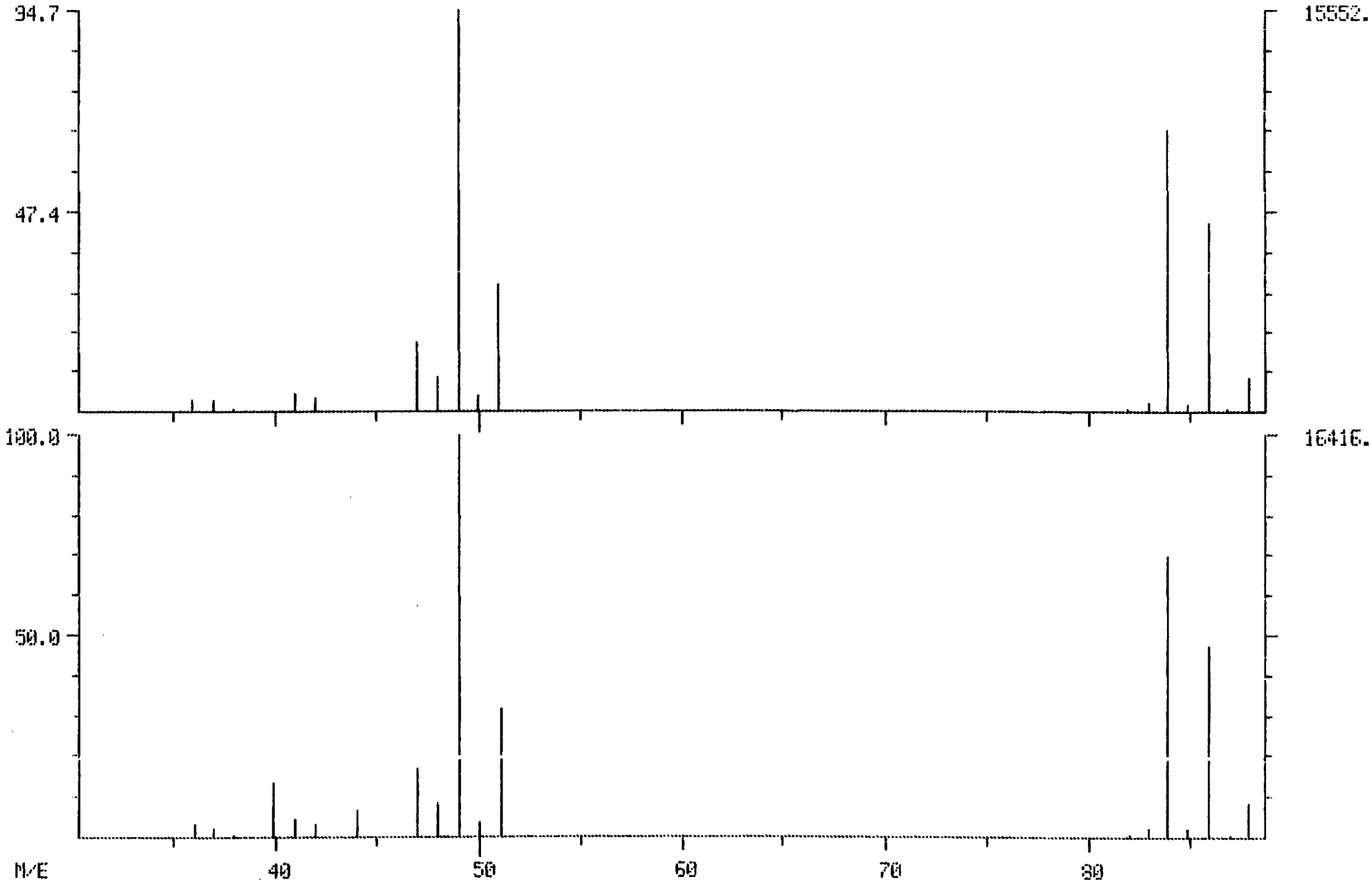
DATA: VN024426A12 #122 BASE M/E: 64/ 64
RIC: 33023./ 45247.



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 6:19
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (5 15B 2N)

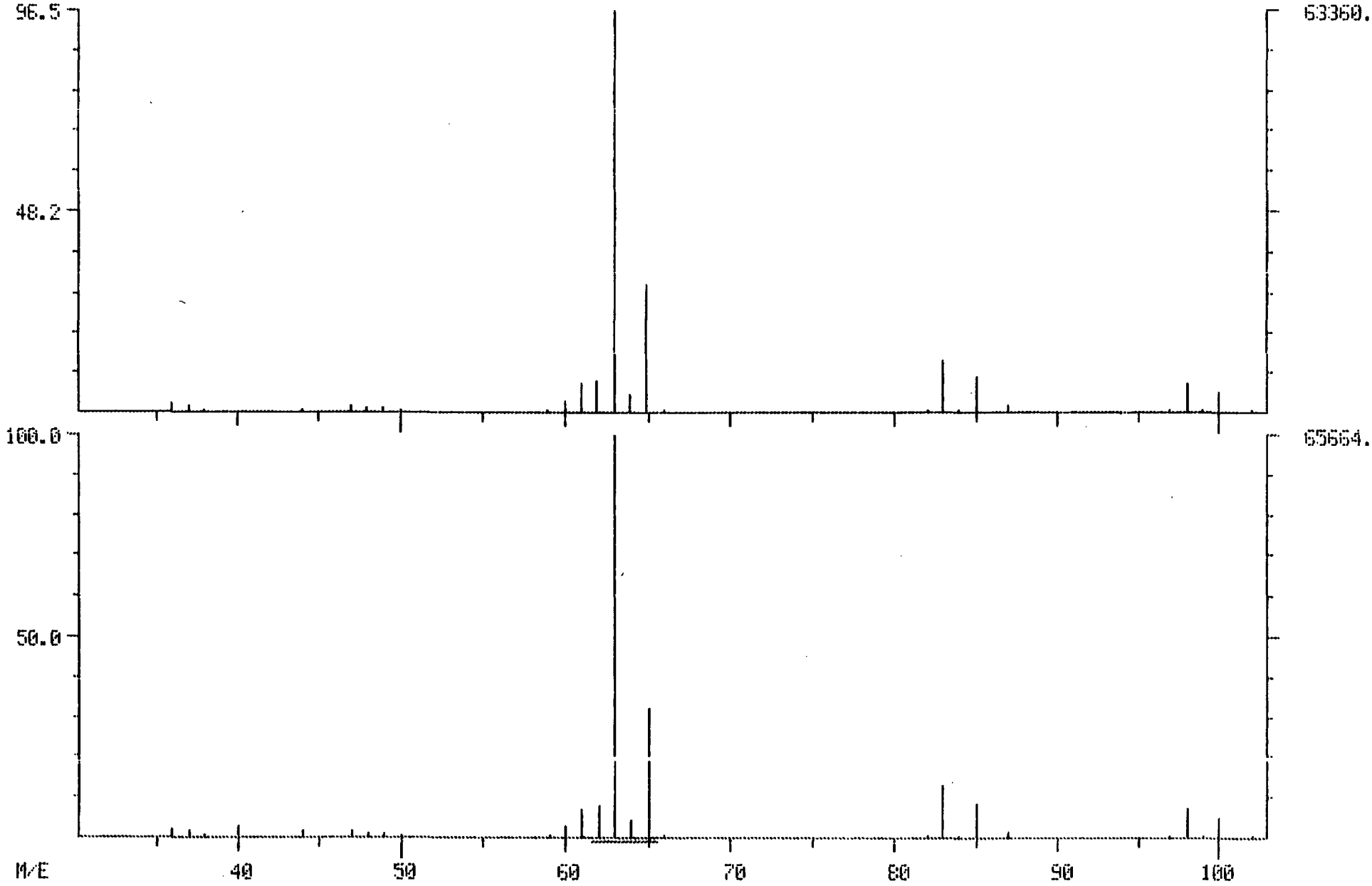
DATA: VN024426A12 #185 BASE M/E: 49/ 49
RIC: 47743./ 53439.



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 10:27
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (S 15B 2N)

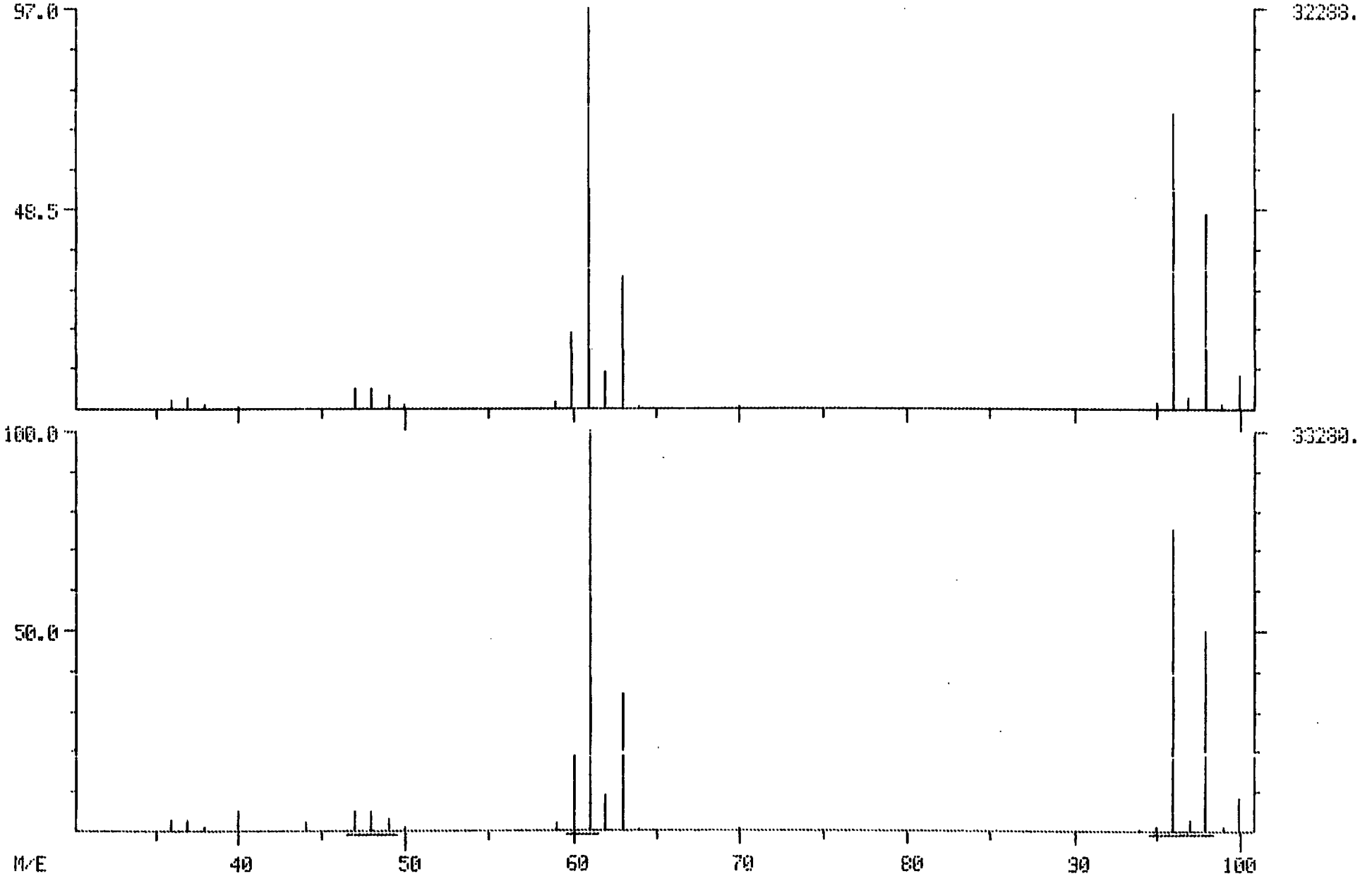
DATA: UN024426A12 #306 BASE M/E: 63/ 63
RIC: 129663./ 135935.



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 11:10
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (5 15B 2N)

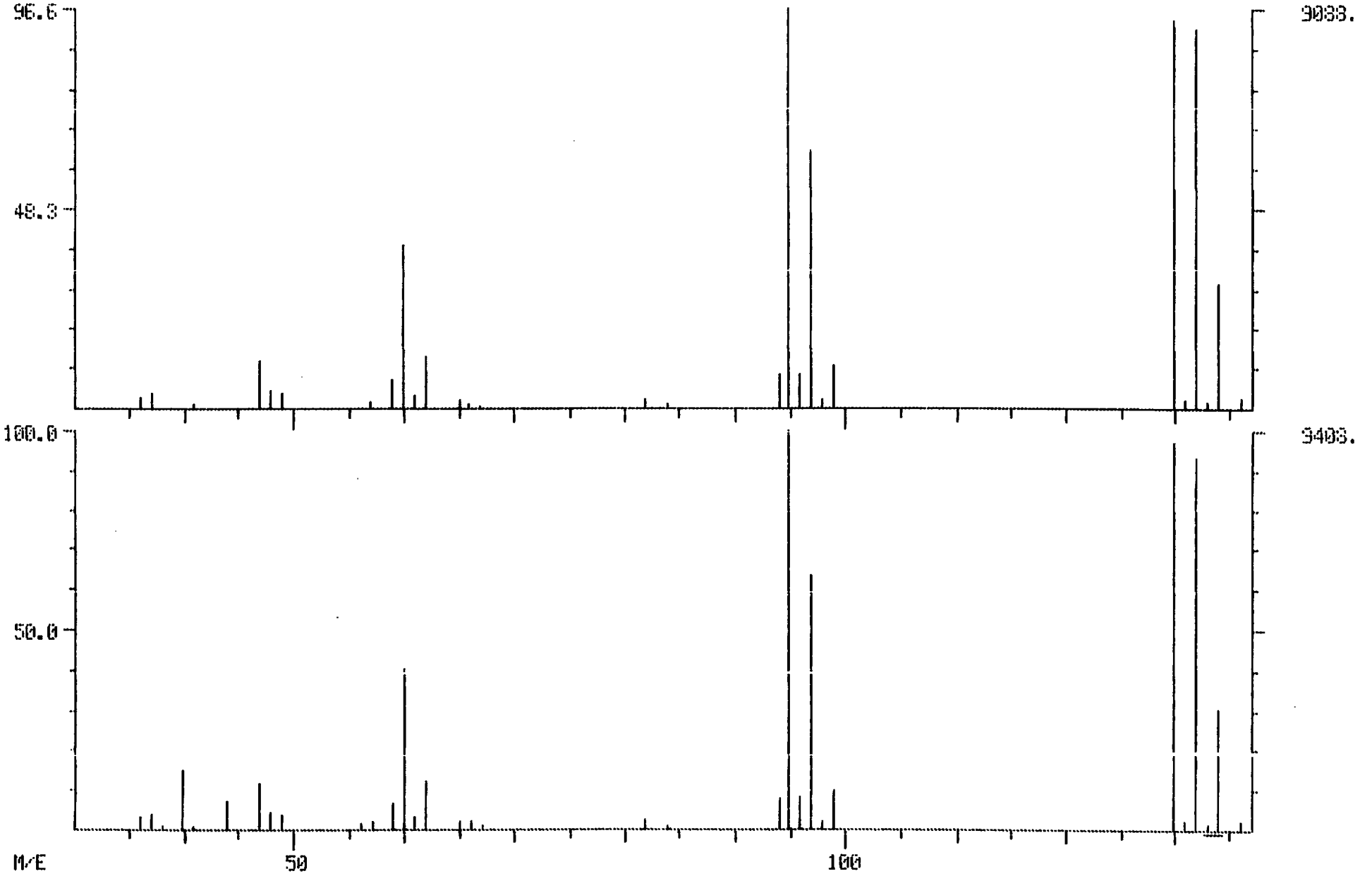
DATA: VN02442GA12 #327 BASE M/E: 61/ 61
RIC: 104319./ 111359.



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 16:55
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (S 15B 2ND)

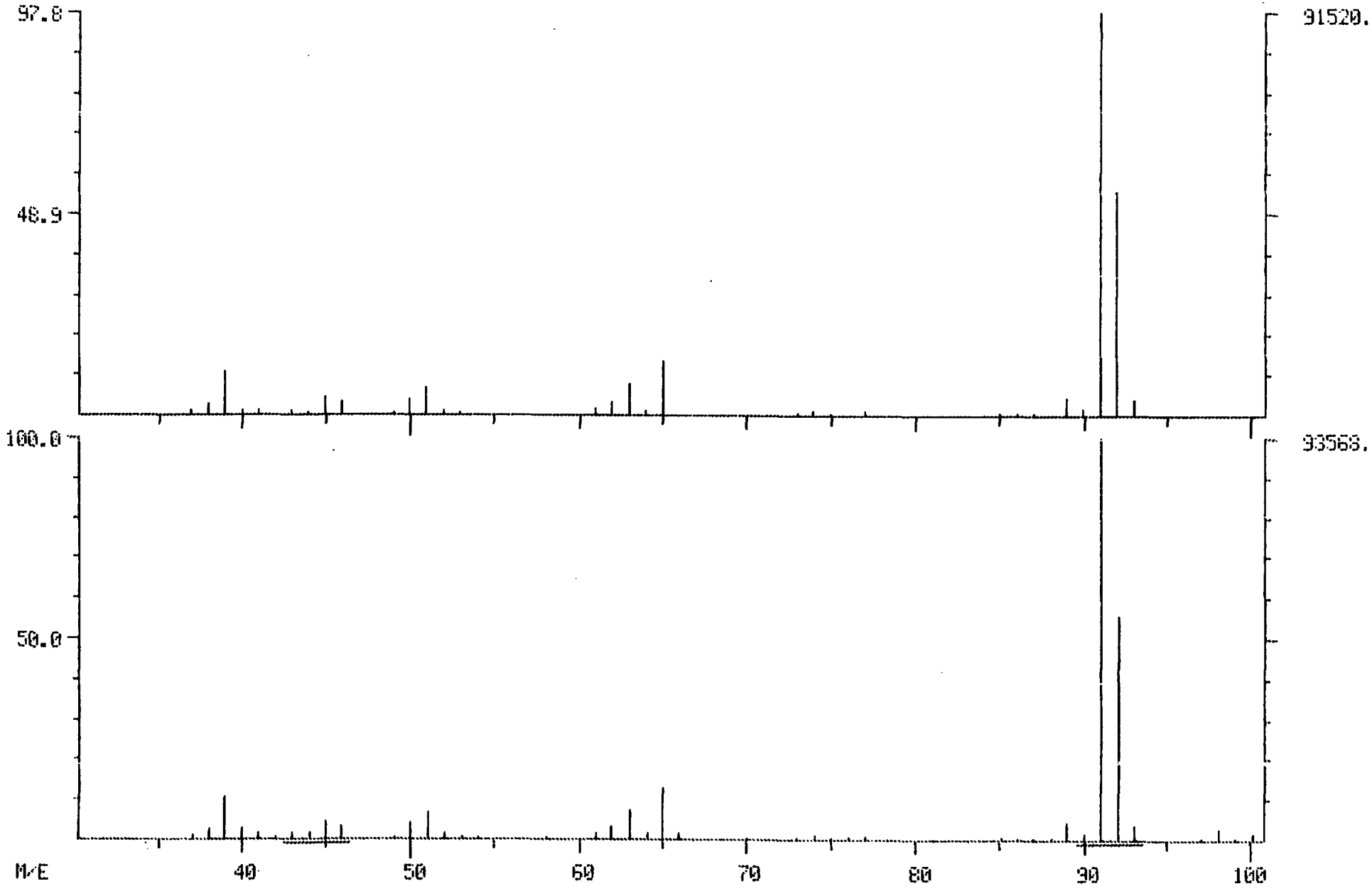
DATA: VN02442GA12 #495 BASE M/E: 95/ 95
RIC: 47871./ 51647.



MEAD COMPUCHEM

DUAL MASS SPECTRUM
04/11/84 11:04:00 + 23:57
SAMPLE: 5 ML # 24426 + 5 UL 11459 + 11502
ENHANCED (S 15B 2N)

DATA: VN024426A12 #701 BASE M/E: 91/ 91
RIC: 216831./ 235519.

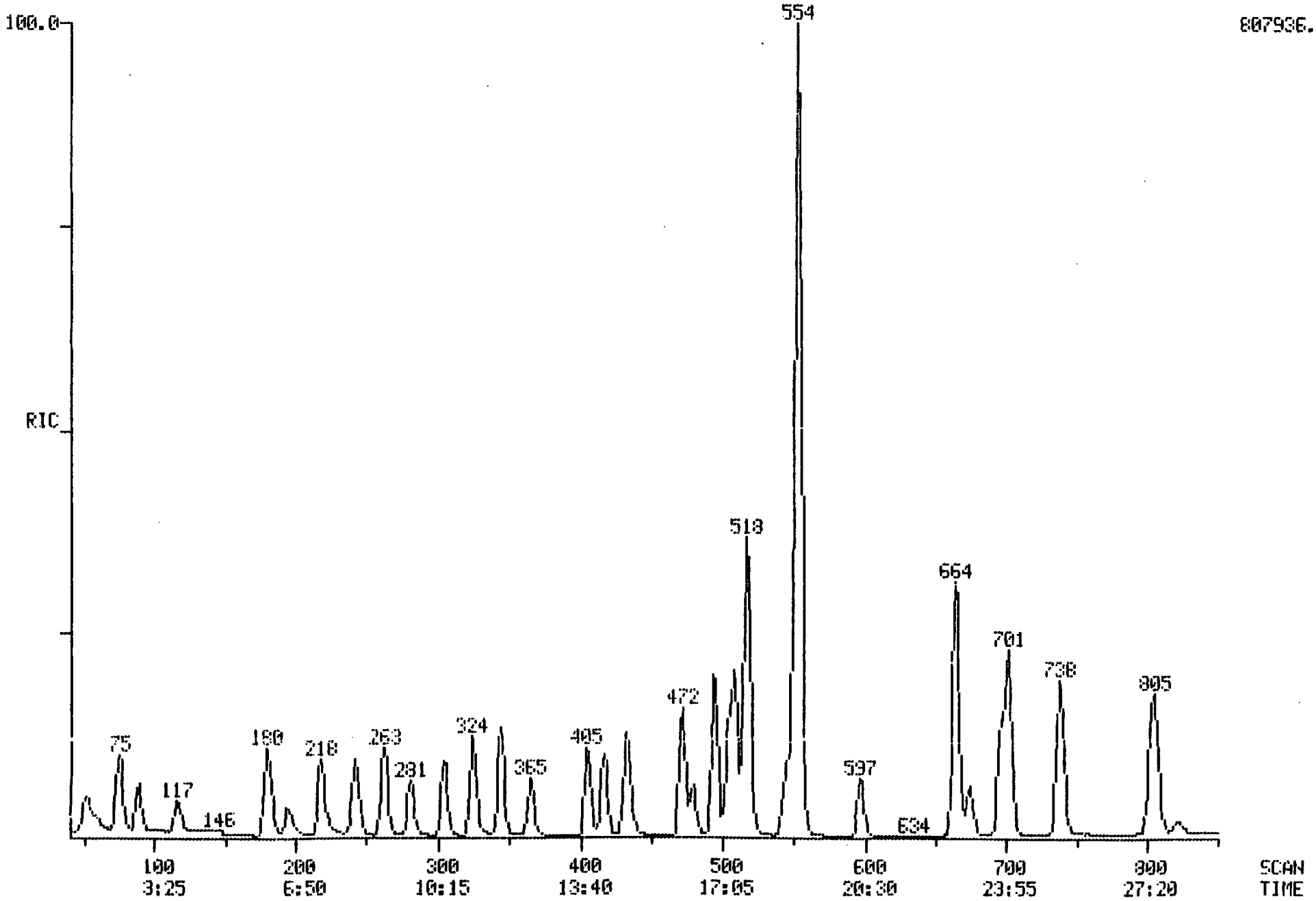


MEAD COMPUCHEM

RIC DATA: V5840411A12 SCANS 40 TO 850

04/11/84 10:10:00

SAMPLE: 5 ML H2O + STD 1819 + 1 UL 1842



2. ANALYTICAL METHODS, DEFINITIONS AND EXPLANATIONS

The CompuChem report contains not only the concentrations of the priority pollutant compounds identified but also additional supportive information which is useful in the review of this data. A complete report includes the following (if ordered):

- Priority Pollutant Data
  - GC/MS (VOA, B/N/P, Acid)
  - Pesticides (Method 608)
  - Inorganics
- Other Analytical Data (EP Toxicity, etc.)
- Conventional Permit Data

The GC/MS priority pollutant data is presented in summary form (concentration of each identified compound) along with the detection limits specified by EPA. In addition, a reconstructed total ion chromatogram (RIC) for each fraction and for the relevant instrument calibration (standards) runs are included.

Also included in the report are the spectra for all organic (except for certain pesticides) priority pollutant compounds identified above EPA specified detection limits, as well as a laboratory chronicle of completion dates.

To assist in the interpretation and utilization of this data, a Glossary of frequently used terms, a Compound Cross-Reference List and a typical Spectral Match Diagram with explanatory notation are also included.

If the Twenty Peak option has been ordered, the report also includes spectral match diagrams for as many as twenty (20) additional non-priority pollutant compounds with peaks greater than 25% of the intensity of the internal standard (d_{10}-anthracene).

If the Quality Control option has been ordered, the report also includes BFB and DFTPP tuning data for the GC/MS instruments, a summary of surrogate spike recovery data and the following:

- Matrix Spike Data
- Duplicate Data
- Method Blank Data

Also included with the method blank is an RIC for each fraction plus spectra and spectral match diagrams for any compounds identified with concentrations greater than EPA specified detection limits found in the blank.

If the Chain-of-Custody option has been ordered, this information is included in the section with the sample data.

ANALYTICAL METHODS

The analytical methods used by CompuChem for priority pollutant, RCRA and NPDES permit analyses are based on those promulgated by EPA. These methods have appeared in the Federal Register as noted below.

In summary, gas chromatography/mass spectrometry (GC/MS) is the analytical technique employed for the analysis of organic compounds while atomic absorption spectrophotometry (AAS) is used for the analysis of metals.

On occasion CompuChem also performs analyses for other parameters which are not on the priority pollutant list. In these cases also, EPA methods are used if available, and if not methods are developed and verified along guidelines suggested by EPA.

References for Methods

Volatile Organics	(Method 624)	Federal	Register	12-3-79
Acid Extractables	(Method 625)	"	"	"
Base/Neutral/Pesticide Extractables	(Method 625)	"	"	"
Pesticides	(Method 608)	"	"	"
Inorganics	EPA: Analysis of Water & Waste Water (1974, 1979)			
RCRA	Federal Register 5-19-80			

GLOSSARY OF TERMS

ACID FRACTION

Those compounds which solvent extract from the sample when it is pH-adjusted acidic (pH<2).

BFB TUNING

Each GC/MS instrument dedicated to VOA analyses is certified according to protocol prior to each 8-hour shift by injecting BFB (bromofluorobenzene) and comparing relationships between ion abundances for certain key mass numbers. If the prescribed relative ion abundances are not present, the instrument is adjusted until the criteria are met. With the available QC option, these parameters are included in the report for the BFB analysis following the specific sample analyzed.

B/N/P FRACTION

Those compounds which solvent extract from the sample when it is pH-adjusted basic (pH>11). This includes the pesticides (P), bases (B) and since this step is performed first, the neutral (N) compounds.

DFTPP TUNING

Each GC/MS instrument dedicated to Base/Neutral or Acid analyses is certified according to protocol prior to each 8-hour shift by injecting DFTPP (decafluorotriphenylphosphine) and comparing the relationships between ion abundances for certain key mass numbers. If the prescribed relative ion abundances are not present, the instrument is adjusted until the criteria are met. With the available QC option, these parameters are included in the report for the DFTPP analysis following the specific sample analyzed.

INDISTINGUISHABLE ISOMERS

Compounds with essentially the same mass spectrum and which have the same elution time from the gas chromatograph. An example is anthracene and phenanthrene.

INTERNAL STANDARD

CompuChem uses the internal standard method of quantitation. The same amount of d_{10}-anthracene is added to both the calibration standard and the sample. All calculations are referenced to a signal produced by this compound. Then all results are automatically corrected for any change in instrument sensitivity.

RPD - RELATIVE PERCENT DIFFERENCE

An average used to compare duplicate analyses:

$$RPD = \frac{2\ (C_1 - C_2)}{(C_1 + C_2)} \times 100\%$$

where C1 and C2 are the concentrations found in two separate aliquots of the same sample.

SATURATED ION

If a compound is present at a high enough concentration in the sample, the intensity of the major ions is generally so strong that the detector is overloaded by the signal. This is a result of the instrument having been adjusted for maximum sensitivity in order to reach lower detection limits.

SPECTRAL MATCH DIAGRAM

A display of the mass spectrum of the sample followed by the mass spectra of the three compounds in the library which are most similar to the sample (see Purity Value)

SURROGATES

A surrogate compound is chemically similar to one of the priority pollutants except that it is deuterated or fluorinated or in some other manner distinguishable by GC/MS from the other compounds in the sample.

TWENTY (20) PEAK SEARCH

An available option in which up to 20 non-priority peaks larger than 25% of the internal standard peak are identified by searching the NBS spectral library. Only an estimate of concentration can be given which is:

Low	<50 ug/l
Medium	50-200 ug/l
High	>200 ug/l

VOA - VOLATILE ORGANICS ANALYSIS

Those highly volatile compounds detected by introducing the sample directly into the GC/MS through a purge and trap apparatus.

MATRIX SPIKES

Actual priority pollutants which are added to a second aliquot of the sample to determine the effect, if any, of the sample matrix on the analytical procedure.

METHOD BLANK

A sample of organic-free laboratory water which undergoes exactly the same extraction procedure at the same time as the actual samples. This monitors for possible contamination from glassware, solvents, or the extraction procedure.

PERCENT RECOVERY (SURROGATES AND MATRIX SPIKES)

The formula for determining percent recovery is:

$$\% \text{ Recovery (Spike)} = \frac{\text{Conc. in Spike} - \text{Conc. in Sample}}{\text{Amount of Spike Added}} \times 100\%$$

$$\% \text{ Recovery (Surrogate)} = \frac{\text{Amount found}}{\text{Amount added}} \times 100\%$$

PURITY VALUE (sometimes abbreviated PUR)

A mathematically devised index which indicates the "goodness of fit" between the spectrum in the sample and a compound in the library. The maximum value is 1000, and values greater than 800 indicate a high probability that the identification is correct. Values from 500 to 800 are only tentative and values less than 500 are not reliable. Also important is the relationship between purity values for the best, second and third matches; ideally the second and third purity scores are much lower than the first.

RIC - RECONSTRUCTED ION CHROMATOGRAM

A plot of the total ion current of the mass spectrometer during the analysis. The plot is analogous to a gas chromatogram where a peak indicates that a compound was detected at that time. The vertical axis is intensity and the horizontal axis is time (both minutes and mass spectral scan marks are labelled).

HOW TO INTERPRET "DATA: BN3436A4 #640"

In addition to the actual data, the headers of all RIC's, spectra, and spectral match diagrams contain information on the date, the sample and the instrumentation. Some of this information is coded in the following format:

DATA: BN3436A4 #640

BN

In this particular example, BN indicates that the sample analyzed was the base/neutral fraction. Other codes which are used are listed below:

VOA	Volatile Fraction	
AC	Acid Fraction	
BN	Base/Neutral Fraction	(also includes Pesticides)
VOASTD	Volatile Standard	(sometimes VOASD)
ACSTD	Acid Standard	(sometimes ACSD)
BNSTD	Base/Neutral Standard	(sometimes BNSD)
VOABK	Volatile Blank	(sometimes VOAB)
ACBK	Acid Blank	(sometimes ACB)
BNBK	Base/Neutral Blank	(sometimes BNB)

3436

This is the CompuChem sample number. (In the case of a blank or standard, the number represents the date: two digits for month followed by two digits for day)

A4

In this particular example, A4 indicates that the sample was run on the first shift (A) and on instrument #4. Other codes which are used include A, B, and C to denote the first, second and third shift respectively and instrument numbers 1 through 18.

From this information, CompuChem management also knows the chemist who performed the measurement, which senior spectroscopist reviewed the data, and which laboratory manager had the overall responsibility for the analysis.

#640

This is the scan number of the peak (or the compound). A specific peak on a RIC will be labelled with this number, and it will also appear in the header of the corresponding spectrum and/or the spectral match diagram.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

FIT Inspection Date: 10/25-26/88

CERCLIS Site Name: Kent County Plainfield Landfill

Site Address: 2908 10 mile Road

Recipient Information: Jerry Powell
Name
Kent County Department of Public Works
Title
1500 Scribner Avenue N.W
Street Address
Grand Rapids MI 49504
City State Zip Code
(616) 774-3694
Telephone Number

Ecology and Environment, Inc. has been retained by the United States Environmental Protection Agency (U.S. EPA) under contract 68-01-7347 for the purpose of evaluating sites under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA).

A copy of the report regarding the inspection conducted at the above-referenced property will be forwarded by the U.S. EPA within 6 months. If a copy of the inspection report is not received within 6 months of the inspection date noted above, a written request may be sent to the U.S. EPA representative indicated below.

It is essential to include the U.S. EPA Identification Number listed below to ensure that your request is properly referenced.

U.S. EPA Identification Number MID000265066

Address requests to:

William Messenger, Chief
Pre-Remedial Unit (5HR11)
United States Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604
(312) 353-1057

Distribution:
White: FIT Site File; TDD No.: F05-8711-063; PAN: FMI031DSB
Yellow: Recipient
Pink: U.S. EPA

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO MID000265066

PROJ. ACCT. NO. FMI 0310SB

TDD F05-8711-063

SPLIT SAMPLES ACCEPTED (✓) DECLINED ( )

FACILITY/OCCUPANT NAME
Kent County Plainfield Landfill
c/o Jerry Powell

FACILITY/OCCUPANT ADDRESS
2908 10 Mile Road
Rockford, MI 49341

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
MW62	10/26/88	1330	✓	EAB71	MEBU 94	Monitoring Well MW62	✓	✓	✓	✓	✓			Water
TW03	10/26/88	1410	✓	EAB72	MEBU 00	Monitoring Well TW-03	✓	✓	✓	✓	✓			Water
MW53	10/26/88	1550	✓	EAB73	MEBU 01	Monitoring Well MW53	✓	✓	✓	✓	✓			Water
MW54	10/26/88	1620	✓	EAB74	MEBU 02	Monitoring Well MW54	✓	✓	✓	✓	✓			Water
MW55	10/26/88	1855	✓	EAB75	MEBU 03	Monitoring Well MW55	✓	✓	✓	✓	✓			Water
MW56	10/26/88	1645	✓	EAB76	MEBU 04	Monitoring Well MW56	✓	✓	✓	✓	✓			Water
MW70	10/26/88	1945	✓	EAB77	MEBU 05	Monitoring Well MW70	✓	✓	✓	✓	✓			Water
MW74	10/26/88	1830	✓	EAB78	MEBU 06	Monitoring Well MW74	✓	✓	✓	✓	✓			Water

TRANSFERRED BY
Stephen Bunsen 10/26/88 1500
(Signature) (Date) (Time)

RECEIVED BY:
[signature] 11/3/88 11:45
(Signature) (Date) (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE
CIVIL ENGINEER

TELEPHONE
(616) 774-3674

RECEIPT FOR SAMPLES

U.S. EPA, 230 S. Dearborn St., Chicago, IL 60604

U. S. EPA ID NO MID 000265066

PROJ. ACCT. NO. FMI 0310SB

TDD F05-8711-063

SPLIT SAMPLES ACCEPTED(✓) DECLINED( )

FACILITY/OCCUPANT NAME: Kent County Plainfield Landfill c/o Jerry Powell

FACILITY/OCCUPANT ADDRESS: 2909 10 Mile Road Rockford, MI 49341

SAMPLE NUMBER	DATE	TIME	SPLIT SAMPLES (✓)	OTR#	ITR#	DESCRIPTION OF SAMPLE LOCATIONS	SEMIVOLATILES	PESTICIDES/PCBS	VOLATILES	METALS	CYANIDE			MATRIX
S1	10/25/88	1255	✓	EAB 54	MEBB 77	Soil 1	✓	✓	✓	✓	✓			Soil
S2	10/25/88	1310	✓	EAB55	MEBB 78	Soil 2	✓	✓	✓	✓	✓			Soil
S3	10/25/88	1320	✓	EAB 56	MEBB 79	Soil 3	✓	✓	✓	✓	✓			Soil
S4	10/25/88	1335	✓	EAB 57	MEBB 80	Soil 4	✓	✓	✓	✓	✓			Soil
S5	10/25/88	1350	✓	EAB 58	MEBB 81	Soil 5	✓	✓	✓	✓	✓			Soil
S6	10/25/88	1400	✓	EAB 59	MEBB 82	Soil 6	✓	✓	✓	✓	✓			Soil
S7	10/25/88	1410	✓	EAB 60	MEBB 83	Soil 7	✓	✓	✓	✓	✓			Soil
S8	10/25/88	1435	✓	EAB 61	MEBB 84	Soil 8	✓	✓	✓	✓	✓			Soil
S9	10/25/88	1431	✓	EAB 62	MEBB 85	Soil 9	✓	✓	✓	✓	✓			Soil
S10	10/25/88	1435	✓	EAB 63	MEBB 86	Soil 10	✓	✓	✓	✓	✓			Soil
RW1	10/25/88	1610	✓	EAB 64	MEBB 87	2770 10 Mile Road	✓	✓	✓	✓	✓			Water
RW2	10/25/88	1620	✓	EAB 65	MEBB 88	8040 Belmont Street	✓	✓	✓	✓	✓			Water
RW3	10/25/88	1630	✓	EAB 66	MEBB 89	3232 10 Mile Road	✓	✓	✓	✓	✓			Water
RW4	10/25/88	1730	✓	EAB 67	MEBB 90	8246 Belmont Street	✓	✓	✓	✓	✓			Water
RW5	10/25/88	1810	✓	EAB 68	MEBB 91	7740 House Court	✓	✓	✓	✓	✓			Water

TRANSFERED BY: Stephen Eunsen 10/28/88 1500
(Signature) (Date) (Time)

RECEIVED BY: [illegible] 11/2/88 11:45
(Signature) (Date) (Time)

DISTRIBUTION
WHITE: FIT SITE FILE
YELLOW: FACILITY/OCCUPANT
GREEN: FIT SAMPLE MANAGEMENT
PINK: U.S. EPA

TITLE: [illegible]

TELEPHONE: (616) 774-[illegible]

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

Sample Collection Date: 10/25/88

Recipient Information: [redacted]

Ecology and Environment, Inc. has been retained by the United States Environmental Protection Agency (U.S. EPA) under contract 68-01-7347 for the purpose of evaluating sites under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), and the Superfund Amendments and Reauthorization Act (SARA).

A copy of the sample analysis of samples collected from your property will be forwarded by the U.S. EPA within 6 months. If a copy of the sample analysis is not received within 6 months of the sample collection date noted above, a written request may be sent to the U.S. EPA representative indicated below.

It is essential to include the U.S. EPA Identification Number listed below to ensure that your request is properly referenced.

U. S. EPA Identification Number MID000265066

Address requests to:

William Messenger, Chief
Pre-Remedial Unit (5HR11)
United States Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois 60604
(312) 353-1057

Distribution:

White: FIT Site File; TDD No.: F05-8711-063 ; PAN: FMI03/05B
Yellow: Recipient
Pink: U.S. EPA

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716

SAS NO: (IF APPLICABLE)

INORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND—_____ PROGRAM

SITE NAME: Plainfield Landfill
CITY, STATE: Grand Rapids, MI
SITE SPILL ID: N/A

REGION NO: V
SAMPLING COMPANY ② FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: ENSECO/RMAL ③
4955 YARROW ST.
ARVADA, CO. 80002

ATTN: BECKY WILLIAMS

SAMPLING DATE: ④
BEGIN: 10/25/88 END: 10/25/88

DATE SHIPPED: 10/25/88 CARRIER: F ⑤
AIRBILL NO: 3523958922

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

DOUBLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS COMPLETE

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW M = MED H = HIGH (SAS)	Ⓒ RAS ANALYSIS: TOTAL METALS	CYANIDE	DISSOLVED METALS	HIGH ONLY (SAS): SULFIDE	pH	CONDUCTIVITY	OXIDANTS	Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
MEBB 77	4	L	✓	✓							Soil 1
MEBB 78	4	L	✓	✓							Soil 2
MEBB 79	4	L	✓	✓							Soil 3
MEBB 80	4	L	✓	✓							Soil 4
MEBB 81	4	L	✓	✓							Soil 5
MEBB 82	4	L	✓	✓							Soil 6
MEBB 83	4	L	✓	✓							Soil 7
MEBB 84	4	L	✓	✓							Soil 8
MEBB 85	4	L	✓	✓							Soil 9
MEBB 86	4	L	✓	✓							Soil 10

EPA Form 2075-6 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CHAIN OF CUSTODY RECORD

COOLER # 27

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

PROJ. NO.: [illegible]
PROJECT NAME: FMID310 / CASE # 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8OZ. [illegible]						REMARKS ITR	OTR	[illegible]
S1	10/25/88	12:55		✓	Soil 1	1	1						MEBB 77	EAB 54	Soil
S2	10/25/88	13:10		✓	Soil 2	1	1						MEBB 78	EAB 55	Soil
S3	10/25/88	13:20		✓	Soil 3	1	1						MEBB 79	EAB 56	Soil
S4	10/25/88	13:35		✓	Soil 4	1	1						MEBB 80	EAB 57	Soil
S5	10/25/88	13:50		✓	Soil 5	1	1						MEBB 81	EAB 58	Soil
S6	10/25/88	14:00		✓	Soil 6	1	1						MEBB 82	EAB 59	Soil
S7	10/25/88	14:10		✓	Soil 7	1	1						MEBB 83	EAB 60	Soil
S8	10/25/88	14:35		✓	Soil 8	1	1						MEBB 84	EAB 61	Soil
S9	10/25/88	14:31		✓	Soil 9	1	1						MEBB 85	EAB 62	Soil
S10	10/25/88	14:35		✓	Soil 10	1	1						MEBB 86	EAB 63	Soil
													LOT # 8oz. F8140024 (S1-5)		
													F8140134 (S6-9)		
													F8120094 (S10)		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Shipped FED EXP. TO ENSECO/RMAL Airbill 3523958922 Custody Seals [illegible]	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09201

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA SI ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND— _____ PROGRAM

SITE NAME: Plainfield Landfill
CITY, STATE: Grand Rapids, MI
SITE SPILL ID:

REGION NO: V
SAMPLING COMPANY ②: FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: ③ IT CORP. 17605 FABRICA WAY SUITE A CERRITO, CA. 90701
ATTN: CHERYL SUHL

SAMPLING DATE: ④
BEGIN: 10/25/88 END: 10/25/88

DATE SHIPPED: 10/25/88 CARRIER: F ⑤
AIRBILL NO: 3523958933

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

TRIPLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS COMPLETE

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED. H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
EAB 54	4	L	✓	✓	✓			Soil 1
EAB 55	4	L	✓	✓	✓			Soil 2
EAB 56	4	L	✓	✓	✓			Soil 3
EAB 57	4	L	✓	✓	✓			Soil 4
EAB 58	4	L	✓	✓	✓			Soil 5
EAB 59	4	L	✓	✓	✓			Soil 6
EAB 60	4	L	✓	✓	✓			Soil 7
EAB 61	4	L	✓	✓	✓			Soil 8
EAB 62	4	L	✓	✓	✓			Soil 9
EAB 63	4	L	✓	✓	✓			Soil 10

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 209

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8oz. Extractable	120ml VOA						REMARKS OTR	ITR	LOW CONC. MATRIX
S1	10/25/88	12 55		✓	Soil 1	3	1	2						EAB 54	MEBB77	SOIL
S2	10/25/88	13 :10		✓	Soil 2	3	1	2						EAB 55	MEBB 78	SOIL
S3	10/25/88	13 :20		✓	Soil 3	3	1	2						EAB 56	MEBB 79	SOIL
S4	10/25/88	13 :35		✓	Soil 4	3	1	2						EAB 57	MEBB 80	SOIL
S5	10/25/88	13 :50		✓	Soil 5	3	1	2						EAB 58	MEBB 81	SOIL
S6	10/25/88	14 :00		✓	Soil 6	3	1	2						EAB 59	MEBB 82	SOIL
S7	10/25/88	14 :10		✓	Soil 7	3	1	2						EAB 60	MEBB 83	SOIL
S8	10/25/88	14 :35		✓	Soil 8	3	1	2						EAB 61	MEBB 84	SOIL
S9	10/25/88	14 :31		✓	Soil 9	3	1	2						EAB 62	MEBB 85	SOIL
S10	10/25/88	14 :35		✓	Soil 10	3	1	2						EAB 63	MEBB 86	SOIL

LOT # 8oz. F8140024 (S1-5)
F8141 0134 (S6-9)
F8120094 (S10)
120ml. 08202014

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Shipped FEDEX TO IT CORP.
Airbill 3523958933
Custody Seals 12367-70

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

05- 02600

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716 | SAS NO: (IF APPLICABLE) 4062E

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND—_____ PROGRAM

SITE NAME: PLAINFIELD LANDFILL
CITY, STATE: GRAND RAPIDS, MI
SITE SPILL ID: N/A

REGION NO: V
SAMPLING COMPANY ②: FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: COMPUCHEM LAB. ③
3308 CHAPEL HILL/NELSON Hwy
P.O. BOX 12656
RTP, NC. 27709
ATTN: RICHARD BLOOM

SAMPLING DATE: ④
BEGIN: 10/25/88 END: 10/25/88

DATE SHIPPED: 10/25/88 CARRIER: F ⑤
AIRBILL NO: 3523958896

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

TRIPLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS COMPLETE

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED, H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
EAB 64	2	L	✓	✓	✓			RW1
EAB 65	2	L	✓	✓	✓		MSD	RW2
EAB 66	2	L	✓	✓	✓			RW3
EAB 67	2	L	✓	✓	✓			RW4
EAB 68	2	L	✓	✓	✓			RW5
EAB 69	2	L	✓	✓	✓			DUPLICATE
EAB 70	~~2~~ 3	L	✓	✓	✓		BLANK	BLANK

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 70

PROJ. NO.: F05-5711-063
PROJECT NAME: FMI0310 / CASE #10716 / SAS # 4062E
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTRACTABLES	40 ml VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW1	10/25/88	1610		✓	RW1	5	3	2					EAB 64	MEBB 87	WATER
~~RWD~~ ~~RWB~~ R															
~~MSOTS~~															
RWD	10/25/88	1610		✓	RWD	5	3	2					EAB 69	MEBB 92	WATER
RW3	10/25/88	1630		✓	RW3	5	3	2					EAB 66	MEBB 89	WATER

LOT # 1L AMBER H8267014
40ml VOA B8176064

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700	—			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXP. TO CONNECTICUT. AIRBILL 8523958896 CUSTODY SEALS 12373-74	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09202

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 237

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716 / SAS # 40626
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTENDED HOLDING TIMES	40 ml VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW2	10/25/88	1620		✓	RW2	5	3	2					EAB 65	MEBB 88	WATER
RW4	10/25/88	1730		✓	RW4	5	3	2					EAB 67	MEBB 90	WATER
MSD	10/25/88	1620		✓	MSD	5	3	2					EAB 65	—	WATER

LOT # 1L AMBER H8267014
40ml. VOA B8176064

(OTR IN COOLER #70)

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700	—			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXP. TO CONPUCHEM AIRBILL 3523958896 CUSTODY SEALS 12375-76	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09203

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 166

PROJ. NO.	PROJECT NAME
F05-8711-063	FMI 0310 / CASE # 10716 / SAS # 4062E

SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER EXTRACTABLE ~~AMBER~~ FS	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
RW5	10/25/88	1810		✓	RW5	5	3	2					EAB 68	MEBB 91	WATER
RWB	10/25/88	1500		✓	RWB	5	3	2					EAB 70	MEBB 93	WATER
													LOT # 1l AMBE H8267014 (5)		
													H8267134 (BLANK)		
													40ml. VOA B8176064		
													(OTR IN COOLER # 70)		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700	–			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXP. TO COMPUCHEM AIRBILL 3523958896 CUSTODY SEALS 12377-78	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5.09204

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716

SAS NO: (IF APPLICABLE) 4062E

INORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND— _____ PROGRAM

SITE NAME: PLAINFIELD LANDFILL
CITY, STATE: GRAND RAPIDS, MI
SITE SPILL ID: N/A

REGION NO: V
SAMPLING COMPANY ② FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: NANCO LABORATORIES ③
RD 6 ROBINSON LANE
P.O. BOX 10
WAPPINGER FALLS, WY. 12590
ATTN: GEORGE ODELL

SAMPLING DATE: ④
BEGIN: 10/25/88 END: 10/25/88

DATE SHIPPED: 10/25/88 CARRIER: F ⑤
AIRBILL NO: 3523958885

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

DOUBLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS COMPLETE.

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW M = MED H = HIGH (SAS)	Ⓒ RAS ANALYSIS: TOTAL METALS	CYANIDE	DISSOLVED METALS	HIGH ONLY (SAS): SULFIDE	pH	CONDUCTIVITY	OXIDANTS	Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
MEBB 87	2	L	✓	✓							RW1
MEBB 88	2	L	✓	✓							RW2
MEBB 89	2	L	✓	✓							RW3
MEBB 90	2	L	✓	✓							RW4
MEBB 91	2	L	✓	✓							RW5
MEBB 92	2	L	✓	✓							DUPLICATE RWD
FS ~~MEBB 93~~	~~2~~	~~L~~	~~✓~~	~~✓~~						~~BLANK~~	~~RWB~~
MEBB 93	3 ~~2~~	L	✓	✓						BLANK	RWB

EPA Form 2075-6 (8-87)

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ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

657
COOLCOR # 92 FS

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716 / SAS # 4062E
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER METALS (HNO3)	1 LITER CN- (NaOH)					REMARKS ITR	OTR	LOW CONC. MATRIX
RW1	10/25/88	1610		✓	RW1	2	1	1					MEBB 87	EAB 64	WATER
RW2	10/25/88	1620		✓	RW2	2	1	1					MEBB 88	EAB 65	WATER
RW3	10/25/88	1630		✓	RW3	2	1	1					MEBB 89	EAB 66	WATER
RW4	10/25/88	1730		✓	RW4	2	1	1					MEBB 90	EAB 67	WATER
RW5	10/25/88	1810		✓	RW5	2	1	1					MEBB 91	EAB 68	WATER
RWD	10/25/88	1610		✓	RWD	2	1	1					MEBB 92	EAB 69	WATER
RWB	10/25/88	1500		✓	RWB	2	1	1					MEBB 93	EAB 70	WATER
~~MSD~~	~~10/ /88~~	~~FS~~		✓	~~MSD~~	~~2~~	~~1~~	~~1~~	~~FS~~					~~FS~~	
													LOT # 1L PLASTIC C8272074		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/25/88 1700				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FEDERAL EXPRESS TO NANCO LAB. AIRBILL # 3523958885 CUSTODY SEALS 12379-80	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09205

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716

SAS NO: (IF APPLICABLE)

ORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER ____
NON-SUPERFUND— ____ PROGRAM

SITE NAME: PLAINFIELD LANDFILL
CITY, STATE: GRAND RAPIDS, MI. SITE SPILL ID: N/A

REGION NO: V SAMPLING COMPANY ② FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: ③
IT CORP.
17605 FABRICA WAY
SUITE A
CERRITOS, CA, 90701
ATTN: CHERYL SUHL

SAMPLING DATE: ④
BEGIN: 10/26/88 END: 10/26/88

DATE SHIPPED: 10/26/88 CARRIER: F ⑤
AIRBILL NO: 3523958911

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

TRIPLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS COMPLETE

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW/MED. H = HIGH (SAS)	Ⓒ RAS ANALYSIS: VOLATILE	BASE/NEUT /ACID	PESTICIDE /PCB's		Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
EAB 71	2	L	✓	✓	✓			MW62
EAB 72	2	L	✓	✓	✓		MSD	TW03
EAB 73	2	L	✓	✓	✓			mw 53
EAB 74	2	L	✓	✓	✓			mw 54
EAB 75	2	L	✓	✓	✓			mw 55
EAB 76	2	L	✓	✓	✓			mw 56
EAB 77	2	L	✓	✓	✓			mw 70
EAB 78	2	L	✓	✓	✓			mw 74
EAB 79	2	L	✓	✓	✓			DUPLICATE
EAB 80	3	L	✓	✓	✓		BLANK	BLANK

EPA Form 2075-7 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 513

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Sartelle

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8 oz. EXTRACTABLE ~~ORGANICS~~	40 ml. VOA					REMARKS OTR	REMARKS ITR	LOW CONC. MATRIX
~~MW62~~	~~10/26/88~~			✓	~~MW62 + MSD~~	~~8~~	~~4~~	~~4~~					~~EAB 71~~	~~MEBB 94~~	~~WATER~~
MW62	10/26/88	1330		✓	MW62	4	2	2					EAB 71	MEBB 94	WATER
MW0	10/26/88	1330		✓	MW0 - DUPLICATE	4	2	2					EAB 79	MEBU 07	WATER
MW53	10/26/88	1550		✓	MW53	4	2	2					EAB 73	MEBU 01	WATER

LOT # 8oz. A8084064 (MW62 + DUPLICATE).
A8084074 (MW53).
40ml. VOA B8176064

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Sartelle	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXP. TO IT CORP. AIRBILL 3523958911 CUSTODY SEALS 12381-82	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09206

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 243

PROJ. NO.: F05-8711-067
PROJECT NAME: FMI0310 / CASE 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTRACTABLE	40 ml. VOA				REMARKS OTR	ITR	CON CONC. MATRIX
~~TW03~~	~~10/26/88~~			✓	~~TW03~~	~~4~~	~~2~~	~~2~~	~~VOID~~	~~FS~~		~~EAB 72~~	~~MEBU 00~~	~~WATER~~
~~TW0~~	~~10/26/88~~			✓	~~DUPLICATE~~	~~4~~	~~2~~	~~2~~	~~VOID~~	~~FS~~		~~EAB~~		~~WATER~~
TW03	10/26/88	1410		✓	TW03 + MSD	8 ~~4~~ FS	4 ~~2~~ FS	4 ~~2~~ FS				EAB 72	~~MEBU~~ MEBU00	WATER
MW54	10/26/88	1620		✓	MW54	4	2	2				EAB 74	MEBU02	water

LOT # 8007: A8084064 (TW03)
A8084074 (MSD + MW54)
40 ml - B8171064
* OTR IN COOLER # 513

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks SHIPPED FED. EXPR. TO IT CORP. AIRBILL 3523958911 CUSTODY SEALS 12383-84	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09207

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 60

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTRACTABLE	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
MW55	10/26/88	1855		✓	MW55	4	2	2					EAB 75	MEBU 03	WATER
MW56	10/26/88	1645		✓	MW 56	4	2	2					EAB 76	MEBU 04	WATER
MW70	10/26/88	1845		✓	MW 70	4	2	2					EAB 77	MEBU 05	WATER

LOT # 80 oz. A8084074 (MW 55)
A8174044 (MW56 + 70)
40 ml. B8176064

* OTR IN COOLER # 513

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/26/88 2100	—			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time		

Remarks: SHIPPED FED. EXP. TO IT CORP.
AIRBILL 3523958911
CUSTODY SEALS 12385-86

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09208

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

COOLER # 92

PROJ. NO.: F05-8711-023
PROJECT NAME: FMI0310 / CASE 10716
SAMPLERS: (Signature) Frank Satella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	80 oz. EXTractable	40 ml. VOA					REMARKS OTR	ITR	LOW CONC. MATRIX
MW 74	10/26/88	1830		✓	MW74	4	2	2					EAB 78	MEBU 06	WATER
~~—~~	~~10/26/88~~	~~—~~		✓	~~FS VOID~~	~~4~~	~~2~~	~~2~~					~~EAB~~		~~WATER~~
MWB	10/26/88	1510		✓	MWB	4	2	2					EAB 80	MEBU 08	
													LOT # 80 oz. A8174044		
													40 ml. B8176064		
													* OTR IN COOLER #513		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Satella	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	

Remarks: SHIPPED FED. EXP. TO IT CORP.
AIRBILL 3523958911
CUSTODY SEALS 12387-88

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09209

USEPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA, VA 22313
703/557-2490 FTS-557-2490

CASE NO: 10716 | SAS NO: (IF APPLICABLE)

INORGANIC TRAFFIC REPORT

(FOR CLP USE ONLY)

TYPE OF ACTIVITY (CIRCLE ONE) ①
SUPERFUND—PA (SI) ESI RIFS RD RA ER NPLD O&M OTHER _____
NON-SUPERFUND— _____ PROGRAM

SITE NAME: PLAINFIELD LANDFILL
CITY, STATE: GRAND RAPIDS, MI
SITE SPILL ID: N/A

REGION NO: I
SAMPLING COMPANY ②: FIT
SAMPLER: (NAME) FRANK SANTELLA

SHIP TO: ~~KATHERINE OKONZAK~~ ③
ENSECO / RMAL
4955 YARROW ST.
ARVADA, CO. 80002
ATTN: KATHERINE OKONZAK

SAMPLING DATE: ④
BEGIN: 10/26/88 END: 10/26/88

DATE SHIPPED: 10/26/88 CARRIER: F ⑤
AIRBILL NO: 3523958900

SAMPLE DESCRIPTION ⑥
(ENTER IN BOX A)
1. SURFACE WATER
2. GROUND WATER
3. LEACHATE
4. SOIL
5. SEDIMENT
6. OIL (SAS)
7. WASTE (SAS)

DOUBLE VOLUME REQUIRED FOR MATRIX SPIKE/DUPLICATE AQUEOUS SAMPLE

SHIP MEDIUM AND HIGH CONCENTRATION SAMPLES IN PAINT CANS

SEE REVERSE FOR ADDITIONAL INSTRUCTIONS

SHIPMENT IS Complete

CLP SAMPLE NUMBER (FROM LABELS)	Ⓐ SAMPLE DESCRIPTION (FROM BOX 1) 1 2 3 4 5 6 7	Ⓑ CONCENTRATION L = LOW M = MED H = HIGH (SAS)	Ⓒ RAS ANALYSIS: TOTAL METALS	CYANIDE	DISSOLVED METALS	HIGH ONLY (SAS): SULFIDE	pH	CONDUCTIVITY	OXIDANTS	Ⓓ SPECIAL HANDLING	Ⓔ STATION LOCATION
MEBB 94	2	L	✓	✓							MW62
MEBU 00	2	L	✓	✓							TW 03
MEBU 01	2	L	✓	✓							MW 53
MEBU 02	2	L	✓	✓							MW 54
MEBU 03	2	L	✓	✓							MW 55
MEBU 04	2	L	✓	✓							MW 56
MEBU 05	2	L	✓	✓							MW 70
MEBU 06	2	L	✓	✓							MW 74
MEBU 07	2	L	✓	✓							DUPLICATE
MEBU 08	3	L	✓	✓						BLANK	BLANK

EPA Form 2075-6 (8-87)

WHITE — SMO COPY PINK — CLIENT COPY WHITE — LAB COPY FOR RETURN TO SMO YELLOW — LAB COPY

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

COOLER # 228

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO.: F05-8711-063
PROJECT NAME: FMI0310 / CASE # 10716
SAMPLERS: (Signature) Frank Santella

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	1 LITER METALS (HNO3)	1 LITER CN⁻ (NaOH)					REMARKS ITR	OTR	LOW CONC. MATRIX
~~MW62~~	~~10/26/88~~	~~VO~~	~~D~~	~~✓~~	~~MW63 + MSD~~ FS	~~VO~~	~~2~~	~~2~~			FS	FS	~~MEBB 94~~ ~~EAB~~	~~EAB 71~~ FS	~~WATER~~
TW03	10/26/88	1410		✓	TW03	2	1	1					MEBU 00	EAB 72	WATER
MW53 FS ~~MW62~~	10/26/88	1550		✓	MW53 FS ~~MW62 + MSD FS~~	2	1	1					MEBU 01	EAB 73	WATER
MW54	10/26/88	1620		✓	MW54	2	1	1					MEBU 02	EAB 74	WATER
MW55	10/26/88	1855		✓	MW55	2	1	1					MEBU 03	EAB 75	WATER
MW56	10/26/88	1645		✓	MW56	2	1	1					MEBU 04	EAB 76	WATER
MW70	10/26/88	1845		✓	MW70	2	1	1					MEBU 05	EAB 77	WATER
MW74	10/26/88	1830		✓	MW74	2	1	1					MEBU 06	EAB 78	WATER
MWD	10/26/88	1330		✓	MWD	2	1	1					MEBU 07	EAB 79	WATER
MWB	10/26/88	1510		✓	MWB	2	1	1					MEBU 08	EAB 80	WATER
MW62	10/26/88	1330		✓	MW62	2	FS 1	1					MEBB94	EAB 71	WATER
													LOT # C8272074 (MW62, TW03, MW53-56)		
													C8271024 (MW70 + MW74)		
													Metal waters have been filtered!!		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Frank Santella	10/26/88 2100				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	SHIPPED FED. EXP. TO ENSECO/AMAL AIRBILL 3523958900 CUSTODY SEALS 12389-90

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5-09210

BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

1500 Scribner Ave., N.W. Grand Rapids, Michigan 49504
Telephone: (616) 774-3694

RECEIVED
DEC 03 1987
WATER POLLUTION CONTROL DIVISION
GRAND RAPIDS

DATE: December 2, 1987

DPW FILE REF. _____

YOUR FILE NO. _____

TO: Mr. Terry Hartman
D.N.R.
State Office Building
350 Ottawa N.W.
Grand Rapids, MI 49503

FROM: ____ Water & Sewer Operations
X Solid Waste
____ Resource Recovery

We are sending you: ( ) Herewith
(X) At Your Request

AS FOLLOWS:

____ Plans
____ Certified Copies
X Other

FOR YOUR: ( ) Files
(X) Information ( ) Signature

LOCAL RESIDENTS
VOL. ORGANIC RESULTS
1987
NOTHING FOUND

REMARKS: Enclosed are the annual private well test analysis for the South Kent & North Kent Landfill residents. Partial chemical, COD + TOC tests were done for all residents who requested these services. Also a volatile organics scan was done for the North Kent residents. All analysis were acceptable.

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

By: Dennis Kmiecik

CC:

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:00 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81166

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:05 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81167

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:40 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81168

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:30 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81169

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:45 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81172

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor, it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:50 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81173

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:45 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81178

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
SAMPLE: [redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:55 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81179

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:35 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81180

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 12:00 PM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81181

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-06-1987 TIME: 10:05 AM
DATE RECEIVED: 10-06-1987 TIME: 11:10 AM
TEST DATE: 10-06-1987
SAMPLE NO. 81182

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 11:25 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-06-1987
SAMPLE NO. 81183

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:15 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81184

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:00 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81185

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 11:05 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81186

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 10:30 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81191

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 11:40 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81192

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO. : 25010
[redacted]

DATE SAMPLED: 10-06-1987 TIME: 10:15 AM
DATE RECEIVED: 10-06-1987 TIME: 11:10 AM
TEST DATE: 10-07-1987
SAMPLE NO. 81193

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-06-1987 TIME: 10:20 AM
DATE RECEIVED: 10-06-1987 TIME: 11:10 AM
TEST DATE: 10-07-1987
SAMPLE NO. 81194

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 11:20 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81196

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:15 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81197

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-06-1987 TIME: 10:00 AM
DATE RECEIVED: 10-06-1987 TIME: 11:10 AM
TEST DATE: 10-07-1987
SAMPLE NO. 81198

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorodifluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 11:10 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81202

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoromethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoroethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

VOLATILE FRACTION

CLIENT: KENT CO. DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10-05-1987 TIME: 09:10 AM
DATE RECEIVED: 10-05-1987 TIME: 12:40 PM
TEST DATE: 10-07-1987
SAMPLE NO. 81203

COMPOUND	RESULT (ug/L)	COMPOUND	RESULT (ug/L)
Benzene	< 1.0	trans-1,2-Dichloroethylene	< 2.0
Bromodichloromethane	< 2.0	1,2-Dichloropropane	< 3.0
Bromoform	< 15	cis-1,3-Dichloropropylene	< 4.0
Bromomethane	< 10	trans-1,3-Dichloropropylene	< 4.0
Carbon Tetrachloride	< 4.0	Ethylbenzene	< 1.0
Chlorobenzene	< 1.0	Methylene Chloride	< 2.0
Chlorodibromomethane	< 3.0	1,1,2,2-Tetrachloroethane	< 2.0
Chloroethane	< 10	Tetrachloroethylene	< 2.0
Chloroform	< 1.0	Toluene	< 1.0
2-Chloroethyl Vinyl Ether	< 10	1,1,1-Trichloroethane	< 2.0
Chloromethane	< 10	1,1,2-Trichloroethane	< 3.0
1,1-Dichloroethane	< 2.0	Trichloroethylene	< 2.0
1,2-Dichloroethane	< 2.0	Trichlorofluoromethane	< 3.0
1,1-Dichloroethylene	< 2.0	Vinyl Chloride	< 10

ADDITIONAL COMPOUNDS

Acrolein	< 10	Dichlorofluoroethane	< 10
Acrylonitrile	< 10	Dichlorodifluoromethane	< 10
Chlorofluoromethane	< 25	Dichlorotrifluoroethane	< 10
Dichlorofluoromethane	< 10		

** A less than (<) sign indicates that the compound was nondetectable at the specified detection limit.

Bis-chloromethyl ether has been found to rapidly degrade in water. Due to th factor,it is not likely to be detected in water and quantitative data cannot be reported.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
[redacted]

DATE SAMPLED: 10/06/87 TIME: 10:35 AM
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/22/87

SAMPLE NO. 81521

COMPOUND	RESULT (ug/l)	D.L.	COMPOUND	RESULT (ug/l)	D.L.
BENZENE	*	5	TRANS-1,2-DICHLOROETHYLENE	*	5
BROMODICHLOROMETHANE	*	10	1,2-DICHLOROPROPANE	*	5
BROMOFORM	*	5	CIS-1,3-DICHLOROPROPYLENE	*	5
BROMOMETHANE	*	10	TRANS-1,3-DICHLOROPROPYLENE	*	5
CARBON TETRACHLORIDE	*	5	ETHYL BENZENE	*	5
CHLOROBENZENE	*	5	METHYLENE CHLORIDE	*	5
CHLORODIBROMOMETHANE	*	5	1,1,2,2-TETRACHLOROETHANE	*	5
CHLOROETHANE	*	10	TETRACHLOROETHYLENE	*	5
2-CHLOROETHYLVINYL ETHER	*	10	TOLUENE	*	5
CHLOROFORM	*	5	1,1,1-TRICHLOROETHANE	*	5
CHLOROMETHANE	*	10	1,1,2-TRICHLOROETHANE	*	5
1,1-DICHLOROETHANE	*	5	TRICHLOROETHYLENE	*	5
1,2-DICHLOROETHANE	*	5	TRICHLOROFLUOROMETHANE	*	10
1,1-DICHLOROETHYLENE	*	5	VINYL CHLORIDE	*	10

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: GB
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 10/06/87 TIME: 10:35 AM
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/22/87
SCHEDULED COMPLETION: 10/22/87
ANALYST: AML
QUALITY CONTROL REVIEW BY: AML
WORKSHEET NO: 79

	[redacted]	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81521		
ACROLEIN	<10	10	ug/l
ACRYLONITRILE	<10	10	ug/l
BIS-(CHLOROMETHYL)	**	25	ug/l
ETHER		----	----
CHLOROFLUORO-		----	----
METHANE	<10	10	ug/l
DICHLOROFLUORO-		----	----
METHANE	<10	10	ug/l
DICHLOROFLUORO-		----	----
ETHANE	<10	10	ug/l
DICHLORODIFLUORO-		----	----
METHANE	<10	10	ug/l
DICHLOROTRIFLUORO-		----	----
ETHANE	<10	10	ug/l

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: TVT,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 1

	[redacted]				DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81166	81167	81168	81169		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
VOA-624	*	*	*	*		
STATION I.D.	PW-01	PW-02	PW-03	PW-04		
DATE SAMPLED:	10/5/87	10/5/87	10/5/87	10/5/87		
TIME SAMPLED:	10:00 AM	10:05 AM	10:40 AM	9:30 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 20

	[redacted]		DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81172	81173		
COD	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	5	mg/l
VOA-624	*	*		
STATION I.D.	PW-07	PW-08		
DATE SAMPLED:	10/5/87	10/5/87		
TIME SAMPLED:	9:45 AM	9:50 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 21

	[redacted]				DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81178	81179	81180	81181		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
VOA-624	*	*	*	*		
STATION I.D.	PW-13	PW-14	PW-15	PW-16		
DATE SAMPLED:	10/5/87	10/5/87	10/5/87	10/5/87		
TIME SAMPLED:	10:45 AM	10:55 AM	9:35 AM	12:00 PM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 23

	[redacted]				DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81182	81183	81184	81185		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
VOA-624	*	*	*	*		
STATION I.D.	PW-17	PW-18	PW-19	PW-20		
DATE SAMPLED:	10/6/87	10/5/87	10/5/87	10/5/87		
TIME SAMPLED:	10:00 AM	11:25 AM	10:15 AM	9:00 AM		

ADDRESS FOR PW-18 FORMERLY LISTED AS 3006 HOUSE CT.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 24

	[redacted]	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81186		
COD	<5.0	5.0	mg/l
TOC	<5	5	mg/l
VOA-624	*		
STATION I.D.	PW-21		
DATE SAMPLED:	10/5/87		
TIME SAMPLED:	11:05 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 25

	[redacted]			DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81191	81192	81193		
COD	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	5	mg/l
VOA-624	*	*	*		
STATION I.D.	PW-26	PW-27	PW-28		
DATE SAMPLED:	10/5/87	10/5/87	10/6/87		
TIME SAMPLED:	10:30 AM	11:40 AM	10:15 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 26

	[redacted]			DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81194	81196	81197		
COD	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	5	mg/l
VOA-624	*	*	*		
STATION I.D.	PW-29	PW-31	PW-32		
DATE SAMPLED:	10/6/87	10/5/87	10/5/87		
TIME SAMPLED:	10:20 AM	11:20 AM	9:15 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 27

	[redacted]	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81198		
COD	<5.0	5.0	mg/l
TOC	<5	5	mg/l
VOA-624	*		
STATION I.D.	PW-33		
DATE SAMPLED:	10/6/87		
TIME SAMPLED:	10:00 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: CC
DESCRIPTION: ANNUAL MONITORING

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DATE RECEIVED: 10/06/87 TIME: 11:10 AM
DATE COMPLETED: 10/28/87
SCHEDULED COMPLETION: 10/27/87
ANALYST: KLM,SH,TL
QUALITY CONTROL REVIEW BY: KLM,JE,DEK
WORKSHEET NO: 28

	[redacted]			DETECTION LIMIT	UNITS
EDI SAMPLE NO:	81202	81203	81521		
COD	<5.0	<5.0	<5.0	5.0	mg/l
TOC	<5	<5	<5	5	mg/l
VOA-624	*	*	*		
STATION I.D.	PW-37	PW-38	PW-39		
DATE SAMPLED:	10/5/87	10/5/87	10/6/87		
TIME SAMPLED:	11:10 AM	9:10 AM	10:35 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 66

	TW-2	TW-3	TW-4	TW-5	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67861	67862	67863	67864		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	<0.01	<0.01	<0.01	0.08	0.01	mg/l
CHLORIDE	9.6	130	<1.0	29	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	54	34	19	25	5.0	mg/l
pH VALUE	7.73	7.34	8.01	7.42	----	std. units
CONDUCTIVITY @ 25 *C	595	1,107	410	735	5	umhos/cm
NITROGEN, NITRATE	1.3	0.25	0.09	<0.05	0.05	mg/l
NITROGEN, AMMONIA	0.26	0.30	0.26	0.28	0.05	mg/l
RESIDUE,DISSOLVED	390	690	310	470	1.0	mg/l
DATE SAMPLED:	10/14/86	10/13/86	10/14/86	10		
TIME SAMPLED:	1:45 PM	1:12 PM	9:37 AM	8		

Monitor Well Analysis for Inorganics 10/14/86 low-level zinc & nickel

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR
CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 198

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JB,BH,PCC
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 67

	TW-2	TW-3	TW-4	TW-5	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67861	67862	67863	67864		
CALCIUM,DISSOLVED	76	150	53	110	0.5	mg/l
SODIUM, DISSOLVED	8.2	48	4.3	21	0.5	mg/l
MAGNESIUM, DISSOLVED	32	40	24	31	0.5	mg/l
HARDNESS (as CaCO3)	320	540	230	400	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.85	0.07	0.52	0.39	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	<0.02	<0.02	<0.02	0.02	mg/l
ZINC, DISSOLVED	4.4	5.9	2.1	0.22	0.02	mg/l

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 68

	TW-6	MW-35	MW-47	MW-48	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67865	67866	67867	67868		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	<0.01	0.04	0.01	0.02	0.01	mg/l
CHLORIDE	9.2	1.2	74	2.9	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	8.6	12	97	17	5.0	mg/l
pH VALUE	8.13	8.01	7.56	7.45	----	std. units
CONDUCTIVITY @ 25 *C	470	344	975	681	5	umhos/cm
NITROGEN, NITRATE	-0.23	<0.05	<0.05	0.91	0.05	mg/l
NITROGEN, AMMONIA	0.31	0.29	0.26	0.36	0.05	mg/l
RESIDUE,DISSOLVED	290	220	630	460	1.0	mg/l
DATE SAMPLED:	10/14/86	10/13/86	10/14/86	10/14/86		
TIME SAMPLED:	3:30 PM	2:00 PM	4:15 PM	10:55 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JB,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 69

	MW TW-6	MW-35	MW-47	MW-48	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67865	67866	67867	67868		
CALCIUM,DISSOLVED	44	39	140	91	0.5	mg/l
SODIUM, DISSOLVED	19	4.1	18	5.6	0.5	mg/l
MAGNESIUM, DISSOLVED	26	24	45	32	0.5	mg/l
HARDNESS (as CaCO3)	220	200	530	360	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.07	<0.02	<0.02	<0.02	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	<0.02	<0.02	<0.02	0.02	mg/l
ZINC, DISSOLVED	0.78	0.04	0.08	2.1	0.02	mg/l

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 70

	MW-53	MW-54	MW-55	MW-56	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67869	67870	67871	67872		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	3.8	11	14	1.2	0.01	mg/l
CHLORIDE	86	520	560	110	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	29	11	10	17	5.0	mg/l
pH VALUE	6.55	6.73	6.59	6.77	----	std. units
CONDUCTIVITY @ 25 *C	1,878	2,117	1,643	1,718	5	umhos/cm
NITROGEN, NITRATE	<0.05	<0.05	<0.05	0.08	0.05	mg/l
NITROGEN, AMMONIA	0.33	0.38	0.38	0.42	0.05	mg/l
RESIDUE,DISSOLVED	1,200	2,000	970	1,000	1.0	mg/l
DATE SAMPLED:	10/14/86	10/14/86	10/14/86	10/14/86		
TIME SAMPLED:	1:30 PM	10:25 AM	1:00 PM	11:45 AM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JB
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 71

	MW-53	MW-54	MW-55	MW-56	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67869	67870	67871	67872		
CALCIUM,DISSOLVED	310	340	290	260	0.5	mg/l
SODIUM, DISSOLVED	32	180	12	60	0.5	mg/l
MAGNESIUM, DISSOLVED	100	73	84	86	0.5	mg/l
HARDNESS (as CaCO3)	1,185	1,150	1,070	1,000	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	0.02	0.01	mg/l
PHOSPHORUS,TOTAL	0.02	0.03	0.04	<0.02	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	0.03	0.04	0.03	0.02	0.02	mg/l
ZINC, DISSOLVED	0.06	0.08	0.06	0.08	0.02	mg/l

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ & GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 10/14/86 TIME: 12:25 PM
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: JE,MB,CS,BJM,PCC
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 98

	MW #57	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67873		
COD	<5.0	5.0	mg/l
IRON, DISSOLVED	0.35	0.01	mg/l
CHLORIDE	160	1.0	mg/l
TOC	<5	5	mg/l
SULFATE	6.1	5.0	mg/l
pH (FIELD)	7.30	----	std. units
CONDUCTIVITY @ 25 *C	1,357	5	umhos/cm
NITROGEN, NITRATE	<0.05	0.05	mg/l
NITROGEN, AMMONIA	0.34	0.05	mg/l
RESIDUE,DISSOLVED	800	1.0	mg/l

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: MJ & GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 10/14/86 TIME: 12:25 PM
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,BJM,MB
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 99

	MW #57	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67873		
CALCIUM,DISSOLVED	140	0.5	mg/l
SODIUM, DISSOLVED	57	0.5	mg/l
MAGNESIUM, DISSOLVED	54	0.5	mg/l
HARDNESS (as CaCO3)	572	1.0	mg/l
NITROGEN, NITRATE	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.03	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	0.02	mg/l
ZINC, DISSOLVED	<0.02	0.02	mg/l

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ANALYTICAL SERVICES
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CLIENT: KENT COUNTY DPW
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SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 72

	MW-61	MW-63	MW-65	MW-66	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67874	67875	67876	67877		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	0.11	0.02	0.01	0.92	0.01	mg/l
CHLORIDE	1.3	13	35	230	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	11	12	7.4	29	5.0	mg/l
pH VALUE	7.70	8.00	7.45	7.29	----	std. units
CONDUCTIVITY @ 25 *C	471	412	814	1,708	5	umhos/cm
NITROGEN, NITRATE	<0.05	1.0	0.43	<0.05	0.05	mg/l
NITROGEN, AMMONIA	0.27	0.29	0.32	0.33	0.05	mg/l
RESIDUE,DISSOLVED	230	220	470	1,300	1.0	mg/l
DATE SAMPLED:	10/14/86	10/14/86	10/13/86	10/14/86		
TIME SAMPLED:	9:35 AM	4:30 PM	5:15 PM	4:20 PM		

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EDI LABORATORY REPORT

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SAMPLED BY: MJ/GLB
DESCRIPTION: ANNUAL MONITORING

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DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,BJM,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 73

	MW-61	MW-63	MW-65	MW-66	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67874	67875	67876	67877		
CALCIUM,DISSOLVED	63	52	120	220	0.5	mg/l
SODIUM, DISSOLVED	5.6	8.0	18	62	0.5	mg/l
MAGNESIUM, DISSOLVED	24	19	39	84	0.5	mg/l
HARDNESS (as CaCO3)	260	210	460	900	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.03	<0.02	0.09	<0.02	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	<0.02	<0.02	0.03	0.02	mg/l
ZINC, DISSOLVED	0.30	0.03	1.0	5.3	0.02	mg/l

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DESCRIPTION: ANNUAL MONITORING

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DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 74

	MW-67	MW-68	MW-69	MW-70	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67878	67879	67880	67881		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
CHLORIDE	<1.0	<1.0	9.6	15	1.0	mg/l
TOC	<5	<5	<5	<5	1.0	mg/l
SULFATE	9.3	15	22	8.3	5.0	mg/l
pH VALUE	7.76	7.94	7.59	7.97	----	std. units
CONDUCTIVITY @ 25 *C	377	403	566	448	5	umhos/cm
NITROGEN, NITRATE	0.30	<0.05	0.30	0.25	0.05	mg/l
NITROGEN, AMMONIA	0.29	0.31	0.78	0.31	0.05	mg/l
RESIDUE,DISSOLVED	200	230	330	260	1.0	mg/l
DATE SAMPLED:	10/13/86	10/13/86	10/13/86	10/13/86		
TIME SAMPLED:	3:00 PM	1:30 PM	11:45 AM	12:24 PM		

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

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LOCATION: NORTH KENT LANDFILL
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DESCRIPTION: ANNUAL MONITORING

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DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,BJM,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 77

	MW-67	MW-68	MW-69	MW-70	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67878	67879	67880	67881		
CALCIUM,DISSOLVED	54	57	80	61	0.5	mg/l
SODIUM, DISSOLVED	4.2	4.9	8.0	5.4	0.5	mg/l
MAGNESIUM, DISSOLVED	19	22	27	22	0.5	mg/l
HARDNESS (as CaCO3)	210	230	310	240	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.05	0.11	0.06	<0.02	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	<0.02	<0.02	<0.02	0.02	mg/l
ZINC, DISSOLVED	2.5	0.77	3.9	3.9	0.02	mg/l

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ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 78

	MW-71	MW-72	MW-73	MW-74	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67882	67883	67884	67885		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	3.3	<0.01	<0.01	0.03	0.01	mg/l
CHLORIDE	150	64	2.9	19	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	37	15	62	14	5.0	mg/l
pH VALUE	6.51	7.14	7.69	7.82	----	std. units
CONDUCTIVITY @ 25 *C	2,068	1,186	761	452	5	umhos/cm
NITROGEN, NITRATE	<0.05	<0.05	<0.05	3.1	0.05	mg/l
NITROGEN, AMMONIA	0.38	0.14	0.28	0.26	0.05	mg/l
RESIDUE,DISSOLVED	1,300	770	480	250	1.0	mg/l
DATE SAMPLED:	10/14/86	10/14/86	10/14/86	10/13/86		
TIME SAMPLED:	2:45 PM	3:15 PM	11:37 AM	3:45 PM		

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SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,BJM,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 79

	MW-71	MW-72	MW-73	MW-74	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67882	67883	67884	67885		
CALCIUM,DISSOLVED	320	180	120	57	0.5	mg/l
SODIUM, DISSOLVED	67	30	4.8	2.5	0.5	mg/l
MAGNESIUM, DISSOLVED	100	64	43	25	0.5	mg/l
HARDNESS (as CaCO3)	1,200	710	480	240	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.16	0.21	0.06	0.04	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	0.07	<0.02	<0.02	<0.02	0.02	mg/l
ZINC, DISSOLVED	1.6	2.2	1.9	1.4	0.02	mg/l

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

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DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: CS,MB,JE,BJM
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 83

	MW-75	MW-76	MW-77	MW-78	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67886	67887	67888	67889		
COD	<5.0	<5.0	<5.0	<5.0	5.0	mg/l
IRON, DISSOLVED	0.01	<0.01	<0.01	0.04	0.01	mg/l
CHLORIDE	18	<1.0	<1.0	<1.0	1.0	mg/l
TOC	<5	<5	<5	<5	5	mg/l
SULFATE	42	13	7.1	16	5.0	mg/l
pH VALUE	7.67	8.46	8.08	8.27	----	std. units
CONDUCTIVITY @ 25 *C	540	458	283	310	5	umhos/cm
NITROGEN, NITRATE	<0.05	<0.05	0.08	0.1	0.05	mg/l
NITROGEN, AMMONIA	0.24	0.17	0.24	0.26	0.05	mg/l
RESIDUE,DISSOLVED	390	300	200	180	1.0	mg/l
DATE SAMPLED:	10/13/86	10/14/86	10/14/86	10/14/86		
TIME SAMPLED:	4:10 PM	8:40 AM	8:05 AM	4:55 PM		

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYST: CS,MB,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 84

	MW-75	NW-76	MW-77	MW-78	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67886	67887	67888	67889		
CALCIUM,DISSOLVED	80	37	38	39	0.5	mg/l
SODIUM, DISSOLVED	3.1	6.0	2.0	2.0	0.5	mg/l
MAGNESIUM, DISSOLVED	30	37	17	19	0.5	mg/l
HARDNESS (as CaCO3)	320	240	160	180	1.0	mg/l
NITROGEN, NITRITE	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.07	0.15	0.03	<0.02	0.02	mg/l
CHROMIUM,DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	<0.01	<0.01	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	<0.02	<0.02	<0.02	0.02	mg/l
ZINC, DISSOLVED	1.2	0.07	0.52	1.1	0.02	mg/l

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

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DATE RECEIVED: 10/14/86 TIME: 5:35 PM
DATE COMPLETED: 11/03/86
SCHEDULED COMPLETION: 11/06/86
ANALYST: MB,JE,BJM,CS
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 85

	MW-80	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67890		
COD	<5.0	5.0	mg/l
IRON, DISSOLVED	<0.01	0.01	mg/l
CHLORIDE	<1.0	1.0	mg/l
TOC	<5	5	mg/l
SULFATE	21	5.0	mg/l
pH VALUE	8.06	----	std. units
CONDUCTIVITY @ 25 *C	432	5	umhos/cm
NITROGEN, NITRATE	0.1	0.05	mg/l
NITROGEN, AMMONIA	0.25	0.05	mg/l
RESIDUE,DISSOLVED	350	1.0	mg/l

DATE SAMPLED: 10/13/86

TIME SAMPLED: 12:55 PM

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYST: CS,MB,BJM,BH
QUALITY CONTROL REVIEW BY: DEK
WORKSHEET NO: 86

	MW-80	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67890		
CALCIUM,DISSOLVED	51	0.5	mg/l
SODIUM, DISSOLVED	2.2	0.5	mg/l
MAGNESIUM, DISSOLVED	27	0.5	mg/l
HARDNESS (as CaCO3)	240	1.0	mg/l
NITROGEN, NITRITE	<0.01	0.01	mg/l
PHOSPHORUS,TOTAL	0.05	0.05	mg/l
CHROMIUM,DISSOLVED	<0.05	0.05	mg/l
COPPER, DISSOLVED	<0.01	0.01	mg/l
LEAD, DISSOLVED	<0.05	0.05	mg/l
NICKEL, DISSOLVED	<0.02	0.02	mg/l
ZINC, DISSOLVED	0.44	0.02	mg/l

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-35

DATE SAMPLED: 10/13/86 TIME: 2:00 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67866

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	[illegible]
1,2-DICHLOROETHANE	*	0.002	TRICHLOR[illegible]		
1,1-DICHLOROETHYLENE	*	0.002	VINYL CH[illegible]		

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-47

DATE SAMPLED: 10/14/86 TIME: 4:15 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/15/86

SAMPLE NO. 67867

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.005	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.002	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-48

DATE SAMPLED: 10/14/86 TIME: 10:55 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67868

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 9

	MW-IW-6 10/14 3:30	MW-35 2:00 10/13/86	MW-47 4:15 10/14/86	MW48 10:55 10/14/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67865	67866	67867	67868		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-53

DATE SAMPLED: 10/14/86 TIME: 1:30 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/15/86

SAMPLE NO. 67869

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.003	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.008	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.022	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.002	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.032	0.002	TRICHLOROETHYLENE	0.004	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.025	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

96 pm

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-54

DATE SAMPLED: 10/14/86 TIME: 10:25 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67870

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.007	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.050	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.015	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.029	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-55

DATE SAMPLED: 10/14/86 TIME: 1:00 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67871

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.018	0.001	TRANS-1,2-DICHLOROETHYLENE	0.14	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.011	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.097	0.010	TETRACHLOROETHYLENE	0.022	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	0.002	0.001
CHLOROFORM	0.092	0.001	1,1,1-TRICHLOROETHANE	0.025	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.83	0.002	TRICHLOROETHYLENE	0.10	0.002
1,2-DICHLOROETHANE	0.009	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	0.002	0.002	VINYL CHLORIDE	0.13	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-56

DATE SAMPLED: 10/14/86 TIME: 11:45 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67872

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	0.006	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.099	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.064	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.056	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.080	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	0.005	0.003
1,1-DICHLOROETHYLENE	0.004	0.002	VINYL CHLORIDE	0.041	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 10

	MW-53 1:30 10/14/86	MW54 10:25 10/14/86	MW-55 1:00 10/14/86	MW56 11:45 10/14/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67869	67870	67871	67872		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	0.20	0.19	0.18	0.034	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	0.14	0.089	<0.010	0.022	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-57

DATE SAMPLED: 10/14/86 TIME: 12:25 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67873

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-63 MW-61

DATE SAMPLED: 10/14/86 TIME: 4:30 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67875

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.001	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-61
MW-63.2

DATE SAMPLED: 10/14/86 TIME: 9:35 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67874

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-65

DATE SAMPLED: 10/13/86 TIME: 5:15 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67876

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.003	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 11

	MW57 12:25 10/14/86	MW-61 9:35 10/14/86	MW-63 4:30 10/14/86	MW-65 5:15 10/13/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67873	67874	67875	67876		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-66

DATE SAMPLED: 10/14/86 TIME: 4:20 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67877

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-67

DATE SAMPLED: 10/13/86 TIME: 3:00 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67878

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-68

DATE SAMPLED: 10/13/86 TIME: 1:30 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67879

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-69

DATE SAMPLED: 10/13/86 TIME: 11:45 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67880

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 12

	MW-66 4:20 10/14/86	MW-67 3:00 10/13/86	MW-68 1:30 10/13/86	MW69 11:45 10/13/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67877	67878	67879	67880		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-70

DATE SAMPLED: 10/13/86 TIME: 12:24 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67881

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.002	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-71

DATE SAMPLED: 10/14/86 TIME: 2:45 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67882

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.003	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.015	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.069	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.010	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.053	0.002	TRICHLOROETHYLENE	0.003	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.060	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

2-13

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-72

DATE SAMPLED: 10/14/86 TIME: 3:15 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67883

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.002	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-73

DATE SAMPLED: 10/14/86 TIME: 11:37 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67884

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 13

	MW70 12:24 10/13/86	MW-71 2:45 10/14/86	MW-72 3:15 10/14/86	MW73 11:37 10/14/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67881	67882	67883	67884		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	0.19	0.021	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	0.16	0.023	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-74

DATE SAMPLED: 10/13/86 TIME: 3:45 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67885

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-75

DATE SAMPLED: 10/13/86 TIME: 4:10 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/15/86

SAMPLE NO. 67886

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-76

DATE SAMPLED: 10/14/86 TIME: 8:40 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67887

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-77

DATE SAMPLED: 10/14/86 TIME: 8:05 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67888

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.001	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 14

	MW-74 3:45 10/13/86	MW-75 4:10 10/13/86	MW-76 8:40 10/14/86	MW-77 8:05 10/14/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67885	67886	67887	67888		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-78

DATE SAMPLED: 10/14/86 TIME: 4:55 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/15/86

SAMPLE NO. 67889

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.001	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-80

DATE SAMPLED: 10/13/86 TIME: 12:55 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67890

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 15

	MW-78 4:55 10/14/86	MW80 12:55 10/13/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67889	67890		
ACROLEIN	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-				----
METHANE	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-				----
METHANE	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-				----
ETHANE	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-				----
METHANE	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-				----
ETHANE	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)				
ETHER	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: TW-2

DATE SAMPLED: 10/14/86 TIME: 1:45 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67861

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.001	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.002	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: TW-3

DATE SAMPLED: 10/13/86 TIME: 1:12 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/17/86

SAMPLE NO. 67862

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.052	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.006	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: TW-4

DATE SAMPLED: 10/14/86 TIME: 9:37 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67863

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-TW-5

DATE SAMPLED: 10/14/86 TIME: 8:40 AM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67864

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.004	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25624
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DWK
DESCRIPTION: ANNUAL MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86
SCHEDULED COMPLETION: 00/00/00
ANALYST: KLM,TVT
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 8

	TW-2 1:45 10/14/86	TW-3 1:12 10/13/86	TW-4 9:37 10/14/86	TW-5 8:40 10/14/86	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	67861	67862	67863	67864		
ACROLEIN	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
CHLOROFLUORO-						----
METHANE	<0.025	<0.025	<0.025	<0.025	0.025	mg/l
DICHLOROFLUORO-						----
METHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
DICHLOROFLUORO-						----
ETHANE	<0.010	0.010	<0.010	<0.010	0.010	mg/l
DICHLORODIFLUORO-						----
METHANE	<0.010	0.011	<0.010	<0.010	0.010	mg/l
DICHLOROTRIFLUORO-						----
ETHANE	<0.010	<0.010	<0.010	<0.010	0.010	mg/l
BIS-(CHLOROMETHYL)						
ETHER	**	**	**	**		

BIS-CHLOROMETHYL ETHER HAS BEEN SHOWN TO READILY DEGRADE IN WATER AND WAS NOT DETECTED IN THIS SAMPLE.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-TW-6

DATE SAMPLED: 10/14/86 TIME: 3:30 PM
DATE RECEIVED: 10/14/86 TIME: 5:45 PM
DATE COMPLETED: 10/16/86

SAMPLE NO. 67865

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

CHEMICAL ANALYSIS OF WATER

Laboratory and Epidemiological Services Administration
Michigan Department of Public Health
3500 North Logan, P.O. Box 30035
Lansing, MI 48909
Telephone (517) 373-1428

Abbreviations: GT = Greater than given value
MCL = State regulated maximum contaminant limit

LAB NO.: 8608-01936 Page: 1
PROGRAM CODE: 22

REPORT TO:

Kent County Health Dept.
700 Fuller Ave.N.E.
Grand Rapids,MI 49503

Date received: 08/11/86
Date reported: 08/19/86

Examiner in Charge:

[redacted]

WSSN:
Location/Source:
Collected by: READING
Date Collected: 08/07/86

Test Name	Test Result	Standard Health MCL	Detection Test Limit
BROMOFORM	Not Detected	0.10mg/l	0.001mg/l
CARBON TETRACHLORIDE	Not Detected		0.001mg/l
CHLOROBENZENE	Not Detected		0.001mg/l
CHLORODIBROMOMETHANE	Not Detected	0.10mg/l	[illegible]
CHLOROETHANE	Not Detected		
CHLOROFORM	Not Detected	0.10mg/l	
DICHLOROBROMOMETHANE	Not Detected	0.10mg/l	
DICHLOROETHANE, 1,2-	Not Detected		
DICHLOROETHANE, 1,1-	Not Detected		
DICHLOROETHYLENE, TRANS-1,2,	Not Detected		
DICHLOROETHYLENE, CIS-1,2,	Not Detected		
DICHLOROPROPANE, 1,2-	Not Detected		
DICHLOROPROPYLENE, TRANS-1,3,	Not Detected		
DICHLOROPROPYLENE, CIS-1,3,	Not Detected		
ETHYLENE DIBROMIDE	Not Detected		
FLUOROTRICHLOROMETHANE	Not Detected		
HEXACHLOROETHANE	Not Detected		
METHYL BROMIDE	Not Detected		
METHYL CHLORIDE	Not Detected		
METHYLENE CHLORIDE	Not Detected		
TETRACHLOROETHANE, 1,1,2,2-	Not Detected		
TETRACHLOROETHYLENE	Not Detected		[illegible]
TOTAL TRIHALOMETHANES	Not Detected	0.10mg/l	0.001mg/l
TRICHLOROETHANE, 1,1,2-	Not Detected		0.001mg/l
TRICHLOROETHANE, 1,1,1-	0.001mg/l		
TRICHLOROETHYLENE	Not Detected		0.001mg/l
VINYL CHLORIDE	Not Detected		0.005mg/l
VINYLIDENE CHLORIDE	Not Detected		0.001mg/l
BENZENE	Not Detected		0.001mg/l
DICHLOROBENZENE, 1,4-	Not Detected		0.001mg/l
DICHLOROBENZENE, 1,3-	Not Detected		0.001mg/l

Contaminate
Residential
Well

(CONTINUED)

CHEMICAL ANALYSIS OF WATER

Laboratory and Epidemiological Services Administration
Michigan Department of Public Health
3500 North Logan, P.O. Box 30035
Lansing, MI 48909
Telephone (517) 373-1428

Abbreviations: GT = Greater than given value
MCL = State regulated maximum contaminant limit

LAB NO.: 8608-01936 Page: 2
PROGRAM CODE: 22

REPORT TO:

Kent County Health Dept.
700 Fuller Ave.N.E.
Grand Rapids,MI 49503

Date received: 08/11/86
Date reported: 08/19/86

Examiner in Charge: FMSaad

[redacted]

WSSN:
Location/Source:
Collected by: READING
Date Collected: 08/07/86

Test Name	Test Result	Standard Health MCL	Detection Test Limit
DICHLOROBENZENE, 1,2-	Not Detected		0.001mg/l
ETHYLBENZENE	Not Detected		0.001mg/l
METHYLETHYL KETONE	Not Detected		0.02mg/l
METHYL ISOBUTYL KETONE	Not Detected		0.020mg/l
STYRENE	Not Detected		0.001mg/l
TOLUENE	Not Detected		0.001mg/l
XYLENE	Not Detected		0.001mg/l

BOARD OF PUBLIC WORKS
OF THE COUNTY OF KENT

1500 Scribner Ave., N.W. Grand Rapids, Michigan 49504
Telephone: (616) 774-3694

GQD COMPLIANCE
GRAND RAPIDS
MAY 21 1986
RECEIVED

DATE: April 10, 1986 (MAY 20, 1986 REVISED)*

DPW FILE REF. _____

YOUR FILE NO. _____

TO: Ms. Bonnie White
Department of Natural Resources
State Office Building
350 Ottawa NW
Grand Rapids, MI 49503

FROM: ____ Water & Sewer Operations
X Solid Waste
____ Resource Recovery

We are sending you: ( ) Herewith ( ) Under Separate Cover
(X) At Your Request

AS FOLLOWS:

____ Plans ____ Specifications
____ Certified Copies ____ Change Orders
X Other

FOR YOUR: ( ) Files ( ) Approval
(X) Information ( ) Signature

REMARKS: Quarterly monitoring reports for on-site wells at North Kent County Landfill. (Inorganics + organics)

* DUE TO ERROR BY EDI - RESULTS WERE LATE (ERROR ON M.W. 73 + 63 + 61 were reversed)

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

By: Dennis Kniecik

CC:

1986 analysis

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-55

DATE SAMPLED: 02
DATE RECEIVED: 02
DATE COMPLETED: 03

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND		
BENZENE	0.017	0.001	TRANS-1,2-DICHLOROETHYLENE	0.14	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	0.003	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.015	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.28	0.010	TETRACHLOROETHYLENE	0.005	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	0.002	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.037	0.002
CHLOROMETHANE	0.056	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	1.2	0.002	TRICHLOROETHYLENE	0.10	0.002
1,2-DICHLOROETHANE	0.009	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	0.007	0.002	VINYL CHLORIDE	0.85	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI Engineering & Science
Environmental Engineering, Geology, Biology & Chemistry
611 Cascade W Pkwy, SE, Grand Rapids, MI 49506-2179, (616) 942-9600
a subsidiary of WW Engineering & Science

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-55

DATE SAMPLED: 02/27/86 TIME: 4:50 PM
DATE RECEIVED: 02/27/86 TIME: 6:45 PM
DATE COMPLETED: 03/11/86

SAMPLE NO. 60266

COMPOUND	RESULT	D.L.
ACROLEIN	<0.010	0.010
ACRYLONITRILE	<0.010	0.010
DICHLORODIFLUORO-METHANE	0.015	0.010
CHLORODIFLUORO-METHANE	0.065	0.010
DIETHYLETHER	0.20	0.050

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-62

DATE SAMPLED: 02/26/86 TIME: 3:48 PM
DATE RECEIVED: 02/26/86 TIME: 6:00 PM
DATE COMPLETED: 03/11/86

SAMPLE NO. 60271

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.002	0.001	TRANS-1,2-DICHLOROETHYLENE	0.017	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.003	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.079	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	0.53	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.002	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.058	0.002	TRICHLOROETHYLENE	0.003	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.15	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: MW-62
SAMPLED BY: MC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 02/26/86 TIME: 3:48 PM
DATE RECEIVED: 02/26/86 TIME: 6:00 PM
DATE COMPLETED: 03/11/86
SCHEDULED COMPLETION: 3/11/86
ANALYST: KLM
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 2

		DETECTION LIMIT	UNITS
EDI SAMPLE NO:	60271		
ACROLEIN	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	0.010	mg/l
DICHLORODIFLUORO-METHANE	<0.010	0.010	mg/l
CHLORODIFLUORO-METHANE	0.013	0.010	mg/l
METHYL ETHYL KETONE	0.26	0.050	mg/l
	0.096	0.050	mg/l
DICHLOROFLUORO-METHANE	0.015	0.010	mg/l
ISOPROPANOL	2.1	0.050	mg/l
ETHYL ETHER	0.18	0.050	mg/l

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-71

DATE SAMPLED: 02/27/86 TIME: 5:42 PM
DATE RECEIVED: 02/27/86 TIME: 6:45 PM
DATE COMPLETED: 03/10/86

SAMPLE NO. 60280

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.023	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.18	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.025	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.082	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	0.002	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.25	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: MW-71
SAMPLED BY: MC
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 02/27/86 TIME: 5:42 PM
DATE RECEIVED: 02/27/86 TIME: 6:45 PM
DATE COMPLETED: 03/10/86
SCHEDULED COMPLETION: 3/10/86
ANALYST: KLM
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 4

		DETECTION LIMIT	UNITS
EDI SAMPLE NO:	60280		
ACROLEIN	<0.010	0.010	mg/l
ACRYLONITRILE	<0.010	0.010	mg/l
DICHLORODIFLUORO-METHANE	0.28	0.010	mg/l
CHLORODIFLUORO-METHANE	0.13	0.050	mg/l
DICHLOROFLUORO-METHANE	0.15	0.050	mg/l
METHYLESTER ACETIC ACID	0.025	0.010	mg/l
METHYL BUTANE	0.011	0.010	mg/l

ANALYSIS BY STANDARD METHODS 16TH EDITION AND/OR METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES, USEPA, 1983.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-72

DATE SAMPLED: 02/26/86 TIME:
DATE RECEIVED: 02/26/86 TIME: 6:00 PM
DATE COMPLETED: 03/03/86

SAMPLE NO. 60281

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.002	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-72

DATE SAMPLED: 02/26/86 TIME:
DATE RECEIVED: 02/26/86 TIME: 6:00 PM
DATE COMPLETED: 03/03/86

SAMPLE NO. 60281

COMPOUND	RESULT	D.L.
ACROLEIN	<0.010	0.010
ACRYLONITRILE	<0.010	0.010
DICHLORODIFLUORO-METHANE	0.072	0.010
CHLORODIFLUORO-METHANE	0.022	0.010
DICHLOROFLUORO-METHANE	0.025	0.010

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: MW-73

DATE SAMPLED: 02/27/86 TIME: 2:49 PM
DATE RECEIVED: 02/27/86 TIME: 6:45 PM
DATE COMPLETED: 03/11/86

SAMPLE NO. 60282

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	*	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	*	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

EDI ENGINEERING & SCIENCE
ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W. PKWY. S.E., GRAND RAPIDS, MI 49506, (616) 942-0970

Chain of Custody Record

Client: KENT Co DPW 10 MILE
Project No: 25010
Samplers (Signature): Mark V Christensen

Sample Location	Date	Time	Sample Type: Water Comp.	Sample Type: Water Grab.	Sample Type: Sludge	No. of Containers	Analysis Required
M.W. #79	11/19/85	10:20A		✓		2	vials only
M.W. #35		10:45A		✓		6	
M.W. #80		11:15A		✓		6	
M.W. # 69		11:30A		✓		6	
M.W. # 73		12:40p		✓		6	
M.W. # 74		1:10p		✓		6	
M.W. # 57		1:35p		✓		6	
M.W. # 76		2:10p		✓		6	
M.W. # 63		2:40p		✓		6	
~~M.W. #~~							
~~M.W. #~~							
~~M.W. #~~							

Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Mark V Christensen	Joni Vander Stel	11/20/85	7:00am
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time

Dispatched by: (signature)	Date	Time	Received for Lab by:	Date	Time

GQD COMPLIANCE
GRAND RAPIDS
FEB 10 1986
RECEIVED

Method of Shipment:

Comments:

EDI ENGINEERING & SCIENCE
ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W PKWY. S.E., GRAND RAPIDS, MI 49506, (616) 942-0970

Chain of Custody Record

Client: KENT Co DPW 10 MILE Samplers (Signature): Mark V Christensen
Project No: 25010

Sample Location	Date	Time	Sample Type: Water Comp.	Sample Type: Water Grab.	Sample Type: Sludge	No. of Containers	Analysis Required
M.W.#67	11/21/95	9:10A		✓		6	
MW.#77	"	9:40A		✓		6	
T.W.#4	"	10:00A		✓		6	
MW#70	"	10:40A		✓		6	
T.W.#5	"	10:55A		✓		6	
M.W.#68	"	11:10A		✓		6	
T.W.#3	"	12:30p		✓		6	
T.W. 2	"	12:50p		✓		6	
M.W. 47	"	1:05p		✓		6	
M.W. 56	"	1:35p		✓		6	
M.W. 54	"	3:15p		✓		6	
OUTFALL#004	"	2:10p		✓		5	
" #007	"	2:15p		✓		5	
" #005	"	2:25p		✓		5	
" #006	"	2:30p		✓		5	
M.W. #62	"	2:40p		✓		6	

Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Mark V Christensen	Jon Vander [illegible]	11/21/95	5:00 PM
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time

Dispatched by: (signature)	Date	Time	Received for Lab by:	Date	Time

Method of Shipment:

Comments:

EDI ENGINEERING & SCIENCE
ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W. PKWY. S.E., GRAND RAPIDS, MI 49506, (616) 942-0970

Chain of Custody Record

Client: KENT CO DPW 10 MILE Samplers (Signature): Gary Bowman
Project No: 25010

Sample Location	Date	Time	Sample Type: Water Comp.	Sample Type: Water Grab.	Sample Type: Sludge	No. of Containers	Analysis Required
M.W.# 72	11/22/85	10:15 A.		✓		6	
M.W.# 71		10:30 A.		✓		6	
M.W.# 53		11:00 A.		—		6	
M.W.# 55		11:15 A.		✓		6	

Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Gary Bowman	Jon Vander Stel	11/22	1:00pm
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time
Relinquished by: (signature)	Recieved by: (signature)	Date	Time

Dispatched by: (signature)	Date	Time	Received for Lab by:	Date	Time

Method of Shipment:

Comments:

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: TW-03

DATE SAMPLED: 02/25/86 TIME: 4:55 PM
DATE RECEIVED: 02/25/86 TIME: 6:20 PM
DATE COMPLETED: 03/06/86

SAMPLE NO. 60292

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	*	0.001	TRANS-1,2-DICHLOROETHYLENE	*	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	*	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	*	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.064	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.011	0.002	TRICHLOROETHYLENE	*	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: TW-03

DATE SAMPLED: 02/25/86 TIME: 4:55 PM
DATE RECEIVED: 02/25/86 TIME: 6:20 PM
DATE COMPLETED: 03/06/86

SAMPLE NO. 60292

COMPOUND	RESULT	D.L.
DICHLORODIFLUORO-METHANE	0.012	0.010
ACROLEIN	<0.010	0.010
ACRYLONITRILE	<0.010	0.010
DICHLOROFLUORO-METHANE	0.016	0.010

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: LS-01

DATE SAMPLED: 06/18/86 TIME: 10:30 PM
DATE RECEIVED: 06/18/86 TIME: 4:40 PM
DATE COMPLETED: 06/23/86

SAMPLE NO. 63790

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.11	0.05	TRANS-1,2-DICHLOROETHYLENE	0.30	0.10
BROMODICHLOROMETHANE	*	0.10	1,2-DICHLOROPROPANE	*	0.15
BROMOFORM	*	0.75	CIS-1,3-DICHLOROPROPYLENE	*	0.20
BROMOMETHANE	*	0.50	TRANS-1,3-DICHLOROPROPYLENE	*	0.20
CARBON TETRACHLORIDE	*	0.20	ETHYL BENZENE	0.30	0.05
CHLOROBENZENE	*	0.05	METHYLENE CHLORIDE	3.9	0.10
CHLORODIBROMOMETHANE	*	0.15	1,1,2,2-TETRACHLOROETHANE	*	0.10
CHLOROETHANE	*	0.50	TETRACHLOROETHYLENE	*	0.10
2-CHLOROETHYLVINYL ETHER	*	0.50	TOLUENE	1.9	0.05
CHLOROFORM	0.099	0.05	1,1,1-TRICHLOROETHANE	*	0.10
CHLOROMETHANE	*	0.50	1,1,2-TRICHLOROETHANE	*	0.15
1,1-DICHLOROETHANE	0.76	0.10	TRICHLOROETHYLENE	0.13	0.10
1,2-DICHLOROETHANE	0.11	0.10	TRICHLOROFLUOROMETHANE	*	0.15
1,1-DICHLOROETHYLENE	*	0.10	VINYL CHLORIDE	*	0.50

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: NORTH KENT LANDFILL
SAMPLED BY: DP & GLB
DESCRIPTION: QUARTERLY MONITORING

DATE SAMPLED: 00/00/00 TIME:
DATE RECEIVED: 06/18/86 TIME: 4:40 PM
DATE COMPLETED: 06/23/86
SCHEDULED COMPLETION: 7/09/86
ANALYST: TVT,KLM
QUALITY CONTROL REVIEW BY: KLM
WORKSHEET NO: 88

	LS-01	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	63790		
ACROLEIN	<0.50	0.50	mg/l
ACRYLONITRILE	<0.50	0.50	mg/l
BIS-(CHLOROMETHYL)			----
ETHER	<1.5	1.5	mg/l
CHLOROFLUORO-			----
METHANE	<1.5	1.5	mg/l
DICHLOROFLUORO-			----
METHANE	<0.50	0.50	mg/l
DICHLOROFLUORO-			----
ETHANE	<0.50	0.50	mg/l
DICHLORODIFLUORO-			----
METHANE	<0.50	0.50	mg/l
DICHLOROTRIFLUORO-			----
ETHANE	<0.50	0.50	mg/l

ANALYSIS BY "METHODS FOR ORGANIC CHEMICAL ANALYSIS OF MUNICIPAL AND INDUSTRIAL WASTEWATER", USEPA-600/4-82-057.

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: M.W. #55

DATE SAMPLED: 11/22/85 TIME: 11:15 AM
DATE RECEIVED: 11/22/85 TIME: 5:00 PM
DATE COMPLETED: 11/25/85

SAMPLE NO. 57755

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.011	0.001	TRANS-1,2-DICHLOROETHYLENE	0.045	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	0.003	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.014	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.093	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	*	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.023	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.46	0.002	TRICHLOROETHYLENE	0.033	0.002
1,2-DICHLOROETHANE	0.004	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	0.002	0.002	VINYL CHLORIDE	0.086	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: M.W. #55

DATE SAMPLED: 11/22/85 TIME: 11:15 AM
DATE RECEIVED: 11/22/85 TIME: 5:00 PM
DATE COMPLETED: 11/25/85

SAMPLE NO. 57755

COMPOUND	RESULT	D.L.
ACROLEIN	<0.010	0.010
ACRYLONITRILE	<0.010	0.010
DICHLORODIFLUORO-METHANE	0.016	0.010

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: M.W. #62

DATE SAMPLED: 11/21/85 TIME: 2:40 PM
DATE RECEIVED: 11/21/85 TIME: 5:00 PM
DATE COMPLETED: 11/25/85

SAMPLE NO. 57759

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
BENZENE	0.003	0.001	TRANS-1,2-DICHLOROETHYLENE	0.016	0.002
BROMODICHLOROMETHANE	*	0.002	1,2-DICHLOROPROPANE	*	0.003
BROMOFORM	*	0.015	CIS-1,3-DICHLOROPROPYLENE	*	0.004
BROMOMETHANE	*	0.010	TRANS-1,3-DICHLOROPROPYLENE	*	0.004
CARBON TETRACHLORIDE	*	0.004	ETHYL BENZENE	*	0.001
CHLOROBENZENE	*	0.001	METHYLENE CHLORIDE	0.019	0.002
CHLORODIBROMOMETHANE	*	0.003	1,1,2,2-TETRACHLOROETHANE	*	0.002
CHLOROETHANE	0.067	0.010	TETRACHLOROETHYLENE	*	0.002
2-CHLOROETHYLVINYL ETHER	*	0.010	TOLUENE	0.25	0.001
CHLOROFORM	*	0.001	1,1,1-TRICHLOROETHANE	0.006	0.002
CHLOROMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.003
1,1-DICHLOROETHANE	0.073	0.002	TRICHLOROETHYLENE	0.003	0.002
1,2-DICHLOROETHANE	*	0.002	TRICHLOROFLUOROMETHANE	*	0.003
1,1-DICHLOROETHYLENE	*	0.002	VINYL CHLORIDE	0.051	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: M.W. #62

DATE SAMPLED: 11/21/85 TIME: 2:40 PM
DATE RECEIVED: 11/21/85 TIME: 5:00 PM
DATE COMPLETED: 11/25/85

SAMPLE NO. 57759

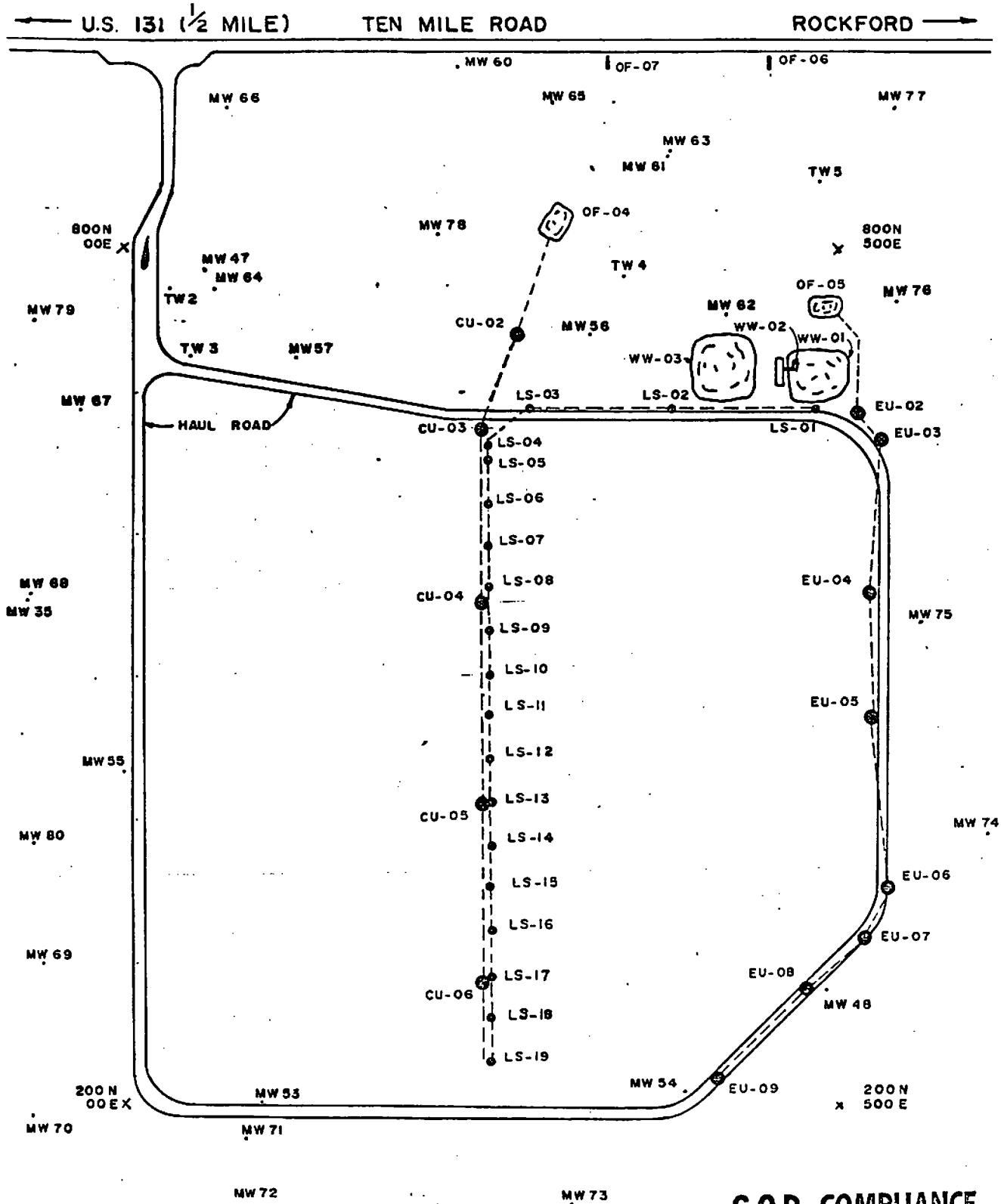
COMPOUND	RESULT	D.L.
ACROLEIN	<0.010	0.010
ACRYLONITRILE	<0.010	0.010
DICHLORODIFLUORO-METHANE	0.010	0.010

Rec. 2/12/86

...ay of the data files EVELS-FLOWS (Select) (Multi-Level Sort)

Station I.D.	Sample Date	T.O.C. Elev. (USGS Metric)	Depth to Water (Meters)	Water Level 1 (USGS Metric)	SCREEN
MW-35	09/19/85	274.50	10.87	263.63	260.25
MW-35	11/19/85	274.50	10.87	263.63	
MW-47	09/19/85	271.70	9.75	261.95	253.01
MW-47	11/19/85	271.70	8.84	262.86	
MW-48	09/19/85	274.90	10.28	264.62	259.06
MW-48	11/19/85	274.90	10.23	264.67	
MW-53	09/19/85	272.60	6.58	266.02	262.20
MW-53	11/19/85	272.60	8.96	263.64	NOTE: QUESTIONABLE DATA TO BE DOUBLE CHECKED
MW-54	09/19/85	278.30	11.09	267.21	263.98
MW-54	11/19/85	278.30	11.12	267.18	
MW-55	09/19/85	272.30	8.71	263.59	255.52
MW-55	11/19/85	272.30	8.68	263.62	
MW-56	09/19/85	264.60	6.71	257.89	260.09
MW-56	11/19/85	264.60	6.46	258.14	
MW-57	09/19/85	272.70	10.33	262.37	
MW-57	11/19/85	272.70	10.31	262.39	
MW-60	09/19/85	257.40	5.12	252.28	250.15
MW-60	11/19/85	257.40	4.47	252.93	
MW-61	11/19/85	256.50	2.92	253.58	
MW-62	11/19/85	260.20	2.30	257.90	248.36
MW-63	09/19/85	256.40	32.31	224.09	LOWER AQUIFER DATA
MW-63	11/19/85	256.40	32.00	224.40	
MW-64	11/19/85	270.80	41.76	229.04	
MW-65	09/19/85	254.70	2.15	252.55	247.25
MW-65	11/19/85	254.70	1.52	253.18	
MW-66	09/19/85	266.70	1.18	265.52	260.66
MW-66	11/19/85	266.70	0.71	265.99	
MW-67	[illegible]	[illegible]	[illegible]	[illegible]	254.36

67	11/19/85	275.20	12.65	262.55	
MW-68	09/19/85	274.70	11.14	263.56	243.95
MW-68	11/19/85	274.70	11.13	263.57	
MW-69	09/19/85	272.30	11.95	260.35	257.70
MW-69	11/19/85	272.30	12.05	260.25	
MW-70	09/19/85	273.60	15.54	258.06	253.04
MW-70	11/19/85	273.70	15.74	257.96	
MW-71	09/19/85	272.70	10.12	262.58	262.24
MW-71	11/19/85	272.80	9.73	263.07	
MW-72	11/19/85	269.00	8.34	260.66	
MW-73	09/19/85	274.40	3.24	271.16	269.68
MW-73	11/19/85	274.50	1.61	272.89	
MW-74	09/19/85	268.40	3.64	264.76	260.80
MW-74	11/19/85	268.40	3.69	264.71	
MW-75	09/19/85	268.60	4.28	264.32	262.08
MW-75	11/19/85	268.70	4.24	264.46	
MW-76	09/19/85	258.90	1.14	257.76	255.74
MW-76	11/19/85	259.00	0.49	258.51	
MW-77	09/19/85	255.20	2.33	252.87	247.31
MW-77	11/19/85	255.20	2.10	253.10	
MW-78	09/19/85	269.40	14.68	254.72	250.11
MW-78	11/19/85	269.50	14.70	254.80	
MW-79	09/19/85	272.30	8.21	264.09	263.20
MW-79	11/19/85	272.30	8.15	264.15	
MW-80	09/19/85	270.70	7.08	263.62	258.19
MW-80	11/19/85	270.80	7.15	263.65	
MW-82	11/19/85	274.70	12.12	262.58	
MW-83	11/19/85	273.50	10.97	262.53	
MW-84	11/19/85	261.70	3.53	258.17	
MW-85	11/19/85	266.70	1.52	264.18	



MW = 4" MONITORING WELL
TW = 2" TEMPORARY WELL
CU = CENTER UNDERDRAINS
EU = EASTERN UNDERDRAINS
LS = LEACHATE MANHOLES

GQD COMPLIANCE
GRAND RAPIDS

FEB 10 1986

RECEIVED

NORTH KENT LANDFILL

KENT COUNTY DPW LANDFILL (PLAINFIELD SITE) AREA FIGURES

Total property of site	345 acres (on application)		
Landfill site, approximately	200 acres	81.29 Hectares	
Landfill site not to be filled	71 acres	28.37 "	(plan 9/27)
Area to be filled	129 acres	52.92 "	
Initial fill area	75.5 acres	30.56 "	(first license)
Second fill area	52.5 acres	22.36 "	

SUMMARY OF ALL VOL ORGANIC HITS BETWEEN 1983-85 in P.P. B. MONITOR WELLS & OUTFALLS

NORTH KENT LANDFILL GROUNDWATER DATA

WELL NUMBER	DATE	1,1DCA	1,1,1TCA	METH CHL	TCE	TTCA	1,2DCA	TOLUENE	CHL		
		PARAMETER									
MW47	08-Jun-83	1.30	12.00								
	22-Aug-83	1.90	11.00								
	29-Nov-83	1.70	5.60								
	28-Mar-84		16.00								
	10-Jun-85	2.80	5.60								
MW47-DPW											
	08-Feb-83	11.00	52.00								15.00
	08-Jun-83	1.00	18.00								
	22-Aug-83	1.00	13.00		1.00						
	29-Nov-83	2.00	10.00	1.00							
	29-Mar-84	4.00	14.00	3.00							
	12-Jun-84	2.00	4.00	3.00							3.00
	19-Sep-84	2.00	7.00	2.00							
	20-Dec-84	5.00	14.00								
	11-Mar-85	2.00	6.00								
	10-Jun-85	2.00	6.00								
	20-Sep-85	2.00	12.00	2.00							
	22-Nov-85		4.00								
MW48	30-Nov-82	2.00	2.80			1.10					
	08-Feb-83	2.70	3.10								
	08-Jun-83	1.00	10.00		110.00	1.00			2.30		
	22-Aug-83	4.80	2.40		4.30						
	29-Nov-83	1.70	1.40								
	28-Mar-84										
	10-Jun-85				3.00						
MW48-DPW											
	08-Feb-83		6.00								
	08-Jun-83										
	22-Aug-83	1.00	3.00		3.00						
	29-Nov-83	1.00	2.00								
	29-Mar-84	2.00									
	12-Jun-84										3.00
	19-Sep-84					2.00					
	20-Dec-84	2.00	3.00								2.00
	11-Mar-85										2.00
	10-Jun-85				3.00						2.00
	20-Sep-85				1.00						
	22-Nov-85										
MW53	30-Nov-82	2.90		690.00							
	08-Feb-83	3.20	1.30	610.00							
	08-Jun-83	6.40	2.50	220.00							
	22-Aug-83	6.30	1.40	870.00							
	29-Nov-83	5.20		77.00							
	28-Mar-84			24.00						11.00	
	10-Jun-85	27.00		210.00	64.00						
MW53-DPW											
	08-Feb-83	28.00	40.00	35.00		7.00				93.00	38.00
	08-Jun-83	6.00	4.00	110.00	2.00					5.00	
	22-Aug-83	7.00	1.00	13.00	6.00						
	29-Nov-83										
	29-Mar-84	7.00	1.00	21.00						53.00	
	12-Jun-84	9.00		3.00	1.00					10.00	6.00

	[illegible]	[illegible]		[illegible]	[illegible]							[illegible]	[illegible]
	19-Sep-84	11.00	1.00	11.00						2.00		12.00	2.00
	20-Dec-84	35.00	6.00	13.00	2.00						22.00	25.00	5.00
	11-Mar-85	20.00	3.00	10.00	2.00						38.00	37.00	5.00
	10-Jun-85	4.00	20.00	11.00	60.00						24.00	17.00	5.00
	20-Sep-85	14.00	2.00	5.00	2.00						46.00	18.00	2.00
	22-Nov-85	21.00		7.00	2.00						29.00	24.00	
MW54	30-Nov-82												
	08-Feb-83	2.30											
	08-Jun-83	2.60	3.60		25.00								
	22-Aug-83				6.20								
	29-Nov-83												
	28-Mar-84												
	10-Jun-85	20.00		140.00	25.00								
MW54-DPW													
	08-Feb-83	9.00	20.00				2.00						6.00
	08-Jun-83												
	22-Aug-83				5.00								
	29-Nov-83			1.00									
	29-Mar-84	3.00	1.00										
	12-Jun-84	4.00		1.00									5.00
	19-Sep-84	2.00		3.00									
	20-Dec-84	2.00	5.00										2.00
	11-Mar-85	9.00	2.00	21.00								15.00	2.00
	10-Jun-85	14.00	3.00	25.00	13.00							19.00	2.00
	20-Sep-85	3.00	1.00										
	22-Nov-85	2.00		4.00									
MW55	08-Feb-83	17.00	8.00	270.00									
	08-Jun-83	15.00	7.20	81.00	52.00								
	22-Aug-83	44.00	14.00	2660.00	7.30								
	29-Nov-83	96.00	25.00	350.00									
	28-Mar-84	110.00	27.00	240.00									
	10-Jun-85	410.00	31.00		32.00								
MW55-DPW													
	08-Feb-83	140.00	300.00	18.00								190.00	44.00
	08-Jun-83	14.00	12.00	35.00	53.00							5.00	
	22-Aug-83	63.00	43.00	91.00		24.00							
	29-Nov-83	99.00	28.00			1.00					110.00	320.00	
	29-Mar-84	100.00	27.00	240.00									
	12-Jun-84	140.00	12.00	6100.00	1.00							48.00	10.00
	19-Sep-84	220.00	35.00	96.00	2.00							32.00	2.00
	20-Dec-84	650.00	95.00	760.00	6.00	1.00	2.00	1.00	2.00		33.00	90.00	8.00
	11-Mar-85	310.00	31.00	95.00	3.00				3.00		30.00	79.00	5.00
	10-Jun-85	280.00	20.00	22.00	24.00				3.00		18.00	25.00	2.00
	20-Sep-85	660.00	30.00	12.00	23.00	2.00			8.00		180.00	100.00	
	22-Nov-85	460.00	23.00	14.00	33.00	4.00			45.00		86.00	93.00	
MW56	08-Feb-83												
	08-Jun-83				21.00								
	22-Aug-83				4.80								
	29-Nov-83												
	10-Jun-85		1.80		59.00								
MW56-DPW													
	08-Feb-83		10.00										
	08-Jun-83		2.00		49.00								
	22-Aug-83				17.00								
	29-Nov-83												
	29-Mar-84												
	12-Jun-84												
	19-Sep-84												

	19-Sep-84														
	20-Dec-84		2.00												
	11-Mar-85														
	10-Jun-85		1.00		28.00										2.00
	20-Sep-85	3.00		2.00									10.00		2.00
	22-Nov-85	4.00		4.00									11.00	11.00	
MW57	06-Feb-83														
	08-Jun-83		6.00		48.00										
	22-Aug-83				4.10										
	29-Nov-83														
	10-Jun-85				87.00										
MW57-DPW															
	08-Jun-83		6.00		48.00										
	22-Aug-83				13.00										
	10-Jun-85		3.00		83.00										
MW62	10-Jun-85	46.00	7.50		2.40					12.00					
MW62-DPW															
	29-Nov-83	2.00		2.00											
	29-Mar-84	10.00		2.00									75.00	30.00	
	12-Jun-84	16.00	3.00	3.00				1.00		3.00			13.00		3.00
	19-Sep-84	5.00													
	20-Dec-84	71.00	49.00	52.00	10.00		2.00	26.00	13.00	11.00					
	11-Mar-85	72.00	10.00	5.00	16.00					9.00			49.00	37.00	
	10-Jun-85	37.00	5.00	2.00	2.00					6.00			18.00	11.00	
	20-Sep-85	77.00	28.00	8.00	7.00			90.00		14.00			150.00	65.00	
	22-Nov-85	73.00	6.00	19.00	3.00			250.00		16.00			51.00	67.00	
OF 004	30-Nov-82	2.50	1.30	110.00				9.50							
	08-Feb-83	1.40	1.10	46.00											
	08-Jun-83	14.00	6.50	260.00	2.80	3.70	1.40	24.00		4.50	6.10				
	22-Aug-83	44.00	16.00	5800.00	8.60	34.00	4.00	150.00		8.80	28.00				
	02-Sep-83	94.00	25.00	1100.00	15.00	27.00	8.40	200.00		16.00	43.00				
	10-Jun-85	32.00	12.00	130.00	3.60			11.00		13.00	5.70				
OF 004-DPW															
	08-Feb-83	43.00	33.00	70.00	1.00	3.00		55.00		4.00					
	08-Jun-83	28.00	15.00		7.00	18.00	2.00	71.00		8.00				2.00	
	10-Aug-83	10.00	51.00	61.00	42.00	10.00	13.00	420.00							
	05-Oct-83	15.00	5.00	490.00	2.00	4.00	3.00	43.00		3.00					
	15-Dec-83														
	20-Jan-84	1.00	4.00	3.00				5.00							
	30-Mar-84	1.00	1.00	5.00				1.00							
	19-Apr-84	1.00	2.00	4.00				2.00							
	15-May-84	2.00	2.00	4.00											
	07-Jun-84	3.00	1.00	5.00											
	13-Jul-84	2.00													
	07-Dec-84		1.00												
	11-Jan-85	2.00	5.00					3.00							
	15-Feb-85	3.00	4.00												
	08-Mar-85	3.00	3.00												1.00
	11-Apr-85	5.00	3.00					1.00							
	13-May-85	30.00	13.00	82.00	3.00			2.00		7.00					
	11-Jun-85	35.00	15.00	79.00	4.00			14.00		6.00					
OF 005	30-Nov-82	15.00	4.90	78.00	2.50	1.20	3.90								
	08-Feb-83	20.00	5.20	86.00	3.40	1.80	10.00								
	08-Jun-83	27.00	8.90		5.90	3.50				10.00					
	22-Aug-83	25.00	9.90	14.00	6.00	6.70				11.00					
	02-Sep-83	18.00	3.60		4.70	2.80				9.50					
	10-Jun-85	190.00			39.00	28.00		150.00		78.00	96.00				

08-Feb-83	20.00	5.20	86.00	3.40	1.80	10.00				
08-Jun-83	27.00	8.90		5.90	3.50				10.00	
22-Aug-83	23.00	9.90	14.00	8.00	6.70				11.00	
02-Sep-83	18.00	3.60		4.70	2.80				9.50	
10-Jun-85	190.00			39.00	28.00		150.00		78.00	96.00

OF 005-DPW

08-Feb-83	170.00	100.00		10.00	25.00	1.00				
08-Jun-83	30.00	10.00		10.00	4.00					
10-Aug-83	17.00	8.00		8.00	5.00					
05-Oct-83	11.00	3.00	2.00	3.00	3.00					
15-Dec-83	23.00	3.00	2.00	3.00	3.00					
20-Jan-84	32.00	7.00	3.00							
30-Mar-84	35.00	5.00	8.00	7.00	4.00					
19-Apr-84	26.00	4.00	7.00	7.00	4.00					
15-May-84	25.00	3.00	8.00	5.00	4.00					
07-Jun-84	60.00	7.00	19.00	10.00	7.00					
13-Jul-84	56.00	5.00	11.00	10.00	8.00					
10-Aug-84	66.00	26.00	27.00	17.00	11.00					
07-Sep-84	87.00	7.00	10.00	14.00	10.00	1.00				
11-Oct-84	230.00	10.00	13.00	18.00	10.00	2.00				
07-Dec-84	71.00	3.00	2.00	7.00	3.00					
11-Jan-85	130.00	5.00	9.00	11.00	6.00	2.00				
15-Feb-85	120.00	7.00	230.00	15.00	11.00	2.00				
08-Mar-85	73.00	5.00	17.00	11.00	9.00	1.00				
11-Apr-85		7.00	36.00	21.00	17.00	120.00				
16-May-85	220.00	14.00	83.00	64.00	52.00	4.00				
11-Jun-85	210.00	12.00	52.00	49.00	47.00	4.00				

PARAMETER KEY

1,1 DCA	1,1 dichloroethane
1,1,1 TCA	1,1,1 trichloroethane
METH CHL	methylene chloride
TCE	trichloroethene
TTCA	tetrachloroethane
1,2 DCA	1,2 dichloroethane
CHLFORM	chloroform
1,2 DCE	1,2 dichloroethene
VIN CHL	vinyl chloride
CHL A	chloroethane
TCFM	trichlorofluoromethane

RKW

BOARD OF PUBLIC WORKS OF THE COUNTY OF KENT

1500 Scribner Ave., N.W. Grand Rapids, Michigan 49504
Telephone: (616) 774-3694

DATE: 2/12/86

DPW FILE REF. NORTH KENT LANDFILL - W.Q. DATA

YOUR FILE NO. _____

TO: RON WOODS
MDNR - SURFACE WATER QUALITY

FROM: ____ Water & Sewer Operations
✓ Solid Waste
____ Resource Recovery

We are sending you: (✓) Herewith ( ) Under Separate Cover
(✓) At Your Request

AS FOLLOWS:

____ Plans ____ Specifications
____ Certified Copies ____ Change Orders
✓ Other

FOR YOUR: (✓) Files ( ) Approval
(✓) Information ( ) Signature

REMARKS:
SEPTEMBER 1985 OUTFALL DATA, ORGANICS & INORGANICS (8 PGS)

GQD COMPLIANCE
GRAND RAPIDS
FEB 12 1986
RECEIVED

KENT COUNTY DEPARTMENT OF PUBLIC WORKS

By: [signature]

CC:

COPY #1

INPUT COMPLETED 11/12/85 GSP

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LAND FILL
SAMPLED BY: CC
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 09/06/85 TIME: PM
DATE RECEIVED: 09/06/85 TIME: 5:15 PM
DATE COMPLETED: 09/19/85
SCHEDULED COMPLETION: 9/27/85
ANALYST: MB,NJB
QUALITY CONTROL REVIEW BY: PG
WORKSHEET NO: 20

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	55132	55133	55134	55135		
BOD-5	3.5	12.2	3.1	1.6	1.0	mg/l
BOD, CARBONACEOUS	3.0	9.8	3.0	1.5	1.0	mg/l
CHLORIDE	33	43	47	33	1.0	mg/l
COD	<5.0	36	11	<5.0	5.0	mg/l
IRON,TOTAL	0.28	4.2	0.24	0.10	0.10	mg/l
NITROGEN, AMMONIA	0.27	0.14	<0.05	0.14	0.05	mg/l
NITROGEN, NITRATE	<0.05	<0.05	<0.05	<0.05	0.05	mg/l
OIL SEVERITY	0	0	0	0	----	----
pH VALUE	7.8	7.3	8.3	8.1	----	std. units
PHOSPHORUS,TOTAL	0.03	0.015	0.06	0.03	0.01	mg/l

ANALYSIS BY STANDARD METHODS 15TH EDITION AND/OR METHODS FOR CHEMICAL ANLAYSIS OF WATER AND WASTES, USEPA, 1983.

EDI ENGINEERING & SCIENCE
ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W. PKWY. S.E. GRAND RAPIDS, MI 49506 (616) 942-0970

ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE RD. LANDFILL
SAMPLED BY: CC
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 09/13/85 TIME: AM
DATE RECEIVED: 09/13/85 TIME: 11:30 AM
DATE COMPLETED: 10/01/85
SCHEDULED COMPLETION: 10/01/85
ANALYST: MB NJB MK PG
QUALITY CONTROL REVIEW BY: MK PG
WORKSHEET NO: 35

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	55293	55294	55295	55296		
BOD-5	6.5	14	3.2	8.6	1.0	mg/l
BOD, CARBONACEOUS	6.5	14	3.2	5.1	1.0	mg/l
CHLORIDE	38	47	52	39	1.0	mg/l
COD	15	19	12.0	20	5.0	mg/l
IRON,TOTAL	0.91	5.4	<0.10	0.28	0.10	mg/l
NITROGEN, AMMONIA	0.20	0.19	<0.05	0.06	0.05	mg/l
NITROGEN, NITRATE	<0.05	<0.05	<0.05	0.05	0.05	mg/l
OIL SEVERITY	0	0	0	0	----	----
pH VALUE	7.9	7.3	8.0	8.1	----	std. units
PHOSPHORUS,TOTAL	0.022	0.008	0.020	0.050	0.005	mg/l

ANALYSIS BY STANDARD METHODS 15TH EDITION AND/OR METHODS FOR CHEMICAL ANLAYSIS OF WATER AND WASTES, USEPA, 1983.

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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: CC
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 09/20/85 TIME:
DATE RECEIVED: 09/20/85 TIME: 11:30 AM
DATE COMPLETED: 10/08/85
SCHEDULED COMPLETION: 10/08/85
ANALYST: NJB,PG,MB,MK
QUALITY CONTROL REVIEW BY: PG,MK
WORKSHEET NO: 11

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	55795	55796	55797	55798		
BOD-5	5.3	15	1.5	2.6	1.0	mg/l
BOD, CARBONACEOUS	5.0	12	1.5	2.6	2.0	mg/l
CHLORIDE	37	39	45	37	1.0	mg/l
COD	<5.0	23	14	18	5.0	mg/l
IRON,TOTAL	0.64	4.8	<0.10	0.33	0.10	mg/l
NITROGEN, AMMONIA	0.17	0.17	<0.05	0.18	0.05	mg/l
NITROGEN, NITRATE	<0.05	<0.05	<0.05	0.13	0.05	mg/l
OIL SEVERITY	0	0	0	0	----	----
pH VALUE	7.7	7.0	8.0	8.0	----	std. units
PHOSPHORUS,TOTAL	0.02	0.03	0.04	0.10	0.01	mg/l

ANALYSIS BY STANDARD METHODS 15TH EDITION AND/OR METHODS FOR CHEMICAL ANLAYSIS OF WATER AND WASTES, USEPA, 1983.

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ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
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ANALYTICAL SERVICES
EDI LABORATORY REPORT

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
LOCATION: 10 MILE ROAD LANDFILL
SAMPLED BY: CC
DESCRIPTION: WEEKLY MONITORING

DATE SAMPLED: 09/27/85 TIME: AM
DATE RECEIVED: 09/27/85 TIME: 11:35 AM
DATE COMPLETED: 10/07/85
SCHEDULED COMPLETION: 10/07/85
ANALYST: MB,PG,NB,DEK
QUALITY CONTROL REVIEW BY: PG,MK
WORKSHEET NO: 45

	OUTFALL #004	OUTFALL #005	OUTFALL #006	OUTFALL #007	DETECTION LIMIT	UNITS
EDI SAMPLE NO:	56044	56045	56046	56047		
BOD-5	3.2	5.6	1.1	3.3	1.0	mg/l
BOD, CARBONACEOUS	3.2	5.6	<1.0	3.3	1.0	mg/l
CHLORIDE	37	37	43	34	1.0	mg/l
COD	<5.0	6.2	<5.0	<5.0	5.0	mg/l
IRON,TOTAL	1.9	4.0	0.09	0.30	0.02	mg/l
NITROGEN, AMMONIA	0.73	0.17	0.06	0.16	0.05	mg/l
NITROGEN, NITRATE	<0.05	0.10	<0.05	0.35	0.05	mg/l
OIL SEVERITY	0	0	0	0	----	----
pH VALUE	7.8	7.1	8.1	8.2	----	std. units
PHOSPHORUS,TOTAL	0.01	<0.01	0.02	0.06	0.02	mg/l

ANALYSIS BY STANDARD METHODS 15TH EDITION AND/OR METHODS FOR CHEMICAL ANLAYSIS OF WATER AND WASTES, USEPA, 1983.

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ENGINEERS / GEOLOGISTS / BIOLOGISTS / CHEMISTS
611 CASCADE W PKWY. S.E., GRAND RAPIDS MI 49506, (616) 942-0970

ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #004 (PLAINFIELD TWP)

DATE SAMPLED: 09/23/85 TIME: 11:15 AM
DATE RECEIVED: 09/23/85 TIME: 2:40 PM
DATE COMPLETED: 10/02/85

SAMPLE NO. 56015

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	0.001	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.17	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.039	0.001
1,1-DICHLOROETHANE	0.039	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	0.010	0.001	ETHYL BENZENE	0.003	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.015	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	0.004	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #005 (PLAINFIELD TWP)

DATE SAMPLED: 09/23/85 TIME: 11:05 AM
DATE RECEIVED: 09/23/85 TIME: 2:40 PM
DATE COMPLETED: 10/02/85

SAMPLE NO. 56017

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	0.039	0.010	BENZENE	0.014	0.001
CHLOROETHANE	0.033	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	0.007	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	0.033	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	0.23	0.001
1,1-DICHLOROETHANE	0.17	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	0.093	0.001	ETHYL BENZENE	0.091	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	0.008	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	0.009	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	0.031	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #006 (PLAINFIELD TWP.)

DATE SAMPLED: 09/23/85 TIME: 11:08 AM
DATE RECEIVED: 09/23/85 TIME: 2:40 PM
DATE COMPLETED: 10/02/85

SAMPLE NO. 56018

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	0.004	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	0.002	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT

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ANALYTICAL SERVICES
PRIORITY POLLUTANT ANALYSIS

TABLE 1
VOLATILE FRACTION

CLIENT: KENT COUNTY DPW
PROJECT NO.: 25010
SAMPLE: OUTFALL #007 (PLAINFIELD TWP.)

DATE SAMPLED: 09/20/85 TIME: 10:00 AM
DATE RECEIVED: 09/20/85 TIME: 11:45 AM
DATE COMPLETED: 10/08/85

SAMPLE NO. 55798

COMPOUND	RESULT (mg/l)	D.L.	COMPOUND	RESULT (mg/l)	D.L.
CHLOROMETHANE	*	0.010	1,2-DICHLOROPROPANE	*	0.001
BROMOMETHANE	*	0.010	1,1,2-TRICHLOROETHANE	*	0.001
VINYL CHLORIDE	*	0.010	BENZENE	*	0.001
CHLOROETHANE	*	0.010	BROMOFORM	*	0.001
METHYLENE CHLORIDE	*	0.001	1,1,2,2-TETRACHLOROETHANE	*	0.001
TRICHLOROFLUOROMETHANE	*	0.001	TETRACHLOROETHYLENE	*	0.001
1,1-DICHLOROETHYLENE	*	0.001	TOLUENE	*	0.001
1,1-DICHLOROETHANE	*	0.001	CHLOROBENZENE	*	0.001
TRANS-1,2-DICHLOROETHYLENE	*	0.001	ETHYL BENZENE	*	0.001
CHLOROFORM	*	0.001	ACROLEIN	*	0.010
1,2-DICHLOROETHANE	*	0.001	ACRYLONITRILE	*	0.010
1,1,1-TRICHLOROETHANE	*	0.001	DICHLORODIFLUOROMETHANE	*	0.010
CARBON TETRACHLORIDE	*	0.001	CHLORODIBROMOMETHANE	*	0.001
BROMODICHLOROMETHANE	*	0.001	CIS-1,3-DICHLOROPROPYLENE	*	0.001
TRICHLOROETHYLENE	*	0.001	TRANS-1,3-DICHLOROPROPYLENE	*	0.001
2-CHLOROETHYLVINYL ETHER	*	0.010	BIS-(CHLOROMETHYL) ETHER	*	0.010

*COMPOUND NOT PRESENT AT DETECTION LIMIT
*COMPOUND NOT PRESENT AT DETECTION LIMIT

D

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KENT COUNTY DPW LANDFILL (PLAINFIELD SITE) AREA FIGURES

Total property of site	345 acres	(on application)		
Landfill site, approximately	200 acres	81.29	Hectares	
Landfill site not to be filled	71 acres	28.37	"	(plan 9/27)
Area to be filled	129 acres	52.92	"	
Initial fill area	75.5 acres	30.56	"	(first license)
Second fill area	52.5 acres	22.36	"	

MW-67	11/19/85	275.20	12.65	262.55	
MW-68	09/19/85	274.70	11.14	263.56	243.95
MW-68	11/19/85	274.70	11.13	263.57	
MW-69	09/19/85	272.30	11.95	260.35	257.70
MW-69	11/19/85	272.30	12.05	260.25	
MW-70	09/19/85	273.60	15.54	258.06	253.04
MW-70	11/19/85	273.70	15.74	257.96	
MW-71	09/19/85	272.70	10.12	262.58	262.24
MW-71	11/19/85	272.80	9.73	263.07	
MW-72	11/19/85	269.00	8.34	260.66	
MW-73	09/19/85	274.40	3.24	271.16	269.68
MW-73	11/19/85	274.50	1.61	272.89	
MW-74	09/19/85	268.40	3.64	264.76	260.80
MW-74	11/19/85	268.40	3.69	264.71	
MW-75	09/19/85	268.60	4.28	264.32	262.08
MW-75	11/19/85	268.70	4.24	264.46	
MW-76	09/19/85	258.90	1.14	257.76	255.74
MW-76	11/19/85	259.00	0.49	258.51	
MW-77	09/19/85	255.20	2.33	252.87	247.31
MW-77	11/19/85	255.20	2.10	253.10	
MW-78	09/19/85	269.40	14.68	254.72	250.11
MW-78	11/19/85	269.50	14.70	254.80	
MW-79	09/19/85	272.30	8.21	264.09	263.20
MW-79	11/19/85	272.30	8.15	264.15	
MW-80	09/19/85	270.70	7.08	263.62	258.19
MW-80	11/19/85	270.80	7.15	263.65	
TW-02	11/19/85	274.70	12.12	262.58	
TW-03	11/19/85	273.30	10.97	262.33	
TW-04	11/19/85	261.70	3.53	258.17	
TW-05	11/19/85	266.70	1.92	264.78	

Inc. 41480

...ey of the data files EVELS-FLOWS (Select) (Multi-Level Sort *)

Station I.D. Sample Date T.O.C. Elev. (USGS Metric)
Depth to Water (Meters) Water Level 1 (USGS Metric)

					SCREEN
MW-35	09/19/85	274.50	10.87	263.63	260.25
MW-35	11/19/85	274.50	10.87	263.63	
MW-47	09/19/85	271.70	9.75	261.95	253.01
MW-47	11/19/85	271.70	8.84	262.86	
MW-48	09/19/85	274.90	10.28	264.62	259.06
MW-48	11/19/85	274.90	10.23	264.67	
MW-53	09/19/85	272.60	6.58	266.02	262.20
MW-53	11/19/85	272.60	8.96	263.64	← NOTE: QUESTIONABLE DATA TO BE DOUBLE CHECKED
MW-54	09/19/85	278.30	11.09	267.21	263.98
MW-54	11/19/85	278.30	11.12	267.18	
MW-55	09/19/85	272.30	8.71	263.59	255.52
MW-55	11/19/85	272.30	8.68	263.62	
MW-56	09/19/85	264.60	6.71	257.89	260.09
MW-56	11/19/85	264.60	6.46	258.14	
MW-57	09/19/85	272.70	10.33	262.37	
MW-57	11/19/85	272.70	10.31	262.39	
MW-60	09/19/85	257.40	5.12	252.28	250.15
MW-60	11/19/85	257.40	4.47	252.93	
MW-61	11/19/85	256.50	2.92	253.58	
MW-62	11/19/85	260.20	2.30	257.90	248.36
MW-63	09/19/85	256.40	32.31	224.09	LOWER AQUIFER DATA
MW-63	11/19/85	256.40	32.00	224.40	LOWER AQUIFER DATA
MW-64	11/19/85	270.80	41.76	229.04	LOWER AQUIFER DATA
MW-65	09/19/85	254.70	2.15	252.55	247.25
MW-65	11/19/85	254.70	1.52	253.18	
MW-66	09/19/85	266.70	1.18	265.52	260.66
MW-66	11/19/85	266.70	2.71	265.99	
MW 67	[illegible]	275.25	[illegible]	[illegible]	254.36

KENT COUNTY DEPARTMENT OF
PUBLIC WORKS
1500 Scribner Avenue N.W.
GRAND RAPIDS, MICHIGAN

(616) 774-3694

LETTER OF TRANSMITTAL

UNDWATER QUALITY

NOV 1986

DISTRICT 9
GRAND RAPIDS

DATE	JOB NO.
11-13-85	
ATTENTION: BONNIE WHITE	
RE: NEW MONITORING WELL DATA FROM NORTH KENT LANDFILL	

TO MS. BONNIE WHITE
DEPARTMENT OF NATURAL RESOURCES
350 OTTAWA NW
GRAND RAPIDS, MI 49503

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☒ Plans ☐ Samples ☐ Specifications
☒ Copy of letter ☐ Change order ☒ ANNUAL MONITORING DATA (NKLF)

COPIES	DATE	NO.	DESCRIPTION
1	9-23-85		VOLATILE FRACTION - ANNUAL MONITORING WELL INFO
1	7-22-85		MATERIAL TESTING CONSULTANTS INFO ON AIR LINE + GAMMA RAY
1	10-21-85		VOLITILE FRACTION FROM SOUTH DISCHARGE (N.K.L.F)
1	8-27-85		BORING DISCRIPTIONS
1	8-12-85		KECK SOIL RESISTIVITY SURVEY
1	11-6-85		KECK COMPOSITE DRAWING OF SOIL RESISTIVITY

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval
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☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19 _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

[illegible]

COPY TO

SIGNED: Dennis Kowalski

JOB NUMBER 0178-439 DATE August 27, 1985 PAGE copy #3 of 3

BORING NUMBER SB-1 TOTAL DEPTH 9.76m S.W.L. (BGL)

Sample Number	From 0 to 9.76 Meters	Lithologic Description
	0 - 3.65	SAND; med.-fine, lt. brown-buff, moist w/fine gravel
		and random cobbles, becoming wet at approx. 2.13m BGL
	3.66 - 3.96	SAND; med.-fine, dk. brown-black, organic, moist
	3.96 - 7.32	SAND; med.-fine, lt. brown-buff, silty, well sorted,
		becoming very fine at approx. 4.57m, saturated at 5.18m
		BGL w/moderate silts
	7.32 - 9.15	SAND: med.-fine, brown, saturated w/fine gravel
	9.15 - 9.76	CLAY; lt. brown, very silty, plastic, moist from over-
		lying saturated zone
		topsoil material was removed
		bit sample of confining clay layer was taken upon
		confirmation w/client
		It is thought that clay layer at SB-1 is thin, due to
		split-spoon sample exhibited sand above and below clay
		retained in tube. Resulting in possible clay pene-
		tration. SB-1 was quickly grouted from 9.15m BGL to
		the surface. Split-spoon sample was disturbed and
		discarded.
		drilling was conducted w/4¼" I.D. augers
		bentonite slurry grouted from 0 - 9.15m BGL
		no well installed at this location
		Split-Spoon Sample Interval
		#1; 9.15 - 9.76 meters
		Blow Counts: 22, 28, 31
		GRID LOCATION 800 N/170 E
		GRD. ELEVATION 261.12m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 3&4, 1985 PAGE

BORING NUMBER SB-2 19 TOTAL DEPTH 8.54m S.W.L. (BGL)

Sample Number	From 0 to 8.54 Meters	Lithologic Description
	0 - 1.52	SANDY LOAM; med.-fine, moist, dk. brown, silty
	1.52 - 2.13	COBBLES AND COARSE GRAVEL
	2.13 - 3.66	SAND: med.-fine, dry, reddish-brown w/minor pebbles
		and fine gravel
	3.66 - 4.88	SAND; med.-coarse, dk. brown, moist, poorly sorted w/
		fine gravel
	4.88 - 5.49	SAND; med.-fine, lt. brown-buff, moist, well sorted
	5.49 - 8.23	SAND: med.-fine, dk. brown, moist w/minor gravel, be-
		coming wet at approx. 6.10m, well sorted and saturated
		at 7.32m
	8.23 - 8.54	CLAY; gray, dense, dry, elastic
		bit sample of confining clay layer was taken upon
		confirmation w/client
		well installed at this location
		well T.D. = 8.54 meters BGL
		screened interval = 7.02 - 8.54 meters BGL
		bentonite slurry grouted from 1.52 - 7.02 meters BGL
		drilling was done w/6¼" I.D. augers
		materials: (1) 4" x 5' SSS #7 slot w/plug
		(1) 4" x 20' galvanized casing
		(1) 4" x 5' galvanized casing
		development remains to be completed
		GRID LOCATION 750 N/63 W
		GRD. ELEVATION 271.735m

Piezometer: ☐ Screen 1.52m Pipe 7.62m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 22, 1985 PAGE

BORING NUMBER SB-3 TOTAL DEPTH 13.1m S.W.L. (BGL)

Sample Number	From 0 to 13.1 Meters	Lithologic Description
	0 - .610	CLAY TILL; blackish-brown, very silty w/minor fine
		gravel & pebbles, moist
	.610 - 1.83	CLAY TILL; reddish-brown, moist w/large cobbles at
		random intervals
	1.83 - 3.66	SAND; med.-fine, reddish-brown, moist, well sorted
	3.66 - 12.5	SAND; med.-fine, lt. brown-buff, dry, becoming wet at
		5.79m, saturated at 6.71m, poorly sorted
	12.5 - 13.1	CLAY; reddish-brown, very silty, elastic, dense w/some
		moisture
		topsoil material was removed
		auger refusal in first location at 1.52m had to relocate
		well installed at this location
		well T.D. = 12.5 meters BGL
		screened interval = 10.98 - 12.5 meters BGL
		bentonite slurry grout from 6.71 - 10.98 meters BGL
		drilling was done w/6¼" I.D. Augers
		materials: (1) 4" x 5' SSS #10 slot w/plug
		(1) 4" x 20' galvanized casing
		(1) 4" x 18' galvanized casing
		development was done by air-jetting and well developed
		clear w/high recharge rate
		Split-Spoon Sample Interval
		#1; 12.5 - 13.11 meters
		Blow Counts: 24, 30, 31
		GRID LOCATION 382 N/63 W
		GRD. ELEVATION 270.685m

Piezometer: ☐ Screen 1.52m Pipe 11.5m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 23, 1985 PAGE

BORING NUMBER SB-4 TOTAL DEPTH 6.71m S.W.L. (BGL)

Sample Number	From 0 to 6.71 Meters	Lithologic Description
	0 - .305	SANDY LOAM; blackish-brown, organic
	.305 - .915	CLAY TILL; reddish-brown, moist w/gravel & minor
		cobbles, silty
	.915 - 2.44	SAND; med.-fine, reddish-brown, moist, well sorted,
		silty
	2.44 - 6.40	SAND; med.-fine, dk. brown, poorly sorted w/some
		pebbles, moist, saturated at 3.96m, very silty and
		clayish in nature
	6.40 - 6.71	CLAY TILL; reddish-brown, very silty, elastic, moist
		and dense
		drilling was done w/6¼" I.D. augers
		no well installed at this location
		bentonite slurry grout from 0 - 6.71 meters BGL
		drilling T.D. = 6.71 meters BGL
		Note: due to nature of saturated material it was
		decided that a well at this location would be
		non-productive
		spoils sample of saturated material was taken
		GRID LOCATION 340 N/2 W
		GRD. ELEVATION 270.75m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 4, 1985 PAGE

BORING NUMBER SB-4A TOTAL DEPTH 7.01m S.W.L. (BGL)

Sample Number	From 0 to 7.01 Meters	Lithologic Description
	0 - .152	SANDY LOAM; blackish-brown, organic, moist
	.152 - .915	CLAY TILL; reddish-brown, moist w/med.-fine gravel,
		silty
	.915 - 1.22	COBBLES & COARSE GRAVEL
	1.22 - 1.83	SAND: med.-fine, moist, silty, reddish-brown
	1.83 - 4.27	SAND: med.-fine w/gravel, dk. brown, moist, becoming
		wet at approx. 2.13m, very silty
	4.27 - 6.10	CLAY TILL; reddish-brown, dense w/med.-fine sand,
		fine gravel and some cobbles
	6.10 - 7.01	CLAY: gray w/minor med.-fine sand, dry, very tight
		drilling w/auger refusal at 7.01m
		drilling done w/4¼" I.D. augers
		no well installed at this location
		auger refusal at .915m at two previous location and
		relocated three times before acquiring penetration
		through cobble zone
		backfilled w/natural materials
		drilling T.D. = 7.01 meters BGL
		location approximately 23 meters northwest of SB-4
		GRID LOCATION 376 N/14 W
		GRD. ELEVATION 270.80m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE August 23, 1985 PAGE

BORING NUMBER SB-5 TOTAL DEPTH 10.1m S.W.L. (BGL)

Sample Number	From 0 to 10.1 Meters	Lithologic Description
	0 - .305	SANDY LOAM; blackish-brown, organic, moist
	.305 - 2.13	SAND; med.-fine, reddish-brown, very silty w/some minor
		cobbles & pebbles, minor gravel, dry, poorly sorted
	2.13 - 4.27	SAND; med.-fine, grayish-brown, very silty w/cobbles &
		pebbles, poorly sorted, moist
	4.27 - 7.32	CLAY TILL; dk. brown w/cobbles, dry, very silty, minor
		fine-med., poorly sorted sand
	7.32 - 9.15	SAND; med.-fine, lt. brown-buff, dry, silty, well
		sorted, saturated at approx, 8.53m
	9.15 - 10.1	CLAY; grayish-brown, silty, spoils are soupy in nature
		drilling done w/4¼" I.D. augers
		no well installed at this location
		attempted to spoon but refusal occurred due to cobbles
		from overlying lithology, client confirmed bit sample
		drilling T.D. = 10.1 meters BGL
		bentonite slurry grout from approx. 1.52 - 9.15 meters
		BGL and backfilled w/natural clay materials
		GRID LOCATION 127 N/80 E
		GRD. ELEVATION 271.545m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 5 1985 PAGE

BORING NUMBER SB-6 TOTAL DEPTH 4.57m S.W.L. (BGL)

Sample Number	From 0 to 4.57 Meters	Lithologic Description
	0 - .304	SANDY LOAM; blackish-brown, organic
	.304 - .915	SAND; med.-fine, lt. brown, silty, saturated
	.915 - 1.52	CLAY; reddish-brown, dry, dense
	1.52 - 2.74	CLAY TILL; lt. brown, dry w/some med.-fine sand and
		fine gravel
	2.74 - 3.66	SAND; med.-fine, saturated, silty, lt. brown
	3.66 - 3.96	CLAY TILL; grayish-brown, moist w/med.-fine sand
	3.96 - 4.57	CLAY; gray, dry, sandy w/med.-fine sand, silty
		well installed this location
		drilling done w/4¼" I.D. augers
		drilling T.D. = 4.57 meters BGL
		well T.D. = 4.27 meters BGL
		due to poor potential of aquifer SB-6 was installed
		.609 meters into underlying clay to aquifer; optimum
		volume of water
		screened interval = 3.05 - 4.27 meters BGL
		backfilled w/natural materials from 0 - 2.74 meters BGL
		materials: (1) 4" x 4' SSS #10 slot w/plug
		(1) 4" x 13' galvanized casing
		devleopment; bail developed due to inadequate volume
		of water and slow recharge rate. SB-6 still reqires
		further bail development
		bit sample was taken from 3.96 - 4.57 meters BGL
		GRID LOCATION 130 N/310 E
		GRD. ELEVATION 273.95m

Piezometer: ☐ Screen 1.22m Pipe 3.96m Total Depth (BGL)

JOB NUMBER 0178-439 DATE September 5 1985 PAGE

BORING NUMBER SB-7 TOTAL DEPTH 5.18m S.W.L. (BGL)

Sample Number	From 0 to 5.18 Meters	Lithologic Description
	0 - .304	SANDY LOAM; blackish-brown, organic (removed w/loader)
	.304 - .915	SAND; fine-very fine, dry, lt. brown, silty
	.915 - 1.83	SAND; fine-very fine, reddish-brown, dry, well sorted,
		silty, wet at approx 1.83 ft.
	1.83 - 2.13	SAND; grayish-brown, very silty, med.-fine, moist
	2.13 - 3.66	CLAY TILL: grayish-brown, moist, very silty, plastic
		w/very fine sand and minor cobbles
	3.66 - 5.98	CLAY; gray, dry w/intermittent gravel zones
		drilling was done w/4¼" I.D. augers
		no well installed at this location
		drilling T.D. = 5.98 meters BGL
		bit sample taken from 4.87 - 5.18 meters BGL upon
		confirmation w/client
		backfilled w/natural materials and 1 bag bentonite
		GRID LOCATION 130 N/370 E
		GRD. ELEVATION 276.34m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 6, 1985 PAGE

BORING NUMBER SB-8 TOTAL DEPTH 15.2m S.W.L. (BGL)

Sample Number	From 0 to 15.2	Lithologic Description
	0 - .304	SANDY LOAM; dk. brown, organic
	.304 - .610	CLAY TILL; reddish-brown, elastic, moist, dense w/
		pebbles, fine gravel and sand
	.610 - 5.48	CLAY TILL; lt. brown, dry, plastic, silty w/minor
		pebbles and fine gravel, med.-coarse sand, cobble
		zone at 1.22 - 1.52 meters
	5.48 - 10.98	SAND; very fine, lt. brown, dry, very silty, becomes
		moist at 8.54 meters
	10.98 - 15.2	CLAY: gray, dense, dry, tight drilling
		drilling T.D. = 15.2 meters BGL
		drilling was done w/4¼" I.D. augers
		no well installed at this location
		bit sample was taken from 14.3 - 15.2 meters BGL
		bentonite slurry grout from .610 - 15.2 meters and
		backfilled w/natural materials
		GRID LOCATION 915 N/16 W
		GRD. ELEVATION 268.365m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 5 1985 PAGE

BORING NUMBER SB-9 TOTAL DEPTH 10.8m S.W.L. (BGL)

Sample Number	From 0 to 10.8 Meters	Lithologic Description
	0 - .304	SANDY LOAM; blackish-brown, organic
	.304 - 1.52	SAND; med.-fine, grayish-brown, dry, becoming wet at
		1.22 meters
	1.52 - 3.96	SAND: med.-fine, reddish-brown, wet
	3.96 - 10.1	SAND AND GRAVEL; grayish-brown, saturated at 3.96m,
		med.-fine sand, well sorted
	10.1 - 10.8	CLAY; brown, dense, elastic, tight drilling
		drilling was done w/4¼" I.D. augers
		drilling T.D. = 10.8 meters BGL
		no well installed at this location
		bit sample was taken from 10.3 - 10.8 meters BGL
		backfilled w/natural materials w/1 bag of bentonite at
		the top of the water table
		GRID LOCATION 500 N/552 E
		GRD. ELEVATION 268.720m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE August 21, 1985 PAGE

BORING NUMBER MW-70 TOTAL DEPTH 21.3m S.W.L. (BGL)

Sample Number	From 0 to 21.3 Meters	Lithologic Description
	0 - .305	SANDY LOAM; dk. brown, organic
	.305 - .610	SAND; med.-fine, lt. brown, dry, well sorted
	.610 - 2.44	SAND; med.-fine, reddish-brown, dry, well sorted,
		silty w/cobbles at 1.52m
	2.44 - 7.32	SAND; med.-fine, grayish-brown, moist, very silty w/
		cobbles
	7.32 - 20.1	SAND; med.-fine, lt. brown-buff, dry, poorly sorted w/
		some fine gravel, becoming moist at approx. 15.2m,
		saturation = 19.2m
	20.1 - 21.3	CLAY; gray, dense, tight drilling
		drilling T.D. = 21.3 meters BGL
		split-spoon sample of confining clay was taken
		screened interval = 19.1 - 20.1 meters BGL
		bentonite slurry grout from 10.1 - 19.2 meters BGL and
		backfilled w/natural materials and cement pad at
		surface
		materials: (1) 4" x 5.5' SSS #10 slot w/plug
		62.5' of 4" galvanized casing
		development by air jetting, clear w/high recharge rate
		Split-Spoon Interval
		#1; 20.7 - 21.3 meters
		Blow Counts: 27, 35, 40
		GRID LOCATION- 192 N/67 W
		GRD. ELEVATION 273.135m

Piezometer: ☐ Screen 1.68m Pipe 19.1m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 16, 1 5 PAGE

BORING NUMBER MW-71 TOTAL DEPTH 14.3m S.W.L. (BGL)

Sample Number	From 0 to 14.3 Meters	Lithologic Description
	0 - .305	SANDY LOAM; organic, blackish-brown
	.305 - 2.13	CLAY TILL; sandy, med.-fine, reddish-brown, very silty
		dry becoming moist at 1.83m w/intermittent cobbles &
		pebbles, significant cobbles at .610-.915m, drilling
		was tight
	2.13 - 4.57	CLAY TILL; sandy, med.-fine, grayish-brown, silty,
		moist w/cobbles at 4.57m
	4.57 - 7.62	COBBLES & GRAVEL; slow drilling, dry w/med.-coarse
		gravel, brown
	7.62 - 9.45	SAND: very fine-fine, lt. brown-buff, dry, poorly
		sorted & becoming silty at 9.15m, becoming wet at 8.84m,
		drilling was slow & tight due to frictional heat
	9.45 - 12.8	CLAY; gray, dense, plastic & dry, sandy at 9.45-10.7m,
		also some mottled clay at contact zone 9.45m, slow,
		tight drilling
	12.8 - 13.1	SAND & GRAVEL; dry, brown, med.-fine sand w/coarse
		gravel
	13.1 - 14.3	CLAY; gray, dense, dry & plastic
		bentonite slurry grout from 0 - 7.62 BGL and backfilled
		w/natural materials (clay) w/cement pad at surface
		initial boring (3.0m east of MW-71) was abandoned due
		to auger refusal at 7.62m BGL
		screened interval = 8.69 - 9.91 meters BGL
		inadequate water and slow recharge requires bail
		development
		gravel packed from 7.62 - 9.91 meters BGL
		slow & tight drilling created high frictional heat
		and condensation within the augers
		Note: standard penetration test - driving 2-inch O.D.
		sampler 0.61m with 140 lbs. hammer falling approx.
		0.76m; counts made at 6-inch intervals
		materials: (1) 4" x 4' SSS #10 slot w/plug
		32 ft. of 4-inch galvanized casing

Piezometer: ☐ Screen 1.22m Pipe 9.76m Total Depth (BGL)

con't...

JOB NUMBER 0178-439 DATE August 16, 1985 PAGE

BORING NUMBER MW-71 con't. TOTAL DEPTH S.W.L. (BGL)

Sample Number	From___to___ Feet	Lithologic Description
		Split-Spoon Sample Intervals
		#1; 25 - 27 ft.
		#2; 47 - 49 ft.
		Blow Counts: #1; 16, 19, 20
		#2; 28, 35, 38
		GRID LOCATION 176 N/80 E
		GRD. ELEVATION 272.15m

Piezometer: ☐ Screen _____ Pipe_____ Total Depth (BGL)_____

JOB NUMBER 0178-439 DATE August 29, 1 PAGE

BORING NUMBER Boring 1 MW-73 TOTAL DEPTH 11.3m S.W.L. (BGL)

Sample Number	From 0 to 11.3 Feet	Lithologic Description
	0 - .305	SANDY LOAM; dk. brown, organic, moist w/med.-fine sand
	.305 - .610	SAND; med.-fine, lt. brown, moist
	.610 - .915	SAND: med.-fine, reddish-brown, silty w/cobbles &
		pebbles
	.915 - 1.83	CLAY TILL; reddish-brown, dense, dry
	1.83 - 2.13	CLAY TILL; dk. brown, moist w/cobbles
	2.13 - 3.66	SAND & GRAVEL; med.-fine sand, med.-fine gravel w/
		pebbles, moist
	3.66 - 3.96	COBBLES; substantial, drilling .305m/hr.
	3.96 - 4.27	CLAY; color unknown, very tight drilling
	4.27 - 5.18	SAND AND GRAVEL; med.-fine sand, lt. brown, moist,
		med.-fine gravel, cobble zone at 5.18m
	5.18 - 11.3	CLAY; gray, dry w/some gravel & pebbles, slow drilling
		approx. .610m/hr., auger refusal at 11.3m
		drilling T.D. = 11.3 meters BGL
		auger refusal, abandon hole upon clients request; hole
		remains open for future boring by rotary, client
		confirmation obtained
		spoils sample of confining clay was taken from approx.
		7.62 - 9.15 meters BGL
		no well installed at this location
		GRID LOCATION- 170 N/545 E
		GRD. ELEVATION 276.98m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 3, 1985 PAGE

BORING NUMBER MW-74 TOTAL DEPTH 11.3m S.W.L. (BGL)

Sample Number	From 0 to 11.3 Meters	Lithologic Description
	0 - .610	CLAY TILL; back fill material
	.610 - 2.13	SAND; med.-coarse, lt. brown, moist, poorly sorted w/
		fine gravel and pebbles
	2.13 - 3.05	CLAY; lt. brown, moist, very silty
	3.05 - 10.7	SAND; med.-fine, lt. brown, saturated, poorly sorted,
		very silty, sand becomes med.-coarse w/gravel and
		pebbles mixed at approx. 4.88m
	10.7	CLAY; gray, dense, plastic, tight drilling w/high
		drilling pressure
		drilling T.D. = 10.7 meters BGL
		drilling w/6¼" I.D. augers
		screened interval = 5.49 - 7.01 meters BGL
		backfilled w/2 bags of bentonite at the top of water
		table and natural materials; cement pad at surface
		bit sample of confining layer taken upon request of
		client
		materials: (1) 4" x 5' SSS #7 slot w/plug
		20' of galvanized casing
		development by air jetting, clear w/high recharge rate
		Note: standard penetration test used in sampling
		Split-Spoon Sample Interval
		#1; 4.57 - 5.18 meters
		Blow Counts: 18, 23, 26
		MW-74 was installed at mid-aquifer-water at the
		request of client
		GRID LOCATION: 391 N/600 E
		GRD. ELEVATION 267.81m

Piezometer: ☐ Screen 1.52m Pipe 6.08m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 30, 1985 PAGE

BORING NUMBER MW-74A TOTAL DEPTH 9.76m S.W.L. (BGL)

Sample Number	From 0 to 9.76 Feet	Lithologic Description
	0 - .305	SANDY LOAM; dk. brown, organic
	.305 - .915	CLAY TILL; dk. brown w/med.-fine sand, moist, very
		silty
	.915 - 1.52	SAND; med.-fine, lt. brown, moist, well sorted
	1.52 - 2.44	CLAY TILL; reddish-brown, moist, very silty w/pebbles
		and small cobbles
	2.44 - 9.15	CLAY; gray, dry, silty, plastic, dense, very tight
		drilling
		no well installed at this location
		auger refusal at 9.15 meters BGL, client called hole
		depth
		drilling T.D. = 9.15 meters BGL
		drilled w/6¼" I.D. augers
		backfilled w/natural materials
		Note: standard penetration test used in sampling
		Split-Spoon Sample Interval
		#1; 9.15 - 9.76 meters
		Blow Counts: 28, 36, 39
		GRID LOCATION- 590 N/580 E
		GRD. ELEVATION 263.425

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE September 5 1985 PAGE

BORING NUMBER MW-74B TOTAL DEPTH 8.55m S.W.L. (BGL)

Sample Number	From 0 to 8.55 Meters	Lithologic Description
	0 - .305	SANDY LOAM; dk. brown, organic
	.305 - 1.83	SAND: med.-fine, lt. brown, wet, well sorted
	1.83 - 2.74	SAND; med.-fine, reddish-brown, wet
	2.74 - 3.66	SAND; med.-fine, grayish-brown, wet, well sorted
	3.66 - 8.23	SAND & GRAVEL; grayish-brown, saturated, poorly
		sorted, med.-coarse sand w/fine gravel
	8.23 - 8.55	CLAY; gray, dense & sandy w/med.-fine sand, tight
		drilling
		well T.D. = 5.49 meters BGL
		drilling T.D. = 8.55 meters BGL
		drilled w/4¼" I.D. augers w/intent of being only
		boring after establishing thickness of aquifer a well
		was requested by client at mid aquifer. MW-74B was
		pushed in upon consent of client
		screened interval = 3.96 - 5.49 meters BGL
		backfilled w/1 bag of bentonite at top of water table
		and natural materials w/cement pad at the surface
		bit sample taken from 8.23 - 8.54 meters
		materials: (1) 4" x 5' SSS #7 slot w/plug
		18' of 4" galvanized casing
		development by air jetting, clear w/high recharge rate
		GRID LOCATION 540 N/555 E
		GRD. ELEVATION 267.565m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____

JOB NUMBER 0178-439 DATE August 28, 1985 PAGE

BORING NUMBER MW-75 TOTAL DEPTH 5.49m S.W.L. (BGL)

Sample Number	From 0 to 5.49 Meters	Lithologic Description
	0 - .305	SANDY LOAM; blackish-brown, organic
	.305 - .610	SAND; med.-fine, dk. brown, saturated, well sorted
	.610 - 2.74	SAND; med.-fine, lt. brown, saturated, very silty w/
		gravel at 2.44m
	2.74 - 5.49	CLAY; gray, dense, dry, elastic
		drilling T.D. = 5.49 meters BGL, advancement into clay
		at 2.74 meters was upon request by client
		drilling w/6¼" I.D. augers
		well T.D. = 2.9 meters BGL
		screened interval = 1.4 - 2.9 meters BGL
		backfilled w/natural materials and 1 bag of bentonite
		at top of water table; cement pad at surface
		it became necessary to relocate three times due to
		auger refusal at .915 meters
		bit sample of confining clay taken
		materials: (1) 4" x 5' SSS #7 slot w/plug
		5.5' of 4" galvanized casing
		note: standard penetration test used in sampling
		development was by bailer due to slow recharge rate;
		initially water had to be induced to clear screened
		interval during air development; quality clear w/slow
		recharge rate
		Split-Spoon Sample Interval
		#1; 1.22 - 1.83 meters
		Blow Counts: 18, 25, 26
		GRID LOCATION 764 N/538 E
		GRD. ELEVATION 258.635m

Piezometer: ☐ Screen 1.52m Pipe 1.7m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 28, 1985 PAGE

BORING NUMBER MW-76 TOTAL DEPTH 8.84m S.W.L. (BGL)

Sample Number	From 0 to 8.84 Meters	Lithologic Description
	0 - .305	SANDY LOAM; dk. brown, moist w/med.-fine sand, organic
	.305 - .915	SAND; med.-coarse, dk. brown, moist, well sorted
	.915 - 8.23	SAND & GRAVEL; brown, silty, saturated, med.-fine sand
		w/some fine gravel
	8.23	CLAY; gray w/very silty fine sand interbeds
		drilling T.D. = 8.23 meters BGL
		screened interval = 5.49 - 7.16 meters BGL
		well T.D.= 7.16 meters BGL
		backfilled w/natural materials and 1 bag of bentonite
		at water table; cement pad at surface
		drilled w/6¼" I.D. augers
		materials: (1) 4" x 5.5' SSS #10 slot w/plug
		20' of 4" galvanized casing
		development was by air jetting; water quality clear
		and having a high recharge rate
		Note: standard penetration test used in sampling
		Split Spoon Sample Intervals
		#1; 3.05 - 3.66 meters
		#2; 8.23 - 8.84 meters
		Blow Counts: #1; 16, 21, 29
		#2; 28, 30, 35
		GRID LOCATION - 900 N/539 E
		GRD. ELEVATION 254.47m

Piezometer: ☐ Screen 1.68m Pipe 6.09m Total Depth (BGL)

JOB NUMBER 0178-439 DATE August 27, 1985 PAGE

BORING NUMBER MW-77 78 TOTAL DEPTH 21.9m S.W.L. (BGL)

Sample Number	From 0 to 21.9 Meters	Lithologic Description
	0 - .610	CLAY TILL; dk. brown w/large cobbles, moist
	.610 - 1.52	SAND; med.-fine, reddish-brown, dry w/cobbles, poorly
		sorted
	1.52 - 1.82	SAND; med.-fine, dk. brown, moist w/cobbles
	1.82 - 6.4	SAND; fine, lt. brown-buff, well sorted, moist,
		angular
	6.4 - 7.9	CLAY; unidentified (no spoils) tight drilling, dense
	7.9 - 11.3	SAND; med.-fine, lt. brown, poorly sorted, moist
	11.3 - 12.5	CLAY; unidentified, dense, tight
	12.5 - 21.3	SAND: med.-fine, lt. brown, wet, saturated at approx.
		13.7m, well sorted
	21.3	CLAY; gray, tight
		drilled w/6¼" I.D. augers
		drilling T.D. = 21.3 meters BGL
		well T.D. = 18.6 meters BGL
		screened interval = 17.1 - 18.6 meters BGL
		bentonite slurry grout from 6.1 - 18.2 meters BGL
		MW-77 was installed at an mid-aquifer level at the
		the request of client
		split spooned confining clay layer but no retrieval
		was obtained so a bit sample was taken
		development by air jetting, clear w/high recharge rate
		materials: (1) 4" x 5' SSS #7 slot w/plug
		58' of 4" galvanized casing
		Note: standard penetration test used in sampling
		Split-Spoon Sample Intervals
		#1; 10.7 - 11.3 meters
		#2; 21.3 - 21.9 meters
		Blow Counts: #1; 24, 27, 28
		#2; 27, 31, 36
		GRID LOCATION 810 N/218 E
		GRD. ELEVATION 268.71m

Piezometer: ☐ Screen _____ Pipe _____ Total Depth (BGL) _____