# TABLES

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TABLE 1

DISPOSAL POND SOLIDS
SAMPLE COLLECTION INTERVALS
ORMET CORPORATION
HANNIBAL, OHIO

| POND 1 | POND 2 | POND 3 | POND 4 SECTION A | SECTION B |
|---|---|---|---|---|
| 0'- 1' | 0' - 1' | 0' - 1' | 0' - 1' | 0' - 1' |
| 1' - 4' | 1' - 3' | 2' - 5' | 1' - 4' | 1' - 4' |
| 4' - interface | 3' - interface | 6' - 9' | 4' - interface | 4' - 7' |
| | | 10' - interface | | |

| POND 5 SECTION A | POND 5 SECTION B | POND 5 SECTION C | POND 5 SECTION D | POND 5 SECTION E |
|---|---|---|---|---|
| 0' - 1' | 0' - 1' | O' - 1' | 0' - 1' | 0' - 1' |
| 5' - 8'* | 5' - 8' | 5' - 8' | 5' - 8' | 5' - 8' |
| 10' - 13'* | 10' - 13' | 10' - 13' | 10' - interface | 10' - 13' |
| 15' - 18'* | 15' - 18'* | 15' 18' | | 15' - 18' |
| interface** | interface** | interface** | | 20' - 23'*** |
| | | | | interface** |

* Composite samples for these intervals did not include individual samples from all four sample locations within the section due to variations in the pond depth and the interface depth.

** Explanation of interface sample interval given in Table 2.

*** Composite sample for the 20' to 23' interval of section E was submitted to the laboratory before the interface sampling approach was modified.

TABLE 2

SUMMARY OF SAMPLING INTERVALS
FOR POND 5 INTERFACE SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

| POND 5 SECTION | SAMPLING POINT | DEPTH INTERVAL FROM WHICH INTERFACE SAMPLE WAS COLLECTED |
|---|---|---|
| A | 1 | 15' - 17'.8' |
| | 2 | 16' - 19' |
| | 3 | 18' - 21' |
| | 4 | 5' - 8' |
| B | 1 | 15.5' - 18.5' |
| | 2 | 13' - 16' |
| | 3 | 14' - 17' |
| | 4 | 25' - 28' |
| C | 1 | 25' - 28' |
| | 2 | 25' - 28' |
| | 3 | 25' - 27.2' |
| | 4 | 23' - 26' |
| D | 1 | 10' - 12' |
| | 2 | 10' - 13.8' |
| | 3 | 10' - 13.9' |
| | 4 | 10' - 12' |
| E | 1 | 19.5' - 22.5' |
| | 2 | 23' - 26' |
| | 3 | 22.5' - 25.0' |
| | 4 | 25' - 28' |

Note: Sampling intervals reaching 28 feet may not have encountered the sludge/soil interface.

TABLE 3

GENERAL DESCRIPTION OF SOIL SAMPLES
COLLECTED FROM IMMEDIATELY BENEATH
THE FORMER DISPOSAL PONDS
ORMET CORPORATION
HANNIBAL, OHIO

| SAMPLING LOCATION | GENERAL DESCRIPTIONS OF SOIL ENCOUNTERED AT INTERFACE |
|---|---|
| 1A3 | Predominantly sand with some silt and clay |
| 3A1 | Brown sandy clay |
| 3A2 | Sandy silt with little clay |
| 4A1 | Sand (30 - 40%), fine to coarse; Gravel (30 - 40%), fine medium; Clay (20 - 40%); brown; dry |
| 4B1 | Silty clay (60%); Gravel (30%); Sand (10%) |
| 4B3 | Silty sand and gravel |
| 4B4 | Clay (30 - 40%); Silt (30%); Gravel (20%), fine to medium, sub. rd.; Sand (15%), fine; poorly sorted |
| 5B1 | Silt (70%); Sand (20%), very fine: Gravel (10%), coarse, well rd.; medium brown |

TABLE 4
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 1A-0-1<br>5/4/88 | 1A-1-4<br>5/5/88 | 1A-1-4RE<br>5/5/88 | 1A-4-INT<br>5/5/88 | 2A-0-1<br>5/4/88 | 2A-0-1 RE<br>5/4/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Bromomethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Vinyl Chloride | <.010 | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Chloroethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Methylene Chloride | .023 B,J | .019 B,J | .077 J | .011 B,J | .051 J | .065 J |
| Acetone | .045 B,J | .030 B,J | .074 B,J | .059 B,J | .020 B,J | .018 B,J |
| Carbon Disulfide | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 1,1-Dichloroethene | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 1,1-Dichloroethane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 1,2-Dichloroethene (total) | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| Chloroform | <.005 | [.003] B,J | .011 J | <.010 | .005 J | .010 J |
| 1,2-Dichloroethane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 2-Butanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| 1,1,1-Trichloroethane | [.004] | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |
| Carbon Tetrachloride | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |
| Vinyl Acetate | <.010 | <.010 UJ | <.010 UJ | <.020 | <.010 UJ | <.010 UJ |
| Bromodichloromethane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 1,2-Dichloropropane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| cis-1,3-Dichloropropene | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| Trichlorethene | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| Dibromochloromethane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 1,1,2-Trichloroethane | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| Benzene | [.004] | [.004] B,J | [.004] B,J | [.004] | [.003] B,J | [.004] B,J |
| trans-1,3-Dichloropropene | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| Bromoform | <.005 | <.005 UJ | <.005 UJ | <.010 | <.005 UJ | <.005 UJ |
| 4-Methyl-2-Pentanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| 2-Hexanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Tetrachloroethene | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.050 UJ |
| 1,1,2,2-Tetrachloroethane | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.050 UJ |
| Toluene | <.005 | [.003] B,J | [.030] B,J | [.002] | [.004] B,J | [.002] B,J |
| Chlorobenzene | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |
| Ethylbenzene | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |
| Styrene | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |
| Xylene (total) | <.005 | <.005 UJ | <.050 UJ | <.010 | <.005 UJ | <.005 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Colleted | 2A-1-3<br>5/4/88 | 2A-1-3 RE<br>5/4/88 | 2A-3-INT<br>5/4/88 | 2A-3-INT RE<br>5/4/88 | 3A-0-1<br>5/3/88 | 3A-2-5<br>5/9/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.022 UJ |
| Bromomethane | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 | <.022 |
| Vinyl Chloride | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 | <.022 |
| Chloroethane | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 | <.022 UJ |
| Methylene Chloride | .130 J | .067 J | .036 J | .046 J | .013 B,J | .017 B,J |
| Acetone | .034 B,J | .027 B,J | .030 B,J | [.007] B,J | [.011] B,J | .028 B,J |
| Carbon Disulfide | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 UJ |
| 1,1-Dichloroethene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 1,1-Dichloroethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 1,2-Dichloroethene (total) | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Chloroform | .005 J | .009 J | .010 J | .012 J | <.010 | [.009] |
| 1,2-Dichloroethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 2-Butanone | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.022 UJ |
| 1,1,1-Trichloroethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Carbon Tetrachloride | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Vinyl Acetate | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 | <.022 UJ |
| Bromodichloromethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 1,2-Dichloropropane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| cis-1,3-Dichloropropene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Trichlorethene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Dibromochloromethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 1,1,2-Trichloroethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Benzene | [.004] B,J | [.003] B,J | [.006] B,J | [.006] B,J | [.005] B,J | [.004] |
| trans-1,3-Dichloropropene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Bromoform | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 UJ |
| 4-Methyl-2-Pentanone | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.022 UJ |
| 2-Hexanone | <.010 UJ | <.010 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.022 UJ |
| Tetrachloroethene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| 1,1,2,2-Tetrachloroethane | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Toluene | [.004] B,J | [.003] B,J | [.005] B,J | [.003] B,J | [.002] | <.011 |
| Chlorobenzene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Ethylbenzene | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |
| Styrene | <.005 UJ | <.005 UJ | [.002] J | <.010 UJ | <.010 | <.011 |
| Xylene (total) | <.005 UJ | <.005 UJ | <.010 UJ | <.010 UJ | <.010 | <.011 |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

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TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 3A-6-9<br>5/9/88 | 3A-10-INT<br>5/10/88 | 4A-0-1<br>5/3/88 | 4A-1-4<br>5/5/88 | 4A-4-INT<br>5/5/88 | 4B-0-1<br>5/3/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.022 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.020 UJ |
| Bromomethane | <.022 | <.020 | <.020 | <.020 UJ | <.010 UJ | <.020 |
| Vinyl Chloride | <.022 | <.020 | <.020 | <.020 | <.010 | <.020 |
| Chloroethane | <.022 UJ | <.020 UJ | <.020 | <.020 UJ | <.010 UJ | <.020 |
| Methylene Chloride | .010 B,J | .042 B,J | .017 B,J | .013 B,J | .010 B,J | .014 B,J |
| Acetone | [.021] B,J | [.009] B,J | .040 B,J | .044 B,J | .160 B,J | .022 B,J |
| Carbon Disulfide | <.011 UJ | <.010 UJ | <.010 | <.010 | <.005 | <.010 |
| 1,1-Dichloroethene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| 1,1-Dichloroethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| 1,2-Dichloroethene (total) | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Chloroform | .010 | .039 | <.010 | <.010 | [.002] B,J | <.010 |
| 1,2-Dichloroethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| 2-Butanone | <.022 UJ | <.020 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.020 UJ |
| 1,1,1-Trichloroethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Carbon Tetrachloride | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Vinyl Acetate | <.022 UJ | <.020 UJ | <.020 | <.020 | <.010 | <.020 |
| Bromodichloromethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| 1,2-Dichloropropane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| cis-1,3-Dichloropropene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Trichlorethene | <.011 | <.010 | <.010 | <.010 | [.002] | <.010 |
| Dibromochloromethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| 1,1,2-Trichloroethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Benzene | [.003] | [.003] | [.004] B,J | [.005] | [.004] B,J | [.004] B,J |
| trans-1,3-Dichloropropene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Bromoform | <.011 UJ | <.010 UJ | <.010 | <.010 | <.005 | <.010 |
| 4-Methyl-2-Pentanone | <.022 J | <.021 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.020 UJ |
| 2-Hexanone | <.022 J | <.021 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.020 UJ |
| Tetrachloroethene | <.011 | <.010 | <.010 | [.002] | .047 | <.010 |
| 1,1,2,2-Tetrachloroethane | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Toluene | <.011 | <.010 | [.002] | [.002] | <.005 B | <.010 |
| Chlorobenzene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Ethylbenzene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Styrene | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |
| Xylene (total) | <.011 | <.010 | <.010 | <.010 | <.005 | <.010 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

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B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 4B-1-4<br>5/6/88 | 4B-4-7<br>5/6/88 | 4B-4-7 RE<br>5/6/88 | 4B-8-INT<br>5/9/88 | 5A-0-1<br>5/2/88 | 5A-5-8<br>5/12/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.020 UJ | <.020 UJ | <.020 UJ | <.019 UJ | <.010 UJ | <.017 UJ |
| Bromomethane | <.020 UJ | <.020 UJ | <.020 UJ | <.019 | <.010 | <.017 UJ |
| Vinyl Chloride | <.020 | <.020 UJ | <.020 UJ | <.019 | <.010 | <.017 |
| Chloroethane | <.020 UJ | <.020 UJ | <.020 UJ | <.019 UJ | <.010 | <.017 UJ |
| Methylene Chloride | .011 B,J | .092 J | .061 J | .016 B,J | .130 | [.003] J |
| Acetone | .140 B,J | .040 B,J | .022 B,J | [.013] B,J | [.004] B,J | [.005] B,J |
| Carbon Disulfide | <.010 | <.010 UJ | <.010 UJ | <.009 UJ | <.005 | <.009 |
| 1,1-Dichloroethene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| 1,1-Dichloroethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| 1,2-Dichloroethene (total) | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Chloroform | <.010 | .019 J | .012 J | .010 | <.005 | [.005] |
| 1,2-Dichloroethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| 2-Butanone | <.020 UJ | <.020 UJ | <.020 UJ | <.019 UJ | <.010 UJ | <.017 UJ |
| 1,1,1-Trichloroethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| Carbon Tetrachloride | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| Vinyl Acetate | <.020 | <.020 UJ | <.020 UJ | <.019 UJ | <.010 | <.017 UJ |
| Bromodichloromethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| 1,2-Dichloropropane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| cis-1,3-Dichloropropene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Trichlorethene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Dibromochloromethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| 1,1,2-Trichloroethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Benzene | [.006] B,J | [.004] B,J | [.003] B,J | [.003] | .005 B,J | [.002] B,J |
| trans-1,3-Dichloropropene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| Bromoform | <.010 | <.010 UJ | <.010 UJ | <.009 UJ | <.005 | <.009 UJ |
| 4-Methyl-2-Pentanone | <.020 UJ | <.020 UJ | <.020 UJ | <.019 UJ | <.010 UJ | <.017 UJ |
| 2-Hexanone | <.020 UJ | <.020 UJ | <.020 UJ | <.019 UJ | <.010 UJ | <.017 UJ |
| Tetrachloroethene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| 1,1,2,2-Tetrachloroethane | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 UJ |
| Toluene | <.010 | [.004] B,J | [.002] B,J | <.009 | <.005 | [.002] |
| Chlorobenzene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Ethylbenzene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Styrene | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |
| Xylene (total) | <.010 | <.010 UJ | <.010 UJ | <.009 | <.005 | <.009 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 5A-10-13<br>5/12/88 | 5A-15-18<br>5/13/88 | 5A-INT<br>5/20/88 | 5A-INT RE<br>5/20/88 | 5B-0-1<br>5/2/88 | 5B-5-8<br>5/13/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.017 UJ |
| Bromomethane | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 | <.017 UJ |
| Vinyl Chloride | <.017 | <.021 | <.018 UJ | <.018 UJ | <.020 | <.017 |
| Chloroethane | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 | <.017 UJ |
| Methylene Chloride | [.004] | [.004] | .120 B,J | .081 J | .086 | [.003] |
| Acetone | [.004] B,J | [.004] B,J | .075 B,J | .078 B,J | .015 B,J | [.003] B,J |
| Carbon Disulfide | [.004] J | .013 J | .058 J | .020 J | <.010 | <.008 UJ |
| 1,1-Dichloroethene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| 1,1-Dichloroethane | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| 1,2-Dichloroethene (total) | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Chloroform | [.004] | .014 | .012 J | .011 J | <.010 | .016 |
| 1,2-Dichloroethane | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| 2-Butanone | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.017 UJ |
| 1,1,1-Trichloroethane | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| Carbon Tetrachloride | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| Vinyl Acetate | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 | <.017 UJ |
| Bromodichloromethane | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| 1,2-Dichloropropane | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| cis-1,3-Dichloropropene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Trichlorethene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Dibromochloromethane | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| 1,1,2-Trichloroethane | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Benzene | [.004] B,J | [.004] B,J | [.006] B,J | [.007] B,J | [.006] B,J | [.003] B,J |
| trans-1,3-Dichloropropene | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| Bromoform | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| 4-Methyl-2-Pentanone | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.017 UJ |
| 2-Hexanone | <.017 UJ | <.021 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.017 UJ |
| Tetrachloroethene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| 1,1,2,2-Tetrachloroethane | <.008 UJ | <.010 UJ | <.009 UJ | <.009 UJ | <.010 | <.008 UJ |
| Toluene | [.002] | [.002] | [.002] B,J | [.004] B,J | <.010 | [.002] |
| Chlorobenzene | <.008 | <.010 | <.009 UJ | <.009 UJ | [.004] | <.008 |
| Ethylbenzene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Styrene | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |
| Xylene (total) | <.008 | <.010 | <.009 UJ | <.009 UJ | <.010 | <.008 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Colleted | 5B-10-13<br>5/16/88 | 5B-10-13RE<br>5/16/88 | 5B-15-18<br>5/16/88 | 5B-15-18RE<br>5/16/88 | 5B-INT<br>5/19/88 | 5B-INT RE<br>5/19/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| Bromomethane | <.020 | <.020 UJ | <.018 | <.018 | <.016 UJ | <.016 UJ |
| Vinyl Chloride | <.020 | <.020 UJ | <.018 | <.018 | <.016 UJ | <.016 UJ |
| Chloroethane | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| Methylene Chloride | .063 B,J | .160 B,J | .075 B,J | .130 B,J | .100 B,J | .240 B,J |
| Acetone | .070 B,J | .058 B,J | .074 B,J | .072 B,J | .068 B,J | <.016 UJ |
| Carbon Disulfide | .060 | .064 B,J | .079 J | .027 J | .048 J | <.008 UJ |
| 1,1-Dichloroethene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 1,1-Dichloroethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 1,2-Dichloroethene (total) | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Chloroform | .018 | .013 J | .017 J | .014 | .012 J | <.008 UJ |
| 1,2-Dichloroethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 2-Butanone | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| 1,1,1-Trichloroethane | <.010 UJ | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Carbon Tetrachloride | <.010 UJ | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Vinyl Acetate | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| Bromodichloromethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 1,2-Dichloropropane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| cis-1,3-Dichloropropene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Trichlorethene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Dibromochloromethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 1,1,2-Trichloroethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Benzene | [.005] B,J | [.008] B,J | [.005] B,J | [.007] B,J | .015 J | [.007] B,J |
| trans-1,3-Dichloropropene | <.010 | <.010 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.008 UJ |
| Bromoform | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 4-Methyl-2-Pentanone | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| 2-Hexanone | <.020 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ |
| Tetrachloroethene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| 1,1,2,2-Tetrachloroethane | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Toluene | <.010 | [.004] B,J | [.002] J | [.002] B,J | [.003] B,J | [.003] B,J |
| Chlorobenzene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Ethylbenzene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Styrene | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |
| Xylene (total) | <.010 | <.010 UJ | <.009 UJ | <.009 | <.008 UJ | <.008 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 5C-0-1<br>5/3/88 | 5C-5-8<br>5/17/88 | 5C-5-8 RE<br>5/17/88 | 5C-10-13<br>5/17/88 | 5C-10-13RE<br>5/17/88 | 5C-15-18<br>5/18/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.020 UJ | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Bromomethane | <.020 | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Vinyl Chloride | <.020 | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Chloroethane | <.020 | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Methylene Chloride | .010 B,J | .061 B,J | .150 B,J | .120 B,J | .014 J | .094 B,J |
| Acetone | [.009] B,J | .086 B,J | .062 B,J | .061 B,J | .075 B,J | .040 B,J |
| Carbon Disulfide | <.010 | .061 J | .041 J | .061 J | [.005] J | .037 J |
| 1,1-Dichloroethene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 1,1-Dichloroethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 1,2-Dichloroethene (total) | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Chloroform | <.010 | .015 J | .012 J | .011 J | [.008] J | .012 J |
| 1,2-Dichloroethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 2-Butanone | <.020 UJ | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| 1,1,1-Trichloroethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Carbon Tetrachloride | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Vinyl Acetate | <.020 | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Bromodichloromethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 1,2-Dichloropropane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| cis-1,3-Dichloropropene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Trichlorethene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Dibromochloromethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 1,1,2-Trichloroethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Benzene | [.006] B,J | [.004] B,J | [.007] B,J | [.006] B,J | [.008] B,J | .009 B,J |
| trans-1,3-Dichloropropene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Bromoform | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 4-Methyl-2-Pentanone | <.020 UJ | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| 2-Hexanone | <.020 UJ | <.016 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.016 UJ |
| Tetrachloroethene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| 1,1,2,2-Tetrachloroethane | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Toluene | [.002] | <.008 UJ | <.009 UJ | [.002] B,J | [.004] B,J | [.002] B,J |
| Chlorobenzene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Ethylbenzene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Styrene | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |
| Xylene (total) | <.010 | <.008 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.008 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Colleted | 5C-15-18RE<br>5/18/88 | 5C-25-INT<br>5/20/88 | 5C-25-INT RE<br>5/20/88 | 5D-0-1<br>5/3/88 | 5D-0-1RE<br>5/3/88 | 5D-5-8<br>5/12/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.016 UJ | <.018 UJ | <.018 UJ | <.010 UJ | <.010 UJ | <.016 UJ |
| Bromomethane | <.016 UJ | <.018 UJ | <.018 UJ | <.010 | <.010 UJ | <.016 UJ |
| Vinyl Chloride | <.016 UJ | <.018 UJ | <.018 UJ | <.010 | <.010 | <.016 |
| Chloroethane | <.016 UJ | <.018 UJ | <.018 UJ | <.010 | <.010 UJ | <.016 UJ |
| Methylene Chloride | .060 J | .082 B,J | .075 J | .090 | .140 | [.003] |
| Acetone | .200 B,J | .029 B,J | .069 B,J | .011 B,J | .049 B,J | [.005] B,J |
| Carbon Disulfide | [.006] J | .013 B,J | [.004] J | <.005 | <.005 | [.002] J |
| 1,1-Dichloroethene | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| 1,1-Dichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| 1,2-Dichloroethene (total) | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Chloroform | <.008 UJ | .012 J | .009 J | <.005 | <.005 | [.004] |
| 1,2-Dichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| 2-Butanone | <.016 UJ | <.018 UJ | <.018 UJ | <.010 UJ | <.010 UJ | <.016 UJ |
| 1,1,1-Trichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| Carbon Tetrachloride | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| Vinyl Acetate | <.016 UJ | <.018 UJ | <.018 UJ | <.010 | <.010 | <.016 UJ |
| Bromodichloromethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| 1,2-Dichloropropane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| cis-1,3-Dichloropropene | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Trichlorethene | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Dibromochloromethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| 1,1,2-Trichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Benzene | [.005] B,J | [.006] B,J | [.006] B,J | [.005] B,J | [.003] | [.002] B,J |
| trans-1,3-Dichloropropene | <.018 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| Bromoform | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| 4-Methyl-2-Pentanone | <.016 UJ | <.018 UJ | <.018 UJ | <.010 UJ | <.010 UJ | <.016 UJ |
| 2-Hexanone | <.016 UJ | <.018 UJ | <.018 UJ | <.010 UJ | <.010 UJ | <.016 UJ |
| Tetrachloroethene | <.008 UJ | <.009 UJ | [.006] J | <.005 | <.005 | <.008 |
| 1,1,2,2-Tetrachloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 UJ |
| Toluene | [.004] B,J | <.009 UJ | [.005] B,J | <.005 | <.005 | [.002] |
| Chlorobenzene | .008 J | <.009 UJ | <.009 UJ | [.002] | <.005 | <.008 |
| Ethylbenzene | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Styrene | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |
| Xylene (total) | <.008 UJ | <.009 UJ | <.009 UJ | <.005 | <.005 | <.008 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 5D-10-INT<br>5/12/88 | 5D-10-INT RE<br>5/12/88 | 5E-0-1<br>5/3/88 | 5E-5-8<br>5/10/88 | 5E-10-13<br>5/10/88 | 5E-10-13 RE<br>5/10/88 |
|---|---|---|---|---|---|---|
| Chloromethane | <.016 UJ | <.016 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.018 UJ |
| Bromomethane | <.016 UJ | <.016 UJ | <.020 | <.018 | <.018 UJ | <.018 UJ |
| Vinyl Chloride | <.016 UJ | <.016 UJ | <.020 | <.018 | <.018 UJ | <.018 UJ |
| Chloroethane | <.016 UJ | <.016 UJ | <.020 | <.018 UJ | <.018 UJ | <.018 UJ |
| Methylene Chloride | [.004] J | .083 B,J | .012 B,J | .198 | .600 J | [.005] J |
| Acetone | [.009] B,J | .164 J | [.008] B,J | .024 B,J | [.015] B,J | [.009] B,J |
| Carbon Disulfide | .008 UJ | .056 J | <.010 | <.009 UJ | .017 J | .031 J |
| 1,1-Dichloroethene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 1,1-Dichloroethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 1,2-Dichloroethene (total) | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Chloroform | [.004] J | .013 J | <.010 | .017 | .012 J | .015 J |
| 1,2-Dichloroethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 2-Butanone | <.016 UJ | <.016 UJ | <.020 UJ | <.018 UJ | <.018 UJ | <.018 UJ |
| 1,1,1-Trichloroethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Carbon Tetrachloride | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Vinyl Acetate | <.016 UJ | <.016 UJ | <.020 | <.018 UJ | <.018 UJ | <.018 UJ |
| Bromodichloromethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 1,2-Dichloropropane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| cis-1,3-Dichloropropene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Trichlorethene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Dibromochloromethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 1,1,2-Trichloroethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Benzene | [.003] B,J | [.005] B,J | .010 B,J | [.003] | [.003] J | [.004] B,J |
| trans-1,3-Dichloropropene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Bromoform | <.008 UJ | <.008 UJ | <.010 | <.009 UJ | <.009 UJ | <.009 UJ |
| 4-Methyl-2-Pentanone | <.016 UJ | <.016 UJ | .020 UJ | <.018 UJ | <.018 UJ | <.018 UJ |
| 2-Hexanone | <.016 UJ | <.016 UJ | .020 UJ | <.018 UJ | <.018 UJ | <.018 UJ |
| Tetrachloroethene | <.008 UJ | [.006] J | <.010 | <.009 | <.009 UJ | <.009 UJ |
| 1,1,2,2-Tetrachloroethane | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Toluene | [.002] J | [.003] J | [.006] | <.009 | <.009 UJ | <.009 UJ |
| Chlorobenzene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Ethylbenzene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Styrene | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |
| Xylene (total) | <.008 UJ | <.008 UJ | <.010 | <.009 | <.009 UJ | <.009 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 4 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | 5E-15-18<br>5/11/88 | 5E-15-18 RE<br>5/11/88 | 5E-20-23<br>5/11/88 | 5E-20-23 RE<br>5/11/88 | 5E-INT<br>5/23/88 | 5E-INT RE<br>5/23/88 | 6B-20-23<br>5/17/88 | 6B-20-23 RE<br>5/17/88 |
|---|---|---|---|---|---|---|---|---|
| Chloromethane | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Bromomethane | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 | <.020 UJ | <.010 UJ | <.010 UJ |
| Vinyl Chloride | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 | <.020 UJ | <.010 UJ | <.010 UJ |
| Chloroethane | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Methylene Chloride | .068 J | .069 B,J | .052 J | .076 B,J | .055 B,J | .110 J | .095 B,J | .053 J |
| Acetone | .016 B,J | .091 B,J | [.013] B,J | .079 B,J | .034 B,J | <.020 UJ | .058 B,J | [.009] B,J |
| Carbon Disulfide | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | .043 J | <.010 UJ | .019 B,J | <.005 UJ |
| 1,1-Dichloroethene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 1,1-Dichloroethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 1,2-Dichloroethene (total) | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Chloroform | .012 J | .015 J | .016 J | .019J | .012 | [.008] J | .006 J | [.004] J |
| 1,2-Dichloroethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 2-Butanone | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| 1,1,1-Trichloroethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Carbon Tetrachloride | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Vinyl Acetate | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Bromodichloromethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 1,2-Dichloropropane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| cis-1,3-Dichloropropene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Trichlorethene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Dibromochloromethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 1,1,2-Trichloroethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Benzene | [.004] J | [.006] B,J | [.003] J | [.005] B,J | [.009] B,J | [.005] B,J | .025 J | .006 B,J |
| trans-1,3-Dichloropropene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 UJ | <.010 UJ | <.005 UJ | <.005 UJ |
| Bromoform | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| 4-Methyl-2-Pentanone | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| 2-Hexanone | <.016 UJ | <.015 UJ | <.018 UJ | <.018 UJ | <.020 UJ | <.020 UJ | <.010 UJ | <.010 UJ |
| Tetrachloroethene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | .005 J | <.005 UJ |
| 1,1,2,2-Tetrachloroethane | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Toluene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | [.003] B,J | [.004] B,J | .038 J | .007 B,J |
| Chlorobenzene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Ethylbenzene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | .008 J | <.005 UJ |
| Styrene | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | <.005 UJ | <.005 UJ |
| Xylene (total) | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.010 | <.010 UJ | .013 J | <.005 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 5
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | | Field Duplicate | | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| | 1A-1-4 | 1A-1-4RE | 6A-1-4 | 6A-1-4RE | 3A-6-9 | 6A-6-9 |
| Chloromethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| Bromomethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 | <.021 |
| Vinyl Chloride | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 | <.021 |
| Chloroethane | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| Methylene Chloride | .019 B,J | .077 J | .061 J | .024 J | .010 B,J | .010 B,J |
| Acetone | .030 B,J | .074 B,J | .030 BJ | .010 J,B | [.021] B,J | [.016] B,J |
| Carbon Disulfide | <.005 UJ | <.005 UJ | [.002] J | <.010 UJ | <.011 UJ | <0.11 UJ |
| 1,1-Dichloroethene | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 1,1-Dichloroethane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 1,2-Dichloroethene (total) | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Chloroform | [.003] B,J | .011 J | 0.009 J | .015 J | .010 | .012 |
| 1,2-Dichloroethane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 2-Butanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| 1,1,1-Trichloroethane | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Carbon Tetrachloride | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Vinyl Acetate | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| Bromodichloromethane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 1,2-Dichloropropane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| cis-1,3-Dichloropropene | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Trichlorethene | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Dibromochloromethane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 1,1,2-Trichloroethane | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Benzene | [.004] B,J | [.004] B,J | [.003] B,J | [.003] BJ | [.003] | [.002] |
| trans-1,3-Dichloropropene | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Bromoform | <.005 UJ | <.005 UJ | <.005 UJ | <.010 UJ | <.011 UJ | <.011 UJ |
| 4-Methyl-2-Pentanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| 2-Hexanone | <.010 UJ | <.010 UJ | <.010 UJ | <.020 UJ | <.022 UJ | <.021 UJ |
| Tetrachloroethene | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| 1,1,2,2-Tetrachloroethane | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Toluene | [.003] B,J | [.030] B,J | [.002] B,J | [.002] J | <.011 | <.011 |
| Chlorobenzene | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Ethylbenzene | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Styrene | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |
| Xylene (total) | <.005 UJ | <.050 UJ | <.005 UJ | <.010 UJ | <.011 | <.011 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 5 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | | Field Duplicate | |
|---|---|---|---|---|---|---|
| | 4B-0-1 | 6A-0-1 | 4B-4-7 | 4B-4-7 RE | 6A-4-7 | 6A-4-7RE |
| Chloromethane | <.020 UJ | <.020 | <.020 UJ | <.020 UJ | <.020 UJ | <.020 UJ |
| Bromomethane | <.020 | <.020 | <.020 UJ | <.020 UJ | <.020 | <.020 UJ |
| Vinyl Chloride | <.020 | <.020 | <.020 UJ | <.020 UJ | <.020 | <.020 |
| Chloroethane | <.020 | <.020 | <.020 UJ | <.020 UJ | <.020 UJ | <.020 UJ |
| Methylene Chloride | .014 B,J | .089 | .092 J | .061 J | .089 J | .012 |
| Acetone | .022 B,J | .220 | .040 B,J | .022 B,J | .044 B,J | [.006] B,J |
| Carbon Disulfide | <.010 | <.010 | <.010 UJ | <.010 UJ | [.003] | <.010 UJ |
| 1,1-Dichloroethene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| 1,1-Dichloroethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| 1,2-Dichloroethene (total) | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Chloroform | <.010 | <.010 | .019 J | .012 J | .013 | .017 |
| 1,2-Dichloroethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| 2-Butanone | <.020 UJ | [.009] | <.020 UJ | <.020 UJ | <.020 UJ | <.020 UJ |
| 1,1,1-Trichloroethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| Carbon Tetrachloride | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| Vinyl Acetate | <.020 | <.020 | <.020 UJ | <.020 UJ | <.020 | <.020 UJ |
| Bromodichloromethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| 1,2-Dichloropropane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| cis-1,3-Dichloropropene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Trichlorethene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Dibromochloromethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| 1,1,2-Trichloroethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Benzene | [.004] B,J | [.006] | [.004] B,J | [.003] B,J | [.004] B,J | [.003] B,J |
| trans-1,3-Dichloropropene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| Bromoform | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 UJ |
| 4-Methyl-2-Pentanone | <.020 UJ | <.020 | <.020 UJ | <.020 UJ | <.020 UJ | <.020 UJ |
| 2-Hexanone | <.020 UJ | <.020 | <.020 UJ | <.020 UJ | <.020 UJ | <.020 UJ |
| Tetrachloroethene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| 1,1,2,2-Tetrachloroethane | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 UJ | <.010 UJ |
| Toluene | <.010 | <.010 | [.004] B,J | [.002] B,J | [.003] B,J | [.002] |
| Chlorobenzene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Ethylbenzene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Styrene | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |
| Xylene (total) | <.010 | <.010 | <.010 UJ | <.010 UJ | <.010 | <.010 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 5 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| | Orginial Sample | Field Duplicate | Original Sample | | Field Duplicate | |
|---|---|---|---|---|---|---|
| | 5B-5-8 | 6B-5-8 | 5E-10-13 | 5E-10-13 RE | 6E-10-13 | 6E-10-13RE |
| Chloromethane | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.018 UJ | <.019 UJ |
| Bromomethane | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.018 UJ | <.019 UJ |
| Vinyl Chloride | <.017 | <.018 | <.018 UJ | <.016 UJ | <.018 UJ | <.019 UJ |
| Chloroethane | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.018 UJ | <.019 UJ |
| Methylene Chloride | [.003] | [.002] | .60 J | [.005] J | .061 J | [.003] B,J |
| Acetone | [.003] B,J | [.006] B,J | [.015] B,J | [.009] B,J | [.013] B,J | [.005] B,J |
| Carbon Disulfide | <.008 UJ | <.009 UJ | .017 J | .031 J | <.009 UJ | <.009 UJ |
| 1,1-Dichloroethene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 1,1-Dichloroethane | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 1,2-Dichloroethene (total) | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Chloroform | .016 | [.008] | .012 J | .015 J | .027 J | .011 J |
| 1,2-Dichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 2-Butanone | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.019 UJ | <.019 UJ |
| 1,1,1-Trichloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Carbon Tetrachloride | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Vinyl Acetate | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.019 UJ | <.019 UJ |
| Bromodichloromethane | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 1,2-Dichloropropane | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| cis-1,3-Dichloropropene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Trichlorethene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Dibromochloromethane | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 1,1,2-Trichloroethane | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Benzene | [.003] B,J | [.002] B | [.003] J | [.004] B,J | [.003] J | [.003] B,J |
| trans-1,3-Dichloropropene | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Bromoform | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 4-Methyl-2-Pentanone | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.019 UJ | <.019 UJ |
| 2-Hexanone | <.017 UJ | <.018 UJ | <.018 UJ | <.016 UJ | <.019 UJ | <.019 UJ |
| Tetrachloroethene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| 1,1,2,2-Tetrachloroethane | <.008 UJ | <.009 UJ | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Toluene | [.002] | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Chlorobenzene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Ethylbenzene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Styrene | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |
| Xylene (total) | <.008 | <.009 | <.009 UJ | <.008 UJ | <.009 UJ | <.009 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 1A-0-1<br>5/4/88 | 1A-0-1 RE<br>5/4/88 | 1A-1-4<br>5/5/88 | 1A-4-INT<br>5/5/88 | 2A-0-1<br>5/4/88 | 2A-1-3<br>5/4/88 | 2A-3-INT<br>5/4/88 | 3A-0-1<br>5/3/88 |
|---|---|---|---|---|---|---|---|---|
| Phenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| bis(2-Chloroethyl)ether | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2-Chlorophenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 1,3-Dichlorobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 1,4-Dichlorobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Benzyl alcohol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 1,2-Dichlorobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2-Methylphenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| bis-(2-Chloroisopropyl)ether | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 4-Methylphenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| N-Nitroso-di-n-propylamine | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Hexachloroethane | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Nitrobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Isophorone | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2-Nitrophenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2,4-Dimethylphenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Benzoic Acid | <2.75 UJ | <2.75 | <2.05 UJ | <2.75 R | <20.5 UJ | <2.75 | <2.75 | <2.75 UJ |
| bis(2-Chloroethoxy)methane | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2,4-Dichlorophenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 1,2,4-Trichlorobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Naphthalene | .940 J | .870 J | [.180] | <.550 | [.800] | [.320] | .930 | <.550 UJ |
| 4-Chloroaniline | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Hexachlorobutadiene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 4-Chloro-3-methylphenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2-Methylnaphthalene | [.450] J | [.400] J | [.120] | <.550 | [.500] | [.200] | [.460] | <.550 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 1A-0-1<br>5/4/88 | 1A-0-1 RE<br>5/4/88 | 1A-1-4<br>5/5/88 | 1A-4-INT<br>5/5/88 | 2A-0-1<br>5/4/88 | 2A-1-3<br>5/4/88 | 2A-3-INT<br>5/4/88 | 3A-0-1<br>5/3/88 |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2,4,6-Trichlorophenol | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2,4,5-Trichlorophenol | <2.75 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| 2-Chloronaphthalene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 2-Nitroaniline | <2.75 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| Dimethylphthalate | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Acenaphthylene | <.550 UJ | [.066] J | <.410 | <.550 | <4.10 | <.550 | [.099] | <.550 UJ |
| 2,6-Dinitrotoluene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 3-Nitroaniline | <2.57 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| Acenaphthene | 1.30 J | 1.20 J | [.300] | <.550 | [2.10] | [.380] | [.420] | [.190] J |
| 2,4-Dinitrophenol | <2.75 UJ | <2.75 UJ | <2.05 UJ | <2.75 UJ | <20.5 UJ | <2.75 UJ | <2.75 UJ | <2.75 UJ |
| 4-Nitrophenol | <2.75 UJ | <2.75 UJ | <2.05 UJ | <2.75 | <20.5 UJ | <2.75 UJ | <2.75 UJ | <2.75 UJ |
| Dibenzofuran | 1.90 J | 1.80 J | .440 | <.550 | [2.40] | .840 | 1.30 | [.150] J |
| 2,4-Dinitrotoluene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Diethylphthalate | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 4-Chlorophenyl-phenylether | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Fluorene | .990 J | 1.10 J | [.320] | <.550 | [1.40] | [.300] | [.200] | [.130] J |
| 4-Nitroaniline | <2.75 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| 4,6-Dinitro-2-Methylphenol | <2.75 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| N-Nitrosodiphenylamine | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.1 | <.550 | <.550 | <.550 UJ |
| 4-Bromophenyl-phenylether | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Hexachlorobenzene | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Dentachlorophenol | <2.75 UJ | <2.75 UJ | <2.05 | <2.75 | <20.5 | <2.75 | <2.75 | <2.75 UJ |
| Phenanthrene | 7.800 J | 6.20 J | 3.90 | .890 | 30.0 | 4.20 | 6.60 | 3.00 J |
| Anthracene | 3.20 J | 3.20 J | 1.30 | [.310] | 7.40 | 1.60 | 2.40 | .830 J |

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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 1A-0-1<br>5/4/88 | 1A-0-1 RE<br>5/4/88 | 1A-1-4<br>5/5/88 | 1A-4-INT<br>5/5/88 | 2A-0-1<br>5/4/88 | 2A-1-3<br>5/4/88 | 2A-3-INT<br>5/4/88 | 3A-0-1<br>5/3/88 |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | <.550 UJ | <.550 | <.410 | [.092] B,J | <4.10 | <.550 | <.550 | <.550 UJ |
| Fluoranthene | 8.50 J | 6.90 J | 7.50 | 1.10 | 52.0 | 5.20 | 7.40 | 7.80 J |
| Pyrene | 9.90 J | 7.80 J | 6.40 | 8.50 | 37.0 | 4.10 | 5.80 | 4.70 J |
| Butylbenzylphthalate | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| 3,3'-Dichlorobenzidine | <1.10 UJ | <1.10 UJ | <.820 | <1.10 | <8.20 | <1.10 | <1.10 | <1.10 UJ |
| Benzo(a)anthracene | 9.20 J | 7.40 J | 5.40 | 4.40 | 33.0 | 4.10 | 4.90 | 4.90 J |
| Chrysene | 9.50 J | 7.30 J | 7.10 | 10.0 | 38.0 | 4.30 | 5.40 | 7.10 J |
| bis(e-Ethylhexyl)phthalate | 1.30 B,J | <.550 UJ | <.410 | 3.40 B,J | [1.30] B,J | 2.10 B,J | 2.60 B,J | [.065] B,J |
| Di-n-octylphthalate | <.550 UJ | <.550 UJ | <.410 | <.550 | <4.10 | <.550 | <.550 | <.550 UJ |
| Benzo(b)fluoranthene | 9.90 J | 7.90 J | 5.30 | 4.20 | 29.0 | 5.00 J | 4.20 J | 4.50 J |
| Benzo(d)fluoranthene | 5.50 J | 6.00 J | 3.10 | 1.80 | 24.0 | 2.70 J | 2.50 J | 2.80 J |
| Benzo(a)pyrene | 6.50 J | 6.50 J | 2.80 | 1.30 | 22.0 | 2.90 | 2.50 | 2.30 J |
| Indeno(1,2,3-cd)pyrene | 1.10 J | 2.00 J | 1.70 J | .640 | 15.0 J | 1.30 | .670 | .850 J |
| Dibenz(a,h)anthracene | [.320] J | [.450] J | .410 | [.170] | [3.000] | [.400] | [.210] | [.210] J |
| Benzo(g,h,i)perylene | 1.20 J | 1.70 J | 1.20 J | [.440] | 12.0 J | 1.30 | .630 | .740 J |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 3A-2-5<br>5/9/88 | 3A-6-9<br>5/9/88 | 3A-10-INT<br>5/10/88 | 4A-0-1<br>5/3/88 | 4A-1-4<br>5/5/88 | 4A-4-INT<br>5/5/88 | 4B-0-1<br>5/3/88 | 4B-1-4<br>5/6/88 |
|---|---|---|---|---|---|---|---|---|
| Phenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| bis(2-Chloroethyl)ether | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2-Chlorophenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 1,3-Dichlorobenzene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 1,4-Dichlorobenzene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Benzyl alcohol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 1,2-Dichlorobenzene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2-Methylphenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| bis-(2-Chloroisopropyl)ether | <.660 UJ | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 4-Methylphenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| N-Nitroso-di-n-propylamine | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Hexachloroethane | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Nitrobenzene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Isophorone | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2-Nitrophenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,4-Dimethylphenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Benzoic Acid | <3.30 UJ | <3.30 UJ | <3.30 UJ | <3.30 UJ | <33.0 R | <2.75 R | <165 UJ | <33.0 UJ |
| bis(2-Chloroethoxy)methane | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,4-Dichlorophenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 1,2,4-Trichlorobenzene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Naphthalene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 4-Chloroaniline | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Hexachlorobutadiene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 4-Chloro-3-methylphenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2-Methylnaphthalene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample<br>Date Collected | 3A-2-5<br>5/9/88 | 3A-6-9<br>5/9/88 | 3A-10-INT<br>5/10/88 | 4A-0-1<br>5/3/88 | 4A-1-4<br>5/5/88 | 4A-4-INT<br>5/5/88 | 4B-0-1<br>5/3/88 | 4B-1-4<br>5/6/88 |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,4,6-Trichlorophenol | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,4,5-Trichlorophenol | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165 | <33.0 |
| 2-Chloronaphthalene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2-Nitroaniline | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165. | <33.0 |
| Dimethylphthalate | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Acenaphthylene | .066 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,6-Dinitrotoluene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 3-Nitroaniline | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165 | <33.0 |
| Acenaphthene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 2,4-Dinitrophenol | <3.30 UJ | <3.30 UJ | <3.30 UJ | <3.30 UJ | <33.0 UJ | <2.75 UJ | <165 UJ | <33.0 UJ |
| 4-Nitrophenol | <3.30 UJ | <3.30 UJ | <3.30 UJ | <3.30 UJ | <33.0 | <2.75 | <165 UJ | <33.0 UJ |
| Dibenzofuran | 1.20 | [.300] | [.590] | <.660 | <6.60 | <.550 | <33.0 | [.650] |
| 2,4-Dinitrotoluene | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Diethylphthalate | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 4-Chlorophenyl-phenylether | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Fluorene | [.300] | [.068] | [.460] | <.660 | <6.60 | <.550 | <33.0 | [1.00] |
| 4-Nitroaniline | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165 | <33.0 |
| 4,6-Dinitro-2-Methylphenol | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165 | <33.0 |
| N-Nitrosodiphenylamine | <.660 | <.660 | <.660 | <.660 | <6.6 | <.550 | <33.0 | <6.60 |
| 4-Bromophenyl-phenylether | <.660 | <.660 | <.660 | <.660 | <6.6 | <.550 | <33.0 | <6.60 |
| Hexachlorobenzene | <.660 | <.660 | <.660 | <.660 | <6.6 | <.550 | <33.0 | <6.60 |
| Dentachlorophenol | <3.30 | <3.30 | <3.30 | <3.30 | <33.0 | <2.75 | <165 | <33.0 |
| Phenanthrene | 13.0 | 4.60 | 7.60 | [.340] | [2.50] | 1.40 | [4.60] | 56.0 |
| Anthracene | 3.90 | [.420] | 1.50 | .730 | [3.10] | 1.10 | [9.00] | 44.0 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
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R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 3A-2-5<br>5/9/88 | 3A-6-9<br>5/9/88 | 3A-10-INT<br>5/10/88 | 4A-0-1<br>5/3/88 | 4A-1-4<br>5/5/88 | 4A-4-INT<br>5/5/88 | 4B-0-1<br>5/3/88 | 4B-1-4<br>5/6/88 |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | .870 B,J | .810 B,J | 1.10 B,J | <.660 | <6.6 | <.550 | <33.0 | <6.60 |
| Fluoranthene | 17.0 | 6.50 | 6.60 | 1.90 | 46.0 | 13.0 | [19.0] | 150 |
| Pyrene | 26.0 | 5.00 | 4.80 | 1.40 | 55.0 | 9.40 | [9.30] | <6.60 |
| Butylbenzylphthalate | <.660 B | <.660 B | <660 B | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| 3,3'-Dichlorobenzidine | <1.32 | <1.32 | <1.32 | <1.32 | <13.20 | <1.10 | <66.0 | <13.2 |
| Benzo(a)anthracene | 21.0 | 1.50 | .840 | 5.30 | 24.0 | 6.80 | 58.0 | 100 |
| Chrysene | 22.0 | 3.20 | 1.10 | 12.0 | 39.0 | 10.0 | 120 | 130 |
| bis(s-Ethylhexyl)phthalate | 2.10 B,J | 2.00 B,J | [.150] B,J | [.160] B,J | [1.90] B,J | 3.90 B,J | <33.0 | <6.60 |
| Di-n-octylphthalate | <.660 | <.660 | <.660 | <.660 | <6.60 | <.550 | <33.0 | <6.60 |
| Benzo(b)fluoranthene | 4.70 | .860 | [.210] | 18.0 | 20.00 | 34.0 | 140 | 97.0 |
| Benzo(d)fluoranthene | 3.60 | <.660 | <.660 | 20.0 | [6.20] | 1.80 | 75.0 | 45.0 |
| Benzo(a)pyrene | 6.10 | <.660 | <.660 | 5.80 | [5.50] | 1.30 | 49.0 | 36.0 |
| Indeno(1,2,3-cd)pyrene | 2.50 J | <.660 UJ | <.660 UJ | 2.90 J | [3.00] | [.420] | 40.0 J | 15.0 J |
| Dibenz(a,h)anthracene | .970 J | <.660 UJ | <.660 UJ | .810 | [.910] | [.160] | [11.0] | [4.80] |
| Benzo(g,h,i)perylene | 2.00 J | <.660 UJ | <.660 UJ | 2.20 J | [2.30] | [.350] | 45.0 J | 14.0 J |

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TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 4B-4-7<br>5/6/88 | 4B-8-INT<br>5/9/88 | 5A-0-1<br>5/2/88 | 5A-INT<br>5/20/88 | 5A-INT-RE<br>5/20/88 | 5A-5-8<br>5/12/88 | 5A-10-13<br>5/12/88 | 5A-15-18<br>5/13/88 |
|---|---|---|---|---|---|---|---|---|
| Phenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| bis(2-Chloroethyl)ether | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2-Chlorophenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 1,3-Dichlorobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 1,4-Dichlorobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ<br><.660 UJ | <.550 | <.550 UJ | <.660 |
| Benzyl alcohol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 1,2-Dichlorobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2-Methylphenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| bis-(2-Chloroisopropyl)ether | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 UJ |
| 4-Methylphenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| N-Nitroso-di-n-propylamine | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Hexachloroethane | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Nitrobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Isophorone | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2-Nitrophenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2,4-Dimethylphenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Benzoic Acid | <16.5 UJ | <2.75 UJ | <2.05 UJ | <2.65 UJ | <3.30 UJ | <2.75 UJ | <2.75 UJ | <3.30 UJ |
| bis(2-Chloroethoxy)methane | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2,4-Dichlorophenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 1,2,4-Trichlorobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Naphthalene | <3.30 | <.550 | [.290] J | [.160] J | [.110] J | [.180] | .810 J | [.140] |
| 4-Chloroaniline | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Hexachlorobutadiene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 4-Chloro-3-methylphenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2-Methylnaphthalene | <3.30 | <.550 | [.180] J | [.076] J | <.660 UJ | [.094] | [.400] J | <.660 |

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TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 4B-4-7<br>5/6/88 | 4B-8-INT<br>5/9/88 | 5A-0-1<br>5/2/88 | 5A-INT<br>5/20/88 | 5A-INT-RE<br>5/20/88 | 5A-5-8<br>5/12/88 | 5A-10-13<br>5/12/88 | 5A-15-18<br>5/13/88 |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2,4,6-Trichlorophenol | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2,4,5-Trichlorophenol | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | <2.75 UJ | <3.30 |
| 2-Chloronaphthalene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2-Nitroaniline | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | 2.75 UJ | <3.30 |
| Dimethylphthalate | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Acenaphthylene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 2,6-Dinitrotoluene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 3-Nitroaniline | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | <2.75 UJ | <3.30 |
| Acenaphthene | <3.30 | <.550 | 1.50 J | [.250] J | [.190] J | [.330] | 1.10 J | [.250] |
| 2,4-Dinitrophenol | <16.5 UJ | <2.75 UJ | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 UJ | <2.75 UJ | <3.30 UJ |
| 4-Nitrophenol | <16.5 UJ | <2.75 UJ | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 UJ | <2.75 UJ | <3.30 UJ |
| Dibenzofuran | <3.30 | <.550 | 1.30 J | [.300] J | [.200] J | [.330] | 1.20 J | [.280] |
| 2,4-Dinitrotoluene | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Diethylphthalate | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 4-Chlorophenyl-phenylether | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Fluorene | <3.30 | <.550 | 1.40 J | [.190] J | [.120] J | [.230] | .570 J | [.200] |
| 4-Nitroaniline | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | <2.75 UJ | <3.30 |
| 4,6-Dinitro-2-Methylphenol | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | <2.75 UJ | <3.30 |
| N-Nitrosodiphenylamine | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 4-Bromophenyl-phenylether | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Hexachlorobenzene | <3.30 | <.550 | <.410 UJ | <.550 UJ | 2.40 J | <.550 | <.550 UJ | <.660 |
| Dentachlorophenol | <16.5 | <2.75 | <2.05 UJ | <2.75 UJ | <3.30 UJ | <2.75 | <.275 UJ | <3.30 |
| Phenanthrene | 7.10 | .590 | 6.60 J | 3.40 J | 2.50 J | 3.80 | 6.10 J | 3.70 |
| Anthracene | 4.60 | [.076] | 3.40 J | .820 J | [.590] J | 1.00 | 2.80 J | .710 |

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TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 4B-4-7<br>5/6/88 | 4B-8-INT<br>5/9/88 | 5A-0-1<br>5/2/88 | 5A-INT<br>5/20/88 | 5A-INT-RE<br>5/20/88 | 5A-5-8<br>5/12/88 | 5A-10-13<br>5/12/88 | 5A-15-18<br>5/13/88 |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | <3.30 | [.079] B,J | <.410 UJ | <.550 UJ | <.660 UJ | [.520] B,J | [.180] B,J | [.075] B,J |
| Fluoranthene | 37.0 | 3.20 | 8.30 J | 3.80 J | 2.50 J | 5.50 | 6.30 J | 5.00 |
| Pyrene | [1.90] | 1.50 | 10.0 J | 3.60 J | 2.30 J | 3.60 | 7.40 J | 3.90 |
| Butylbenzylphthalate | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| 3,3'-Dichlorobenzidine | <6.60 | <1.10 | <.820 UJ | <1.10 UJ | <1.32 UJ | <1.10 | <1.10 UJ | <1.32 |
| Benzo(a)anthracene | 16.0 | [.530] | 9.60 J | 1.70 J | 1.20 J | 2.50 | 5.50 J | 1.80 |
| Chrysene | 27.0 | 1.40 | 9.10 J | 1.70 J | 1.50 J | 2.50 | 5.10 J | 2.00 |
| bis(s-Ethylhexyl)phthalate | [2.60] B,J | 1.80 B,J | 1.40 B,J | [.120] B,J | [.220] B,J | [.130] B,J | [.150] B,J | [.210] B,J |
| Di-n-octylphthalate | <3.30 | <.550 | <.410 UJ | <.550 UJ | <.660 UJ | <.550 | <.550 UJ | <.660 |
| Benzo(b)fluoranthene | 21.0 | [.220] | 15.0 J | .860 J | .800 J | 2.10 J | 3.10 J | .850 |
| Benzo(d)fluoranthene | 10.0 | [.096] | 10.0 J | .640 J | [.590] J | 1.30 J | 2.40 J | [.640] |
| Benzo(a)pyrene | 7.10 | <.550 | 11.0 J | .800J | [.640] J | 1.30 | 2.80 J | [.610] |
| Indeno(1,2,3-cd)pyrene | 5.00 | <.550 UJ | 3.70 J | .620 J | [.260] J | 1.30 J | 1.50 J | [.530] J |
| Dibenz(a,h)anthracene | [1.70] | <.550 UJ | .780 J | [.130] J | [.061] J | [.250] J | [.320] J | [.130] J |
| Benzo(g,h,i)perylene | 4.40 | <.550 UJ | 3.50 J | .630 J | .270 J | .930 J | 1.20 J | <.660 UJ |

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TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5B-0-1<br>5/2/88 | 5B-5-8<br>5/13/88 | 5B-10-13<br>5/16/88 | 5B-15-18<br>5/16/88 | 5B-INT<br>5/19/88 | 5C-0-1<br>5/3/88 | 5C-5-8<br>5/17/88 | 5C-10-13<br>5/17/88 |
|---|---|---|---|---|---|---|---|---|
| Phenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| bis(2-Chloroethyl)ether | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2-Chlorophenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 1,3-Dichlorobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 1,4-Dichlorobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Benzyl alcohol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 1,2-Dichlorobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2-Methylphenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| bis-(2-Chloroisopropyl)ether | <5.50 | <.470 UJ | <.660 UJ | <.550 | <.470 | <.550 | <.470 | <.550 |
| 4-Methylphenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| N-Nitroso-di-n-propylamine | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Hexachloroethane | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Nitrobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Isophorone | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2-Nitrophenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2,4-Dimethylphenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Benzoic Acid | <27.5 UJ | <2.40 UJ | <3.30 UJ | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| bis(2-Chloroethoxy)methane | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2,4-Dichlorophenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 1,2,4-Trichlorobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Naphthalene | [.540] | [.190] | [.076] | [.280] | .570 | [.170] | [.052] | [.310] |
| 4-Chloroaniline | <5.50 | <.470 | <.660 | <.550 UJ | <.470 UJ | <.550 | <.470 | <.550 UJ |
| Hexachlorobutadiene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 4-Chloro-3-methylphenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2-Methylnaphthalene | [.320] | [.100] | <.660 | [.150] | [.450] | [.120] | <.470 | [.150] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5B-0-1<br>5/2/88 | 5B-5-8<br>5/13/88 | 5B-10-13<br>5/16/88 | 5B-15-18<br>5/16/88 | 5B-INT<br>5/19/88 | 5C-0-1<br>5/3/88 | 5C-5-8<br>5/17/88 | 5C-10-13<br>5/17/88 |
|---|---|---|---|---|---|---|---|---|
| Hexachlorobutadiene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2,4,6-Trichlorophenol | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2,4,5-Trichlorophenol | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| 2-Chloronaphthalene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2-Nitroaniline | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| Dimethylphthalate | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Acenaphthylene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 2,6-Dinitrotoluene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 3-Nitroaniline | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| Acenaphthene | [2.20] | <.530 | [.160] | [.520] | 1.40 | .900 | [.140] | [.380] |
| 2,4-Dinitrophenol | <27.5 UJ | <2.40 UJ | <3.30 UJ | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| 4-Nitrophenol | <27.5 UJ | <2.40 UJ | <3.30 UJ | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| Dibenzofuran | [1.80] | .490 | [.150] | .620 | 1.70 | .820 | [.130] | [.480] |
| 2,4-Dinitrotoluene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Diethylphthalate | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 4-Chlorophenyl-phenylether | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Fluorene | [2.00] | .500 | [.065] | [.380] | 1.20 | .880 | [.085] | [.160] |
| 4-Nitroaniline | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| 4,6-Dinitro-2-Methylphenol | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| N-Nitrosodiphenylamine | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 4-Bromophenyl-phenylether | <5.50 | <.470 | <.660 | <.550 | <4.70 | <.550 | <.470 | <.550 |
| Hexachlorobenzene | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Pentachlorophenol | <27.5 | <2.40 | <3.30 | <2.75 | <2.35 | <2.75 | <2.35 | <2.75 |
| Phenanthrene | 21.0 | 4.40 | 2.50 | 6.10 | 7.20 | 7.20 | 2.00 | 4.70 |
| Anthracene | 7.30 | 1.50 | [.480] | 1.60 | 3.30 | 3.30 | [.440] | 1.10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | SB-0-1<br>5/2/88 | SB-5-8<br>5/13/88 | SB-10-13<br>5/16/88 | SB-15-18<br>5/16/88 | SB-INT<br>5/19/88 | SC-0-1<br>5/3/88 | SC-5-8<br>5/17/88 | SC-10-13<br>5/17/88 |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | <5.50 | <.470 | <.660 | [.070] B,J | [.046] B,J | <.550 | <.470 | <.550 |
| Fluoranthene | 27.0 | 5.10 | 3.40 | 7.70 | 6.50 | 8.70 | 2.70 | 5.40 |
| Pyrene | 19.0 | 4.60 | 3.00 | 7.30 | 9.80 | 8.70 | 2.30 | 5.90 |
| Butylbenzylphthalate | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| 3,3'-Dichlorobenzidine | <11.0 | <.940 | <1.32 | <1.10 | <.940 | <1.10 | <.940 | <1.10 |
| Benzo(a)anthracene | 17.0 | 3.30 | 1.50 | 4.20 | 7.10 | 9.10 | 1.00 | 2.80 |
| Chrysene | 17.0 | 3.10 | 1.70 | 4.20 | 6.80 | 9.40 | 1.10 | 3.10 |
| bis(s-Ethylhexyl)phthalate | [1.40] B,J | [.092] B,J | [.160] B,J | [.200] B,J | [.130] B,J | 1.30 B,J | [.140] B,J | <.550 |
| Di-n-octylphthalate | <5.50 | <.470 | <.660 | <.550 | <.470 | <.550 | <.470 | <.550 |
| Benzo(b)fluoranthene | 15.0 | 1.90 | .910 | 2.30 | 3.00 | 13.0 J | .600 | 1.20 |
| Benzo(d)fluoranthene | 12.0 | 1.60 | .750 | 1.70 | 3.30 | <5.90 | [.460] | 1.20 |
| Benzo(a)pyrene | 13.0 | 2.00 | [.620] | 2.20 | 3.50 | 7.40 | [.430] | 1.20 |
| Indeno(1,2,3-cd)pyrene | 6.20 J | 1.10 J | [.300] J | 1.60 | 1.00 | 1.80 | [.380] | .830 |
| Dibenz(a,h)anthracene | [13.0] | [.240] J | [.100] J | [.390] | [.300] | .700 | [.092] | [.180] |
| Benzo(g,h,i)perylene | 6.00 J | 1.10 J | [.420] J | <1.10 UJ | 1.00 J | 2.20 | .490 J | .830 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5C-15-18<br>5/18/88 | 5C-25-INT<br>5/20/88 | 5C-25-INT RE<br>5/20/88 | 5D-0-1<br>5/3/88 | 5D-0-1 RE<br>5/3/88 | 5D-5-8<br>5/12/88 | 5D-10-INT<br>5/12/88 |
|---|---|---|---|---|---|---|---|
| Phenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| bis(2-Chloroethyl)ether | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2-Chlorophenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 1,3-Dichlorobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 1,4-Dichlorobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Benzyl alcohol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 1,2-Dichlorobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2-Methylphenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| bis-(2-Chloroisopropyl)ether | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 UJ | <.470 UJ |
| 4-Methylphenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| N-Nitroso-di-n-propylamine | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Hexachloroethane | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Nitrobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Isophorone | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2-Nitrophenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2,4-Dimethylphenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Benzoic Acid | <2.35 | <3.30 | <3.30 UJ | <2.05 UJ | <2.05 UJ | 2.40 UJ | <2.35 UJ |
| bis(2-Chloroethoxy)methane | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2,4-Dichlorophenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 1,2,4-Trichlorobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Naphthalene | 2.20 | [.540] | [.540] | [.140] J | [.120] J | .590 | [.370] |
| 4-Chloroaniline | <.470 UJ | <.660 UJ | <.660 UJ | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Hexachlorobutadiene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 4-Chloro-3-methylphenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2-Methylnaphthalene | 1.50 | [.270] | [.270] | [.120] J | [.077] J | [.260] | [.170] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5C-15-18<br>5/18/88 | 5C-25-INT<br>5/20/88 | 5C-25-INT RE<br>5/20/88 | 5D-0-1<br>5/3/88 | 5D-0-1 RE<br>5/3/88 | 5D-5-8<br>5/12/88 | 5D-10-INT<br>5/12/88 |
|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2,4,6-Trichlorophenol | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2,4,5-Trichlorophenol | 2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| 2-Chloronaphthalene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2-Nitroaniline | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| Dimethylphthalate | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Acenaphthylene | [.094] | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 2,6-Dinitrotoluene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 3-Nitroaniline | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| Acenaphthene | 3.70 | .660 | .660 | .640 J | .460 J | .760 | 5.30 |
| 2,4-Dinitrophenol | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 UJ | <2.35 UJ |
| 4-Nitrophenol | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 UJ | <2.35 UJ |
| Dibenzofuran | 3.90 | [.650] | [.650] | .670 J | .470 J | .900 | .590 |
| 2,4-Dinitrotoluene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Diethylphthalate | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | 1.40 |
| 4-Chlorophenyl-phenylether | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Fluorene | 3.20 | [.180] | [.180] | .530 J | .450 J | .500 | [.350] |
| 4-Nitroaniline | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| 4,6-Dinitro-2-Methylphenol | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| N-Nitrosodiphenylamine | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| 4-Bromophenyl-phenylether | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Hexachlorobenzene | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Pentachlorophenol | <2.35 | <3.30 | <3.30 | <2.05 UJ | <2.05 UJ | <2.35 | <2.35 |
| Phenanthrene | 13.0 | 4.90 | 4.90 | 5.60 J | 1.60 J | 6.20 | 5.10 |
| Anthracene | 5.40 | 1.60 | 1.60 | 2.20 J | 1.80 J | 2.10 | 1.30 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5C-15-18<br>5/18/88 | 5C-25-INT<br>5/20/88 | 5C-25-INT RE<br>5/20/88 | 5D-0-1<br>5/3/88 | 5D-0-1 RE<br>5/3/88 | 5D-5-8<br>5/12/88 | 5D-10-INT<br>5/12/88 |
|---|---|---|---|---|---|---|---|
| Di-n-butyphthalate | [.057] B,J | <.660 | <.660 UJ | <.410 UJ | <.410 UJ | [.089] B,J | [.098] B,J |
| Fluoranthene | <.470 | 6.70 | 6.70 | 8.20 J | 5.10 J | 6.50 | 6.90 |
| Pyrene | <.470 | 3.90 | 3.90 | 8.10 J | 4.50 J | 5.20 | 3.80 |
| Butylbenzylphthalate | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 B |
| 3,3'-Dichlorobenzidine | <.940 | <1.32 | <1.32 | <.820 UJ | <.820 UJ | <.940 | <.940 |
| Benzo(a)anthracene | 16.0 | 2.10 | 2.10 | 7.30 J | 4.70 J | 4.30 | 2.50 |
| Chrysene | [.220] | 2.30 | 2.30 | 8.10 J | 4.60 J | 4.00 | 2.30 |
| bis(s-Ethylhexyl)phthalate | 14.0 | [.140] B,J | [.140] B,J | 1.10 B,J | <.410 UJ | [.110] B,J | [.130] B,J |
| Di-n-octylphthalate | <.470 | <.660 | <.660 | <.410 UJ | <.410 UJ | <.470 | <.470 |
| Benzo(b)fluoranthene | 16.0 | .850 | .850 | 6.30 J | 7.20 J | 2.90 | 1.20 |
| Benzo(d)fluoranthene | 10.0 | .700 | .700 | 4.10 J | 4.30 J | 1.90 | 1.00 |
| Benzo(a)pyrene | 12.0 | .700 | .700 | 4.50 J | 4.10 J | 2.50 | 1.20 |
| Indeno(1,2,3-cd)pyrene | 3.80 | [.440] | [.440] | 1.40 J | 1.60 J | 2.00 J | [.250] J |
| Dibenz(a,h)anthracene | .920 | [.110] | [.110] | .460 J | [.360] J | [.200] J | [.130] J |
| Benzo(g,h,i)perylene | 3.70 J | [.220]J | [.220] | 1.40 J | 1.50 J | 1.70 J | .650 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO



Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5E-0-1<br>5/3/88 | 5E-5-8<br>5/10/88 | 5E-10-13<br>5/10/88 | 5E-15-18<br>5/11/88 | 5E-20-23<br>5/11/88 | 5E-INT<br>5/23/88 | 6B-20-23<br>5/17/88 |
|---|---|---|---|---|---|---|---|
| Phenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| bis(2-Chloroethyl)ether | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2-Chlorophenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 1,3-Dichlorobenzene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 1,4-Dichlorobenzene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Benzyl alcohol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 1,2-Dichlorobenzene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2-Methylphenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | [.043] |
| bis-(2-Chloroisopropyl)ether | <.660 | <.550 | <.660 | <.470 UJ | <.550 | <.660 | <.330 |
| 4-Methylphenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | [.061] |
| N-Nitroso-di-n-propylamine | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Hexachloroethane | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Nitrobenzene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Isophorone | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2-Nitrophenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2,4-Dimethylphenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Benzoic Acid | <3.30 | <2.75 UJ | <3.30 UJ | <2.35 UJ | <2.75 UJ | <3.30 | <1.650 |
| bis(2-Chloroethoxy)methane | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2,4-Dichlorophenol | <.600 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 1,2,4-Trichlorobenzene | <.600 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Naphthalene | [.077] | [.330] | [.130] | 1.70 | 1.80 | 1.10 | 2.400 |
| 4-Chloroaniline | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 UJ | <.330 UJ |
| Hexachlorobutadiene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 4-Chloro-3-methylphenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2-Methylnaphthalene | <.660 | [.170] | [.067] | 1.50 | <.830 | [.570] | 4.000 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5E-0-1<br>5/3/88 | 5E-5-8<br>5/10/88 | 5E-10-13<br>5/10/88 | 5E-15-18<br>5/11/88 | 5E-20-23<br>5/11/88 | 5E-INT<br>5/23/88 | 6B-20-23<br>5/17/88 |
|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 UJ | <.330 |
| 2,4,6-Trichlorophenol | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2,4,5-Trichlorophenol | <3.30 | <2.75 | <3.30 | <2.35 | 2.75 | <3.30 | <1.650 |
| 2-Chloronaphthalene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 2-Nitroaniline | <3.30 | <2.75 | <3.30 | <2.35 | <2.75 | <3.30 | <1.650 |
| Dimethylphthalate | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Acenaphthylene | <.660 | <.550 | <.660 | [.230] | <.550 | <.660 | <.330 |
| 2,6-Dinitrotoluene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 3-Nitroaniline | <3.30 | <2.75 | <3.30 | <2.35 | <2.75 | <3.30 | <1.650 |
| Acenaphthene | [.180] | .690 | [.300] | <.430 | 2.00 | 1.70 | [.050] |
| 2,4-Dinitrophenol | <3.30 UJ | <2.75 UJ | <3.30 UJ | <2.35 UJ | <2.75 UJ | <3.30 UJ | <1.650 |
| 4-Nitrophenol | <3.30 UJ | <2.75 UJ | <3.30 UJ | <2.35 UJ | <2.75 UJ | <3.30 | <1.650 |
| Dibenzofuran | <.660 | .610 | [.270] | <.430 | 1.90 | 1.90 | .960 |
| 2,4-Dinitrotoluene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Diethylphthalate | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 4-Chlorophenyl-phenylether | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Fluorene | [.170] | [.480] | [.220] | 4.50 | .620 | 2.00 | [.082] |
| 4-Nitroaniline | <3.30 | <2.75 | <3.30 | <2.35 | <2.75 | <3.30 | <1.650 |
| 4,6-Dinitro-2-Methylphenol | <3.30 | <2.75 | <3.30 | <2.35 | <2.75 | <3.30 | <1.650 |
| N-Nitrosodiphenylamine | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 4-Bromophenyl-phenylether | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Hexachlorobenzene | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Pentachlorophenol | <3.30 | <2.75 | <3.30 | <2.35 | <2.75 | <3.30 | <1.650 |
| Phenanthrene | 3.00 | 5.30 | 3.30 | 13.0 | 8.30 | 10.0 | 1.300 |
| Anthracene | .780 | 2.00 | .870 | 5.20 | 4.30 | 5.10 | [.046] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 6 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
Results in mg/kg

| Sample ID<br>Date Collected | 5E-0-1<br>5/3/88 | 5E-5-8<br>5/10/88 | 5E-10-13<br>5/10/88 | 5E-15-18<br>5/11/88 | 5E-20-23<br>5/11/88 | 5E-INT<br>5/23/88 | 6B-20-23<br>5/17/88 |
|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | [.073] | 1.10 B,J | 4.00 B,J | 2.70 B,J | 2.80 B,J | [.067] | <.330 |
| Fluoranthene | 5.00 | 6.40 | 4.30 | 11.0 | 9.40 | 16.0 | [.099] |
| Pyrene | 4.00 | 5.20 | 4.40 | 14.0 | 7.80 | 11.0 | .360 |
| Butylbenzylphthalate | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| 3,3'-Dichlorobenzidine | <1.32 | <1.10 | <1.32 | <.940 | <1.10 | <13.2 | <.660 |
| Benzo(a)anthracene | 2.60 | 4.10 | 2.00 | 14.0 | 6.60 | 9.80 | [.100] |
| Chrysene | 3.60 | 4.00 | 2.00 | 12.0 | 6.50 | 11.0 | [.140] |
| bis(s-Ethylhexyl)phthalate | 3.10 B,J | [.330] B,J | [.500] B,J | [.370] B,J | [.260] B,J | [.160] B,J | [.110] B,J |
| Di-n-octylphthalate | <.660 | <.550 | <.660 | <.470 | <.550 | <.660 | <.330 |
| Benzo(b)fluoranthene | 3.70 J | 3.50 J | 1.10 J | 7.80 | 4.00 J | 6.70 | <.330 |
| Benzo(d)fluoranthene | 2.10 J | 2.50 J | 1.10 J | 5.60 | 3.20 J | 3.10 | <.330 |
| Benzo(a)pyrene | 2.00 | 2.20 | .940 | 9.00 | 2.40 | 3.30 | <.330 |
| Indeno(1,2,3-cd)pyrene | 1.50 | 2.00 J | [.500] J | 2.70 J | 1.40 J | 1.60 J | <.330 |
| Dibenz(a,h)anthracene | [.370] | [.420] J | <.660 UJ | .630 J | [.370] J | [.430] J | <.330 |
| Benzo(g,h,i)perylene | 1.60 | 1.70 J | [.570] J | 2.30 J | .930 J | .950 J | <.330 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 7
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| | 1A-1-4 | 6A-1-4 | 3A-6-9 | 6A-6-9 | 4B-0-1 | 6A-0-1 |
| Phenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| bis(2-Chloroethyl)ether | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2-Chlorophenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 1,3-Dichlorobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 1,4-Dichlorobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Benzyl alcohol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 1,2-Dichlorobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2-Methylphenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| bis-(2-Chloroisopropyl)ether | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 4-Methylphenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| N-Nitroso-di-n-propylamine | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Hexachloroethane | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Nitrobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Isophorone | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2-Nitrophenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2,4-Dimethylphenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Benzoic Acid | <2.05 UJ | <16.5 UJ | <3.30 UJ | <3.30 UJ | <165 UJ | <33.0 UJ |
| bis(2-Chloroethoxy)methane | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2,4-Dichlorophenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 1,2,4-Trichlorobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Naphthalene | [.180] | [.260] | <.660 | <.660 | <33.0 | <6.60 |
| 4-Chloroaniline | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Hexachlorobutadiene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 4-Chloro-3-methylphenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2-Methylnaphthalene | [.120] | [.180] | <.660 | <.660 | <33.0 | <6.60 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: *Quality control indicates that data are unusable (compound may or may not be present).* Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 7 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample 1A-1-4 | Field Duplicate 6A-1-4 | Original Sample 3A-6-9 | Field Duplicate 6A-6-9 | Original Sample 4B-0-1 | Field Duplicate 6A-0-1 |
|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.410 | <3.30 UJ | <.660 | <.660 | <33.0 | <6.60 |
| 2,4,6-Trichlorophenol | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2,4,5-Trichlorophenol | <2.05 | <16.5 | <3.30 | <3.30 | <165 | <33.0 |
| 2-Chloronaphthalene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2-Nitroaniline | <2.05 | <16.5 | <3.30 | <3.30 | <165. | <33.0 |
| Dimethylphthalate | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Acenaphthylene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 2,6-Dinitrotoluene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 3-Nitroaniline | <2.05 | <16.5 | <3.30 | <3.30 | <165 | <33.0 |
| Acenaphthene | [.300] | [.460] | <.660 | <.660 | <33.0 | <6.60 |
| 2,4-Dinitrophenol | <2.05 UJ | <16.5 | <3.30 UJ | <3.30 UJ | <165 UJ | <33.0 UJ |
| 4-Nitrophenol | <2.05 UJ | <16.5 | <3.30 UJ | <3.30 UJ | <165 UJ | <33.0 UJ |
| Dibenzofuran | .440 | [.890] | [.300] | [.350] | <33.0 | <6.60 |
| 2,4-Dinitrotoluene | <.410 | <6.60 | <.660 | <.660 | <33.0 | <6.60 |
| Diethylphthalate | <.410 | <6.60 | <.660 | <.660 | <33.0 | <6.60 |
| 4-Chlorophenyl-phenylether | <.410 | <6.60 | <.660 | <.660 | <33.0 | <6.60 |
| Fluorene | [.320] | [.440] | [.068] | [.082] | <33.0 | <6.60 |
| 4-Nitroaniline | <2.05 | <16.5 | <3.30 | <3.30 | <165 | <33.0 |
| 4,6-Dinitro-2-Methylphenol | <2.05 | <16.5 | <3.30 | <3.30 | <165 | <33.0 |
| N-Nitrosodiphenylamine | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 4-Bromophenyl-phenylether | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Hexachlorobenzene | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Dentachlorophenol | <2.05 | <16.5 | <3.30 | <3.30 | <165 | <33.0 |
| Phenanthrene | 3.90 | [1.30] | 4.60 | 4.90 | [4.60] | [4.70] |
| Anthracene | 1.30 | [2.90] | [.420] | [.540] | [9.00] | 11.0 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; *therefore the associated numerical value is considered to be the quantitation* limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 7 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| | 1A-1-4 | 6A-1-4 | 3A-6-9 | 6A-6-9 | 4B-0-1 | 6A-0-1 |
| Di-n-butylphthalate | <.410 | <3.30 | .810 B,J | <.660 | <33.0 | <6.60 |
| Fluoranthene | 7.50 | 26.0 | 6.50 | 7.10 | [19.0] | 16.0 |
| Pyrene | 6.40 | 33.0 | 5.00 | 5.50 | [9.30] | 7.70 |
| Butylbenzylphthalate | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| 3,3'-Dichlorobenzidine | <.820 | <6.60 | <1.32 | <1.32 | <66.0 | <13.2 |
| Benzo(a)anthracene | 5.40 | 19.0 | 1.50 | 2.20 | 58.0 | 69.0 |
| Chrysene | 7.10 | 27.0 | 3.20 | 4.50 | 120 | 130 |
| bis(s-Ethylhexyl)phthalate | <.410 | [2.40] B,J | 2.00 B,J | 2.30 B,J | <33.0 | [2.10] B,J |
| Di-n-octylphthalate | <.410 | <3.30 | <.660 | <.660 | <33.0 | <6.60 |
| Benzo(b)fluoranthene | 5.30 | 16.0 | .860 | .710 J | 140 | 130 |
| Benzo(d)fluoranthene | 3.10 | 8.30 | <.660 | [.510] J | 75.0 | 62.0 |
| Benzo(a)pyrene | 2.80 | 7.70 | <.660 | <.660 | 49.0 | 55.0 |
| Indeno(1,2,3-cd)pyrene | 1.70 J | 3.80 | <.660 UJ | <.660 UJ | 40.0 J | 25.0 J |
| Dibenz(a,h)anthracene | .410 | [.940] | <.660 UJ | <.660 UJ | [11.0] | 6.80 |
| Benzo(g,h,i)perylene | 1.20 J | 3.70 J | <.660 UJ | <.660 UJ | 45.0 J | 23.0 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
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TABLE 7 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample 4B-4-7 | Field Duplicate 6A-4-7 | Original Sample 5B-5-8 | Field Duplicate 6B-5-8 | Original Sample 5E-10-13 | Field Duplicate 6E-10-13 |
|---|---|---|---|---|---|---|
| Phenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| bis(2-Chloroethyl)ether | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2-Chlorophenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 1,3-Dichlorobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 1,4-Dichlorobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Benzyl alcohol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 1,2-Dichlorobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2-Methylphenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| bis-(2-Chloroisopropyl)ether | <3.30 | <.660 | <.470 UJ | <.470 UJ | <.660 | <.660 UJ |
| 4-Methylphenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| N-Nitroso-di-n-propylamine | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Hexachloroethane | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Nitrobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Isophorone | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2-Nitrophenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2,4-Dimethylphenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Benzoic Acid | <16.5 UJ | <3.30 R | <2.40 UJ | <2.35 UJ | <3.30 UJ | <3.30 UJ |
| bis(2-Chloroethoxy)methane | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2,4-Dichlorophenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 1,2,4-Trichlorobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Naphthalene | <3.30 | <.660 | [.190] | [.120] | [.130] | [.230] |
| 4-Chloroaniline | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Hexachlorobutadiene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 4-Chloro-3-methylphenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2-Methylnaphthalene | <3.30 | <.660 | [.100] | [.057] | [.067] | [.110] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: *Indicates a value greater than or equal to the instrument detection limit* but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 7 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| | 4B-4-7 | 6A-4-7 | 5B-5-8 | 6B-5-8 | 5E-10-13 | 6E-10-13 |
| Hexachlorocyclopentadiene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2,4,6-Trichlorophenol | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2,4,5-Trichlorophenol | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| 2-Chloronaphthalene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2-Nitroaniline | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| Dimethylphthalate | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Acenaphthylene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 2,6-Dinitrotoluene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 3-Nitroaniline | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| Acenaphthene | <3.30 | <.660 | <.530 | [.360] | [.300] | [.530] |
| 2,4-Dinitrophenol | <16.5 UJ | <3.30 UJ | <2.40 UJ | <2.35 UJ | <3.30 UJ | <3.30 UJ |
| 4-Nitrophenol | <16.5 UJ | <3.30 | <2.40 UJ | <2.35 UJ | <3.30 UJ | <3.30 UJ |
| Dibenzofuran | <3.30 | [.120] | .490 | [.350] | [.270] | [.520] |
| 2,4-Dinitrotoluene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Diethylphthalate | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 4-Chlorophenyl-phenylether | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Fluorene | <3.30 | [.120] | .500 | [.340] | [.220] | [.370] |
| 4-Nitroaniline | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| 4,6-Dinitro-2-Methylphenol | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| N-Nitrosodiphenylamine | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| 4-Bromophenyl-phenylether | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Hexachlorobenzene | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Dentachlorophenol | <16.5 | <3.30 | <2.40 | <2.35 | <3.30 | <3.30 |
| Phenanthrene | 7.10 | 5.70 | 4.40 | 3.80 | 3.30 | 5.70 |
| Anthracene | 4.60 | 2.80 | 1.50 | 1.10 | .870 | 1.60 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 7 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| | 4B-4-7 | 6A-4-7 | 5B-5-8 | 6B-5-8 | 5E-10-13 | 6E-10-13 |
| Di-n-butylphthalate | <3.30 | <.660 | <.470 | [.054] B,J | 4.00 B,J | 2.90 B,J |
| Fluoranthene | 37.0 | 16.0 | 5.10 | 3.90 | 4.30 | 6.80 |
| Pyrene | [1.90] | 15.0 | 4.60 | 4.40 | 4.40 | 5.40 |
| Butylbenzylphthalate | <3.30 | <.660 | <.470 B | <.470 B | <.660 B | <.660 B |
| 3,3'-Dichlorobenzidine | <6.60 | <1.32 | <.940 | <.940 | <1.32 | <1.32 |
| Benzo(a)anthracene | 16.0 | 12.0 | 3.30 | 2.50 | 2.00 | 3.70 |
| Chrysene | 27.0 | 16.0 | 3.10 | 2.40 | 2.00 | 3.60 |
| bis(a-Ethylhexyl)phthalate | [2.60] B,J | <3.60 B,J | [.092] B,J | [.130] B,J | [.500] B,J | [.150] B,J |
| Di-n-octylphthalate | <3.30 | <.660 | <.470 | <.470 | <.660 | <.660 |
| Benzo(b)fluoranthene | 21.0 | 9.50 | 1.90 | 1.20 | 1.10 J | 2.10 |
| Benzo(d)fluoranthene | 10.0 | 2.80 | 1.60 | .820 | 1.10 J | 1.60 |
| Benzo(a)pyrene | 7.10 | 3.20 | 2.00 | 1.20 | .940 | 1.90 |
| Indeno(1,2,3-cd)pyrene | 5.00 | 1.90 | 1.10 J | .740 J | [.500] J | 1.70 J |
| Dibenz(a,h)anthracene | [1.70] | .750 | [.240] J | <.470 UJ | <.660 UJ | [.250] J |
| Benzo(g,h,i)perylene | 4.40 | 1.20 | 1.10 J | .670 J | [.570] J | 1.50 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the the associate numberical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 8
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Polychlorinated Biphenyls (PCB)
(Results in mg/kg)

| Sample ID | Date Collected | Aroclor - 1016 | Aroclor - 1221 | Aroclor - 1232 | Aroclor - 1242 | Aroclor - 1248 | Aroclor - 1254 | Aroclor - 1260 |
|---|---|---|---|---|---|---|---|---|
| 1A-0-1 | 5/4/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 1A-1-4 | 5/5/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 1A-4-INT | 5/5/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 2A-0-1 | 5/4/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 2A-1-3 | 5/4/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 2A-3-INT | 5/4/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 3A-0-1 | 5/3/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 3A-2-5 | 5/9/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |
| 3A-6-9 | 5/9/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 3A-10-INT | 5/10/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |
| 4A-0-1 | 5/3/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 4A-1-4 | 5/5/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 4A-4-INT | 5/5/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 4B-0-1 | 5/3/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 4B-1-4 | 5/6/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 4B-4-7 | 5/6/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 4B-8-INT | 5/9/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5A-0-1 | 5/2/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 5A-5-8 | 5/12/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5A-10-13 | 5/12/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5A-15-18 | 5/13/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |
| 5A-INT | 5/20/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5B-0-1 | 5/2/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| 5B-5-8 | 5/13/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5B-10-13 | 5/16/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5B-15-18 | 5/16/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5B-INT | 5/19/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5C-0-1 | 5/3/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 5C-5-8 | 5/17/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5C-10-13 | 5/17/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5C-15-18 | 5/18/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |
| 5C-25-INT | 5/20/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5D-0-1 | 5/3/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 5D-5-8 | 5/12/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5D-10-INT | 5/12/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5E-0-1 | 5/3/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| 5E-5-8 | 5/10/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5E-10-13 | 5/10/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5E-15-18 | 5/11/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5E-20-23 | 5/11/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| 5E-INT | 5/23/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |
| 6B-20-23 | 5/17/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |

TABLE 8 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

Polychlorinated Biphenyls (PCB)
(Results in mg/kg)

| Sample ID | Date Collected | Aroclor - 1016 | Aroclor - 1221 | Aroclor - 1232 | Aroclor - 1242 | Aroclor - 1248 | Aroclor - 1254 | Aroclor - 1260 |
|---|---|---|---|---|---|---|---|---|
| Original Sample 1A-1-4 | 5/5/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| Field Duplicate 6A-1-4 | 5/5/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| Original Sample 3A-6-9 | 5/9/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| Field Duplicate 6A-6-9 | 5/9/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| Original Sample 4B-0-1 | 5/3/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| Field Duplicate 6A-0-1 | 5/3/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| Original Sample 4B-4-7 | 5/6/88 | <1.900 | <3.800 | <1.900 | <1.900 | <1.900 | <3.800 | <1.900 |
| Field Duplicate 6A-4-7 | 5/6/88 | <.190 | <.380 | <.190 | <.190 | <.190 | <.380 | <.190 |
| Original Sample 5B-5-8 | 5/13/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| Field Duplicate 6B-5-8 | 5/13/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| Original Sample 5E-10-13 | 5/10/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| Field Duplicate 6E-10-13 | 5/10/88 | <1.900 | <1.900 | <1.900 | <1.900 | <1.900 | <3.800 | <3.800 |

TABLE 9

RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS

DISPOSAL POND SOLIDS

ORMET CORPORATION

HANNIBAL, OHIO

(Results in mg/kg)

| Sample ID | 1A-0-1 | 1A-1-4 | 1A-4-INT | 2A-0-1 | 2A-1-3 | 2A-3-INT | 3A-0-1 | 3A-2-5 | 3A-6-9 | 3A-10-INT |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/4/88 | 5/5/88 | 5/5/88 | 5/4/88 | 5/4/88 | 5/4/88 | 5/3/88 | 5/9/88 | 5/9/88 | 5/10/88 |
| Aluminum | 48000 | 68100 | 64300 | 67400 | 56900 | 54200 | 88900 | 53800 J | 66400 J | 72900 J |
| Antimony | 13 | [13] | 30 | <6.7 | [11] | [11] | <8.3 | 41 | 37 | 29 |
| Arsenic | 15 J | 43 | 64 J | [20] | [22] | [24] | 50 J | 119 | 109 | 123 |
| Barium | 113 | 139 | [54] | 102 | 106 | 116 | 118 | [76] | [43] | [39] |
| Beryllium | 3.1 | 3.4 | 3.6 | 4.8 | 5.3 | 3.4 | 4.1 | 3.4 | 3.2 | 2.9 |
| Cadmium | <.88 | <1.4 | <1.6 | <1.1 | <1.2 | <1.2 | <1.4 | <1.8 | <1.8 | <1.7 |
| Calcium | 111000 | 169000 | 319000 | 64400 | 106000 | 127000 | 205000 | 350000 | 327000 | 298000 |
| Chromium | 11 | 21 | 59 | 6.4 | 18 | 17 | 41 | 104 J | 99 J | 119 J |
| Cobalt | [5.2] | [7.6] | [14] | [3.6] | [4.2] | [5.7] | [12] | [19] J | [16] J | [18] J |
| Copper | 47 J | 66 J | 101 J | 114 J | 88 J | 70 J | 72 J | 106 J | 105 J | 130 J |
| Iron | 3690 | 5420 | 9330 | 4690 | 4520 | 4560 | 7150 | 10600 | 11000 | 13600 |
| Lead | 19 | 31 | 122 | 19 J | 23 | 25 | 80 | 154 | 159 | 214 |
| Magnesium | 2110 J | 2580 J | 3090 J | [1310] J | 1680 J | 2040 J | 1950 J | 2520 J | 3100 J | 3330 J |
| Manganese | 70 | 123 | 227 | 129 | 172 | 155 | 142 | 171 | 202 | 207 |
| Mercury | <.088 | 0.31 | <.17 | <.11 | <.15 | .14 | .45 | <.20 | <.16 | <.17 |
| Nickel | 62 | 121 | 488 | 27 | 37 | 59 | 199 | 399 J | 445 J | 581 J |
| Potassium | <495 | <775 | <924 | <620 | <683 | <694 | <767 | 1020 | <1010 | <954 |
| Selenium | <5.0 R | <7.4 R | <8.7 R | <5.7 R | <6.3 R | <6.4 R | <7.2 R | <9.7 R | <9.8 R | <9.1 R |
| Silver | <.95 | <1.5 | <1.8 | <1.2 | <1.3 | <1.3 | <1.5 | <1.9 | <1.9 | <1.8 |
| Sodium | 6760 | 16000 | 18100 | 7680 | 6410 | 10500 | 13300 | 16600 J | 13100 J | 11200 J |
| Thallium | <.41 | <.61 | <.72 | <.47 | <.51 | <.53 | <.59 | <.80 | <.81 | <.75 |
| Vanadium | 36 | 115 | 564 | 20 | 32 | 60 | 204 | 503 J | 546 J | 741 J |
| Zinc | 24 J | 25 J | 32 J | 16 J | 57 J | 46 J | 16 J | 75 J | 56 J | 33 J |
| Cyanide | 137 | 83 | 46 | 60 | 104 | 137 | <.85 | 88 | 8.1 | 3.1 |
| % Solids | 88 | 59 | 50 | 74 | 67 | 65 | 59 | 44 | 44 | 46 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
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TABLE 9 (CONT.)

RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS



DISPOSAL POND SOLIDS

ORMET CORPORATION

HANNIBAL, OHIO

(Results in mg/kg)

| Sample ID | 4A-0-1 | 4A-1-4 | 4A-4-INT | 4B-0-1 | 4B-1-4 | 4B-4-7 | 4B-8-INT | 5A-0-1 | 5A-5-8 | 5A-10-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/3/88 | 5/5/88 | 5/5/88 | 5/3/88 | 5/6/88 | 5/6/88 | 5/9/88 | 5/2/88 | 5/12/88 | 5/12/88 |
| Aluminum | 50600 | 48700 | 76800 | 50600 | 58000 | 73600 | 72300 J | 78000 | 90700 | 67400 |
| Antimony | 22 | [15] | [14] | [21] | [25] | [17] | 32 | [7.6] | [13] | [12] |
| Arsenic | 52 J | 56 J | 98 J | 37 J | 57 J | 84 J | 74 | 22 J | [36] | [29] |
| Barium | 308 | 75 | [76] | 423 | [80] | [61] | [42] | 144 | 121 | 107 |
| Beryllium | 3.5 | 3.5 | 3.2 | 3.3 | 4.3 | 4.0 | 2.3 | 13 | 5.5 | 4.8 |
| Cadmium | <1.5 | <1.5 | <1.6 | <1.6 | <1.8 | <1.7 | <1.5 | <1.1 | <1.4 | <1.5 |
| Calcium | 323000 | 267000 | 268000 | 352000 | 348000 | 336000 | 294000 | 92700 | 137000 | 129000 |
| Chromium | 45 | 63 | 52 | 34 | 64 | 60 | 48 J | 12 | 10 J | 11 J |
| Cobalt | [14] | [16] | [14] | [12] | [16] | [14] | [13] J | [3.8] | [6.0] | [5.2] |
| Copper | 76 J | 62 J | 100 J | 53 J | 68 J | 87 J | 126 J | 17 J | 16 | 24 |
| Iron | 9690 | 9690 | 9850 | 7760 | 10000 | 9080 | 7190 | 6690 | 3970 | 3690 |
| Lead | 141 | 183 | 120 | 134 | 212 | 157 | 128 | 17 J | 23 | 29 |
| Magnesium | 4000 J | 2080 J | 2160 J | 3740 J | 2430 J | 2120 J | 2210 J | 1660 J | 2210 J | 2110 J |
| Manganese | 139 | 147 | 140 | 106 | 120 | 149 | 102 | 193 | 99 | 81 |
| Mercury | <.17 | <.17 | <.15 | <.20 | <.19 | <.17 | <.14 | <.11 | <.15 | .22 |
| Nickel | 342 | 357 | 498 | 286 | 358 | 463 | 656 J | 21 | 75 J | 57 J |
| Potassium | <841 | <818 | <872 | <886 | <989 | <934 | <864 | <619 | <800 | <831 |
| Selenium | <8.1 R | <8.0 R | <8.3 R | <8.5 R | <9.2 R | <9.0 R | <8.3 R | <5.9 R | 7.6 R | <7.9 R |
| Silver | <1.6 | <1.6 | <1.7 | <1.7 | <1.9 | <1.8 | <1.7 | <1.2 | <1.5 | <1.6 |
| Sodium | 11000 | 8740 | 7470 | 14200 | 11500 | 10000 | 8830 J | 11100 | 12200 J | 10600 J |
| Thallium | <.66 | <.65 | <.68 | <.69 | <.75 | <.74 | <.68 | [.67] | <.63 | <.65 |
| Vanadium | 490 | 425 | 603 | 389 | 484 | 640 | 555 J | 16 | 44 J | 45 J |
| Zinc | 25 J | 32 J | 34 J | 37 J | 39 J | 52 J | 43 J | 35 J | 24 J | 25 J |
| Cyanide | 66 | 87 | 19 | 59 | 16 | 28 | 1.8 | 92 | 294 | 222 |
| % Solids | 53 | 54 | 52 | 51 | 93 | 48 | 51 | 73 | 56 | 54 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
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TABLE 9 (CONT.)
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO
(Results in mg/kg)

| Sample ID | 5A-15-18 | 5A-INT | 5B-0-1 | 5B-5-8 | 5B-10-13 | 5B-15-18 | 5B-INT | 5C-0-1 | 5C-5-8 | 5C-10-13 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/13/88 | 5/20/88 | 5/2/88 | 5/13/88 | 5/16/88 | 5/16/88 | 5/19/88 | 5/3/88 | 5/17/88 | 5/17/88 |
| Aluminum | 63400 | 78400 | 78800 | 99000 | 91300 | 87100 | 105000 | 89900 | 95500 | 91200 |
| Antimony | [15] | 88 | [8.7] | [8.4] | <9.2 | [11] | [15] | [11] | [12] | [17] |
| Arsenic | 53 | 53 J | 29 | 34 | 49 | 51 | 66 J | 27 J | 41 J | 54 J |
| Barium | [86] | 125 | 131 | 124 | 121 | 106 | 137 | 181 | 128 | 123 |
| Beryllium | 2.9 | 4.8 | 12 | 4.9 | 4.6 | 4.2 | 6.7 J | 11 | 6.6 J | 5.4 J |
| Cadmium | <1.8 | 2.7 | <1.2 | <1.3 | <1.5 | <1.6 | [1.8] | <1.4 | <1.4 | <1.6 |
| Calcium | 170000 | 136000 | 94200 | 104000 | 144000 | 127000 | 124000 | 125000 | 147000 | 153000 |
| Chromium | 13 J | 15 | 16 | 8.5 J | 11 J | 10 J | 20 J | 18 | 15 J | 13 J |
| Cobalt | [9.1] | [6.2] | [4.6] | [6.1] | [8.0] | [8.0] | [6.9] | [5.2] | [7.3] | [8.6] |
| Copper | 28 | 38 J | 20 J | 20 | 28 | 33 | 42 J | 17 J | 22 J | 33 J |
| Iron | 5140 | 5260 | 5400 | 4850 | 4550 | 4540 | 6790 | 5870 | 5420 | 4610 |
| Lead | 36 | 54 | 25 | 18 | 36 | 26 | 29 | 29 | 25 | 31 |
| Magnesium | 2820 J | 2500 J | 1720 J | 1790 J | 2050 J | 2590 J | 2240 J | 1960 J | 2120 J | 2460 J |
| Manganese | 73 | 96 | 197 | 88 | 92 | 105 | 157 | 160 | 113 | 105 |
| Mercury | <.20 | <.14 | <.14 | <.14 | .15 | <.16 | <.17 | <.16 | <.16 | <.19 |
| Nickel | 149 J | 111 J | 19 | 64 J | 86 J | 89 J | 44 | 30 | 71 | 91 |
| Potassium | <1020 | 2510 | <664 | <704 | [1060] | [1190] | [1230] | <774 | [824] | <877 |
| Selenium | <4.9 R | [44] R | <3.2 R | <3.4 R | <4.0 R | <4.1 R | <8.8 R | <7.8 R | <7.5 R | <8.6 R |
| Silver | <2.0 | <.16 | <1.3 | <1.3 | <1.6 | <1.7 | [2.4] | <1.5 | <1.5 | <1.7 |
| Sodium | 27700 J | 23100 J | 12900 | 34100 J | 21700 J | 27500 J | 46100 J | 14500 | 23300 J | 16500 J |
| Thallium | <.80 | <.64 | <.52 | <.55 | <.65 | <.67 | <.72 | <.64 | <.62 | <.71 |
| Vanadium | 113 J | 86 J | 16 | 35 J | 69 J | 61 J | 50 J | 20 | 39 J | 65 J |
| Zinc | 35 J | 41 J | 74 J | 20 J | 28 J | 41 J | 24 J | 44 J | 30 J | 19 J |
| Cyanide | 210 | 197 | 148 | 224 | 171 | 138 | 150 | 194 | 160 | 170 |
| % Solids | 44 | 54 | 66 | 62 | 52 | 52 | 50 | 56 | 56 | 51 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
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TABLE 9 (CONT.)
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO
(Results in mg/kg)

| Sample ID | 5C-15-18 | 5C-25-INT | 5D-0-1 | 5D-5-8 | 5D-10-INT | 5E-0-1 | 5E-5-8 | 5E-10-13 | 5E-15-18 | 5E-20-23 | 5E-INT | 6B-20-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/18/88 | 5/20/88 | 5/3/88 | 5/12/88 | 5/12/88 | 5/3/88 | 5/10/88 | 5/10/88 | 5/11/88 | 5/11/88 | 5/23/88 | 5/17/88 |
| Aluminum | 93900 | 67400 | 91000 | 86300 | 85800 | 84200 | 86300 J | 73200 J | 71800 J | 61300 J | 70100 | 616 |
| Antimony | <11 | 61 | <6.4 | [12] | [8.7] | [16] | [22] | 25 | [11] | 26 | 79 | <6.2 |
| Arsenic | 49 J | 43 J | 26 | [29] | 38 | [30] | [37] | [37] | 23 | 28 | 48 J | 22 |
| Barium | 129 | 156 | 145 | 133 | 147 | 182 | 142 | 110 | 134 | 143 | 123 | [17] |
| Beryllium | 9.1 J | 3.5 | 14 | 5.6 | 6 | 11 | 4.7 | 4.6 | 6.7 | 3.1 | 4.3 | [1.0] |
| Cadmium | <1.8 | <1.5 | <1.0 | <1.3 | <1.4 | <1.6 | <1.5 | <1.5 | <1.4 | <1.5 | <1.5 | <1.0 |
| Calcium | 76600 | 189000 | 68600 | 106000 | 107000 | 152000 | 167000 | 160000 | 97200 | 208000 | 190000 | [586] |
| Chromium | 14 J | 16 | 6.4 | 10 J | 16 J | 23 | 13 J | 16 J | 15 J | 16 J | 26 | 8.8 |
| Cobalt | [6.0] | [2.2] | [3.5] | [4.6] | [6.2] | [5.5] | [8.4] J | [8.8] J | [5.6] J | [6.7] J | [2.0] | [2.2] |
| Copper | 46 J | 37 J | 13 J | 19 | 36 | 12 J | 27 J | 26 J | 38 J | 28 J | 57 J | <3.9 |
| Iron | 6000 | 4660 | 5570 | 5170 | 5680 | 6330 | 4870 | 4380 | 3460 | 3180 | 7260 | 8350 |
| Lead | 25 | 47 | 13 J | 17 | 28 | 23 J | 34 | 29 | 16 | 20 | 67 | 2.3 |
| Magnesium | [1980] J | 2670 J | [1220] J | 1860 J | 2610 J | 2350 J | 2350 J | 3160 J | 1960 J | 2700 J | 1900 J | [172] |
| Manganese | 151 | 161 | 112 | 102 | 98 | 226 | 105 | 78 | 122 | 129 | 120 | 13 |
| Mercury | <.19 | <.18 | <.12 | <.13 | <.16 | <.16 | <.18 | <.13 | <.15 | <.17 | .34 | 0.59 |
| Nickel | 30 | 88 J | 20 | 28 J | 69 J | 30 | 122 J | 109 J | 40 J | 61 J | 168 J | <6.4 |
| Potassium | <986 | <826 | <586 | 748 | <791 | <892 | <854 | <814 | <.758 | <831 | <838 | <567 |
| Selenium | <9.5 R | <38 R | <2.8 R | <7.2 R | <3.8 R | <8.5 R | <8.2 R | <8.1 R | <3.6 R | <4.0 R | <40 R | 2.7 |
| Silver | <1.9 | <1.6 | <1.1 | <1.4 | <1.5 | <1.7 | <1.6 | <1.6 | <1.4 | <1.6 | <1.6 | <1.1 |
| Sodium | 29400 J | 16200 J | 24200 | 12100 J | 19800 J | 7590 | 13000 J | 15300 J | 16200 J | 11900 J | 25600 J | <321 |
| Thallium | <.78 | <.62 | <.46 | <.59 | <.62 | <.70 | <.67 | <.66 | <.59 | <.65 | <.66 | [1.2] |
| Vanadium | 29 J | 104 J | 15 | 22 J | 48 J | 23 | 68 J | 73 J | 35 J | 63 J | 243 J | 13 |
| Zinc | 34 J | 44 J | 17 J | 23 J | 30 J | 170 J | 30 J | 22 J | 28 J | 51 J | 36 J | 13 |
| Cyanide | 180 | 214 | 87 | 180 | 115 | 195 | 251 | 238 | 203 | 9 | 44 | <.63 |
| % Solids | 44 | 54 | 77 | 59 | 56 | 50 | 52 | 54 | 60 | 54 | 52 | 79 |

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S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 10
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO



CLP Inorganic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| Sample ID | 1A-1-4 | 6A-1-4 | 3A-6-9 | 6A-6-9 | 4B-0-1 | 6A-0-1 |
| Aluminum | 68100 | 63700 | 66400 J | 63000 J | 50600 | 52200 |
| Antimony | [13] | [14] | 37 | 32 | [21] | [19] |
| Arsenic | 43 | 31 J | 109 | 111 | 37 J | 48 J |
| Barium | 139 | 143 | [43] | [45] | 423 | 848 |
| Beryllium | 3.4 | 4.1 | 3.2 | 3.4 | 3.3 | 4.0 |
| Cadmium | <1.4 | <1.3 | <1.8 | <1.7 | <1.6 | <1.6 |
| Calcium | 169000 | 180000 | 327000 | 302000 | 352000 | 346000 |
| Chromium | 21 | 27 | 99 J | 89 J | 34 | 41 |
| Cobalt | [7.6] | [10] | [16] J | [15] J | [12] | [15] |
| Copper | 66 J | 83 J | 105 J | 97 J | 53 J | 68 J |
| Iron | 5420 | 6890 | 11000 | 10300 | 7760 | 8950 |
| Lead | 31 | 47 | 159 | 138 | 134 | 139 |
| Magnesium | 2580 J | 2480 J | 3100 J | 2940 J | 3740 J | 6010 J |
| Manganese | 123 | 166 | 202 | 213 | 106 | 151 |
| Mercury | 0.31 | .31 | <.16 | <.20 | <.20 | <.16 |
| Nickel | 121 | 182 | 445 J | 393 J | 286 | 329 |
| Potassium | <775 | <741 | <1010 | <936 | <886 | <895 |
| Selenium | <7.4 R | <7.3 R | <9.8 R | <9.0 R | <8.5 R | <8.7 R |
| Silver | <1.5 | <1.4 | <1.9 | <1.8 | <1.7 | <1.7 |
| Sodium | 16000 | 18300 | 13100 J | 12000 J | 14200 | 13700 |
| Thallium | <.61 | <.60 | <.81 | <.74 | <.69 | <.71 |
| Vanadium | 115 | 174 | 546 J | 496 J | 389 | 416 |
| Zinc | 25 J | 31 J | 56 J | 46 J | 37 J | 36 J |
| Cyanide | 83 | 89 | 8.1 | 7.2 | 59 | 59 |
| % Solids | 59 | 59 | 44 | 48 | 51 | 49 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
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TABLE 10 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL, OHIO

CLP Inorganic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| Sample ID | 4B-4-7 | 6A-4-7 | 5B-5-8 | 6B-5-8 | 5E-10-13 | 6E-10-13 |
| Aluminum | 73600 | 70900 J | 99000 | 199000 | 73200 J | 83500 J |
| Antimony | [17] | 25 | [8.4] | [16] | 25 | 26 |
| Arsenic | 84 J | 67 | 34 | 42 | [37] | 36 |
| Barium | [61] | [63] | 124 | 254 | 110 | 123 |
| Beryllium | 4.0 | 3.2 | 4.9 | 9.1 | 4.6 | 4.9 |
| Cadmium | <1.7 | <1.6 | <1.3 | <1.4 | <1.5 | <1.5 |
| Calcium | 336000 | 323000 | 104000 | 225000 | 160000 | 170000 |
| Chromium | 60 | 63 J | 8.5 J | 24 J | 16 J | 16 J |
| Cobalt | [14] | [16] J | [6.1] | [13] | [8.8] J | [9.6] J |
| Copper | 87 J | 90 J | 20 | 43 | 26 J | 32 J |
| Iron | 9080 | 9630 | 4850 | 9490 | 4380 | 4780 |
| Lead | 157 | 153 | 18 | 38 | 29 | 35 |
| Magnesium | 2120 J | 2050 J | 1790 J | 3690 J | 3160 J | 3370 J |
| Manganese | 149 | 173 | 88 | 180 | 78 | 81 |
| Mercury | <.17 | <.14 | <.14 | .14 | <.13 | <.16 |
| Nickel | 463 | 465 J | 64 J | 150 J | 109 J | 117 J |
| Potassium | <934 | <888 | <704 | [810] | <814 | <849 |
| Selenium | <9.0 R | <8.5 R | <3.4 R | <3.8 R | <8.1 R | <4.1 R |
| Silver | <1.8 | <1.7 | <1.3 | <1.5 | <1.6 | [2.0] |
| Sodium | 10000 | 10100 J | 34100 J | 69400 J | 15300 J | 16400 J |
| Thallium | <.74 | <.69 | <.55 | <.61 | <.66 | <.67 |
| Vanadium | 640 | 626 J | 35 J | 81 J | 73 J | 82 J |
| Zinc | 52 J | 51 J | 20 J | 37 J | 22 J | 24 J |
| Cyanide | 28 | 15 J | 224 | 184 | 24 | 194 |
| % Solids | 48 | 50 | 62 | 56 | 54 | 53 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
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TABLE 11
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg unless otherwise noted)

| Sample ID | Date Collected | pH Std. Units | Nitrogen Ammonia | Fluoride | Silica (as SiO2) | Cyanide (Total) | Cyanide (Amenable) | Solids (% wt.) | TOC | Alkalinity (CaCO3) | Chloride | Sulfate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A-0-1 | 5/4/88 | 9.5 | 29 | 412 | 32 | 309 | 176 | 68 | <6 | 2059 | 15 | 338 |
| 1A-1-4 | 5/5/88 | 9.5 | 167 | 1050 | 22 | 125 | 20 | 60 | 23 | 6333 | 43 | 1000 |
| 1A-4-INT | 5/5/88 | 9.0 | 45 | 340 | 40 | 32 | 7.5 | 53 | 19 | 3396 | 64 | 1396 |
| 2A-0-1 | 5/4/88 | 9.4 | 29 | 214 | 16 | 171 | 124 | 70 | 7 | 1000 | 9 | 117 |
| 2A-0-1 (Dup.) | 5/4/88 | 9.3 | 29 | 246 | 13 | 188 | 120 | 69 | 10 | 1000 | 9 | 100 |
| 2A-1-3 | 5/4/88 | 9.6 | 21 | 323 | 45 | 210 | 160 | 62 | 111 | 1274 | 16 | 387 |
| 2A-3-INT | 5/4/88 | 9.6 | 22 | 561 | 60 | 263 | 35 | 57 | 18 | 2456 | 132 | 965 |
| 3A-0-1 | 5/3/88 | 8.2 | <22 | 534 | 16 | 17 | 6.7 | 58 | 10 | 159 | <7 | 78 |
| 3A-2-5 | 5/9/88 | 7.3 | <28 | 100 | 43 | 162 | <2 | 47 | 28 | 468 | 9 | 4681 |
| 3A-6-9 | 5/9/88 | 7.4 | <28 | 85 | 57 | 11 | <2 | 46 | 13 | 630 | 9 | 6957 |
| 3A-10-INT | 5/10/88 | 7.4 | <27 | 65 | 56 | <2 | <2 | 48 | 10 | 458 | 17 | 9375 |
| 4A-0-1 | 5/3/88 | 7.1 | <27 | 120 | 24 | 153 | 100 | 49 | 10 | 37 | 10 | 1449 |
| 4A-1-4 | 5/5/88 | 7.1 | <28 | 91 | 167 | 124 | 50 | 46 | 13 | 435 | 24 | 3698 |
| 4A-4-INT | 5/5/88 | 7.1 | <22 | 61 | 63 | 29 | 2 | 59 | 7 | 407 | 14 | 3729 |
| 4B-0-1 | 5/3/88 | 7.1 | <26 | 146 | 20 | 80 | 24 | 50 | 10 | 20 | 8 | 1088 |
| 4B-1-4 | 5/6/88 | 7.2 | <30 | 89 | 130 | 250 | <2 | 44 | 14 | 341 | 9 | 2159 |
| B-4-7 | 5/6/88 | 7.2 | <27 | 78 | 55 | 71 | 2 | 49 | 20 | 571 | 8 | 3061 |
| -8-INT | 5/9/88 | 7.2 | <25 | 60 | 83 | <2 | <2 | 53 | <8 | 585 | 11 | 4528 |
| 5A-0-1 | 5/2/88 | 8.7 | 36 | 116 | <11 | 205 | <1 | 73 | 25 | 178 | 14 | 47 |
| 5A-0-1 (Dup.) | 5/2/88 | 9.0 | 32 | 107 | 13 | 267 | <1 | 75 | 40 | 173 | 13 | 47 |
| 5A-5-8 | 5/12/88 | 9.4 | 164 | 621 | 59 | 690 | <2 | 58 | 26 | 5172 | 98 | 362 |
| 5A-10-13 | 5/12/88 | 9.5 | 203 | 441 | 36 | 339 | <2 | 59 | 14 | 3898 | 14 | 1170 |
| 5A-15-18 | 5/13/88 | 8.8 | 152 | 1417 | <17 | 375 | <2 | 48 | 27 | 10000 | 113 | 5833 |
| A-INT | 5/20/88 | 10.5 | 102 | 1138 | <14 | 414 | <2 | 58 | 21 | 5517 | 124 | 3793 |
| 5B-0-1 | 5/2/88 | 9.0 | 27 | 312 | <12 | 266 | <2 | 64 | 25 | 516 | 16 | 122 |
| 5B-5-8 | 5/13/88 | 9.0 | 93 | 1150 | <13 | 400 | <2 | 60 | 20 | 5333 | 43 | 1417 |
| 5B-10-13 | 5/16/88 | 7.1 | 137 | 192 | 98 | 353 | <2 | 51 | 12 | 2745 | 112 | 2157 |
| 5B-15-18 | 5/16/88 | 9.4 | 172 | 157 | 44 | 241 | <2 | 54 | 15 | 2222 | 202 | 14815 |
| 5B-INT | 5/19/88 | 9.1 | 79 | 619 | <13 | 270 | 63 | 63 | 21 | 4127 | 556 | 7937 |
| 5C-0-1 | 5/3/88 | 8.4 | 33 | 491 | 15 | 455 | <1 | 55 | 18 | 818 | 27 | 236 |
| 5C-5-8 | 5/17/88 | 8.7 | 159 | 952 | 22 | 349 | <1 | 63 | 22 | 4286 | 138 | 746 |
| 5C-10-13 | 5/17/88 | 8.5 | 171 | 1269 | 27 | 327 | <1 | 52 | 15 | 5192 | 50 | 2308 |
| 5C-10-13 (Dup.) | 5/17/88 | 8.4 | 94 | 1308 | 29 | 308 | <1 | 52 | 19 | 5192 | 60 | 2308 |
| 5C-15-18 | 5/18/88 | 8.4 | 189 | 354 | <8 | 215 | <1 | 65 | <4 | 1692 | 46 | 2769 |
| 5C-25-INT | 5/20/88 | 9.0 | 88 | 1241 | <8 | 379 | 103 | 58 | 41 | 9138 | 379 | 3966 |
| 5D-0-1 | 5/3/88 | 8.5 | 32 | 250 | <11 | 237 | <1 | 76 | 11 | 289 | 5 | 54 |
| 5D-5-8 | 5/12/88 | 9.5 | 172 | 328 | 48 | 516 | <2 | 64 | 19 | 2812 | 88 | 203 |
| 5D-5-8 (Dup.) | 5/12/88 | 8.8 | 234 | 312 | 73 | 484 | <2 | 64 | 19 | 2656 | 48 | 250 |
| 5D-10-INT | 5/12/88 | 9.3 | 115 | 631 | 23 | 338 | <2 | 65 | 6 | 3846 | 15 | 446 |
| 5E-0-1 | 5/3/88 | 8.3 | <27 | 312 | 30 | 896 | <2 | 48 | 31 | 625 | 75 | 312 |
| 5E-5-8 | 5/10/88 | 8.9 | 29 | 929 | 112 | 357 | <2 | 56 | 27 | 3750 | 100 | 1964 |
| 5E-10-13 | 5/10/88 | 7.5 | 77 | 768 | 38 | 321 | 54 | 56 | 14 | 5536 | 32 | 1018 |
| -15-18 | 5/11/88 | 9.4 | 121 | 227 | 24 | 258 | 30 | 66 | <6 | 1818 | 50 | 4697 |
| -20-23 | 5/11/88 | 9.6 | 77 | 491 | 14 | 228 | 35 | 57 | 19 | 3509 | 193 | 3684 |
| 5E-INT | 5/23/88 | 9.6 | 110 | 1600 | <16 | 160 | <2 | 50 | 24 | 7600 | 360 | 9400 |

TABLE 12
COMPARISON OF DUPLICATE SAMPLE ANALYSES
DISPOSAL POND SOLIDS
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg unless otherwise noted)

| Sample ID | pH Std. Units | Nitrogen Ammonia | Fluoride | Silica (as SiO2) | Cyanide (Total) | Cyanide (Amenable) | Solids (% wt.) | TOC | Alkalinity (CaCO3) | Chloride | Sulfate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Original Sample 1A-1-4 | 9.5 | 167 | 1050 | 22 | 125 | 20 | 60 | 23 | 6333 | 48 | 1000 |
| Field Duplicate 6A-1-4 | 9.0 | 241 | 983 | 16 | 155 | 3 | 58 | 22 | 6207 | 93 | 1190 |
| Original Sample 3A-6-9 | 7.4 | <28 | 85 | 57 | 11 | <2 | 46 | 13 | 630 | 9 | 6957 |
| Field Duplicate 6A-6-9 | 7.5 | <28 | 45 | 55 | 4 | <2 | 47 | <9 | 574 | 9 | 7021 |
| Original Sample 4B-0-1 | 7.1 | <26 | 146 | 20 | 80 | 24 | 50 | 10 | 20 | 8 | 1080 |
| Field Duplicate 6A-0-1 | 7.4 | <25 | 144 | 33 | 35 | <2 | 52 | <8 | 35 | <8 | 1346 |
| Original Sample 4B-4-7 | 7.2 | <27 | 78 | 55 | 71 | 2 | 49 | 20 | 571 | 8 | 3061 |
| Field Duplicate 6A-4-7 | 7.1 | <27 | 67 | 165 | 75 | 6 | 48 | 8 | 583 | 12 | 4375 |
| Original Sample 5B-5-8 | 9.0 | 93 | 1150 | <13 | 400 | <2 | 60 | 20 | 5333 | 43 | 1417 |
| Field Duplicate 6B-5-8 | 8.6 | 102 | 1218 | <15 | 400 | <2 | 55 | 30 | 6182 | 73 | 1691 |
| Original Sample 5E-10-13 | 7.5 | 77 | 768 | 38 | 321 | 54 | 56 | 14 | 5536 | 32 | 1018 |
| Field Duplicate 6E-10-13 | 9.5 | 107 | 741 | 30 | 352 | 111 | 54 | 11 | 5556 | 31 | 5556 |

TABLE 13
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN DISPOSAL POND SOLIDS SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

*Results in mg/kg*

| Sample ID | Methylene Chloride | Acetone | Carbon Disulfide | Chloroform | 1,1,1-Trichloroethane | Trichloroethene | Benzene | Tetrachloroethene | Toluene | Chlorobenzene | Styrene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1A-0-1 | .023 B,J | .045 B,J | --- | --- | [.004] | --- | [.004] | --- | --- | --- | --- |
| 1A-1-4 | .019 B,J | .030 B,J | --- | [.003] B,J | --- | --- | [.004] B,J | --- | [.003] B,J | --- | --- |
| 1A-1-4RE | .077 J | .074 B,J | --- | .011J | --- | --- | [.004] B,J | --- | [.030] B,J | --- | --- |
| 1A-4-INT | .011 B,J | .059 B,J | --- | --- | --- | --- | [.004] | --- | [.002] | --- | --- |
| 2A-01 | .051 J | .020 B,J | --- | .005 J | --- | --- | [.003] B,J | --- | [.004] B,J | --- | --- |
| 2A-0-1RE | .065 J | .018 B,J | --- | 0.10 J | --- | --- | [.004] B,J | --- | [.002] B,J | --- | --- |
| 2A-1-3 | .130 J | .034 B,J | --- | .005 J | --- | --- | [.004] B,J | --- | [.004] B,J | --- | --- |
| 2A-1-3RE | .067 J | .027 B,J | --- | .009 J | --- | --- | [.003] B,J | --- | [.003] B,J | --- | --- |
| 2A-3-INT | .036 J | .030 B,J | --- | 0.10 J | --- | --- | [.006] B,J | --- | [.005] B,J | --- | [.002]J |
| 2A-3-INT RE | .046 J | [.007] B,J | --- | 0.12 J | --- | --- | [.006] B,J | --- | [.003] B,J | --- | --- |
| 3A-0-1 | .013 B,J | [.011] B,J | --- | --- | --- | --- | [.005] B,J | --- | [.002] | --- | --- |
| 3A-2-5 | .017 B,J | .028 B,J | --- | [.009] | --- | --- | [.004] | <.011 | --- | --- | --- |
| 3A-6-9 | .010 B,J | [.021] B,J | --- | .010 | --- | --- | [.003] | --- | --- | --- | --- |
| 3A-10-INT | .042 B,J | [.009] B,J | --- | .039 | --- | --- | [.003] | --- | --- | --- | --- |
| 4A-0-1 | .017 B,J | .040 B,J | --- | --- | --- | --- | [.004] B,J | --- | [.002] | --- | --- |
| 4A-1-4 | .013 B,J | .044 B,J | --- | --- | --- | [.002] | [.005] | [.002] | [.002] | --- | --- |
| 4A-4-INT | .010 B,J | .160 B,J | --- | [.002] B,J | --- | --- | [.004] B,J | .047 | --- | --- | --- |
| 4B-0-1 | .014 B,J | .022 B,J | --- | --- | --- | --- | [.004] B,J | --- | --- | --- | --- |
| 4B-1-4 | .011 B,J | .140 B,J | --- | --- | --- | --- | [.006] B,J | --- | --- | --- | --- |
| 4B-4-7 | .092 J | .040 B,J | --- | .019 J | --- | --- | [.004] B,J | --- | [.004] B,J | --- | --- |
| 4B-4-7 RE | .061 J | .022 B,J | --- | .012 J | --- | --- | [.003] B,J | --- | [.002] B,J | --- | --- |
| 4B-8-INT | .016 B,J | [.013] B,J | --- | .010 | --- | --- | [.003] | --- | --- | --- | --- |
| 5A-0-1 | .130 | [.004] B,J | --- | --- | --- | --- | .005 B,J | --- | --- | --- | --- |
| 5A-5-8 | [.003] J | [.005] B,J | --- | [.005] | --- | --- | [.002] B,J | --- | [.002] | --- | --- |
| 5A-10-13 | [.004] | [.004] B,J | [.004] J | [.004] | --- | --- | [.004] B,J | --- | [.002] | --- | --- |
| 5A-10-18 | [.004] | [.004] B,J | .013 J | .014 | --- | --- | [.004] B,J | --- | [.002] | --- | --- |
| 5A-INT | .120 B,J | [.075] B,J | .058 BJ | .012 J | --- | --- | [.006] B,J | --- | [.002] B,J | --- | --- |
| 5A-INT RE | .081 J | .078 B,J | .020 J | .011 J | --- | --- | [.007] B,J | --- | [.004] B,J | --- | --- |

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TABLE 13 (CONT.)
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN DISPOSAL POND SOLIDS SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | Methylene Chloride | Acetone | Carbon Disulfide | Chloroform | 1,1,1-Trichloroethane | Trichloroethene | Benzene | Tetrachloroethene | Toluene | Chlorobenzene | Styrene |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 5B-0-1 | .086 | .015 B,J | --- | --- | --- | --- | [.006] B,J | --- | --- | [.004] | --- |
| 5B-5-8 | [.003] | [.003] B,J | --- | .016 | --- | --- | [.003] B,J | --- | [.002] | --- | --- |
| 5B-10-13 | .063 B,J | .070 B,J | .060 | .018 | --- | --- | [.005] B,J | --- | --- | --- | --- |
| 5B-10-13RE | .160 B,J | .058 B,J | .064 B,J | .013 J | --- | --- | [.008] B,J | --- | [.004] B,J | --- | --- |
| 5B-15-18 | .075 B,J | .074 B,J | .079 J | .017 J | --- | --- | [.005] B,J | --- | [.002] J | --- | --- |
| 5B-15-18RE | .130 B,J | .072 B,J | .027 B,J | .014 | --- | --- | [.007] B,J | --- | [.002] B,J | --- | --- |
| 5B-INT | .100 B,J | .068 B,J | .048 B,J | .012 J | --- | --- | .015 J | --- | [.003] B,J | --- | --- |
| 5B-INT RE | .240 B,J | --- | --- | --- | --- | --- | [.007] B,J | --- | [.003] B,J | --- | --- |
| 5C-0-1 | .010 B,J | [.009] B,J | --- | --- | --- | --- | [.006] B,J | --- | [.002] | --- | --- |
| 5C-5-8 | .061 B,J | .086 B,J | .061 J | .015 J | --- | --- | [.004] B,J | --- | --- | --- | --- |
| 5C-5-8 RE | .150 B,J | .062 B,J | .041 B,J | .012 J | --- | --- | .[007] B,J | --- | --- | --- | --- |
| 5C-10-13 | .120 B,J | .061 B,J | .061 B,J | .011 J | --- | --- | [.006] B,J | --- | [.002] B,J | --- | --- |
| 5C-10-13RE | .014 J | .075 B,J | [.005] J | [.008] J | --- | --- | [.008] B,J | --- | [.004] B,J | --- | --- |
| 5C-15-18 | .094 B,J | .040 B,J | .037 B,J | .012 J | --- | --- | .009 B,J | --- | [.002] B,J | --- | --- |
| 5C-15-18RE | .060 J | .200 B,J | [.006] J | --- | --- | --- | [.005] B,J | --- | [.004] B,J | .008 J | --- |
| 5C-25-INT | .082 B,J | .029 B,J | .013 B,J | .012 J | --- | --- | [.006] B,J | --- | --- | --- | --- |
| 5C-25-INT RE | .075 J | .069 B,J | [.004] J | .009 J | --- | --- | [.006] B,J | [.006] J | [.005] B,J | --- | --- |
| 5D-0-1 | .090 | .011 B,J | --- | --- | --- | --- | [.005] B,J | --- | --- | [.002] | --- |
| 5D-0-1RE | .140 | .049 B,J | --- | --- | --- | --- | [.003] | --- | --- | --- | --- |
| 5D-5-8 | [.003] | [.005] B,J | [.002] J | [.004] | --- | --- | [.002] B,UJ | --- | [.002] | --- | --- |
| 5-10-INT | [.004] J | [.009] B,J | .008 UJ | [.004] J | --- | --- | [.003] B,J | --- | [.002] J | --- | --- |
| 5-10-INT RE | .083 B,J | .164 J | .056 J | .013 J | --- | --- | [.005] B,J | [.006] J | [.003] J | --- | --- |
| 5E-0-1 | .012 B,J | [.008] B,J | --- | --- | --- | --- | .010 B,J | --- | [.006] | --- | --- |
| 5E-5-8 | .198 | .024 B,J | --- | .017 | --- | --- | [.003] | --- | --- | --- | --- |
| 5E-10-13 | .60 J | [.015] B,J | .017 J | .012 J | --- | --- | [.003] J | --- | --- | --- | --- |
| 5E-10-13RE | [.005] J | [.009] B,J | .031 J | .015 J | --- | --- | [.004] B,J | --- | --- | --- | --- |
| 5E-15-18 | .068 J | .016 B,J | --- | .012 J | --- | --- | [.004] J | --- | --- | --- | --- |
| 5E-15-18RE | .069 B,J | .091 B,J | --- | .015 J | --- | --- | [.006] B,J | --- | --- | --- | --- |
| 5E-20-23 | .052 J | [.013] B,J | --- | .016 J | --- | --- | [.003] J | --- | --- | --- | --- |
| 5E-20-23RE | .076 B,J | .079 B,J | --- | .019 J | --- | --- | [.005] B,J | --- | --- | --- | --- |
| 5E-INT | .055 B,J | .034 B,J | .043 B,J | .012 | --- | --- | [.009] B,J | --- | [.003] B,J | --- | --- |
| 5E-INTR RE | .110 B,J | --- | --- | [.008] J | --- | --- | [.005] B,J | --- | [.004] B,J | --- | --- |

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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

# TABLE 14
## SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN DISPOSAL POND SOLIDS SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

Results in mg/kg

| Sample ID | 1A-0-1 | 1A-0-1 RE | 1A-1-4 | 1A-4-INT | 2A-0-1 | 2A-1-3 | 2A-3-INT | 3A-0-1 | 3A-2-5 | 3A-6-9 | 3A-10-INT | 4A-0-1 | 4A-1-4 | 4A-4-INT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | | | | | | | |
| Naphthalene | .940 J | .870 J | [.180] | --- | [.800] | [.320] | .930 | --- | --- | --- | --- | --- | --- | --- |
| 2-Methylnaphthalene | [.450] J | [.400] J | [.120] | --- | [.500] | [.200] | [.460] | --- | --- | --- | --- | --- | --- | --- |
| Acenaphthylene | --- | [.066] J | --- | --- | --- | --- | [.099] | --- | .066 | --- | --- | --- | --- | --- |
| Acenaphthene | 1.30 J | 1.20 J | [.300] | --- | [2.10] | [.380] | [.420] | [.190] J | --- | --- | --- | --- | --- | --- |
| Dibenzofuran | 1.90 J | 1.80 J | .440 | --- | [2.40] | .840 | 1.30 | [.150] J | 1.20 | [.300] | [.590] | --- | --- | --- |
| Fluorene | .990 J | 1.10 J | [.320] | --- | [1.40] | [.300] | [.200] | [.130] J | [.300] | [.068] | [.460] | --- | --- | --- |
| Phenanthrene | 7.800 J | 6.20 J | 3.90 | .890 | 30.0 | 4.20 | 6.60 | 3.00 J | 13.0 | 4.60 | 7.60 | [.340] | [2.50] | 1.40 |
| Anthracene | 3.20 J | 3.20 J | 1.30 | [.310] | 7.40 | 1.60 | 2.40 | .830 J | 3.90 | [.420] | 1.50 | .730 | [3.10] | 1.10 |
| Fluoranthene | 8.50 J | 6.90 J | 7.50 | 1.10 | 52.0 | 5.20 | 7.40 | 7.80 J | 17.0 | 6.50 | 6.60 | 1.90 | 46.0 | 13.0 |
| Pyrene | 9.90 J | 7.80 J | 6.40 | 8.50 | 37.0 | 4.10 | 5.80 | 4.70 J | 26.0 | 5.00 | 4.80 | 1.40 | 55.0 | 9.40 |
| Benzo(a)anthracene | 9.20 J | 7.40 J | 5.40 | 4.40 | 33.0 | 4.10 | 4.90 | 4.90 J | 21.0 | 1.50 | .840 | 5.30 | 24.0 | 6.80 |
| Chrysene | 9.50 J | 7.30 J | 7.10 | 10.0 | 38.0 | 4.30 | 5.40 | 7.10 J | 22.0 | 3.20 | 1.10 | 12.0 | 39.0 | 10.0 |
| Benzo(b)fluoranthene | 9.90 J | 7.90 J | 5.30 | 4.20 | 29.0 | 5.00 J | 4.20 J | 4.50 J | 4.70 | .860 | [.210] | 18.0 | 20.00 | 34.0 |
| Benzo(d)fluoranthene | 5.50 J | 6.00 J | 3.10 | 1.80 | 24.0 | 2.70 J | 2.50 J | 2.80 J | 3.60 | --- | --- | 20.0 | [6.20] | 1.80 |
| Benzo(a)pyrene | 6.50 J | 6.50 J | 2.80 | 1.30 | 22.0 | 2.90 | 2.50 | 2.30 J | 6.10 | --- | --- | 5.80 | [5.50] | 1.30 |
| Indeno(1,2,3-cd)pyrene | 1.10 J | 2.00 J | 1.70 J | .640 | 15.0 J | 1.30 | .670 | .850 J | 2.50 J | --- | --- | 2.90 J | [3.00] | [.420] |
| Dibenz(a,h)anthracene | [.320] J | [.450] J | .410 | [.170] | [.300] | [.400] | [.210] | [.210] J | .970 J | --- | --- | .810 | [.910] | [.160] |
| Benzo(g,h,i)perylene | 1.20 J | 1.70 J | 1.20 J | [.440] | 12.0 J | 1.30 | .630 | .740 J | 2.00 J | --- | --- | 2.20 J | [2.30] | [.350] |
| TOTAL PAHs | 78.2 | 68.79 | 47.47 | 33.75 | 306.9 | 39.14 | 46.62 | 40.2 | 124.34 | 22.45 | 23.7 | 71.38 | 207.51 | 79.73 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | | | | | | | |
| bis(2-ethylhexyl)phthalate | 1.30 B,J | --- | --- | 3.40 B,J | [1.30] B,J | 2.10 B,J | 2.60 B,J | [.065] B,J | 2.10 B,J | 2.00 B,J | [.150] B,J | [.160] B,J | [.190] B,J | 3.90 B,J |
| Di-n-butylphtalate | --- | --- | --- | [.092] B,J | --- | --- | --- | --- | .870 B,J | .810 B,J | 1.10 B,J | --- | --- | --- |

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# TABLE 14 (CONT.)
## SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN DISPOSAL POND SOLIDS SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

Results in mg/kg

| Sample ID | 4B-0-1 | 4B-1-4 | 4B-4-7 | 4B-8-INT | 5A-0-1 | 5A-INT | 5A-INT-RE | 5A-5-8 | 5A-10-13 | 5A-15-18 | 5B-0-1 | 5B-5-8 | 5B-10-13 | 5B-15-18 | 5B-INT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | | | | | | | | |
| Naphthalene | --- | --- | --- | --- | [.290] J | [.160] J | [.110] J | [.180] | .810 J | [.140] | [.540] | [.190] | [.076] | [.280] | .570 |
| 2-Methylnaphthalene | --- | --- | --- | --- | [.180] J | [.076] J | --- | [.094] | [.400] J | --- | [.320] | [.100] | --- | [.150] | [.450] |
| Acenaphthylene | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Acenaphthene | --- | --- | --- | --- | 1.50 J | [.250] J | [.190] J | [.330] | 1.10 J | [.250] | [2.20] | --- | [.160] | [.520] | 1.40 |
| Dibenzofuran | --- | --- | --- | --- | 1.30 J | [.300] J | [.200] J | [.330] | 1.20 J | [.280] | [1.80] | .490 | [.150] | .620 | 1.70 |
| Fluorene | --- | --- | --- | --- | 1.40 J | [.190] J | [.120] J | [.230] | .570 J | [.200] | [2.00] | .500 | [.065] | [.380] | 1.20 |
| Phenanthrene | [4.60] | 56.0 | 7.10 | .590 | 6.60 J | 3.40 J | 2.50 J | 3.80 | 6.10 J | 3.70 | 21.0 | 4.40 | 2.50 | 6.10 | 7.20 |
| Anthracene | [9.00] | 44.0 | 4.60 | [.076] | 3.40 J | .820 J | [.590] J | 1.00 | 2.80 J | .710 | 7.30 | 1.50 | [.480] | 1.60 | 3.30 |
| Fluoranthene | [19.0] | 150 | 37.0 | 3.20 | 8.30 J | 3.80 J | 2.50 J | 5.50 | 6.30 J | 5.00 | 27.0 | 5.10 | 3.40 | 7.70 | 6.50 |
| Pyrene | [9.30] | --- | [1.90] | 1.50 | 10.0 J | 3.60 J | 2.30 J | 3.60 | 7.40 J | 3.90 | 19.0 | 4.60 | 3.00 | 7.30 | 9.80 |
| Benzo(a)anthracene | 58.0 | 100 | 16.0 | [.530] | 9.60 J | 1.70 J | 1.20 J | 2.50 | 5.50 J | 1.80 | 17.0 | 3.30 | 1.50 | 4.20 | 7.10 |
| Chrysene | 120 | 130 | 27.0 | 1.40 | 9.10 J | 1.70 J | 1.50 J | 2.50 | 5.10 J | 2.00 | 17.0 | 3.10 | 1.70 | 4.20 | 6.80 |
| Benzo(b)fluoranthene | 140 | 97.0 | 21.0 | [.220] | 15.0 J | .860 J | .800 J | 2.10 J | 3.10 J | .850 | 15.0 | 1.90 | .910 | 2.30 | 3.00 |
| Benzo(d)fluoranthene | 75.0 | 45.0 | 10.0 | [.096] | 10.0 J | .640 J | [.590] J | 1.30 J | 2.40 J | [.640] | 12.0 | 1.60 | .750 | 1.70 | 3.30 |
| Benzo(a)pyrene | 49.0 | 36.0 | 7.10 | --- | 11.0 J | .800J | [.640] J | 1.30 | 2.80 J | [.610] | 13.0 | 2.00 | [.620] | 2.20 | 3.50 |
| Indeno(1,2,3-cd)pyrene | 40.0 J | 15.0 J | 5.00 | --- | 3.70 J | .620 J | [.260] J | 1.30 J | 1.50 J | [.530] J | 6.20 J | 1.10 J | [.300] J | 1.60 | 1.00 |
| Dibenz(a,h)anthracene | [11.0] | [4.80] | [1.70] | --- | .780 J | [.130] J | [.061] J | [.250] J | [.320] J | [.130] J | [13.0] | [.240] J | [.100] J | [.390] | [.300] |
| Benzo(g,h,i)perylene | 45.0 J | 14.0 J | 4.40 | --- | 3.50 J | .630 J | .270 J | .930 J | 1.20 J | --- | 6.00 J | 1.10 J | [.420] J | --- | 1.00 J |
| TOTAL PAHs | 579.9 | 693.45 | 142.8 | 7.61 | 95.65 | 19.68 | 13.83 | 27.24 | 48.6 | 20.74 | 180.36 | 31.22 | 16.13 | 41.24 | 58.12 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | | | | | | | | |
| Hexachlorobenzene | --- | --- | --- | --- | --- | --- | 2.40 J | --- | --- | --- | --- | --- | --- | --- | --- |
| bis(2-ethylhexyl)phthalate | --- | --- | [2.60] B,J | 1.80 B,J | [1.40] B,J | [.120] B,J | [.220] B,J | [.130] B,J | [.150] B,J | [.210] B,J | [1.40] B,J | [.092] B,J | [.160] B,J | [.200] B,J | [.130] B,J |
| Di-n-butylphthalate | --- | --- | --- | [.079] B,J | --- | --- | --- | [.520] B,J | [.180] B,J | [.075] B,J | --- | --- | --- | [.070] B,J | [.046] B,J |

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# TABLE 14 (CONT.)
## SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN DISPOSAL POND SOLIDS SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

Results in mg/kg

| Sample ID | 5C-0-1 | 5C-5-8 | 5C-10-13 | 5C-15-18 | 5C-25-INT | 5C-25-INT RE | 5D-0-1 | 5D-0-1 RE | 5D-5-8 | 5D-10-INT | 5E-0-1 | 5E-5-8 | 5E-10-13 | 5E-15-18 | 5E-20-23 | 5E-INT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | | | | | | | | | |
| Naphthalene | [.170] | [.052] | [.310] | 2.20 | [.540] | [.540] | [.140] J | [.120] J | .590 | [.370] | [.077] | [.330] | [.130] | 1.70 | 1.80 | 1.10 |
| 2-Methylnaphthalene | [.120] | --- | [.150] | 1.50 | [.270] | [.270] | [.120] J | [.077] J | [.260] | [.170] | --- | [.170] | [.067] | 1.50 | --- | [.570] |
| Acenaphthylene | --- | --- | --- | [.094] | --- | --- | --- | --- | --- | --- | --- | --- | --- | [.230] | --- | --- |
| Acenaphthene | .900 | [.140] | [.380] | 3.70 | .660 | .660 | .640 J | .460 J | .760 | 5.30 | [.180] | .690 | [.300] | --- | 2.00 | 1.70 |
| Dibenzofuran | .820 | [.130] | [.480] | 3.90 | [.650] | [.650] | .670 J | .470 J | .900 | .590 | --- | .610 | [.270] | --- | 1.90 | 1.90 |
| Fluorene | .880 | [.085] | [.160] | 3.20 | [.180] | [.180] | .530 J | .450 J | .500 | [.350] | [.170] | [.480] | [.220] | 4.50 | .620 | 2.00 |
| Phenanthrene | 7.20 | 2.00 | 4.70 | 13.0 | 4.90 | 4.90 | 5.60 J | 1.60 J | 6.20 | 5.10 | 3.00 | 5.30 | 3.30 | 13.0 | 8.30 | 10.0 |
| Anthracene | 3.30 | [.440] | 1.10 | 5.40 | 1.60 | 1.60 | 2.20 J | 1.80 J | 2.10 | 1.30 | .780 | 2.00 | .870 | 5.20 | 4.30 | 5.10 |
| Fluoranthene | 8.70 | 2.70 | 5.40 | --- | 6.70 | 6.70 | 8.20 J | 5.10 J | 6.50 | 6.90 | 5.00 | 6.40 | 4.30 | 11.0 | 9.40 | 16.0 |
| Pyrene | 8.70 | 2.30 | 5.90 | --- | 3.90 | 3.90 | 8.10 J | 4.50 J | 5.20 | 3.80 | 4.00 | 5.20 | 4.40 | 14.0 | 7.80 | 11.0 |
| Benzo(a)anthracene | 9.10 | 1.00 | 2.80 | 16.0 | 2.10 | 2.10 | 7.30 J | 4.70 J | 4.30 | 2.50 | 2.60 | 4.10 | 2.00 | 14.0 | 6.60 | 9.80 |
| Chrysene | 9.40 | 1.10 | 3.10 | [.220] | 2.30 | 2.30 | 8.10 J | 4.60 J | 4.00 | 2.30 | 3.60 | 4.00 | 2.00 | 12.0 | 6.50 | 11.0 |
| Benzo(b)fluoranthene | 13.0 J | .600 | 1.20 | 16.0 | .850 | .850 | 6.30 J | 7.20 J | 2.90 | 1.20 | 3.70 J | 3.50 J | 1.10 J | 7.80 | 4.00 J | 6.70 |
| Benzo(d)fluoranthene | --- | [.460] | 1.20 | 10.0 | .700 | .700 | 4.10 J | 4.30 J | 1.90 | 1.00 | 2.10 J | 2.50 J | 1.10 J | 5.60 | 3.20 J | 3.10 |
| Benzo(a)pyrene | 7.40 | [.430] | 1.20 | 12.0 | .700 | .700 | 4.50 J | 4.10 J | 2.50 | 1.20 | 2.00 | 2.20 | .940 | 9.00 | 2.40 | 3.30 |
| Indeno(1,2,3-cd)pyrene | 1.80 | [.380] | .830 | 3.80 | [.440] | [.440] | 1.40 J | 1.60 J | 2.00 J | [.250] J | 1.50 | 2.00 J | [.500] J | 2.70 J | 1.40 J | 1.60 J |
| Dibenz(a,h)anthracene | .700 | [.092] | [.180] | .920 | [.110] | [.110] | .460 J | [.360] J | [.200] J | [.130] J | [.370] | [.420] J | --- | .630 J | [.370] J | [.430] J |
| Benzo(g,h,i)perylene | 2.20 | .490 J | .830 J | 3.70 J | [.220]J | [.220] | 1.40 J | 1.50 J | 1.70 J | .650 J | 1.60 | 1.70 J | [.570] J | 2.30 J | .930 J | .950 J |
| TOTAL PAHs | 74.39 | 12.40 | 29.92 | 95.63 | 26.82 | 26.82 | 59.76 | 42.94 | 42.51 | 33.11 | 30.68 | 41.6 | 22.73 | 105.16 | 61.52 | 86.25 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | | | | | | | | | |
| Diethylphthalate | --- | --- | --- | --- | --- | --- | --- | --- | --- | [1.40] | --- | --- | --- | --- | --- | --- |
| Di-n-butylphthalate | --- | --- | --- | [.057] B,J | --- | --- | --- | --- | [.089] B,J | [.098] B,J | [.073] | 1.10 B,J | 4.00 B,J | 2.70 B,J | 2.80 B,J | [.067] |
| bis(2-ethylhexyl)phthalate | 1.30 B,J | [.140] B,J | --- | 14.0 | [.140] B,J | [.140] B,J | 1.10 B,J | --- | [.110] B,J | [.130] B,J | 3.10 B,J | [.330] B,J | [.500] B,J | [.370] B,J | [.260] B,J | [.160] B,J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 15

SUMMARY OF INFILTRATION RATES FOR DISPOSAL POND SURFACES
OBTAINED FROM DOUBLE-RING INFILTROMETER TESTING

ORMET CORPORATION
HANNIBAL, OHIO

| TEST LOCATION | | NO. OF MEASUREMENTS DURING TEST | MINIMUM INFILTRATION RATE* | MAXIMUM INFILTRATION RATE* | MEAN INFILTRATION RATE* | MEDIAN INFILTRATION RATE* |
|---|---|---|---|---|---|---|
| Pond 1 | outer ring | 14 | .118 | .520 | .230 | .210 |
| | inner ring | 14 | 0.000 | .160 | .044 | .031 |
| Pond 2 | outer ring | 14 | .750 | 1.350 | 1.105 | 1.185 |
| | inner ring | 14 | .732 | 1.370 | 1.050 | 1.039 |
| Pond 3 | outer ring | 16 | .583 | 1.900 | .971 | .943 |
| | inner ring | 16 | .754 | 1.950 | .922 | .829 |
| Pond 4 | outer ring | 18 | .980 | 2.750 | 1.239 | 1.065 |
| Section A | inner ring | 18 | .540 | 2.220 | 1.072 | .913 |
| Pond 4 | outer ring | 14 | .650 | 3.168 | 1.148 | .875 |
| Section B | inner ring | 14 | .550 | 1.440 | .820 | .745 |
| Pond 5 | outer ring | 16 | 1.670 | 5.112 | 2.076 | 1.820 |
| Section A | inner ring | 16 | 1.098 | 4.069 | 1.834 | 1.645 |
| Pond 5 | outer ring | 16 | 1.620 | 5.119 | 2.078 | 1.845 |
| Section B | inner ring | 16 | 2.190 | 6.440 | 2.696 | 2.420 |
| Pond 5 | outer ring | 20 | 3.640 | 5.190 | 4.247 | 4.205 |
| Section C | inner ring | 20 | 3.210 | 7.520 | 4.460 | 4.190 |
| Pond 5 | outer ring | 16 | 1.140 | 1.829 | 1.314 | 1.278 |
| Section D | inner ring | 16 | 1.077 | 3.144 | 1.501 | 1.346 |
| Pond 5 | outer ring | 16 | 3.170 | 8.870 | 5.096 | 4.890 |
| Section E | inner ring | 16 | 1.870 | 2.170 | 2.013 | 2.020 |

* Infiltration rates reported in inches/hour

TABLE 16
RESULTS OF INDICATOR PARAMETER ANALYSES
PERFORMED ON SOIL SAMPLES FROM FORMER POTLINER
AREA SOIL BORING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/kg unless otherwise noted)

| BORING # | DATE COLLECTED | INTERVAL (feet) | PH (S.U.) | % SOLIDS | CYANIDE | AMMONIA-N | FLUORIDE | CALCIUM | SODIUM |
|---|---|---|---|---|---|---|---|---|---|
| SB-001 | 2/17/88 | 0-2 | 7.8 | 80 | 1 | <16 | 738 | 21,250 | 83,750 |
| | | 2-4 | 7.4 | 88 | <1 | 26 | 705 | 2841 | 18,182 |
| | | 4-6 | 7.1 | 91 | <1 | 18 | 495 | 1319 | 2308 |
| | | 6-8 | 8.0 | 90 | <1 | <14 | 80 | 1333 | 344 |
| | | 8-10 | 8.1 | 87 | <1 | <14 | 62 | 1724 | 437 |
| SB-002 | 2/17/88 | 0-2 | 7.9 | 91 | <1 | 19 | 101 | 3846 | 648 |
| | | 2-4 | 8.4 | 87 | 5 | 80 | 97 | 45,977 | 529 |
| | | 4-6 | 8.1 | 89 | 3 | 60 | 57 | 16,854 | 427 |
| | | 6-8 | 8.7 | 94 | <1 | <13 | 33 | 3298 | <266 |
| | | 8-10 | 8.6 | 91 | <1 | <14 | 26 | 2967 | 286 |
| SB-003 | 2/17/88 | 0-2 | 6.9 | 92 | 1 | 14 | 511 | 1413 | 2283 |
| | | 2-4 | 7.9 | 91 | 1 | 17 | 286 | 2527 | 1978 |
| | | 4-6 | 7.0 | 92 | <1 | <14 | 14 | 696 | <272 |
| | | 6-8 | 7.1 | 90 | <1 | 22 | 39 | 811 | <278 |
| | | 8-10 | 7.4 | 92 | <1 | <14 | 23 | 815 | <272 |
| SB-004 | 2/17/88 | 0-2 | 6.3 | 91 | <1 | <14 | 15 | 758 | 538 |
| | | 2-4 | 7.4 | 90 | <1 | <14 | 10 | 422 | <278 |
| | | 4-6 | 6.8 | 85 | <1 | <15 | 1.3 | 506 | <294 |
| | | 6-8 | 5.9 | 88 | <1 | <14 | 1.5 | 409 | <284 |
| | | 8-10 | 5.3 | 86 | <1 | <15 | 2.1 | 442 | <291 |
| SB-005 | 2/17/88 | 0-2 | 5.6 | 90 | <1 | <14 | 9 | 811 | <278 |
| | | 2-4 | 5.8 | 88 | <1 | <14 | 1.7 | 625 | <284 |
| | | 4-6 | 6.1 | 92 | <1 | <14 | 1.8 | 391 | <267 |
| | | 6-8 | 5.9 | 88 | <1 | <14 | 1.0 | 443 | <284 |
| | | 8-10 | 5.7 | 89 | <1 | <14 | 0.7 | 989 | <281 |
| SB-006 | 2/18/88 | 0-2 | 9.2 | 93 | 2043 | 52 | 1.8 | 1065 | 8710 |
| | | 0-2 (Dup.) | 9.5 | 89 | 1236 | <14 | 3.5 | 1461 | 8652 |
| | | 2-4 | 9.8 | 90 | 211 | 89 | 156 | 26,667 | 3000 |
| | | 4-6 | 10.3 | 92 | 21 | 49 | 120 | 9,457 | 957 |
| | | 6-8 | 10.7 | 93 | 16 | 65 | 55 | 12,903 | 1290 |
| | | 8-10 | 10.7 | 92 | 9 | 68 | 46 | 2,283 | 1196 |
| SB-007 | 2/18/88 | 0-2 | 8.0 | 82 | 439 | 35 | 830 | 5244 | 4634 |
| | | 2-4 | 9.7 | 91 | 198 | 20 | 330 | 1209 | 5275 |
| | | 2-4 (Dup.) | 9.8 | 91 | 140 | <14 | 286 | 1758 | 5604 |
| | | 4-6 | 10.2 | 92 | 13 | 21 | 207 | 978 | 2826 |
| | | 6-8 | 10.4 | 92 | 15 | 27 | 228 | 902 | 3370 |
| | | 8-10 | 10.0 | 92 | 15 | 33 | 304 | 1196 | 2935 |
| SB-008 | 2/18/88 | 0-2 | 9.6 | 87 | 92 | 414 | 931 | 16,092 | 19,540 |
| | | 2-4 | 10.6 | 91 | 253 | 154 | 1648 | 2637 | 7363 |
| | | 4-6 | 9.6 | 97 | 45 | 165 | 88 | 959 | 928 |
| | | 4-6 (Dup.) | 10.5 | 93 | 484 | 25 | 1075 | 1828 | 6667 |
| | | 6-8 | 9.5 | 93 | 129 | 60 | 312 | 1183 | 1183 |
| | | 8-10 | 9.8 | 91 | 100 | 20 | 923 | 1209 | 2747 |
| Interpreted Background Values | | | <8.0 | NA | Below Detection | Below Detection | up to ±10 | up to ±2000 | up to ±500 |

TABLE 16 (CONT.)
RESULTS OF INDICATOR PARAMETER ANALYSES
PERFORMED ON SOIL SAMPLES FROM FORMER POTLINER
AREA SOIL BORING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/kg unless otherwise noted)

| BORING # | DATE COLLECTED | INTERVAL (feet) | PH (S.U.) | % SOLIDS | CYANIDE | AMMONIA-N | FLUORIDE | CALCIUM | SODIUM |
|---|---|---|---|---|---|---|---|---|---|
| SB-009 | 2/18/88 | 0-2 | 7.8 | 82 | 27 | 43 | 610 | 15,854 | 36,585 |
| | | 2-4 | 8.0 | 76 | 132 | 17 | 868 | 1974 | 71,053 |
| | | 4-6 | 8.5 | 90 | 2 | 14 | 767 | 1111 | 2444 |
| | | 6-8 | 7.7 | 89 | 2 | <14 | 640 | 1798 | 2,472 |
| | | 8-10 | 8.3 | 89 | 2 | <14 | 506 | 1236 | 1573 |
| | | 8-10 (Dup.) | 8.0 | 89 | 2 | <14 | 438 | 1348 | 1910 |
| SB-010 | 2/18/88 | 0-2 | 8.1 | 90 | 189 | <14 | 667 | 3000 | 8667 |
| | | 2-4 | 9.7 | 92 | 46 | <14 | 554 | 4130 | 3478 |
| | | 4-6 | 9.4 | 95 | 14 | <13 | 200 | 1263 | 1368 |
| | | 6-8 | 8.2 | 84 | 2 | <15 | 488 | 2024 | 1786 |
| | | 6-8 (Dup.) | 8.2 | 92 | 1 | <14 | 391 | 1413 | 1413 |
| | | 8-10 | 8.3 | 89 | <1 | <14 | 303 | 1236 | 1236 |
| SB-011 | 2/18/88 | 0-2 | 8.1 | 93 | 27 | <13 | 527 | 5806 | 5699 |
| | | 2-4 | 7.8 | 93 | 29 | <13 | 258 | 2903 | 935 |
| | | 2-4 (Dup.) | 7.8 | 94 | 19 | <13 | 181 | 2553 | 766 |
| | | 4-6 | 8.7 | 91 | 5 | <14 | 385 | 1538 | 835 |
| | | 6-8 | 8.8 | 93 | <1 | <13 | 237 | 1075 | 817 |
| | | 8-10 | 7.6 | 88 | <1 | <14 | 307 | 898 | 943 |
| SB-012 | 2/18/88 | 0-2 | 6.7 | 88 | <1 | <14 | 170 | 841 | 511 |
| | | 2-4 | 7.0 | 92 | <1 | <14 | 23 | 935 | <272 |
| | | 4-6 | 6.9 | 95 | <1 | <13 | 0.7 | 695 | <263 |
| | | 4-6 (Dup.) | 7.2 | 96 | <1 | <13 | 0.8 | 667 | <260 |
| | | 6-8 | 6.9 | 94 | <1 | <13 | 10.3 | 968 | <266 |
| | | 8-10 | 7.2 | 95 | <1 | <13 | 1.7 | 653 | <263 |
| SB-013 | 2/19/88 | 0-2 | 6.9 | 91 | <1 | <14 | 132 | 1033 | <275 |
| | | 2-4 | 7.3 | 91 | <1 | <14 | 36 | 1978 | <275 |
| | | 2-4 (Dup.) | 7.1 | 91 | <1 | <14 | 33 | 1978 | <275 |
| | | 4-6 | 8.4 | 94 | <1 | <13 | 1.6 | 1596 | <266 |
| | | 6-8 | 8.6 | 94 | <1 | <13 | 1.6 | 5957 | <266 |
| | | 8-10 | 8.7 | 92 | <1 | <14 | 1.7 | 4348 | <272 |
| SB-014 | 2/19/88 | 0-2 | 6.4 | 87 | 13 | <14 | 184 | 17,241 | 4138 |
| | | 2-4 | 6.4 | 94 | <1 | <13 | 76 | 10,638 | 1170 |
| | | 4-6 | 7.8 | 94 | <1 | <13 | 78 | 21,277 | 968 |
| | | 6-8 | 9.0 | 91 | <1 | <14 | 113 | 5,275 | 1011 |
| | | 6-8 (Dup.) | 8.9 | 94 | <1 | <13 | 117 | 7766 | 851 |
| | | 8-10 | 8.5 | 87 | <1 | <14 | 184 | 1,494 | 1000 |
| SB-015 | 2/19/88 | 0-2 | 9.4 | 84 | 214 | 30 | 1167 | 28,571 | 13,095 |
| | | 2-4 | 9.8 | 92 | 174 | 41 | 630 | 3913 | 4,022 |
| | | 4-6 | 8.1 | 90 | 26 | 14 | 222 | 3444 | 1222 |
| | | 6-8 | 7.3 | 92 | 2 | <14 | 33 | 1739 | <272 |
| | | 8-10 | 7.5 | 89 | 24 | <14 | 11 | 1236 | 326 |
| | | 8-10 (Dup.) | 7.6 | 91 | 29 | <14 | 40 | 1099 | 308 |
| Interpreted Background Values | | | <8.0 | NA | Below Detection | Below Detection | up to ±10 | up to ±2000 | up to ±500 |

TABLE 16 (CONT.)
RESULTS OF INDICATOR PARAMETER ANALYSES
PERFORMED ON SOIL SAMPLES FROM FORMER POTLINER
AREA SOIL BORING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/kg unless otherwise noted)

| BORING # | DATE COLLECTED | INTERVAL (feet) | PH (S.U.) | % SOLIDS | CYANIDE | AMMONIA-N | FLUORIDE | CALCIUM | SODIUM |
|---|---|---|---|---|---|---|---|---|---|
| SB-016 | 2/19/88 | 0-2 | 7.8 | 85 | 11 | <15 | 282 | 8000 | 2235 |
| | | 2-4 | 7.3 | 85 | 6 | <15 | 282 | 6353 | 5529 |
| | | 4-6 | 7.9 | 83 | 10 | <15 | 313 | 7952 | 4217 |
| | | 6-8 | 7.9 | 88 | 5 | <14 | 193 | 2159 | 795 |
| | | 8-10 | 7.7 | 89 | 3 | 15 | 247 | 2247 | 1798 |
| SB-017 | 2/20/88 | 0-2 | 8.6 | 93 | 3 | <13 | 26 | 3118 | 376 |
| | | 2-4 | 8.0 | 93 | <1 | <13 | 6.3 | 1613 | <269 |
| | | 4-6 | 6.5 | 92 | <1 | <14 | <0.4 | 761 | <272 |
| | | 6-8 | 6.5 | 91 | <1 | <14 | 0.4 | 868 | <275 |
| | | 8-10 | 6.4 | 89 | <1 | <14 | <0.4 | 989 | <281 |
| SB-018 | 2/20/88 | 0-2 | 6.4 | 90 | 1 | 14 | 43 | 8111 | 344 |
| | | 2-4 | 7.6 | 91 | <1 | <14 | 8.5 | 2857 | <275 |
| | | 4-6 | 5.8 | 90 | <1 | <14 | 1.1 | 878 | <278 |
| | | 4-6 (Dup.) | 6.7 | 88 | <1 | <14 | 1.0 | 1068 | <284 |
| | | 6-8 | 6.5 | 86 | <1 | 15 | 2.4 | 1000 | <291 |
| | | 8-10 | 6.8 | 85 | <1 | <15 | 2.9 | 1294 | <294 |
| SB-019 | 2/20/88 | 0-2 | 8.2 | 90 | <1 | 14 | 34 | 18,889 | 333 |
| | | 2-4 | 7.2 | 91 | 4 | <14 | 2.1 | 2088 | <275 |
| | | 4-6 | 6.8 | 88 | <1 | <14 | 0.6 | 2727 | <284 |
| | | 6-8 | 6.1 | 90 | <1 | <14 | 4.6 | 1667 | <278 |
| | | 8-10 | 6.3 | 91 | <1 | <14 | 1.0 | 1099 | <275 |
| SB-020 | 2/20/88 | 0-2 | 9.1 | 90 | 3 | 14 | 8.8 | 90,000 | 822 |
| | | 2-4 | 8.5 | 90 | <1 | <14 | 3.3 | 16,667 | 444 |
| | | 4-6 | 6.6 | 90 | <1 | <14 | 0.4 | 12,222 | 400 |
| | | 6-8 | 7.0 | 90 | <1 | <14 | 0.3 | 667 | <278 |
| | | 8-10 | 7.5 | 86 | <1 | <15 | 13 | 1140 | 395 |
| SB-021 | 2/20/88 | 0-2 | 7.6 | 90 | <1 | <14 | 56 | 9222 | 478 |
| | | 2-4 | 6.8 | 90 | <1 | <14 | 0.8 | 978 | <278 |
| | | 4-6 | 6.2 | 88 | <1 | <14 | 0.7 | 909 | <284 |
| | | 4-6 (Dup.) | 6.2 | 88 | <1 | <14 | 0.8 | 852 | <284 |
| | | 6-8 | 6.6 | 88 | <1 | <14 | 1.1 | 920 | <284 |
| | | 8-10 | 6.9 | 90 | <1 | <14 | 0.8 | 1333 | <278 |
| SB-022 | 2/20/88 | 0-2 | 7.1 | 87 | <1 | <14 | 43 | 1609 | <287 |
| | | 2-4 | 7.0 | 83 | <1 | <15 | 34 | 542 | <301 |
| | | 4-6 | 7.7 | 85 | <1 | <15 | 48 | 882 | <294 |
| | | 4-6 (Dup.) | 7.6 | 87 | <1 | <14 | 36 | 954 | <287 |
| | | 6-8 | 7.8 | 87 | <1 | <14 | 21 | 793 | <287 |
| | | 8-10 | 7.7 | 86 | <1 | <15 | 12 | 3953 | <291 |
| SB-023 | 2/20/88 | 0-2 | 7.5 | 92 | <1 | <14 | 130 | 2935 | 533 |
| | | 2-4 | 7.9 | 93 | <1 | <13 | 1.6 | 903 | <269 |
| | | 4-6 | 7.4 | 90 | <1 | <14 | 2.6 | 944 | <278 |
| | | 6-8 | 6.5 | 91 | <1 | <14 | 1.0 | 956 | <275 |
| | | 8-10 | 6.6 | 91 | <1 | <14 | 1.2 | 1088 | <275 |
| SB-024 | 2/20/88 | 0-2 | 9.0 | 93 | 6 | <13 | 0.4 | 27,957 | 505 |
| | | 2-4 | 5.5 | 92 | <1 | <14 | <0.4 | 1304 | <272 |
| | | 4-6 | 6.5 | 91 | <1 | <14 | 1.2 | 1978 | <275 |
| | | 6-8 | 7.7 | 87 | <1 | <14 | 1.0 | 1115 | <287 |
| | | 8-10 | 8.0 | 88 | <1 | <14 | 1.0 | 966 | <284 |
| Interpreted Background Values | | | <8.0 | NA | Below Detection | Below Detection | up to ±10 | up to ±2000 | up to ±500 |

# TABLE 17
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| Chloromethane | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Bromomethane | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Vinyl Chloride | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Chloroethane | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Methylene Chloride | [.005] | [.004] | [.005] | [.004] | [.005] | [.007] | [.004] | [.004] | [.004] | [.005] |
| Acetone | .076 B | .100 B | .100 B | .085 B | .099 B | .097 B | .044(B) | .029(B,J) | .051(B) | .056(B) |
| Carbon Disulfide | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1-Dichloroethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1-Dichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloroethene (total) | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Chloroform | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 2-Butanone | .088(B,J) | .079(B,J) | .050(B,J) | .074(B,J) | [.006](B,J) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| 1,1,1-Trichloroethane | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) |
| Carbon Tetrachloride | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) |
| Vinyl Acetate | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Bromodichloromethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloropropane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| cis-1,3-Dichloropropene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Trichlorethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |

J: The associated numerical value is an estimated quanity because one or more were not met.

UJ: The associated quantitation limit is estimated because one or more were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated lab blank; the associated numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numberical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 17 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| Dibromochloromethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1,2-Trichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Benzene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| trans-1,3-Dichloropropene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Bromoform | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 4-Methyl-2-Pentanone | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| 2-Hexanone | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Tetrachloroethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | .015 |
| 1,1,2,2-Tetrachloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Toluene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Chlorobenzene | <.015 | <.015 | <.015 | <.015 | [.007] | <.015 | <.015 | <.015 | <.015 | <.015 |
| Ethylbenzene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Styrene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Xylene (total) | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |

J: The associated numerical value is an estimated quanity because one or more were not met.

UJ: The associated quantitation limit is estimated because one or more were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated lab blank; the associated numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numberical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 17 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-015-0-2 | SB-015-2-4 | SB-015-4-6 | SB-015-6-8 | SB-015-8-10 | SB-016-0-2 | SB-016-2-4 | SB-016-4-6 | SB-016-6-8 | SB-016-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 |
| Chloromethane | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Bromomethane | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Vinyl Chloride | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Chloroethane | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 | <.030 |
| Methylene Chloride | [.012] | <.015 | .018 | <.015 | [.011] | [.008] | .015 | .020 | <.015 | [.010] |
| Acetone | .120(B) | .084(B) | .091(B) | .061(B) | .120(B) | .110(B) | .140(B) | .150(B) | .071(B) | .120(B) |
| Carbon Disulfide | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1-Dichloroethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1-Dichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloroethene (total) | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Chloroform | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 2-Butanone | .095(B,J) | .089(B,J) | .073(B,J) | .068(B,J) | .043(B,J) | .030(B,J) | [.025](B) | [.027](B) | [.029](B) | .042(B,J) |
| 1,1,1-Trichloroethane | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | < 015(UJ) |
| Carbon Tetrachloride | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) | <.015(UJ) |
| Vinyl Acetate | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Bromodichloromethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,2-Dichloropropane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| cis-1,3-Dichloropropene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Trichlorethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |

J: The associated numerical value is an estimated quanity because one or more were not met.

UJ: The associated quantitation limit is estimated because one or more were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated lab blank; the associated numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numberical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 17 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
(Results in mg/kg)

| Boring ID<br>Date Collected | SB-015-0-2<br>2/19/88 | SB-015-2-4<br>2/19/88 | SB-015-4-6<br>2/19/88 | SB-015-6-8<br>2/19/88 | SB-015-8-10<br>2/19/88 | SB-016-0-2<br>2/19/88 | SB-016-2-4<br>2/19/88 | SB-016-4-6<br>2/19/88 | SB-016-6-8<br>2/19/88 | SB-016-8-10<br>2/19/88 |
|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | < 015 |
| 1,1,2-Trichloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Benzene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| trans-1,3-Dichloropropene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Bromoform | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 4-Methyl-2-Pentanone | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| 2-Hexanone | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) | <.030(UJ) |
| Tetrachloroethene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| 1,1,2,2-Tetrachloroethane | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Toluene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Chlorobenzene | <.015 | <.015 | <.015 | <.015 | [.005] | <.015 | <.015 | <.015 | <.015 | <.015 |
| Ethylbenzene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Styrene | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |
| Xylene (total) | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 | <.015 |

J: The associated numerical value is an estimated quanity because one or more were not met.

UJ: The associated quantitation limit is estimated because one or more were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated lab blank; the associated numberical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numberical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 18
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/19/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| Phenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| bis(2-Chloroethyl)ether | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2-Chlorophenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 1,3-Dichlorobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 1,4-Dichlorobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Benzyl alcohol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 1,2-Dichlorobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2-Methylphenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| bis-(2-Chloroisopropyl)ether | <.400 | <.400(UJ) | <.400 | <.400 | <.400 | <10.0(UJ) | <.400 | <.400 | <.400 | <.400 |
| 4-Methylphenol | <.400 | <.400 | <.400 | <.400 | <.400 | [1.30] | <.400 | <.400 | <.400 | <.400 |
| N-Nitroso-di-n-propylamine | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Hexachloroethane | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Nitrobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Isophorone | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2-Nitrophenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2,4-Dimethylphenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Benzoic Acid | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) | <50.0(UJ) | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) |
| bis(2-Chloroethoxy)methane | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2,4-Dichlorophenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 1,2,4-Trichlorobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment

# TABLE 18 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| Naphthalene | <.400 | <.400 | <.400 | <.400 | <.400 | 80.0 | .530 | [.071] | [.180] | <.400 |
| 4-Chloroaniline | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Hexachlorobutadiene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 4-Chloro-3-methylphenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2-Methylnaphthalene | <.400 | <.400 | <.400 | <.400 | <.400 | 32.0 | [.330] | [.037] | [.090] | <.400 |
| Hexachlorocyclopentadiene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2,4,6-Trichlorophenol | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2,4,5-Trichlorophenol | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| 2-Chloronaphthalene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 2-Nitroaniline | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <.200 | <2.00 |
| Dimethylphthalate | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Acenaphthylene | <.400 | <.400 | <.400 | <.400 | <.400 | [1.40] | <.400 | <.400 | <.400 | <.400 |
| 2,6-Dinitrotoluene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 3-Nitroaniline | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| Acenaphthene | <.400 | <.400 | <.400 | <.400 | <.400 | 140 | 2.40 | [.250] | .600 | <.400 |
| 2,4-Dinitrophenol | <2.00 | <2.00(UJ) | <2.00 | <2.00(UJ) | <2.00 | <50.0(UJ) | <2.00 | <2.00(UJ) | <2.00(UJ) | <2.00(UJ) |
| 4-Nitrophenol | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00(UJ) | <2.00 | <2.00(UJ) |
| Dibenzofuran | <.400 | <.400 | <.400 | <.400 | <.400 | 120 | 1.70 | [.250] | .440 | [.043] |
| 2,4-Dinitrotoluene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Diethylphthalate | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment

# TABLE 18 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| 4-Chlorophenyl-phenylether | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Fluorene | <.400 | <.400 | <.400 | <.400 | <.400 | 140 | 1.90 | [.250] | <.550 | <.400 |
| 4-Nitroaniline | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| 2-Methyl-4,6-Dinitrophenol | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <2.00 | <2.00 |
| N-Nitrosodiphenylamine | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| 4-Bromophenyl-phenylether | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Hexachlorobenzene | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Pentachlorophenol | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <50.0 | <2.00 | <2.00 | <2.00 | <.2.00 |
| Phenanthrene | <.400 | <.400 | <.400 | <.400 | <.400 | 450 | 10.0 | 2.50 | 3.80 | [.180] |
| Anthracene | <.400 | <.400 | <.400 | <.400 | <.400 | 170 | 4.40 | .700 | 1.30 | [.045] |
| Di-n-butylphthalate | [.043] | <.400(UJ) | [.051] | [.048] | [.063] | <10.0(UJ) | [.047] | [.063] | [.050] | <.400 |
| Fluoranthene | <.400 | <.400 | <.400 | <.400 | <.400 | 410 | 12.0 | 2.20 | 3.90 | [.200] |
| Pyrene | <.400 | <.400 | <.400 | <.400 | <.400 | 470 | 11.0 | 1.80 | 3.70 | [.170] |
| Butylbenzylphthalate | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <4.00 | <.400 | <.400 |
| 3,3'-Dichlorobenzidine | <.800 | <.800 | <.800 | <.800 | <.800 | <20.0 | <.800 | <.800 | <.800 | <.800 |
| Benzo(a)anthracene | <.400 | <.400 | <.400 | <.400 | <.400 | 330 | 7.90 | .950 | 2.00 | [.093] |
| Chrysene | <.400 | <.400 | <.400 | <.400 | <.400 | 260 | 6.80 | .840 | 1.80 | [.081] |
| bis(2-Ethylhexyl)phthalate | [.200](B) | [.350](B) | .660(B) | .710(B) | 1.10(B) | [1.70](B) | <.400 | 1.30(B) | 1.50(B) | [.270](B) |
| Di-n-octylphthalate | <.400 | <.400 | <.400 | <.400 | <.400 | <10.0 | <.400 | <.400 | <.400 | <.400 |
| Benzo(b)fluoranthene | [.056] | <.400 | <.400 | <.400 | <.400 | 390 | 7.20 | .550 | 1.50 | [.095] |
| Benzo(k)fluoranthene | <.400 | <.400 | <.400 | <.400 | <.400 | 180 | 2.10 | .880 | .980 | <.400 |
| Benzo(a)pyrene | <.400 | <.400 | <.400 | <.400 | <.400 | 270 | 5.40 | .630 | 1.40 | .056(J) |
| Indeno(1,2,3-cd)pyrene | <.400 | <.400(UJ) | <.400 | <.400(UJ) | <.400 | 110(J) | 2.00 | .470(J) | .960(J) | [.061] J |
| Dibenz(a,h)anthracene | <.400 | <.400(UJ) | <.400 | <.400(UJ) | <.400 | 220(J) | .520 | [.086] | [.170] J | <.400(UJ) |
| Benzo(g,h,i)perylene | <.400 | <.400(UJ) | <.400 | <.400(UJ) | <.400 | 99.0(J) | 1.70 | .480(J) | 0.89(J) | [.085] J |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment

# TABLE 18 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID<br>Date Collected | SB-015-0-2<br>2/19/88 | SB-015-2-4<br>2/19/88 | SB-015-4-6<br>2/19/88 | SB-015-6-8<br>2/19/88 | SB-015-8-10<br>2/19/88 | SB-016-0-2<br>2/19/88 | SB-016-2-4<br>2/19/88 | SB-016-4-6<br>2/19/88 | SB-016-6-8<br>2/19/88 | SB-016-8-10<br>2/19/88 |
|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <2.00 | [.120] | [.170] | <.400 | <.400 | <32.0 | [1.70] | <12.0 | <0.80 | <2.00 |
| bis(2-Chloroethyl)ether | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 2-Chlorophenol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 1,3-Dichlorobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 1,4-Dichlorobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| Benzyl alcohol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 1,2-Dichlorobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 2-Methylphenol | <2.00 | [.065] | [.087] | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| bis-(2-Chloroisopropyl)ether | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 4-Methylphenol | [.210] | [.230] | [.310] | <.400 | <.400 | <32.0 | [3.40] | <12.0 | <0.80 | <2.00 |
| N-Nitroso-di-n-propylamine | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| Hexachloroethane | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| Nitrobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| Isophorone | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 2-Nitrophenol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <0.80 | <2.00 |
| 2,4-Dimethylphenol | <2.00 | [.072] | [.110] | <.400 | <.400 | <32.0 | [1.80] | <12.0 | <0.80 | <2.00 |
| Benzoic Acid | *<10.0 UJ* | *<2.00(UJ)* | *<2.00(UJ)* | *<2.00(UJ)* | *<2.00(UJ)* | *<160(UJ)* | *<85.0(UJ)* | *<60.0(UJ)* | *<10.0(UJ)* | *<10.0(UJ)* |
| bis(2-Chloroethoxy)methane | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 2,4-Dichlorophenol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 1,2,4-Trichlorobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present).
*Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment*

# TABLE 18 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-015-0-2 | SB-015-2-4 | SB-015-4-6 | SB-015-6-8 | SB-015-8-10 | SB-016-0-2 | SB-016-2-4 | SB-016-4-6 | SB-016-6-8 | SB-016-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 |
| Naphthalene | 4.50 | 5.00 | 6.60 | [.130] | [.140] | 46.0 | 73.0 | 21.0 | 9.20 | 5.00 |
| 4-Chloroaniline | <2.00(UJ) | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <.200 |
| Hexachlorobutadiene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <.200 |
| 4-Chloro-3-methylphenol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <.200 |
| 2-Methylnaphthalene | [1.60] | 2.20 | 3.70 | [.037] | <.400 | [21.0] | 39.0 | [8.20] | 4.20 | 2.10 |
| Hexachlorocyclopentadiene | <2.00(UJ) | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 2,4,6-Trichlorophenol | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <.200 |
| 2,4,5-Trichlorophenol | <10.0 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <60.0 | <.400 | <10.0 |
| 2-Chloronaphthalene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 2-Nitroaniline | <10.0 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <12.0 | <.400 | <10.0 |
| Dimethylphthalate | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Acenaphthylene | <2.00 | <.400 | [.062] | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 2,6-Dinitrotoluene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 3-Nitroaniline | <10.0 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <60.0 | <.400 | <10.0 |
| Acenaphthene | 6.20 | 2.50 | 4.50 | [.046] | <.400 | 100 | 180 | 27.0 | 6.00 | 4.30 |
| 2,4-Dinitrophenol | <10.0(UJ) | <2.00 | <2.00 | <2.00(UJ) | <2.00(UJ) | <160 | <84.0 | <60.0(UJ) | <.400 | <10.0 |
| 4-Nitrophenol | <10.0 | <2.00 | <2.00 | <2.00(UJ) | <2.00 | <160 | <84.0 | <60.0(UJ) | <.400 | <10.0 |
| Dibenzofuran | 5.20 | 2.80 | 4.70 | [.060] | <.400 | 38.0 | 60.0 | 13.0 | 4.50 | 2.70 |
| 2,4-Dinitrotoluene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Diethylphthalate | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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R: Quality control indicates that data are unusable (compound may or may not be present).
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# TABLE 18 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

### Semi-Volatile Organic Compounds
(Results in mg/kg)

| Boring ID | SB-015-0-2 | SB-015-2-4 | SB-015-4-6 | SB-015-6-8 | SB-015-8-10 | SB-016-0-2 | SB-016-2-4 | SB-016-4-6 | SB-016-6-8 | SB-016-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 |
| 4-Chlorophenyl-phenylether | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Fluorene | 4.40 | 2.30 | 4.40 | [.064] | [.040] | 59.0 | 85.0 | 18.0 | 6.30 | 37.0 |
| 4-Nitroaniline | <10.0 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <60.0 | <.400 | <10.0 |
| 2-Methyl-4,6-Dinitrophenol | <10.0 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <60.0 | <.400 | <10.0 |
| N-Nitrosodiphenylamine | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 4-Bromophenyl-phenylether | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Hexachlorobenzene | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Pentachlorophenol | <10.00 | <2.00 | <2.00 | <2.00 | <2.00 | <160 | <84.0 | <60.0 | <.400 | <10.0 |
| Phenanthrene | 28.0 | 8.20 | 15.00 | [.340] | [.190] | 370 | 420 | 150 | 23.0 | 17.0 |
| Anthracene | 11.0 | 3.50 | 6.40 | [.099] | [.053] | 130 | 180 | 40.0 | 9.00 | 5.80 |
| Di-n-butylphthalate | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| Fluoranthene | 32.0 | 7.60 | 13.0 | [.290] | [.180] | 580 | 530 | 160 | 28.0 | 24.0 |
| Pyrene | 39.0 | 7.70 | 19.0 | [.260] | [.120] | 500 | 820 | 210 | 29.0 | 21.0 |
| Butylbenzylphthalate | <2.00 | <.400 | <.400 | <.400 | <.400 | <32.0 | <16.8 | <12.0 | <.080 | <2.00 |
| 3,3'-Dichlorobenzidine | <4.00(UJ) | <.800 | <.800 | <.800 | <.800 | <64.0 | <33.6 | <24.0 | <.160 | <4.00 |
| Benzo(a)anthracene | 30.0 | 5.90 | 12.0 | [.140] | [.076] | 460 | 750 | 210 | 22.0 | 18.0 |
| Chrysene | 28.0 | 5.60 | 10.0 | [.130] | [.074] | 440 | 470 | 190 | 20.0 | 16.0 |
| bis(2-Ethylhexyl)phthalate | [1.10] B | <.400 | <.400 | [.340](B) | .460(B,J) | <32.0 | <16.8 | <12.0 | [.540] (B) | [.740](B) |
| Di-n-octylphthalate | <.400 | <.400 | <.400 | <.400 | [.067] | <32.0 | <16.8 | <12.0 | <2.00 | <2.00 |
| Benzo(b)fluoranthene | 27.0 | 6.20 | 11.0 | [.110] | <.400 | 580 | 1200 | 310 | 23.0 | 20.0 |
| Benzo(k)fluoranthene | 9.10 | .830 | 4.60 | [.079] | <.400 | 270 | 1200 | 310 | 11.0 | 8.80 |
| Benzo(a)pyrene | 23.0 | 4.30 | 9.00 | .110(J) | [.043] | 420 | 710 | 200 | 18.0 | 16.0 |
| Indeno(1,2,3-cd)pyrene | .710(J) | 1.70 | 3.30 | [.089] J | <.400(UJ) | 120 | 180 | 130(J) | 6.00 | 4.20 |
| Dibenz(a,h)anthracene | .880(J) | .480 | .890 | <.400 UJ | <.400(UJ) | [30.0] | 50.0(J) | 32.0(J) | 1.50 | [1.10] |
| Benzo(g,h,i)perylene | <2.00(UJ) | 1.10 | 2.20 | [.110] J | <.400(UJ) | 120 | 120 | 100(J) | 5.40 | 4.10 |

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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

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TABLE 19
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Polychlorinated Biphenyls (PCB)
(Results in mg/kg)

| Boring ID | Date Collected | Aroclor - 1016 | Aroclor - 1221 | Aroclor - 1232 | Aroclor - 1242 | Aroclor - 1248 | Aroclor - 1254 | Aroclor - 1260 |
|---|---|---|---|---|---|---|---|---|
| SB-006-0-2 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-006-2-4 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-006-4-6 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-006-6-8 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-006-8-10 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-008-0-2 | 2/18/88 | <1.90 | <1.90 | <1.90 | <1.90 | <1.90 | <3.80 | <3.80 |
| SB-008-2-4 | 2/18/88 | <.380 | <.380 | <.380 | <.380 | <.380 | <.760 | <.760 |
| SB-008-4-6 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-008-6-8 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-008-8-10 | 2/18/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-015-0-2 | 2/19/88 | <.950 | <.950 | <.950 | <.950 | <.950 | <1.90 | <1.90 |
| SB-015-2-4 | 2/19/88 | <.380 | <.380 | <.380 | <.380 | <.380 | <.760 | <.760 |
| SB-015-4-6 | 2/19/88 | <.380 | <.380 | <.380 | <.380 | <.380 | <.760 | <.760 |
| SB-015-6-8 | 2/19/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-015-8-10 | 2/19/88 | <.190 | <.190 | <.190 | <.190 | <.190 | <.380 | <.380 |
| SB-016-0-2 | 2/19/88 | <9.50 | <9.50 | <9.50 | <9.50 | <9.50 | <19.0 | <19.0 |
| SB-016-2-4 | 2/19/88 | <19.0 | <19.0 | <19.0 | <19.0 | <19.0 | <38.0 | <38.0 |
| SB-016-4-6 | 2/19/88 | <3.80 | <3.80 | <3.80 | <3.80 | <3.80 | <7.60 | <7.60 |
| SB-016-6-8 | 2/19/88 | <.950 | <.950 | <.950 | <.950 | <.950 | <1.90 | <1.90 |
| SB-016-8-10 | 2/19/88 | <.950 | <.950 | <.950 | <.950 | <.950 | <1.90 | <1.90 |

# TABLE 20
## RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO
(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 | 2/18/88 |
| Aluminum | 13500 | 7830 | 4260 | 3300 | 3040 | 30300 | 11700 | 2560 | 3810 | 4470 |
| Antimony | <12.(UJ) | <11(UJ) | <11(UJ) | <11(UJ) | <12(UJ) | <12(UJ) | <13(UJ) | <11(UJ) | <11(UJ) | <11(UJ) |
| Arsenic | 3.0(S) | 3.2 | 4.2 | 8.1 | 6.4 | 10 | 13 | 5.4 | 9.1 | 6.6 |
| Barium | [38] | 54 | [38] | [35] | [37] | 56 | 93 | [35] | [36] | 51 |
| Beryllium | [.97] | [.95] | [.93] | [.64] | [.90] | 1.3 | [1.0] | [.23] | [.28] | [.37] |
| Cadmium | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.1 | <1.2 | <1.0 | <1.1 | <1.0 |
| Calcium | [1000] | 6650 | 8410 | 12100 | 2210 | 6670 | 2160 | [806] | 1190 | 1250 |
| Chromium | 4.9 | 6.8 | 5.7 | 5.0 | 4.8 | 9.0 | 11 | 5.0 | 5.4 | 5.3 |
| Cobalt | [5.1](J) | [4.5](J) | [5.0](J) | [3.3](J) | [4.5](J) | <1.1(J) | [2.7](J) | [2.7](J) | [1.9](J) | [2.7](J) |
| Copper | 8.2(J) | 12(J) | 8.0(J) | 8.6(J) | 13(J) | 30(J) | 27(J) | 8.2(J) | 8.2(J) | 8.6(J) |
| Iron | 21500 | 25900 | 20200 | 19700 | 29100 | 6690 | 26000 | 17100 | 18400 | 17400 |
| Lead | 8.5 | 8.0 | 7.8 | 11 | 7.3 | 21 | 16 | 7.6 | 8.8 | 7.2 |
| Magnesium | 1270(J) | 1680(J) | 1430(J) | 1260(J) | 1140(J) | 1120(J) | 2240(J) | [661](J) | 1130(J) | [1010](J) |
| Manganese | 626 | 621 | 419 | 430 | 732 | 198 | 844 | 463 | 680 | 739 |
| Mercury | <.087 | <.096 | <.095 | <.095 | <.099 | <.062 | <.079 | <.074 | <.070 | <.067 |
| Nickel | <8.5 | <8.4 | 9.0 | <8.4 | 11 | 12 | 17 | 8.8 | <8.3 | 11 |
| Potassium | 1160 | 1770 | 1750 | <515 | <522 | <524 | <594 | <499 | <510 | <502 |
| Selenium | <.29(UJ) | <.28(UJ) | <.27(UJ) | <.28(UJ) | <.28(UJ) | <.56(UJ) | <.32(UJ) | <.27(UJ) | <.27(UJ) | <.27(UJ) |
| Silver | <1.7 | <1.7 | <1.7 | <1.7 | <1.7 | <1.7 | <2.0 | <1.7 | <1.7 | <1.7 |
| Sodium | 10600 | 4050 | 2300 | 1190 | 1640 | 10900 | 6540 | <352 | <359 | 1860 |
| Thallium | <.49 | <.47 | <.46 | <.48 | <.48 | <.48 | <.55 | <.46 | <.46 | <.46 |
| Vanadium | 11(J) | 15(J) | 14(J) | [10](J) | 16(J) | 11(J) | 19(J) | [6.1](J) | [8.5](J) | [9.9](J) |
| Zinc | 46 | 50 | 40 | 39 | 52 | 24 | 55 | 36 | 40 | 38 |
| Cyanide | 647 | 161 | 11 | 7.9 | 7.8 | 34 | 228 | 20 | 58 | 56 |
| % Solids | 89 | 91 | 92 | 91 | 88 | 89 | 77 | 93 | 92 | 93 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 20 (CONT.)
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
PERFORMED ON SELECTED POTLINER STORAGE AREA SOIL SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO
(Results in mg/kg)

| Boring ID | SB-015-0-2 | SB-015-2-4 | SB-015-4-6 | SB-015-6-8 | SB-015-8-10 | SB-016-0-2 | SB-016-2-4 | SB-016-4-6 | SB-016-6-8 | SB-016-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 | 2/19/88 |
| Aluminum | 42500 | 6000 | 8240 | 5600 | 4450 | 14900 | 35100 | 22600 | 10600 | 9710 |
| Antimony | <12(UJ) | <11(UJ) | <15(UJ) | <14(UJ) | <11(UJ) | <12(UJ) | <12(UJ) | <13(UJ) | <12(UJ) | <11(UJ) |
| Arsenic | 11 | 10 | 9.3 | 25 | 7.4 | 16 | 5.0 | 13 | 20 | 12 |
| Barium | 136 | 124 | 107 | 56 | [34] | [45] | [33] | [48] | 88 | 73 |
| Beryllium | 2.2 | 1.5 | [1.2] | [1.2] | [.93] | [.92] | [.98] | [.90] | [.96] | [.88] |
| Cadmium | <1.1 | <1.1 | <1.4 | <1.3 | <1.0 | <1.1 | <1.1 | <1.2 | <1.1 | <1.1 |
| Calcium | 24300 | 5150 | 5270 | [1300] | 1580 | 7660 | 7990 | 5840 | 1960 | 1930 |
| Chromium | 9.9 | 9.8 | 9.2 | 7.6 | 7.4 | 29 | 61 | 168 | 23 | 51 |
| Cobalt | [2.7](J) | [5.6](J) | [6.0](J) | [6.6](J) | [5.7](J) | [5.4](J) | [2.8](J) | 12(J) | [9.9](J) | 13(J) |
| Copper | 24(J) | 26(J) | 25(J) | 20(J) | 15(J) | 277(J) | 391(J) | 791(J) | 184(J) | 199(J) |
| Iron | 21100 | 20900 | 25600 | 23600 | 20000 | 28900 | 29800 | 106000 | 33200 | 45100 |
| Lead | 23 | 11 | 18 | 15 | 7.9 | 39 | 50 | 43 | 74 | 21 |
| Magnesium | 2930(J) | 1100(J) | 2240(J) | 1560(J) | 1620(J) | [1050](J) | [1100](J) | [1210](J) | 1860(J) | 1780(J) |
| Manganese | 734 | 595 | 1620 | 785 | 628 | 1690 | 914 | 3220 | 913 | 1360 |
| Mercury | <.099 | <.089 | <.12 | .098 | <.065 | <.10 | .089 | <.072 | <.11 | <.11 |
| Nickel | 17 | 22 | 19 | 15 | 13 | 64 | 59 | 146 | 28 | 57 |
| Potassium | <524 | <517 | <691 | <633 | <503 | [796] | <541 | <579 | 2810 | 2620 |
| Selenium | [.31](J) | <.28(UJ) | [.42](J) | <.35(UJ) | <.27(UJ) | <.30(UJ) | <.29(UJ) | [.61](J) | <.29(UJ) | <.28(UJ) |
| Silver | <1.7 | <1.7 | <2.3 | <2.1 | <1.7 | <1.8 | <1.8 | 11 | <1.8 | <1.7 |
| Sodium | 12600 | 14200 | [1390] | <446 | <354 | 2370 | 4600 | 7830 | 3770 | 2950 |
| Thallium | <.48 | <.47 | <.63 | <.59 | <.46 | <.50 | <.49 | <.54 | <.49 | <.47 |
| Vanadium | 21(J) | 13(J) | 18(J) | [13](J) | 12(J) | 36(J) | 20(J) | 62(J) | 27(J) | 34(J) |
| Zinc | 60 | 39 | 63 | 57 | 59 | 109 | 77 | 101 | 65 | 77 |
| Cyanide | 243 | 110 | 61 | 2.7 | 16 | 6.9 | 5.6 | 3.7 | 5.3 | 4.8 |
| % Solids | 88 | 90 | 67 | 72 | 93 | 85 | 86 | 80 | 86 | 90 |

J: The associated numberical value is an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
S: Indicates value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 21
## SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN SELECTED POTLINER STORAGE AREA SOIL SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

(Results in mg/kg)

| Boring ID | SB-006-0-2 | SB-006-2-4 | SB-006-4-6 | SB-006-6-8 | SB-006-8-10 | SB-008-0-2 | SB-008-2-4 | SB-008-4-6 | SB-008-6-8 | SB-008-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | | | |
| Naphthalene | --- | --- | --- | --- | --- | 80.0 | .530 | [.071] | [.180] | --- |
| 2-Methylnaphthalene | --- | --- | --- | --- | --- | 32.0 | [.330] | [.037] | [.090] | --- |
| Acenaphthylene | --- | --- | --- | --- | --- | [1.40] | --- | --- | --- | --- |
| Acenaphthene | --- | --- | --- | --- | --- | 140 | 2.40 | [.250] | .600 | --- |
| Dibenzofuran | --- | --- | --- | --- | --- | 120 | 1.70 | [.250] | .440 | [.043] |
| Fluorene | --- | --- | --- | --- | --- | 140 | 1.90 | [.250] | .550 | --- |
| Phenanthrene | --- | --- | --- | --- | --- | 450 | 10.0 | 2.50 | 3.80 | [.180] |
| Anthracene | --- | --- | --- | --- | --- | 170 | 4.40 | .700 | 1.30 | [.045] |
| Fluoranthene | --- | --- | --- | --- | --- | 410 | 12.0 | 2.20 | 3.90 | [.200] |
| Pyrene | --- | --- | --- | --- | --- | 470 | 11.0 | 1.80 | 3.70 | [.170] |
| Benzo(a)anthracene | --- | --- | --- | --- | --- | 330 | 7.90 | .950 | 2.00 | [.093] |
| Chrysene | --- | --- | --- | --- | --- | 260 | 6.80 | .840 | 1.80 | [.081] |
| Benzo(b)fluoranthene | [.056] | --- | --- | --- | --- | 390 | 7.20 | .550 | 1.50 | [.095] |
| Benzo(k)fluoranthene | --- | --- | --- | --- | --- | 180 | 2.10 | .880 | .980 | --- |
| Benzo(a)pyrene | --- | --- | --- | --- | --- | 270 | 5.40 | .630 | 1.40 | .056(J) |
| Indeno(1,2,3-cd)pyrene | --- | --- | --- | --- | --- | 110(J) | 2.00 | .470(J) | .960(J) | [.061] J |
| Dibenz(a,h)anthracene | --- | --- | --- | --- | --- | 220(J) | .520 | [.086] J | [.170] J | --- |
| Benzo(g,h,i)perylene | --- | --- | --- | --- | --- | 99.0(J) | 1.70 | .480(J) | 0.89(J) | [.085] J |
| TOTAL PAHS | .056 | --- | --- | --- | --- | 3872.4 | 77.88 | 12.944 | 24.26 | 1.109 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | | | |
| 4-Methylphenol | --- | --- | --- | --- | --- | [1.30] | --- | --- | --- | --- |
| Di-n-butylphthalate | [.043] | --- | [.051] | [.048] | [.063] | --- | [.047] | [.063] | [.050] | --- |
| bis(2-ethylhexyl)phthalate | [.200] B | [.350] B | .660 B | .710 B | 1.10 B | [1.70] B | --- | 1.30 B | 1.50 B | [.270] B |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 21 (CONT.)
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN SELECTED POTLINER STORAGE AREA SOIL SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/kg)

| Boring ID | SB-015-0-2 | SB-015-2-4 | SB-015-4-6 | SB-015-6-8 | SB-015-8-10 | SB-016-0-2 | SB-016-2-4 | SB-016-4-6 | SB-016-6-8 | SB-016-8-10 |
|---|---|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | | | |
| Naphthalene | 4.50 | 5.00 | 6.60 | [.130] | [.140] | 46.0 | 73.0 | 21.0 | 9.20 | 5.00 |
| 2-Methylnaphthalene | [1.60] | 2.20 | 3.70 | [.037] | --- | [21.0] | 39.0 | [8.20] | 4.20 | 2.10 |
| Acenaphthylene | --- | --- | [.062] | --- | --- | --- | --- | --- | --- | --- |
| Acenaphthene | 6.20 | 2.50 | 4.50 | [.046] | --- | 100 | 180 | 27.0 | 6.00 | 4.30 |
| Dibenzofuran | 5.20 | 2.80 | 4.70 | [.060] | --- | 38.0 | 60.0 | 13.0 | 4.50 | 2.70 |
| Fluorene | 4.40 | 2.30 | 4.40 | [.064] | [.040] | 59.0 | 85.0 | 18.0 | 6.30 | 37.0 |
| Phenanthrene | 28.0 | 8.20 | 15.00 | [.340] | [.190] | 370 | 420 | 150 | 23.0 | 17.0 |
| Anthracene | 11.0 | 3.50 | 6.40 | [.099] | [.053] | 130 | 180 | 40.0 | 9.00 | 5.80 |
| Fluoranthene | 32.0 | 7.60 | 13.0 | [.290] | [.180] | 580 | 530 | 160 | 28.0 | 24.0 |
| Pyrene | 39.0 | 7.70 | 19.0 | [.260] | [.120] | 500 | 820 | 210 | 29.0 | 21.0 |
| Benzo(a)anthracene | 30.0 | 5.90 | 12.0 | [.140] | [.076] | 460 | 750 | 210 | 22.0 | 18.0 |
| Chrysene | 28.0 | 5.60 | 10.0 | [.130] | [.074] | 440 | 470 | 190 | 20.0 | 16.0 |
| Benzo(b)fluoranthene | 27.0 | 6.20 | 11.0 | [.110] | --- | 580 | 1200 | 310 | 23.0 | 20.0 |
| Benzo(k)fluoranthene | 9.10 | .830 | 4.60 | [.079] | --- | 270 | 1200 | 310 | 11.0 | 8.80 |
| Benzo(a)pyrene | 23.0 | 4.30 | 9.00 | .110(J) | [.043] | 420 | 710 | 200 | 18.0 | 16.0 |
| Indeno(1,2,3-cd)pyrene | .710(J) | 1.70 | 3.30 | [.089] J | --- | 120 | 180 | 130(J) | 6.00 | 4.20 |
| Dibenz(a,h)anthracene | .880(J) | .480 | .890 | --- | --- | [30.0] | 50.0(J) | 32.0(J) | 1.50 | [1.10] |
| Benzo(g,h,i)perylene | <2.00(UJ) | 1.10 | 2.20 | [.110] J | --- | 120 | 120 | 100(J) | 5.40 | 4.10 |
| TOTAL PAHS | 250.59 | 67.91 | 130.352 | 2.094 | 0.916 | 4284 | 7067 | 2129.2 | 226.1 | 207.1 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | | | |
| Phenols | --- | [.120] | [.170] | --- | --- | --- | [1.70] | --- | --- | --- |
| 4-Methylphenol | [.210] | [.230] | [.310] | --- | --- | --- | [3.40] | --- | --- | --- |
| 2,4-Dinitrotoluene | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2,4-Dimethylphenol | --- | [.072] | [.110] | --- | --- | --- | [1.80] | --- | --- | --- |
| bis(2-ethylhexyl)phthalate | [1.10] B | --- | --- | [.340] B | .460 B,J | --- | --- | --- | [.540] B | [.740] B |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present).
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# TABLE 22
## RESULTS OF ANALYSES FOR CLP VOLATILE ORGANIC COMPOUNDS
## CONSTRUCTION MATERIAL SCRAP DUMP AND BALLFIELD SEEPS
## ORMET CORPORATION
## HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| | SEEP #1 | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Phase II | Phase I | Phase II | Phase II Dup. | Phase I | Phase I Dup | Phase II | Phase II | Phase II | Phase II |
| Date Collected | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 |
| Chloromethane | <10 UJ | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Bromomethane | <10 UJ | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 UJ | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Methylene Chloride | [4] B,J | [3] B | [3] B,J | [2] B | [2] B | 6 B,J | 7 B,J | [3] B | [3] B | [2] B | [2] B |
| Acetone | [4] B,J | 55 B,J | <10 UJ | 40 B,J | 38 B,J | <10 UJ | <10 UJ | 49 B,J | 40 B,J | 39 B,J | 33 B,J |
| Carbon Disulfide | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | 7 | <5 | [4] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 R | <10 UJ | <10 R | <10 R | <10 UJ | <10 UJ | <10 R | <10 R | <10R | <10R |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | 10 | <5 | <5 | <5 | <5 | 15 | 5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | [2] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ |
| Bromoform | <5 UJ | <5 | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 UJ | [1] | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <5 UJ | <10 | <5 UJ | <10 | <10 | <5 UJ | <5 UJ | <10 | <10 | <10 | <10 |
| Toluene | 5 | <5 | <5 | <5 | <5 | <5 | [3] | <5 | <5 | <5 | <5 |
| Chlorobenzene | 44 J | <5 | <5 UJ | <5 | <5 | <5 UJ | 43 J | <5 | <5 | <5 | <5 |
| Ethylbenzene | [2] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | 25 J | <5 | <5 | <5 | <5 | <5 | [3] B,J | <5 | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with a R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 22 (CONT.)
RESULTS OF ANALYSES FOR CLP VOLATILE ORGANIC COMPOUNDS
CONSTRUCTION MATERIAL SCRAP DUMP AND BALLFIELD SEEPS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| | CONDUIT | FIELD BLANKS | | | TRIP BLANKS | |
|---|---|---|---|---|---|---|
| | Phase I | Phase I | Phase II #1 | Phase II #2 | Phase I | Phase II |
| Date Collected | 7/7/88 | 7/7/88 | 2/21/90 | 2/22/90 | 7/8/88 | 2/21/90 |
| Chloromethane | <10 UJ | <10 UJ | <10 | <10 | <10 UJ | <10 |
| Bromomethane | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 UJ | <10 UJ | <10 | <10 | <10 UJ | <10 |
| Methylene Chloride | 7 B,J | 13 B,J | [1] B | [4] B | 5 B,J | [3] B |
| Acetone | 21 B,J | 10 B,J | 15 B,J | 78 B,J | <10 UJ | 30 B,J |
| Carbon Disulfide | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 R | <10 R | <10 UJ | <10 R |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 | <10 | <10 UJ | <10 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| trans-1,3-Dichloropropene | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| Bromoform | <5 | <5 UJ | <5 | <5 | <5 UJ | <5 |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 | <5 UJ | <5 | <5 | <5 UJ | <5 |
| 1,1,2,2-Tetrachloroethane | <5 UJ | <5 UJ | <10 | <10 | <5 UJ | <10 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | 5 UJ | <5 UJ | <5 | <5 | <5 UJ | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with a R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 23
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## SEEPS AND STEEL CONDUIT
## ORMET CORPORATION
## HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
*Results in ug/l*

| | SEEP #1 | | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 | CONDUIT | FIELD BLANK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Seep #1 RE | Phase II | Phase I | Phase II | Phase II Dup. | Phase I | Phase I Dup. | Phase II | Phase II | Phase II | Phase II | Phase I | Phase I | Phase II |
| Date Collected | 7/7/88 | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 7/22/90 |
| Phenol | <10 UJ | <10 | [4] J | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| bis(2-Chloroethyl)ether | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <20 | <10 UJ |
| 2-Chlorophenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 1,3-Dichlorobenzene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 1,4-Dichlorobenzene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Benzyl alcohol | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 UJ | <20 UJ | <10 |
| 1,2-Dichlorobenzene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2-Methylphenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| bis-(2-Chloroisopropyl)ether | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <20 UJ | <10 UJ |
| 4-Methylphenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| N-Nitroso-di-n-propylamine | <10 UJ | <10 UJ | <10 UJ | <10 | <10UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <20 | <10 UJ |
| Hexachloroethane | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Nitrobenzene | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <20 | <10 UJ |
| Isophorone | 36 J | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2-Nitrophenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,4-Dimethylphenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Benzoic Acid | <50 UJ | <50 | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 UJ | <100 UJ | <50 |
| bis(2-Chloroethoxy)methane | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,4-Dichlorophenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 1,2,4-Trichlorobenzene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Naphthalene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 4-Chloroaniline | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Hexachlorobutadiene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 4-Chloro-3-methylphenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2-Methylnaphthalene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Hexachlorocyclopentadiene | <10 UJ | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,4,6-Trichlorophenol | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,4,5-Trichlorophenol | <50 UJ | <50 | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| 2-Chloronaphthalene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2-Nitroaniline | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <100 UJ | <50 UJ |
| Dimethyl phthalate | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Acenaphthylene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,6-Dinitrotoluene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 3-Nitroaniline | <50 UJ | <50 | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| Acenaphthene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

# TABLE 23 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## SEEPS AND STEEL CONDUIT
## ORMET CORPORATION
## HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| | SEEP #1 | | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 | CONDUIT | FIELD BLANK | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Seep #1 RE | Phase II | Phase I | Phase II | Phase II Dup. | Phase I | Phase I Dup. | Phase II | Phase II | Phase II | Phase II | Phase I | Phase I | Phase II |
| Date Collected | 7/7/88 | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 | 7/7/77 | 7/7/88 | 2/22/90 |
| 2,4-Dinitrophenol | <50 UJ | <50 | <50 | <50 UJ | <50 | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| 4-Nitrophenol | <50 UJ | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| Dibenzofuran | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 2,4-Dinitrotoluene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Diethyl phthalate | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 4-Chlorophenyl phenyl ether | <10 UJ | <10 | <10 | <10 | <0 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Fluorene | <10 UJ | <10 | <10 | <10 | <0 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 4-Nitroaniline | <50 UJ | <50 | <50 UJ | <50 | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <100 | <50 UJ |
| 4,6-Dinitro-2-Methylphenol | <50 UJ | <50 | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| N-Nitrosodiphenylamine | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 4-Bromophenyl-phenylether | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Hexachlorobenzene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 UJ | <20 UJ | <10 |
| Pentachlorophenol | <50 UJ | <50 | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 | <50 | <50 | <50 | <50 | <100 | <50 |
| Phenanthrene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Anthracene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Di-n-butylphthalate | <10 UJ | <10 | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Fluoranthene | <10 UJ | <10 | <10 | [4] | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Pyrene | <10 UJ | <10 | <10 | [3] | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Butylbenzylphthalate | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| 3,3'-Dichlorobenzidine | <20 UJ | <20 | <20 | <20 | <20 | <20 | <20 | <20 UJ | <20 | <20 | <20 | <20 | <20 | <40 | <20 |
| Benzo(a)anthracene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Chrysene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| bis(2-Ethylhexyl)phthalate | <10 UJ | 23 B,J | [8] | <10 | <10 | 16 | [1] | [4] J | <10 | <10 | [3] | [2] | <10 | <20 | <10 |
| Di-n-octylphthalate | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Benzo(b)fluoranthene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Benzo(k)fluoranthene | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 | <20 | <10 |
| Benzo(a)pyrene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Dibenz(a,h)anthracene | <10 UJ | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <20 | <10 |
| Benzo(g,h,i)perylene | <10 UJ | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <20 | <10 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 24
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
SEEPS AND STEEL CONDUIT
ORMET CORPORATION
HANNIBAL, OHIO

(Pesticides and PCBs)
Results in ug/l

| | SEEP #1 | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 | CONDUIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Phase II | Phase I | Phase II | Phase II (Dup.) | Phase I | Phase I (Dup.) | Phase II | Phase II | Phase II | Phase II | Phase I |
| Date Collected | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 | 7/7/88 |
| Alpha-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| beta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| delta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| gamma-BHC (Lindane) | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor epoxide | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endosulfan I | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Dieldrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4,4'-DDE | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4,4'-DDD | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan sulfate | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| 4,4'-DDT | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Endrin ketone | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| gamma-Chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toxaphene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor-1016 | <0.5 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Aroclor-1221 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Aroclor-1232 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Aroclor-1242 | <0.5 | <0.5 | 5.4 | 7.4 | 3.6 | 0.83 | 0.9 | 2.3 | <0.5 | <0.5 | <0.5 | <0.5 |
| Aroclor-1248 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Aroclor-1254 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Aroclor-1260 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present).
Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 25
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
CONSTRUCTION MATERIAL SCRAP DUMP AND BALLFIELD SEEPS
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/l

| | SEEP #1 | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 | CONDUIT | FIELD BLANKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Phase II | Phase I | Phase II | Phase II Dup. | Phase I | Phase I Dup. | Phase II | Phase II | Phase II | Phase II | Phase I | Phase I | Phase II |
| Date Collected | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 |
| Aluminum | 331 | 1030 J | 415 | 649 | 653 | 558 | 513 | 839 J | 429 J | 1050 | 407 | 384 | <27 | [102] J |
| Antimony | <33 | <16.0 | <33 | [17.0] B | [18.0] B | <33 | <33 | <16.0 | <16.0 | [32.0] B | [19.0] B | <33 | <33 | <16.0 |
| Arsenic | <43 | [6.0] | <8.6 | <4.0 | <4.0 | <8.6 | <8.6 | <2.0 UJ | <2.0 | [5.0] | [5.0] | <86 | <.86 | <2.0 UJ |
| Barium | [72] J | [29] | [49] J | [20.0] | [20.0] | [32] J | [99] J | [29.0] | <19.0 | <190 | [35.0] | [12] J | [7.2] J | <19.0 |
| Beryllium | <.29 | <5.0 | [.55] | <50.0 | <50.0 | [.64] | [.64] | <5.0 | <5.0 | <50.0 | <50.0 | <.29 | [.29] | <5.0 |
| Cadmium | <4.0 | <2.0 | <4.0 | [30.0] | [20.0] | <4.0 | <4.0 | <2.0 | <2.0 | [30.0] | [20.0] | <4.0 | <4.0 | <2.0 |
| Calcium | 33500 J | 12500 | 15000 J | 16800 B | 17300 B | 6450 J | 6930 J | 6500 | 177000 | [3970] B | 7380 B | 5230 J | [152] J | [166] |
| Chromium | <8.1 | <3.0 UJ | <8.1 | <30.0 B | <30.0 B | <8.1 | <8.1 | 31.0 J | 23.0 J | 60.0 B | 31.0 B | 37 | [8.2] | 15 J |
| Cobalt | [24] | <7.0 UJ | [5.7] | <70.0 | <70.0 | [8.1] | [8.5] | [29.0] J | 52.0 J | <70.0 | <70.0 | [31] | <2.4 | [12.0] J |
| Copper | <5.4 | [13.0] J | <5.4 | [13.0] | [13.0] | [19] | [17] | 48.0 J | [16.0] J | 144 | 141 | <5.4 | [9.7] | [13.0] J |
| Iron | 1060 J | 1650 | 861 J | 408 J | 450 J | 803 J | 824 J | 1280 | 1740 | 1720 J | 721 J | 2620 J | [74] J | [76.0] |
| Lead | <23 | 5.0 J | <2.3 | <3.0 | <3.0 | <2.3 | <2.3 | 3.0 J | <3.0 UJ | 3.0 | <6.0 | <23 | <2.3 | <3.0 UJ |
| Magnesium | 13600 | [4840] | 15100 | 12700 | 13000 | 9310 | 10000 | 8470 | 48500 | [5000] | 10300 | 8300 | <120 | <91.0 |
| Manganese | 331 J | 127 | 402 J | 204 | 210 | 155 J | 163 J | 176 | 31300 | 32.0 | 17.0 | [3.0] J | [14.0] J | <7.0 |
| Mercury | <.20 | <.20 | <.20 | <.20 | <.02 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 |
| Nickel | <34 | <7.0 UJ | <34 | <70.0 | <70.0 | <34 | <34 | 51.0 J | 48.0 J | <70.0 | <70.0 | <34 | <.34 | [28.0] J |
| Potassium | 10700 | [3480] | 22900 | 15200 | 15700 | 27700 | 29900 | 21700 | [3170] | 20600 | 28900 | 5450 | <1770 | [398] |
| Selenium | <100 | <3.0 UJ | <20 | <4.0 UJ | <4.0 | [20] | <20 | <3.0 UJ | <3.0 UJ | 13.7 | <4.0 UJ | <200 | <2.0 | <3.0 UJ |
| Silver | <9.4 | <3.0 UJ | <9.4 | <30.0 | 49.0 | <9.4 | <9.4 | 30.0 J | 18.0 J | <30.0 | <30.0 | <9.4 | <9.4 | 16.0 J |
| Sodium | 3530000 | 1300000 | 1820000 | 1130000 B | 1170000 B | 1930000 | 2030000 | 1480000 | 945000 | 1290000 B | 2270000 B | 4990000 | <888 | [489] B |
| Thallium | <18 | <3.0 UJ | <18 | <3.0 | <3.0 | <1.8 | <1.8 | <3.0 UJ | <3.0 UJ | <3.0 | <3.0 | <18 | <1.8 | <3.0 UJ |
| Vanadium | [9.8] | <6.0 UJ | [6.2] | [6.0] | <60.0 | [6.3] | [5.6] | [29.0] J | [14.0] J | [18.0] | [12.0] | <3.2 | <3.2 | [13.0] J |
| Zinc | 66 J | <6.0 UJ | [9.7] J | [6.0] | [10.0] | 89 J | 60 J | 29.0 J | [16.0] J | 24.0 | [11.0] | [8.4] J | 21 J | [8.0] J |
| Cyanide | 733 | 190 | 163 | 248 | 377 | 950 | 695 | 265 | 79.4 | 282 | 770 | 4383 | <10 | <5 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.
B: The analyte was also detected in the associated laboratory blank(s).
S: Indicates a value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 26
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
CONSTRUCTION MATERIAL SCRAP DUMP AND BALLFIELD SEEPS
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/l unless otherwise noted)

| | SEEP #1 | | SEEP #2 | | | SEEP #3 | | | SEEP #4 | SEEP #5 | SEEP #6 | CONDUIT | FIELD BLANKS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phase I | Phase II | Phase I | Phase II | Phase II Dup. | Phase I | Phase I Dup. | Phase II | Phase II | Phase II | Phase II | Phase I | Phase I | Phase II |
| Date Collected | 7/7/88 | 2/22/90 | 7/7/88 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 | 2/22/90 | 2/21/90 | 2/21/90 | 7/7/88 | 7/7/88 | 2/22/90 |
| Temperature ( C) | 25 | 6.5 | 22 | 13.5 | 13.5 | 19 | 19 | 13 | 7 | 10.0 | 12.5 | 17.5 | --- | --- |
| pH (Std. Units) - lab | 8.6 | 8.6 | 8.0 | 8.1 | 8.2 | 7.8 | 7.9 | 7.9 | 6.6 | 8.8 | 8.6 | 9.2 | 7.0 | 6.0 |
| pH (Std. Units) - field | 8.7 | 8.6 | 8.1 | 8.2 | 8.2 | 7.9 | 7.9 | 7.8 | 6.2 | 8.9 | 8.8 | 9.3 | 7.6 | --- |
| Spec. Cond. (umho/cm) - lab | 14,000 | 4700 | 6700 | 4100 | 4100 | 7400 | 7400 | 5000 | 3600 | 4100 | 6300 | 18,000 | 11 | 1 |
| Spec. Cond. (umho/cm) - field | 14,200 | 5200 | 6800 | 4500 | 4500 | 7500 | 7500 | 5600 | 4600 | 4900 | 7800 | 18,900 | 1.2 | --- |
| Silica, Dissolved | 24 | <10 | 16 | 6 | 11 | 28 | 17 | 20 | 17 | <10 | 7 | 7 | <2 | <2 |
| Alkalinity | 2700 | 920 | 3000 | 2000 | 2000 | 4100 | 3900 | 2900 | 310 | 1900 | 3700 | 3800 | <1 | 2 |
| Total Dissolved Solids | 14,000 | 3900 | 9300 | 3100 | 3100 | 12,000 | 13,000 | 3900 | 3100 | 3500 | 6000 | 16,000 | <1 | 16 |
| Chloride | 170 | 41 | 78 | 39 | 40 | 79 | 73 | 42 | 57 | 84 | 100 | 170 | <1 | <1 |
| Sulfate | 5000 | 1000 | 630 | 440 | 440 | 240 | 210 | 360 | 1800 | 300 | 750 | 6100 | <1 | <1 |
| Fluoride | 92 | 47 | 110 | 80 | 74 | 81 | 74 | 62 | 6.5 | 160 | 94 | 200 | <0.1 | <0.1 |
| Cyanide, Total | 1.5 | .19 | 0.36 | .248 | .377 | 1.3 | 0.79 | 0.265 | 0.0794 | 0.282 | 0.770 | 8.8 | <0.01 | <0.005 |
| Cyanide, Amenable to Chlorination | 0.20 | <0.005 | 0.10 | <0.005 | .114 | 0.30 | <0.01 | 0.134 | 0.0686 | <0.005 | 0.549 | 0.90 | <0.01 | <0.005 |
| Total Organic Carbon | 16 | 9 | 23 | 19 | 17 | 33 | 39 | 36 | 6 | 42 | 44 | 8 | <1 | <1 |
| Nitrogen, Ammonia | 4.2 | <1 | 1.9 | <1 | <1 | <0.1 | 1.5 | <1 | <1 | <1 | <1 | <0.1 | <0.1 | <1 |
| Tin, Total | <0.01 | <0.01 | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.07 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 |

--- Not Measured

TABLE 27
RESULTS OF ANALYSES FOR CLP ORGANIC COMPOUNDS
PHASE II CONSTRUCTION MATERIAL SCRAP DUMP SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in mg/kg

| Sample ID | CMSD-1 | CMSD-2 | CMSD-3 | CMSD-3 DUP. | CMSD-4 |
|---|---|---|---|---|---|
| Date Collected | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 |
| Chloromethane | <.012 | <.012 | <.013 | <.012 | <.012 |
| Bromomethane | <.012 | <.012 | <.013 | <.012 | <.012 |
| Vinyl Chloride | <.012 | <.012 | <.013 | <.012 | <.012 |
| Chloroethane | <.012 | <.012 | <.013 | <.012 | <.012 |
| Methylene Chloride | .091 | .002 B,J | .092 | .089 | .110 |
| Acetone | .270 J | .098 J | .110 J | .120 J | .160 J |
| Carbon Disulfide | [.004] | <.006 | <.006 | <.006 | <.006 |
| 1,1-Dichloroethene | <.006 | <.006 | <.006 | <.006 | <.006 |
| 1,1-Dichloroethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| 1,2-Dichloroethene (total) | <.006 | <.006 | <.006 | <.006 | <.006 |
| Chloroform | <.006 | <.006 | <.006 | <.006 | <.006 |
| 1,2-Dichloroethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| 2-Butanone | .043 J | .016 J | <.013 R | <.012 R | <.012 R |
| 1,1,1-Trichloroethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| Carbon Tetrachloride | <.006 | <.006 | <.006 | <.006 | <.006 |
| Vinyl Acetate | <.012 | <.012 | <.013 | <.012 | <.012 |
| Bromodichloromethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| 1,2-Dichloropropane | <.006 | <.006 | <.006 | <.006 | <.006 |
| cis-1,3-Dichloropropene | <.006 | <.006 | <.006 | <.006 | <.006 |
| Trichlorethene | <.006 | <.006 | <.006 | <.006 | <.006 |
| Dibromochloromethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| 1,1,2-Trichloroethane | <.006 | <.006 | <.006 | <.006 | <.006 |
| Benzene | <.006 | <.006 | <.006 | <.006 | <.006 |
| trans-1,3-Dichloropropene | <.006 | <.006 | <.006 | <.006 | <.006 |
| Bromoform | <.006 | <.006 | <.006 | <.006 | <.006 |
| 4-Methyl-2-Pentanone | <.012 UJ | <.012 UJ | <.013 UJ | .031 J | <.012 UJ |
| 2-Hexanone | <.012 UJ | [.002] J | <.013 UJ | <.012 UJ | <.012 UJ |
| Tetrachloroethene | <.006 | [.003] | <.006 | <.006 | <.006 |
| 1,1,2,2-Tetrachloroethane | <.012 | <.012 | <.013 | <.012 | <.012 |
| Toluene | [.002] | <.006 | <.006 | <.006 | <.006 |
| Chlorobenzene | <.006 | <.006 | <.006 | <.006 | <.006 |
| Ethylbenzene | [.002] B,J | <.006 | [.002] B,J | <.006 | [.002] B,J |
| Styrene | <.006 | <.006 | <.006 | <.006 | <.006 |
| Xylene (total) | [.002] B,J | <.006 | <.006 | [.002] B,J | <.006 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 28
## RESULTS OF ANALYSES FOR CLP ORGANIC COMPOUNDS
## PHASE II CONSTRUCTION MATERIAL SCRAP DUMP COMPOSITE SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in mg/kg

| Sample ID | CMSD-1 | CMSD-2 | CMSD-3 | CMSD-3 DUP. | CMSD-4 |
|---|---|---|---|---|---|
| Date Collected | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 |
| Phenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| bis(2-Chloroethyl)ether | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2-Chlorophenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 1,3-Dichlorobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 1,4-Dichlorobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Benzyl alcohol | <40.0 UJ | <4.0 UJ | <41.0 UJ | <40.0 UJ | <40.0 |
| 1,2-Dichlorobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2-Methylphenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| bis-(2-Chloroisopropyl)ether | <40.0 UJ | <4.0 UJ | <41.0 UJ | <40.0 UJ | <40.0 UJ |
| 4-Methylphenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| N-Nitroso-di-n-propylamine | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 UJ |
| Hexachloroethane | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Nitrobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Isophorone | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2-Nitrophenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2,4-Dimethylphenol | <40.0 | | <41.0 | <40.0 | <40.0 |
| Benzoic Acid | <200 UJ | <20.0 UJ | <200 UJ | <190 UJ | <200 |
| bis(2-Chloroethoxy)methane | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2,4-Dichlorophenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 1,2,4-Trichlorobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Naphthalene | <40.0 | [1.3] | <41.0 | <40.0 | <40.0 |
| 4-Chloroaniline | <40.0 UJ | <4.0 UJ | <41.0 UJ | <40.0 UJ | <40.0 UJ |
| Hexachlorobutadiene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 4-Chloro-3-methylphenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2-Methylnaphthalene | <40.0 | [.460] | <41.0 | <40.0 | <40.0 |
| Hexachlorocyclopentadiene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2,4,6-Trichlorophenol | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2,4,5-Trichlorophenol | <200 | <20.0 | <200 | <190 | <200 |
| 2-Chloronaphthalene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2-Nitroaniline | <200 | <20.0 | <200 | <190 | <200 UJ |
| Dimethyl phthalate | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Acenaphthylene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 2,6-Dinitrotoluene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 3-Nitroaniline | <200 | <20.0 | <200 | <190 | <200 |
| Acenaphthene | [6.6] | [5.1] | [13.0] | [5.2] | [13.0] |
| 2,4-Dinitrophenol | <200 | <20.0 | <200 | <190 | <200 |
| 4-Nitrophenol | <200 | <20.0 | <200 | <190 | <200 |
| Dibenzofuran | <40.0 | [2.7] | <41.0 | <40.0 | [8.5] |
| 2,4-Dinitrotoluene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Diethyl phthalate | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 4-Chlorophenyl phenyl ether | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Fluorene | [4.1] | 4.3 | [5.5] | <40.0 | [11.0] |
| 4-Nitroaniline | <200 | <20.0 | <200 | <190 | <200 |
| 4,6-Dinitro-2-Methylphenol | <200 | <20.0 | <200 | <190 | <200 |
| N-Nitrosodiphenylamine | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| 4-Bromophenyl-phenylether | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Hexachlorobenzene | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Pentachlorophenol | <200 | <20.0 | <200 | <190 | <200 |
| Phenanthrene | 59.0 | 44.0 | 120 | 49.0 | 130 |
| Anthracene | [19.0] | 14.0 | [33.0] | [13.0] | [35.0] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 28 (CONT.)

RESULTS OF ANALYSES FOR CLP ORGANIC COMPOUNDS
PHASE II CONSTRUCTION MATERIAL SCRAP DUMP COMPOSITE SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | CMSD-1<br>2/6/90 | CMSD-2<br>2/6/90 | CMSD-3<br>2/6/90 | CMSD-3 DUP.<br>2/6/90 | CMSD-4<br>2/6/90 |
|---|---|---|---|---|---|
| Di-n-Butylphthalate | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Fluoranthene | 95.0 | 47.0 | 240 | 97.0 | 160 |
| Pyrene | 110 | 43.0 | 280 | 110 | 130 |
| Butylbenzylphthalate | <40.0 | <4.0 | 41.0 | <40.0 | <40.0 |
| 3,3'-Dichlorobenzidine | <81.0 UJ | 8.0 UJ | 83.0 UJ | <80.0 UJ | <81.0 |
| Benzo(a)anthracene | 68.0 | 31.0 | 220 | 70.0 | 56.0 |
| Chrysene | 85.0 | 25.0 | 180 | 76.0 | 47.0 |
| bis(2-Ethylhexyl)phthalate | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Di-n-octylphthalate | <40.0 | <4.0 | <41.0 | <40.0 | <40.0 |
| Benzo(b)fluoranthene | 84.0 | 35.0 | 310 | 93.0 | 46.0 |
| Benzo(k)fluoranthene | <40.0 | <4.0 | <41.0 | <40.0 | 50.0 J |
| Benzo(a)pyrene | 50.0 | 21.0 | 200 | 61.0 | 46.0 |
| Indeno(1,2,3-cd)pyrene | 49.0 | 18.0 | 160 | 45.0 | <40.0 |
| Dibenz(a,h)anthracene | [14.0] | 5.2 | <41.0 | [14.0] | <40.0 |
| Benzo(g,h,i)perylene | 75.0 | <4.0 UJ | 220 J | 55.0 J | <40.0 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 29
RESULTS OF ANALYSES FOR CLP ORGANIC COMPOUNDS
PHASE II CONSTRUCTION MATERIAL SCRAP DUMP COMPOSITE SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Pesticides and PCBs)
Results in mg/kg

| Sample ID<br>Date Collected | CSMD-1<br>2/6/90 | CMSD-2<br>2/6/90 | CMSD-3<br>2/6/90 | CMSD-3 DUP.<br>2/6/90 | CMSD-4<br>2/6/90 |
|---|---|---|---|---|---|
| Alpha-BHC | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| beta-BHC | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| delta-BHC | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| gamma-BHC (Lindane) | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| Heptachlor | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| Aldrin | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| Heptachlor epoxide | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| Endosulfan I | <.240 | <.980 | <.250 | <.240 UJ | <.240 |
| Dieldrin | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| 4,4'-DDE | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| Endrin | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| Endosulfan II | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| 4,4'-DDD | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| Endosulfan sulfate | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| 4,4'-DDT | <.490 | <2.00 | <.500 | <.480 UJ | <.490 |
| Methoxychlor | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Endrin ketone | <.490 | <2.00 | <.500 | <.480 | <.490 |
| alpha-chlordane | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| gamma-Chlordane | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Toxaphene | <4.90 | <20.0 | <5.00 | <4.80 | <4.90 |
| Aroclor-1016 | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Aroclor-1221 | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Aroclor-1232 | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Aroclor-1242 | <2.40 | <9.80 | <2.50 | <2.40 | <2.40 |
| Aroclor-1248 | 3.632 | 22.6 | 5.725 J | 7.26 J | 4.555 |
| Aroclor-1254 | <4.90 | <20.0 | <5.00 | <4.80 UJ | <4.90 |
| Aroclor-1260 | <4.90 | <20.0 | <5.00 | <4.80 UJ | <4.90 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 30
RESULTS OF ANALYSES FOR CLP INOGRANIC PARAMETERS
PHASE II CONSTRUCTION MATERIAL SCRAP DUMP COMPOSITE SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO
Results in mg/kg

| Sample ID<br>Date Collected | CMSD-1<br>2/6/90 | CMSD-2<br>2/6/90 | CMSD-3<br>2/6/90 | CMSD-3<br>DUP.<br>2/6/90 | CMSD-4<br>2/6/90 |
|---|---|---|---|---|---|
| Aluminum | 121000 | 58800 | 81500 | 87200 | 98500 |
| Antimony | <3.40 | <4.00 | <3.90 | <3.70 | <4.00 |
| Arsenic | 53.7 | 32.2 | 50.7 | 46.1 | 56.9 |
| Barium | 125 | 111 | 107 | 150 | 106 |
| Beryllium | 3.80 | 2.80 | 2.50 | 2.60 | 3.00 |
| Cadmium | 3.60 | 2.30 | 2.00 | 2.80 | 3.00 |
| Calcium | 11100 | 8610 | 10100 | 11100 | 16100 |
| Chromium | 30.2 | 2.30 | 2.00 | 42.5 | 16.7 |
| Cobalt | 7.50 | 11.4 | 4.20 | 5.60 | 5.50 |
| Copper | 429 | 333 | 542 | 481 | 303 |
| Iron | 26900 | 23900 | 24700 | 27800 | 21800 |
| Lead | 83.9 | 57.8 | 54.7 | 84.1 | 70.7 |
| Magnesium | 1170 | 1670 | 1380 | 1670 | 901 |
| Manganese | 436 | 1060 | 418 | 437 | 330 |
| Mercury | <0.09 | <0.11 | <0.10 | <0.09 | <0.12 |
| Nickel | 58.8 | 46.7 | 53.2 | 62.5 | 36.6 |
| Potassium | 875 | 1150 | 311 | 377 | 672 |
| Selenium | <0.98 | <0.99 | <0.97 | <0.85 | <1.05 |
| Silver | <0.64 | <0.76 | <0.74 | <0.70 | <0.75 |
| Sodium | 44100 | 22300 | 23600 | 23300 | 48700 |
| Thallium | <0.73 | <0.74 | <0.72 | <0.66 | <0.78 |
| Vanadium | 42.4 | 36.6 | 32.3 | 41.6 | 29.4 |
| Zinc | 94.5 | 59.6 | 66.3 | 78.5 | 125 |
| Cyanide | 19.4 | 7.90 | 13.80 | 9.50 | 21.70 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 31
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
PHASE II CONSTRUCTION MATERIAL SCRAP DUMP COMPOSITE SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO
Results in mg/kg

| Sample ID | CMSD-1 | CMSD-2 | CMSD-3 | CMSD-3 (DUP.) | CMSD-4 |
|---|---|---|---|---|---|
| Date Collected | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 | 2/6/90 |
| Ammonia, Leachable | 110 | 90 | 70 | 98 | 99 |
| Chloride, Leachable | 10 | 10 | 8 | 10 | 10 |
| Fluoride, Leachable | 540 | 440 | 450 | 450 | 480 |
| Total Organic Carbon, Leachable | 200 | 150 | 210 | 220 | 130 |
| Sulfate, Leachable | 41 | 270 | 58 | 86 | 82 |
| Cyanide, Amenable | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 |
| Cyanide, Total | 19.4 | 7.90 | 13.80 | 9.50 | 21.7 |
| Percent Solids | 87 | 82 | 80 | 83 | 82 |
| pH | 7.8 | 7.1 | 7.3 | 7.1 | 7.1 |

TABLE 32
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN CONSTRUCTION MATERIAL SCRAP DUMP SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | CMSD-1 | CMSD-2 | CMSD-3 | CMSD-3 DUP. | CMSD-4 |
|---|---|---|---|---|---|
| PAHs | | | | | |
| Naphthalene | — | [1.3] | — | — | — |
| 2-Methylnaphthalene | — | [.460] | — | — | — |
| Acenaphthylene | — | — | — | — | — |
| Acenaphthene | [6.6] | [5.1] | [13.0] | [5.2] | [13.0] |
| Dibenzofuran | — | [2.7] | — | — | [8.5] |
| Fluorene | [4.1] | 4.3 | [5.5] | — | [11.0] |
| Phenanthrene | 59.0 | 44.0 | 120 | 49.0 | 130 |
| Anthracene | [19.0] | 14.0 | [33.0] | [13.0] | [35.0] |
| Fluoranthene | 95.0 | 47.0 | 240 | 97.0 | 160 |
| Pyrene | 110 | 43.0 | 280 | 110 | 130 |
| Benzo(a)anthracene | 68.0 | 31.0 | 220 | 70.0 | 56.0 |
| Chrysene | 85.0 | 25.0 | 180 | 76.0 | 47.0 |
| Benzo(b)fluoranthene | 84.0 | 35.0 | 310 | 93.0 | 46.0 |
| Benzo(k)fluoranthene | — | — | — | — | 50.0 J |
| Benzo(a)pyrene | 50.0 | 21.0 | 200 | 61.0 | 46.0 |
| Indeno(1,2,3-cd)pyrene | 49.0 | 18.0 | 160 | 45.0 | — |
| Dibenz(a,h)anthracene | [14.0] | 5.2 | — | [14.0] | — |
| Benzo(g,h,i)perylene | 75.0 | — | 220 J | 55.0 J | — |
| TOTAL PAHs | 718.7 | 297.06 | 1981.5 | 688.2 | 732.5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 33
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
Results in mg/kg

| Sample ID | CRA-A1-C | CRA-A1-C RE | CRA-A1-S | CRA-A2-C | CRA-A2-C RE | CRA-A2-S | CRA-D1-C | CRA-D1-C RE | CRA-D2-S | CRA-B1-C | CRA-B1-C RE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/25/88 | 5/25/88 | 5/25/88 | 5/25/88 | 5/25/88 | 5/25/88 | 5/26/88 | 5/26/88 | 5/26/88 | 5/26/88 | 5/26/88 |
| Chloromethane | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| Bromomethane | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| Vinyl Chloride | <.018 UJ | <.018 UJ | <.016 | <.016 UJ | <.016 UJ | <.016 | <.018 UJ | <.018 UJ | <.014 | <.018 UJ | <.018 UJ |
| Chloroethane | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| Methylene Chloride | .026 J | .011 B,J | .033 J | .023 J | [.003] B,J | .022 J | [.002] B,J | [.008] B,J | .008 B,J | [.004] B,J | .011 B,J |
| Acetone | .110 B,J | [.016] B,J | .190 B,J | .130 B,J | [.003] B,J | .094 B,J | [.015] B,J | .019 B,J | .019 B,J | [.007] B,J | .018 B,J |
| Carbon Disulfide | <.009 UJ | <.009 UJ | <.008 UJ | <.008 UJ | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| 1,1-Dichloroethene | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| 1,1-Dichloroethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| 1,2-Dichloroethene (total) | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Chloroform | <.009 UJ | [.008] J | <.008 | <.008 UJ | <.008 UJ | <.008 | [.007] J | .009 J | [.004] | [.008] J | .010 J |
| 1,2-Dichloroethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| 2-Butanone | <.018 UJ | <.018 UJ | .057 J | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| 1,1,1-Trichloroethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Carbon Tetrachloride | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Vinyl Acetate | <.018 UJ | <.018 UJ | <.016 | <.016 UJ | <.016 UJ | <.016 | <.018 UJ | <.018 UJ | <.014 | <.018 UJ | <.018 UJ |
| Bromodichloromethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| 1,2-Dichloropropane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| cis-1,3-Dichloropropene | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Trichlorethene | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Dibromochloromethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| 1,1,2-Trichloroethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Benzene | [.005] B,J | [.006] B,J | .008 B,J | [.003] B,J | [.006] B,J | [.004] B,J | [.004] B,J | [.008] B,J | [.003] B,J | [.005] B,J | [.005] B,J |
| trans-1,3-Dichloropropene | <.009 UJ | <.009 UJ | <.008 UJ | <.008 UJ | <.008 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| Bromoform | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| 4-Methyl-2-Pentanone | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| 2-Hexanone | <.018 UJ | <.018 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.018 UJ | <.018 UJ |
| Tetrachloroethene | [.004] J | [.003] J | [.002] | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| 1,1,2,2-Tetrachloroethane | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 UJ | <.009 UJ | <.009 UJ |
| Toluene | <.009 UJ | <.009 UJ | [.003] B,J | [.003] B,J | [.003] J | [.002] B,J | [.002] J | [.004] J | [.002] | [.003] J | [.004] J |
| Chlorobenzene | <.009 UJ | <.009 UJ | .180 | <.008 UJ | <.008 UJ | <.008 | .023 J | .023 J | .139 | .054 J | [.006] J |
| Ethyl benzene | <.009 UJ | [.004] J | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Styrene | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |
| Xylene (total) | <.009 UJ | <.009 UJ | <.008 | <.008 UJ | <.008 UJ | <.008 | <.009 UJ | <.009 UJ | <.007 | <.009 UJ | <.009 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 33 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

Volatile Organic Compounds
Results in mg/kg

| Sample ID | CRA-B1-S | CRA-B2-C | CRA-B2-S | CRA-C1-C | CRA-C1-C RE | CRA-C1-S | CRA-C2-C | CRA-C2-C RE | CRA-C2-S |
|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 5/26/88 | 5/26/88 | 5/26/88 | 5/26/88 | 5/26/88 | 5/26/88 | 5/27/88 | 5/27/88 | 5/27/88 |
| Chloromethane | <.012 UJ | <.020 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ |
| Bromomethane | <.012 UJ | <.020 | <.014 | <.016 UJ | <.016 UJ | <.014 | <.016 UJ | <.016 UJ | <.014 |
| Vinyl Chloride | <.012 | <.020 | <.014 | <.016 UJ | <.016 UJ | <.014 | <.016 UJ | <.016 UJ | <.014 |
| Chloroethane | <.012 UJ | <.020 | <.014 | <.016 UJ | <.016 UJ | <.014 | <.016 UJ | <.016 UJ | <.014 |
| Methylene Chloride | .024 J | [.002] B,J | .018 B | <.008 UJ | .030 J | .027 | .032 J | [.002] B,J | [.002] B,J |
| Acetone | .052 J | [.007] B,J | .017 B,J | .022 B,J | [.005] B,J | [.009] B,J | .072 B,J | [.012] B,J | [.010] B,J |
| Carbon Disulfide | <.006 UJ | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| 1,1-Dichloroethene | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| 1,1-Dichloroethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| 1,2-Dichloroethene (total) | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Chloroform | <.006 | [.008] | .008 | <.008 UJ | .013 J | .008 | <.008 UJ | [.007] J | [.007] |
| 1,2-Dichloroethane | <.006 | <.010 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ |
| 2-Butanone | <.012 UJ | <.020 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ |
| 1,1,1-Trichloroethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Carbon Tetrachloride | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Vinyl Acetate | <.012 | <.020 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ |
| Bromodichloromethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| 1,2-Dichloropropane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| cis-1,3-Dichloropropene | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Trichlorethene | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Dibromochloromethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| 1,1,2-Trichloroethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Benzene | [.006] B,J | [.004] B,J | [.004] B,J | .052 J | .310 J | .350 | .018 B,J | [.003] B,J | [.003] B,J |
| trans-1,3-Dichloropropene | <.006 UJ | <.010 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ |
| Bromoform | <.006 | <.010 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ | <.008 UJ | <.008 UJ | <.007 UJ |
| 4-Methyl-2-Pentanone | <.012 UJ | <.020 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ |
| 2-Hexanone | <.012 UJ | <.020 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ | <.016 UJ | <.016 UJ | <.014 UJ |
| Tetrachloroethene | <.006 | <.010 | .007 | <.008 UJ | [.002] J | .011 | <.008 UJ | <.008 UJ | <.007 |
| 1,1,2,2-Tetrachloroethane | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Toluene | <.006 | [.002] | [.003] | <.008 UJ | .032 J | .034 | [.003] B,J | [.002] J | <.007 |
| Chlorobenzene | <.006 | <.010 | <.007 | <.008 UJ | .015 J | <.007 | <.008 UJ | <.008 UJ | <.007 |
| Ethyl benzene | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | [.001] | <.008 UJ | <.008 UJ | <.007 |
| Styrene | <.006 | <.010 | <.007 | <.008 UJ | [.007] J | .008 | <.008 UJ | <.008 UJ | <.007 |
| Xylene (total) | <.006 | <.010 | <.007 | <.008 UJ | <.008 UJ | <.007 | <.008 UJ | <.008 UJ | <.007 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 34
COMPARISON OF DUPLICATE SAMPLE ANALYSES
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL,OHIO

Volatile Organic Compounds
(Results in mg/kg)

| | Original Sample | | Field Duplicate | | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| Sample ID | CRA-B1-C | CRA-B1-C RE | CRA-D1-C | CRA-D1-C RE | CRA-B2-S | CRA-D2-S |
| Chloromethane | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.014 UJ |
| Bromomethane | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 | <.014 UJ |
| Vinyl Chloride | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 | <.014 |
| Chloroethane | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 | <.014 UJ |
| Methylene Chloride | <[.004] B,UJ | <.011 B,UJ | <[.002] B,UJ | <[.008] B,UJ | .018 B | <.008 B,UJ |
| Acetone | <[.007] B,UJ | <.018 B,UJ | <[.015] B,UJ | <.019 B,UJ | <.017 B,UJ | <.019 B,UJ |
| Carbon Disulfide | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 UJ |
| 1,1-Dichloroethene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| 1,1-Dichloroethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| 1,2-Dichloroethene (total) | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Chloroform | [.008] J | .010 J | [.007] J | .009 J | .008 | [.004] |
| 1,2-Dichloroethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.007 |
| 2-Butanone | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.014 UJ |
| 1,1,1-Trichloroethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Carbon Tetrachloride | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Vinyl Acetate | <.018 UJ | <.018 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.014 UJ |
| Bromodichloromethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| 1,2-Dichloropropane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| cis-1,3-Dichloropropene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Trichlorethene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Dibromochloromethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| 1,1,2-Trichloroethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Benzene | <[.005] B,UJ | [.005] B,UJ | <[.004] B,UJ | <[.008] B,UJ | <[.004] B,UJ | <[.003] B,UJ |
| trans-1,3-Dichloropropene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.007 UJ |
| Bromoform | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.007 UJ |
| 4-Methyl-2-Pentanone | <.018 UJ | <.018 B,UJ | <.018 UJ | <.018 B,UJ | <.014 UJ | <.014 B,UJ |
| 2-Hexanone | <.018 UJ | <.018 B,UJ | <.018 UJ | <.018 B,UJ | <.014 UJ | <.014 B,UJ |
| Tetrachloroethene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | .007 | <.007 |
| 1,1,2,2-Tetrachloroethane | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 UJ |
| Toluene | [.003] J | [.004] J | [.002] J | [.004] J | [.003] | [.002] |
| Chlorobenzene | .054 J | [.006] J | .023 J | .023 J | <.007 | .140 |
| Ethyl benzene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Styrene | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |
| Xylene (total) | <.009 UJ | <.009 UJ | <.009 UJ | <.009 UJ | <.007 | <.007 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 35
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | CRA-A1-C<br>5/25/88 | CRA-A1-S<br>5/25/88 | CRA-A2-C<br>5/25/88 | CRA-A2-S<br>5/25/88 | CRA-B1-C<br>5/26/88 | CRA-B1-C RE<br>5/26/88 | CRA-B1-S<br>5/26/88 | CRA-B2-C<br>5/26/88 | CRA-B2-C RE<br>5/26/88 | CRA-B2-S<br>5/26/88 | CRA-C1-C<br>5/26/88 | CRA-C1-S<br>5/26/88 | CRA-C2-C<br>5/27/88 | CRA-C2-C RE<br>5/27/88 | CRA-C2-S<br>5/27/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| bis(2-Chloroethyl)ether | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2-Chlorophenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 1,3-Dichlorobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 1,4-Dichlorobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Benzyl alcohol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 1,2-Dichlorobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2-Methylphenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| bis-(2-Chloroisopropyl)ether | <.550 | <.550 | <.550 | <.550 UJ | <.660 R | <.660 UJ | <.410 UJ | <.660 UJ | <.660 UJ | <.470 | <.550 UJ | <.470 UJ | <.550 UJ | <.550 UJ | <.470 |
| 4-Methylphenol | <.550 | [.055] | <.550 | <.550 | <.660 R | <.660 UJ | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 UJ | <.470 |
| N-Nitroso-di-n-propylamine | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Hexachloroethane | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Nitrobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Isophorone | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2-Nitrophenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2,4-Dimethylphenol | <.550 | [.150] | <.550 | [.180] | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Benzoic Acid | <2.75 UJ | <2.75 | <2.75 UJ | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 UJ | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| bis(2-Chloroethoxy)methane | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2,4-Dichlorophenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 1,2,4-Trichlorobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Naphthalene | [.160] | [.070] | [.082] | <.550 | <.660 R | [.570] | <.410 | <.660 UJ | [.081] | <.470 | [.160] J | <.470 | [.350] J | [.070] | <.470 |
| 4-Chloroaniline | <.550 UJ | <.550 | <.550 UJ | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 UJ | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Hexachlorobutadiene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 4-Chloro-3-methylphenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2-Methylnaphthalene | [.083] | <.550 | [.053] | <.550 | <.660 R | [.220] | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | [.100] J | <.550 | <.470 |

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B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
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R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 35 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | CRA-A1-C<br>5/25/88 | CRA-A1-S<br>5/25/88 | CRA-A2-C<br>5/25/88 | CRA-A2-S<br>5/25/88 | CRA-B1-C<br>5/26/88 | CRA-B1-C RE<br>5/26/88 | CRA-B1-S<br>5/26/88 | CRA-B2-C<br>5/26/88 | CRA-B2-C RE<br>5/26/88 | CRA-B2-S<br>5/26/88 | CRA-C1-C<br>5/26/88 | CRA-C1-S<br>5/26/88 | CRA-C2-C<br>5/27/88 | CRA-C2-C RE<br>5/27/88 | CRA-C2-S<br>5/27/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2,4,6-Trichlorophenol | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2,4,5-Trichlorophenol | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| 2-Chloronaphthalene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2-Nitroaniline | <2.75 | <2.75 UJ | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| Dimethylphthalate | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Acenaphthylene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 2,6-Dinitrotoluene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 3-Nitroaniline | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| Acenaphthene | .560 | [.170] | [.240] | [.067] | <.660 R | 1.40 | <.410 | <.660 UJ | [.350] | <.470 | [.260] J | <.470 | .650 J | [.140] | <.470 |
| 2,4-Dinitrophenol | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| 4-Nitrophenol | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| Dibenzofuran | [.290] | [.073] | [.290] | <.550 | [.130] J | .870 | <.410 | <.660 UJ | [.110] | <.470 | [.150] J | <.470 | [.430] J | [.280] | <.470 |
| 2,4-Dinitrotoluene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Diethylphthalate | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 4-Chlorophenyl-phenylether | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Fluorene | .320 | .190 | [.220] | [.056] | <.660 R | [.640] | <.410 | [.061] J | [.200] | <.470 | [.130] J | <.470 | [.300] J | [.110] | <.470 |
| 4-Nitroaniline | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| 4,6-Dinitro-2-Methylphenol | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| N-Nitrosodiphenylamine | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| 4-Bromophenyl-phenylether | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Hexachlorobenzene | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | <.550 UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Pentachlorophenol | <2.75 | <2.75 | <2.75 | <2.75 | <3.30 R | <3.30 | <2.05 | <3.30 UJ | <3.30 | <2.35 | <2.75 UJ | <2.35 | <2.75 UJ | <2.75 | <2.35 |
| Phenanthrene | 3.70 | [.480] | 4.10 | [.110] | 2.10 J | 9.50 | <.410 | .810 J | 2.40 | <.470 | 2.90 J | [.070] | 5.50 J | 5.30 | [.140] |
| Anthracene | .940 | [.180] | 1.10 | [.064] | [.250] J | 3.70 | <.410 | [.130] J | .680 | <.470 | .690 J | <.470 | 1.80 J | .760 | <.470 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

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B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 35 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Compounds)
Results in mg/kg

| Sample ID<br>Date Collected | CRA-A1-C<br>5/25/88 | CRA-A1-S<br>5/25/88 | CRA-A2-C<br>5/25/88 | CRA-A2-S<br>5/25/88 | CRA-B1-C<br>5/26/88 | CRA-B1-C RE<br>5/26/88 | CRA-B1-S<br>5/26/88 | CRA-B2-C<br>5/26/88 | CRA-B2-C RE<br>5/26/88 | CRA-B2-S<br>5/26/88 | CRA-C1-C<br>5/26/88 | CRA-C1-S<br>5/26/88 | CRA-C2-C<br>5/27/88 | CRA-C2-C RE<br>5/27/88 | CRA-C2-S<br>5/27/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | [.085] J | [.060] J | <.550 UJ | <.550 | <.660 R | <.660 UJ | <.410 | <.660 UJ | <.660 | [.045] J | <.550 UJ | <.470 | <.550 UJ | <.550 UJ | [.060] J |
| Fluoranthene | 7.20 | 1.60 | 7.30 | .570 | 4.80 J | 14.0 | <.410 | 2.00 J | 5.90 | [.052] | 5.10 J | [.110] | 9.10 J | 11.0 | [.250] |
| Pyrene | 7.40 | 1.30 | 5.40 | [.410] J | 2.60 J | 13.0 J | <.410 UJ | 1.30 J | 4.10 J | [.042] | 4.50 J | [.097] J | 7.20 J | 6.00 J | [.210] J |
| Butylbenzylphthalate | <.550 | <.550 | [.130] | <.550 UJ | <.660 R | <.660 UJ | <.410 UJ | <.660 UJ | <.660 UJ | <.470 | <.550 UJ | <.470 UJ | <.550 UJ | <.550 UJ | <.470 UJ |
| 3,3'-Dichlorobenzidine | <1.10 | <1.10 | <1.10 | <1.10 | <1.32 R | <1.32 | <.820 | <1.32 UJ | <1.32 | <.940 | <1.10 UJ | <.940 | <1.10 UJ | <1.10 | <.940 |
| Benzo(a)anthracene | 4.70 | .690 | 4.20 | [.270] | 1.90 J | 16.0 | <.410 | 1.10 J | 3.20 | [.046] | 3.40 J | [.073] | 8.30 J | 5.30 | [.160] |
| Chrysene | 5.30 | .770 | 4.90 | [.300] | 3.40 J | 16.0 | <.410 | 1.60 J | 4.00 | [.048] | 3.70 J | [.085] | 8.30 J | 10.0 | [.190] |
| bis(2-Ethylhexyl)phthalate | [.091] B,J | [.100] B,J | [.084] B,J | [.070] B,J | [.066] B,J | .820 B,J | [.042] B,J | [.068] B,J | 1.20 B,J | [.860] B,J | [.180] B,J | [.063] B,J | [.074] B,J | .680 B,J | [.150] B,J |
| Di-n-octylphthalate | <.550 | <.550 | <.550 | <.550 | <.660 R | <.660 | <.410 | <.660 UJ | <.660 | <.470 | [.056] UJ | <.470 | <.550 UJ | <.550 | <.470 |
| Benzo(b)fluoranthene | 3.50 | .830 | 3.40 | [.440] | 4.70 J | 22.0 | <.410 | 2.80 J | 4.90 | <.470 | 5.10 J | [.110] | 17.0 J | 9.80 | [.170] |
| Benzo(d)fluoranthene | 2.00 | .660 | 2.00 | [.350] | 2.20 J | 19.0 | <.410 | 2.70 J | 3.80 | <.470 | 3.20 J | [.086] | 14.0 J | 6.00 | [.170] |
| Benzo(a)pyrene | 3.40 | .720 | 2.50 | [.330] | 1.60 J | 19.0 | <.410 | 1.20 J | 3.80 | <.470 | 4.30 J | [.097] | 12.0 J | 4.10 | [.160] |
| Indeno(1,2,3-cd)pyrene | 1.60 | .660 | 1.80 | [.150] | .750 J | 6.60 | <.410 | .800 J | 2.30 | <.470 | 1.80 J | [.080] | 5.70 J | 2.00 | [.110] |
| Dibenz(a,h)anthracene | [.350] | [.150] | [.420] | <.550 | [.230] J | 1.70 J | <.410 | [.230] J | [.530] | <.470 | [.420] J | <.470 | 1.40 J | .720 J | <.470 |
| Benzo(g,h,i)perylene | 1.10 | [.490] | .890 | [.120] | [.350] J | 5.40 | <.410 | [.420] J | 1.40 | <.470 | 1.20 J | [.067] | 3.40 J | 1.00 | [.084] J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 36
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in mg/kg

| Sample ID | Original Sample CRA-B1-C | Field Duplicate CRA-D1-C | Original Sample CRA-B1-C RE | Field Duplicate CRA-D1-C RE | Original Sample CRA-B2-S | Field Duplicate CRA-D2-S |
|---|---|---|---|---|---|---|
| Phenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| bis(2-Chloroethyl)ether | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2-Chlorophenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 1,3-Dichlorobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 1,4-Dichlorobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Benzyl alcohol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 1,2-Dichlorobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2-Methylphenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| bis-(2-Chloroisopropyl)ether | <.660 R | <.660 R | <.660 UJ | <.600 R | <.470 | <.470 UJ |
| 4-Methylphenol | <.660 R | <.660 R | <.660 UJ | <.600 R | <.470 | <.470 |
| N-Nitroso-di-n-propylamine | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Hexachloroethane | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Nitrobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Isophorone | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2-Nitrophenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2,4-Dimethylphenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Benzoic Acid | <3.30 R | <3.30 R | <3.30 | [.069] J | <2.35 UJ | <2.35 |
| bis(2-Chloroethoxy)methane | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2,4-Dichlorophenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 1,2,4-Trichlorobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Naphthalene | <.660 R | [.070] J | [.570] | [.170] J | <.470 | <.470 |
| 4-Chloroaniline | <.660 R | <.660 R | <.660 | <.600 R | <.470 UJ | <.470 |
| Hexachlorobutadiene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 4-Chloro-3-methylphenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2-Methylnaphthalene | <.660 R | <.660 R | [.220] | [.090] J | <.470 | <.470 |
| Hexachlorocyclopentadiene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2,4,6-Trichlorophenol | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2,4,5-Trichlorophenol | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| 2-Chloronaphthalene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2-Nitroaniline | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| Dimethylphthalate | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Acenaphthylene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 2,6-Dinitrotoluene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 3-Nitroaniline | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| Acenaphthene | <.660 R | [.180] J | 1.40 | [.340] J | <.470 | <.470 |
| 2,4-Dinitrophenol | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| 4-Nitrophenol | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| Dibenzofuran | [.130] J | [.370] J | .870 | .640 J | <.470 | <.470 |
| 2,4-Dinitrotoluene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Diethylphthalate | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 4-Chlorophenyl-phenylether | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Fluorene | <.660 R | [.084] J | [.640] | [.250] J | <.470 | <.470 |
| 4-Nitroaniline | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| 4,6-Dinitro-2-Methylphenol | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| N-Nitrosodiphenylamine | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| 4-Bromophenyl-phenylether | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Hexachlorobenzene | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Pentachlorophenol | <3.30 R | <3.30 R | <3.30 | <3.00 R | <2.35 | <2.35 |
| Phenanthrene | 2.10 J | 4.20 J | 9.50 | 8.30 J | <.470 | [.055] |
| Anthracene | [.250] J | [.550] J | 3.70 | 1.70 J | <.470 | <.470 |
| Di-n-butylphthalate | <.660 R | <.660 R | <.660 UJ | <.600 R | [.045] J | [.052] |
| Fluoranthene | 4.80 J | 8.00 J | 14.0 | 15.0 J | [.052] | [.110] |
| Pyrene | 2.60 J | 5.60 J | 13.0 J | 11.0 J | [.042] | [.084] J |
| Butylbenzylphthalate | <.660 R | <.660 R | <.660 UJ | <.600 R | <.470 | <.470 UJ |
| 3,3'-Dichlorobenzidine | <1.32 R | <1.30 R | <1.32 | <1.20 R | <.940 | <.940 |
| Benzo(a)anthracene | 1.90 J | 4.10 J | 16.0 | 12.0 J | [.046] | [.051] |
| Chrysene | 3.40 J | 7.00 J | 16.0 | 20.0 J | [.048] | [.073] |
| bis(s-Ethylhexyl)phthalate | [.066] B,J | [.190] B,J | .820 B,J | 1.10 B,J | .860 B,J | [.200] B,J |
| Di-n-octylphthalate | <.660 R | <.660 R | <.660 | <.600 R | <.470 | <.470 |
| Benzo(b)fluoranthene | 4.70 J | 4.60 J | 22.0 | 24.0 J | <.470 | [.080] |
| Benzo(d)fluoranthene | 2.20 J | 1.70 J | 19.0 | 13.0 J | <.470 | <.470 |
| Benzo(a)pyrene | 1.60 J | 1.90 J | 19.0 | 10.0 J | <.470 | <.470 |
| Indeno(1,2,3-cd)pyrene | .750 J | 1.10 J | 6.60 | 2.60 J | <.470 | <.470 |
| Dibenz(a,h)anthracene | [.230] J | [.320] J | 1.70 J | 1.10 J | <.470 | <.470 |
| Benzo(g,h,i)perylene | [.350] J | [.570] J | 5.40 | 1.60 J | <.470 | <.470 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 37
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg)

| Sample ID<br>Date Collected | CRA-A1-C<br>5/25/88 | CRA-A1-S<br>5/25/88 | CRA-A2-C<br>5/25/88 | CRA-A2-S<br>5/25/88 | CRA-B1-C<br>5/26/88 | CRA-B1-S<br>5/26/88 | CRA-B2-C<br>5/26/88 | CRA-B2-S<br>5/26/88 | CRA-C1-C<br>5/26/88 | CRA-C1-S<br>5/26/88 | CRA-C2-C<br>5/27/88 | CRA-C2-S<br>5/27/88 | CRA-D1-C<br>5/26/88 | CRA-D2-S<br>5/26/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 63400 | 21900 | 63000 | 25600 | 74600 | 21600 | 56500 | 19600 | 107000 | 18700 | 84000 | 20200 | 84400 | 19900 |
| Antimony | 56 | [9.5] | 38 | <7.5 | [24] | <7.5 | [20] | <8.0 | [23] | <7.5 | [20] | <8.3 | [17] | <7.3 |
| Arsenic | [26] J | 17 J | [29] J | 8.3 J | 64 | 3.8 | 83 | 6.4 | 63 | 26 | 44 | [33] | 87 | 35 |
| Barium | 309 | 170 | 137 | 197 | 192 | 231 | 138 | 259 | 217 | 278 | 143 | 241 | 221 | 255 |
| Beryllium | 3.5 | 2.0 | 4.2 | 2.0 | 4.4 J | 1.5 J | 3.3 J | 1.7 J | 7.8 J | 1.9 J | 6.7 J | 2.0 J | 4.1 | 1.5 |
| Cadmium | <1.4 | <1.2 | <1.3 | [1.2] | <1.8 UJ | <1.2 UJ | [2.0] J | <1.3 UJ | <1.7 UJ | <1.2 UJ | <1.5 UJ | <1.4 UJ | <1.8 | <1.2 |
| Calcium | 125000 | 4010 | 124000 | 2820 | 165000 | 2130 | 194000 | 2750 | 169000 | 2420 | 109000 | 2590 | 175000 | 2570 |
| Chromium | 21 | 20 | 14 | 22 | 39 J | 25 J | 31 J | 24 J | 20 J | 26 J | 14 J | 27 J | 47 | 25 |
| Cobalt | [1.8] | <1.1 | [1.9] | <1.2 | [15] | 23 | [12] | 19 | [9.7] | 18 | [7.0] | 19 | [18] | 17 |
| Copper | 59 J | 50 J | 50 J | 52 J | 75 J | 29 J | 88 J | 31 J | 38 J | 40 J | 32 J | 48 J | 94 | 33 |
| Iron | 7650 | 34800 | 5910 | 36300 | 10100 | 38600 | 11200 | 49800 | 8640 | 44000 | 5210 | 45300 | 12200 | 42700 |
| Lead | 42 | 42 | 24 | 55 | 76 | 2.9 | 66 | 36 | 53 | 39 | 30 | 45 | 85 | 36 |
| Magnesium | 2160 J | 3160 J | 2110 J | 3510 J | 3510 | 3210 | 2540 | 2990 | 4500 | 3180 | 2740 | 3090 | 3860 | 2990 |
| Manganese | 592 | 510 | 149 | 594 | 257 | 2140 | 265 | 2090 | 215 | 1410 | 131 | 1270 | 296 | 1110 |
| Mercury | <.13 | .19 | .20 | .18 | .30 | <.14 | <.18 | <.14 | <.18 | .31 | <.17 | .24 | <.23 | .17 |
| Nickel | 94 J | 24 J | 84 J | 43 J | 286 J | 42 J | 558 J | 31 J | 106 J | 37 J | 61 J | 37 J | 363 | 35 |
| Potassium | <805 | <670 | <738 | [1200] | <1020 | [1450] | 2750 | [1370] | <977 | 1580 | <831 | 1750 | <1030 | 1480 |
| Selenium | <7.7 R | <3.2 R | <7.1 R | <3.4 R | <9.3 R | <.63 R | <8.3 R | <.67 R | <10 R | <6.5 R | <8.3 R | <7.2 R | <9.9 | <.68 |
| Silver | <1.5 | <1.3 | <1.4 | <1.3 | <2.0 | <1.3 | <1.7 | <1.4 | <1.9 | <1.3 | <1.6 | <1.5 | <2.0 | <1.3 |
| Sodium | 7830 J | 1960 J | 9310 J | 3490 J | 10800 | 2790 | 10100 | 2390 | 10900 | 2290 | 8410 | 3740 | 11500 | 2210 |
| Thallium | <.63 | [.54] | <.58 | [.60] | <.76 | <.52 | <.68 | <.55 | <.82 | <.54 | <.68 | <.59 | <.81 | <.56 |
| Vanadium | 80 J | 32 J | 73 J | 38 J | 211 | 41 | 233 | 33 | 67 | 31 | 36 | 32 | 270 | 33 |
| Zinc | 107 J | 193 J | 46 J | 191 J | 28 J | 128 J | 50 J | 171 J | 48 J | 181 J | 28 J | 194 J | 48 | 167 |
| Cyanide | 13 | 21 | 101 | 8.9 | 67 | 10 | 44 | 1.0 | 191 | 18 | 254 | 25 | 78 | .82 |
| % Solids | 56 | 65 | 60 | 63 | 44 | 63 | 49 | 62 | 43 | 62 | 50 | 60 | 42 | 63 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 38
COMPARISON OF DUPLICATE SAMPLE ANALYSES
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL,OHIO

CLP Inorganic Compounds
(Results in mg/kg)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|
| Sample ID | CRA-B1-C | CRA-D1-C | CRA-B2-S | CRA-D2-S |
| Aluminum | 74600 | 84400 | 19600 | 19900 |
| Antimony | [24] | [17] | <8.0 | <7.3 |
| Arsenic | 64 | 87 | 6.4 | 35 |
| Barium | 192 | 221 | 259 | 255 |
| Beryllium | 4.4 J | 4.1 J | 1.7 J | 1.5 J |
| Cadmium | <1.8 UJ | <1.8 UJ | <1.3 UJ | <1.2 UJ |
| Calcium | 165000 | 175000 | 2750 | 2570 |
| Chromium | 39 J | 47 J | 24 J | 25 J |
| Cobalt | [15] | [18] | 19 | 17 |
| Copper | 75 J | 94 J | 31 J | 33 J |
| Iron | 10100 | 12200 | 49800 | 42700 |
| Lead | 76 | 85 | 36 | 36 |
| Magnesium | 3510 | 3860 | 2990 | 2990 |
| Manganese | 257 | 296 | 2090 | 1110 |
| Mercury | .30 | <.23 | <.14 | .17 |
| Nickel | 286 J | 363 J | 31 J | 35 J |
| Potassium | <1020 | <1030 | [1370] | 1480 |
| Selenium | <9.3 R | <9.9 R | <.67 R | <.68 R |
| Silver | <2.0 | <2.0 | <1.4 | <1.3 |
| Sodium | 10800 | 11500 | 2390 | 2210 |
| Thallium | <.76 | <.81 | <.55 | <.56 |
| Vanadium | 211 | 270 | 33 | 33 |
| Zinc | 28 J | 48 J | 171 R | 167 J |
| Cyanide | 67 | 78 | 1.0 | .82 |
| % Solids | 44 | 42 | 62 | 63 |

J: The associated numerical value is considered an estimated quantity

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is therefore considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 39
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
CARBON RUNOFF AND DEPOSITION AREA
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg unless otherwise noted)

| Sample ID | Date Sampled | pH Std. Units | Fluoride | Silica (as SiO2) | Cyanide (Total) | Cyanide (Amenable) | Solids (% wt.) | Total Organic Carbon (TOC) | Alkalinity (CaCO3) | Chloride | Sulfate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CRA-A1-C | 5/25/88 | 8.3 | 298 | 28 | 128 | <2 | 57 | 14 | 2807 | 56 | 298 |
| CRA-A1-S | 5/25/88 | 7.9 | 190 | <13 | 11 | <2 | 63 | 1905 | 3492 | 159 | 2698 |
| CRA-A2-C | 5/25/88 | 8.8 | 270 | 25 | 149 | <2 | 63 | 32 | 1905 | 51 | 1397 |
| CRA-A2-S | 5/25/88 | 8.0 | 238 | <13 | <2 | <2 | 63 | 2540 | 5079 | 286 | 2222 |
| CRA-A2-S(Dup.) | 5/25/88 | 7.8 | 238 | <13 | <2 | <2 | 63 | 2540 | 5397 | 317 | 1460 |
| CRA-B1-C | 5/26/88 | 8.2 | 283 | 42 | 102 | 53 | 53 | 8 | 2453 | <8 | 208 |
| CRA-B1-S | 5/26/88 | 8.0 | 192 | 18 | 4 | <1 | 78 | 795 | 1795 | 141 | 205 |
| CRA-B2-C | 5/26/88 | 7.5 | 153 | 57 | 76 | <2 | 51 | <8 | 2549 | 16 | 216 |
| CRA-B2-S | 5/26/88 | 7.8 | 107 | <11 | <1 | <1 | 73 | 1644 | 2191 | 164 | 438 |
| CRA-C1-C | 5/26/88 | 8.2 | 279 | 25 | 79 | <2 | 61 | 13 | 2295 | 13 | 36 |
| CRA-C1-S | 5/26/88 | 7.8 | 158 | <11 | 4 | <1 | 76 | 1447 | 2237 | 158 | <26 |
| CRA-C2-C | 5/27/88 | 8.2 | 323 | 23 | 210 | <2 | 62 | 10 | 1774 | 15 | 194 |
| CRA-C2-S | 5/27/88 | 8.1 | 355 | <11 | 14 | <1 | 76 | 1579 | 2763 | 263 | 210 |

COMPARISON OF ANALYSES OF FIELD DUPLICATES

| | Sample ID | Date Collected | pH Std. Units | Fluoride | Silica (as SiO2) | Cyanide (Total) | Cyanide (Amenable) | Solids (% wt.) | Total Organic Carbon (TOC) | Alkalinity (CaCO3) | Chloride | Sulfate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Orig. Sample | CRA-B1-C | 5/26/88 | 8.2 | 283 | 42 | 102 | 53 | 53 | 8 | 2453 | <8 | 208 |
| Field Dup. | CRA-D1-C | 5/26/88 | 8.2 | 302 | 40 | 109 | 6 | 53 | 8 | 2642 | 9 | 245 |
| Orig. Sample | CRA-B2-S | 5/26/88 | 7.8 | 107 | <11 | <1 | <1 | 73 | 1644 | 2192 | 164 | 438 |
| Field Dup. | CRA-D2-S | 5/26/88 | 8.0 | 121 | <11 | <1 | <1 | 73 | 1370 | 1781 | 164 | <55* |
| | CRA-D2-S(Dup.) | 5/26/88 | 7.9 | 128 | <11 | <1 | <1 | 73 | 1507 | 1781 | 192 | <55* |

(Dup.) - Denotes laboratory duplicate analysis.
* - Detection limit elevated due to turbidity/color interference.

TABLE 40
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN CARBON RUNOFF AND DEPOSITION AREA SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | CRA-A1-C | CRA-A1-C RE | CRA-A1-S | CRA-A2-C | CRA-A2-C RE | CRA-A2-S | CRA-D1-C | CRA-D1-C RE | CRA-D2-S | CRA-B1-C | CRA-B1-C RE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | .026 J | .011 B,J | .033 J | .023 J | [.003] B,J | .022 J | [.002] B,J | [.008] B,J | .008 B,J | [.004] B,J | .011 B,J |
| Acetone | .110 B,J | [.016] B,J | .190 B,J | .130 B,J | [.003] B,J | .094 B,J | [.015] B,J | .019 B,J | .019 B,J | [.007] B,J | .018 B,J |
| Chloroform | -- | [.008] J | -- | -- | -- | -- | [.007] J | .009 J | [.004] | [.008] J | .010 J |
| 2-Butanone | -- | -- | .057 J | -- | -- | -- | -- | -- | -- | -- | -- |
| Benzene | [.005] B,J | [.006] B,J | .008 B,J | [.003] B,J | [.006] B,J | [.004] B,J | [.004] B,J | [.008] B,J | [.003] B,J | [.005] B,J | [.005] B,J |
| Tetrachloroethene | [.004] J | [.003] J | [.002] | -- | -- | -- | -- | -- | -- | -- | -- |
| Toluene | -- | -- | [.003] B,J | [.003] B,J | [.003] J | [.002] B,J | [.002] J | [.004] J | [.002] | [.003] J | [.004] J |
| Chlorobenzene | -- | -- | .180 | -- | -- | -- | .023 J | .023 J | .139 | .054 J | [.006] J |
| Ethyl benzene | -- | [.004] J | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Styrene | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the intital analysis.

TABLE 40 (CONT.)
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN CARBON RUNOFF AND DEPOSITION AREA SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | CRA-B1-S | CRA-B2-C | CRA-B2-S | CRA-C1-C | CRA-C1-C RE | CRA-C1-S | CRA-C2-C | CRA-C2-C RE | CRA-C2-S |
|---|---|---|---|---|---|---|---|---|---|
| Methylene Chloride | .024 J | [.002] B,J | .018 B | -- | .030 J | .027 | .032 J | [.002] B,J | [.002] B,J |
| Acetone | .052 J | [.007] B,J | .017 B,J | .022 B,J | [.005] B,J | [.009] B,J | .072 B,J | [.012] B,J | [.010] B,J |
| Chloroform | -- | [.008] | .008 | -- | .013 J | .008 | -- | [.007] J | [.007] |
| 2-Butanone | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Benzene | [.006] B,J | [.004] B,J | [.004] B,J | .052 B,J | .310 J | .350 | .018 B,J | [.003] B,J | [.003] B,J |
| Tetrachloroethene | -- | -- | .007 | -- | [.002] J | .011 | -- | -- | -- |
| Toluene | -- | [.002] | [.003] | -- | .032 J | .034 | [.003] B,J | [.002] J | -- |
| Chlorobenzene | -- | -- | -- | -- | .015 J | -- | -- | -- | -- |
| Ethyl benzene | -- | -- | -- | -- | -- | [.001] | -- | -- | -- |
| Styrene | -- | -- | -- | -- | [.007] J | .008 | -- | -- | -- |

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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the intital analysis.

TABLE 41
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED
CARBON RUNOFF AND DEPOSITION AREA SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | CRA-A1-C | CRA-A1-S | CRA-A2-C | CRA-A2-S | CRA-B1-C | CRA-B1-C RE | CRA-B1-S |
|---|---|---|---|---|---|---|---|
| PAHS | | | | | | | |
| Naphthalene | [.160] | [.070] | [.082] | --- | --- | [.570] | --- |
| 2-Methylnaphthalene | [.083] | --- | [.053] | --- | --- | [.220] | --- |
| Acenaphthylene | --- | --- | --- | --- | --- | --- | --- |
| Acenaphthene | .560 | [.170] | [.240] | [.067] | --- | 1.40 | --- |
| Dibenzofuran | [.290] | [.073] | [.290] | --- | [.130] J | .870 | --- |
| Fluorene | .320 | .190 | [.220] | [.056] | --- | [.640] | --- |
| Phenanthrene | 3.70 | [.480] | 4.10 | [.110] | 2.10 J | 9.50 | --- |
| Anthracene | .940 | [.180] | 1.10 | [.064] | [.250] J | 3.70 | --- |
| Fluoranthene | 7.20 | 1.60 | 7.30 | .570 | 4.80 J | 14.0 | --- |
| Pyrene | 7.40 | 1.30 | 5.40 | [.410] J | 2.60 J | 13.0 J | --- |
| Benzo(a)anthracene | 4.70 | .690 | 4.20 | [.270] | 1.90 J | 16.0 | --- |
| Chrysene | 5.30 | .770 | 4.90 | [.300] | 3.40 J | 16.0 | --- |
| Benzo(b)fluoranthene | 3.50 | .830 | 3.40 | [.440] | 4.70 J | 22.0 | --- |
| Benzo(k)fluoranthene | 2.00 | .660 | 2.00 | [.350] | 2.20 J | 19.0 | --- |
| Benzo(a)pyrene | 3.40 | .720 | 2.50 | [.330] | 1.60 J | 19.0 | --- |
| Indeno(1,2,3-cd)pyrene | 1.60 | .660 | 1.80 | [.150] | .750 J | 6.60 | --- |
| Dibenz(a,h)anthracene | [.350] | [.150] | [.420] | --- | [.230] J | 1.70 J | --- |
| Benzo(g,h,i)perylene | 1.10 | [.490] | .890 | [.120] | [.350] J | 5.40 | --- |
| TOTAL PAHS | 43.350 | 9.033 | 38.895 | 3.237 | 25.010 | 149.6 | 0.00 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | |
| 4-Methylphenol | --- | [.055] | --- | --- | --- | --- | --- |
| 2-4 Dimethylphenol | --- | [.150] | --- | [.180] | --- | --- | --- |
| Di-n-butylphthalate | [.085] J | [.060] J | --- | --- | --- | --- | --- |
| Bis-(2-Ethylhexyl)Phthalate | [.091] B,J | [.100] B,J | [.084] B,J | [.070] B,J | [.066] B,J | .820 B,J | [.042] B,J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 41 (CONT.)
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED
IN CARBON RUNOFF AND DEPOSITION AREA SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/kg

| Sample ID | CRA-B2-C | CRA-B2-C RE | CRA-B2-S | CRA-C1-C | CRA-C1-S | CRA-C2-C | CRA-C2-C RE | CRA-C2-S |
|---|---|---|---|---|---|---|---|---|
| PAHS | | | | | | | | |
| Naphthalene | --- | [.081] | --- | [.160] J | --- | [.350] J | [.070] | --- |
| 2-Methylnaphthalene | --- | --- | --- | --- | --- | [.100] J | --- | --- |
| Acenaphthylene | --- | --- | --- | --- | --- | --- | --- | --- |
| Acenaphthene | --- | [.350] | --- | [.260] J | --- | .650 J | [.140] | --- |
| Dibenzofuran | --- | [.110] | --- | [.150] J | --- | [.430] J | [.280] | --- |
| Fluorene | [.061] J | [.200] | --- | [.130] J | --- | [.300] J | [.110] | --- |
| Phenanthrene | .810 J | 2.40 | --- | 2.90 J | [.070] | 5.50 J | 5.30 | [.140] |
| Anthracene | [.130] J | .680 | --- | .690 J | --- | 1.80 J | .760 | --- |
| Fluoranthene | 2.00 J | 5.90 | [.052] | 5.10 J | [.110] | 9.10 J | 11.0 | [.250] |
| Pyrene | 1.30 J | 4.10 J | [.042] | 4.50 J | [.097] J | 7.20 J | 6.00 J | [.210] J |
| Benzo(a)anthracene | 1.10 J | 3.20 | [.046] | 3.40 J | [.073] | 8.30 J | 5.30 | [.160] |
| Chrysene | 1.60 J | 4.00 | [.048] | 3.70 J | [.085] | 8.30 J | 10.0 | [.190] |
| Benzo(b)fluoranthene | 2.80 J | 4.90 | --- | 5.10 J | [.110] | 17.0 J | 9.80 | [.170] |
| Benzo(k)fluoranthene | 2.70 J | 3.80 | --- | 3.20 J | [.086] | 14.0 J | 6.00 | [.170] |
| Benzo(a)pyrene | 1.20 J | 3.80 | --- | 4.30 J | [.097] | 12.0 J | 4.10 | [.160] |
| Indeno(1,2,3-cd)pyrene | .800 J | 2.30 | --- | 1.80 J | [.080] | 5.70 J | 2.00 | [.110] |
| Dibenz(a,h)anthracene | [.230] J | [.530] | --- | [.420] J | --- | 1.40 J | .720 J | --- |
| Benzo(g,h,i)perylene | [.420] J | 1.40 | --- | 1.20 J | [.067] | 3.40 J | 1.00 | [.084] J |
| TOTAL PAHS | 15.151 | 37.751 | 0.188 | 37.01 | 0.875 | 95.53 | 62.58 | 1.644 |
| OTHER SEMI-VOLATILE COMPOUNDS DETECTED | | | | | | | | |
| 4-Methylphenol | --- | --- | --- | --- | --- | --- | --- | [.060] J |
| 2-4 Dimethylphenol | --- | --- | --- | --- | --- | --- | --- | --- |
| Di-n-butylphthalate | --- | --- | [.045] J | --- | --- | --- | --- | --- |
| Bis-(2-Ethylhexyl) Phthalate | [.068] B,J | 1.20 B,J | [.860] B,J | [.180] B,J | [.063] B,J | [.074] B,J | .680 B,J | [.150] B,J |

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B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 42

AIR FILTER PRE- AND POST-WEIGHT DATA

| Sample Date | Site | Filter Number | Filter Wt (gram) Pre- | Filter Wt (gram) Post- | P-Chart | Flow Rate (SCFM) | Sample Time (minute) | PM_10 (ug/m$^3$) |
|---|---|---|---|---|---|---|---|---|
| 03/05/88 | AM-1 | EEM-209 | 3.76690 | 3.82300 | 35.83 | 38.32 | 1434.8 | 36.0 |
| | AM-2 | EEM-206 | 3.77490 | 3.79570 | void | void | 98.0 | void |
| | AM-3 | EEM-208 | 3.74350 | 3.79880 | 34.63 | 38.50 | 1465.2 | 34.6 |
| | AM-4 | EEM-207 | 3.74710 | 3.79620 | 30.25 | 27.21 | 1419.4 | 44.9 |
| 03/11/88 | AM-1 | PR-107 | 4.00850 | 4.04620 | 36.50 | 39.08 | 1470.5 | 23.2 |
| | AM-2 | PR-105 | 3.99190 | 4.01590 | 28.67 | 40.82 | 997.8 | 20.8 |
| | AM-3 | PR-106 | 4.00650 | 4.05410 | 35.25 | 39.14 | 1463.2 | 29.4 |
| | AM-4 | PR-108 | 4.03210 | 4.07880 | 31.13 | 29.38 | 1465.5 | 38.3 |
| 03/17/88 | AM-1 | PR-112 | 3.96600 | 3.98720 | 36.00 | 38.52 | 1440.9 | 13.5 |
| | AM-2 | PR-113 | 3.99430 | 4.01740 | 28.50 | 40.48 | 1432.8 | 14.1 |
| | AM-3 | PR-110 | 4.00440 | 4.09720 | 35.25 | 39.14 | 1438.4 | 58.2 |
| | AM-4 | PR-111 | 4.00570 | 4.04410 | 30.00 | 26.59 | 1448.3 | 35.2 |
| 03/23/88 | AM-1 | PR-117 | 4.00420 | 4.12560 | 36.50 | 39.08 | 1443.1 | 76.0 |
| | AM-2 | PR-116 | 4.00130 | 4.24710 | 29.25 | 41.99 | 1455.7 | 142.0 |
| | AM-3 | PR-115 | 3.99480 | 4.12150 | 35.63 | 39.53 | 1460.2 | 77.5 |
| | AM-4 | PR-114 | 3.98220 | 4.24570 | 31.88 | 31.23 | 1437.1 | 207.4 |
| 04/10/88 | AM-1 | PR-129 | 4.00560 | 4.05440 | 36.25 | 38.80 | 1456.2 | 30.5 |
| | AM-2 | PR-130 | 4.01120 | 4.06620 | 31.17 | 45.86 | 1439.7 | 29.4 |
| | AM-3 | PR-128 | 4.00300 | 4.06230 | 35.38 | 39.27 | 1435.9 | 37.1 |
| | AM-4 | PR-127 | 3.98620 | 4.03350 | 31.88 | 31.23 | 1464.1 | 36.5 |
| 04/16/88 | AM-1 | PR-132 | 4.00610 | 4.03920 | 35.88 | 38.38 | 1440.8 | 21.1 |
| | AM-2 | PR-131 | 4.00050 | 4.05160 | 29.50 | 42.49 | 1442.5 | 29.4 |
| | AM-3 | PR-133 | 4.04080 | 4.13170 | 35.25 | 39.14 | 1436.7 | 57.1 |
| | AM-4 | PR-134 | 4.03150 | 4.11180 | 30.63 | 28.15 | 1397.3 | 72.1 |
| 04/22/88 | AM-1 | PR-135 | 4.00470 | 4.04050 | 36.13 | 38.66 | 1472.6 | 22.2 |
| | AM-2 | PR-136 | 3.97770 | 4.01200 | 29.25 | 41.99 | 1440.8 | 20.0 |
| | AM-3 | PR-137 | 4.00150 | 4.03760 | 35.50 | 39.39 | 1469.5 | 22.0 |
| | AM-4 | PR-138 | 4.00980 | 4.04450 | 31.75 | 30.91 | 1465.8 | 27.1 |
| 04/28/88 | AM-1 | PR-142 | 4.00140 | 4.04420 | 32.63 | 34.72 | 1435.6 | 30.3 |
| | AM-2 | PR-141 | 4.00020 | 4.05360 | 28.75 | 40.99 | 1446.8 | 31.8 |
| | AM-3 | PR-140 | 4.00970 | void | 26.75 | 30.38 | 1468.1 | void |
| | AM-4 | PR-139 | 4.00080 | 4.12110 | 30.50 | 27.83 | 1463.3 | 104.3 |
| 05/04/88 | AM-1 | PR-146 | 3.98950 | 4.03540 | 34.83 | 37.20 | 1440.5 | 30.3 |
| | AM-2 | PR-145 | 3.98770 | 4.03210 | 28.50 | 40.48 | 1392.7 | 27.8 |
| | AM-3 | PR-143 | 3.99600 | void | 26.75 | 30.38 | 1470.5 | void |
| | AM-4 | PR-144 | 4.00850 | 4.09350 | 31.50 | 30.30 | 1428.6 | 69.4 |
| 05/10/88 | AM-1 | PR-151 | 4.02000 | 4.06800 | 37.38 | 40.07 | 1392.9 | 30.4 |
| | AM-2 | PR-148 | 3.99190 | 4.05500 | 29.00 | 41.49 | 1402.1 | 38.3 |
| | AM-3 | PR-149 | 3.98730 | 4.08480 | 43.88 | 48.03 | 1437.1 | 49.9 |
| | AM-4 | PR-150 | 3.99280 | 4.09690 | 33.88 | 36.17 | 1432.7 | 71.0 |

P-Chart: Pressure Chart
SCFM: Standard Cubic Feet per Minute
VOID: Power failure interupted 24-hour reading.

TABLE 42 (CONT.)

AIR FILTER PRE- AND POST-WEIGHT DATA

| Sample Date | Site | Filter Number | Filter Wt (gram) Pre- | Filter Wt (gram) Post- | P-Chart | Flow Rate (SCFM) | Sample Time (minute) | PM_10 (ug/m$^3$) |
|---|---|---|---|---|---|---|---|---|
| 05/15/88 | AM-1 | PR-153 | 3.99180 | 4.09000 | 36.75 | 39.36 | 1455.7 | 60.5 |
| | AM-2 | PR-152 | 4.02540 | 4.12340 | 28.25 | 39.98 | 1449.4 | 59.7 |
| | AM-3 | PR-154 | 4.01310 | 4.11900 | 36.88 | 40.82 | 1452.8 | 63.1 |
| | AM-4 | PR-155 | 3.99430 | 4.10050 | 34.75 | 38.32 | 1461.7 | 67.0 |
| 05/21/88 | AM-1 | PR-157 | 4.00230 | 4.05660 | 36.75 | 39.36 | 1435.0 | 34.0 |
| | AM-2 | PR-156 | 4.00840 | 4.06430 | 28.00 | 39.48 | 1418.5 | 35.3 |
| | AM-3 | PR-160 | 4.02090 | 4.08370 | 36.63 | 40.56 | 1449.2 | 37.7 |
| | AM-4 | PR-159 | 3.99050 | 4.05120 | 34.38 | 37.41 | 1467.1 | 39.1 |
| 05/27/88 | AM-1 | PR-161 | 4.00420 | 4.05490 | 37.25 | 39.92 | 1466.3 | 30.6 |
| | AM-2 | PR-162 | 4.00310 | 4.05490 | 28.33 | 40.14 | 1413.9 | 32.2 |
| | AM-3 | PR-163 | 3.98350 | 4.04600 | 36.75 | 40.68 | 1469.1 | 36.9 |
| | AM-4 | PR-164 | 3.99630 | 4.06150 | 34.50 | 37.70 | 1482.2 | 41.2 |
| 06/02/88 | AM-1 | PR-169 | 3.99330 | 4.03990 | 36.63 | 39.22 | 1431.7 | 29.3 |
| | AM-2 | PR-168 | 3.98070 | 4.02610 | 28.38 | 40.24 | 1415.1 | 28.2 |
| | AM-3 | PR-166 | 3.98440 | 4.05110 | 36.75 | 40.68 | 1436.8 | 40.3 |
| | AM-4 | PR-165 | 3.98740 | 4.04050 | 34.38 | 37.41 | 1427.2 | 35.1 |
| 06/08/88 | AM-1 | PR-171 | 4.00040 | 4.10010 | 37.25 | 39.92 | 1413.7 | 62.4 |
| | AM-2 | PR-170 | 3.99230 | 4.08770 | 28.50 | 40.48 | 1450.9 | 57.4 |
| | AM-3 | PR-172 | 3.98900 | 4.10250 | 36.75 | 40.68 | 1413.8 | 69.7 |
| | AM-4 | PR-173 | 3.95280 | 4.05290 | 35.13 | 39.26 | 1428.2 | 63.1 |
| 06/14/88 | AM-1 | PR-175 | 3.95760 | 4.04300 | 36.75 | 39.36 | 1459.5 | 52.5 |
| | AM-2 | PR-174 | 3.97790 | 4.06320 | 28.13 | 39.74 | 1474.2 | 51.4 |
| | AM-3 | PR-177 | 3.99450 | 4.08350 | 36.63 | 40.56 | 1438.0 | 53.9 |
| | AM-4 | PR-176 | 3.96400 | 4.06870 | 34.88 | 38.64 | 1458.6 | 65.6 |
| 06/20/88 | AM-1 | PR-181 | 4.00230 | 4.12370 | 36.88 | 39.51 | 1448.8 | 74.9 |
| | AM-2 | PR-180 | 3.99750 | 4.12090 | 28.13 | 39.74 | 1452.5 | 75.5 |
| | AM-3 | PR-179 | 3.99180 | 4.13290 | 36.75 | 40.68 | 1419.6 | 86.3 |
| | AM-4 | PR-178 | 3.97920 | 4.14450 | 35.00 | 38.94 | 1431.7 | 104.7 |
| 06/26/88 | AM-1 | PR-184 | 3.99950 | 4.05630 | 38.00 | 40.77 | 1428.8 | 34.4 |
| | AM-2 | PR-185 | 3.97510 | 4.02600 | 29.25 | 41.99 | 1396.0 | 30.7 |
| | AM-3 | PR-183 | 4.00450 | 4.10630 | 36.63 | 40.56 | 1466.7 | 60.4 |
| | AM-4 | PR-182 | 3.99480 | 4.05130 | 34.00 | 36.47 | 1426.8 | 38.4 |
| 07/02/88 | AM-1 | PR-187 | 3.98030 | 4.04910 | 37.50 | 40.20 | 1431.3 | 42.2 |
| | AM-2 | PR-188 | 3.99420 | 4.05920 | 29.00 | 41.49 | 1486.1 | 37.2 |
| | AM-3 | PR-189 | 3.98360 | 4.07020 | 36.75 | 40.68 | 1439.6 | 52.2 |
| | AM-4 | PR-186 | 3.94630 | 4.02090 | 33.25 | 34.62 | 1440.2 | 52.8 |
| 07/08/88 | AM-1 | PR-193 | 3.98660 | 4.15350 | 37.75 | 40.49 | 1452.2 | 100.3 |
| | AM-2 | PR-192 | 3.98700 | 4.15190 | 28.75 | 40.99 | 1436.6 | 98.9 |
| | AM-3 | PR-190 | 3.98280 | 4.16210 | 36.75 | 40.68 | 1439.1 | 108.2 |
| | AM-4 | PR-191 | 3.98010 | 4.14390 | 34.13 | 36.79 | 1466.0 | 107.3 |

P-Chart: Pressure Chart
SCFM: Standard Cubic Feet per Minute
VOID: Power failure interupted 24-hour reading.

TABLE 42 (CONT.)

AIR FILTER PRE- AND POST-WEIGHT DATA

| Sample Date | Site | Filter Number | Filter Wt (gram) Pre- | Filter Wt (gram) Post- | P-Chart | Flow Rate (SCFM) | Sample Time (minute) | PM_10 (ug/m$^3$) |
|---|---|---|---|---|---|---|---|---|
| 07/14/88 | AM-1 | PR-194 | 3.98930 | 4.08900 | 37.75 | 40.49 | 1442.8 | 60.3 |
| | AM-2 | PR-195 | 4.01540 | 4.10840 | 28.38 | 40.24 | 1419.0 | 57.5 |
| | AM-3 | PR-196 | 4.03910 | 4.13610 | 36.38 | 40.30 | 1436.6 | 59.2 |
| | AM-4 | PR-197 | 4.01000 | 4.25190 | 34.00 | 36.47 | 1440.4 | 162.6 |
| 07/20/88 | AM-1 | PR-198 | 4.00300 | 4.05020 | 36.88 | 39.51 | 1406.4 | 30.0 |
| | AM-2 | PR-199 | 3.59710 | 3.63120 | 28.38 | 40.24 | 1425.8 | 21.0 |
| | AM-3 | 8075401 | 4.55220 | 4.62150 | 36.00 | 39.91 | 1457.0 | 42.1 |
| | AM-4 | PR-200 | 3.60040 | 3.65490 | 33.38 | 34.94 | 1440.3 | 38.3 |
| 07/26/88 | AM-1 | 8075404 | 4.61590 | 4.69310 | 37.75 | 40.49 | 1430.1 | 47.1 |
| | AM-2 | 8075405 | 4.60400 | 4.67780 | 28.75 | 40.99 | 1426.1 | 44.6 |
| | AM-3 | 8075403 | 4.64190 | 4.72820 | 36.50 | 40.42 | 1435.9 | 52.5 |
| | AM-4 | 8075402 | 4.63140 | 4.72360 | 33.88 | 36.17 | 1415.6 | 63.6 |
| 08/02/88 | AM-1 | EEM-210 | 3.79290 | 3.89090 | 37.38 | 40.07 | 1452.4 | 59.5 |
| | AM-2 | EEM-213 | 3.80970 | 3.90520 | 28.50 | 40.48 | 1400.0 | 59.5 |
| | AM-3 | EEM-211 | 3.81710 | 3.94160 | 36.17 | 40.09 | 1404.8 | 78.1 |
| | AM-4 | EEM-212 | 3.79780 | 3.89470 | 33.88 | 36.17 | 1425.4 | 66.4 |
| 08/07/88 | AM-1 | EEM-214 | 3.81780 | 3.86660 | 37.25 | 39.92 | 1447.1 | 29.8 |
| | AM-2 | EEM-215 | 3.81590 | 3.86540 | 28.38 | 40.24 | 1439.4 | 30.2 |
| | AM-3 | EEM-217 | 3.77660 | 3.85320 | 36.38 | 40.30 | 1444.0 | 46.5 |
| | AM-4 | EEM-218 | 3.77310 | 3.82810 | 33.63 | 35.56 | 1430.9 | 38.2 |
| 08/13/88 | AM-1 | EEM-219 | 3.77980 | 3.93530 | 37.00 | 39.64 | 1403.8 | 98.7 |
| | AM-2 | EEM-220 | 3.77020 | 3.93340 | 28.25 | 39.98 | 1462.8 | 98.6 |
| | AM-3 | EEM-221 | 3.79220 | 3.96790 | 36.25 | 40.17 | 1482.1 | 104.2 |
| | AM-4 | EEM-222 | 3.77580 | 3.93990 | 33.63 | 35.56 | 1416.7 | 115.1 |
| 08/19/88 | AM-1 | EEM-226 | 3.75670 | 3.80760 | 37.13 | 39.79 | 1445.8 | 31.3 |
| | AM-2 | EEM-225 | 3.76770 | 3.81590 | 28.25 | 39.98 | 1454.6 | 29.3 |
| | AM-3 | EEM-224 | 3.75450 | 3.81080 | 36.00 | 39.91 | 1399.8 | 35.6 |
| | AM-4 | EEM-223 | 3.76860 | 3.81310 | 33.75 | 35.85 | 1465.3 | 29.9 |
| 08/25/88 | AM-1 | EEM-229 | 3.77080 | 3.86870 | 37.25 | 39.92 | 1458.5 | 59.4 |
| | AM-2 | EEM-230 | 3.78980 | 3.85820 | 28.50 | 40.48 | 1397.8 | 42.7 |
| | AM-3 | EEM-227 | 3.77760 | 3.84610 | 36.13 | 40.04 | 1423.0 | 42.5 |
| | AM-4 | EEM-228 | 3.78510 | 3.98580 | 33.50 | 35.23 | 1433.0 | 140.4 |
| 08/31/88 | AM-1 | EEM-233 | 3.78690 | 3.83770 | 36.88 | 39.51 | 1435.5 | 31.6 |
| | AM-2 | EEM-234 | 3.76210 | 3.81030 | 28.25 | 39.98 | 1430.9 | 29.8 |
| | AM-3 | EEM-231 | 3.79620 | 3.84480 | 36.13 | 40.04 | 1429.0 | 30.0 |
| | AM-4 | EEM-232 | 3.80230 | 3.85590 | 33.38 | 34.94 | 1458.9 | 37.1 |
| 09/06/88 | AM-1 | EEM-237 | 3.76790 | 3.80410 | 36.00 | 38.52 | 1436.2 | 23.1 |
| | AM-2 | EEM-238 | 3.76090 | 3.79200 | 28.38 | 40.24 | 1364.5 | 20.0 |
| | AM-3 | EEM-235 | 3.74110 | 3.81100 | 27.13 | 30.77 | 1454.6 | 55.2 |
| | AM-4 | EEM-236 | 3.76060 | 3.80430 | 33.25 | 34.62 | 1437.3 | 31.0 |

P-Chart: Pressure Chart
SCFM: Standard Cubic Feet per Minute
VOID: Power failure interupted 24-hour reading.

TABLE 42 (CONT.)

AIR FILTER PRE- AND POST-WEIGHT DATA

| Sample Date | Site | Filter Number | Filter Wt (gram) Pre- | Filter Wt (gram) Post- | P-Chart | Flow Rate (SCFM) | Sample Time (minute) | PM_10 (ug/m$^3$) |
|---|---|---|---|---|---|---|---|---|
| 09/12/88 | AM-1 | EEM-239 | 3.78980 | 3.84840 | 37.00 | 39.64 | 1413.6 | 36.9 |
| | AM-2 | EEM-242 | 3.74850 | 3.82010 | 28.13 | 39.74 | 1432.7 | 44.4 |
| | AM-3 | EEM-241 | 3.77450 | 3.85860 | 35.13 | 39.01 | 1418.2 | 53.7 |
| | AM-4 | EEM-240 | 3.76870 | 3.93790 | 33.13 | 34.32 | 1420.9 | 122.5 |
| 09/18/88 | AM-1 | EEM-245 | 3.78610 | 3.85070 | 36.88 | 39.51 | 1434.0 | 40.3 |
| | AM-2 | EEM-246 | 3.78970 | 3.84870 | 28.25 | 39.98 | 1402.6 | 37.2 |
| | AM-3 | EEM-243 | 3.74990 | 3.80760 | 35.13 | 39.01 | 1413.7 | 37.0 |
| | AM-4 | EEM-244 | 3.79010 | 3.85930 | 33.00 | 34.00 | 1421.8 | 50.6 |
| 09/24/88 | AM-1 | EEM-249 | 3.81140 | 3.86450 | 36.50 | 39.08 | 1439.8 | 33.3 |
| | AM-2 | EEM-250 | 3.77280 | 3.80360 | 28.25 | 39.98 | 1460.4 | 18.6 |
| | AM-3 | EEM-248 | 3.81270 | 3.84580 | 35.75 | 39.65 | 1448.8 | 20.4 |
| | AM-4 | EEM-247 | 3.79030 | 3.82240 | 32.75 | 33.38 | 1430.0 | 23.8 |
| 09/30/88 | AM-1 | EEM-252 | 3.79150 | 3.86060 | 36.75 | 39.36 | 1427.0 | 43.5 |
| | AM-2 | EEM-251 | 3.76700 | 3.83170 | 28.13 | 39.74 | 1433.4 | 40.1 |
| | AM-3 | EEM-254 | 3.82870 | 3.93250 | 35.50 | 39.39 | 1446.5 | 64.3 |
| | AM-4 | EEM-253 | 3.81760 | 3.91740 | 33.25 | 34.62 | 1456.5 | 69.9 |
| 10/06/88 | AM-1 | EEM-257 | 3.81340 | 3.86180 | 36.13 | 38.66 | 1434.3 | 30.8 |
| | AM-2 | EEM-258 | 3.77540 | 3.82480 | 28.38 | 40.24 | 1409.8 | 30.8 |
| | AM-3 | EEM-255 | 3.81710 | 3.88980 | void | void | 1426.9 | void |
| | AM-4 | EEM-256 | 3.79390 | 3.84290 | 31.88 | 31.23 | 1424.6 | 38.9 |
| 10/12/88 | AM-1 | EEM-261 | 3.81120 | 3.83030 | 36.50 | 39.08 | 1458.3 | 11.8 |
| | AM-2 | EEM-262 | 3.79700 | 3.81800 | 28.38 | 40.24 | 1418.2 | 13.0 |
| | AM-3 | EEM-259 | 3.78850 | 3.80180 | 26.33 | 29.95 | 1460.9 | 10.7 |
| | AM-4 | EEM-260 | 3.79900 | 3.85810 | 31.88 | 31.23 | 1436.8 | 46.5 |
| 10/18/88 | AM-1 | EEM-264 | 3.80350 | 3.85330 | 36.88 | 39.51 | 1452.2 | 30.7 |
| | AM-2 | EEM-265 | 3.78320 | 3.81540 | 28.75 | 40.99 | 1404.6 | 19.8 |
| | AM-3 | EEM-266 | 3.79070 | void | 26.00 | 29.61 | 1424.1 | void |
| | AM-4 | EEM-263 | 3.80080 | 3.89980 | 33.63 | 35.56 | 1425.8 | 69.0 |
| 10/24/88 | AM-1 | EEM-268 | 3.79590 | 4.00910 | 37.00 | 39.64 | 1426.3 | 133.2 |
| | AM-2 | EEM-269 | 3.79640 | 4.07520 | 28.75 | 40.99 | 1429.4 | 168.1 |
| | AM-3 | EEM-271 | 3.77760 | 3.85760 | 36.50 | 40.42 | 1418.9 | 49.3 |
| | AM-4 | EEM-270 | 3.79000 | 3.86820 | 32.63 | 33.09 | 1425.8 | 58.5 |
| 10/30/88 | AM-1 | EEM-274 | 3.75850 | 3.79590 | 36.25 | 38.80 | 1437.2 | 23.7 |
| | AM-2 | EEM-273 | 3.76360 | 3.80390 | 28.50 | 40.48 | 1438.4 | 24.4 |
| | AM-3 | EEM-272 | 3.76310 | 3.82770 | 35.63 | 39.53 | 1449.3 | 39.8 |
| | AM-4 | EEM-275 | 3.75200 | 3.81550 | 31.75 | 30.91 | 1456.8 | 49.8 |
| 11/05/88 | AM-1 | EEM-277 | 3.77510 | 3.84180 | 37.50 | 40.20 | 1416.7 | 41.4 |
| | AM-2 | EEM-276 | 3.75790 | 3.80140 | 28.88 | 41.25 | 1465.0 | 25.4 |
| | AM-3 | EEM-278 | 3.78330 | 3.96020 | 35.25 | 39.14 | 1452.7 | 109.9 |
| | AM-4 | EEM-279 | 3.78080 | 4.04880 | 33.75 | 35.85 | 1428.4 | 184.8 |

P-Chart: Pressure Chart
SCFM: Standard Cubic Feet per Minute
VOID: Power failure interupted 24-hour reading.

TABLE 42 (CONT.)

AIR FILTER PRE- AND POST-WEIGHT DATA

| Sample Date | Site | Filter Number | Filter Wt (gram) Pre- | Filter Wt (gram) Post- | P-Chart | Flow Rate (SCFM) | Sample Time (minute) | PM_10 (ug/m$^3$) |
|---|---|---|---|---|---|---|---|---|
| 11/11/88 | AM-1 | EEM-282 | 3.79030 | 3.81970 | 36.13 | 38.66 | 1438.6 | 18.7 |
| | AM-2 | EEM-283 | 3.77470 | 3.80780 | 28.25 | 39.98 | 1499.2 | 19.5 |
| | AM-3 | EEM-281 | 3.79730 | 3.88110 | 36.00 | 39.91 | 1446.0 | 51.3 |
| | AM-4 | EEM-280 | 3.74720 | 3.79260 | 32.25 | 32.15 | 1477.6 | 33.8 |
| 11/17/88 | AM-1 | EEM-285 | 3.76840 | 3.81340 | 37.38 | 40.07 | 1438.3 | 27.6 |
| | AM-2 | EEM-284 | 3.76560 | 3.82410 | 28.25 | 39.98 | 1429.7 | 36.1 |
| | AM-3 | EEM-287 | 3.74240 | 3.85440 | 31.00 | 34.76 | 1450.9 | 78.4 |
| | AM-4 | EEM-286 | 3.77840 | 3.96150 | 32.63 | 33.09 | 1449.8 | 134.8 |
| 11/23/88 | AM-1 | EEM-290 | 3.80610 | 3.91560 | 36.88 | 39.51 | 1458.2 | 67.1 |
| | AM-2 | EEM-291 | 3.78560 | 3.89470 | 28.13 | 39.74 | 1428.1 | 67.9 |
| | AM-3 | EEM-288 | 3.75040 | 3.88920 | void | void | 1454.8 | void |
| | AM-4 | EEM-289 | 3.77570 | 3.89170 | 32.25 | 32.15 | 1444.2 | 88.2 |
| 11/29/88 | AM-1 | EEM-294 | 3.78090 | 3.82390 | 37.00 | 39.64 | 1433.3 | 26.7 |
| | AM-2 | EEM-295 | 3.79980 | 3.84210 | 28.38 | 40.24 | 1467.7 | 25.3 |
| | AM-3 | EEM-292 | 3.79570 | 3.85140 | 36.00 | 39.91 | 1427.3 | 34.5 |
| | AM-4 | EEM-293 | 3.82420 | 3.96030 | 32.25 | 32.15 | 1401.8 | 106.7 |
| 12/05/88 | AM-1 | EEM-296 | 3.82170 | 3.90780 | void | void | 1435.3 | void |
| | AM-2 | EEM-297 | 3.76180 | 3.84230 | 28.63 | 40.74 | 1455.8 | 47.9 |
| | AM-3 | EEM-299 | 4.03150 | 4.09890 | 35.75 | 39.65 | 1426.4 | 42.1 |
| | AM-4 | EEM-298 | 3.75400 | 4.28610 | 36.50 | 42.64 | 1431.0 | 308.0 |
| 12/11/88 | AM-1 | EEM-308 | 3.96210 | 3.99700 | 36.25 | 38.80 | 1444.4 | 22.0 |
| | AM-2 | EEM-305 | 3.98130 | 4.01120 | 28.00 | 39.48 | 1422.5 | 18.8 |
| | AM-3 | EEM-300 | 4.02670 | 4.11400 | 36.25 | 40.17 | 1424.9 | 53.9 |
| | AM-4 | EEM-306 | 3.97040 | 4.00960 | 35.75 | 40.79 | 1451.3 | 23.4 |
| 12/17/88 | AM-1 | EEM-311 | 3.96070 | 4.00820 | 36.50 | 39.08 | 1450.9 | 29.6 |
| | AM-2 | EEM-312 | 3.97790 | 4.01650 | 28.38 | 40.24 | 1415.6 | 23.9 |
| | AM-3 | EEM-309 | 3.96600 | 4.08300 | 38.25 | 42.23 | 1431.5 | 68.4 |
| | AM-4 | EEM-310 | 3.97110 | 4.13810 | 36.38 | 42.35 | 1419.5 | 98.1 |
| 12/23/88 | AM-1 | EEM-315 | 3.96890 | 4.04030 | 37.63 | 40.35 | 1465.8 | 42.6 |
| | AM-2 | EEM-316 | 3.97700 | 3.97700 | void | void | 1497.5 | void |
| | AM-3 | EEM-313 | 3.95330 | 4.03320 | 38.00 | 41.97 | 1402.2 | 48.0 |
| | AM-4 | EEM-314 | 3.96850 | 4.30050 | 37.50 | 45.11 | 1487.3 | 174.8 |
| 12/29/88 | AM-1 | EEM-317 | 3.98640 | 4.03720 | 36.75 | 39.36 | 1440.3 | 31 7 |
| | AM-2 | EEM-318 | 3.95880 | 3.95880 | void | void | 1440.8 | void |
| | AM-3 | EEM-319 | 3.96290 | 4.02840 | 38.00 | 41.97 | 1440.9 | 38.3 |
| | AM-4 | EEM-320 | 3.98630 | 4.06920 | 36.38 | 42.35 | 1466.5 | 47.1 |

P-Chart: Pressure Chart
SCFM: Standard Cubic Feet per Minute
VOID: Power failure interupted 24-hour reading.

TABLE 43
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

Volatile Organic Compounds
(Results in mg/kg)

| Sample ID | RS-1 | RS-1 (DUP.) | RS-2 | RS-3 | RS-4 | RS-5 | RS-6 |
|---|---|---|---|---|---|---|---|
| Date Collected | 6/8/88 | 6/8/88 | 6/8/88 | 6/8/88 | 6/8/88 | 6/8/88 | 6/8/88 |
| Chloromethane | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.016 UJ |
| Bromomethane | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.016 UJ |
| Vinyl Chloride | <.012 | <.014 | <.016 | <.018 | <.018 | <.014 | <.016 |
| Chloroethane | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.016 UJ |
| Methylene Chloride | .022 B,J | .049 J | .037 J | .024 B,J | .120 B,J | .032 J | .038 J |
| Acetone | .019 B,J | .033 B,J | .039 B,J | .032 B,J | .190 B,J | .032 B,J | .032 B,J |
| Carbon Disulfide | <.006 UJ | <.007 UJ | <.008 UJ | <.009 UJ | <.009 UJ | <.007 UJ | <.008 UJ |
| 1,1-Dichloroethene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 1,1-Dichloroethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 1,2-Dichloroethene (total) | <.006 | <.007 | <.008 | <.009 | <.009 UJ | <.007 | <.008 |
| Chloroform | <.006 | <.007 | <.008 | [.006] | <.009 | <.007 | [.007] |
| 1,2-Dichloroethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 2-Butanone | <.012 UJ | <.014 UJ | <.016 UJ | .120 J | <.018 UJ | <.014 UJ | <.016 UJ |
| 1,1,1-Trichloroethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Carbon Tetrachloride | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Vinyl Acetate | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 UJ | <.016 UJ |
| Bromodichloromethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 1,2-Dichloropropane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| cis-1,3-Dichloropropene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Trichlorethene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Dibromochloromethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 1,1,2-Trichloroethane | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Benzene | .008 B,J | [.004] B,J | .024 | [.006] B,J | [.008] B,J | [.004] B,J | [.005] B,J |
| trans-1,3-Dichloropropene | <.006 UJ | <.007 UJ | <.008 UJ | <.009 UJ | <.009 | <.007 UJ | <.008 UJ |
| Bromoform | <.006 UJ | <.007 UJ | <.008 UJ | <.009 UJ | <.009 | <.007 UJ | <.008 UJ |
| 4-Methyl-2-Pentanone | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014 B,J | <.016 UJ |
| 2-Hexanone | <.012 UJ | <.014 UJ | <.016 UJ | <.018 UJ | <.018 UJ | <.014UJ | <.016 UJ |
| Tetrachloroethene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| 1,1,2,2-Tetrachloroethane | <.006 UJ | <.007 UJ | <.008 UJ | <.009 UJ | <.009 | <.007 UJ | <.008 UJ |
| Toluene | [.001] | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Chlorobenzene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Ethyl benzene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Styrene | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |
| Xylene (total) | <.006 | <.007 | <.008 | <.009 | <.009 | <.007 | <.008 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 44
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RS-1<br>6/8/88 | RS-1 (DUP.)<br>6/8/88 | RS-2<br>6/8/88 | RS-3<br>6/8/88 | RS-4<br>6/8/88 | RS-5<br>6/8/88 | RS-5 DL<br>6/8/88 | RS-6<br>6/8/88 |
|---|---|---|---|---|---|---|---|---|
| Phenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| bis(2-Chloroethyl)ether | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2-Chlorophenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 1,3-Dichlorobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 1,4-Dichlorobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Benzyl alcohol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 1,2-Dichlorobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2-Methylphenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| bis-(2-Chloroisopropyl)ether | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 UJ | <.520 |
| 4-Methylphenol | <.380 | [.070] | <.550 | <.630 | <.630 | <2.30 | <23.0 UJ | <.520 |
| N-Nitroso-di-n-propylamine | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Hexachloroethane | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Nitrobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Isophorone | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2-Nitrophenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2,4-Dimethylphenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Benzoic Acid | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| bis(2-Chloroethoxy)methane | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2,4-Dichlorophenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 1,2,4-Trichlorobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Naphthalene | <.380 | [.070] | [.320] | [.350] | [.450] | [1.60] | [1.80] | [.330] |
| 4-Chloroaniline | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Hexachlorobutadiene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 4-Chloro-3-methylphenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2-Methylnaphthalene | <.380 | [.052] | [.230] | [.240] | [.270] | [.740] | <23.0 | [.210] |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 44 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RS-1<br>6/8/88 | RS-1 (DUP.)<br>6/8/88 | RS-2<br>6/8/88 | RS-3<br>6/8/88 | RS-4<br>6/8/88 | RS-5<br>6/8/88 | RS-5 DL<br>6/8/88 | RS-6<br>6/8/88 |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2,4,6-Trichlorophenol | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2,4,5-Trichlorophenol | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| 2-Chloronaphthalene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 2-Nitroaniline | <1.90 UJ | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| Dimethylphthalate | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | .520 |
| Acenaphthylene | <.380 | <.440 | [.120] | [.094] | [.110] | [.250] | <23.0 | [.084] |
| 2,6-Dinitrotoluene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 3-Nitroaniline | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| Acenaphthene | <.380 | <.440 | [.250] | [.460] | [.370] | 15.0 | [17.0] | .780 |
| 2,4-Dinitrophenol | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| 4-Nitrophenol | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| Dibenzofuran | <.380 | <.440 | [.140] | [.200] | [.190] | 3.30 | [2.40] | [.240] |
| 2,4-Dinitrotoluene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Diethylphthalate | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| 4-Chlorophenyl-phenylether | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Fluorene | <.380 | <.440 | [.160] | [.280] | [.250] | 7.80 | [6.80] | [.420] |
| 4-Nitroaniline | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| 4,6-Dinitro-2-Methylphenol | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| N-Nitrosodiphenylamine | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | [.140] |
| 4-Bromophenyl-phenylether | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Hexachlorobenzene | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Pentachlorophenol | <1.90 | <2.20 | <2.75 | <3.15 | <3.15 | <12.0 | <120 | <2.60 |
| Phenanthrene | [.057] | [.140] | 1.40 | 2.00 | .640 | 47.0 | 110 | 3.10 |
| Anthracene | <.380 | [.041] | [.460] | .680 | .640 | 25.0 | 38 | 1.20 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 44 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE I OHIO RIVER SEDIMENTS
ORMET CORPORATION
HANNIBAL,OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RS-1<br>6/8/88 | RS-1 (DUP.)<br>6/8/88 | RS-2<br>6/8/88 | RS-3<br>6/8/88 | RS-4<br>6/8/88 | RS-5<br>6/8/88 | RS-5 DL<br>6/8/88 | RS-6<br>6/8/88 |
|---|---|---|---|---|---|---|---|---|
| Di-n-butylphthalate | [.035] J | [.043] J | [.058] J | <.630 UJ | <.630 UJ | <2.30 UJ | <23.0 UJ | <.520 |
| Fluoranthene | [.100] | [.330] | 2.60 | 2.90 | 3.20 | 84.0 | 310 | 7.20 |
| Pyrene | [.140] | [.270] J | 2.00 J | 3.60 J | 3.50 J | 110 J | 190 J | 7.60 |
| Butylbenzylphthalate | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 UJ | <23.0 UJ | <.520 |
| 3,3'-Dichlorobenzidine | <.760 | <.880 | <1.10 | <1.26 | <1.26 | <4.60 | <46.0 | <1.04 |
| Benzo(a)anthracene | [.061] | [.180] | 1.40 | 1.90 | 1.90 | 120 | 150 | 6.00 |
| Chrysene | [.080] | [.210] | 1.50 | 2.00 | 2.10 | 120 | 180 | 8.00 |
| bis(s-Ethylhexyl)phthalate | .530 B,J | [.300] B,J | .950 B,J | 1.10 B,J | 1.10 B,J | <2.30 UJ | <23.0 UJ | .850 B,J |
| Di-n-octylphthalate | <.380 | <.440 | <.550 | <.630 | <.630 | <2.30 | <23.0 | <.520 |
| Benzo(b)fluoranthene | [.082] | [.320] | 1.90 | 2.70 | 3.10 | 390 | 180 | 8.90 |
| Benzo(d)fluoranthene | <.380 | [.140] | 1.80 | 2.10 | 1.90 | 170 | 120 | 5.50 |
| Benzo(a)pyrene | [.058] | [.180] | 1.90 | 2.50 | 2.40 | 180 | 160 | 6.10 |
| Indeno(1,2,3-cd)pyrene | <.380 | <.440 | .840 | .630 | .660 | 89.0 | 91.0 | 2.10 |
| Dibenz(a,h)anthracene | <.380 | <.440 | [.170] | [.130] | [.120] | 22.0 | [21.0] J | [.420] |
| Benzo(g,h,i)perylene | <.380 | <.440 UJ | .570 | .690 | [.620] J | 71.0 J | 57.0 | 1.80 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 45
RESULTS OF ANALYSES FOR CLP INORGANIC PARAMETERS
PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg)

| Sample ID<br>Date Collected | RS-1<br>6/8/88 | RS-1 (DUP.)<br>6/8/88 | RS-2<br>6/8/88 | RS-3<br>6/8/88 | RS-4<br>6/8/88 | RS-5<br>6/8/88 | RS-6<br>6/8/88 |
|---|---|---|---|---|---|---|---|
| Aluminum | 8670 | 9980 | 9950 | 12400 | 12600 | 10000 | 6580 |
| Antimony | <6.2 | [9.4] | <8.1 | <11 | <9.2 | <6.5 | <7.1 |
| Arsenic | 12 | 7.3 | 9.0 | 9.7 | 10 | 5.3 | 5.3 |
| Barium | 116 | 142 | 135 | 165 | 154 | 73 | 72 |
| Beryllium | 1.4 J | [1.0] J | 1.7 J | [1.7] J | 2.0 J | [1.1] J | [.94] J |
| Cadmium | <1.0 UJ | <1.1 UJ | 2.0 J | <1.8 UJ | [1.7] J | <1.1 UJ | <1.2 UJ |
| Calcium | 2780 | 2460 | 2840 | 4700 | 4530 | 32500 | 2110 |
| Chromium | 19 | 20 | 49 | 52 | 49 | 13 | 21 |
| Cobalt | 13 J | 15 J | 20 J | 32 J | 31 J | [2.7] J | [14] J |
| Copper | 29 | 28 | 67 | 57 | 56 | 119 | 30 |
| Iron | 47700 | 38400 | 40700 | 43500 | 41800 | 12500 | 23100 |
| Lead | 17 | 20 | 92 | 86 | 81 | 20 | 27 |
| Magnesium | 2630 | 3500 | 2050 | 3160 | 2940 | 6120 | [1370] |
| Manganese | 820 | 615 | 929 | 1490 | 1390 | 648 | 519 |
| Mercury | <.088 | <.12 | .39 | .22 | .32 | <.10 | <.11 |
| Nickel | 26 J | 32 J | 48 J | 73 J | 66 J | [10] J | 29 J |
| Potassium | 1260 | <640 | [907] | <1000 | <851 | <602 | <653 |
| Selenium | <.55 R | <.61 R | <.70 R | <.96 R | <.81 R | <.57 R | <.62 R |
| Silver | <1.1 | <1.2 | <1.4 | <1.9 | <1.6 | <1.2 | <1.2 |
| Sodium | <323 | <362 | <419 | <567 | [501] | 2060 | <369 |
| Thallium | <.45 | <.50 | <.58 | <.79 | <.66 | <.47 | <.51 |
| Vanadium | 18 J | 17 J | [13] J | [17] J | [16] J | [10] J | [8.9] J |
| Zinc | 118 J | 132 J | 379 J | 524 J | 514 J | 106 J | 197 J |
| Cyanide | <.63 UJ | <.71 UJ | 1.1 J | 1.7 J | <.95 UJ | 42 J | 1.6 J |
| % Solids | 78 | 70 | 60 | 44 | 52 | 74 | 68 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

R: Quality control indicates that data are unusable (compound may or may not be present).

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 46
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg unless otherwise noted)

| Sample ID | Date Collected | pH Std. Units | Nitrogen Ammonia | Fluoride | Silica (as SiO2) | Cyanide (Total) | Cyanide (Amenable) | Solids (% wt.) | Total Organic Carbon (TOC) | Alkalinity (CaCO3) | Chloride | Sulfate |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RS-1 | 6/8/88 | 6.8 | 28 | 5.3 | 20 | <1 | <1 | 81 | 74 | 123 | 84 | 679 |
| RS-1 (DUP.) | 6/8/88 | 7.0 | 19 | 6.8 | 55 | <1 | <1 | 77 | 43 | 130 | 299 | 97 |
| RS-2 | 6/8/88 | 7.0 | 70 | 8.9 | 25 | 2 | <2 | 61 | 90 | 344 | 492 | 21 |
| RS-3 | 6/8/88 | 6.8 | 98 | 4.2 | 44 | <2 | <2 | 55 | 53 | 382 | 291 | 65 |
| RS-4 | 6/8/88 | 6.9 | 149 | 7.7 | 58 | <2 | <2 | 53 | 145 | 453 | 340 | 45 |
| RS-5 | 6/8/88 | 7.4 | <16.4 | 109 | 14 | 51 | <1 | 76 | 11 | 250 | 126 | 79 |
| RS-5 (DUP.) | 6/8/88 | 7.4 | <15.4 | 102 | 17 | 63 | <1 | 81 | 16 | 235 | 109 | 67 |
| RS-6 | 6/8/88 | 7.0 | 133 | 27 | 50 | 5 | <2 | 66 | 41 | 212 | 227 | 67 |

(Dup.) - Denotes laboratory duplicate analysis.

# TABLE 47
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## PHASE II OHIO RIVER SEDIMENTS SAMPLES
## ORMET CORPORATION
## HANNIBAL,OHIO

**Semi-Volatile Organic Compounds**
**(Results in mg/kg)**

| Sample ID | RSII-1A | RSII-1B | RSII-1BRE | RSII-1C | RSII-1D | RSII-2 | RSII-3 | RSII-4 | RSII-5 | RSII-6 | RSII-6RE | RSII-7 | RSII-7RE | RSII-9 | RSII-9RE | RSII-9 (Dup.) | RSII-9RE (Dup.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 |
| Phenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| bis(2-Chloroethyl)ether | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2-Chlorophenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 1,3-Dichlorobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 1,4-Dichlorobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | [.063] | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Benzyl alcohol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 1,2-Dichlorobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2-Methylphenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| bis-(2-Chloroisopropyl)ether | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 4-Methylphenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| N-Nitroso-di-n-propylamine | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Hexachloroethane | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Nitrobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Isophorone | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2-Nitrophenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,4-Dimethylphenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Benzoic Acid | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <2.10 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <.770 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| bis(2-Chloroethoxy)methane | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <3.70 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,4-Dichlorophenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 1,2,4-Trichlorobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Naphthalene | [.110] | <.830 R | [.110] J | [.087] | <.850 | [.160] | [.140] | [.290] | [.500] J | <.690 UJ | [.150] J | [.110] J | <.770 UJ | [.070] J | <.560 UJ | [.089] J | [.073] J |
| 4-Chloroaniline | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Hexachlorobutadiene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 4-Chloro-3-methylphenol | <.660 | [.120] J | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2-Methylnaphthalene | [.130] | <.830 R | [.110] J | [.092] | <.850 | [.170] | [.120] | [.190] | <4.40 UJ | <.690 UJ | [.110] J | [.094] J | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Hexachlorocyclopentadiene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,4,6-Trichlorophenol | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,4,5-Trichlorophenol | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| 2-Chloronaphthalene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2-Nitroaniline | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 47 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE II OHIO RIVER SEDIMENTS SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RSII-1A<br>2/14/90 | RSII-1B<br>2/14/90 | RSII-1BRE<br>2/14/90 | RSII-1C<br>2/14/90 | RSII-1D<br>2/14/90 | RSII-2<br>2/14/90 | RSII-3<br>2/14/90 | RSII-4<br>2/14/90 | RSII-5<br>2/14/90 | RSII-6<br>2/14/90 | RSII-6RE<br>2/14/90 | RSII-7<br>2/14/90 | RSII-7RE<br>2/14/90 | RSII-9<br>2/14/90 | RSII-9RE<br>2/14/90 | RSII-9<br>(Dup.)<br>2/14/90 | RSII-9RE<br>(Dup.)<br>2/14/90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimethylphthalate | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Acenaphthylene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | [.140] | [.078] | [.110] | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | [.110] J | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,6-Dinitrotoluene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 3-Nitroaniline | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.77 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| Acenaphthene | [.130] | [.110] J | <.830 UJ | <.700 | <.850 | [.068] | [.100] | [.490] | 9.30 J | [.085] J | [.460] J | [.180] J | [.160] J | [.120] J | [.058] J | [.280] J | [.140] J |
| 2,4-Dinitrophenol | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| 4-Nitrophenol | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| Dibenzofuran | [.085] | <.830 R | <.830 UJ | <.700 | <.850 | [.140] | [.081] | [.190] | [2.10] J | <.690 UJ | [.220] J | [.110] J | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 2,4-Dinitrotoluene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Diethylphthalate | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| 4-Chlorophenyl-phenylether | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Fluorene | [.120] | <.830 R | <.830 UJ | <.700 | <.850 | [.130] | [.110] | [.330] | 6.50 J | [.240] J | <.690 UJ | [.170] J | [.120] J | [.084] J | <.560 UJ | [.140] J | <.730 UJ |
| 4-Nitroaniline | <3.20 U | <4.00 R | <4.00 UJ | <3.40 UJ | <4.10 UJ | <3.00 UJ | <3.10 UJ | <2.90 UJ | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| 4,6-Dinitro-2-Methylphenol | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| N-Nitrosodiphenylamine | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 | <.560 | <.730 UJ | <.730 UJ |
| 4-Bromophenyl-phenylether | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Hexachlorobenzene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Pentachlorophenol | <3.20 | <4.00 R | <4.00 UJ | <3.40 | <4.10 | <3.00 | <3.10 | <2.90 | <21.0 UJ | <3.30 UJ | <3.30 UJ | <3.70 UJ | <3.70 UJ | <2.70 UJ | <2.70 UJ | <3.60 UJ | <3.60 UJ |
| Phenanthrene | .800 | [.410] J | [.330] J | [.260] | [.210] | .860 | .760 | 2.10 | 33.0 J | 2.20 J | 6.60 J | 1.20 J | 1.20 J | .700 J | [.450] J | 1.30 J | [.580] J |
| Anthracene | [.250] | [.130] J | [.092] J | [.070] | <.850 | [.310] | [.230] | .690 | 15.0 J | .780 J | 2.80 J | [.380] J | [.440] J | [.300] J | [.170] J | [.450] J | [.260] J |
| Di-n-butylphthalate | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Fluoranthene | 1.70 | .880 J | [.590] J | [.540] | [.460] | 1.80 | 1.50 | 3.80 | 230. DL,J | <7.10 J | 33.0 DL,J | 2.30 J | 2.20 J | 3.00 J | 1.40 J | 4.80 J | 2.50 J |
| Pyrene | .930 | [.660] J | [.430] J | [.260] | [.280] | 1.20 | .820 | 3.70 | 130. DL,J | 4.00 J | 26.0 DL,J | 1.60 J | 2.00 J | 1.70 J | .860 J | 4.60 J | 2.00 J |
| Butylbenzylphthalate | <6.60 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 J | <.730 UJ | <.730 UJ |
| 3,3'-Dichlorobenzidine | <1.30 | <1.70 R | <1.70 UJ | <1.40 | <1.70 | <1.20 | <1.30 | <1.20 | [4.40] J | [.110] J | <1.40 UJ | <1.50 UJ | <1.50 UJ | <1.10 UJ | <1.10 UJ | <1.50 UJ | <1.50 UJ |
| Benzo(a)anthracene | [.640] | [.320] J | [.220] J | [.200] | [.180] | .800 | [.570] | 1.90 | 110. DL,J | 2.10 J | 12.0 DL,J | .910 J | 1.20 J | 1.40 J | .720 J | 3.20 J | 1.60 J |
| Chrysene | .910 | [.460] J | [.300] J | [.300] | [.260] | 1.20 | .740 | 2.50 | 170. DL,J | 3.70 J | 21.0 DL,J | 1.20 J | 1.40 J | 23.0 J | 1.20 J | 4.60 J | 2.80 J |
| bis(s-Ethylhexyl)phthalate | [.450] | [.240] B,J | [.490] B,J | [.360] | [.430] | [.300] B | [.320] B | [.250] B | [.570] BJ | [.120] B,J | [.540] B,J | [.300] B,J | [.560] B,J | [.220] B,J | [.210] B,J | [.270] B,J | [.550] B,J |
| Di-n-octylphthalate | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Benzo(b)fluoranthene | 1.20 | [.410] J | [.370] J | [.420] | [.370] | .810 | .960 | 2.70 | 190. DL,J | 3.10 J | 17.0 DL,J | .950 J | 2.20 J | 2.00 J | 1.20 J | 4.80 J | 2.60 J |
| Benzo(d)fluoranthene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | <.610 | <.630 | <.600 | <4.40 UJ | <.690 UJ | <.690 UJ | <.770 UJ | <.770 UJ | <.560 UJ | <.560 UJ | <.730 UJ | <.730 UJ |
| Benzo(a)pyrene | .740 | [.310] J | [.250] J | [.230] | [.180] | .660 | [.560] | 2.20 | 99.0 DL,J | 1.20 J | 5.90 J | .920 J | 1.30 J | 1.00 J | .570 J | 2.80 J | 1.20 J |
| Indeno(1,2,3-cd)pyrene | [.560] | [.240] J | <.830 UJ | [.140] | <.850 | [.610] | [.390] | 1.80 | 49.0 DL,J | .750 J | 4.00 J | 1.00 J | 1.10 J | .740 J | [.250] J | 2.10 J | .810 J |
| Dibenz(a,h)anthracene | <.660 | <.830 R | <.830 UJ | <.700 | <.850 | [.180] | [.093] | [.360] | 20.0 J | [.290] J | <.690 UJ | [.270] J | <.770 UJ | [.220] J | <.560 UJ | [.480] J | [.210] J |
| Benzo(g,h,i)perylene | [.610] | [.280] J | <.830 UJ | [.150] | <.850 | .740 | [.420] | 2.20 | 58.0 DL,J | .920 J | 4.60 J | 1.30 J | 1.30 J | .820 J | [.260] J | 2.30 J | .910 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 47 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE II OHIO RIVER SEDIMENTS SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RSII-12<br>2/14/90 | RSII-12RE<br>2/14/90 | RSII-12<br>(Dup.)<br>2/14/90 | RSII-12 RE<br>(Dup.)<br>2/14/90 |
|---|---|---|---|---|
| Phenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| bis(2-Chloroethyl)ether | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2-Chlorophenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 1,3-Dichlorobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 1,4-Dichlorobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Benzyl alcohol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 1,2-Dichlorobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2-Methylphenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| bis-(2-Chloroisopropyl)ether | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 4-Methylphenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| N-Nitroso-di-n-propylamine | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Hexachloroethane | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Nitrobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Isophorone | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2-Nitrophenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2,4-Dimethylphenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Benzoic Acid | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| bis(2-Chloroethoxy)methane | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2,4-Dichlorophenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 1,2,4-Trichlorobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Naphthalene | [.130] J | [.220] J | [.150] J | [.200] J |
| 4-Chloroaniline | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Hexachlorobutadiene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 4-Chloro-3-methylphenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2-Methylnaphthalene | [.098] J | [.120] J | [.120] J | [.100] UJ |
| Hexachlorocyclopentadiene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2,4,6-Trichlorophenol | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2,4,5-Trichlorophenol | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| 2-Chloronaphthalene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 2-Nitroaniline | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 47 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE II OHIO RIVER SEDIMENTS SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in mg/kg)

| Sample ID<br>Date Collected | RSII-12<br>2/14/90 | RSII-12RE<br>2/14/90 | RSII-12<br>(Dup.)<br>2/14/90 | RSII-12RE<br>(Dup.)<br>2/14/90 |
|---|---|---|---|---|
| Dimethylphthalate | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Acenaphthylene | [.084] J | [.088] J | [.110] J | <.670 UJ |
| 2,6-Dinitrotoluene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 3-Nitroaniline | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| Acenaphthene | [.210] J | [.270] J | [.260] J | [.270] J |
| 2,4-Dinitrophenol | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| 4-Nitrophenol | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| Dibenzofuran | [.110] J | [.110] J | [.307] J | [.088] J |
| 2,4-Dinitrotoluene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Diethylphthalate | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 4-Chlorophenyl-phenylether | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Fluorene | [.160] J | [.210] J | [.210] J | [.160] J |
| 4-Nitroaniline | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| 4,6-Dinitro-2-Methylphenol | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| N-Nitrosodiphenylamine | <.700 UJ | <.700 UJ | <3.30 UJ | <3.30 UJ |
| 4-Bromophenyl-phenylether | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Hexachlorobenzene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Pentachlorophenol | <3.40 UJ | <3.40 UJ | <3.30 UJ | <3.30 UJ |
| Phenanthrene | 1.50 J | 1.50 J | 1.70 J | 1.20 J |
| Anthracene | [.550] J | [.530] J | [.640] J | [.450] J |
| Di-n-butylphthalate | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Fluoranthene | 3.50 J | 3.10 J | 3.50 J | 2.60 J |
| Pyrene | 2.40 J | 2.80 J | 2.60 J | 2.40 J |
| Butylbenzylphthalate | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| 3,3'-Dichlorobenzidine | <1.40 UJ | <1.40 UJ | <1.30 UJ | <1.30 UJ |
| Benzo(a)anthracene | 2.20 J | 1.60 J | 2.10 J | 1.50 J |
| Chrysene | 1.90 J | 2.10 J | 2.00 J | 2.00 J |
| bis(s-Ethylhexyl)phthalate | [.370] J | [.460] B,J | [.290] B,J | [.610] B,J |
| Di-n-octylphthalate | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Benzo(b)fluoranthene | 2.70 J | 2.60 J | 2.90 J | 2.80 J |
| Benzo(d)fluoranthene | <.700 UJ | <.700 UJ | <.670 UJ | <.670 UJ |
| Benzo(a)pyrene | 1.50 J | 1.40 J | 1.70 J | 1.50 J |
| Indeno(1,2,3-cd)pyrene | .820 J | .900 J | 1.10 J | .900 J |
| Dibenz(a,h)anthracene | <.700 UJ | <.700 UJ | [.250] J | [.190] J |
| Benzo(g,h,i)perylene | .860 J | .920 J | 1.20 J | 1.00 J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
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DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

# TABLE 48
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## PHASE II OHIO RIVER SEDIMENT SAMPLES
## ORMET CORPORATION
## HANNIBAL, OHIO

(Pesticides and PCBs)
Results in mg/kg

| Sample ID | RSII-1A | RSII-1B | RSII-1C | RSII-1D | RSII-2 | RSII-2RE | RSII-3 | RSII-4 | RSII-5 | RSII-6 | RSII-7 | RSII-9 | RSII-9 (DUP.) | RSII-12 | RSII-12 (DUP.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 | 2/14/90 |
| Alpha-BHC | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| beta-BHC | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| delta-BHC | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| gamma-BHC (Lindane) | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| Heptachlor | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| Aldrin | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| Heptachlor epoxide | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| Endosulfan I | <.080 | <.200 | <.085 | <.210 | <.150 | <.150 | <.077 | <.073 | <1.10 | <.170 | <.190 | <.140 | <.180 | <.170 | <.160 |
| Dieldrin | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.073 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| 4,4'-DDE | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.073 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| Endrin | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| Endosulfan II | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| 4,4'-DDD | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| Endosulfan sulfate | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| 4,4'-DDT | | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| Methoxychlor | <.800 | <2.00 | <.850 | <.2100 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Endrin ketone | <.160 | <.400 | <.170 | <.410 | <.300 | <.300 | <.150 | <.150 | <2.10 | <.330 | <.370 | <.270 | <.360 | <.340 | <.330 |
| alpha-chlordane | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| gamma-Chlordane | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.700 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Toxaphene | <1.60 | <4.00 | <1.70 | <4.10 | <3.00 | <3.00 | <1.50 | <1.50 | <21.0 | <3.30 | <3.70 | <2.70 | <3.60 | <3.40 | <3.30 |
| Aroclor-1016 | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Aroclor-1221 | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Aroclor-1232 | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Aroclor-1242 | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | <11.0 | <1.70 | <1.90 | <1.40 | <1.80 | <1.70 | <1.60 |
| Aroclor-1248 | <.800 | <2.00 | <.850 | <2.10 | <1.50 | <1.50 | <.770 | <.730 | 97.5 | 2.20 | <1.90 | 1.30 | 1.10 | 2.50 | 1.04 |
| Aroclor-1254 | <1.60 | <4.00 | <1.70 | <4.10 | <3.00 | <3.00 | <1.50 | <1.50 | <21.0 | <3.30 | <3.70 | <2.70 | <3.60 | <3.40 | <3.30 |
| Aroclor-1260 | <.800 | <2.00 | <.850 | <4.10 | <3.00 | <3.00 | <1.50 | <1.50 | <21.0 | <3.30 | <3.70 | <2.70 | <3.60 | <3.40 | <3.30 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 49
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN PHASE I OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO

(Results in mg/kg)

| Sample ID | RS-1 | RS-1 (Dup.) | RS-2 | RS-3 | RS-4 | RS-5 | RS-5 DL | RS-6 |
|---|---|---|---|---|---|---|---|---|
| PAHs | | | | | | | | |
| Naphthalene | --- | [.070] | [.320] | [.350] | [.450] | [1.60] | [1.80] | [.330] |
| 2-Methylnaphthalene | --- | [.052] | [.230] | [.240] | [.270] | [.740] | <23.0 | [.210] |
| Acenaphthylene | --- | --- | [.120] | [.094] | [.110] | [.250] | <23.0 | [.084] |
| Acenaphthene | --- | --- | [.250] | [.460] | [.370] | 15.0 | [17.0] | .780 |
| Dibenzofuran | --- | --- | [.140] | [.200] | [.190] | 3.30 | [2.40] | [.240] |
| Fluorene | --- | --- | [.160] | [.280] | [.250] | 7.80 | [6.80] | [.420] |
| Phenanthrene | [.057] | [.140] | 1.40 | 2.00 | .640 | 47.0 | 110 | 3.10 |
| Anthracene | --- | [.041] | [.460] | .680 | .640 | 25.0 | 38 | 1.20 |
| Fluoranthene | [.100] | [.330] | 2.60 | 2.90 | 3.20 | 84.0 | 310 | 7.20 |
| Pyrene | [.140] | [.270] J | 2.00 J | 3.60 J | 3.50 J | 110 J | 190 J | 7.60 |
| Benzo(a)anthracene | [.061] | [.180] | 1.40 | 1.90 | 1.90 | 120 | 150 | 6.00 |
| Chrysene | [.080] | [.210] | 1.50 | 2.00 | 2.10 | 120 | 180 | 8.00 |
| Benzo(b)fluoranthene | [.082] | [.320] | 1.90 | 2.70 | 3.10 | 390 | 180 | 8.90 |
| Benzo(k)fluoranthene | --- | [.140] | 1.80 | 2.10 | 1.90 | 170 | 120 | 5.50 |
| Benzo(a)pyrene | [.058] | [.180] | 1.90 | 2.50 | 2.40 | 180 | 160 | 6.10 |
| Indeno(1,2,3-cd)pyrene | --- | --- | .840 | .630 | .660 | 89.0 | 91.0 | 2.10 |
| Dibenz(a,h)anthracene | --- | --- | [.170] | [.130] | [.120] | 22.0 | [21.0] J | [.420] |
| Benzo(g,h,i)perylene | --- | --- | .570 | .690 | [.620] J | 71.0 J | 57.0 | 1.80 |
| TOTAL PAHs | .578 | 1.933 | 17.76 | 23.454 | 22.42 | 1456.69 | 1635.0 | 59.984 |
| OTHER SEMI VOLATILE COMPOUND DETECTED | | | | | | | | |
| 4-Methyphenol | --- | [.070] | --- | --- | --- | --- | --- | --- |
| N-nitrosodiphenylamine | --- | --- | --- | --- | --- | --- | --- | [.140] |
| Di-n-butylphthalate | [.035] J | [.043] J | [.058] J | --- | --- | --- | --- | --- |
| Dimethylphthalate | --- | --- | --- | --- | --- | --- | --- | .520 |
| Bis-(2-Ethylhexyl)Phthalate | .530 B,J | [.300] B,J | .950 B,J | 1.10 B,J | 1.10 B,J | --- | --- | .850 B,J |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 50
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN PHASE II OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO
(Results in mg/kg)

| Sample ID | RSII-1A | RSII-1B | RSII-1BRE | RSII-1C | RSII-1D | RSII-2 | RSII-3 | RSII-4 | RSII-5 | RSII-6 | RSII-6RE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PAHS | | | | | | | | | | | |
| Naphthalene | [.110] | --- | [.110] J | [.087] | --- | [.160] | [.140] | [.290] | [.500] J | --- | [.150] J |
| 2-Methylnaphthalene | [.130] | --- | [.110] J | [.092] | --- | [.170] | [.120] | [.190] | --- | --- | [.110] J |
| Acenaphthylene | --- | --- | --- | --- | --- | [.140] | [.078] | [.110] | --- | --- | --- |
| Acenaphthene | [.130] | [.110] J | --- | --- | --- | [.068] | [.100] | [.490] | 9.30 J | [.085] J | [.460] J |
| Dibenzofuran | [.085] | --- | --- | --- | --- | [.140] | [.081] | [.190] | [2.10] J | --- | [.220] J |
| Fluorene | [.120] | --- | --- | --- | --- | [.130] | [.110] | [.330] | 6.50 J | [.240] J | .690 J |
| Phenanthrene | .800 | [.410] J | [.330] J | [.260] | [.210] | .860 | .760 | 2.10 | 33.0 J | 2.20 J | 6.60 J |
| Anthracene | [.250] | [.130] J | [.092] J | [.070] | --- | [.310] | [.230] | .690 | 15.0 J | .780 J | 2.80 J |
| Fluoranthene | 1.70 | .880 J | [.590] J | [.540] | [.460] | 1.80 | 1.50 | 3.80 | 230. DL,J | [.100] J | 33.0 DL,J |
| Pyrene | .930 | [.660] J | [.430] J | [.260] | [.280] | 1.20 | .820 | 3.70 | 130. DL,J | 4.00 J | 26.0 DL,J |
| Benzo(a)anthracene | [.640] | [.320] J | [.220] J | [.200] | [.180] | .800 | [.570] | 1.90 | 110. DL,J | 2.10 J | 12.0 DL,J |
| Chrysene | .910 | [.460] J | [.300] J | [.300] | [.260] | 1.20 | .740 | 2.50 | 170. DL,J | 3.70 J | 21.0 DL,J |
| Benzo(b)fluoranthene | 1.20 | [.410] J | [.370] J | [.420] | [.370] | .810 | .960 | 2.70 | 190. DL,J | 3.10 J | 17.0 DL,J |
| Benzo(k)fluoranthene | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Benzo(a)pyrene | .740 | [.310] J | [.250] J | [.230] | [.180] | .660 | [.560] | 2.20 | 99.0 DL,J | 1.20 J | 5.90 J |
| Indeno(1,2,3-cd)pyrene | [.560] | [.240] J | --- | [.140] | --- | [.610] | [.390] | 1.80 | 49.0 DL,J | .750 J | 4.00 J |
| Dibenz(a,h)anthracene | --- | --- | --- | --- | --- | [.180] | [.093] | [.360] | 20.0 J | [.290] J | --- |
| Benzo(g,h,i)perylene | [.610] | [.280] J | --- | [.150] | --- | .740 | [.420] | 2.20 | 58.0 DL,J | .920 J | 4.60 J |
| TOTAL PAHs | 8.915 | 4.210 | 2.802 | 2.749 | 1.940 | 9.978 | 7.672 | 25.55 | 1,122.4 | 26.465 | 175.93 |
| OTHER SEMI VOLATILE COMPOUND DETECTED | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | | | [4.40] J | [.110] J | |
| bis(2-ethylhexyl)phthalate | [.450] | [.240] B,J | [.490] B,J | [.360] | [.430] | [.300] B | [.320] B | [.250] B | [.570] B,J | [.120] B,J | [.540] B,J |
| 1,4-Dichlorobenzene | --- | --- | --- | --- | --- | --- | [.063] | --- | --- | --- | --- |
| 4-chloro-3-methylphenol | --- | [.120] | --- | --- | --- | --- | --- | --- | --- | --- | --- |

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UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 50 (CONT.)
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN PHASE II OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL,OHIO
(Results in mg/kg)

| Sample ID | RSII-7 | RSII-7RE | RSII-9 | RSII-9RE | RSII-9 (Dup.) | RSII-9RE (Dup.) | RSII-12 | RSII-12RE | RSII-12 (Dup.) | RSII-12 RE (Dup.) |
|---|---|---|---|---|---|---|---|---|---|---|
| PAHS | | | | | | | | | | |
| Naphthalene | [.110] J | --- | [.070] J | --- | [.089] J | [.073] J | [.130] J | [.220] J | [.150] J | [.200] J |
| 2-Methylnaphthalene | [.094] J | --- | --- | --- | --- | --- | [.098] J | [.120] J | [.120] J | [.100] UJ |
| Acenaphthylene | --- | [.110] J | --- | --- | --- | --- | [.084] J | [.088] J | [.110] J | --- |
| Acenaphthene | [.180] J | [.160] J | [.120] J | [.058] J | [.280] J | [.140] J | [.210] J | [.270] J | [.260] J | [.270] J |
| Dibenzofuran | [.110] J | --- | --- | --- | --- | --- | [.110] J | [.110] J | [.130] J | [.088] J |
| Fluorene | [.170] J | [.120] J | [.084] J | --- | [.140] J | --- | [.160] J | [.210] J | [.210] J | [.160] J |
| Phenanthrene | 1.20 J | 1.20 J | .700 J | [.450] J | --- | [.580] J | 1.50 J | 1.50 J | 1.70 J | 1.20 J |
| Anthracene | [.380] J | [.440] J | [.300] J | [.170] J | [.450] J | [.260] J | [.550] J | [.530] J | [.640] J | [.450] J |
| Fluoranthene | 2.30 J | 2.20 J | 3.00 J | 1.40 J | 4.80 J | 2.50 J | 3.50 J | 3.10 J | 3.50 J | 2.60 J |
| Pyrene | 1.60 J | 2.00 J | 1.70 J | .860 J | 4.60 J | 2.00 J | 2.40 J | 2.80 J | 2.60 J | 2.40 J |
| Benzo(a)anthracene | .910 J | 1.20 J | 1.40 J | .720 J | 3.20 J | 1.60 J | 2.20 J | 1.60 J | 2.10 J | 1.50 J |
| Chrysene | 1.20 J | 1.40 J | 2.30 J | 1.20 J | 4.60 J | 2.80 J | 1.90 J | 2.10 J | 2.00 J | 2.00 J |
| Benzo(b)fluoranthene | .950 J | 2.20 J | 2.00 J | 1.20 J | 4.80 J | 2.60 J | 2.70 J | 2.60 J | 2.90 J | 2.80 J |
| Benzo(k)fluoranthene | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Benzo(a)pyrene | .920 J | 1.30 J | 1.00 J | .570 J | 2.80 J | 1.20 J | 1.50 J | 1.40 J | 1.70 J | 1.50 J |
| Indeno(1,2,3-cd)pyrene | 1.00 J | 1.10 J | .740 J | [.250] J | 2.10 J | .810 J | .820 J | .900 J | 1.10 J | .900 J |
| Dibenz(a,h)anthracene | [.270] J | --- | [.220] J | --- | [.480] J | [.210] J | --- | --- | [.250] J | [.190] J |
| Benzo(g,h,i)perylene | 1.30 J | 1.30 J | .820 J | [.260] J | 2.30 J | .910 J | .860 J | .920 J | 1.20 J | 1.00 J |
| TOTAL PAHs | 12.694 | 14.73 | 14.454 | 7.138 | 31.939 | 15.683 | 18.722 | 18.448 | 20.67 | 17.358 |
| OTHER SEMI VOLATILE COMPOUND DETECTED | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | | | | | | | | | | |
| bis(2-ethylhexyl)phthalate | [.300] B,J | [.560] B,J | [.220] B,J | [.210] B,J | [.270] B,J | [.550] B,J | [.370] J | [.460] B,J | [.290] B,J | [.610] B,J |
| 1,4-Dichlorobenzene | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4-chloro-3-methylphenol | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 51

RESULTS OF ANALYSES FOR TOTAL COMBUSTIBLE CARBON
PHASE II OHIO RIVER SEDIMENT SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

| SAMPLE # | DATE COLLECTED | MOISTURE CONTENT @105°C | %SOLIDS @450°C | %COMBUSTIBLE MATTER (Wet. Wt.) | % COMBUSTIBLE MATTER (Dry Wt.) |
|---|---|---|---|---|---|
| RSII-1A | 2/14/90 | 48.40 | 46.00 | 5.60 | 54.00 |
| RSII-1B | 2/14/90 | 55.46 | 37.72 | 6.82 | 62.28 |
| RSII-1C | 2/14/90 | 52.00 | 43.00 | 5.00 | 57.00 |
| RSII-1D | 2/14/90 | 60.36 | 34.92 | 4.72 | 65.08 |
| RSII-2 | 2/14/90 | 39.22 | 54.21 | 6.57 | 45.79 |
| RSII-3 | 2/14/90 | 49.72 | 44.01 | 6.27 | 55.99 |
| RSII-4 | 2/14/90 | 44.04 | 48.60 | 7.36 | 51.40 |
| RSII-5 | 2/14/90 | 24.74 | 39.67 | 35.59 | 60.33 |
| RSII-6 | 2/14/90 | 51.00 | 44.11 | 4.89 | 55.89 |
| RSII-7 | 2/14/90 | 50.02 | 43.60 | 6.38 | 56.40 |
| RSII-9 | 2/14/90 | 43.32 | 52.50 | 4.18 | 47.50 |
| RSII-9 (DUP.) | 2/14/90 | 47.71 | 45.81 | 6.48 | 54.19 |
| RSII-12 | 2/14/90 | 48.26 | 47.75 | 3.99 | 52.25 |
| RSII-12 (DUP.) | 2/14/90 | 49.27 | 44.48 | 6.25 | 55.52 |

TABLE 52
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE II OHIO RIVER SURFACE-WATER SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/L

| Sample ID<br>Date Collected | SW-1<br>2/21/90 | SW-1 (DUP.)<br>2/21/90 | SW-4<br>2/21/90 | SW-5<br>2/21/90 | SW-9<br>2/21/90 | SW-12<br>2/21/90 |
|---|---|---|---|---|---|---|
| Chloromethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Methylene Chloride | [1] B | <5 | [1] B | [2] B | [2] B | [2] B |
| Acetone | [8] B,J | [8] B,J | 15 B,J | 11 B,J | 20 B,J | 12 B,J |
| Carbon Disulfide | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 R | <10 R | <10 R | <10 R | <10 R | <10 R |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 | <10 | <10 | <10 | <10 | <10 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| trans-1,3-Dichloropropene | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| Bromoform | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 53
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
PHASE II OHIO RIVER SURFACE WATER SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/L

| Sample ID | SW-1 | SW-1 (DUP.) | SW-4 | SW-5 | SW-9 | SW-12 | FIELD BLANK |
|---|---|---|---|---|---|---|---|
| Date Collected | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 |
| Phenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| bis(2-Chloroethyl)ether | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| bis-(2-Chloroisopropyl)ether | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| N-Nitroso-di-n-propylamine | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Isophorone | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Benzoic Acid | <50 | <50 | <50 | <50 | <50 | <50 | <10 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Fluorene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Di-n-butylphthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | [3] | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | [3] | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chrysene | <10 | <10 | <10 | [3] | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Dibenz(a,h)anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 54
RESULTS OF ANALYSES FOR CLP ORGANIC PARAMETERS
PHASE II OHIO RIVER SURFACE WATER SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

(Pesticides and PCBs)
Results in ug/l

| Sample ID<br>Date Collected | SW-1<br>2/21/90 | SW-1 (DUP.)<br>2/21/90 | SW-4<br>2/21/90 | SW-5<br>2/21/90 | SW-9<br>2/21/90 | SW-12<br>2/21/90 |
|---|---|---|---|---|---|---|
| Alpha-BHC | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| beta-BHC | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| delta-BHC | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| gamma-BHC (Lindane) | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Heptachlor | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Aldrin | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Heptachlor epoxide | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Endosulfan I | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 | <0.050 |
| Dieldrin | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDE | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endrin | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endosulfan II | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDD | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endosulfan sulfate | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDT | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methoxychlor | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Endrin ketone | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| alpha-chlordane | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| gamma-Chlordane | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Toxaphene | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Aroclor-1016 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1221 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1232 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1242 | <0.50 | <0.50 | <0.50 | 1.5 | 1.0 | <0.50 |
| Aroclor-1248 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1254 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Aroclor-1260 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 55
RESULTS OF ANALYSES FOR CLP INORGANIC PARAMETERS
PHASE II OHIO RIVER SURFACE WATER SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/l

| Sample ID | SW-1 | SW-1 (Dup.) | SW-4 | SW-5 | SW-9 | SW-12 | FIELD BLANK |
|---|---|---|---|---|---|---|---|
| Date Collected | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 |
| Aluminum (total) | 2120 | 2320 | 826 | 1270 | 2590 | 2880 | <13.0 |
| Aluminum (dissolved) | <13.0 | <13.0 | [20.0] | [48.0] | [23.0] | <13.0 | <13.0 |
| Antimony (total) | <16.0 | <16.0 | <16.0 | <16.0 | <16.0 | [40.0] B | [20.0] B |
| Antimony (dissolved) | [22.0] B | <16.0 | [27.0] B | <16.0 | <16.0 | [58.0] B | [30.0] B |
| Arsenic (total) | <4.0 | <4.0 | <4.0 | 11.0 | [5.0] | <4.0 | <4.0 |
| Arsenic (dissolved) | <4.0 | <4.0 | <4.0 | 10.0 | [5.0] | <4.0 | <4.0 |
| Barium (total) | [65.0] | [90.0] | [48.0] | [78.0] | [71.0] | [68.0] | <19.0 |
| Barium (dissolved) | [33.0] | [33.0] | [37.0] | [67.0] | [51.0] | [45.0] | <19.0 |
| Beryllium (total) | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| Beryllium (dissolved) | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| Cadmium (total) | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | [2.0] | <2.0 |
| Cadmium (dissolved) | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | [2.0] | <2.0 |
| Calcium (total) | 20800 B | 20900 B | 20500 B | 43100 B | 27100 B | 20800 B | [145] B |
| Calcium (dissolved) | 21700 B | 21800 B | 21600 B | 44800 B | 31600 B | 19700 B | <66.0 |
| Chromium (total) | [4.0] B | [6.0] B | <3.0 | 12.0 B | 10.0 B | [8.0] B | <3.0 |
| Chromium (dissolved) | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 |
| Cobalt (total) | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | [7.0] | <7.0 |
| Cobalt (dissolved) | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 |
| Copper (total) | [6.0] | [10.0] | [4.0] | 26.0 | [16.0] | [12.0] | [5.0] |
| Copper (dissolved) | <4.0 | <4.0 | <4.0 | [9.0] | <4.0 | <4.0 | <4.0 |
| Iron (total) | 3800 J | 5180 J | 1870 J | 2160 J | 4170 J | 5730 J | <42.0 UJ |
| Iron (dissolved) | <42.0 UJ | <42.0 UJ | [57.0] J | 812 J | 357 J | [74.0] J | <42.0 UJ |
| Lead (total) | 5.0 | 6.0 | 3.0 | 3.0 | 7.0 | 9.0 | <3.0 |
| Lead (dissolved) | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 |
| Magnesium (total) | 6100 | 6210 | 5920 | 7190 | 6330 | 6110 | <91.0 |
| Magnesium (dissolved) | 6170 | 6230 | 6180 | 7460 | 7150 | 5500 | <91.0 |
| Manganese (total) | 293 | 342 | 262 | 772 | 540 | 509 | <7.0 |
| Manganese (dissolved) | 175 | 177 | 182 | 726 | 349 | 198 | <7.0 |
| Mercury (total) | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Mercury (dissolved) | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 |
| Nickel (total) | <7.0 | [8.0] | <7.0 | <7.0 | [10.0] | [12.0] | <7.0 |
| Nickel (dissolved) | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 | <7.0 |
| Potassium (total) | [2070] | [2080] | [1720] | [2990] | [2370] | [2060] | <90.0 |
| Potassium (dissolved) | [1780] | [1740] | [1760] | [3040] | [2300] | [1660] | <90.0 |
| Selenium (total) | <4.0 UJ | <4.0 UJ | <4.0 UJ | <4.0 UJ | <4.0 UJ | <4.0 | <4.0 UJ |
| Selenium (dissolved) | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| Silver (total) | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | 10.0 |
| Silver (dissolved) | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 | <3.0 |
| Sodium (total) | 9880 B | 9870 B | 10300 B | 153000 B | 52100 B | 12600 B | [257] B |
| Sodium (dissolved) | 10100 B | 10300 B | 10600 B | 162000 B | 62400 B | 12300 B | <39.0 B |
| Thallium (total) | <3.0 UJ | <3.0 UJ | <3.0 UJ | <3.0 | <3.0 UJ | <3.0 UJ | <3.0 UJ |
| Thallium (dissolved) | <3.0 | <3.0 UJ | <3.0 UJ | <3.0 | <3.0 UJ | <3.0 UJ | <3.0 |
| Vanadium (total) | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 |
| Vanadium (dissolved) | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 |
| Zinc (total) | 32.0 | 42.0 | 26.0 | 23.0 | 50.0 | 66.0 | [6.0] |
| Zinc (dissolved) | <6.0 | <6.0 | <6.0 | <6.0 | <6.0 | [13.0] | <6.0 |
| Cyanide (total) | <5 | <5 | <5 | 125 | 428 | 7.6 | <5 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.
B: Analyte was detected in the associated laboratory blank(s).,
S: Indicates a value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 56
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
PHASE II OHIO RIVER SURFACE-WATER SAMPLES
ORMET CORPORATION
HANNIBAL, OHIO
(Results in mg/L unless otherwise noted)

| Sample ID | SW-1 | SW-1 (Dup.) | SW-4 | SW-5 | SW-9 | SW-12 | Field Blank |
|---|---|---|---|---|---|---|---|
| Date Collected | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 | 2/21/90 |
| Temperature (°C) - field | 7 | 7 | 5 | 17 | 11 | 7.5 | -- |
| pH (std. units) - field | 7.43 | -- | 7.43 | 8.55 | 8.04 | 7.41 | -- |
| pH (std. units) - lab | 7.7 | 7.6 | 7.7 | 8.4 | 7.7 | 7.8 | 8.6 |
| Specific Conductance (umho/cm) - field | 260 | -- | 280 | 1100 | 490 | 270 | -- |
| Specific Conductance (umho/cm) - lab | 230 | 230 | 230 | 1000 | 430 | 270 | 1 |
| Total Dissolved Solids | 150 | 150 | 150 | 600 | 280 | 180 | 18 |
| Total Organic Carbon | * | 3 | 2 | 2 | 3 | 3 | <1 |
| Alkalinity | 28 | 27 | 28 | 270 | 95 | 32 | <1 |
| Ammonia | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | 14 | 17 | 13 | 41 | 21 | 14 | 2 |
| Fluoride | <0.1 | 0.1 | 0.1 | 12 | 3.3 | 0.3 | <0.1 |
| Sulfate | 63 | 67 | 70 | 110 | 97 | 65 | <1 |
| Silica | <2 | 3 | 3 | <10 | 5 | 6 | <2 |
| Tin | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02 |
| Cyanide, Total | <0.005 | <0.005 | <0.005 | 0.125 | 0.428 | 0.0076 | <0.005 |
| Cyanide, Amenable to Cl | <0.005 | <0.005 | <0.005 | <0.005 | 0.078 | <0.005 | <0.005 |

* Not analyzed. Sample bottle received broken.

TABLE 57

RESULTS OF ANALYSES PERFORMED ON SHELBY TUBE SAMPLES
COLLECTED AT THE ORMET PLANT SITE
HANNIBAL, OHIO

| WELL/BORING | DEPTH INTERVAL (feet) | CATION EXCHANGE CAPACITY (meq/100g) | TOTAL SOLIDS | VERTICAL PERMEABILITY (cm/sec) |
|---|---|---|---|---|
| MW-43 | 18.0-20.1 | 24 | 79.9 | $5.9 \times 10^{-8}$ |
| PPB-05 | 44.5-46.5 | 29 | 79.9 | $8.4 \times 10^{-8}$ |
| PPB-06 | 46.0-48.0 | 22 | 82.6 | $1.6 \times 10^{-7}$ |
| PPB-07 | 50.0-52.0 | 18 | 84.0 | $1.2 \times 10^{-6}$ |
| PPB-08 | 50.0-51.5 | 20 | 83.7 | $6.8 \times 10^{-8}$ |
| PPB-09 | 46.0-48.0 | 20 | 83.8 | $1.4 \times 10^{-7}$ |
| PPB-10 | 42.0-44.0 | 27 | 77.5 | $2.0 \times 10^{-5}$ |
| MW-24(1) | 30.0-32.0 | 32.61 | 73.8 | $3.9 \times 10^{-7}$ |
| MW-33(1) | 30.0-32.0 | 21.74 | 78.9 | $<10^{-8*}$ |
| MW-14(2) | 35.0-37.0 | N/A | 76.5 | $3.0 \times 10^{-8}$ |
| MW-20(2) | 15.0-17.0 | N/A | 78.4 | $9.0 \times 10^{-8}$ |

(1) - Samples collected by Geraghty & Miller in 1986
(2) - Samples collected by Geraghty & Miller in 1983

* - No permeation after 36 days. Permeability is probably less than $10^{-8}$ cm/sec.

N/A - Not analyzed

# TABLE 58
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## MW-SERIES MONITORING WELLS
## ORMET CORPORATION
## HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-2<br>7/6/88 | MW-5<br>7/6/88 | MW-8<br>6/23/88 | MW-11<br>6/24/88 | MW-12<br>6/29/88 | MW-13<br>7/1/88 | MW-14<br>6/30/88 | MW-15<br>7/1/88 | MW-16<br>7/6/88 | MW-17<br>6/30/88 | MW-18<br>7/6/88 | MW-19<br>7/1/88 | MW-28<br>6/28/88 | MW-29S<br>6/27/88 | MW-29D<br>6/27/88 | MW-30<br>6/28/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 |
| Methylene Chloride | [2] B,J | [3] B,J | [4] B,J | [2] B,J | 9 B,J | [2] B,J | [3] B,J | [3] B,J | [3] B,J | [4] B,J | 8 B,J | [4] B,J | 6 B,J | [4] B,J | 5 B,J | 6 B,J |
| Acetone | 24 B,J | 25 B,J | [6] B,J | [5] B,J | 24 B,J | <10 UJ | [1] B,J | [2] B,J | [5] B,J | [3] B,J | 20 B,J | [2] B,J | 29 B,J | <10 UJ | <10 UJ | [5] B,J |
| Carbon Disulfide | <5 UJ | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | 10 | <5 UJ | <5 | <5 | <5 | <5 UJ |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | [1] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 UJ | [2] J | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | [2] UJ |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | [1] | [2] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | [1] | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | [2] B,J | [2] B,J | <5 | <5 | [4] B,J | [2] B,J | [2] B,J | [2] B,J | [2] B,J | [3] B,J | <5 | [2] B,J | 5 B,J | 6 B,J | 6 B,J | [4] B,J |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 UJ | <5 | <5 UJ | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | 11 J | 12 J | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | 6 J | <5 | 22 J | <5 | <5 | <5 | <5 | 5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | [1] | <5 | [1] | [1] B,J |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 UJ | <5 | <5 UJ | <5 | <5 | <5 | <5 UJ |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 58 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-31<br>6/28/88 | MW-32<br>7/5/88 | MW-33S<br>6/30/88 | MW-33D<br>6/30/88 | MW-34S<br>7/5/88 | MW-34D<br>7/5/88 | MW-35<br>7/5/88 | MW-36<br>7/5/88 | MW-37<br>7/6/88 | MW-39S<br>6/28/88 | MW-39D<br>6/28/88 | MW-40S<br>6/27/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 | <10 | <10 |
| Methylene Chloride | 7 B,J | 6 B,J | [4] B,J | [4] B,J | [2] B,J | [4] B,J | [2] B,J | 6 B,J | 11 B,J | 6 B,J | [2] B,J | [3] B,J |
| Acetone | [6] B,J | <10 UJ | [3] B,J | [2] B,J | 10 B,J | 15 B,J | 24 B,J | 21 B,J | 13 B,J | [3] B,J | [3] B,J | [6] B,J |
| Carbon Disulfide | <5 UJ | <5 | <5 UJ | <5 UJ | 5 J | <5 UJ | [4] J | [1] J | 8 | <5 UJ | <5 UJ | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 5 J | <5 UJ | [2] |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | [3] | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | [2] B,J | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 UJ | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | [3] J | <5 UJ | [2] |
| Carbon Tetrachloride | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | [1] | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | [3] | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | [4] B,J | <5 | [3] B,J | [2] B,J | [2] B,J | [2] B,J | [3] B,J | [2] B,J | <5 | [4] B,J | 5 B,J | 6 B,J |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | 40 | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| Toluene | [1] B,J | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | [1] B,J | [1] B,J | <5 |
| Chlorobenzene | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 UJ | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 58 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-40D<br>6/27/88 | MW-42S<br>6/29/89 | MW-42D<br>6/29/88 | MW-43S<br>6/29/88 | MW-43D<br>6/29/88 | MW-44S<br>6/24/88 | MW-44D<br>6/24/88 |
|---|---|---|---|---|---|---|---|
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Methylene Chloride | [3] B,J | 6 B,J | 5 B,J | 9 B,J | [2] B,J | 17 B,J | [3] B,J |
| Acetone | 32 B,J | [3] B,J | [4] B,J | [6] B,J | [3] B,J | 26 B,J | [4] B,J |
| Carbon Disulfide | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | [1] | <5 |
| 1,1-Dichloroethane | <5 | <5 UJ | <5 UJ | <5 | <5 UJ | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 | <5 UJ | <5 UJ | <5 | <5 UJ | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 UJ | <5 UJ | <5 | <5 UJ | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | 5 B,J | [4] B,J | [4] B,J | [2] B,J | 24 B,J | [2] | [1] |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 UJ | <5 | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Toluene | <5 | <5 | [1] | <5 | [4] | [1] | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 59
COMPARISON OF DUPLICATE SAMPLE ANALYSES
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| Well ID | MW-14 | MW-45 | MW-35 | MW-48 | MW-37 | MW-49 |
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ |
| Methylene Chloride | [3] B,J | 5 B,J | [2] B,J | [4] B,J | 11 B,J | 10 B,J |
| Acetone | [1] B,J | [3] B,J | 24 B,J | <10 UJ | 13 B,J | 10 UJ |
| Carbon Disulfide | <5 UJ | <5 UJ | [4] J | <5 UJ | 8 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | [3] | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | [2] B,J | [2] B,J | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | [2] B,J | [2] B,J | [3] B,J | [2] B,J | <5 | <5 |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 60
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-2<br>7/6/88 | MW-5<br>7/6/88 | MW-8<br>6/23/88 | MW-11<br>6/24/88 | MW-12<br>6/29/88 | MW-12 RE<br>6/29/88 | MW-13<br>7/1/88 | MW-14<br>6/30/88 | MW-15<br>7/1/88 | MW-16<br>7/6/88 | MW-17<br>6/30/88 | MW-17 RE<br>6/30/88 | MW-18<br>7/6/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| bis-(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| N-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Benzoic Acid | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Hexachlorocyclopentadiene | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,4-Dinitrophenol | <50 UJ | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ |
| 4-Nitrophenol | <50 UJ | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Fluorene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Di-n-butylphthalate | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 UJ | [2] J | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 UJ | <20 UJ | <20 UJ | <20 | <20 UJ | <20 | <20 UJ | <20 UJ | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| bis(2-Ethylhexyl)phthalate | [3] | <10 | 20 B,J | 13 B,J | [9] B,J | 26 B,J | [3] B,J | 21 | [3] B,J | <10 | 20 B,J | 33 B,J | <10 |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 UJ | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 |
| Dibenz(a,h)anthracene | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 60 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-19<br>7/1/88 | MW-28<br>6/28/88 | MW-28 RE<br>6/28/88 | MW-29S<br>6/27/88 | MW-29S RE<br>6/27/88 | MW-29D<br>6/27/88 | MW-29D RE<br>6/27/88 | MW-30<br>6/28/88 | MW-30 RE<br>6/28/88 | MW-31<br>6/28/88 | MW-32 DL<br>7/5/88 | MW-33S<br>6/30/88 | MW-33D<br>6/30/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 UJ | <10 | <10 UJ |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| bis-(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 UJ | <10 | <10 UJ |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| N-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Isophorone | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzoic Acid | <50 | <50 UJ | <50 | <50 | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 | <100 UJ | <50 | <50 UJ |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Naphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Hexachlorocyclopentadiene | <10 | <10 UJ | <10 | <10 | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 UJ | <50 | <50 UJ |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Fluorene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 UJ | <10 | <10 UJ |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <50 | <100 | <50 | <50 UJ |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Di-n-butylphthalate | <10 | <10 | <10 | <10 | <10 | [3] | <10 | <10 | <10 | [2] | <20 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Pyrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <20 | <40 | <20 | <20 UJ |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Chrysene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| bis(2-Ethylhexyl)phthalate | [4] B,J | [3] B,J | 19 B,J | [4] B,J | 47 B,J | [4] B,J | 22 B,J | [5] B,J | 35 B,J | [3] B,J | <20 | 15 B,J | 16 B,J |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 UJ | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <20 | <10 | <10 UJ |
| Dibenz(a,h)anthracene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 60 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-33D R<br>6/30/88 | MW-34S<br>7/5/88 | W-34S R<br>7/5/88 | MW-34D<br>7/5/88 | MW-34D RE<br>7/5/88 | MW-35<br>7/5/88 | MW-35 RE<br>7/5/88 | MW-36<br>7/5/88 | MW-36 RE<br>7/5/88 | MW-37<br>7/6/88 | MW-39S<br>6/28/88 | MW-39D<br>6/28/88 | MW-40S<br>6/27/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| bis(2-Chloroethyl)ether | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Chlorophenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzyl alcohol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Methylphenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| bis-(2-Chloroisopropyl)ether | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Methylphenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| N-Nitroso-di-n-propylamine | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Hexachloroethane | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Nitrobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Isophorone | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Nitrophenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzoic Acid | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 |
| bis(2-Chloroethoxy)methane | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Naphthalene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Chloroaniline | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 |
| 2,4,6-Trichlorophenol | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| 2-Chloronaphthalene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Nitroaniline | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| Dimethyl phthalate | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Acenaphthylene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 3-Nitroaniline | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| Acenaphthene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,4-Dinitrophenol | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 |
| 4-Nitrophenol | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 |
| Dibenzofuran | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Diethyl phthalate | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Chlorophenyl phenyl ether | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Fluorene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Nitroaniline | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| 4,6-Dinitro-2-Methylphenol | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| N-Nitrosodiphenylamine | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Hexachlorobenzene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Pentachlorophenol | <50 UJ | <50 UJ | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 | <50 | <50 |
| Phenanthrene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | [4] | <10 | <10 |
| Anthracene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Di-n-butylphthalate | <10 UJ | <10 UJ | [2] J | <10 UJ | <10 UJ | <10 UJ | [3] J | <10 UJ | [2] J | <10 UJ | <10 | <10 | <10 |
| Fluoranthene | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 UJ | [8] | <10 | <10 |
| Pyrene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | [3] | <10 | <10 |
| Butylbenzylphthalate | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 UJ | <20 UJ | <20 UJ | <20 | <20 UJ | <20 | <20 UJ | <20 | <20 UJ | <20 UJ | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Chrysene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | 28 B,J | <10 UJ | 78 B,J | <10 | 11 B,J | <10 | 120 B,J | <10 | 170 J | <10 UJ | [3] B,J | [2] B,J | [5] B,J |
| Di-n-octylphthalate | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Dibenz(a,h)anthracene | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 UJ | <10 UJ | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 | <10 | <10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis

TABLE 60 (CONT.)
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID<br>Date Collected | MW-40S RE<br>6/27/88 | MW-40D<br>6/27/88 | MW-40D RE<br>6/27/88 | MW-42S<br>6/29/88 | MW-42D<br>6/29/88 | MW-43S<br>6/29/88 | MW-43S RE<br>6/29/88 | MW-43D<br>6/29/88 | MW-43D RE<br>6/29/88 | MW-44S<br>6/24/88 | MW-44S RE<br>6/24/88 | MW-44D<br>6/24/88 | MW-44D RE<br>6/24/88 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| bis-(2-Chloroisopropyl)eth | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| N-Nitroso-di-n-propylami | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzoic Acid | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methan | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl phenyl ethe | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Fluorene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-Methylphen | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylethe | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ | <50 UJ | <50 | <50 | <50 | <50 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Di-n-butylphthalate | <10 | [2] | [3] | [2] B,J | [2] B,UJ | <10 | <10 UJ | [2] B,J | <10 UJ | <10 | <10 | <10 | <10 |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 | <20 UJ | <20 UJ | <20 UJ | <20 UJ | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | [34] B,J | [6] B,J | 110 B,J | [4] B,J | [6] B,UJ | 18 B,J | 21 B,J | [2] B,J | 31 B,J | <10 | 28 B,J | [8] B,J | [13] B,J |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Dibenz(a,h)anthracene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 | <10 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis

TABLE 61
COMPARISON OF DUPLICATE SAMPLE ANALYSES
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID | Original Sample MW-14 | Field Duplicate MW-45 | Original Sample MW-35 | Field Duplicate MW-48 | Original Sample MW-37 | Field Duplicate MW-49 | Field Duplicate MW-49 RE |
|---|---|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| bis-(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| N-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Isophorone | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzoic Acid | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Naphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| Chloronaphthalene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 61 (CONT.)
COMPARISON OF DUPLICATE SAMPLE ANALYSES
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Semi-Volatile Organic Compounds)
Results in ug/l

| Well ID | Original Sample MW-14 | Field Duplicate MW-45 | Original Sample MW-35 | Field Duplicate MW-48 | Original Sample MW-37 | Field Duplicate MW-49 | Field Duplicate MW-49 RE |
|---|---|---|---|---|---|---|---|
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4-Dinitrophenol | <50 | <50 | <50 UJ | <50 | <50 UJ | <50 UJ | <50 UJ |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Fluorene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 UJ | <50 UJ | <50 UJ |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Anthracene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Di-n-butylphthalate | <10 | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| Fluoranthene | <10 | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| Pyrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| 3,3'-Dichlorobenzidine | <20 | <30 | <20 | <20 | <20 UJ | <20 UJ | <20 UJ |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Chrysene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| bis(2-Ethylhexyl)phthalate | 21 | 18 B,J | <10 | 51 B,J | <10 UJ | 40 J | 38 B,J |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |
| Dibenz(a,h)anthracene | <10 | <10 | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 UJ | <10 UJ | <10 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.

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RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

# TABLE 62
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## MW-SERIES MONITORING WELLS
## ORMET CORPORATION
## HANNIBAL, OHIO
## (Pesticides and PCBs)
## Results in ug/l

| Well ID | MW-2 | MW-5 | MW-8 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 | MW-19 | MW-28 | MW-29S | MW-29D | MW-30 | MW-31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 7/6/88 | 7/6/88 | 6/23/88 | 6/24/88 | 6/29/88 | 7/1/88 | 6/30/88 | 7/1/88 | 7/6/88 | 6/30/88 | 7/6/88 | 7/1/88 | 6/28/88 | 6/27/88 | 6/27/88 | 6/28/88 | 6/28/88 |
| Alpha-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| beta-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| delta-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| gamma-BHC (Lindane) | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor epoxide | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endosulfan I | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Dieldrin | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDE | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endrin | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endosulfan II | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDD | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Endosulfan sulfate | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDT | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| Methoxychlor | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Endrin ketone | <0.1 UJ | <0.1 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 | <0.1 UJ | <0.1 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 |
| alpha-chlordane | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| gamma-Chlordane | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Toxaphene | <1 UJ | <1 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 | <1 UJ | <1 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Aroclor-1016 | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1221 | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1232 | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1242 | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1248 | <0.5 UJ | <0.5 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 | <0.5 UJ | <0.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| Aroclor-1254 | <1 UJ | <1 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 | <1 UJ | <1 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |
| Aroclor-1260 | <1 UJ | <1 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 | <1 UJ | <1 | <1.00 | <1.00 | <1.00 | <1.00 | <1.00 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 62 (CONT.)
## RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## MW-SERIES MONITORING WELLS
## ORMET CORPORATION
## HANNIBAL, OHIO
## (Pesticides and PCBs)
## Results in ug/l

| Well ID | MW-32 | MW-33S | MW-33D | MW-34S | MW-34D | MW-35 | MW-36 | MW-37 | MW-39S | MW-39D | MW-40S | MW-40D | MW-42S | MW-42D | MW-43S | MW-43D | MW-44S | MW-44D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 7/5/88 | 6/30/88 | 6/30/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/6/88 | 6/28/88 | 6/28/88 | 6/27/88 | 6/27/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/24/88 | 6/24/88 |
| Alpha-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| beta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| delta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| gamma-BHC (Lindane) | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Aldrin | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Heptachlor epoxide | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Endosulfan I | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Dieldrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| 4,4'-DDE | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| Endrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| Endosulfan II | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| 4,4'-DDD | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| Endosulfan sulfate | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| 4,4'-DDT | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| Methoxychlor | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Endrin ketone | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.10 | <0.10 | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 |
| alpha-chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| gamma-Chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Toxaphene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 UJ | <1.00 | <1.00 | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1.00 | <1.00 |
| Aroclor-1016 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Aroclor-1221 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Aroclor-1232 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Aroclor-1242 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Aroclor-1248 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.50 | <0.50 | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.50 | <0.50 |
| Aroclor-1254 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 UJ | <1.00 | <1.00 | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1.00 | <1.00 |
| Aroclor-1260 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 UJ | <1.00 | <1.00 | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1.00 | <1.00 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 63
COMPARISON OF DUPLICATE SAMPLE ANALYSES
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

(Pesticides and PCBs)
Results in ug/l

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|
| Well ID | MW-14 | MW-45 | MW-35 | MW-48 | MW-37 | MW-49 |
| Alpha-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| beta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| delta-BHC | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| gamma-BHC (Lindane) | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| Heptachlor | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| Aldrin | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| Heptachlor epoxide | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| Endosulfan I | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 UJ |
| Dieldrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| 4,4'-DDE | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| Endrin | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| Endosulfan II | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| 4,4'-DDD | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| Endosulfan sulfate | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| 4,4'-DDT | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| Methoxychlor | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Endrin ketone | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 UJ |
| alpha-chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| gamma-Chlordane | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Toxaphene | <1 | <1 | <1 | <1 | <1 UJ | <1 UJ |
| Aroclor-1016 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Aroclor-1221 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Aroclor-1232 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Aroclor-1242 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Aroclor-1248 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 UJ |
| Aroclor-1254 | <1 | <1 | <1 | <1 | <1 UJ | <1 UJ |
| Aroclor-1260 | <1 | <1 | <1 | <1 | <1 UJ | <1 UJ |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 64
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/l

| Well ID | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 6/27/88 | 7/6/88 | 6/24/88 | 6/22/88 | 7/6/88 | 6/22/88 | 6/23/88 | 6/23/88 | 6/23/88 | 6/24/88 | 6/29/88 | 7/1/88 | 6/30/88 | 7/1/88 | 7/6/88 | 6/30/88 | 7/6/88 |
| Aluminum | 2660 | 3950 | 1060 | 1460 | 7180 | 557 | [29] | 2250 | [56] | [36] | [69] | [131] | [111] | 5200 | 5740 | 353 | 164000 |
| Antimony | <25 | <25 | <25 | [25] | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 |
| Arsenic | [2.4] | 394 | <1.5 | [2.0] | 76 J | 12 | [1.8] | [4.9] | [3.8] | [4.3] | <1.5 UJ | [4.2] J | [5.2] J | [4.5] J | 63 J | [5.4] J | 159 J |
| Barium | [81] | 548 | [46] | [81] | 214 | [135] | [42] | [156] | [135] | [61] | [133] | 509 | [84] | 239 | [176] | [130] | 980 |
| Beryllium | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | [2.5] | <1.5 | <1.5 | 7.1 |
| Cadmium | <4.1 | [4.9] | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 |
| Calcium | 32000 | 13100 | 50200 | 60800 | [3960] | 46900 | 29900 | 115000 | 117000 | 31000 | 64700 | 54200 | 57300 | 86400 | 12400 | 73700 | 17800 |
| Chromium | <5.0 | 26 | <5.0 | <5.0 | [7.2] | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | [5.8] | <5.0 | 163 |
| Cobalt | <3.9 | 327 | [21] | [4.6] | [28] | [8.2] | <3.9 | [5.4] | <3.9 | <3.9 | <3.9 | [4.2] | <3.9 | [4.8] | [18] | [5.6] | 814 |
| Copper | <16 | 680 | <16 | [20] | 86 | [19] | <16 | <16 | <16 | <16 | <16 | [18] | [18] | [23] | 53 | 45 | 200 |
| Iron | 6210 | 34200 | 5650 | 2030 | 7050 | 17600 | [44] | 4150 | [81] | [71] | [66] | 629 | 141 | 10800 | 6570 | 973 | 144000 |
| Lead | [3.6] | 7.4 | <5.0 | [2.9] | [4.2] | <2.3 | <2.3 | [3.0] | <2.3 | <2.3 | <2.3 | <2.3 | <2.3 | [4.9] | [2.9] | <2.3 | 109 |
| Magnesium | 7030 | [1290] | 12000 | 11500 J | [1340] | 12900 J | 6520 | 12900 | 8400 | 6090 | 9580 | 10200 | 9370 | 5850 J | [2840] J | 9480 J | 15600 J |
| Manganese | 379 | 1000 | 1260 | 4870 | 514 | 3050 | 23 | 191 | <1.0 | 227 | 1090 | 3080 | 434 | 117 | 220 | 1720 | 1750 |
| Mercury | <.20 | .95 | <.20 | <.20 | .30 | <.20 | .62 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | 1.1 |
| Nickel | <26 | 180 | 43 | <26 | <26 | <26 | <26 | <26 | <26 | 26 | <26 | <26 | <26 | <26 | [28] | <26 | 192 |
| Potassium | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | 7950 | 42100 |
| Selenium | [19] J | <11 UJ | <2.2 UJ | <2.2 UJ | <4.4 UJ | [27] J | <11 UJ | <11 UJ | <11 UJ | <11 UJ | <2.2 UJ | <2.2 UJ | <2.2 UJ | <22 R | <11 R | <11 R | <22 R |
| Silver | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| Sodium | 20300 | 1450000 | 115000 | 41600 J | 449000 | 64200 J | 67800 | 37500 | 28700 | 78500 | 24400 | 24100 | 29400 | 34400 J | 300000 J | 39700 J | 2640000 J |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <9.0 |
| Vanadium | [6.0] | 251 | [5.0] | [5.8] | [25] | [3.2] | <2.6 | [6.8] | <2.6 | <2.6 | <2.6 | [3.3] | [2.6] | [5.9] | [18] | <2.6 | 191 |
| Zinc | 92 | 231 J | 190 | 27 | 108 J | 96 | [8.7] | 71 | 21 | 28 | 31 J | 30 J | [9.5] J | 105 | 80 | 127 | 240 |
| Cyanide | <10 | 2400 J | 3450 | 15 | 2140 J | 14 | 75 | 51 | 11 | 88 | <10 | 31 J | 57 J | 256 | 1470 | 443 | 10400 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 64 (CONT.)
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/l

| Well ID | MW-19 | MW-20 | MW-21S | MW-21D | MW-22S | MW-22D | MW-23D | MW-25 | MW-27 | MW-24D | MW-26D | MW-28 | MW-29S | MW-29D | MW-30 | MW-31 | MW-32 | MW-33S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 7/1/88 | 7/1/88 | 6/21/88 | 6/21/88 | 6/22/88 | 6/21/88 | 6/21/88 | 6/22/88 | 6/22/88 | 6/23/88 | 6/24/88 | 6/28/88 | 6/27/88 | 6/27/88 | 6/28/88 | 6/28/88 | 7/5/88 | 6/30/88 |
| Aluminum | 8300 | 534 | 464 | 901 | 7260 | 440 | 4780 | 5200 | 9890 | 2550 | 3410 | 696 | 1640 | <19 | 1440 | 12000 | 1280 | 2310 |
| Antimony | <25 | <25 | [32] | [42] | <25 | [25] | [28] | [30] | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 |
| Arsenic | [6.7] J | [1.9] J | [2.8] | [3.9] | [5.5] | <1.5 | [2.6] | [3.2] | [3.0] | [5.8] | [4.6] | <1.5 UJ | [5.2] J | [2.0] | [1.8] J | 46 J | 14 J | [3.7] J |
| Barium | 232 | [81] | [98] | [106] | 256 | [81] | [167] | 208 | [191] | [166] | [154] | [44] | [72] | [82] | 281 | 313 | [66] | [141] |
| Beryllium | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 |
| Cadmium | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 |
| Calcium | 91800 | 64100 | 142000 | 144000 | 115000 | 119000 | 84400 | 57800 | 82600 | 130000 | 121000 | 23300 | [2810] | 52600 | 33200 | 23200 | 35000 | 81500 |
| Chromium | [8.1] | <5.0 | <5.0 | <5.0 | [8.5] | <5.0 | <5.0 | [6.4] | 10 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 21 | <5.0 | <5.0 |
| Cobalt | [8.3] | [5.0] | [5.8] | [6.0] | [6.8] | [5.1] | [5.8] | [8.0] | [12] | [5.4] | [4.9] | [12] | <3.9 | <3.9 | [6.4] | 103 | [32] | [6.7] |
| Copper | [19] | <16 | <16 | 28 | 56 | [19] | 34 | 31 | 38 | <16 | <16 | [18] | [20] | <16 | [20] | 194 | 74 | <16 |
| Iron | 17600 | 875 | 829 | 1770 | 15600 | 773 | 8830 | 19800 | 23500 | 4850 | 6450 | 2410 | 1520 | [82] | 4420 | 20300 | 4050 | 3580 |
| Lead | 6.3 | 5.7 | <2.3 | <2.3 | 8.0 | <2.3 | [3.1] | 5.1 | 8.3 | [3.7] | 7.5 | 8.5 | <2.3 | <2.3 | 14 | 7.5 | [2.5] | <2.3 |
| Magnesium | 11500 J | 10700 J | 12000 J | 13000 J | 10000 J | 9400 J | 7680 J | 11200 J | 13600 J | 10800 | 8660 | 8280 | [895] | 6620 | 9500 | [3220] | [1980] J | 14300 J |
| Manganese | 230 | 1350 | 18 | 59 | 387 | 20 | 192 | 704 | 693 | 137 | 206 | 35 | 94 | 1160 | 753 | 1930 | 513 | 674 |
| Mercury | <.20 | <.20 | .26 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | .90 | <.20 | <.20 |
| Nickel | <26 | <26 | <26 | <26 | <26 | <26 | <.26 | <26 | <26 | <26 | <26 | <26 | <26 | <26 | <26 | 100 | <26 | <26 |
| Potassium | 10900 | 7620 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | 6110 | 6320 |
| Selenium | <22 R | <22 R | <2.2 UJ | <2.2 UJ | <22 UJ | <22 UJ | [25] J | <2.2 UJ | <2.2 UJ | <11 UJ | <11 UJ | [2.3] J | <11 UJ | [17] J | <11 UJ | <4.4 UJ | <22 R | <22 R |
| Silver | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| Sodium | 32200 J | 24800 J | 25700 J | 25200 J | 33100 J | 28300 J | 25300 J | 34800 J | 150000 J | 42100 | 29100 | 83300 | 224000 | 60400 | 18700 | 703000 | 234000 J | 40600 J |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | [2.8] | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 |
| Vanadium | [15] | <2.6 | [6.7] | [5.4] | [13] | [6.2] | [10] | [11] | [17] | [8.6] | [8.5] | <2.6 | [4.4] | <2.6 | [4.4] | 184 | [24] | [2.6] |
| Zinc | 139 | 80 | 38 | 40 | <81 | 34 | 75 | 79 | 136 | 80 | 99 | 64 J | 132 J | 33 | 71 J | 215 J | 82 | 93 |
| Cyanide | <10 | 11 | 16 | 15 | 18 | 11 | 11 | 180 | 519 | 18 | 27 | 2760 J | 587 J | 144 | <10 | 18200 J | 6260 | 30 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

{ }: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 64 (CONT.)
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/l

| Well ID | MW-33D | MW-34S | MW-34D | MW-35 | MW-36 | MW-37 | MW-38 | MW-39S | MW-39D | MW-40S | MW-40D | MW-42S | MW-42D | MW-43S | MW-43D | MW-44S | MW-44D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 6/30/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/6/88 | 7/1/88 | 6/28/88 | 6/28/88 | 6/27/88 | 6/27/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/24/88 | 6/24/88 |
| Aluminum | 1400 | 11500 | 429 | 29100 | 1670 | 178000 | 12600 | 32800 | 406 | 2080 | 7070 | [173] | 762 | 1460 | 3770 | 2940 | [114] |
| Antimony | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <.25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 | <25 |
| Arsenic | [2.2] J | [8.7] J | [3.1] J | 147 J | [7.8] J | 169 J | [4.0] J | 16 J | [2.1] J | 18 J | [18] J | [2.0] J | [2.8] J | [8.0] J | [3.5] J | [4.8] J | [2.9] J |
| Barium | [140] | 251 | [85] | 323 | [124] | 4750 | 310 | 319 | [84] | [58] | [141] | [42] | [86] | 274 | [170] | [61] | [94] |
| Beryllium | <1.5 | <1.5 | <1.5 | [2.0] | <1.5 | 35 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 | <1.5 |
| Cadmium | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | 12 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 |
| Calcium | 66800 | 111000 | 77500 | 17500 | 39800 | 97300 | 23600 | 6160 | 62100 | [3060] | 5730 | 31900 | 48100 | 49500 | 66300 | 59400 | 50200 |
| Chromium | <5.0 | 15 | <5.0 | 27 | <5.0 | 401 | 15 | 35 | <5.0 | <5.0 | [7.0] | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| Cobalt | [6.9] | [11] | [5.3] | 487 | [37] | 201 | [15] | [25] | <3.9 | [7.1] | [11] | <3.9 | <3.9 | [12] | [5.4] | [5.2] | <3.9 |
| Copper | <16 | 42 | <16 | 223 | [17] | 1020 | 42 | 74 | [18] | 37 | 37 | <16 | [18] | [18] | 34 | [18] | [18] |
| Iron | 1200 | 14600 | 538 | 56500 | 3520 | 115000 | 33800 | 36600 | 360 | 1890 | 7810 | 232 | 1110 | 9760 | 6550 | 4100 | 117 |
| Lead | <2.3 | [4.6] | <2.3 | 11 | [2.5] | 139 | 14 | 19 | <2.3 | <2.3 | 7.2 | <2.3 | <14 | [2.8] | <7.2 | [2.3] | <2.3 |
| Magnesium | 11100 J | 9780 J | 7590 J | 5640 J | [4210] J | 16700 J | 7810 J | 6150 | 6650 | [615] | [1710] | 10300 | 6340 | 10300 | 10200 | 11100 | 8450 |
| Manganese | 5910 | 416 | 762 | 337 | 332 | 15400 | 667 | 1630 | 681 | 139 | 454 | 237 | 636 | 9780 | 1410 | 218 | [10] |
| Mercury | <.20 | <.20 | <.20 | <.20 | <.20 | 1.6 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 |
| Nickel | <26 | <26 | <26 | 88 | <26 | 767 | [26] | 46 | <26 | <26 | [31] | <26 | <26 | <26 | <26 | <26 | <26 |
| Potassium | 7540 | 8770 | 6110 | 10000 | 6090 | 34400 | 6850 | [4360] | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 | <2300 |
| Selenium | <22 R | <22 R | <22 R | <22 R | <22 R | <11 R | <11 R | <11 UJ | <2.2 UJ | <11 UJ | <11 UJ | <2.2 UJ | <11 UJ | <11 UJ | <11 UJ | <11 UJ | <2.2 UJ |
| Silver | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| Sodium | 36800 J | 33100 J | 32400 J | 1630000 J | 161000 J | 1470000 J | 24200 J | 826000 | 53900 | 445000 | 258000 | 143000 | 68600 | 57300 | 26600 | 58200 | 22400 |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 |
| Vanadium | [3.3] | [18] | <2.6 | 53 | [6.3] | 369 | [25] | 53 | <2.6 | [5.6] | [12] | [2.7] | [2.8] | [6.0] | [8.0] | [6.3] | <2.6 |
| Zinc | 101 | 101 | 100 | 69 | 65 | 449 | 246 | <195 UJ | [17] J | 38 J | 98 J | [12] J | 71 J | 87 J | 203 J | <80 UJ | [18] J |
| Cyanide | 12 | 18600 | 55 | 17600 | 7390 | 257 | 90 | 1950 J | 135 J | 907 J | 5953 J | 378 J | 133 J | 49 J | 43 J | 118 J | <10 UJ |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 65
COMPARISON OF DUPLICATE SAMPLE ANALYSES
MW-SERIES MONITORING WELLS
ORMET CORPORATION
HANNIBAL, OHIO

CLP Inorganic Compounds
Results in ug/l

| Well ID | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW-14 | MW-45 | MW-22D | MW-46 | MW-35 | MW-48 | MW-37 | MW-49 | MW-38 | MW-47 |
| Aluminum | [111] | [155] | 440 | 436 | 29100 | 26100 | 178000 | 155000 | 12600 | 8230 |
| Antimony | <25 | <25 | [25] | <25 | <25 | <25 | <25 | <25 | <25 | <25 |
| Arsenic | [5.2] J | <1.5 UJ | <1.5 | [2.1] | 147 J | 147 J | 169 J | 162 J | [4.0] J | [6.4] J |
| Barium | [84] | [90] | [81] | [81] | 323 | 276 | 4750 | 4210 | 310 | 286 |
| Beryllium | <1.5 | <1.5 | <1.5 | <1.5 | [2.0] | [2.0] | 35 | 31 | <1.5 | <1.5 |
| Cadmium | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | <4.1 | 12 | 9.8 | <4.1 | <4.1 |
| Calcium | 57300 | 55300 | 119000 | 119000 | 17500 | 14900 | 97300 | 86500 | 23600 | 21500 |
| Chromium | <5.0 | <5.0 | <5.0 | <5.0 | 27 | 25 | 401 | 314 | 15 | 11 |
| Cobalt | <3.9 | [6.1] | [5.1] | [4.6] | 487 | 503 | 201 | 180 | [15] | [13] |
| Copper | [18] | <16 | [19] | [19] | 223 | 491 | 1020 | 908 | 42 | [19] |
| Iron | 141 | 255 | 773 | 772 | 56500 | 61200 | 115000 | 102000 | 33800 | 23500 |
| Lead | <2.3 | <2.3 | <2.3 | [3.5] | 11 | 10 | 139 | 131 | 14 | 11 |
| Magnesium | 9370 | 9100 J | 9400 J | 9490 J | 5640 J | [4930] J | 16700 J | 14800 J | 7810 J | 6690 J |
| Manganese | 434 | 431 | 20 | 19 | 337 | 459 | 15400 | 13800 | 667 | 570 |
| Mercury | <.20 | <.20 | <.20 | <.20 | <.20 | .56 | 1.6 | 3.3 | <.20 | <.20 |
| Nickel | <26 | <26 | <26 | <26 | 88 | 108 | 767 | 685 | [26] | <26 |
| Potassium | <2300 | 6520 | <2300 | <2300 | 10000 | 9750 | 34400 | 27800 | 6850 | 5330 |
| Selenium | <2.2 UJ | <11 R | <22 UJ | <2.2 UJ | <22 R | <11 R | <11 R | <11 R | <11 R | <11 R |
| Silver | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 | <4.4 |
| Sodium | 29400 | 30800 J | 28300 J | 29000 J | 1630000 J | 1700000 J | 1470000 J | 1320000 J | 24200 J | 23000 J |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 |
| Vanadium | [2.6] | <2.6 | [6.2] | [6.2] | 53 | 53 | 369 | 324 | [25] | [19] |
| Zinc | [9.5] J | 93 | 34 | 26 | 69 | 40 | 449 | 390 | 246 | 152 |
| Cyanide | 57 J | 58 | 11 | 12 | 17600 | 12 | 257 | 367 | 90 | <10 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

# TABLE 66
## RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
## MW-SERIES MONITORING WELLS

## ORMET CORPORATION
## HANNIBAL, OHIO

(Results in mg/l unless otherwise noted)

| Well ID | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-7 | MW-8 | MW-9 | MW-9 Dup | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-15 DUP | MW-16 | MW-17 | MW-18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 6/27/88 | 7/6/88 | 6/24/88 | 6/22/88 | 7/6/88 | 6/22/88 | 6/23/88 | 6/23/88 | 6/23/88 | 6/23/88 | 6/24/88 | 6/29/88 | 7/1/88 | 6/30/88 | 7/1/88 | 7/1/88 | 7/6/88 | 6/30/88 | 7/6/88 |
| Temperature ( C) | 15 | 15 | 13.5 | 17.5 | 15 | 26 | 15 | 16.5 | 16.5 | 17 | 14.5 | 16 | 14 | 15 | 14 | 14 | 13.5 | 14 | 15.5 |
| pH (Std. Units) - lab | 6.2 | 10.4 | 7.8 | 7.0 | 9.5 | 5.7 | 8.4 | 7.2 | 7.3 | 7.3 | 8.5 | 7.2 | 7.4 | 7.8 | 7.0 | 7.1 | 9.4 | 7.7 | 10.0 |
| pH (Std. Units) - field | 6.4 | 10.4 | 6.0 | 7.0 | 9.6 | 5.8 | 8.3 | 7.3 | 7.3 | 7.2 | 8.4 | 7.5 | 7.4 | 7.9 | 7.1 | 7.1 | 9.7 | 7.5 | 10.1 |
| Spec. Cond. (umho/cm) - lab | 670 | 6200 | 860 | 610 | 2000 | 740 | 560 | 820 | 820 | 770 | 570 | 510 | 480 | 510 | 610 | 630 | 1400 | 590 | 9700 |
| Spec. Cond. (umho/cm) - field | 540 | 6000 | 725 | 550 | 2050 | 760 | 550 | 755 | 755 | 750 | 565 | 515 | 485 | 530 | 600 | 600 | 1410 | 475 | 10,000 |
| Silica, Dissolved | 13 | 1500 | 24 | 17 | 190 | 18 | 12 | 14 | 19 | 18 | 17 | 18 | 33 | 26 | 24 | 30 | 150 | 19 | 1100 |
| Alkalinity | 42 | 2600 | 62 | 230 | 610 | 31 | 280 | 290 | 280 | 180 | 250 | 160 | 180 | 160 | 170 | 170 | 450 | 200 | 4500 |
| Total Dissolved Solids | 360 | 6400 | 560 | 690 | 2100 | 480 | 350 | 500 | 590 | 480 | 420 | 280 | 300 | 240 | 380 | 560 | 1400 | 340 | 11,000 |
| Chloride | 41 | 190 | 26 | 36 | 48 | 150 | 34 | 41 | 41 | 54 | 32 | 27 | 28 | 27 | 45 | 41 | 44 | 32 | 320 |
| Sulfate | 37 | <500* | 330 | 71 | 80 | 110 | 62 | 100 | 100 | 130 | 60 | 61 | 27 | 50 | 75 | 66 | 86 | 52 | 74 |
| Fluoride | 0.2 | 330 | 0.2 | 1.6 | 90 | 0.2 | 2.8 | 2.1 | 2.1 | 2.1 | 4.9 | 1.3 | 0.7 | 2.3 | 0.2 | 0.2 | 61 | 5.2 | 820 |
| Cyanide, Total | <0.01 | 22 | 6.1 | 0.02 | 5.5 | 0.02 | 0.06 | 0.06 | 0.06 | <0.01 | 0.12 | <0.01 | 0.03 | 0.08 | 0.43 | 0.32 | 4.6 | 1.3 | 29 |
| Cyanide, Amenable to Chlorination | <0.01 | 12 | <0.01 | <0.01 | 0.10 | 0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.10 | <0.01 | <0.01 | 0.46 | 25 |
| Total Organic Carbon | 1 | 16 | 9 | 4 | 6 | 3 | 3 | 3 | 4 | 1 | 38 | 12 | 8 | 2 | 5 | 7 | 6 | 3 | 32 |
| Nitrogen, Ammonia | <0.1 | 12.5 | 1.9 | 3.8 | 6.8 | 0.4 | 3.1 | 0.2 | <0.3* | 0.2 | 2.9 | 2.2 | 3.7 | 2.1 | 0.2 | 0.2 | 3.6 | 1.1 | 6.8 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.02 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

(Dup.) - Denotes laboratory duplicate analysis.
* - Matrix interference

# TABLE 66 (CONT.)
## RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
## MW-SERIES MONITORING WELLS

## ORMET CORPORATION
## HANNIBAL, OHIO

*(Results in mg/l unless otherwise noted)*

| Well ID | MW-19 | MW-20 | MW-21S | MW-21D | MW-22D | MW-22S | MW-23D | MW-24d | MW-25 | MW-26D | MW-27 | MW-28 | MW-29S | MW-29S DUP | MW-29D | MW-30 | MW-31 | MW-32 | MW-33S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 7/1/88 | 7/1/88 | 6/21/88 | 6/21/88 | 6/21/88 | 6/22/88 | 6/21/88 | 6/23/88 | 6/22/88 | 6/24/88 | 6/22/88 | 6/22/8 | 6/27/88 | 6/27/88 | 6/27/88 | 6/28/88 | 6/28/88 | 7/5/88 | 6/30/88 |
| Temperature ( C) | 13 | 15 | 17 | 17.5 | 16 | 15.5 | 16 | 17 | 22 | 15 | 30 | 13 | 16 | 16 | 15.6 | 13.5 | 15 | 14 | 15.5 |
| pH (Std. Units) - lab | 7.3 | 6.9 | 7.3 | 7.2 | 7.4 | 7.3 | 7.2 | 7.4 | 6.6 | 7.4 | 6.2 | 5.7 | 9.0 | 9.0 | 8.1 | 6.3 | 10.2 | 9.2 | 6.8 |
| pH (Std. Units) - field | 7.3 | 6.9 | 7.3 | 7.3 | 7.4 | 7.4 | 7.1 | 7.2 | 6.1 | 7.4 | 6.2 | 5.8 | 9.0 | 9.0 | 8.0 | 6.3 | 10.5 | 9.3 | 6.8 |
| Spec. Cond. (umho/cm) - lab | 630 | 530 | 850 | 870 | 790 | 760 | 580 | 900 | 580 | 780 | 1200 | 640 | 1100 | 1100 | 590 | 340 | 3400 | 890 | 700 |
| Spec. Cond. (umho/cm) - field | 600 | 520 | 850 | 860 | 740 | 680 | 550 | 845 | 520 | 760 | 1280 | 665 | 1090 | 1090 | 570 | 400 | 3500 | 1040 | 630 |
| Silica, Dissolved | 21 | 25 | 12 | 26 | 19 | 21 | 15 | 17 | 20 | 16 | 20 | 13 | 9 | 15 | 11 | 36 | 550 | 56 | 29 |
| Alkalinity | 280 | 160 | 300 | 320 | 180 | 450 | 180 | 160 | 63 | 190 | 89 | 36 | 320 | 320 | 180 | 54 | 1200 | 430 | 210 |
| Total Dissolved Solids | 490 | 300 | 630 | 690 | 540 | 660 | 420 | 640 | 530 | 600 | 1100 | 450 | 1200 | 1200 | 430 | 460 | 2400 | 990 | 480 |
| Chloride | 38 | 26 | 55 | 53 | 58 | 72 | 36 | 63 | 52 | 58 | 180 | 49 | 28 | 30 | 27 | 56 | 60 | 53 | 37 |
| Sulfate | 50 | 60 | 130 | 130 | 130 | 110 | 74 | 130 | 140 | 140 | 240 | 170 | 110 | 100 | 61 | 35 | <1 | 59 | 100 |
| Fluoride | 0.5 | 0.6 | 0.3 | 1.0 | 0.1 | 0.1 | 0.1 | 3.2 | 0.1 | 0.1 | 0.1 | <0.1 | 44 | 43 | 4.2 | <0.1 | 140 | 39 | 1.7 |
| Cyanide, Total | <0.01 | <0.01 | 0.02 | 0.02 | <0.01 | 0.02 | <0.01 | 0.03 | 0.18 | 0.02 | 1.1 | 7.4 | 0.99 | 0.59 | 0.25 | 0.01 | 39 | 7.2 | 0.04 |
| Cyanide, Amenable to Chlorination | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.10 | 0.6 | 0.37 | 0.37 | <0.01 | <0.01 | <0.01 | 0.30 | <0.01 |
| Total Organic Carbon | 4 | 10 | 2 | 6 | 3 | 2 | 2 | 3 | 2 | 4 | 5 | 3 | 5 | 6 | 2 | 2 | 280 | 7 | 3 |
| Nitrogen, Ammonia | 0.2 | 1.3 | <0.1 | <0.1 | <0.01 | 0.2 | <0.1 | 0.2 | 0.2 | 0.5 | 0.3 | <0.1 | 1.7 | 1.6 | 0.6 | <0.1 | 16 | 7.6 | 1.0 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

(Dup.) - Denotes laboratory duplicate analysis.
* - Matrix interference

# TABLE 66 (CONT.)
## RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
## MW-SERIES MONITORING WELLS

## ORMET CORPORATION
## HANNIBAL, OHIO

(Results in mg/l unless otherwise noted)

| Well ID | MW-33D | MW-34S | MW-34D | MW-35 | MW-36 | MW-36 DUP | MW-37 | MW-38 | MW-39S | MW-39D | MW-40S | MW-40D | MW-42S | W-42D | W-42D DUP | MW-43S | MW-43D | MW-44S | MW-44D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Collected | 6/30/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/5/88 | 7/6/88 | 7/1/88 | 6/28/88 | 6/28/88 | 6/27/88 | 6/27/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/29/88 | 6/24/88 | 6/24/88 |
| Temperature ( C) | 15 | 13.5 | 14 | 14 | 14 | 14 | 15 | 12.5 | 14.3 | 14.2 | 14.8 | 14.8 | 15 | 14.5 | 14.5 | 15.5 | 15 | 16 | 16 |
| pH (Std. Units) - lab | 7.1 | 7.2 | 7.4 | 10.2 | 8.9 | 8.7 | 9.9 | 6.7 | 9.3 | 7.9 | 9.2 | 9.4 | 8.0 | 7.9 | 7.9 | 6.1 | 7.2 | 7.0 | 8.0 |
| pH (Std. Units) - field | 7.0 | 7.2 | 7.4 | 10.4 | 9.6 | 9.6 | 9.8 | 6.7 | 9.1 | 7.8 | 9.2 | 9.4 | 8.4 | 8.1 | 8.1 | 6.5 | 7.4 | 6.6 | 7.8 |
| Spec. Cond. (umho/cm) - lab | 610 | 690 | 560 | 6100 | 940 | 790 | 5600 | 260 | 3500 | 590 | 2100 | 1200 | 930 | 550 | 590 | 610 | 530 | 670 | 480 |
| Spec. Cond. (umho/cm) - field | 625 | 670 | 580 | 6150 | 1255 | 1255 | 5500 | 265 | 2550 | 595 | 2200 | 1290 | 870 | 600 | 600 | 520 | 520 | 650 | 550 |
| Silica, Dissolved | 32 | 7 | 17 | 190 | 19 | 16 | 4300 | 26 | 45 | 25 | 21 | 47 | 13 | 9 | 12 | 21 | 12 | 19 | 10 |
| Alkalinity | 230 | 270 | 210 | 2900 | 340 | 330 | 1600 | 70 | 950 | 186 | 500 | 330 | 660 | 180 | 180 | 180 | 260 | 170 | 120 |
| Total Dissolved Solids | 380 | 560 | 160 | 6700 | 1600 | 690 | 9300 | 420 | 11,000 | 380 | 2000 | 1400 | 470 | 340 | 360 | 570 | 470 | 610 | 250 |
| Chloride | 30 | 40 | 30 | 230 | 46 | 45 | 250 | 30 | 57 | 5 | 36 | 36 | 32 | 28 | 30 | 39 | 29 | 31 | 25 |
| Sulfate | 46 | 82 | 54 | 62 | 55 | 59 | <500* | 8 | 850 | 61 | 370 | 160 | 100 | 62 | 49 | 86 | 60 | 270 | 58 |
| Fluoride | 2.5 | 7.3 | 4.4 | 400 | 18 | 18 | 1000 | <0.1 | 110 | 6.1 | 5.9 | 36 | 14 | 6.0 | 6.9 | 0.6 | 0.5 | 0.6 | 0.3 |
| Cyanide, Total | <0.01 | 40 | 0.07 | 43 | 8.6 | 8.9 | 0.30 | <0.01 | 3.8 | 0.17 | 1.5 | 7.0 | 0.70 | 0.16 | 0.16 | 0.03 | 0.01 | 0.05 | <0.01 |
| Cyanide, Amenable to Chlorination | <0.01 | 38 | <0.01 | 41 | 1.3 | 2.6 | <0.01 | <0.01 | 0.10 | 0.03 | <0.01 | <0.01 | 0.25 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Total Organic Carbon | 4 | 5 | <1 | 26 | 6 | 6 | 18 | 4 | 5 | 2 | 2 | 4 | 4 | 5 | 8 | 8 | 5 | 2 | 5 |
| Nitrogen, Ammonia | 3.4 | 0.2 | 0.1 | 230 | 2.3 | 3.2 | 0.2 | 0.3 | 2.9 | 0.2 | 3.3 | 5.4 | 1.8 | 0.4 | 0.5 | 2.7 | 4.0 | 3.2 | 5.8 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

(Dup.) - Denotes laboratory duplicate analysis.
* - Matrix interference

TABLE 67

RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS

MW-SERIES MONITORING WELLS

ORMET CORPORATION

HANNIBAL, OHIO

(Results in mg/kg unless otherwise noted)

| | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate | Original Sample | Field Duplicate |
|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | MW-14 | MW-45 | MW-22D | MW-46 | MW-35 | MW-48 | MW-37 | MW-49 | MW-38 | MW-47 |
| Temperature ( C) | 15 | 15 | 16 | 16 | 14 | 14 | 15 | 15 | 12.5 | 12.5 |
| pH (Std. Units) - lab | 7.8 | 7.9 | 7.4 | 7.4 | 10.2 | 10.3 | 9.9 | 9.9 | 6.7 | 6.7 |
| pH (Std. Units) - field | 7.9 | 7.9 | 7.4 | 7.4 | 10.4 | 10.4 | 9.8 | 9.8 | 6.7 | 6.7 |
| Spec. Cond. (umho/cm) - lab | 510 | 510 | 790 | 780 | 6100 | 7100 | 5600 | 5600 | 260 | 260 |
| Spec. Cond. (umho/cm) - field | 530 | 530 | 740 | 740 | 6150 | 6150 | 5500 | 5500 | 265 | 265 |
| Silica, Dissolved | 26 | 25 | 19 | 25 | 190 | 300 | 4300 | 600 | 26 | 27 |
| Alkalinity | 160 | 160 | 180 | 180 | 2900 | 3100 | 1600 | 1700 | 70 | 62 |
| Total Dissolved Solids | 240 | 270 | 540 | 560 | 6700 | 7000 | 9300 | 9500 | 420 | 360 |
| Chloride | 27 | 33 | 58 | 61 | 230 | 250 | 250 | 200 | 30 | 27 |
| Sulfate | 50 | 53 | 130 | 130 | 62 | 89 | <500* | <500* | 8 | 14 |
| Fluoride | 2.3 | 2.1 | 0.1 | 0.1 | 400 | 410 | 1000 | 840 | <0.1 | <0.1 |
| Cyanide, Total | 0.08 | 0.07 | <0.01 | <0.01 | 43 | 0.07 | 0.30 | 0.54 | <0.01 | <0.01 |
| Cyanide, Amenable to Chlorination | <0.01 | <0.01 | <0.01 | <0.01 | 41 | <0.01 | <0.01 | 0.11 | <0.01 | <0.01 |
| Total Organic Carbon | 2 | 2 | 3 | 23 | 26 | 27 | 18 | 32 | 4 | 4 |
| Nitrogen, Ammonia | 2.1 | 2.8 | <0.01 | <0.1 | 230 | 230 | 0.2 | 8.8 | 0.3 | 0.3 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

* Matrix interference

TABLE 68
RESULTS OF ANALYSES FOR VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(results in ug/l)

| Sample ID<br>Date Collected | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 | Field Blank #7<br>6/29/88 | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12<br>7/7/88 |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ |
| Methylene Chloride | [4] B,J | [1] B,J | [4] B,J | [3] B,J | 5 B,J | [3] B,J | 6 B,J | [4] B,J | [2] B,J | 13 B,J |
| Acetone | <10 UJ | [9] B,J | <10 UJ | <10 UJ | [7] B,J | [4] B,J | [9] B,J | <10 UJ | <10 UJ | <10 UJ |
| Carbon Disulfide | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | 12 J | <5 UJ | <5 UJ | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (tot | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropen | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 | <5 | 10 B,J | 21 B,J | 5 B,J | 5 B,J | [2] B,J | 41 | [2] B,J | <5 |
| trans-1,3-Dichloroprop | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ |
| 1,1,2,2-Tetrachloroetha | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ |
| Toluene | <5 | <5 | [2] | <5 | <5 | <5 | <5 | 5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 UJ |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | [1] | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 69
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 | Field Blank #7<br>6/29/88 |
|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <10 |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <10 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <10 |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| bis-(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <10 |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <10 |
| N-Nitroso-di-n-propylamine | <10 | <10 | <10 | <10 | <10 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <10 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <10 |
| Isophorone | <10 | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <10 |
| Benzoic Acid | <50 | <50 | <50 | <50 | <50 |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Naphthalene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <10 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <10 |

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TABLE 69 (CONT.)
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 | Field Blank #7<br>6/29/88 |
|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <50 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| Acenaphthene | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrophenol | <50 | <50 | <50 | <50 | <50 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <50 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <10 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <10 |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <10 |
| Fluorene | <10 | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <50 |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <50 |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <10 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <10 |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <50 |
| Phenanthrene | <10 | <10 | <10 | <10 | <10 |
| Anthracene | <10 | <10 | <10 | <10 | <10 |

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TABLE 69 (CONT.)
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 | Field Blank #7<br>6/29/88 |
|---|---|---|---|---|---|
| Di-n-butylphthalate | <10 | <10 | <10 | <10 | <10 B |
| Fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Pyrene | <10 | <10 | <10 | <10 | <10 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <20 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <10 |
| Chrysene | <10 | <10 | <10 | <10 | <10 |
| bis(2-Ethylhexyl)phthalate | 10 B,J | 13 B,J | 11 B,J | [5] B,J | [9] B,J |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <10 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <10 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <10 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <10 |
| Dibenz(a,h)anthracene | <10 | <10 | <10 | <10 | <10 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <10 |

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B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
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TABLE 69 (CONT.)
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6//88 | Field Blank #12 DL<br>7/7/88 |
|---|---|---|---|---|---|
| Phenol | <10 | <10 | <10 | <10 | <20 |
| bis(2-Chloroethyl)ether | <10 | <10 | <10 | <10 | <20 |
| 2-Chlorophenol | <10 | <10 | <10 | <10 | <20 |
| 1,3-Dichlorobenzene | <10 | <10 | <10 | <10 | <20 |
| 1,4-Dichlorobenzene | <10 | <10 | <10 | <10 | <20 |
| Benzyl alcohol | <10 | <10 | <10 | <10 | <20 UJ |
| 1,2-Dichlorobenzene | <10 | <10 | <10 | <10 | <20 |
| 2-Methylphenol | <10 | <10 | <10 | <10 | <20 |
| bis-(2-Chloroisopropyl)ether | <10 | <10 | <10 | <10 | <20 UJ |
| 4-Methylphenol | <10 | <10 | <10 | <10 | <20 |
| N-Nitroso-di-n-propylamine | <10 UJ | <10 | <10 | <10 | <20 |
| Hexachloroethane | <10 | <10 | <10 | <10 | <20 |
| Nitrobenzene | <10 | <10 | <10 | <10 | <20 |
| Isophorone | <10 | <10 | <10 | <10 | <20 |
| 2-Nitrophenol | <10 | <10 | <10 | <10 | <20 |
| 2,4-Dimethylphenol | <10 | <10 | <10 | <10 | <20 |
| Benzoic Acid | <50 | <50 | <50 | <50 | <100 UJ |
| bis(2-Chloroethoxy)methane | <10 | <10 | <10 | <10 | <20 |
| 2,4-Dichlorophenol | <10 | <10 | <10 | <10 | <20 |
| 1,2,4-Trichlorobenzene | <10 | <10 | <10 | <10 | <20 |
| Naphthalene | <10 | <10 | <10 | <10 | <20 |
| 4-Chloroaniline | <10 | <10 | <10 | <10 | <20 |
| Hexachlorobutadiene | <10 | <10 | <10 | <10 | <20 |
| 4-Chloro-3-methylphenol | <10 | <10 | <10 | <10 | <20 |
| 2-Methylnaphthalene | <10 | <10 | <10 | <10 | <20 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 69 (CONT.)
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12 DL<br>7/7/88 |
|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | <10 | <10 | <10 | <10 | <20 |
| 2,4,6-Trichlorophenol | <10 | <10 | <10 | <10 | <20 |
| 2,4,5-Trichlorophenol | <50 | <50 | <50 | <50 | <100 |
| 2-Chloronaphthalene | <10 | <10 | <10 | <10 | <20 |
| 2-Nitroaniline | <50 | <50 | <50 | <50 | <100 UJ |
| Dimethyl phthalate | <10 | <10 | <10 | <10 | <20 |
| Acenaphthylene | <10 | <10 | <10 | <10 | <20 |
| 2,6-Dinitrotoluene | <10 | <10 | <10 | <10 | <20 |
| 3-Nitroaniline | <50 | <50 | <50 | <50 | <100 |
| Acenaphthene | <10 | <10 | <10 | <10 | <20 |
| 2,4-Dinitrophenol | <50 | <50 UJ | <50 | <50 | <100 |
| 4-Nitrophenol | <50 | <50 | <50 | <50 | <100 |
| Dibenzofuran | <10 | <10 | <10 | <10 | <20 |
| 2,4-Dinitrotoluene | <10 | <10 | <10 | <10 | <20 |
| Diethyl phthalate | <10 | <10 | <10 | <10 | <20 |
| 4-Chlorophenyl phenyl ether | <10 | <10 | <10 | <10 | <20 |
| Fluorene | <10 | <10 | <10 | <10 | <20 |
| 4-Nitroaniline | <50 | <50 | <50 | <50 | <100 |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 | <50 | <50 | <100 |
| N-Nitrosodiphenylamine | <10 | <10 | <10 | <10 | <20 |
| 4-Bromophenyl-phenylether | <10 | <10 | <10 | <10 | <20 |
| Hexachlorobenzene | <10 | <10 | <10 | <10 | <20 UJ |
| Pentachlorophenol | <50 | <50 | <50 | <50 | <100 |
| Phenanthrene | <10 | <10 | <10 | <10 | <20 |
| Anthracene | <10 | <10 | <10 | <10 | <20 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 69 (CONT.)
RESULTS OF ANALYSES FOR SEMI-VOLATILE ORGANIC COMPOUNDS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12 DL<br>7/7/88 |
|---|---|---|---|---|---|
| Di-n-butylphthalate | <10 | <10 UJ | <10 | <10 | <20 |
| Fluoranthene | <10 | <10 UJ | <10 | <10 | <20 |
| Pyrene | <10 | <10 | <10 | <10 | <20 |
| Butylbenzylphthalate | <10 | <10 | <10 | <10 | <20 |
| 3,3'-Dichlorobenzidine | <20 | <20 | <20 | <20 | <40 |
| Benzo(a)anthracene | <10 | <10 | <10 | <10 | <20 |
| Chrysene | <10 | <10 | <10 | <10 | <20 |
| bis(2-Ethylhexyl)phthalate | 17 B,J | [3] B,J | 14 B,J | 11 B,J | <20 |
| Di-n-octylphthalate | <10 | <10 | <10 | <10 | <20 |
| Benzo(b)fluoranthene | <10 | <10 | <10 | <10 | <20 |
| Benzo(k)fluoranthene | <10 | <10 | <10 | <10 | <20 |
| Benzo(a)pyrene | <10 | <10 | <10 | <10 | <20 |
| Indeno(1,2,3-cd)pyrene | <10 | <10 | <10 | <10 | <20 |
| Dibenz(a,h)anthracene | <10 | <10 UJ | <10 | <10 | <20 |
| Benzo(g,h,i)perylene | <10 | <10 | <10 | <10 | <20 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.

UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.

B: The material analyzed for was detected in the associated laboratory blank.

B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.

B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.

DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 70
RESULTS OF ANALYSES FOR PESTICIDES AND PCBS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 | Field Blank #7<br>6/29/88 | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12<br>7/7/88 |
|---|---|---|---|---|---|---|---|---|---|---|
| Alpha-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| beta-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| delta-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| gamma-BHC | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| Heptachlor | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| Aldrin | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| Heptachlor epoxide | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| Endosulfan I | <0.05 UJ | <0.05 UJ | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 UJ | <0.05 |
| Dieldrin | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| 4,4'-DDE | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| Endrin | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| Endosulfan II | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| 4,4'-DDD | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| Endosulfan sulfate | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| 4,4'-DDT | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| Metholychlor | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Endrin ketone | <0.10 UJ | <0.10 UJ | <0.10 | <0.10 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 UJ | <0.1 |
| alpha-chlordane | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| gamma-Chlordane | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Toxaphene | <1.00 UJ | <1.00 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 |
| Aroclor-1016 | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Aroclor-1221 | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Aroclor-1232 | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Aroclor-1242 | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Aroclor-1248 | <0.50 UJ | <0.50 UJ | <0.50 | <0.50 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 UJ | <0.5 |
| Aroclor-1254 | <1.00 UJ | <1.00 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 |
| Aroclor-1260 | <1.00 UJ | <1.00 UJ | <1.00 | <1.00 | <1 | <1 | <1 | <1 | <1 UJ | <1 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 71
RESULTS OF ANALYSES FOR CLP METALS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #1<br>6/21/88 | Field Blank #2<br>6/22/88 | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 |
|---|---|---|---|---|---|---|
| Aluminum | [21] | <19 | <27 | <27 | <27 | <27 |
| Antimony | <25 | <25 | <33 | <33 | <33 | <33 |
| Arsenic | [3.0] J | [1.9] | <.86 | <.86 | <.86 | <.86 |
| Barium | [71] | [2.5] | [26] J | [17] J | [7.0] J | [8.3] J |
| Beryllium | <1.5 | <1.5 | <.29 | <.29 | <.29 | <.29 |
| Cadmium | <4.1 | <4.1 | <4.0 | <4.0 | <4.0 | <4.0 |
| Calcium | 79400 | <24 | [387] J | [70] J | [48] J | [60] J |
| Chromium | <5.0 | <5.0 | 11 | <8.1 | [9.0] | <8.1 |
| Cobalt | <3.9 | [4.4] | <2.4 | <2.4 | <2.4 | <2.4 |
| Copper | [18] | <16 | <5.4 | <5.4 | <5.4 | <5.4 |
| Iron | [6.6] | <3.2 | [8.8] J | <5.0 UJ | [35] J | [53] J |
| Lead | <2.3 | <2.3 | <2.3 | <2.3 | <2.3 | <2.3 |
| Magnesium | 9890 | <150 | <120 | <120 | <120 | <120 |
| Manganese | 15 | <1.0 | [15] J | <.30 UJ | <.30 UJ | <.30 UJ |
| Mercury | <.20 | <.20 | <.20 | <.20 | <.20 | <.20 |
| Nickel | <26 | <26 | <34 | <34 | <34 | <34 |
| Potassium | <2300 | <2300 | <1770 | <1770 | <1770 | <1770 |
| Selenium | <11 UJ | <2.2 UJ | [2.1] | [2.5] | [2.1] | [2.3] |
| Silver | <4.4 | <4.4 | <9.4 | <9.4 | <9.4 | <9.4 |
| Sodium | 29700 | <1300 | <888 | <888 | <888 | <888 |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 |
| Vanadium | <2.6 | <2.6 | <3.2 | <3.2 | <3.2 | <3.2 |
| Zinc | 34 J | [12] | [12] J | [7.4] J | [9.3] J | [5.1] J |
| Cyanide | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.
S: Indicates a value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 71
RESULTS OF ANALYSES FOR CLP METALS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| Sample ID<br>Date Collected | Field Blank #7<br>6/29/88 | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12<br>7/7/88 |
|---|---|---|---|---|---|---|
| Aluminum | <27 | <27 | <27 | <27 | <27 | <27 |
| Antimony | <33 | <33 | <33 | <33 | <33 | <33 |
| Arsenic | <.86 | <.86 | <.86 | <.86 | <.86 | <.86 |
| Barium | [7.8] J | [9.7] J | [18] J | [10] J | [7.9] J | [7.2] J |
| Beryllium | <.29 | <.29 | <.29 | <.29 | <.29 | [.29] |
| Cadmium | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 | <4.0 |
| Calcium | [60] J | [62] J | [101] J | [132] J | [67] J | [152] J |
| Chromium | [8.6] | 12 | 10 | 14 | <8.1 | [8.2] |
| Cobalt | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 | <2.4 |
| Copper | <5.4 | <5.4 | <5.4 | [9.7] | <5.4 | [9.7] |
| Iron | [38] J | [42] J | [58] J | [64] J | <5.0 UJ | [74] J |
| Lead | <2.3 | <2.3 | <2.3 | <2.3 | <2.3 | <2.3 |
| Magnesium | <120 | <120 | <120 | <120 | <120 | <120 |
| Manganese | [.34] J | <.30 UJ | <.30 UJ | [.34] J | <.30 UJ | [14] J |
| Mercury | <.20 | <.20 | <.20 | <.20 | <20 | <.20 |
| Nickel | <34 | <34 | <34 | <34 | <34 | <.34 |
| Potassium | <1770 | <1770 | <1770 | <1770 | <1770 | <1770 |
| Selenium | [2.6] | [2.1] | <2.0 | <2.0 | [2.1] | <2.0 |
| Silver | <9.4 | <9.4 | <9.4 | <9.4 | <9.4 | <9.4 |
| Sodium | <888 | <888 | <888 | <888 | <888 | <888 |
| Thallium | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 | <1.8 |
| Vanadium | <3.2 | <3.2 | <3.2 | <3.2 | <3.2 | <3.2 |
| Zinc | [5.7] J | [7.7] J | [12] J | [11] J | [10] J | 21 J |
| Cyanide | 218 J | <10 UJ | <10 UJ | <10 | <62 | <10 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.
UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.
S: Indicates a value determined by Method of Standard Addition.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 72
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/l unless otherwise noted)

| Sample ID<br>Date Collected | Field Blank #1<br>6/21/88 | Field Blank #2<br>6/22/88 | Field Blank #3<br>6/23/88 | Field Blank #4<br>6/24/88 | Field Blank #5<br>6/27/88 | Field Blank #6<br>6/28/88 |
|---|---|---|---|---|---|---|
| Temperature ( C) | 37.5 | 34 | 32 | 33 | 24 | |
| pH (Std. Units) - lab | 8.0 | 8.3 | 8.2 | 7.1 | 9.0 | 8.5 |
| pH (Std. Units) - field | 8.0 | 7.4 | 6.9 | 6.1 | 6.0 | |
| Spec. Cond. (umho/cm) - lab | 620 | 24 | 39 | 4.5 | 2 | 2 |
| Spec. Cond. (umho/cm) - field | 625 | 17 | 20 | 1.2 | 1.8 | |
| Silica, Dissolved | 12 | <2 | <2 | <2 | <2 | <2 |
| Alkalinity | 200 | 10 | 1 | <1 | <1 | <1 |
| Total Dissolved Solids | 350 | 20 | <1 | <1 | 2 | <1 |
| Chloride | 42 | 3 | <1 | <1 | <1 | <1 |
| Sulfate | 56 | <1 | <1 | <1 | <1 | <1 |
| Fluoride | 0.7 | <0.1 | <0.1 | <0.1 | <0.1 | <1 |
| Cyanide, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Cyanide, Amenable to Chlorination | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Total Organic Carbon | 4 | <1 | <1 | <1 | <1 | <1 |
| Nitrogen, Ammonia | 0.5 | 0.3 | <0.1 | <0.1 | <0.1 | <0.1 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

TABLE 72 (CONT.)
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
PERFORMED ON FIELD BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/l unless otherwise noted)

| Sample ID<br>Date Collected | Field Blank #7<br>6/29/88 | Field Blank #8<br>6/30/88 | Field Blank #9<br>7/1/88 | Field Blank #10<br>7/5/88 | Field Blank #11<br>7/6/88 | Field Blank #12<br>7/7/88 |
|---|---|---|---|---|---|---|
| Temperature ( C) | 29 | 26 | 22 | 22.5 | 32 | |
| pH (Std. Units) - lab | 7.0 | 6.7 | 8.2 | 5.4 | 5.6 | 7.0 |
| pH (Std. Units) - field | 5.9 | 5.9 | 6.1 | 5.0 | 6.8 | 6.7 |
| Spec. Cond. (umho/cm) - lab | 10 | 6 | 14 | 5 | 9 | 11 |
| Spec. Cond. (umho/cm) - field | 1.3 | 1 | 1.4 | 1.1 | 9.5 | 1.2 |
| Silica, Dissolved | <2 | <2 | <2 | <2 | <2 | <2 |
| Alkalinity | <1 | <1 | <1 | <1 | <1 | <1 |
| Total Dissolved Solids | <1 | <1 | 8 | 10 | <1 | <1 |
| Chloride | <1 | <1 | <1 | <1 | <1 | <1 |
| Sulfate | <1 | <1 | <1 | <1 | <1 | <1 |
| Fluoride | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Cyanide, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Cyanide, Amenable to Chlorination | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Total Organic Carbon | <1 | <1 | <1 | <1 | <1 | <1 |
| Nitrogen, Ammonia | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Tin, Total | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

TABLE 73
RESULTS OF ANALYSES FOR VOLATILE ORGANIC COMPOUNDS
PERFORMED ON TRIP BLANKS PREPARED
DURING GROUND-WATER SAMPLING PROGRAM
ORMET CORPORATION
HANNIBAL, OHIO

(Results in ug/l)

| | 6/24/88 | 6/27/88 | 6/28/88 | 6/29/88 | 6/30/88 A | 6/30/88 B | 7/1/88 | 7/6/88 | 7/7/88 | 7/9/88 |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 UJ |
| Methylene Chloride | 5 B,J | [2] B,J | [2] B,J | [2] B,J | 10 B,J | [3] B,J | [4] B,J | [3] B,J | [3] B,J | 5 B,J |
| Acetone | 14 B,J | 13 B,J | 18 B,J | [6] B,J | [7] B,J | [4] B,J | [5] B,J | 25 B,J | 41 B,J | <10 UJ |
| Carbon Disulfide | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | [9] B,J | <10 UJ | <10 UJ |
| 1,1,1-Trichloroethane | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 UJ | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichloroethene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 | <5 | 5 B,J | [3] B,J | [4] B,J | [3] B,J | [2] B,J | [2] B,J | 20 J | <5 |
| trans-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 UJ | <5 UJ | <5 UJ |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 UJ | <5 UJ | <5 | <5 | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ |
| 1,1,2,2-Tetrachloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ |
| Toluene | <5 | <5 | <5 | [1] B,J | <5 | <5 | <5 | <5 | [3] | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 UJ |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 UJ | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 74
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN GROUND-WATER SAMPLES
ORMET CORPORATION
Hannibal, Ohio
(Results in μg/L)

| Well ID | Chloroform | 1,1-Dichloroethane | 1,1,-Dichlorethene | 1,1,1-Trichloroethane | Trichlorethene | Tetrachloroethene | Benzene | Toluene | Carbon Disulfide |
|---|---|---|---|---|---|---|---|---|---|
| MW-2 | -- | -- | -- | -- | [1] | 11 J | -- | -- | -- |
| MW-5 | -- | [1] | -- | [2] J | [2] | 12 J | -- | -- | -- |
| MW-18 | -- | -- | -- | -- | [1] | 22 J | -- | -- | -- |
| MW-28 | -- | -- | -- | -- | -- | -- | -- | [1] | -- |
| MW-29D | -- | -- | -- | -- | -- | -- | -- | [1] | -- |
| MW-30 | -- | -- | -- | [2] UJ | -- | 5 | -- | -- | -- |
| MW-31 | -- | -- | -- | -- | [1] | 40 | -- | -- | -- |
| MW-34S | [3] | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-36 | -- | -- | -- | -- | -- | -- | -- | -- | [1] |
| MW-39S | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-40S | -- | [2] | -- | [2] | -- | -- | -- | -- | -- |
| MW-42D | -- | -- | -- | -- | -- | -- | -- | [2] | -- |
| MW-43D | -- | -- | -- | -- | -- | -- | -- | [4] | -- |
| MW-44S | -- | -- | [1] | -- | -- | -- | [2] | [1] | -- |
| MW-44D | -- | -- | -- | -- | -- | -- | [1] | -- | -- |
| MW-35/MW-48 (Dup.) | -- | -- | -- | -- | -- | -- | -- | -- | [4] J/<5UJ |
| MW-37/MW-49 (Dup.) | -- | -- | -- | -- | -- | -- | -- | -- | 8/<5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank; the associated numerical value is the estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 75
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUNDS
DETECTED IN GROUND-WATER SAMPLES
ORMET CORPORATION
Hannibal, Ohio
(Results in $\mu g/L$)

| Well ID | bis(2-Ethylhexyl)phthalate | Di-n-butylphthalate | Phenanthrene | Fluoranthene | Pyrene |
|---|---|---|---|---|---|
| MW-2 | [3] | -- | -- | -- | -- |
| MW-14 | 21 B | -- | -- | -- | -- |
| MW-29D | -- | [3] | -- | -- | -- |
| MW-31 | -- | [2] | -- | -- | -- |
| MW-34S RE | -- | [2] J | -- | -- | -- |
| MW-35 RE | -- | [3] J | -- | -- | -- |
| MW-36 RE | 170 B, J | [2] J | -- | -- | -- |
| MW-39S | -- | -- | [4] | [8] | [3] |
| MW-40D | -- | [2] | -- | -- | -- |
| MW-40D RE | -- | [3] | -- | -- | -- |

J: The associated numerical value is an estimated value becauseone or more quality control criteria were no
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the assocated laboratory blank; the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank; therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale durin a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratory re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 76
SUMMARY OF METALS DETECTED IN GROUND-WATER SAMPLES
Results in µg/L

| Well ID | SILVER | THALLIUM | CADMIUM | BERYLLIUM | SELENIUM | ANTIMONY | MERCURY | NICKEL | CHROMIUM | LEAD | COPPER | COBALT | VANADIUM | CYANIDE | ARSENIC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | | | | | [19] J | | | | | [3.6] | | | [6.0] | | [2.4] |
| MW-2 | | | [4.9] | | | | .95 | 180 | 26 | 7.4 | 680 | 327 | 251 | 2400 J | 394 |
| MW-3 | | | | | | | | 43 | | | | [21] | [5.0] | 3450 | |
| MW-4 | | | | | | [25] | | | | [2.9] | [20] | [4.6] | [5.8] | 15 | [2.0] |
| MW-5 | | | | | | | .30 | | [7.2] | [4.2] | 86 | [28] | [25] | 2140 J | 76 J |
| MW-7 | | | | | [27] J | | | | | | [19] | [8.2] | [3.2] | 14 | 12 |
| MW-8 | | | | | | | .62 | | | | | | | 75 | [1.8] |
| MW-9 | | | | | | | | | | [3.0] | | [5.4] | [6.8] | 51 | [4.9] |
| MW-10 | | | | | | | | | | | | | | 11 | [3.8] |
| MW-11 | | | | | | | | 26 | | | | | | 88 | [4.3] |
| MW-12 | | | | | | | | | | | | | | | |
| MW-13 | | | | | | | | | | | [18] | [4.2] | [3.3] | 31 J | [4.2] J |
| MW-14 | | | | | | | | | | | [18] | | [2.6] | 57 J | [5.2] J |
| MW-15 | | | | [2.5] | | | | | | [4.9] | [23] | [4.8] | [5.9] | 256 | [4.5] J |
| MW-16 | | | | | | | | [28] | [5.8] | [2.9] | 53 | [18] | [18] | 1470 | 63 J |
| MW-17 | | | | | | | | | | | 45 | [5.6] | | 443 | [5.4] J |
| MW-18 | | | | 7.1 | | | 1.1 | 192 | 163 | 109 | 200 | 814 | 191 | 10400 | 159 J |
| MW-19 | | | | | | | | | [8.1] | 6.3 | [19] | [8.3] | [15] | | [6.7] J |
| MW-20 | | | | | | | | | | 5.7 | | [5.0] | | 11 | [1.9] J |
| MW-21S | | | | | | [32] | .26 | | | | | [5.8] | [6.7] | 16 | [2.8] |
| MW-21D | | | | | | [42] | | | | | 28 | [6.0] | [5.4] | 15 | [3.9] |
| MW-22S | | | | | | | | | [8.5] | 8.0 | 56 | [6.8] | [13] | 18 | [5.5] |
| MW-22D | | | | | | [25] | | | | | [19] | [5.1] | [6.2] | 11 | |
| MW-23D | | | | | [25] J | [28] | | | | [3.1] | 34 | [5.8] | [10] | 11 | [2.6] |
| MW-25 | | [2.8] | | | | [30] | | | [6.4] | 5.1 | 31 | [8.0] | [11] | 180 | [3.2] |
| MW-27 | | | | | | | | | 10 | 8.3 | 38 | [12] | [17] | 519 | [3.0] |
| MW-24D | | | | | | | | | | [3.7] | | [5.4] | [8.6] | 18 | [5.8] |
| MW-26D | | | | | | | | | | 7.5 | | [4.9] | [8.5] | 27 | [4.6] |
| MW-28 | | | | | [2.3] J | | | | | 8.5 | [18] | [12] | | 2760 J | |
| MW-29S | | | | | | | | | | | [20] | | [4.4] | 587 J | [5.2] J |
| MW-29D | | | | | [17] J | | | | | | | | | 144 | [2.0] |
| MW-30 | | | | | | | | | | 14 | [20] | [6.4] | [4.4] | | [1.8] J |
| MW-31 | | | | | | | .90 | 100 | 21 | 7.5 | 194 | 103 | 184 | 18200 J | 46 J |
| MW-32 | | | | | | | | | | [2.5] | 74 | [32] | [24] | 6260 | 14 J |
| MW-33S | | | | | | | | | | | | [6.7] | [2.6] | 30 | [3.7] J |
| MW-33D | | | | | | | | | | | | [6.9] | [3.3] | 12 | [2.2] J |
| MW-34S | | | | | | | | | 15 | [4.6] | 42 | [11] | [18] | 18600 | [8.7] J |
| MW-34D | | | | | | | | | | | | [5.3] | | 55 | [3.1] J |
| MW-35 | | | | [2.0] | | | | 88 | 27 | 11 | 223 | 487 | 53 | 17600 | 147 J |
| MW-36 | | | | | | | | | | [2.5] | [17] | [37] | [6.3] | 7390 | [7.8] J |
| MW-37 | | | 12 | 35 | | | 1.6 | 767 | 401 | 139 | 1020 | 201 | 369 | 257 | 169 J |
| MW-38 | | | | | | | | [26] | 15 | 14 | 42 | [15] | [25] | 90 | [4.0] J |
| MW-39S | | | | | | | | 46 | 35 | 19 | 74 | [25] | 53 | 1950 J | 16 J |
| MW-39D | | | | | | | | | | | [18] | | | 135 J | [2.1] J |
| MW-40S | | | | | | | | | | | 37 | [7.1] | [5.6] | 907 J | 18 J |
| MW-40D | | | | | | | | [31] | [7.0] | 7.2 | 37 | [11] | [12] | 5953 J | [18] J |
| MW-42S | | | | | | | | | | | | | [2.7] | 378 J | [2.0] J |
| MW-42D | | | | | | | | | | | [18] | | [2.8] | 133 J | [2.8] J |
| MW-43S | | | | | | | | | | [2.8] | [18] | [12] | [6.0] | 49 J | [8.0] J |
| MW-43D | | | | | | | | | | | 34 | [5.4] | [8.0] | 43 J | [3.5] J |
| MW-44S | | | | | | | | | | [2.3] | [18] | [5.2] | [6.3] | 118 J | [4.8] J |
| MW-44D | | | | | | | | | | | [18] | | | | [2.9] J |

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[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
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with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 76 (CONT.)
SUMMARY OF METALS DETECTED IN GROUND-WATER SAMPLES
Results in µg/L

| Well ID | ZINC | ALUMINUM | MANGANESE | IRON | BARIUM | POTASSIUM | SODIUM | CALCIUM | MAGNESIUM |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 92 | 2660 | 379 | 6210 | [81] | | 20300 | 32000 | 7030 |
| MW-2 | 231 J | 3950 | 1000 | 34200 | 548 | | 1450000 | 13100 | [1290] |
| MW-3 | 190 | 1060 | 1260 | 5650 | [46] | | 115000 | 50200 | 12000 |
| MW-4 | 27 | 1460 | 4870 | 2030 | [81] | | 41600 J | 60800 | 11500 J |
| MW-5 | 108 J | 7180 | 514 | 7050 | 214 | | 449000 | [3960] | [1340] |
| MW-7 | 96 | 557 | 3050 | 17600 | [135] | | 64200 J | 46900 | 12900 J |
| MW-8 | [8.7] | [29] | 23 | [44] | [42] | | 67800 | 29900 | 6520 |
| MW-9 | 71 | 2250 | 191 | 4150 | [156] | | 37500 | 115000 | 12900 |
| MW-10 | 21 | [56] | | [81] | [135] | | 28700 | 117000 | 8400 |
| MW-11 | 28 | [36] | 227 | [71] | [61] | | 78500 | 31000 | 6090 |
| MW-12 | 31 J | [69] | 1090 | [66] | [133] | | 24400 | 64700 | 9580 |
| MW-13 | 30 J | [131] | 3080 | 629 | 509 | | 24100 | 54200 | 10200 |
| MW-14 | [9.5] J | [111] | 434 | 141 | [84] | | 29400 | 57300 | 9370 |
| MW-15 | 105 | 5200 | 117 | 10800 | 239 | | 34400 J | 86400 | 5850 J |
| MW-16 | 80 | 5740 | 220 | 6570 | [176] | | 300000 J | 12400 | [2840] J |
| MW-17 | 127 | 353 | 1720 | 973 | [130] | 7950 | 39700 J | 73700 | 9480 J |
| MW-18 | 240 | 164000 | 1750 | 144000 | 980 | 42100 | 2640000 J | 17800 | 15600 J |
| MW-19 | 139 | 8300 | 230 | 17600 | 232 | 10900 | 32200 J | 91800 | 11500 J |
| MW-20 | 80 | 534 | 1350 | 875 | [81] | 7620 | 24800 J | 64100 | 10700 J |
| MW-21S | 38 | 464 | 18 | 829 | [98] | | 25700 J | 142000 | 12000 J |
| MW-21D | 40 | 901 | 59 | 1770 | [106] | | 25200 J | 144000 | 13000 J |
| MW-22S | | 7260 | 387 | 15600 | 256 | | 33100 J | 115000 | 10000 J |
| MW-22D | 34 | 440 | 20 | 773 | [81] | | 28300 J | 119000 | 9400 J |
| MW-23D | 75 | 4780 | 192 | 8830 | [167] | | 25300 J | 84400 | 7680 J |
| MW-25 | 79 | 5200 | 704 | 19800 | 208 | | 34800 J | 57800 | 11200 J |
| MW-27 | 136 | 9890 | 693 | 23500 | [191] | | 150000 J | 82600 | 13600 J |
| MW-24D | 80 | 2550 | 137 | 4850 | [166] | | 42100 | 130000 | 10800 |
| MW-26D | 99 | 3410 | 206 | 6450 | [154] | | 29100 | 121000 | 8660 |
| MW-28 | 64 J | 696 | 35 | 2410 | [44] | | 83300 | 23300 | 8280 |
| MW-29S | 132 J | 1640 | 94 | 1520 | [72] | | 224000 | [2810] | [895] |
| MW-29D | 33 | | 1160 | [82] | [82] | | 60400 | 52600 | 6620 |
| MW-30 | 71 J | 1440 | 753 | 4420 | 281 | | 18700 | 33200 | 9500 |
| MW-31 | 215 J | 12000 | 1930 | 20300 | 313 | | 703000 | 23200 | [3220] |
| MW-32 | 82 | 1280 | 513 | 4050 | [66] | 6110 | 234000 J | 35000 | [1980] J |
| MW-33S | 93 | 2310 | 674 | 3580 | [141] | 6320 | 40600 J | 81500 | 14300 J |
| MW-33D | 101 | 1400 | 5910 | 1200 | [140] | 7540 | 36800 J | 66800 | 11100 J |
| MW-34S | 101 | 11500 | 416 | 14600 | 251 | 8770 | 33100 J | 111000 | 9780 J |
| MW-34D | 100 | 429 | 762 | 538 | [85] | 6110 | 32400 J | 77500 | 7590 J |
| MW-35 | 69 | 29100 | 337 | 56500 | 323 | 10000 | 1630000 J | 17500 | 5640 J |
| MW-36 | 65 | 1670 | 332 | 3520 | [124] | 6090 | 161000 J | 39800 | [4210] J |
| MW-37 | 449 | 178000 | 15400 | 115000 | 4750 | 34400 | 1470000 J | 97300 | 16700 J |
| MW-38 | 246 | 12600 | 667 | 33800 | 310 | 6850 | 24200 J | 23600 | 7810 J |
| MW-39S | | 32800 | 1630 | 36600 | 319 | [4360] | 826000 | 6160 | 6150 |
| MW-39D | [17] J | 406 | 681 | 360 | [84] | | 53900 | 62100 | 6650 |
| MW-40S | 38 J | 2080 | 139 | 1890 | [58] | | 445000 | [3060] | [615] |
| MW-40D | 98 J | 7070 | 454 | 7810 | [141] | | 258000 | 5730 | [1710] |
| MW-42S | [12] J | [173] | 237 | 232 | [42] | | 143000 | 31900 | 10300 |
| MW-42D | 71 J | 762 | 636 | 1110 | [86] | | 68600 | 48100 | 6340 |
| MW-43S | 87 J | 1460 | 9780 | 9760 | 274 | | 57300 | 49500 | 10300 |
| MW-43D | 203 J | 3770 | 1410 | 6550 | [170] | | 26600 | 66300 | 10200 |
| MW-44S | | 2940 | 218 | 4100 | [61] | | 58200 | 59400 | 11100 |
| MW-44D | [18] J | [114] | [10] | 117 | [94] | | 22400 | 50200 | 8450 |

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[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit, and is considered an estimated quantity.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 77
PHASE II ANALYTICAL RESULTS
FOR GROUND-WATER MONITORING WELLS
AND THE ORMET RANNEY WELL

ORMET CORPORATION
HANNIBAL, OHIO

(Results in mg/L unless otherwise noted)

| Well ID<br>Date Collected | MW-2<br>2/23/90 | MW-3<br>2/22/90 | MW-3<br>Dup.<br>2/22/90 | MW-14<br>2/23/90 | MW-17<br>2/22/90 | MW-18<br>2/23/90 | MW-19<br>2/22/90 | MW-23S<br>2/22/90 | MW-23D<br>2/22/90 | MW-31<br>2/23/90 | MW-34S<br>2/23/90 | MW-34S<br>Dup.<br>2/23/90 | MW-35<br>2/23/90 | MW-37<br>2/23/90 | MW-42S<br>2/23/90 | Ranney<br>Well<br>2/23/90 | Ranney<br>Well<br>Dup.<br>2/23/90 | Field<br>Blank<br>2-22-90 | Field<br>Blank<br>2-23-90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Temperature - field (°C) | 15 | 17 | -- | 15 | 14 | 14 | 12.5 | 14 | 14 | 13 | 13 | -- | 15 | 14 | 14 | 17 | -- | -- | -- |
| pH - field (std. units) | 10.34 | 5.85 | -- | 7.36 | 7.55 | 10.1 | 7.27 | 7.53 | 7.33 | 9.95 | 6.93 | -- | 9.70 | 9.65 | 8.25 | 7.22 | -- | -- | -- |
| pH - lab (std. units) | 10.2 | 6.0 | 6.0 | 7.7 | 7.7 | 10.0 | 7.3 | 7.6 | 7.5 | 10.0 | 7.4 | 7.3 | 9.6 | 9.6 | 8.4 | 7.5 | 7.6 | 5.6 | 5.8 |
| Specific Conductance - field (umho/cm) | 4800 | 680 | -- | 560 | 680 | 11,400 | 560 | 590 | 580 | 2,700 | 740 | -- | 1540 | 3100 | 2400 | 590 | -- | -- | -- |
| Specific conductance - lab (umho/cm) | 3900 | 660 | 660 | 520 | 640 | 8000 | 520 | 550 | 530 | 2,300 | 690 | 670 | 1500 | 2700 | 2100 | 550 | 550 | 1 | 1 |
| Total Dissolved Solids | 3600 | 420 | 430 | 320 | 600 | 9200 | 500 | 700 | 690 | 2100 | 540 | 570 | 1200 | 6500 | 1500 | 330 | 330 | 8 | 8 |
| Fluoride | 200 | 0.4 | 0.4 | 2.1 | 4.1 | 710 | 0.7 | 1.3 | 0.9 | 110 | 6.5 | 6.0 | 71 | 360 | 35 | 1.3 | 1.3 | <0.1 | <0.1 |
| Sulfate | 130 | 160 | 180 | 87 | 76 | <100** | 83 | 110 | 89 | 200 | 110 | 97 | 31 | <500** | 400 | 90 | 88 | <1 | <1 |
| Silica | <200* | 17 | 16 | 10 | 5 | <200* | <2 | 6 | 8 | <200* | 6 | 8 | 32 | <200* | 7 | 9 | 10 | <2 | <2 |
| Total Organic Carbon | 11 | 3 | 6 | 2 | 14 | 39 | 3 | 3 | 3 | 7 | 6 | 4 | 6 | 8 | 3 | 2 | 2 | <1 | <1 |
| Sodium | 1200 | 53 | 53 | 34 | 40 | 3500 | 21 | 24 | 25 | 660 | 49 | 46 | 350 | 970 | 520 | 34 | 37 | 2 | 1 |
| Iron | 31 | 0.89 | 0.92 | 0.3 | 18 | 110 | 710 | 250 | 17 | 49 | 21 | 25 | 20 | 1000 | 0.88 | 0.1 | 0.1 | 0.09 | 0.04 |
| Cyanide, Amenable to Cl | 29.6 | <0.005 | <0.005 | 0.0676 | <0.005 | 10.5 | <0.005 | <0.005 | <0.005 | 3.94 | 0.026 | 0.0416 | <0.005 | 22.7 | 0.079 | <0.005 | 0.008 | <0.005 | <0.005 |
| Cyanide, Total (CLP) | 36.2 | 0.345 | 0.702 | 0.0564 | 0.582 | 67.0 | 0.200 | <0.005 | <0.005 | 4.80 | 0.113 | 0.0840 | 8.00 | 4.6 | 0.266 | 0.0806 | 0.158 | <0.005 | <0.005 |

Notes:

* Elevated detection limit due to color interference

** Elevated detection limits due to matrix interference

TABLE 77A

RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
FOR POLYNUCLEAR AROMATIC HYDROCARBON COMPOUNDS
USING LOW PARTS PER TRILLION REPORTING LIMITS
ORMET CORPORATION
HANNIBAL, OHIO

(RESULTS IN ng/L)

| Sample I.D. | Naphthalene | Benzo(a)anthracene | Chrysene | Benzo(k)fluoranthene | Benzo(a)pyrene |
|---|---|---|---|---|---|
| MW-2 | 40 R | 22 | 61 | 33 | 30 |
| MW-2 (Dup.) | 55 R | 32 | 95 | 44 | 35 |
| MW-14 | <20 R | <20 | <20 | <20 | <20 |
| MW-19 | <20 R | <20 | <20 | <20 | <20 |
| MW-19 (Dup.) | <20 R | <20 | <20 | <20 | <20 |
| MW-31 | 36 R | <20 | 80 | 37 | <20 |
| MW-35 | 20 R | <20 | <20 | <20 | <20 |
| MW-35 (Dup.) | 31 R | <20 | <20 | <20 | <20 |
| MW-37 | 24 R | <20 | 28 | 25 | <20 |
| Field Blank | 60 R | <20 | <20 | <20 | <20 |

NOTE: The data contained in this table are qualified as follows:

1) Data between 20 ng/L and 100 ng/L are considered estimated or semi-quantitative.
2) A precision and accuracy test was not performed on the data obtained after instrumentation improvements were made.
3) A Method Detection Limit (MDL) was not established for the ground-water matrix.
4) Matrix spikes and matrix spike duplicates run at 20 ng/L in the ground-water matrix were unacceptable with respect to recovery and relative percent difference. Spiked samples run at 100 ng/L yielded usable recovery rates.

R - Analytical results for naphthalene are considered unusable due to significant concentrations reported in the field blank.

TABLE 78
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO

| WATER-LEVEL MEASURING PT. | MEASURING PT. ELEV. (ft. MSL) | JUNE 20, 1988 (Phase I) DEPTH TO WATER (feet) | GROUND-WATER ELEV. (ft. MSL) | FEBRUARY 20, 1990 (Phase II) DEPTH TO WATER (feet) | GROUND-WATER ELEVATION (ft MSL) |
|---|---|---|---|---|---|
| MW-1 | 668.07 | 55.20 | 612.87 | 54.55 | 613.52 |
| MW-2 | 668.12 | 59.97 | 608.15 | 57.46 | 610.66 |
| MW-3 | 645.17 | 33.73 | 611.44 | 29.80 | 615.37 |
| MW-4 | 661.07 | 62.63 | 598.44 | 58.74 | 602.33 |
| MW-5 | 668.16 | 68.25 | 599.91 | 64.40 | 603.76 |
| MW-7 | 667.94 | 60.23 | 607.71 | 60.00 | 607.94 |
| MW-8 | 667.71 | 75.44 | 592.27 | 70.47 | 597.24 |
| MW-9 | 666.59 | 73.63 | 592.96 | 68.60 | 597.99 |
| MW-10 | 667.16 | 75.46 | 591.70 | 70.29 | 596.87 |
| MW-11 | 667.31 | 68.13 | 599.18 | 64.26 | 603.05 |
| MW-12 | 636.73 | 25.21 | 611.52 | 22.84 | 613.89 |
| MW-13 | 661.44 | 43.44 | 618.00 | 41.91 | 619.53 |
| MW-14 | 653.59 | 40.14 | 613.45 | 37.60 | 615.99 |
| MW-15 | 657.31 | 40.25 | 617.06 | 37.44 | 619.87 |
| MW-16 | 662.72 | 51.05 | 611.67 | 48.34 | 614.38 |
| MW-17 | 655.03 | 40.51 | 614.52 | 37.11 | 617.92 |
| MW-18 | 660.91 | 40.07 | 620.84 | 39.46 | 621.45 |
| MW-19 | 662.03 | 43.53 | 618.50 | 41.15 | 620.88 |
| MW-20 | 632.33 | 12.34 | 619.99 | 11.93 | 620.40 |
| MW-21s | 664.02 | 70.57 | 593.45 | 65.54 | 598.48 |
| MW-21d | 663.60 | 70.16 | 593.44 | 65.54 | 598.06 |
| MW-22s | 667.47 | 74.41 | 593.06 | 65.14 | 602.33 |
| MW-22d | 667.21 | 74.17 | 593.04 | 69.07 | 598.14 |
| MW-23s | 663.18 | 69.35 | 593.83 | 63.91 | 599.27 |
| MW-23d | 663.41 | 69.76 | 593.65 | 64.55 | 598.86 |
| MW-24s | 667.88 | 75.55 | 592.33 | 70.46 | 597.42 |
| MW-24d | 667.75 | 75.46 | 592.29 | 70.36 | 597.39 |
| MW-25 | 667.73 | 66.28 | 601.45 | 65.41 | 602.32 |
| MW-26s | 665.54 | 72.84 | 592.70 | 67.75 | 597.79 |
| MW-26d | 665.59 | 72.99 | 592.60 | 67.88 | 597.71 |
| MW-27 | 667.86 | 67.86 | 600.00 | 65.83 | 602.03 |
| MW-28 | 663.27 | 21.21 | 642.06 | 19.82 | 643.45 |
| MW-29s | 653.40 | 42.09 | 611.31 | 39.51 | 613.89 |
| MW-29d | 653.07 | 41.73 | 611.34 | 39.16 | 613.91 |
| MW-30 | 667.58 | 49.32 | 618.26 | 48.84 | 618.74 |
| MW-31 | 661.59 | 49.10 | 612.49 | 46.16 | 615.43 |
| MW-32 | 656.66 | 42.92 | 613.74 | 39.42 | 617.24 |
| MW-33s | 653.24 | 37.08 | 616.16 | 35.22 | 618.02 |

NOTE:

All MW-series wells are measured from the top of the PVC casing.

All TH-series wells are measured from the top of steel casing.

River pool (RP) measuring points are located on the walkway below the dry scrubbers.

East INT & WEST INT refer to the old interceptor wells near the Ormet Ranney well.

* - Designates a perched zone piezometer

+ - Designates an alluvial aquifer piezometer

TABLE 78 (cont.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO

| WATER-LEVEL MEASURING PT. | MEASURING PT. ELEV. (ft. MSL) | JUNE 20, 1988 (Phase I) DEPTH TO WATER (feet) | GROUND-WATER ELEV. (ft. MSL) | FEBRUARY 20, 1990 (Phase II) DEPTH TO WATER (feet) | GROUND-WATER ELEVATION (ft MSL) |
|---|---|---|---|---|---|
| MW-33d | 653.22 | 38.55 | 614.67 | 36.53 | 616.69 |
| MW-34s | 655.67 | 39.35 | 616.32 | 36.38 | 619.29 |
| MW-34d | 654.67 | 38.18 | 616.49 | 35.32 | 619.35 |
| MW-35 | 661.90 | 36.47 | 625.43 | 36.30 | 625.60 |
| MW-36 | 655.14 | 39.41 | 615.73 | 35.98 | 619.16 |
| MW-37 | 661.14 | 17.91 | 643.23 | 17.04 | 644.10 |
| MW-38 | 666.64 | 20.12 | 646.52 | 19.07 | 647.57 |
| MW-39s | 657.30 | 43.70 | 613.60 | 40.59 | 616.71 |
| MW-39d | 657.18 | 43.21 | 613.97 | 40.24 | 616.94 |
| MW-40s | 662.22 | 53.86 | 608.36 | 51.37 | 610.85 |
| MW-40d | 661.95 | 53.60 | 608.35 | 51.10 | 610.85 |
| MW-41 | 637.67 | --- | --- | --- | --- |
| MW-42s | 654.37 | 42.17 | 612.20 | 39.48 | 614.89 |
| MW-42d | 654.34 | 42.07 | 612.27 | 39.39 | 614.95 |
| MW-43s | 633.68 | 21.66 | 612.02 | 19.44 | 614.24 |
| MW-43d | 633.12 | 21.10 | 612.02 | 18.92 | 614.20 |
| MW-44s | 662.01 | 54.03 | 607.98 | 51.54 | 610.47 |
| MW-44d | 661.76 | 54.63 | 607.13 | 52.09 | 609.67 |
| PPB-01* | 663.24 | 20.29 | 642.95 | 20.00 | 643.24 |
| PPB-02s* | 663.14 | 17.41 | 645.73 | 15.60 | 647.54 |
| PPB-02d+ | 662.78 | 45.52 | 617.26 | 42.89 | 619.89 |
| PPB-04+ | 661.57 | 48.28 | 613.29 | 45.00 | 616.57 |
| PPB-05* | 661.62 | 16.64 | 644.98 | 18.32 | 643.30 |
| PPB-06+ | 663.04 | 47.21 | 615.83 | 45.30 | 617.74 |
| PPB-07* | 661.71 | 14.27 | 647.44 | 14.18 | 647.53 |
| PPB-09+ | 664.30 | 44.24 | 620.06 | 43.49 | 620.81 |
| PPB-10* | 663.45 | 13.53 | 649.92 | 13.40 | 650.05 |
| PPB-14* | 660.64 | 23.88 | 636.76 | Dry | -- |
| TH-3 | 667.81 | 61.10 | 606.71 | 58.50 | 609.31 |
| TH-11 | 659.08 | 37.79 | 621.29 | 36.51 | 622.57 |
| TH-15 | 663.62 | --- | --- | 65.98 | 597.64 |
| TH-16 | 664.62 | 71.29 | 593.33 | 66.26 | 598.36 |
| TH-17 | 663.93 | 70.37 | 593.56 | 65.29 | 598.64 |
| RP-1 | 643.17 | 19.30 | 623.87 | | |
| RP-2 | 643.05 | 19.75 | 623.30 | 19.50 | 623.55 |
| EAST INT. | 667.30 | NOT ACCESSIBLE | | | |
| WEST INT. | 667.46 | NOT ACCESSIBLE | | | |

NOTE:

All MW-series wells are measured from the top of the PVC casing.

All TH-series wells are measured from the top of steel casing.

River pool (RP) measuring points are located on the walkway below the dry scrubbers.

East INT & WEST INT refer to the old interceptor wells near the Ormet Ranney well.

* - Designates a perched zone piezometer

+ - Designates an alluvial aquifer piezometer

--- Not measured

TABLE 78A
VERTICAL HYDRAULIC GRADIENT CALCULATIONS
FOR THE
ALLUVIAL AQUIFER
ORMET CORPORATION
Hannibal, Ohio

| Monitoring Well | Screened Interval Mid-Point (Elevation M.S.L.) | Difference of Mid-Point Elevations (Feet) | Water-Level Elevations (Feet M.S.L.) | | Head Difference (Feet) | | Vertical Hydraulic Gradient (Ft./Ft.) | |
|---|---|---|---|---|---|---|---|---|
| | | | Phase I RI | Phase II RI | Phase I RI | Phase II RI | Phase I RI | Phase II RI |
| MW-33s | 596.26 | | 616.16 | 618.02 | | | | |
| | | 19.61 | | | 1.49 | 1.33 | .076 | .068 |
| MW-33d | 576.65 | | 614.67 | 616.69 | | | | |
| MW-44s | 603.09 | | 607.98 | 610.47 | | | | |
| | | 25.10 | | | 0.85 | 0.80 | .034 | .032 |
| MW-44d | 577.99 | | 607.13 | 609.67 | | | | |

NOTE: Vertical Hydraulic Gradient = Head Difference/Difference of Mid-Point Elevation

TABLE 79
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CAC RANNEY WELL - GROUND WATER
ORMET CORPORATION
HANNIBAL, OHIO

(Volatile Organic Compounds)
Results in ug/l

| | June 22, 1990 | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|
| | CAC | CAC DUP. | CAC FIELD BLANK | CAC | CAC DUP. | CAC FIELD BLANK |
| Chloromethane | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Bromomethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Vinyl Chloride | <10 | <10 | <10 | <10 | <10 | <10 |
| Chloroethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Methylene Chloride | 12 B | 7 B | 15 B | 14 B | 5 B | 8 B |
| Acetone | 39 B | 43 B | 26 B | <10 UJ | <10 UJ | <10 UJ |
| Carbon Disulfide | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1-Dichloroethane | [1] | [1] | <5 | [1] | [1] | <5 |
| 1,2-Dichloroethene (total) | <5 | <5 | <5 | <5 | <5 | <5 |
| Chloroform | <5 | 5 | [2] | <5 | <5 | <5 |
| 1,2-Dichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 2-Butanone | [2] B,J | <10 R | <10 R | <10 R | <10 R | <10 R |
| 1,1,1-Trichloroethane | [2] B | [2] B | <5 | [2] | [2] | <5 |
| Carbon Tetrachloride | <5 | <5 | <5 | <5 | <5 | <5 |
| Vinyl Acetate | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 |
| Bromodichloromethane | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,2-Dichloropropane | <5 | <5 | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | <5 | <5 | <5 | <5 | <5 | <5 |
| Trichlorethene | <5 | <5 | <5 | <5 | <5 | <5 |
| Dibromochloromethane | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 |
| 1,1,2-Trichloroethane | <5 | <5 | <5 | <5 | <5 | <5 |
| Benzene | <5 | <5 | <5 | <5 | <5 | <5 |
| trans-1,3-Dichloropropene | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 |
| Bromoform | <5 UJ | <5 UJ | <5 UJ | <5 | <5 | <5 |
| 4-Methyl-2-Pentanone | <10 UJ | <10 UJ | <10 UJ | <10 | <10 | <10 |
| 2-Hexanone | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ | <10 UJ |
| Tetrachloroethene | <5 | <5 | <5 | <5 | <5 | <5 |
| 1,1,2,2-Tetrachloroethane | <10 | <10 | <10 | <10 | <10 | <10 |
| Toluene | <5 | <5 | <5 | <5 | <5 | <5 |
| Chlorobenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 | <5 | <5 | <5 |
| Styrene | <5 | <5 | <5 | <5 | <5 | <5 |
| Xylene (total) | <5 | <5 | <5 | <5 | <5 | <5 |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 80

# RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
## CAC RANNEY WELL - GROUND WATER
## ORMET CORPORATION
## HANNIBAL, OHIO

Semi-Volatile Organic Compounds
(Results in ug/L)

| | June 22, 1990 | | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|---|
| | CAC | CAC DUP. | CAC DUP. RE | CAC FIELD BLANK | CAC | CAC DUP | CAC FIELD BLANK |
| Phenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| bis(2-Chloroethyl)ether | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2-Chlorophenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 1,3-Dichlorobenzene | <10 | <10 R | <10 R | [3] | <10 R | <10 R | <10 R |
| 1,4-Dichlorobenzene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Benzyl alcohol | <10 | <10 R | <10 R | [4] | <10 R | <10 R | <10 R |
| 1,2-Dichlorobenzene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | [3] J |
| 2-Methylphenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| bis-(2-Chloroisopropyl)ether | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Methylphenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| N-Nitroso-di-n-propylamine | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Hexachloroethane | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Nitrobenzene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Isophorone | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2-Nitrophenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4-Dimethylphenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Benzoic Acid | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| bis(2-Chloroethoxy)methane | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4-Dichlorophenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 1,2,4-Trichlorobenzene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Naphthalene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Chloroaniline | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Hexachlorobutadiene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Chloro-3-methylphenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2-Methylnaphthalene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Hexachlorocyclopentadiene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4,6-Trichlorophenol | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4,5-Trichlorophenol | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| 2-Chloronaphthalene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2-Nitroaniline | <50 | <50 R | <50 R | <50 | <50R | <50R | <50R |
| Dimethyl phthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Acenaphthylene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,6-Dinitrotoluene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 3-Nitroaniline | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| Acenaphthene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4-Dinitrophenol | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| 4-Nitrophenol | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| Dibenzofuran | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 2,4-Dinitrotoluene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Diethyl phthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Chlorophenyl phenyl ether | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Fluorene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Nitroaniline | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| 4,6-Dinitro-2-Methylphenol | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| N-Nitrosodiphenylamine | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 4-Bromophenyl-phenylether | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Hexachlorobenzene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Pentachlorophenol | <50 | <50 R | <50 R | <50 | <50 R | <50 R | <50 R |
| Phenanthrene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Anthracene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Di-n-butylphthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Fluoranthene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Pyrene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Butylbenzylphthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| 3,3'-Dichlorobenzidine | <20 | <20 R | <20 R | <20 | <20 R | <20 R | <20 R |
| Benzo(a)anthracene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Chrysene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| bis(2-Ethylhexyl)phthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Di-n-octylphthalate | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Benzo(b)fluoranthene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Benzo(k)fluoranthene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Benzo(a)pyrene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |
| Indeno(1,2,3-cd)pyrene | <10 UJ | <10 R | <10 R | <10 UJ | <10 R | <10 R | <10 R |
| Dibenz(a,h)anthracene | <10 UJ | <10 R | <10 R | <10 UJ | <10 R | <10 R | <10 R |
| Benzo(g,h,i)perylene | <10 | <10 R | <10 R | <10 | <10 R | <10 R | <10 R |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.
RE: Designates a laboratroy re-analysis to resolve matrix interferences encountered during the initial analysis.

TABLE 81
RESULTS OF ANALYSES FOR ORGANIC COMPOUNDS
CAC RANNEY WELL - GROUND WATER
ORMET CORPORATION
HANNIBAL, OHIO

(Pesticides and PCBs)
Results in ug/l

| | June 22, 1990 | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|
| | CAC | CAC DUP. | CAC FIELD BLANK | CAC | CAC DUP. | CAC FIELD BLANK |
| Alpha-BHC | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| beta-BHC | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| delta-BHC | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| gamma-BHC (Lindane) | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| Heptachlor | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| Aldrin | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| Heptachlor epoxide | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| Endosulfan I | <0.05 | <0.05 | <0.05 | <0.050 | <0.050 | <0.050 |
| Dieldrin | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDE | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| Endrin | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| Endosulfan II | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDD | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| Endosulfan sulfate | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| 4,4'-DDT | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| Methoxychlor | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Endrin ketone | <0.1 | <0.1 | <0.1 | <0.10 | <0.10 | <0.10 |
| alpha-chlordane | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| gamma-Chlordane | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Toxaphene | <0.1 | <0.1 | <0.1 | <1.0 | <1.0 | <1.0 |
| Aroclor-1016 | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Aroclor-1221 | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Aroclor-1232 | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Aroclor-1242 | <0.05 | <0.05 | <0.05 | <0.50 | <0.50 | <0.50 |
| Aroclor-1248 | <0.05 | <0.05 | <0.05 | <1.0 | <1.0 | <1.0 |
| Aroclor-1254 | <0.1 | <0.1 | <0.1 | <1.0 | <1.0 | <1.0 |
| Aroclor-1260 | <0.1 | <0.1 | <0.1 | | | |

J: The associated numerical value is an estimated value because one or more quality control criteria were not met.
UJ: The associated quantitation limit is estimated because one or more quality control criteria were not met.
B: The material analyzed for was detected in the associated laboratory blank.
B,J: The material analyzed for was detected in the associated laboratory blank;the associated numerical value is an estimated quantity because one or more quality control criteria were not met.
B,UJ: The material analyzed for was detected in the associated laboratory blank;therefore the associated numerical value is considered to be the quantitation limit.
[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit.
DL: Denotes a sample that was re-analyzed using a dilution in order to quantify peaks that fell off-scale during a previous analysis.
R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 82
RESULTS OF ANALYSES FOR CLP INORGANIC COMPOUNDS
CAC RANNEY WELL - GROUND WATER
ORMET CORPORATION
HANNIBAL, OHIO

Results in ug/L

| | June 22, 1990 | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|
| | CAC | CAC DUP | CAC FIELD BLANK | CAC | CAC DUP | CAC FIELD BLANK |
| Aluminum | <14.0 | <14.0 | <14.0 | <12.0 | <12.0 | <12.0 |
| Antimony | [2] B | [21] B | [29] B | <22.0 | <11.0 | <20.0 |
| Arsenic | <4.00 | <4.00 | <4.00 | <5.00 | <5.00 UJ | <5.00 |
| Barium | [97] | [98] | <9.00 | [93.0] | [91.0] | <8.00 |
| Beryllium | <3.00 | <3.00 | <3.00 | <3.00 | <3.00 | <3.00 |
| Cadmium | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 | <2.00 |
| Calcium | 63400 | 64300 | [137] | 62800 | 61000 | [47.0] |
| Chromium | <4.00 | <4.00 | <4.00 | <3.00 | <3.00 | <3.00 |
| Cobalt | <4.00 | <4.00 | <4.00 | <3.00 | <3.00 | <3.00 |
| Copper | <3.00 | <3.00 | <3.00 | <3.00 | <3.00 | <3.00 |
| Iron | <35.0 | <35.0 | <35.0 | <25.0 | <25.0 | [32.0] |
| Lead | <2.00 UJ | <2.00 UJ | <2.00 UJ | <2.00 | 15.0 | 4.00 |
| Magnesium | 9810 | 9890 | [41] | 9840 | 9600 | <24.0 |
| Manganese | 1340 | 1350 | <3.00 | 1210 | 1180 | <3.00 |
| Mercury | <0.2 UJ | <0.2 UJ | <0.2 UJ | <0.20 | <0.20 | <0.20 |
| Nickel | <4.00 | <4.00 | <4.00 | <4.00 | <4.00 | <4.00 |
| Potassium | [2430] | [2480] | <90 | [2260] | [2120] | <90.0 |
| Selenium | <4.00 | <4.00 | <4.00 R | <2.00 UJ | <2.00 UJ | <2.00 UJ |
| Silver | <3.00 | <3.00 | <3.00 R | <5.00 UJ | <3.00 UJ | <3.00 UJ |
| Sodium | 20300 | 20000 | [385] | 19300 | 18800 | [471] |
| Thallium | <1.00 | <1.00 | <1.00 | <2.00 | <2.00 | <2.00 |
| Vanadium | <4.00 | <4.00 | <4.00 | <3.00 | <3.00 | <3.00 |
| Zinc | [6] | [4] | [5] | <3.00 | <3.00 | <3.00 |
| Cyanide | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 | <10.0 |

J: The associated numerical value is considered an estimated quantity because one or more quality control criteria were not met.

UJ: The associated quantitation limit is considered estimated because one or more quality control criteria were not met.

S: Indicates a value determined by Method of Standard Addition.

[ ]: Indicates a value greater than or equal to the instrument detection limit but less than the contract-required detection limit,and is considered an estimated quantity.

R: Quality control indicates that data are unusable (compound may or may not be present). Data flagged with an R are not used for any quantitative purpose in the RI Report or Endangerment Assessment.

TABLE 83
RESULTS OF ANALYSES FOR NON-CLP INORGANIC PARAMETERS
CAC RANNEY WELL-GROUND WATER
ORMET CORPORATION
HANNIBAL, OHIO

Results in mg/L

| | June 22, 1990 | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|
| | CAC | CAC DUP. | CAC FIELD BLANK | CAC | CAC DUP. | CAC FIELD BLANK |
| Ammonia, Total | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Chloride | 26.0 | 28.0 | <1.0 | 27 | 25 | <1.0 |
| Fluoride | 0.5 | 0.8 | 0.5 | 0.3 | 0.3 | <0.1 |
| Total Organic Carbon | 3.0 | 3.0 | <1.0 | 3.0 | 2.0 | <1.0 |
| Sulfate | 57.0 | 52.0 | <2.0 | 64 | 60 | <1.0 |
| Cyanide, Amenable to Cl | <0.01 | <0.001 | <0.01 | <0.01 | <0.01 | <0.01 |
| Cyanide, Total | <0.01 | <0.001 | <0.01 | <0.01 | <0.01 | <0.01 |
| Alkalinity, Total | 170.0 | 170.0 | <10.0 | 160 | 160 | <10 |
| pH | 7.2 | 7.3 | 5.6 | 7.3 | 7.3 | 5.4 |
| Tin, Total | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Total Dissolved Solids | 310.0 | 300.0 | 18.0 | 300 | 300 | <10 |
| Conductivity | 520.0 | 520.0 | 2.0 | 500 | 500 | 1.0 |
| Silica | 15.0 | 15.0 | <2.0 | 17 | 15 | <2.0 |

TABLE 84
RESULTS OF ANALYSES FOR INORGANIC DRINKING WATER PARAMETERS
CAC RANNEY WELL
(Results in mg/L unless otherwise noted)

| | June 22, 1990 | | | July 20, 1990 | | |
|---|---|---|---|---|---|---|
| | CAC | CAC Dup. | CAC Field Blank | CAC | CAC Dup. | CAC Field Blank |
| pH - field (Std. Units) | 6.9 | -- | -- | 7.27 | -- | -- |
| pH - lab (std. Units) | 7.2 | 7.1 | 5.2 | 7.5 | 7.4 | 6.8 |
| Specific Conductance - field (umho/cm) | 440 | -- | -- | 500 | -- | -- |
| Arsenic, total | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Barium, total | 0.130 | 0.110 | <0.050 | 0.071 | 0.083 | <0.050 |
| Cadmium, total | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| Chloride, total | 28 | 28 | <0.001 | 48 | 47 | 15 |
| Chromium, total | <0.030 | <0.030 | <0.030 | <0.005 | <0.005 | <0.005 |
| Color (PtCo) | 20 | 20 | <5 | 5 | 5 | 5 |
| Fluoride | 0.63 | 0.46 | 0.01 | 0.43 | 0.42 | <0.02 |
| Iron, total | <0.040 | <0.040 | <0.040 | <0.040 | 0.040 | <0.040 |
| Lead, total | <0.005 | <0.005 | <0.005 | <0.002 | <0.002 | <0.002 |
| Manganese, total | 1.400 | 1.400 | <0.015 | 1.350 | 1.300 | <0.015 |
| MBAS, Colorimetric | 0.03 | 0.03 | 0.03 | <0.01 | <0.01 | <0.01 |
| Mercury, total | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| Nitrate N | 0.19 | 0.19 | 0.03 | 0.13 | 0.38 | 0.13 |
| Nitrite N | <0.05 | <0.05 | 0.00 | <0.05 | <0.05 | <0.05 |
| Total Dissolved Solids | 363 | 330 | 28 | 334 | 328 | 4 |
| Selenium, total | <0.005 | <0.005 | <0.005 | <0.005 | <0.010 | <0.005 |
| Silver, total | <0.010 | <0.010 | <0.010 | <0.001 | <0.001 | <0.001 |
| Sulfate | 42 | 48 | 30 | 87 | 71 | <2 |
| Turbidity (NTU) | 1.1 | 1.1 | 0.9 | -- | -- | -- |
| Zinc, total | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 | <0.010 |
| Corrosion to Steel (1110) (mm/yr.) | 0.26 | 0.35 | 0.31 | 0.23 | 0.60 | 0.29 |

TABLE 85
RESULTS OF ANALYSES FOR ORGANIC DRINKING WATER PARAMETERS
CAC RANNEY WELL
(Results in ug/L unless otherwise noted)

| | DETECTION LIMIT | June 22, 1990 | | | | July 20, 1990 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CAC | CAC Dup. | CAC FIELD BLANK | CAC TRIP BLANK | CAC | CAC Dup. | CAC FIELD BLANK | CAC TRIP BLANK |
| **Regulated VOC's** | | | | | | | | | |
| Benzene | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Carbon Tetrachloride | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dichloroethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethylene | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-Trichloroethane | 0.5 ug/L | 2.6 | 2.5 | ND | ND | 2.0 | 2.1 | ND | ND |
| Trichloroethylene | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Vinyl Chloride | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| p-Dichlorobenzene | 1.0 ug/L | ND | ND | 2.6 | ND | ND | ND | 4.5 | ND |
| **Unregulated VOC's** | | | | | | | | | |
| Bromoform | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorobenzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Chlorodibromemethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloroform | 0.5 ug/L | 0.8 | 1.0 | ND | ND | ND | ND | ND | ND |
| Dichlorobromomethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Dichlorodifluoromethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloroethane | 0.5 ug/L | 1.4 | 1.5 | ND | ND | 1.2 | 1.2 | ND | ND |
| 1,2-Dichloropropane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Ethyl Benzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-Tetrachloroethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Toluene | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| trans-1,2-Dichloroethylen | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-Trichloroethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Trichlorofluoromethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| m-Dichlorobenzene | 1.0 ug/L | ND | ND | 1.4 | ND | ND | ND | 1.2 | ND |
| Methylene Chloride | 1.0 ug/L | 5.1 | ND | ND | ND | 3.4 | 3.6 | ND | ND |
| cis-1,2-Dichloroethylene | 0.5 ug/L | 22.3 | 22.8 | ND | ND | 21.1 | 20.7 | ND | ND |
| o-Dichlorobenzene | 1.0 ug/L | ND | ND | 5.0 | ND | ND | ND | 2.1 | ND |
| 1,2,4-Trichlorobenzene | 3.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Dibromomethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromoethane (EDB) | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-Dibromo-3-Chloropr | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| m,p-Xylenes | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| o-Xylene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichloropropane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Styrene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Chloromethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromomethane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromochloromethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichloropropane | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,3-Trichlorobenzene | 3.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Propyl Benzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-Tetrachlorethane | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Tetrachloroethylene | 0.5 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-Dichloropropene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| sec-Dichloropropane | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,4-Trimethylbenzene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| n-Butylbenzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Naphthalene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Hexachlorobutadiene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| o-Chlorotoluene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| p-Chlorotoluene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3,5-Trimethylbenzene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| p-Isopropyltoluene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-Dichloropropene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| iso-Propylbenzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| tert-Butylbenzene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| sec-Butylbenzene | 2.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |
| Bromobenzene | 1.0 ug/L | ND | ND | ND | ND | ND | ND | ND | ND |

ND = None Detected

TABLE 86
SUMMARY OF VOLATILE ORGANIC COMPOUNDS
DETECTED IN SAMPLES FROM
THE CAC RANNEY WELL
(Results in ug/L)

| | June 22, 1990 | | | | July 20, 1990 | | | |
|---|---|---|---|---|---|---|---|---|
| | CAC | CAC Dup. | CAC Field Blank | CAC Trip Blank | CAC | CAC Dup. | CAC Field Blank | CAC Trip Blank |
| 1,1,1-Trichloroethane | 2.56 | 2.53 | -- | -- | 2.0 | 2.1 | -- | -- |
| p-Dichlorobenzene | -- | -- | 2.6 | -- | -- | -- | 4.5 | -- |
| cis-1,2-Dichloroethene | 22.3 | 22.8 | -- | -- | 21.1 | 20.7 | -- | -- |
| o-Dichlorobenzene | -- | -- | 4.97 | -- | -- | -- | 2.1 | -- |
| Chloroform | 0.82 | 0.96 | -- | -- | -- | -- | -- | -- |
| Dichloromethane | 5.14 | -- | -- | -- | -- | -- | -- | -- |
| 1,1-Dichloroethane | 1.37 | 1.45 | -- | -- | 1.2 | 1.2 | -- | -- |
| m-Dichlorobenzene | -- | -- | 1.43 | -- | -- | -- | 1.2 | -- |

Table 87
CLIMATE DATA FOR THE PERIOD 1931 - 1965

| Month | TEMPERATURE | | | | PRECIPITATION | | |
|---|---|---|---|---|---|---|---|
| | (1) Average Daily Maximum ( F) | (1) Average Daily Minimum ( F) | (2) Average Monthly Maximum ( F) | (2) Average Monthly Minimum ( F) | (2) Average Total (inches) | (2) Average Snowfall (inches) | (2) Average number of days with 1 inch or more of snow |
| January | 40.8 | 22.0 | 61 | -3 | 2.75 | 7.7 | 3 |
| February | 42.6 | 22.3 | 63 | 0 | 2.52 | 5.7 | 2 |
| March | 52.5 | 29.7 | 74 | 10 | 3.73 | 5.2 | 2 |
| April | 64.9 | 39.2 | 82 | 20 | 3.62 | 0.8 | <1/2 |
| May | 75.2 | 49.1 | 87 | 30 | 3.86 | 0 | 0 |
| June | 83.0 | 57.9 | 91 | 41 | 4.78 | 0 | 0 |
| July | 86.3 | 61.7 | 93 | 47 | 4.21 | 0 | 0 |
| August | 85.2 | 59.8 | 93 | 43 | 3.32 | 0 | 0 |
| September | 79.7 | 53.4 | 90 | 32 | 2.46 | 0 | 0 |
| October | 68.5 | 41.8 | 82 | 23 | 2.37 | 0 | 0 |
| November | 53.9 | 32.4 | 73 | 12 | 2.60 | 2.9 | 1 |
| December | 42.4 | 24.0 | 62 | -1 | 2.54 | 6.4 | 2 |
| Year | 64.6 | 41.1 | 95 | -8 | 38.76 | 28.7 | 10 |

(1) Data based on an average of the data compiled from Senecaville Dam, Ohio and New Martinsville, WV Database 1931-1960 (U.S.D.A., 1974).

(2) Data based on records kept at Senecaville Dam, Noble County, Ohio. Database 1940-1965 (U.S.D.A., 1974).

TABLE 88

HANNIBAL LOCKS AND DAM, HANNIBAL, OHIO
PRECIPITATION DATA FOR 1989

| Month | Total Precipitation (in inches) |
|---|---|
| January | 3.34 |
| February | 4.78 |
| March | 4.56 |
| April | 4.83 |
| May | 4.88 |
| June | 6.81 |
| July | 4.61 |
| August | 5.01 |
| September | 4.67 |
| October | 2.93 |
| November | 2.22 |
| December | 1.24 |
| TOTAL: | 49.94 |

Source: National Weather Service, Pittsburgh, PA.
1990 Personal Communication.

## TABLE 89

## COMMON MAMMALS FOUND IN MONROE COUNTY, OHIO

| Scientific Name | Common Name |
|---|---|
| *Didelphis virginiana* Kerr | Virginia opposum |
| *Sorex fumeus* Miller | Smoky shrew |
| *Microsorex hoyi* (Baird) | Pygmy shrew |
| *Blarina brevicauda* | Short-tailed shrew |
| *Cryptotis parva* (Say) | Least shrew |
| *Parascalps breweri* (Bachman) | Hairy-tailed mole |
| *Condylura cristata* Linnaeus | Star-nosed mole |
| *Sylvilagus floridamus* | Eastern cottontail |
| *Tamias striatus* (Linnaeus) | Eastern chipmunk |
| *Tamias striatus fisheri* | Chipmunk |
| *Marmota monax* Linnaeus | Woodchuck or Groundhog |
| *Sciurus carolinensis* Gmelin | Gray squirrel |
| *Sciurus niger* Linnaeus | Fox squirrel |
| *Castor canadensis* Kuhl | Beaver |
| *Microtus pennsylvanicus* (Ord) | Meadow vole |
| *Vulpes vulpes* | Red fox |
| *Procyon lotor* Linnaeus | Raccoon |
| *Mustela vison* | Mink |
| *Mephitis mephitis* Schreber | Striped skunk |
| *Odocoileus virginianus* (Boddart) | White-tailed deer |

Source: Gottschang, J.L. 1981. Guide to the Mammals of Ohio. Ohio State University Press. 176 pp.

TABLE 90

**BIRDS FOUND IN SUNFISH CREEK STATE PARK, OHIO**

| Scientific Name | Common Name |
|---|---|
| *Cathartes aura* | Turkey vulture |
| *Accipiter cooperii (Bonaparte)* | Cooper's hawk |
| *Buteo jamaicensis* (Gmelin) | Red-tailed hawk |
| *Otus asio* (Linnaeus) | Eastern screech owl |
| *Bubo virgianus* (Gmelin) | Great horned owl |
| *Strix varia* Barton | Barred owl |
| *Boanasa umbellus* | Ruffed grouse |
| *Coccyzus americanus* | Yellow-billed cuckoo |
| *Coccyzus erythropthalmus* | Black-billed cuckoo |
| *Caprimulgus vociferus* | Whip-poor will |
| *Dryocopus pileatus* (Linnaeus) | Pileated woodpecker |
| *Melanerpes carolinus* (Linnaeus) | Red-bellied woodpecker |
| *Empidonax virescens* (Vieillot) | Acadian flycatcher |
| *Hylocichla mustelina* (Gmelin) | Wood thrush |
| *Piranga olivacea* | Scarlet tanager |
| *Sayornis phoebe* (Latham) | Eastern phoebe |
| *Troglodytes aedon* Vieillot | House wren |
| *Thryothorus ludovicianus* (Latham) | Carolina wren |
| *Dumetella carolinensis* (Linnaeus) | Grey catbird |
| *Sialia sialis* (Linnaeus) | Eastern bluebird |
| *Polioptila caerulea* (Linnaeus) | Blue-gray gnatcatcher |
| *Vireo gilvus* (Vieillot) | Warbling vireos |

Source: Thomson, Tom. 1983. Birding in Ohio. Indiana University Press.

## TABLE 91

## COMMON FISH SPECIES FOUND IN THE OHIO RIVER BETWEEN RIVER MILE MARKERS 0 AND 327

| Scientific Name | Common Name | Scientific Name | Common Name |
|---|---|---|---|
| *Ichthyomyzon bdellium (E)* | *Ohio Lamprey* | *Pimephales promelas* | *Northern Fathead Minnow* |
| *Ichthyomyzon castaneus* | *Lamprey* | *Pimephales vigilax* | *Bullhead Minnow* |
| *Ichthyomyzon unicuspis* | *Silver Lamprey* | *Rhinichthys atratulus* | *Blacknose Dace* |
| *Polyodon spathula (S)* | *Paddlefish* | *Semotilus atromaculatus* | *Northern Creek Chub* |
| *Lepisosteus osseus* | *Longnose Gar* | *Carpiodes carpio (t)* | *Northern River Carpsucker* |
| *Lepisosteus platostomus (t)(S)* | *Shortnose Gar* | *Carpiodes cyprinus* | *Quillback Carpsucker* |
| *Amia calva* | *Bowfin* | *Carpiodes velifer (t)* | *Highfin Carpsucker* |
| *Anguilla rostrata* | *American Eel* | *Catostomus commersoni* | *Common White Sucker* |
| *Alosa chrysochloris (t)* | *Skipjack Herring* | *Cycleptus elongatus (t)* | *Blue Sucker* |
| *Alosa pseudoharengus (*)* | *Alewife* | *Hypentelium nigricans* | *Northern Hog Sucker* |
| *Dorosoma cepedianum* | *Eastern Gizzard Shad* | *Ictiobus bubalus (t)* | *Smallmouth Buffalofish* |
| *Hiodon alosoides (t)* | *Goldeye* | *Ictiobus cyprinellus* | *Bigmouth Buffalofish* |
| *Hiodon tergisus (t)* | *Mooneye* | *Ictiobus niger (t)* | *Black Buffalofish* |
| *Salmo gairdneri (*)* | *Rainbow Trout* | *Minytrema melanops (t)* | *Spotted Sucker* |
| *Salmo trutta (*)* | *Brown Trout* | *Moxostoma anisurum (t)* | *Silver Redhorse* |
| *Esox americanus vermiculatus* | *Grass Pickerel* | *Moxostoma carinatum* | *River Redhorse* |
| *Esox lucius (*)* | *Northern Pike* | *Moxostoma duquesnei (t)* | *Black Redhorse* |
| *Esox masquinongy (E)* | *Great Lakes Muskellunge* | *Moxostoma erythrurum (t)* | *Golden Redhorse* |
| *Campostoma anomalum* | *Ohio Stoneroller Minnow* | *Moxostoma macrolepidotum* | *Shorthead Redhorse* |
| *Carassius auratus (*)* | *Goldfish* | *Ictalurus catus (*)* | *White Catfish* |
| *yprinus carpio (*)* | *Common Carp* | *Ictalurus furcatus* | *Blue Catfish* |
| *Ericymba buccata* | *Silverjaw Minnow* | *Ictalurus melas (t)* | *Black Bullhead* |
| *Hybognathus nuchalis* | *Mississippi Silvery Minnow* | *Ictalurus natalis* | *Yellow Bullhead* |
| *Hybopsis aestivalis (S)* | *Ohio Speckled Chub* | *Ictalurus nebulosus* | *Brown Bullhead* |
| *Hybopsis amblops (t)* | *Northern Bigeye Chub* | *Ictalurus punctatus (t)* | *Channel Catfish* |
| *Hybopsis dissimilis* | *Ohio Streamline Chub* | *Noturus flavus (t)* | *Stonecat Madtom* |
| *Hybopsis storeriana* | *Silver Chub* | *Noturus miurus* | *Brindled Madtom* |
| *'ocomis micropogon* | *River Chub* | *Pylodictis olivaris (t)* | *Flathead Catfish* |
| *Notemigonus crysoleucas* | *Golden Shiner* | *Percopsis omiscomaycus* | *Trout-perch* |
| *Notropsis atherinoides* | *Common Emerald Shiner* | *Fundulus diaphanus (*)* | *Banded Killfish* |
| *Notropis blennius* | *River Shiner* | *Fundulus notatus* | *Blackstripe Topminnow* |
| *Notropis boops (E)* | *Bigeye Shiner* | *Labidesthes sicculus* | *Brook Silverside* |
| *Notropis buchanani* | *Ghost Shiner* | *Morone chrysops (t)* | *White Bass* |
| *Notropis chrysocephalus* | *Central Striped Shiner* | *Morone saxatilis (*)* | *Striped Bass* |
| *Notropis cornutus* | *Common Shiver* | *Ambloplites rupestris* | *Northern Rockbass* |
| *Notropis heterolepis* | *Blacknose Shiner* | *Lepomis cyanellus (t)* | *Green Sunfish* |
| *Notropis hudsonius* | *Spottail Shiner* | *Lepomis gibbosus* | *Pumpkinseed Sunfish* |
| *Notropis photogenis* | *Silver Shiner* | *Lepomis gulosus* | *Warmouth Sunfish* |
| *Notropis rubellus* | *Rosyface Shiner* | *Lepomis humilis* | *Orangespotted Sunfish* |
| *Notropis spilopterus* | *Spotfin Shiner* | *Lepomis macrochirus (t)* | *Northern Bluegill Sunfish* |
| *Notropis stramineus* | *Sand Shiner* | *Lepomis megalotis* | *Central Longear Sunfish* |
| *Notropis volucellus* | *Northern Mimic Shiner* | *Lepomis microlophus* | *Redear Sunfish* |

*(t) = indicates a species for which the Ohio River is the type locality*
*(*) = introduced species*
*(E) = endangered species*
*(S) = special interest species*

TABLE 91 (cont.)

COMMON FISH SPECIES FOUND IN THE OHIO RIVER BETWEEN RIVER MILE MARKERS 0 AND 327

| Scientific Name | Common Name | Scientific Name | Common Name |
|---|---|---|---|
| *Notropis whiplei* | Steelcolor Shiner | *Micropterus dolomieui* | Northern Smallmouth Blackbass |
| *Phenacobius mirabilis* | *Suckermouth Minnow* | *Micropterus punctulatus (t)* | *Northern Spotted Blackbass* |
| *Pimephales notatus (t)* | Bluntnose Minnow | *Micropterus salmoides* | Northern Largemouth Blackbass |
| *Pomoxis annularis (t)* | *White Crappie* | *Perca flavescens* | *Yellow Perch* |
| *Pomoxis nigromaculatus* | *Black Crappie* | *Percina caprodes (t)* | *Ohio Logperch Darter* |
| *Ammocrypta pellucida (S)* | *Eastern Sand Darter* | *Percina copelandi (E)* | *Channel Darter* |
| *Etheostoma blennioides (t)* | *Eastern Greenside Darter* | *Percina maculata* | *Blackside Darter* |
| *Etheostoma caeruletum* | *Rainbow Darter* | *Percina sciera* | *Northern Dusky Darter* |
| *Etheostoma flabellare (t)* | *Barred Fantail Darter* | *Percina shumardi (E)* | *River Darter* |
| *Etheostoma nigrum* | *Central Johnny Darter* | *Stizostedion canadense* | *Sauger* |
| *Etheostoma spectabile* | *Northern Orange-throat Darter* | *Stizostedion vitreum vitreum* | *Walleye* |
| *Etheostoma variatum* | *Variegate Darter* | *Aplodinotus grunniens (t)* | Freshwater Drum |
| *Etheostoma zonale* | *Eastern Banded Darter* | | |

*(t) = indicates a species for which the Ohio River is the type locality*
*(*) = introduced species*
*(E) = endangered species*
*(S) = special interest species*

Source: Pearson, W.D. and B.J. Pearson. 1989. Fishes of the Ohio River in the Ohio River, Its History and Environment. Ohio Journal of Science, Vol. 89, No. 5. pp. 181-187.

TABLE 91A

RESULTS OF SIEVE ANALYSES OF SURFACE SAMPLES
FROM THE FORMER DISPOSAL PONDS

ORMET CORPORATION
HANNIBAL, OHIO

| SAMPLE DESIGNATION | CLAY % | SILT % | FINE SAND % | COARSE TO MEDIUM SAND % | FINE GRAVEL % |
|---|---|---|---|---|---|
| POND 1A | | 43 | 48 | 9 | |
| POND 1B | 4 | 42 | 50 | 4 | |
| POND 1C | | 10 | 78 | 12 | |
| POND 2A | 4 | 73 | 12 | 11 | |
| POND 2B | | 17 | 30 | 38 | 15 |
| POND 2C | 2 | 30 | 59 | 9 | |
| POND 3A | | 46 | 45 | 9 | |
| POND 3B | | 67 | 25 | 8 | |
| POND 3C | 2 | 65 | 29 | 4 | |
| POND 4A | 18 | 62 | 14 | 4 | 2 |
| POND 4B | 10 | 78 | 9 | 3 | |
| POND 4C | 5 | 74 | 9 | 12 | |
| POND 5A | 1 | 27 | 16 | 56 | |
| POND 5B | | 65 | 32 | 3 | |
| POND 5C | 6 | 12 | 18 | 64 | |
| POND 5D | | 29 | 55 | 16 | |
| POND 5E | 13 | 23 | 21 | 43 | |

NOTE: All results are in % by weight.

Table 92. Physical and Chemical Properties of Chemicals Detected at the Ormet Corporation Site.

| Constituents | Molecular Weight[a] (g/mol) | Water Solubility[b] (mg/L 25°C) | Specific Gravity[c] | Vapor Pressure[d] (mm Hg 25°C) | H[e] (atm-m$^3$/mol) | $K_{oc}$[f] (ml/g) | Log $K_{ow}$[g] | Fish BCF[h] | Water $T_{1/2}$[i] (days) |
|---|---|---|---|---|---|---|---|---|---|
| Polycyclic and Heterocyclic Aromatics | | | | | | | | | |
| Naphthalene | 128 | 31.7 | 1.15 | 0.082 | 4.83E-4 | 3.3E+3 | 3.3 | 10.5 | ~20 |
| 2-Methylnaphthalene | 142 | 24.6 | 1.00 | NR | NR | 7.4E+3 | 4.11 | NR | NR |
| Acenaphthene | 154 | 3.47 | 1.02 | 1.55E-3 | 7.93E-5 | 17.7 | 4.33 | 242 | 12.5 |
| Fluorene | 166 | 1.69 | 1.20 | 1.64E-4 | 2.1E-4 | 5E+3 | 4.38 | 30 | 32-60 |
| Dibenzofuran | 168 | 10 | 1.09 | NR | NR | 4.0 | 4.31 | NR | NR |
| Phenanthrene | 178 | 1.0 | 1.03 | 6.8E-4 | 1.3E-4 | 2.3E+4 | 4.46 | 30 | 0.38-2 |
| Anthracene | 178 | 4.5E-2 | 1.28 | 1.95E-4 | 1.4E-3 | 1.4E+4 | 4.45 | 30 | ~0.1 |
| Fluoranthene | 202 | 2.6E-1 | 1.25 | 5.0E-6 | 1.7E-2 | 4.1E+4 | 5.3 | 1,150 | 1-2 |
| Pyrene | 202 | 1.32E-1 | 1.27 | 6.9E-7 | 1.1E-6 | 4.6E+4 | 5.3 | 30 | ~1.0 |
| Benzo(a)anthracene | 228 | 1.0E-2 | 1.27 | 5.0E-9 | 6.6E-7 | 43 | 5.90 | 30 | ~0.1 |
| Chrysene | 228 | 1.8E-3 | 1.27 | 6.3E-9 | 1.05E-6 | 2.5E+5 | 5.61 | 30 | 0.2 |
| Benzo(b)fluoranthene | 252 | 1.4E-2 | NR | 5.0E-7 | 1.19E-5 | 5.5E+5 | 6.6 | NR | 1-30 |
| Benzo(k)fluoranthene | 252 | 5.5E-4 | NR | 9.6E-11 | 1.04E-3 | 4.4E+6 | 6.84 | 30 | 1-17 |
| Benzo(a)pyrene | 252 | 3.8E-3 | 1.35 | 5.6E-9 | 1.55E-6 | 1.9E+6 | 6.04 | 30 | 0.1 |
| Indeno(1,2,3-cd)pyrene | 276 | 6.2E-2 | NR | ~1.0E-10 | 6.8E-8 | 3.1E+7 | 7.6 | 30 | 125-250 |
| Benzo(g,h,i)perylene | 276 | 3.0E-4 | NR | 1.03E-10 | 1.4E-7 | 7.7E+6 | 7.2 | 30 | 590-650 |
| Dibenz(a,h)anthracene | 278 | 5.0E-4 | 1.28 | ~1.0E-10 | 7.33E-9 | 1.6E+6 | 5.97 | 30 | ~1-32.6 |
| Monocyclic Aromatics | | | | | | | | | |
| Benzene | 78 | 1,800 | 0.88 | 95 | 3.45E-3 | 83 | 2.12 | 5.2 | 5-16 |
| Chlorobenzene | 113 | 488 | 1.11 | 11.7 | 3.72E-3 | 330 | 2.84 | 10.3 | 68-150 |
| Toluene | 92 | 535 | 0.87 | 28.7 | 5.94E-3 | 1.15E+2 | 2.69 | 10.7 | 4-22 |
| Chlorinated Aliphatics | | | | | | | | | |
| Chloroform | 119 | 8,200 | 1.49 | 150 | 4.35E-3 | 44 | 1.97 | 3.75 | 30-180 |
| Methylene Chloride | 85 | 19,400 | 1.33 | 362 | 2.68E-3 | 8.7 | 1.25 | 0.9 | 7-28 |
| Tetrachloroethene | 166 | 150 | 1.62 | 14 | 1.4E-2 | 2E+2 | 2.8 | 30.6 | 180-365 |
| 1,2-Dichloroethene | 97 | 600 | 1.28 | 200 | 6.56E-3 | 59 | 2.09 | 1.6 | 28-180 |

Table 92. Continued.

| Constituents | Molecular Weight[a] (g/mol) | Water Solubility[b] (mg/L 25°C) | Specific Gravity[c] | Vapor Pressure[d] (mm Hg 25°C) | H[e] (atm-m$^3$/mol) | $K_{oc}$[f] (ml/g) | Log $K_{ow}$[g] | Fish BCF[h] | Water $T_{1/2}$[i] (days) |
|---|---|---|---|---|---|---|---|---|---|
| Metals and Inorganics | | | | | | | | | |
| Aluminum | 27 | insoluble | 1.50 | 0 | NA | NA | NA | 50-136 | Persistent |
| Antimony | 122 | insoluble | 6.68 | 1 | NA | NA | NA | 1.0 | Persistent |
| Arsenic | 75 | insoluble | 5.72 | 0 | NA | NA | NA | 44 | Persistent |
| Barium | 137 | decomposes | 3.51 | 0 | NA | NA | NA | NR | Persistent |
| Beryllium | 9.0 | insoluble | 1.85 | 0 | NA | NA | NA | 19 | Persistent |
| Chromium | 52 | insoluble | 7.2 | 0 | NA | NA | NA | 16 | Persistent |
| Copper | 64 | insoluble | 8.92 | 1 | NA | NA | NA | 36 | -- |
| Lead | 207 | insoluble | 11.3 | 0 | NA | NA | NA | 49 | Persistent |
| Manganese | 55 | decomposes | 7.2 | 0 | NA | NA | NA | NR | Persistent |
| Mercury | 201 | insoluble | 13.6 | 0.0012 | NA | NA | NA | 1000-5500 | Persistent |
| Nickel | 59 | insoluble | 8.90 | 1 | NA | NA | NA | 47 | Persistent |
| Vanadium | 51 | insoluble | 5.96 | 0 | NA | NA | NA | NR | Persistent |
| Zinc | 65.4 | insoluble | 7.1 | 1 | NA | NA | NA | 47 | ND |
| Cyanide[j] | 27 | miscible | 0.69 | 658 (22°C) | NA | ND | -0.25 | 1.0 | 0.3-0.8 |
| Other Organics | | | | | | | | | |
| 2-Butanone | 72 | 239,000 | 0.81 | 90.6 | 1.05E-5 | 1.2 | 0.29 | 0.33 | 6 |
| Carbon Disulfide | 76 | 2,100 (20°C) | 1.26 | 360 | 1.4E-2 | 355 | 2.0 | 0 | 10 |
| Bis(2-ethylhexyl)-phthalate | 391 | 0.4 (25°C) | 0.99 | 2E-7 | 1.1E-5 | 1E+5 | 5.11 | 130 | 14-21 |
| PCB-1016 | 258 | 0.049 | 1.33 | 4.0E-4 | 7.50E-4 | 5E+4 | 5.88 | 31,200 | 2-12.9 |
| PCB-1221 | 192 | 0.200 | 1.15 | 6.7E-3 | 3.24E-4 | 2.8E+2 | 2.80 | 31,200 | NR |
| PCB-1232 | 221 | 1.45 | 1.24 | 4.6E-3 | 8.64E-4 | 6.8E+2 | 3.20 | 31,200 | NR |
| PCB-1242 | 261 | 0.24 | 1.39 | 4.06E-4 | 5.60E-4 | 5.1E+3 | 5.58 | 31,200 | NR |
| PCB-1248 | 288 | 0.060 (24°C) | 1.41 | 4.94E-4 | 3.50E-3 | 4.4E+5 | 6.11 | 31,200 | NR |
| PCB-1254 | 327 | 0.012 | 1.50 | 7.71E-5 | 2.70E-3 | 4.1E+5 | 6.47 | 31,200 | NR |
| PCB-1260 | 370 | 0.080 (24°C) | 1.56 | 4.05E-5 | 7.1E-3 | 2.6E+6 | 6.91 | 31,200 | NR |

Table 92. Continued.

a USEPA (1979).
b USEPA (1979).
c Verschueren (1983).
d USEPA (1979) and Howard (1989).
e Howard (1989, 1990).
f Montgomery and Welkom (1990).
g USEPA (1979) and Howard (1989, 1990).
h From constituent-specific AWQC docments (as listed in USEPA Region IV's "Toxic Substance Spreadsheet," dated February 25, 1991).
i Howard et al. (1991).
j As hydrogen cyanide.

| | | | |
|---|---|---|---|
| atm-$m^3$/mol | Atmosphere-meter$^3$ per mole. | | ml/gMilliliters per gram. |
| BCF | Bioconcentration factor. | mm Hg | Millimeters of mercury. |
| g/mol | Grams per mole. | NA | Not applicable. |
| $K_{oc}$ | Organic carbon partition coefficient. | NR | Not reported. |
| $K_{ow}$ | Octanol-water partition coefficient. | $T_{1/2}$ | Half-life. |
| L/kg | Liters per kilogram. | °C | Degrees centigrade. |
| mg/L | Milligrams per liter. | | |

References: Verschueren, 1983; Weast, 1981; Howard, 1989; 1990; Montgomery and Welkom, 1990; AES, 1988; Windholtz and Budavari, 1983; USEPA, 1979; USEPA, 1980; USEPA, 1984a,b; USEPA, 1986a; USEPA, 1988.

Table 93. Relative Significance of Fate and Transport Mechanisms for Constituents Detected at the Ormet Corporation Site.*

| Constituents | Photolysis | Oxidation | Hydrolysis | Volatilization | Sorption | Bioaccumulation | Biotransformation/ Biodegradation |
|---|---|---|---|---|---|---|---|
| Polycyclic Aromatics | | | | | | | |
| Naphthalene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| 2-Methyl naphthalene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Acenaphthene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Dibenzofuran | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Fluorene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Phenanthrene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Anthracene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Fluoranthene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Pyrene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Benzo(a)anthracene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Chrysene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Benzo(b)fluoranthene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Benzo(k)fluoranthene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Benzo(a)pyrene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Indeno(1,2,3-cd)pyrene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Benzo(g,h,i)perylene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Dibenz(a,h)anthracene | High[a] | NS | NS | Moderate | Primary | NS | Primary |
| Monocyclic Aromatics | | | | | | | |
| Benzene | NS | Primary | NS | Primary | Moderate | Moderate-Low | Primary |
| Chlorobenzene | NS | Primary | NS | Primary | Moderate-High | Moderate | Primary |
| Toluene | NS | Moderate | NS | Primary | Moderate | Low | Primary |

Footnotes appear on Page 3.

Table 93. Continued.

| Constituents | Photolysis | Oxidation | Hydrolysis | Volatilization | Sorption | Bioaccumulation | Biotransformation/ Biodegradation |
|---|---|---|---|---|---|---|---|
| Chlorinated Aliphatics | | | | | | | |
| Chloroform | NS | Moderate | NS | Primary | NS | Low-Moderate | NS |
| Methylene Chloride | Low | Moderate | NS | Primary | NS | NS | NS |
| Tetrachloroethene | NS | Moderate | Low | Primary | NS | Moderate | NS |
| 1,2-Dichloroethene | NS | Moderate | NS | Primary | NS | NS | NS |
| Metals and Inorganics | | | | | | | |
| Aluminum | NS | NS | NS | NS | Primary | Low | NS |
| Antimony | NS | ND | ND | Moderate[b] | Primary | Low | NS |
| Arsenic | NS | Low | Low | NS | Primary | Low | Moderate[c] |
| Barium | NS | NS | ND | NS | Low | Low | ND |
| Beryllium | NS | NS | NS | NS | Moderate | NS | NS |
| Chromium | NS | Primary | Moderate | NS | Low | High | NS |
| Copper | NS | NS | NS | NS | Primary | Primary | NS-Low |
| Lead | NS | NS | NS | NS | Primary | Moderate | Moderate[c] |
| Manganese | | | | | | | |
| Mercury | NS | NS | NS | Moderate | Primary | Primary | Low[c] |
| Nickel | NS | NS | NS | NS | Moderate | Low | NS |
| Vanadium | NS | NS | NS | NS | Primary | NS | NS |
| Zinc | NS | NS | NS | NS | Primary | Primary | NS |
| Cyanide[d] | NS | Low | Low | Primary | NS | NS | Primary[c] |

Footnotes appear on Page 3.

Table 93. Continued.

| Biotransformation/ Constituents | Photolysis | Oxidation | Hydrolysis | Volatilization | Sorption | Bioaccumulation | Biodegradation |
|---|---|---|---|---|---|---|---|
| Other Organics | | | | | | | |
| 2-Butanone | NS | Primary | NS | Primary | NS | NS | Primary |
| Carbon Disulfide | NS | Primary | NS | Primary | NS | NS | High |
| Bis(2-ethylhexyl)-phthalate | NS | NS | Low | Low-Moderate | Primary | High | High |
| PCBs (total) | Low | NS | NS | Low | Primary | High | Low |

* The fate and transport qualitative scale description was adapted from USEPA, 1979.
a Photolysis is a significant degregation mechanism only near the surface.
b Dependent on chemical speciation.
c Biotransformation/biodegradation may affect the form of elemental substances but those cannot be created or destroyed. Thus, unless this biotransformation causes increased (or decreased) mobility, there can be no net effect of this mechanism.
d Hydrogen cyanide is the most abundant cyanide form.
ND No data.
NS Not significant.

References: USEPA, 1979; Howard, 1989; Verschueren, 1983; USEPA, 1987; AES, 1988; USEPA, 1985a.

TABLE 94

LIST OF CLP PARAMETERS

ORMET CORPORATION
HANNIBAL, OHIO

Semi-Volatile Organic Compounds

Phenol
bis(2-Chloroethyl)ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene

Benzyl alcohol
1,2-Dichlorobenzene
2-Methylphenol
bis-(2-Chloroisopropyl)ether
4-Methylphenol

N-Nitroso-di-n-propylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol

2,4-Dimethylphenol
Benzoic Acid
bis(2-Chloroethoxy)methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene

Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-Chloro-3-methylphenol
2-Methylnaphthalene

Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline

Dimethylphthalate
Acenaphthylene
2,6-Dinitrotoluene
3-Nitroaniline
Acenaphthene

2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
Diethylphthalate

4-Chlorophenyl-phenylether
Fluorene
4-Nitroaniline
4,6-Dinitro-2-Methylphenol
N-Nitrosodiphenylamine

4-Bromophenyl-phenylether
Hexachlorobenzene
Pentachlorophenol
Phenanthrene
Anthracene

Di-n-butylphthalate
Fluoranthene
Pyrene
Butylbenzylphthalate
3,3'-Dichlorobenzidine

Benzo(a)anthracene
Chrysene
bis(s-Ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene

Benzo(d)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene

(Pesticides and PCBs)

Alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Heptachlor

Aldrin
Heptachlor epoxide
Endosulfan I
Dieldrin
4,4'-DDE

Endrin
Endosulfan II
4,4'-DDD
Endosulfan sulfate
4,4'-DDT

Methoxychlor
Endrin ketone
alpha-chlordane
gamma-Chlordane
Toxaphene

Aroclor-1016
Aroclor-1221
Aroclor-1232
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

(Volatile Organic Compounds)

Chloromethane
Bromomethane
Vinyl Chloride
Chloroethane
Methylene Chloride

Acetone
Carbon Disulfide
1,1-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethene (total)

Chloroform
1,2-Dichloroethane
2-Butanone
1,1,1-Trichloroethane
Carbon Tetrachloride

Vinyl Acetate
Bromodichloromethane
1,2-Dichloropropane
cis-1,3-Dichloropropene
Trichlorethene

Dibromochloromethane
1,1,2-Trichloroethane
Benzene
trans-1,3-Dichloropropene
Bromoform

4-Methyl-2-Pentanone
2-Hexanone
Tetrachloroethene
1,1,2,2-Tetrachloroethane
Toluene

Chlorobenzene
Ethylbenzene
Styrene
Xylene (total)

CLP Inorganic Compounds

Aluminum
Antimony
Arsenic
Barium
Beryllium

Cadmium
Calcium
Chromium
Cobalt
Copper

Iron
Lead
Magnesium
Manganese
Mercury

Nickel
Potassium
Selenium
Silver
Sodium

Thallium
Vanadium
Zinc
Cyanide
% Solids

Table 95. Summary of Constituents of Potential Concern, Ormet Corporation, Hannibal, Ohio.

**Inorganics**

Aluminum
Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Copper
Iron
Lead
Manganese
Mercury
Nickel
Silver
Sodium
Thallium
Vanadium
Zinc

**Non-CLP Inorganics**

Chloride
Cyanide, Amenable
Cyanide, Total
Fluoride
Nitrogen, Ammonia
Silica
Sulfate

**VOCs**

Acetone
Benzene
Carbon disulfide
Chloroform
Chlorobenzene
Ethylbenzene
Methylene chloride

Table 95. Summary of Constituents of Potential Concern, Ormet Corporation, Hannibal, Ohio.

**VOCs (continued)**

Tetrachloroethene
Toluene
1,1,1-Trichloroethane
Trichloroethene

**Semivolatiles**

4-Methylphenol
2,4-Dimethylphenol
Naphthalene
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Dibenzofuran
Fluorene
Phenanthrene
Antrhracene
Di-n-butylphthalate
Fluoranthene
Pyrene
Benzo(a)anthracene
Chrysene
bis(2-Ethylhexyl)phthalate
Di-n-octylphthalate
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(1,2,3-cd)pyrene
Dibenz(a,h)anthracene
Benzo(g,h,i)perylene

**PCBs**

Aroclor-1242
Aroclor-1248

TABLE 96
POTENTIALLY COMPLETE EXPOSURE PATHWAY SUMMARY - CURRENT SCENARIOS

| Population | Exposure Point | Source/Release Mechanism | Exposure Medium | Exposure Route |
|---|---|---|---|---|
| Occupational (Adult) | Plant Recreation Area | Disposal ponds, potliner area/ fugitive dust emission | Air | Inhalation (Particulates) |
| Residential (Adult & Child) | Proctor, West Virginia (off-site) | Disposal ponds, potliner area/ fugitive dust emission | Air | Inhalation (Particulates) |
| Residential (Adult & Child) | Ohio River | Disposal ponds, potliner area/ CMSD, Carbon Runoff Area/ fugitive dust emission, surface runoff | Fish | Ingestion |
| Hypothetical Trespasser | 004 Backwater Area (Ohio River to Outfall 004 discharge pipe) | Disposal Ponds, Potliner Area, CMSD, Carbon Runoff Area/ fugitive dust emission, surface runoff | Sediments | Ingestion Dermal |
| | | | Surface Water | Ingestion Dermal |
| | | | Sediments | Ingestion Dermal |
| | Ohio River Bank | Disposal Ponds, Potliner Area, CMSD, Carbon Runoff Area/ fugitive dust emission, surface runoff | Surface Water | Ingestion Dermal |
| | | | Sediments | Ingestion Dermal |

TABLE 97
POTENTIALLY COMPLETE EXPOSURE PATHWAY SUMMARY - HYPOTHETICAL FUTURE SCENARIOS

| Population | Exposure Points | Source/Release Mechanism | Exposure Media | Exposure Route |
|---|---|---|---|---|
| Occupational (Adult Plant or Maintenance Worker) | CAC Ranney Well | Disposal ponds, potliner area/ infiltration | Groundwater | Ingestion |
| Resident (Adult & Child) | Drinking water well in plume | Disposal ponds, potliner area/ infiltration | Groundwater | Ingestion |
| | 004 Backwater Area (Ohio River to out-fall 004 discharge pipe) | 004 Discharge, CMSD, carbon runoff area/ fugitive dust emission, surface runoff | Sediments | Ingestion<br>Dermal |
| | | | Surface Water | Ingestion<br>Dermal |
| | Residence-Downwind of Pond 5 | Specific source areas/fugitive dust, direct contact | Air | Inhalation (Particulates) |
| | Residence-Potliner Area | | | |
| | Residence - Ponds 1-5 | | Soil | Ingestion<br>Dermal |
| | Residence-CRA | | | |
| | Residence-CMSD | | | |
| | Ohio River | Disposal ponds, potliner area/ CMSD, carbon runoff area/ fugitive dust surface runoff | Surface Water | Ingestion<br>Dermal |
| | | | Sediment | Ingestion<br>Dermal |
| | | | Fish | Ingestion |

**TABLE 98**
**SUMMARY OF ESTIMATED EXCESS CANCER RISKS, CURRENT EXPOSURE SCENARIOS**

| Exposed Population | Exposure Point | Exposure Medium | Exposure Route | Cancer Risk |
|---|---|---|---|---|
| Current Worker | Recreational Area | Pond 5 Particulates | Inhalation | 9E-08 |
| Current Resident, Adult | Proctor, WVA | Pond 5 Particulates | Inhalation | 4E-07 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| Current Hypothetical Trespasser | Ohio River | Surface Water | Ingestion | 2E-08 |
| | | Surface Water | Dermal | 8E-10 |
| | | Sediments | Ingestion | 3E-07 |
| | | Sediments | Dermal | 4E-06 |
| Current Hypothetical Trespasser | 004 Backwater | Surface Water | Ingestion | 7E-08 |
| | | Surface Water | Dermal | 1E-09 |
| | | Sediments | Ingestion | 2E-05 |
| | | Sediments | Dermal | 2E-04 |

**TABLE 99**
**SUMMARY OF ESTIMATED EXCESS CANCER RISKS - HYPOTHETICAL FUTURE SCENARIOS[a]**

| Exposed Population | Exposure Point | Exposure Medium | Exposure Route | Cancer Risk |
|---|---|---|---|---|
| Future Plant Worker, No-Pumping Scenario | CAC Drinking Water Well | Groundwater | Ingestion | 1E-03 |
| Future Maintenance Worker, No Pumping Scenario | CAC Drinking Water Well | Groundwater | Ingestion | 5E-04 |
| Future Resident (Adult) | Pond 5 - Downwind | Pond 5 Particulates | Inhalation | 7E-06 |
| Future Resident (Adult) | Future Drinking Water Well | Groundwater | Ingestion | 2E-03 |
| | Ohio River | Surface Water | Ingestion | 4E-08 |
| | Ohio River | Surface Water | Dermal | 1E-09 |
| | Ohio River | Sediments | Ingestion | 7E-07 |
| | Ohio River | Sediments | Dermal | 7E-06 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| | 004 Backwater | Surface Water | Ingestion | 2E-07 |
| | 004 Backwater | Surface Water | Dermal | 2E-09 |
| | 004 Backwater | Sediments | Ingestion | 4E-05 |
| | 004 Backwater | Sediments | Dermal | 3E-04 |

(a) Hypothetical future residential soil pathway scenarios are summarized in Table 94.

TABLE 100
SUMMARY OF ESTIMATED EXCESS CANCER RISKS, HYPOTHETICAL FUTURE RESIDENTIAL EXPOSURE SCENARIOS - SOIL PATHWAYS

| Exposure Point | Exposure Medium | Exposure Route | Cancer Risk |
|---|---|---|---|
| Pond 5 | Soil | Ingestion | 3E-04 |
| | | Dermal | 2E-09 |
| | | Total: | 3E-04 |
| Pond 1-4 | Soil | Ingestion | 1E-03 |
| | | Dermal | 3E-08 |
| | | Total: | 1E-03 |
| Potliner | Soil | Ingestion | 7E-03 |
| | | Dermal | 2E-08 |
| | | Total: | 7E-03 |
| CRDA | Soil | Ingestion | 7E-04 |
| | | Dermal | 4E-04 |
| | | Total: | 1E-03 |
| CMSD | Soil | Ingestion | 5E-03 |
| | | Dermal | 1E-04 |
| | | Total: | 5E-03 |

**TABLE 101**
**SUMMARY OF ESTIMATED NONCARCINOGENIC RISKS, CURRENT EXPOSURE SCENARIOS**

| Exposed Population | Exposure Point | Exposure Medium | Exposure Route | Hazard Index |
|---|---|---|---|---|
| Current Worker | Recreational Area | Pond 5 Particulates | Inhalation | 6E-03 |
| Current Resident Adult | Proctor, WVA | Pond 5 Particulates | Inhalation | 1E-01 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| Current Resident, Child (subchronic) | Proctor, WVA | Pond 5 Particulates | Inhalation | 1E-02 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| Current Hypothetical Trespasser | Ohio River | Surface Water | Ingestion | 2E-03 |
| | | Surface Water | Dermal | 5E-07 |
| | | Sediments | Ingestion | 4E-04 |
| | | Sediments | Dermal | 6E-04 |
| Current Hypothetical Trespasser | Backwater Area (004) | Surface Water | Ingestion | 2E-03 |
| | | Surface Water | Dermal | 3E-07 |
| | | Sediments | Ingestion | 3E-04 |
| | | Sediments | Dermal | 6E-05 |

**TABLE 102**
**SUMMARY OF ESTIMATED NONCARCINOGENIC RISKS - HYPOTHETICAL FUTURE SCENARIOS[a]**

| Exposed Population | Exposure Point | Exposure Medium | Exposure Route | Hazard Index |
|---|---|---|---|---|
| Future Plant Worker, No-Pumping Scenario | CAC Drinking Water Well | Groundwater | Ingestion | 3E+01 |
| Future Maintenance Worker, No-Pumping Scenario | CAC Drinking Water Well | Groundwater | Ingestion | 2E+01 |
| Future Resident, Adult | Pond 5 - Downwind | Pond 5 Particulates | Inhalation | 4E-01 |
| Future Resident, Child | Pond 5 - Downwind | Pond 5 Particulates | Inhalation | 3E-01 |
| Future Resident, Adult | Future Drinking Water Well | Groundwater | Ingestion | 1E+02 |
| | Ohio River | Surface Water | Ingestion | 1E-03 |
| | Ohio River | Surface Water | Dermal | 2E-07 |
| | Ohio River | Sediments | Ingestion | 3E-04 |
| | Ohio River | Sediments | Dermal | 3E-05 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| | 004 Backwater | Surface Water | Ingestion | 1E-03 |
| | 004 Backwater | Surface Water | Dermal | 1E-07 |
| | 004 Backwater | Sediments | Ingestion | 2E-04 |
| | 004 Backwater | Sediments | Dermal | 3E-05 |
| Future Resident, Child | Future Drinking Water Well | Groundwater | Ingestion | 6E+02 |
| | Ohio River | Surface Water | Ingestion | 6E-03 |
| | Ohio River | Surface Water | Dermal | 2E-07 |
| | Ohio River | Sediments | Ingestion | 1E-03 |
| | Ohio River | Sediments | Dermal | 6E-05 |
| | Ohio River | Fish | Ingestion | 1E-01 |
| | 004 Backwater | Surface Water | Ingestion | 7E-03 |
| | 004 Backwater | Surface Water | Dermal | 1E-07 |
| | 004 Backwater | Sediments | Ingestion | 8E-04 |
| | 004 Backwater | Sediments | Dermal | 9E-05 |

(a) Future residential soil pathway scenarios summarized in Table 94.

TABLE 103
SUMMARY OF ESTIMATED NONCARCINOGENIC RISKS -
HYPOTHETICAL FUTURE RESIDENTIAL SOIL PATHWAYS

| Exposure Point | Exposure Point | Hazard Index(a) Resident Adult | Hazard Index(a) Resident Child |
|---|---|---|---|
| Pond 5 | Ingestion | 2E-01 | 1E+00 |
| | Dermal | 5E-05 | 2E-04 |
| | Total: | 2E-01 | 1E+00 |
| Ponds 1-4 | Ingestion | 4E-01 | 3E+00 |
| | Dermal | 4E-04 | 3E-03 |
| | Total: | 4E-01 | 3E+00 |
| Potliner | Ingestion | 1E-01 | 8E-01 |
| | Dermal | 5E-04 | 2E-03 |
| | Total: | 1E-01 | 8E-01 |
| CRDA | Ingestion | 5E-01 | 3E+00 |
| | Dermal | 9E-05 | 5E-04 |
| | Total: | 5E-01 | 3E+00 |
| CMSD | Ingestion | 2E-01 | 1E+00 |
| | Dermal | 3E-03 | 3E-02 |
| | Total: | 2E-01 | 1E+00 |

(a) For the adult this is a chronic hazard index; for the child the hazard index is subchronic.

TABLE 104
SUMMARY OF LEAD EXPOSURES AND EXPECTED BLOOD LEVELS IN CHILDREN (0 TO 6)

| Residential Exposure Point | Medium | Assumed Concentration(a) | Predicted Blood Lead Values: Geometric Mean, µg/dL | Percent Below 10 µg/dL | Percent Below 15 µg/dL |
|---|---|---|---|---|---|
| Current, Proctor | Soil/Dust | 200 µg/g* | 3.24 | 99.94 | 100 |
| | Water | 4 µg/L* | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, Pond 5 (downwind) | Soil/Dust | 200 µg/g* | 4.78 | 98.37 | 99.95 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, on Pond 5 | Soil/Dust | 29 µg/g | 3.34 | 99.92 | 100 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, Ponds 1-4 | Soil/Dust | 140 µg/g | 4.28 | 99.26 | 99.99 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, Potliner | Soil/Dust | 27 µg/g | 3.32 | 99.93 | 100 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, CRA | Soil/Dust | 53 µg/g | 3.54 | 99.86 | 100 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |
| Future, CMSD | Soil/Dust | 83 µg/g | 3.79 | 99.7 | 100 |
| | Water | 28 µg/L | | | |
| | Air | 0.2 µg/m3* | | | |

(a) * Indicates default value used in model.

TABLE 105

ESTIMATED CUMULATIVE EXCESS CANCER RISKS

| Exposed Population (Exposure Point) | Hypothetical Future Scenarios | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Soil(a) | Air(b) | Ground-Water(c) | River(d) | 004 Back-Water(d) | Sub-Total(e) | Fish Ingestion(f) | Total(g) |
| Future Maintenance Worker | --(h) | 9E-08 | 5E-04 | -- | -- | 5E-04 | -- | 5E-04 |
| Future Plant Worker | -- | -- | 1E-03 | -- | -- | 1E-03 | -- | 1E-03 |
| Future Resident (Downwind Pond 5) | -- | 7E-06 | 2E-03 | 8E-06 | 3E-04 | 2E-03 | 1E-01 | 1E-01 |
| Future Resident (Pond 5) | 3E-04 | -- | 2E-03 | 8E-06 | 3E-04 | 3E-03 | 1E-01 | 1E-01 |
| Future Resident (Ponds 1-4) | 1E-03 | -- | 2E-03 | 8E-06 | 3E-04 | 3E-03 | 1E-01 | 1E-01 |
| Future Resident (Potliner) | 7E-03 | -- | 2E-03 | 8E-06 | 3E-04 | 9E-03 | 1E-01 | 1E-01 |
| Future Resident (Carbon Runoff) | 1E-03 | -- | 2E-03 | 8E-06 | 3E-04 | 3E-03 | 1E-01 | 1E-01 |
| Future Resident (Construction Material Scrap Dump) | 5E-03 | -- | 2E-03 | 8E-06 | 3E-04 | 7E-03 | 1E-01 | 1E-01 |

(a) Includes ingestion and dermal exposures. Values from Table 5-3 of BRA Report (see Appendix R).

(b) From Table 5-1 of BRA Report (see Appendix R). Value for current worker assumed to equal value for future maintenance worker.

(c) From Table 5-2 of BRA Report (see Appendix R).

(d) From Table 5-2 of BRA Report (see Appendix R). Includes both ingestion of and dermal contact with surface water and sediments. Fish ingestion scenario not included here.

(e) Exclusive of fish ingestion scenario.

(f) From Table 5-5 of BRA Report (see Appendix R).

(g) Total is the sum of the subtotal column and the fish ingestion estimate.

(h) "--" indicates pathway not quantified.

TABLE 106

RECOMMENDED REMEDIAL ACTION OBJECTIVES

| ENVIRONMENTAL MEDIA | REMEDIAL ACTION OBJECTIVES |
|---|---|
| Ground Water | For Human Health:<br><br>Reduce the cumulative cancer risk for carcinogens under the future residential exposure scenario to $10^{-4}$ to $10^{-6}$ for the ingestion exposure pathways.<br><br>Reduce the cumulative health hazard index for non-carcinogens to less than 1.0 under the future residential exposure scenario.<br><br>For Environmental Protection:<br><br>Remediate ground water to concentrations that do not result in adverse affects (i.e., toxicity or bioaccumulation potential) in exposed organisms and to prevent degradation of overall environmental quality. |
| Soil | For Human Health:<br><br>Reduce the cumulative cancer risk for carcinogens under the future residential exposure scenario to $10^{-4}$ to $10^{-6}$ for the ingestion, inhalation, and direct contact exposure pathways.<br><br>Reduce the cumulative health hazard index for non-carcinogens to less than 1.0 under the future residential exposure scenario.<br><br>For Environmental Protection:<br><br>Remediate soils concentrations that do not result in adverse affects (i.e., toxicity or bioaccumulation potential) in exposed organisms and to prevent degradation of overall environmental quality. |

TABLE 106 (CONT.)

RECOMMENDED REMEDIAL ACTION OBJECTIVES

| ENVIRONMENTAL MEDIA | REMEDIAL ACTION OBJECTIVES |
|---|---|
| Sludges | For Human Health:<br><br>Reduce the cumulative cancer risk for carcinogens under the future residential exposure scenario to $10^{-4}$ to $10^{-6}$ for the ingestion, inhalation, and direct contact exposure pathways.<br><br>Reduce the cumulative health hazard index for non-carcinogens to less than 1.0 under the future residential exposure scenario.<br><br>For Environmental Protection:<br><br>Remediate sludges to concentrations that do not result in adverse affects (i.e., toxicity or bioaccumulation potential) in exposed organisms and to prevent degradation of overall environmental quality. |
| Solid Wastes | For Human Health:<br><br>Reduce the cumulative cancer risk for carcinogens under the future residential exposure scenario to $10^{-4}$ to $10^{-6}$ for the ingestion, inhalation, and direct contact exposure pathways.<br><br>Reduce the cumulative health hazard index for non-carcinogens to less than 1.0 under the future residential exposure scenario.<br><br>For Environmental Protection:<br><br>Remediate migration of constituents that would result in ground water contamination in excess concentrations for the constituents. |

TABLE 106 (CONT.)

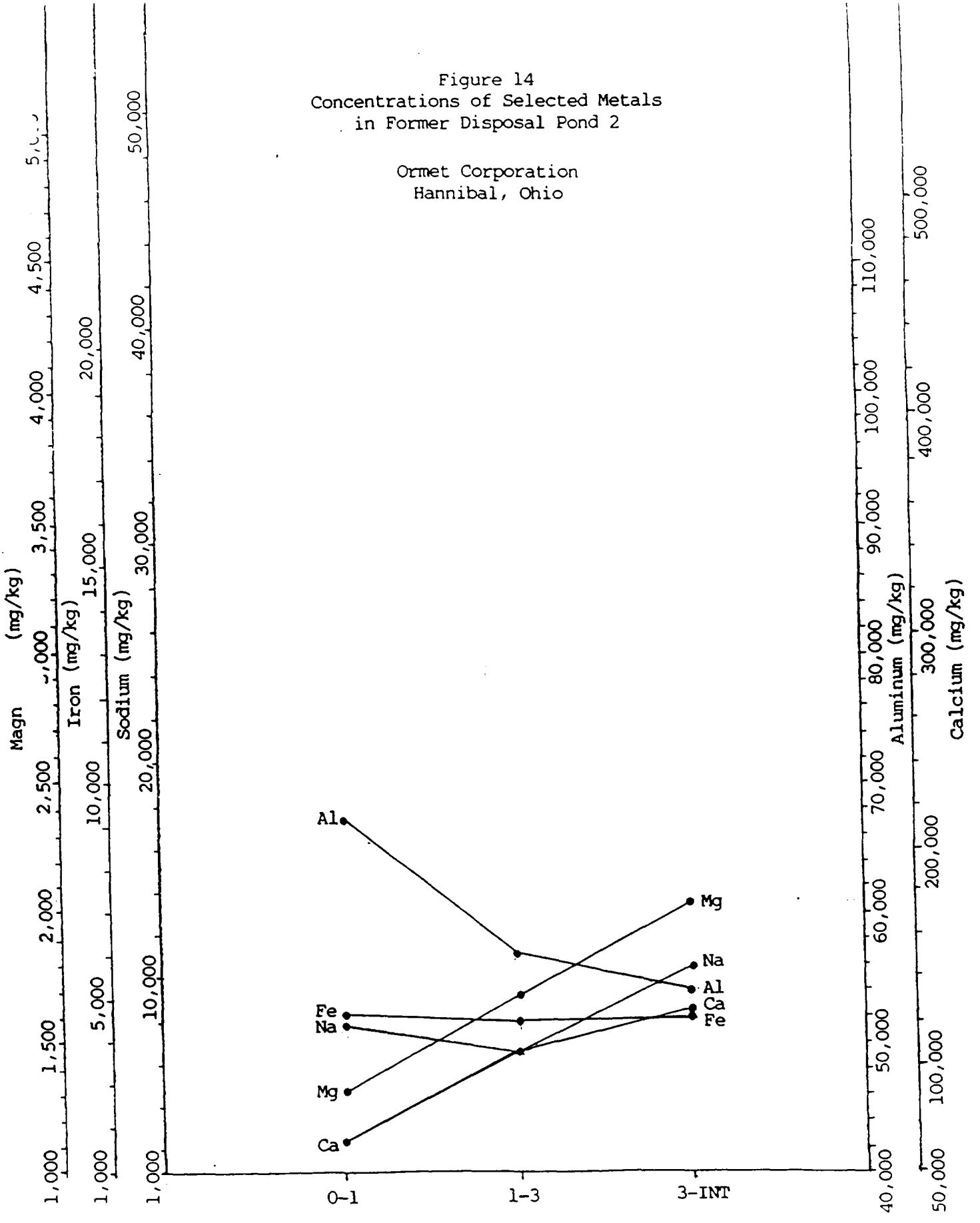
RECOMMENDED REMEDIAL ACTION OBJECTIVES

| ENVIRONMENTAL MEDIA | REMEDIAL ACTION OBJECTIVES |
|---|---|
| Sediments | For Human Health:<br><br>Reduce the cumulative cancer risk for carcinogens under the future residential exposure scenario to $10^{-4}$ to $10^{-6}$ for the ingestion, inhalation, and direct contact exposure pathways.<br><br>Reduce the cumulative health hazard index for non-carcinogens to less than 1.0 under the future residential exposure scenario.<br><br>For Environmental Protection:<br><br>Remediate sediments to concentrations that do not result in adverse affects (i.e., toxicity or bioaccumulation potential) in exposed organisms and to prevent degradation of overall environmental quality. |

# FIGURES

Figure 14
Concentrations of Selected Metals
in Former Disposal Pond 2

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 15
Concentration of Selected Parameters
in Former Disposal Pond 2

Ormet Corporation
Hannibal, Ohio

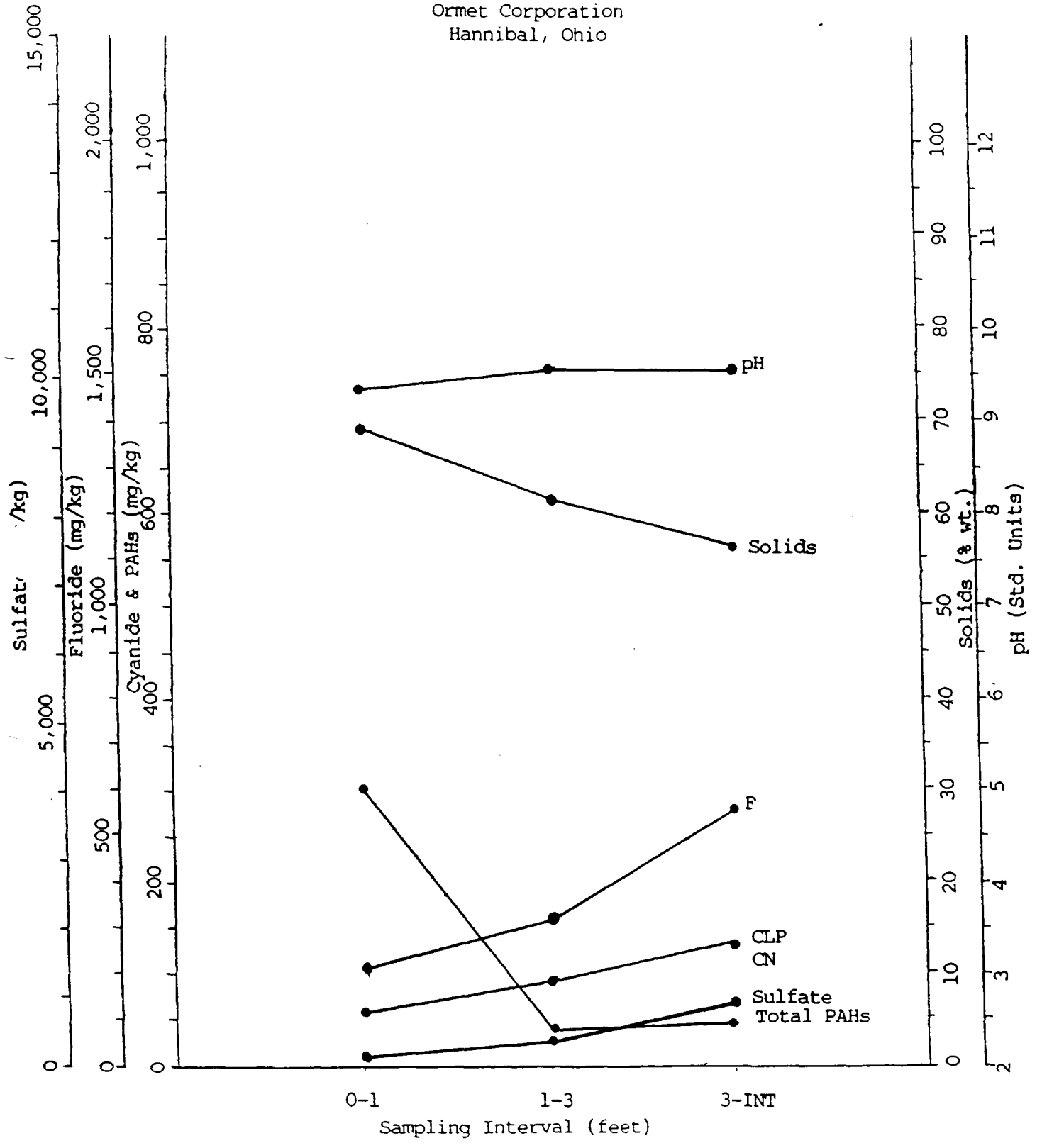


Figure 16
Concentrations of Selected Metals
in Former Disposal Pond 3

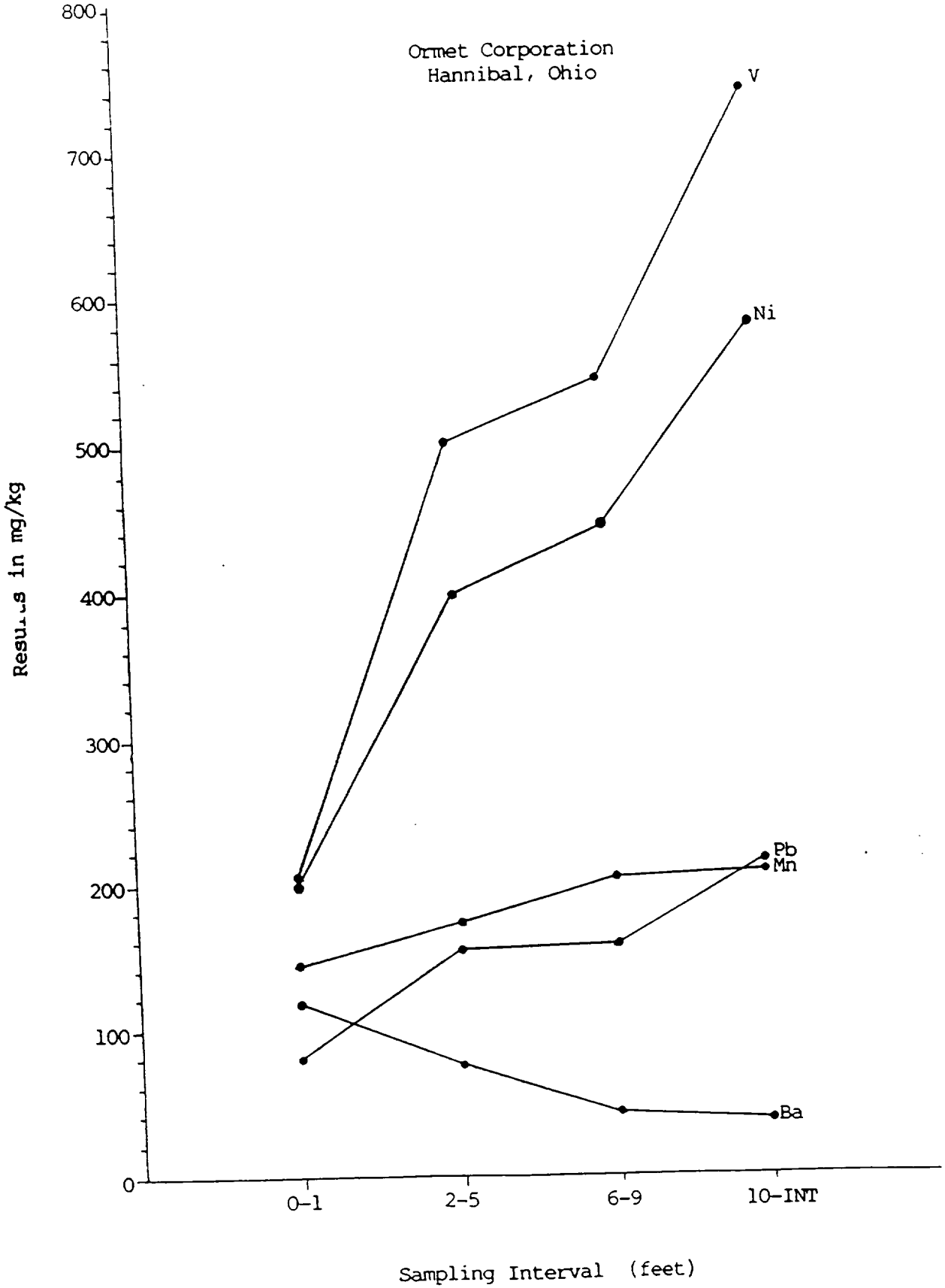
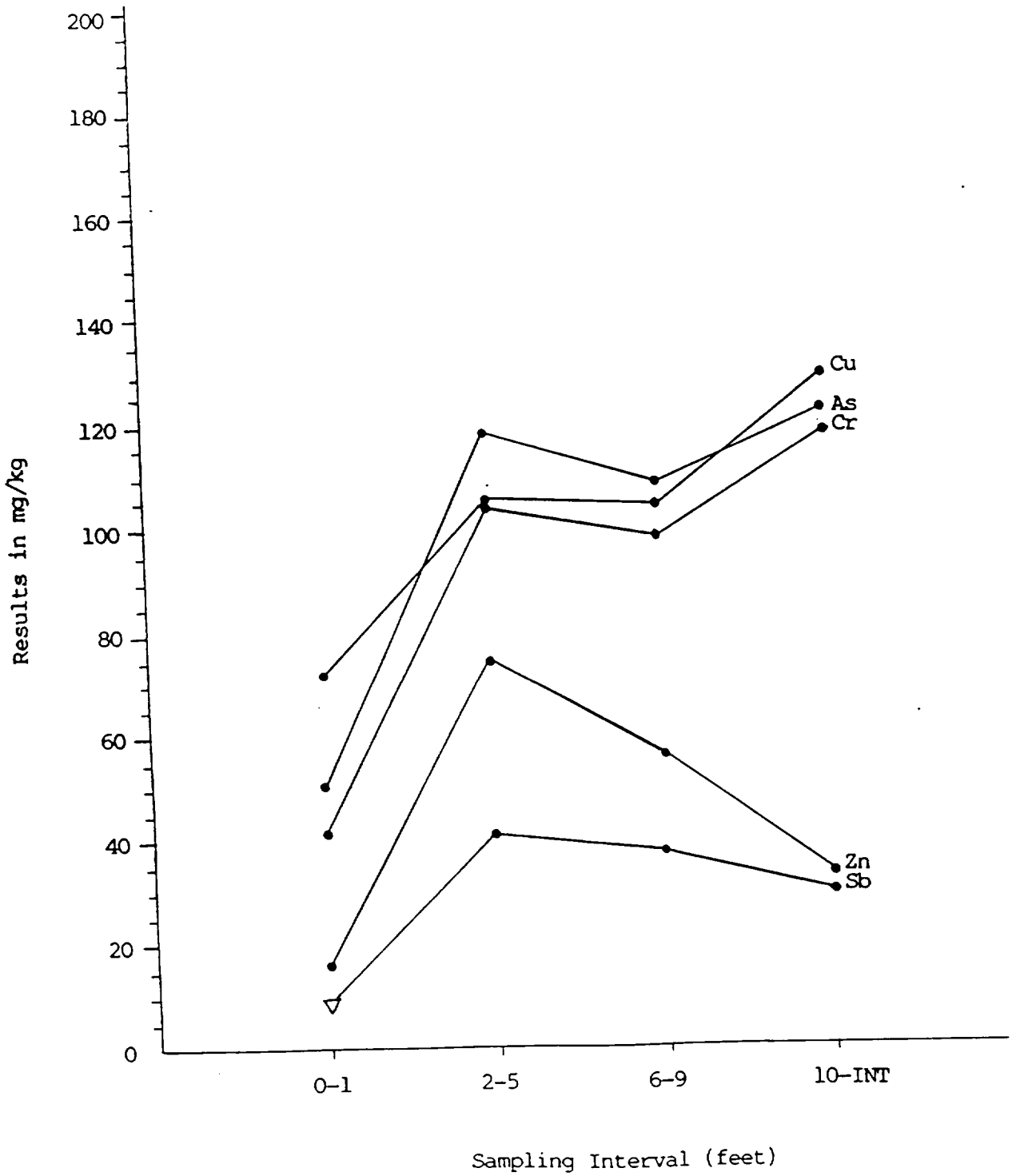


Figure 17
Concentrations of Selected Metals
in Former Disposal Pond 3

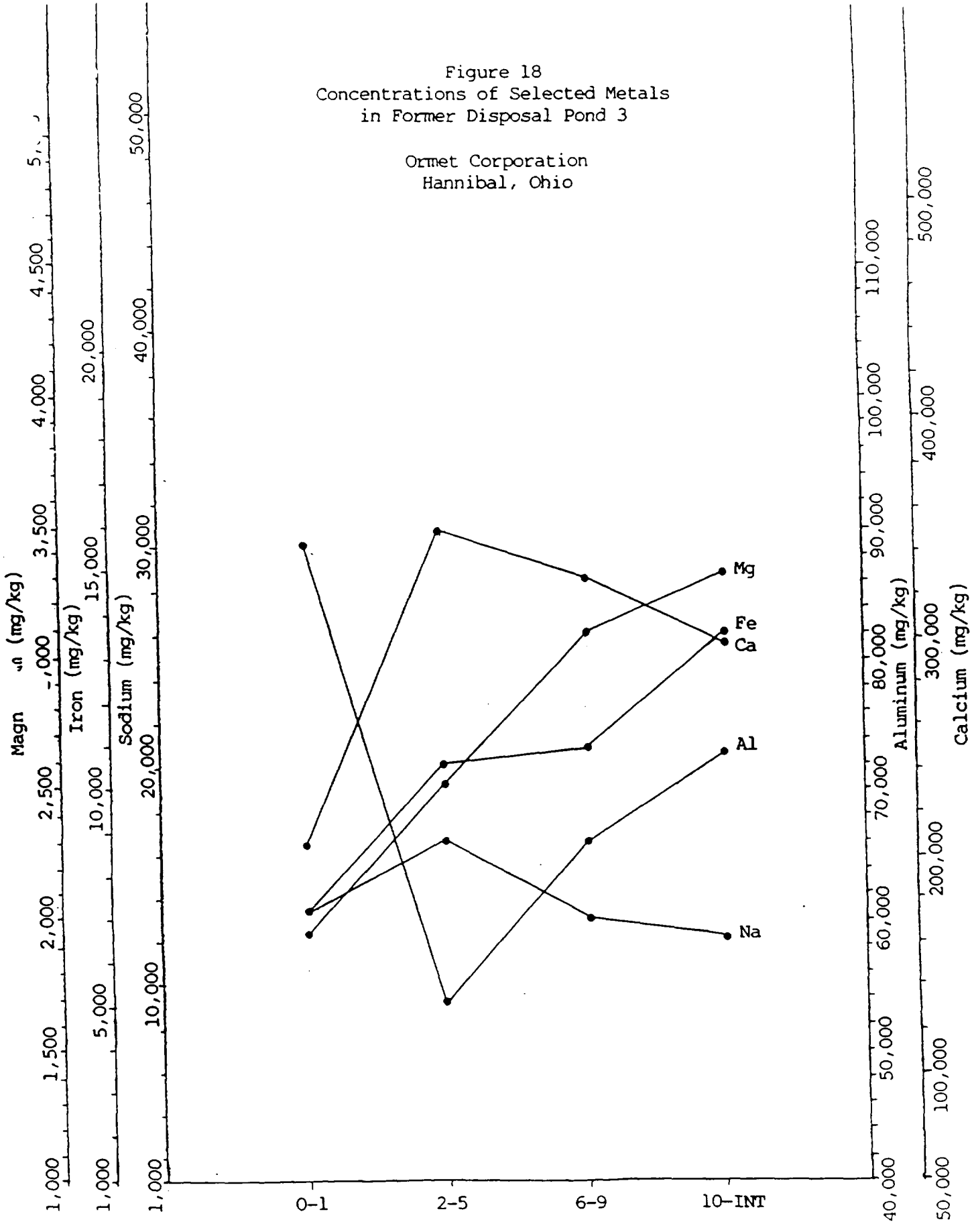
Ormet Corporation
Hannibal, Ohio




▽ - Parameter was below detection, the plotted value is the detection limit.

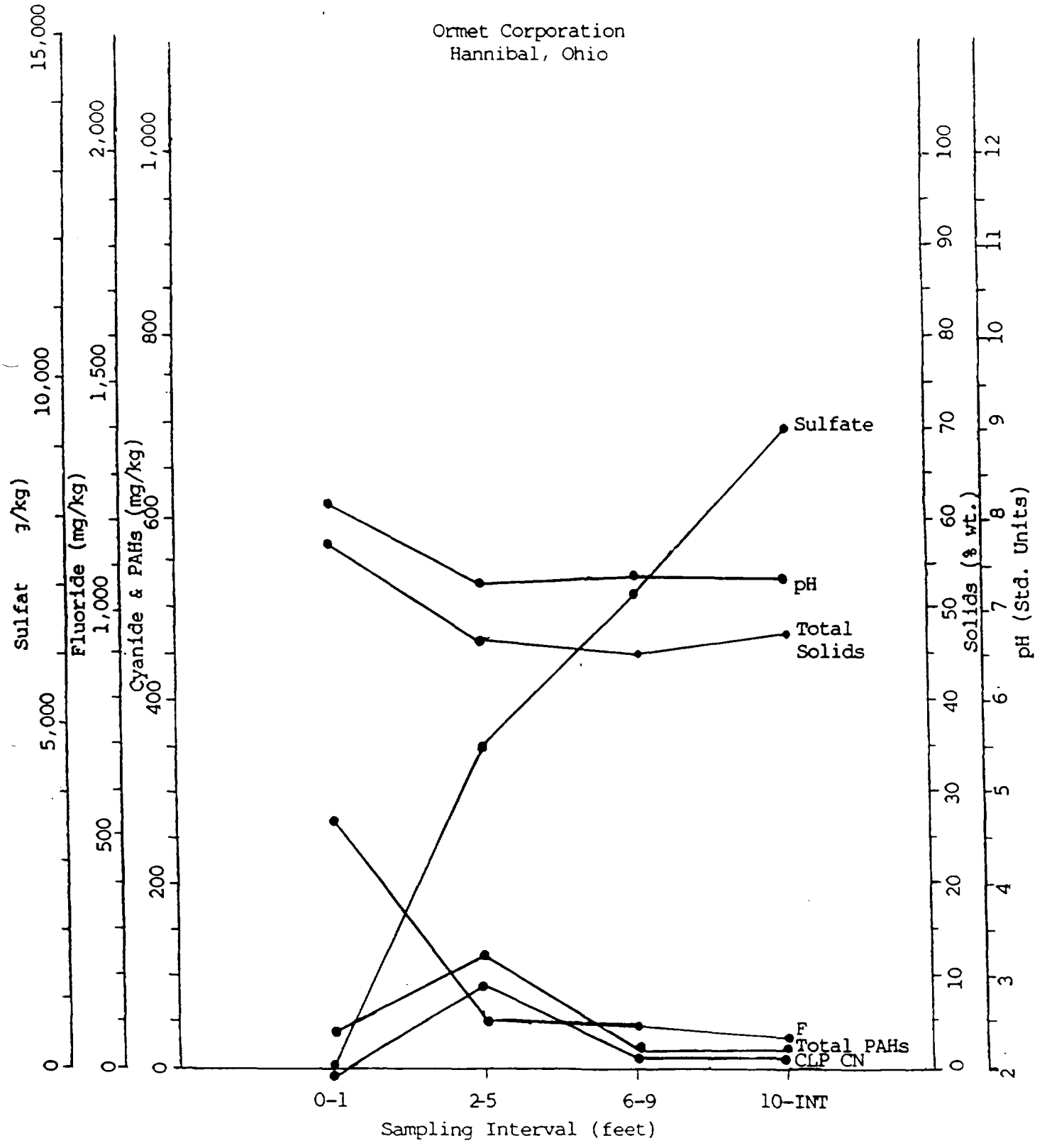
Figure 18
Concentrations of Selected Metals
in Former Disposal Pond 3

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 19
Concentrations of Selected Parameters
in Former Disposal Pond 3




▽ - Parameter was below detection, the plotted value is the detection limit.

Figure 21
Concentrations of Selected Metals
in Former Disposal Pond 4A

Ormet Corporation
Hannibal, Ohio

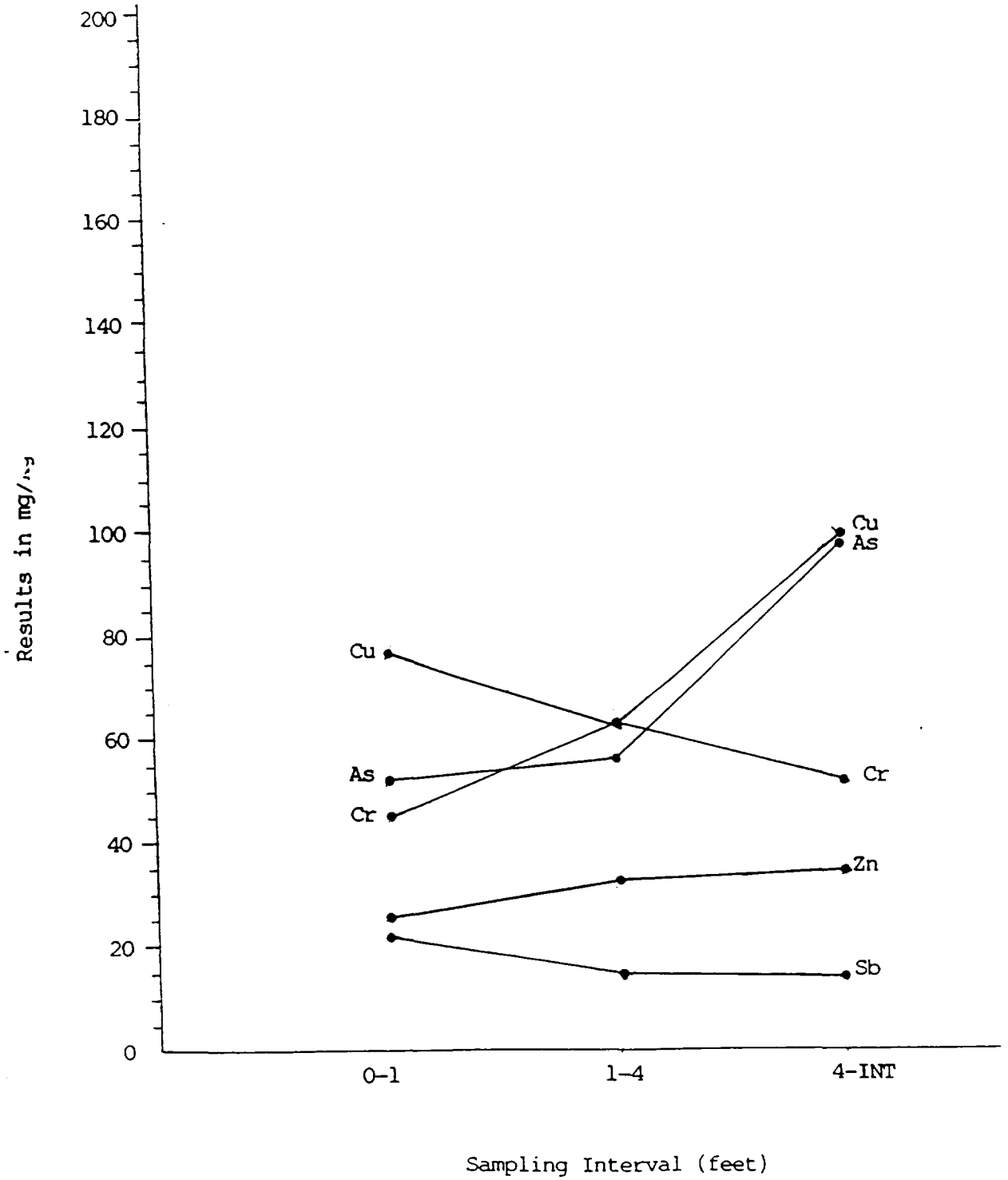


Figure 20
Concentrations of Selected Metals
in Former Disposal Pond 4A

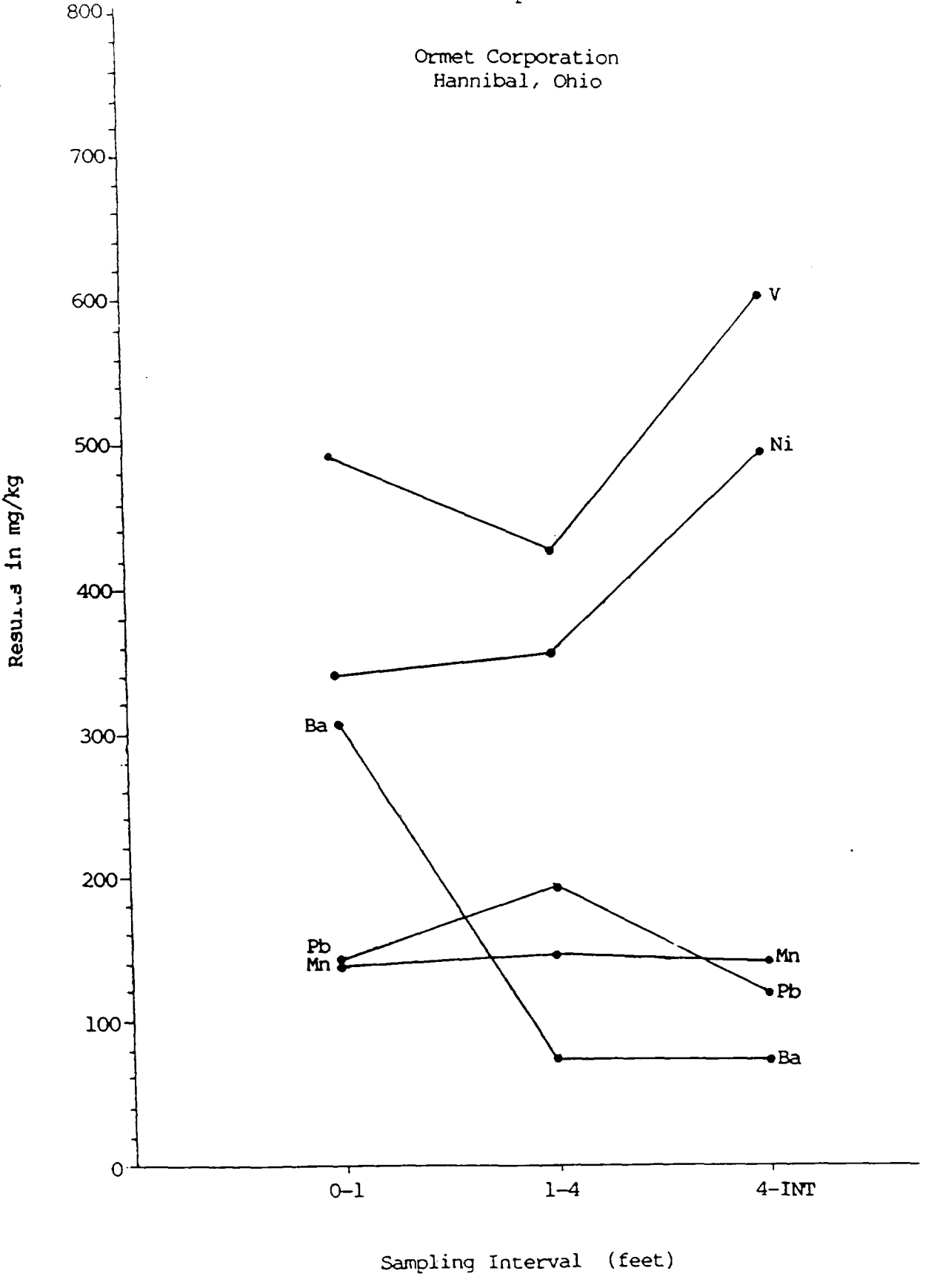


Figure 23
Concentrations of Selected Metals
in Former Disposal Pond 4A

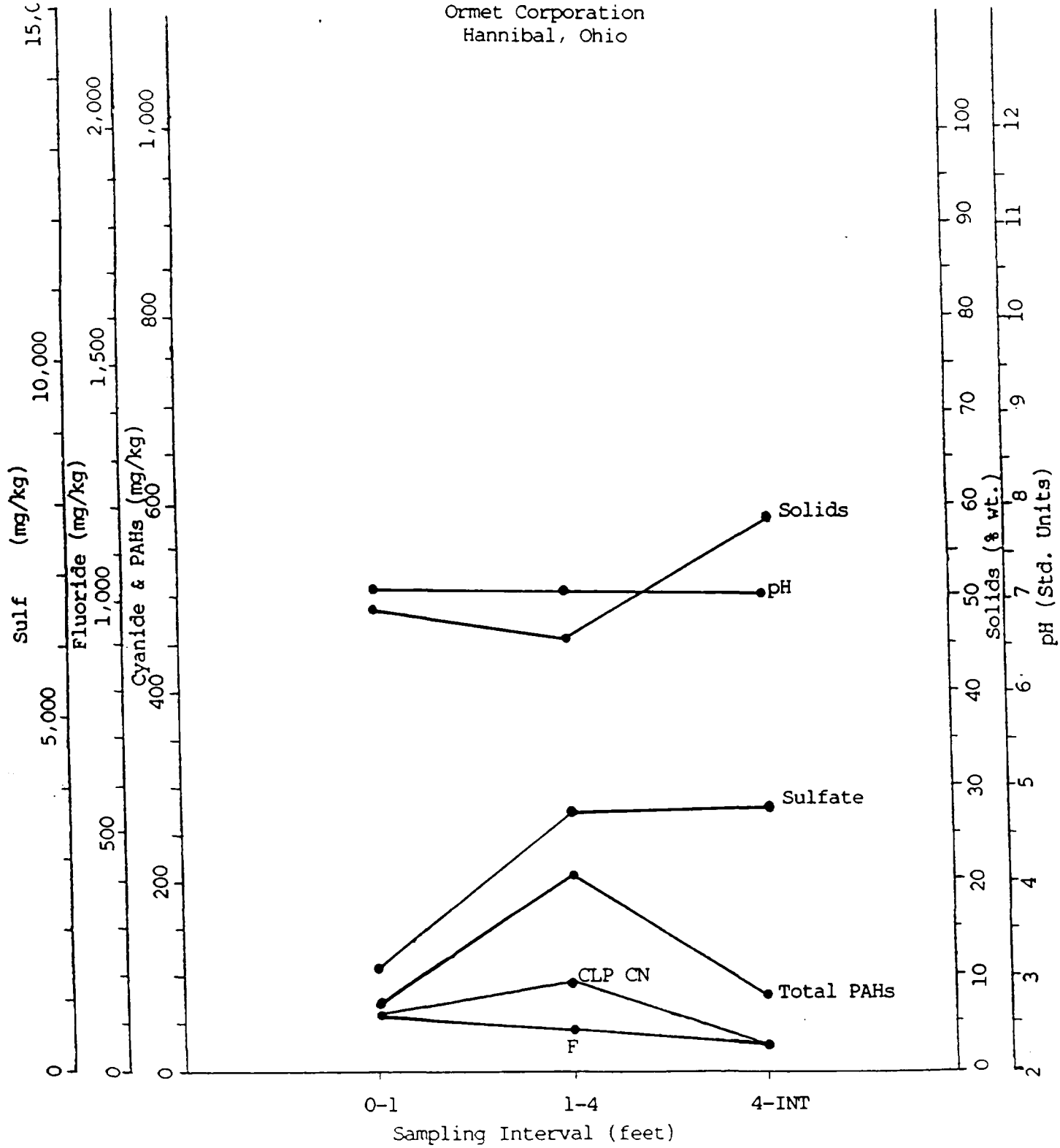


Figure 24
Concentrations of Selected Metals
in Former Disposal Pond 4B

Ormet Corporation
Hannibal, Ohio

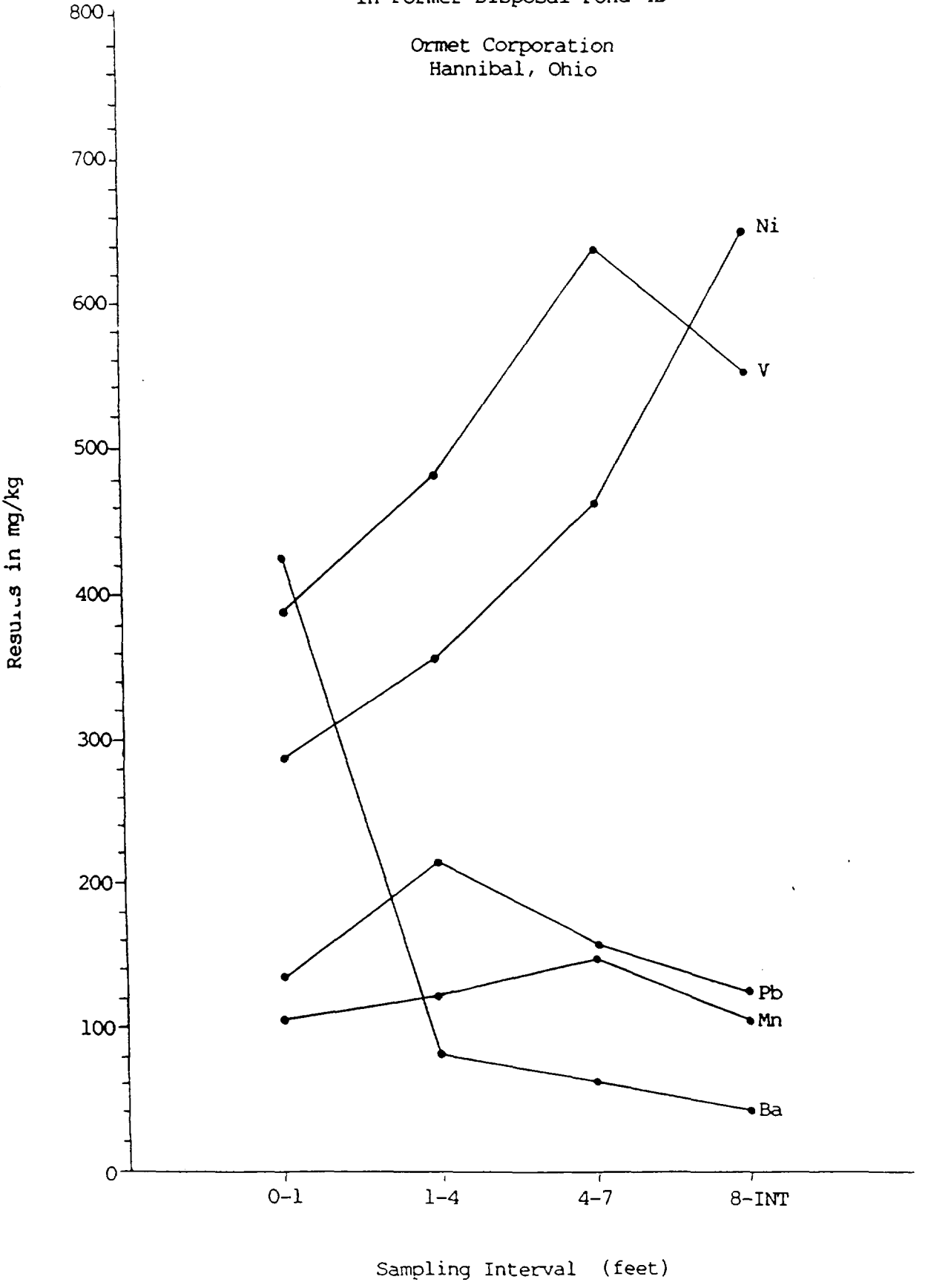


Figure 25
Concentrations of Selected Metals
in Former Disposal Pond 4B

Ormet Corporation
Hannibal, Ohio

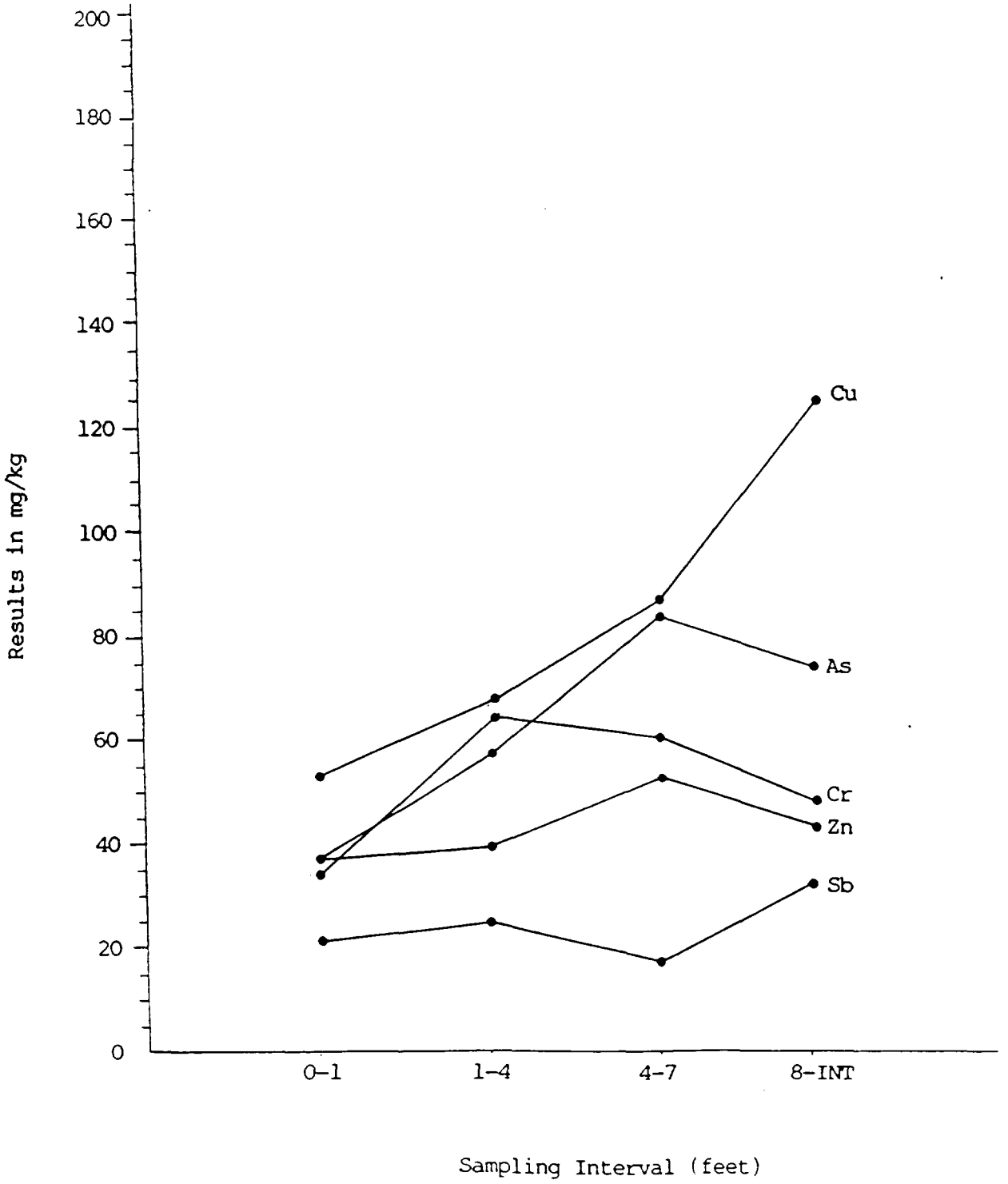
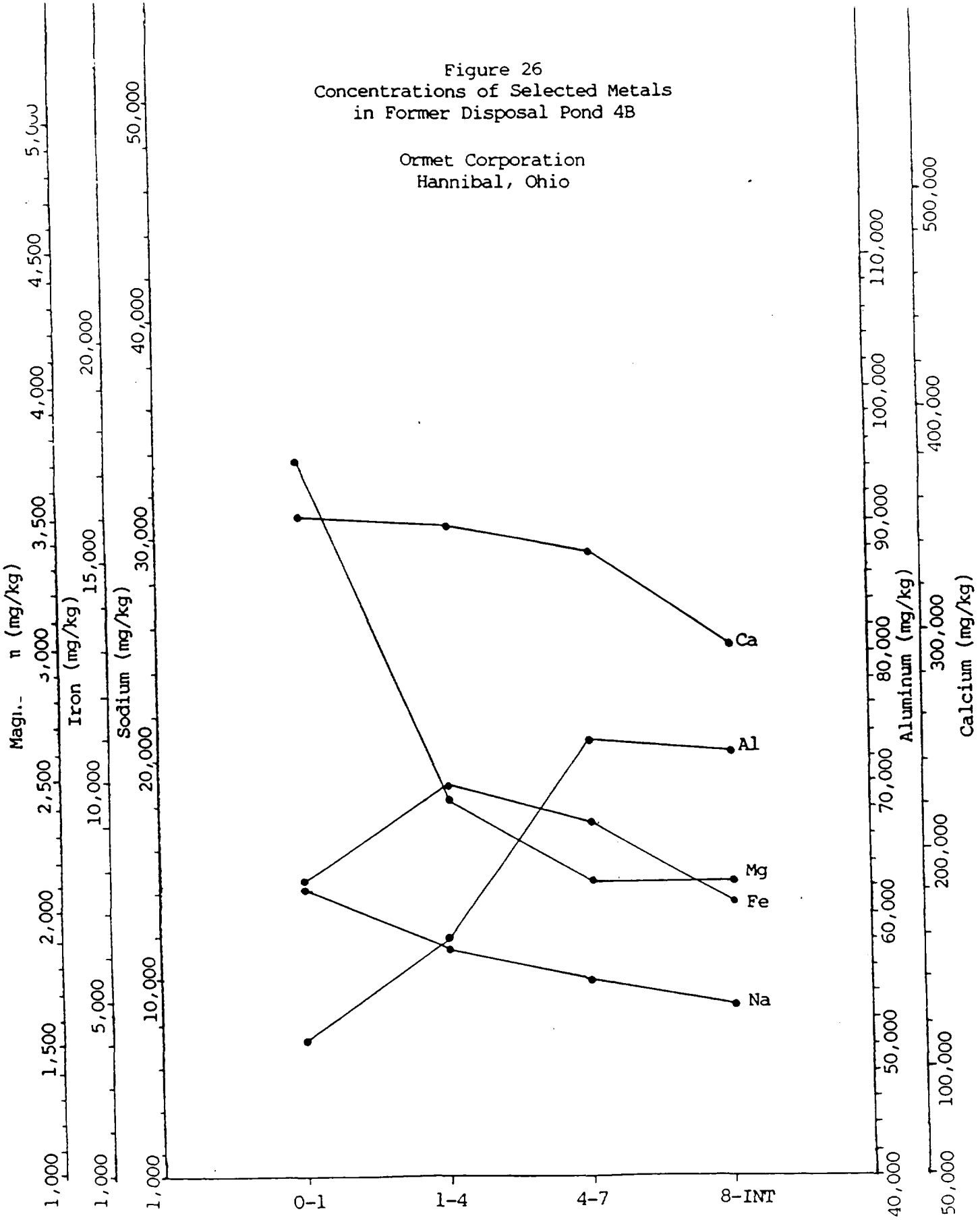


Figure 26
Concentrations of Selected Metals
in Former Disposal Pond 4B

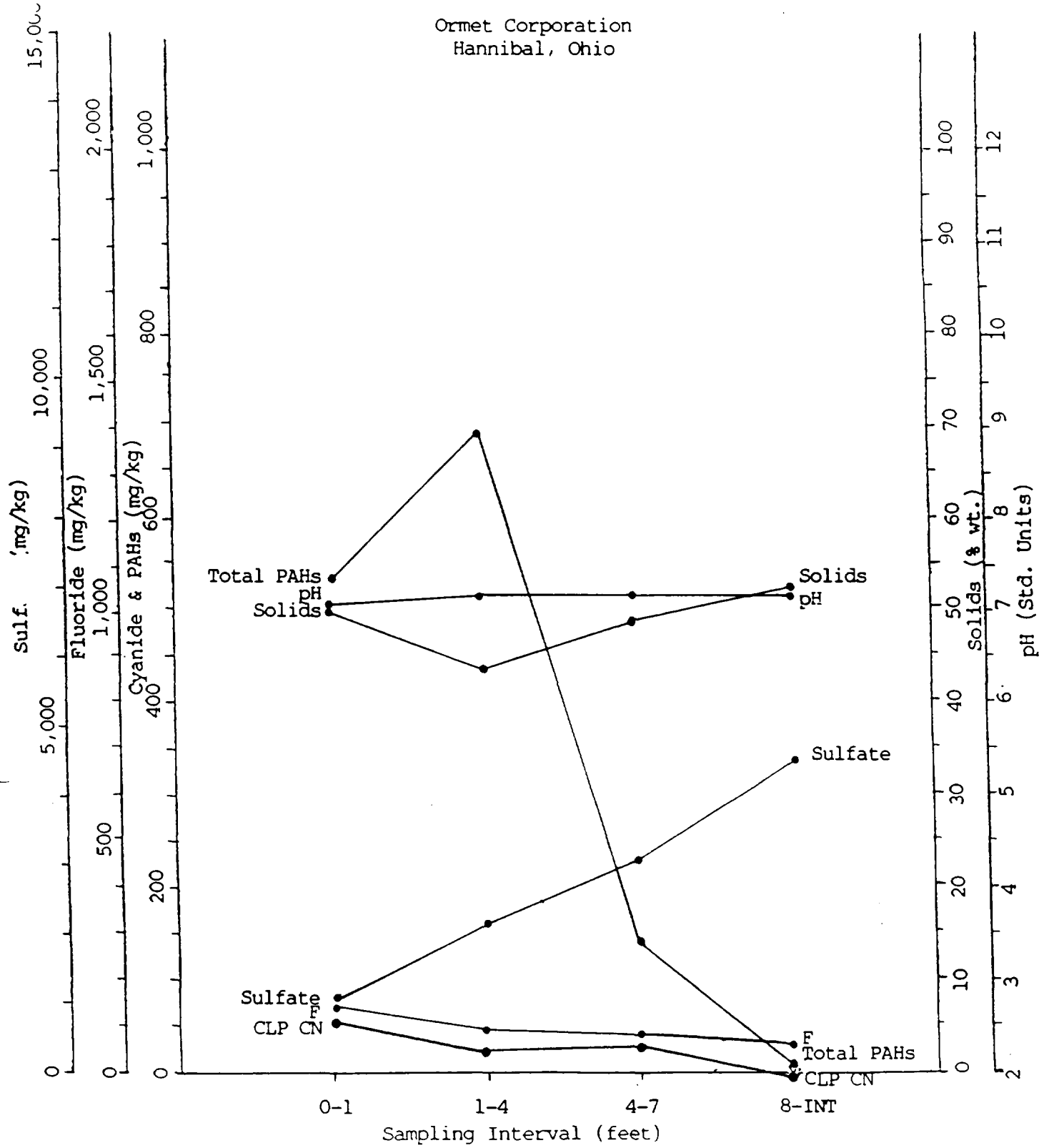
Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 27
Concentrations of Selected Parameters
in Former Disposal Pond 4B

Ormet Corporation
Hannibal, Ohio




▽ - Parameter was below detection, the plotted value is the detection limit.

Figure 28
Concentrations of Selected Metals
in Former Disposal Pond 5A

Ormet Corporation
Hannibal, Ohio

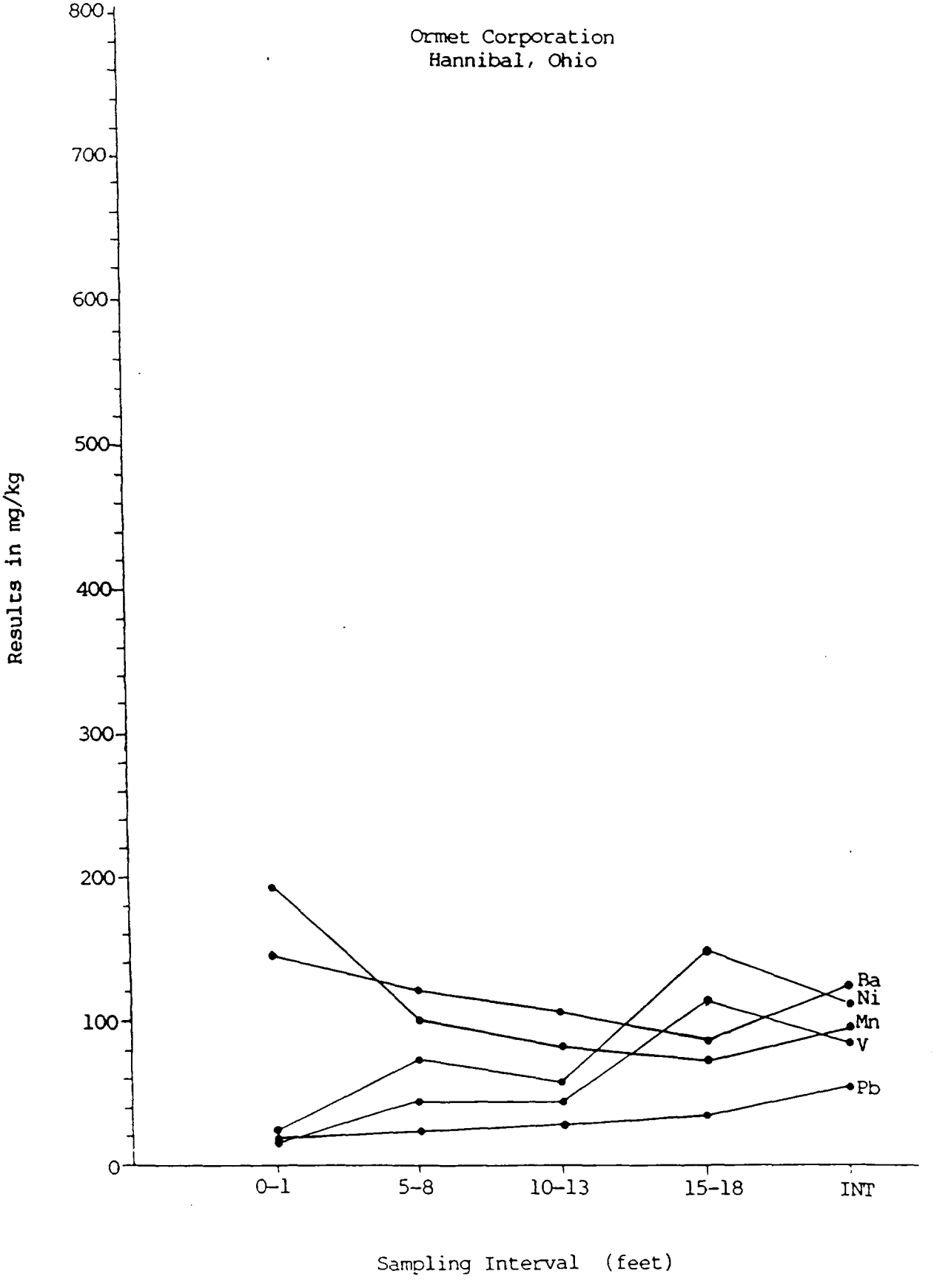


Figure 29
Concentrations of Selected Metals
in Former Disposal Pond 5A

Ormet Corporation
Hannibal, Ohio

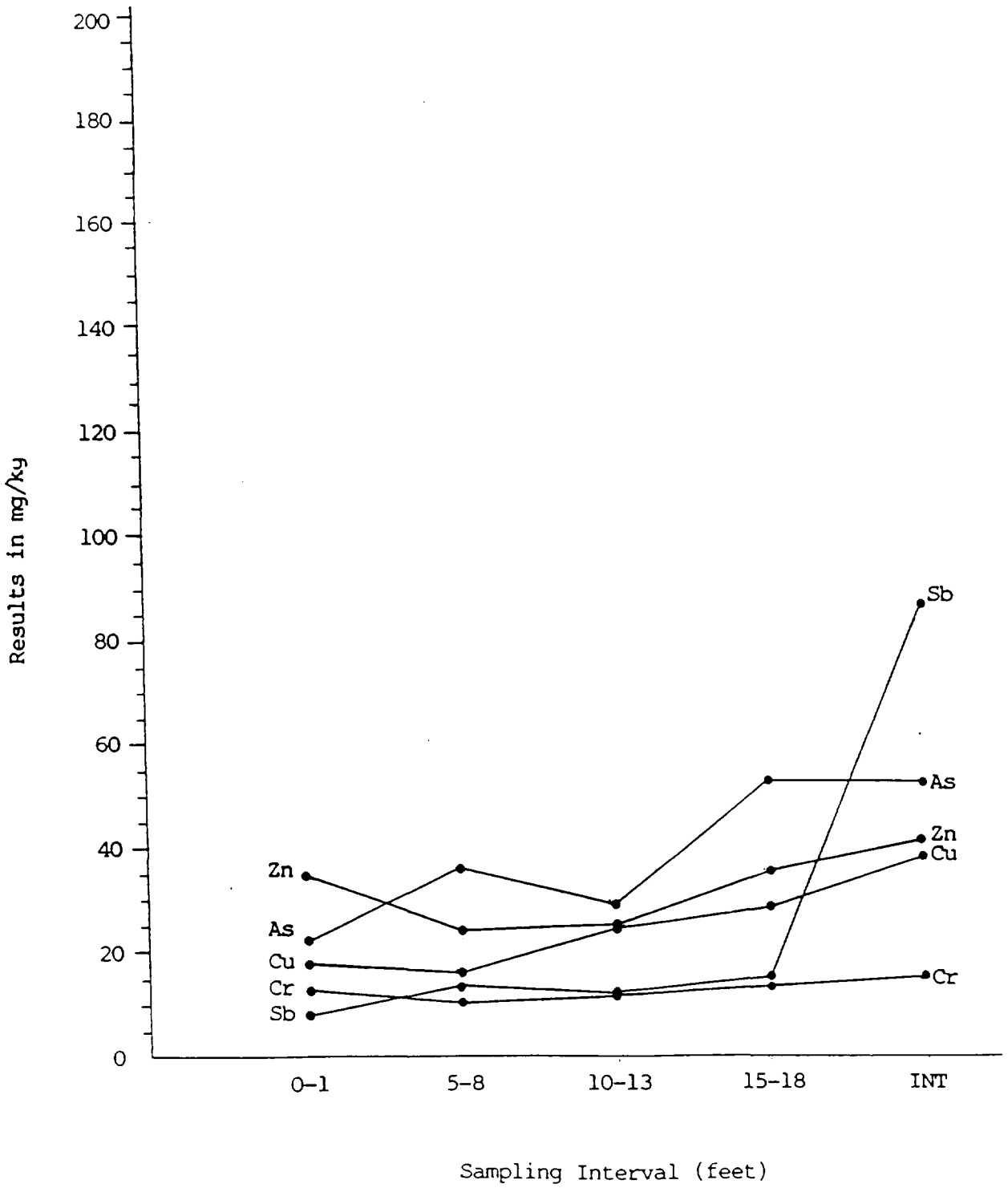
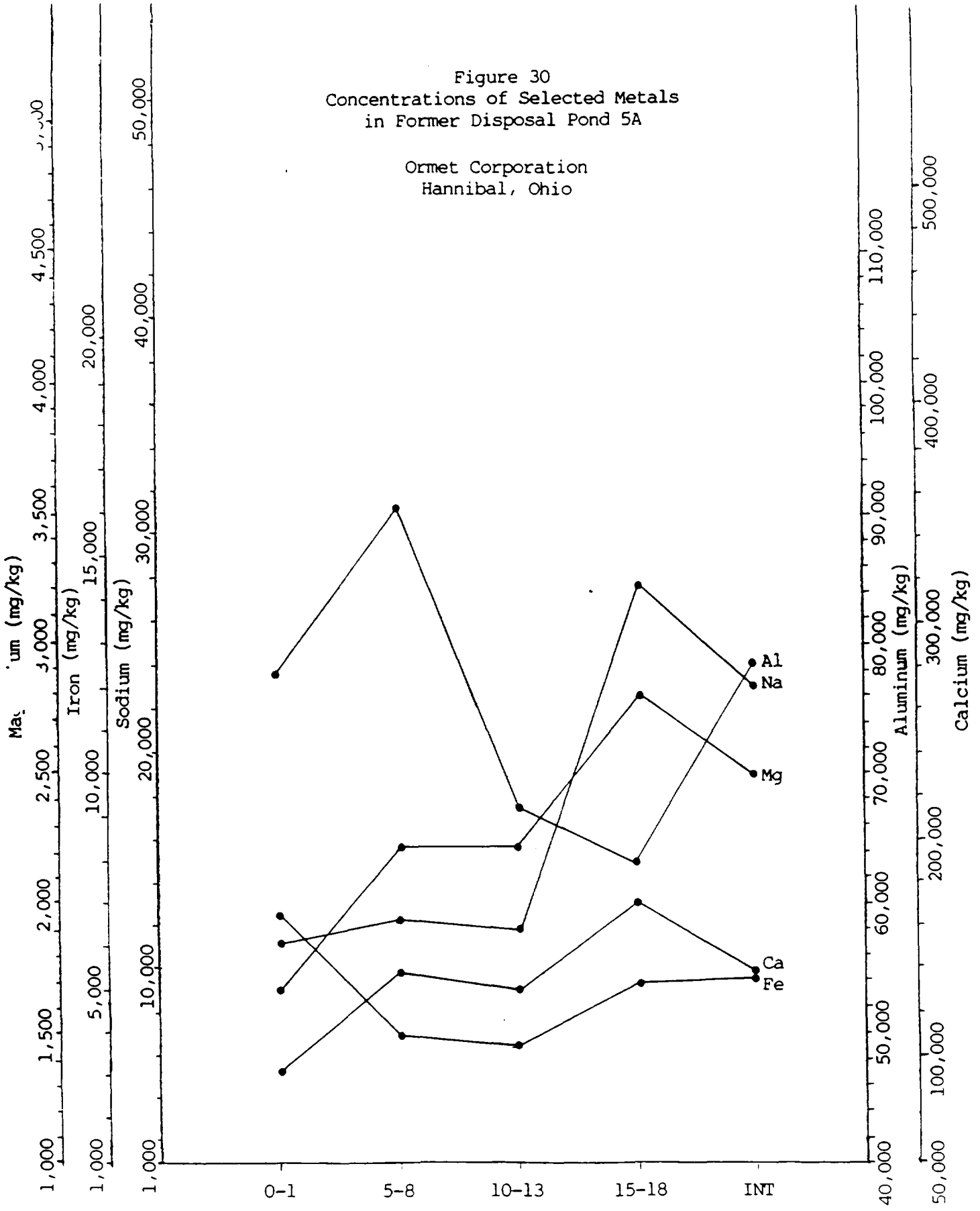


Figure 30
Concentrations of Selected Metals
in Former Disposal Pond 5A

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 31
Concentrations of Selected Parameters
in Former Disposal Pond 5A

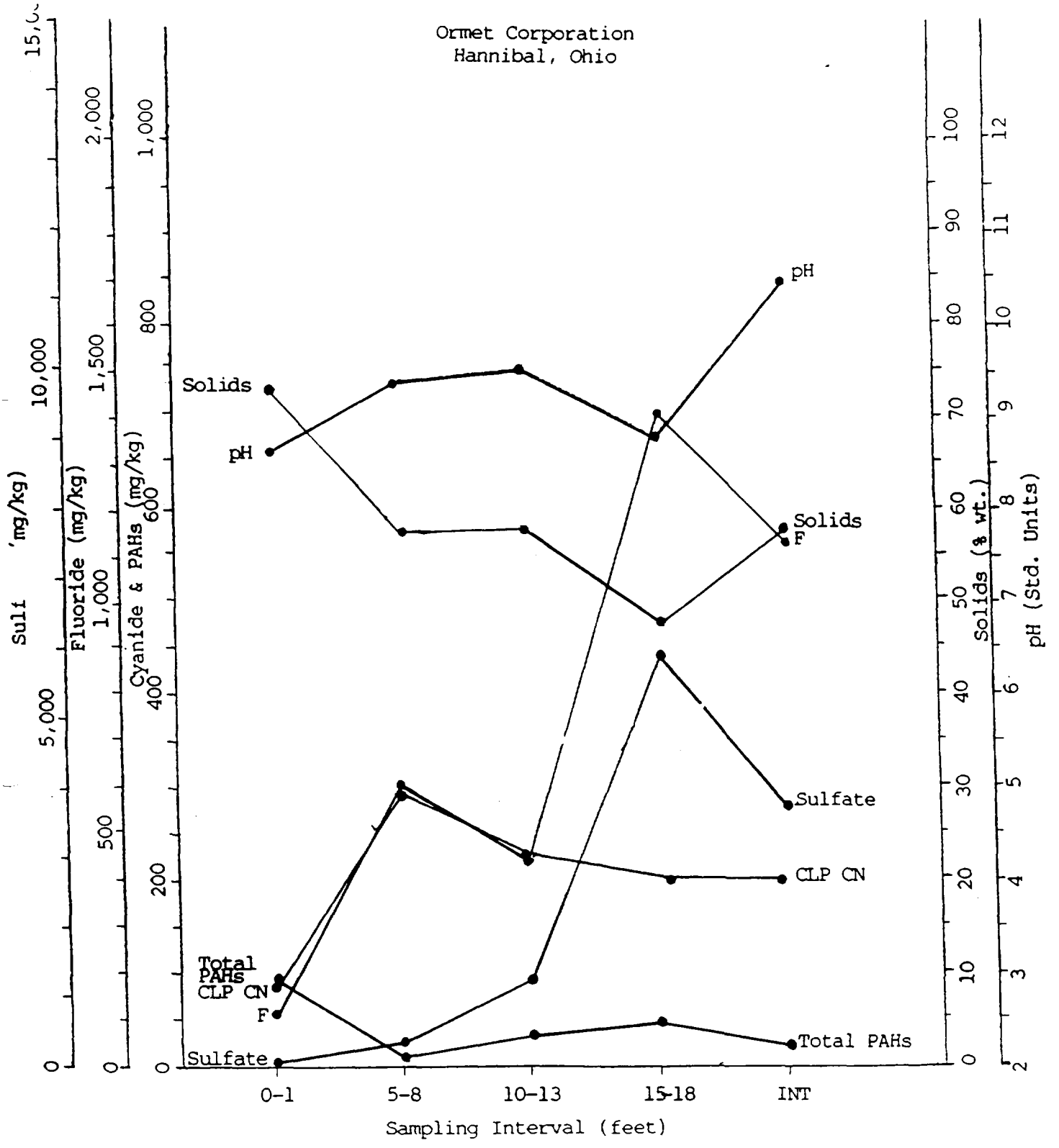


Figure 32
Concentrations of Selected Metals
in Former Disposal Pond 5B

Ormet Corporation
Hannibal, Ohio

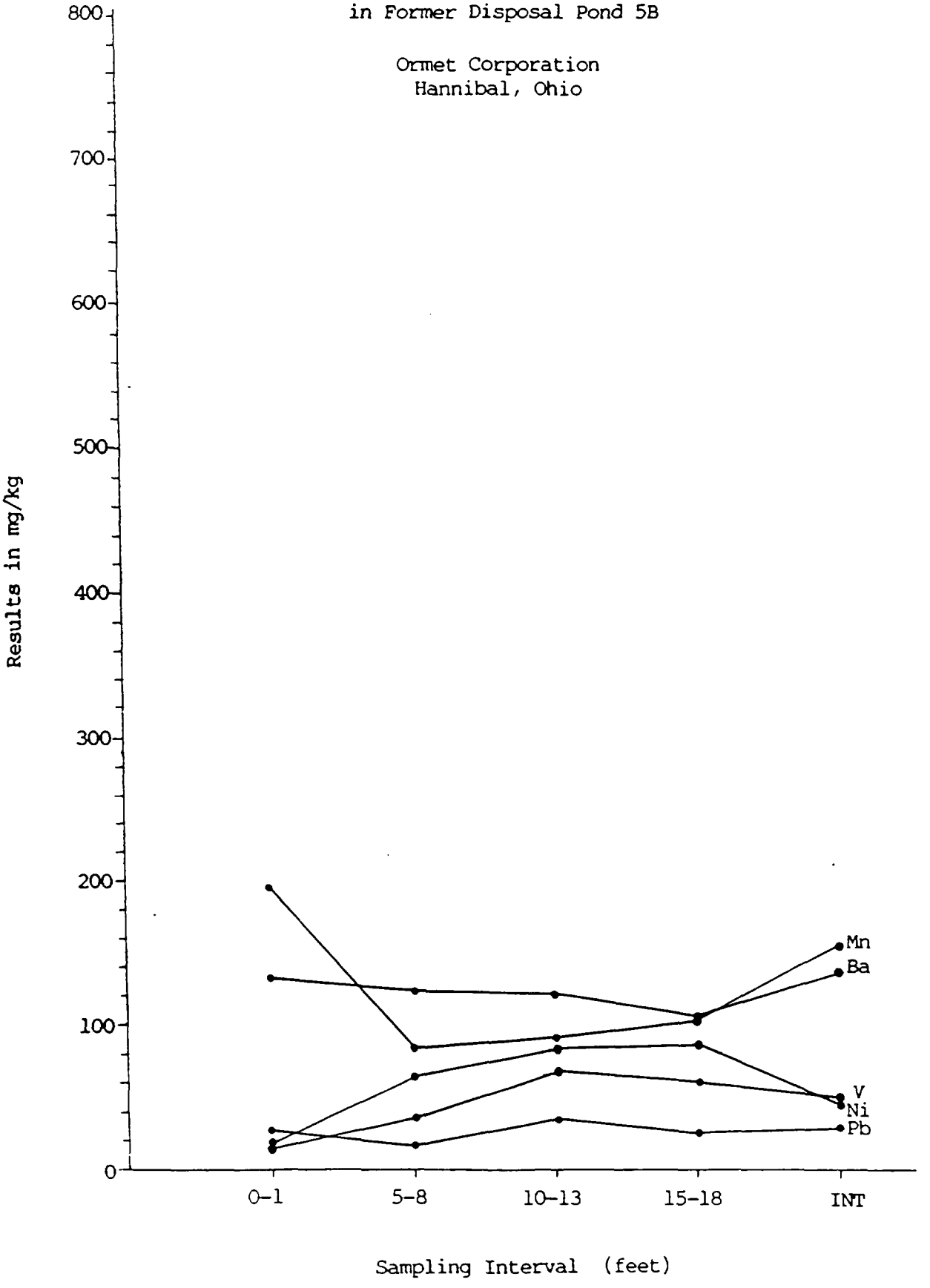
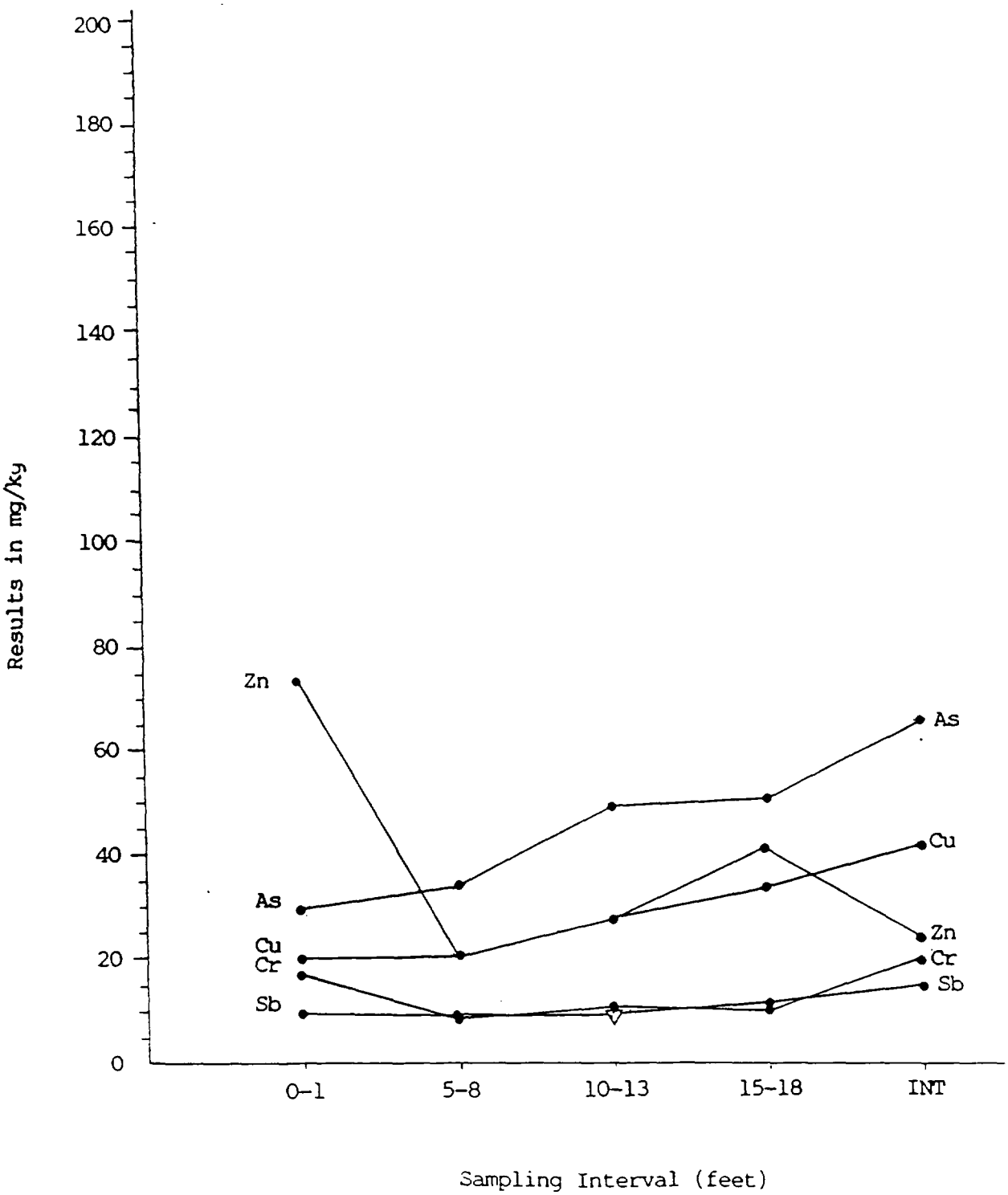


Figure 33
Concentrations of Selected Metals
in Former Disposal Pond 5B

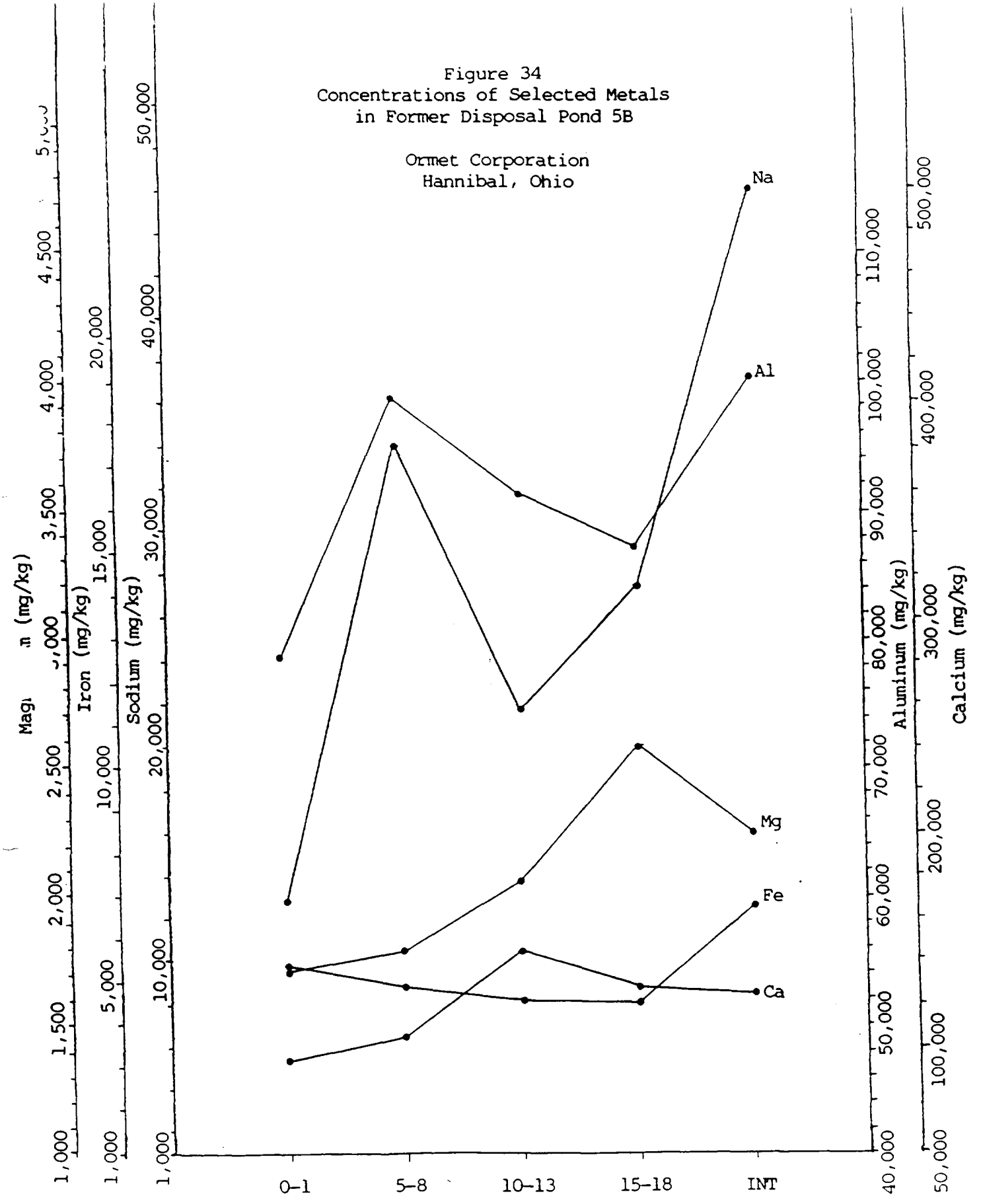
Ormet Corporation
Hannibal, Ohio




▽ - Parameter was below detection, the plotted value is the detection limit.

Figure 34
Concentrations of Selected Metals
in Former Disposal Pond 5B

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 35
Concentrations of Selected Parameters
in former Disposal 5B

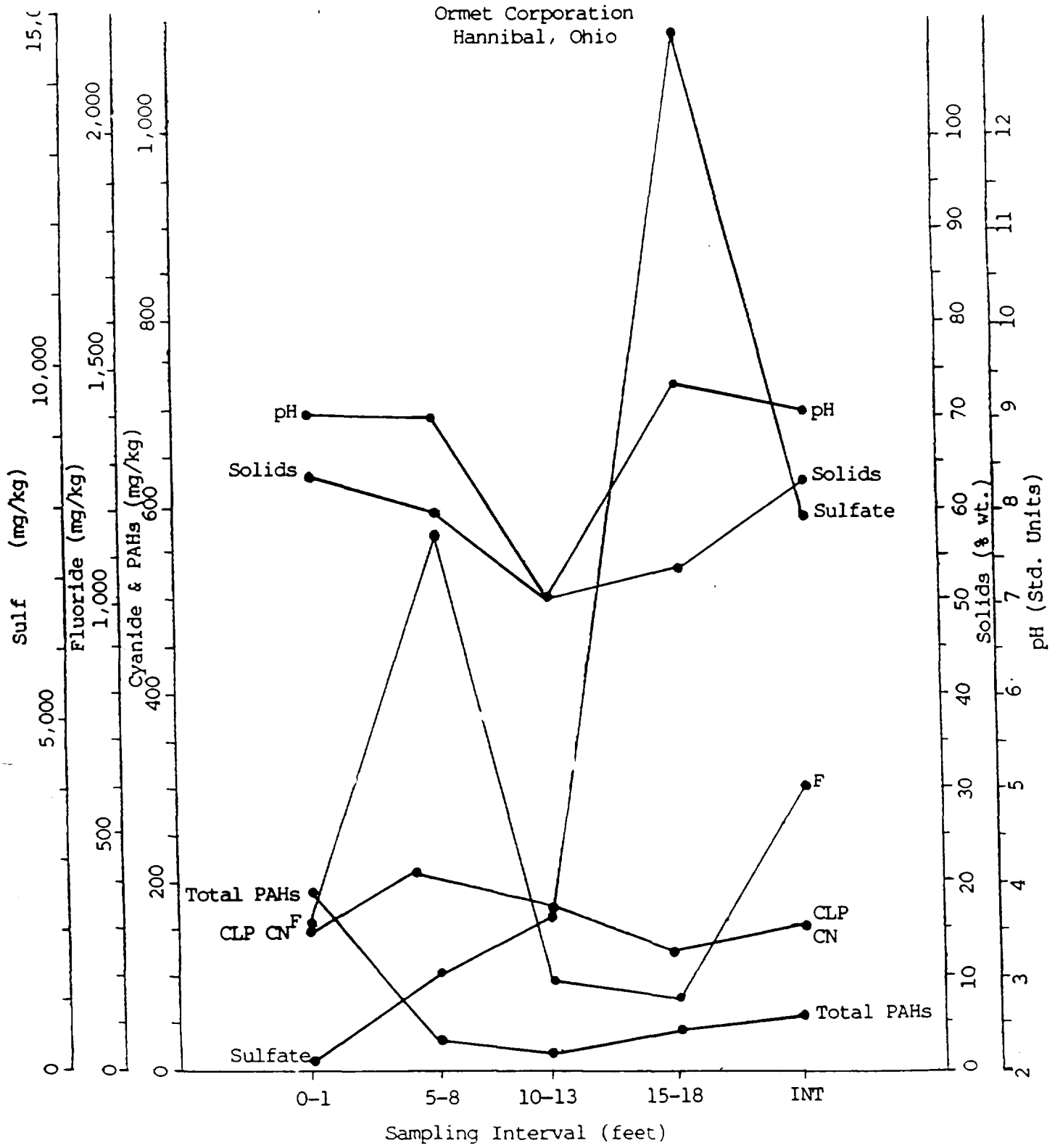


Figure 36
Concentrations of Selected Metals
in Former Pond 5C

Ormet Corporation
Hannibal, Ohio

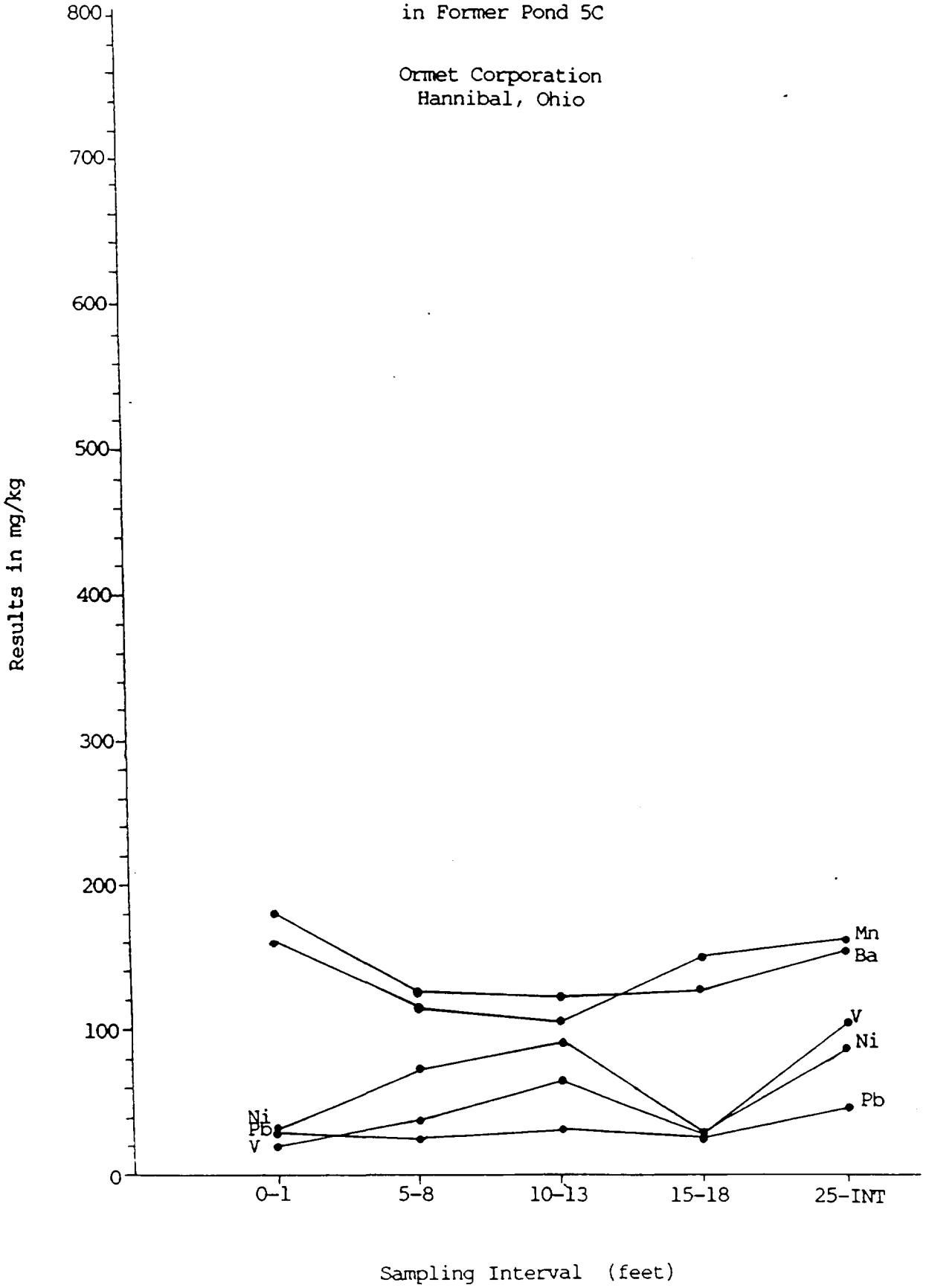
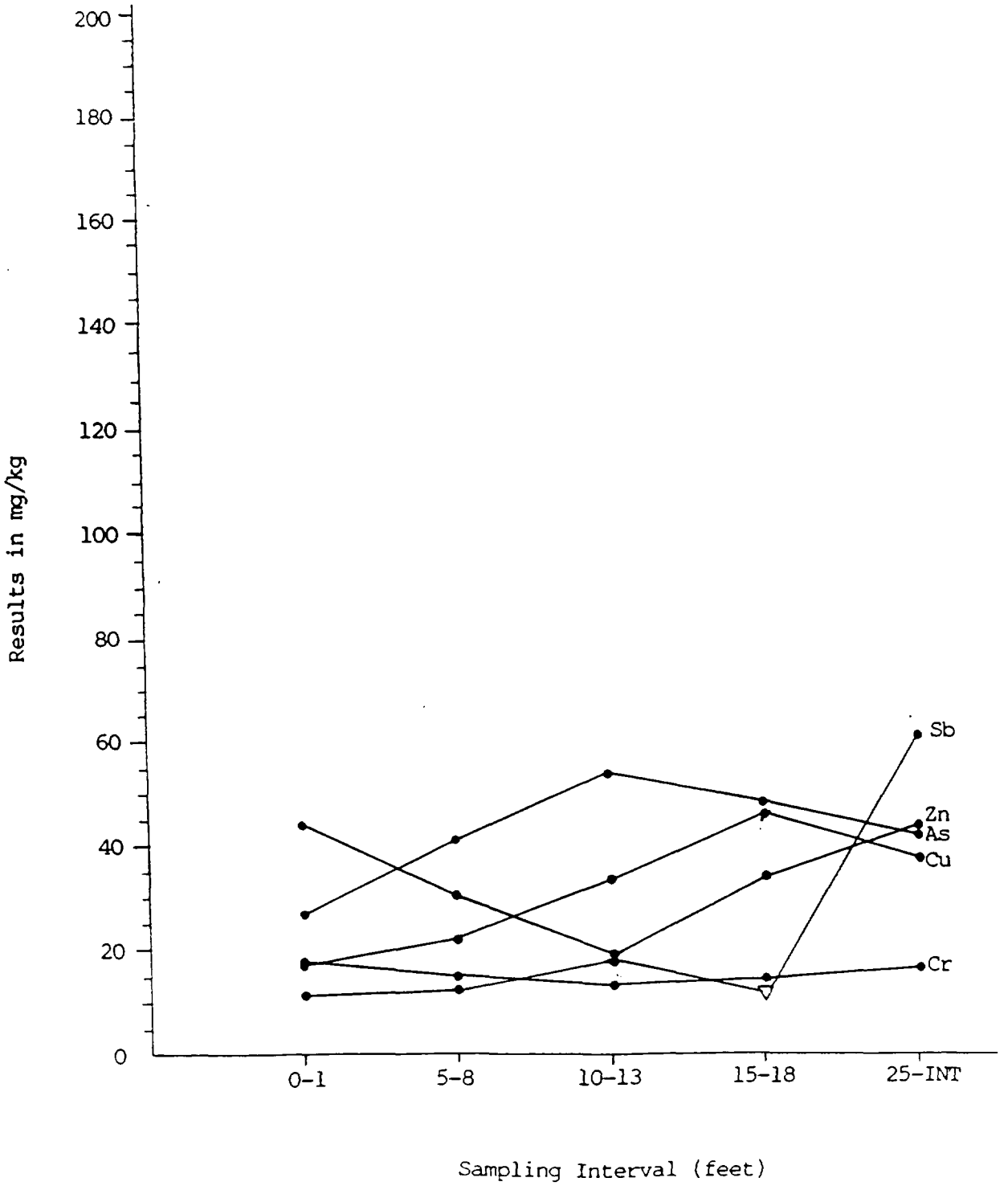


Figure 37
Concentrations of Selected Metals
in Former Disposal Pond 5C

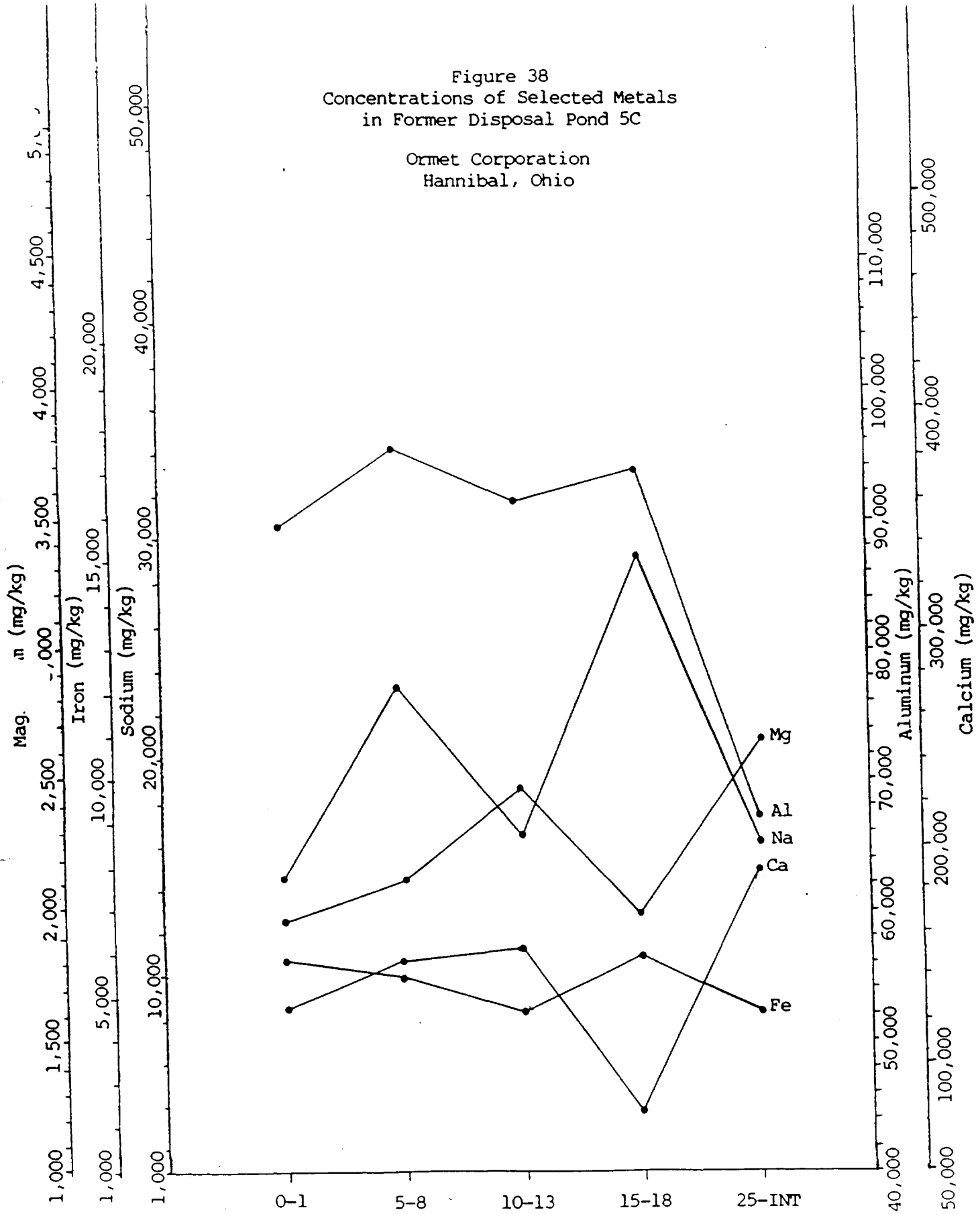
Ormet Corporation
Hannibal, Ohio




▽ - Parameter was below detection, the plotted value is the detection limit.

Figure 38
Concentrations of Selected Metals
in Former Disposal Pond 5C

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 39
Concentrations of Selected Parameters
in Former Disposal Pond 5C

Ormet Corporation
Hannibal, Ohio

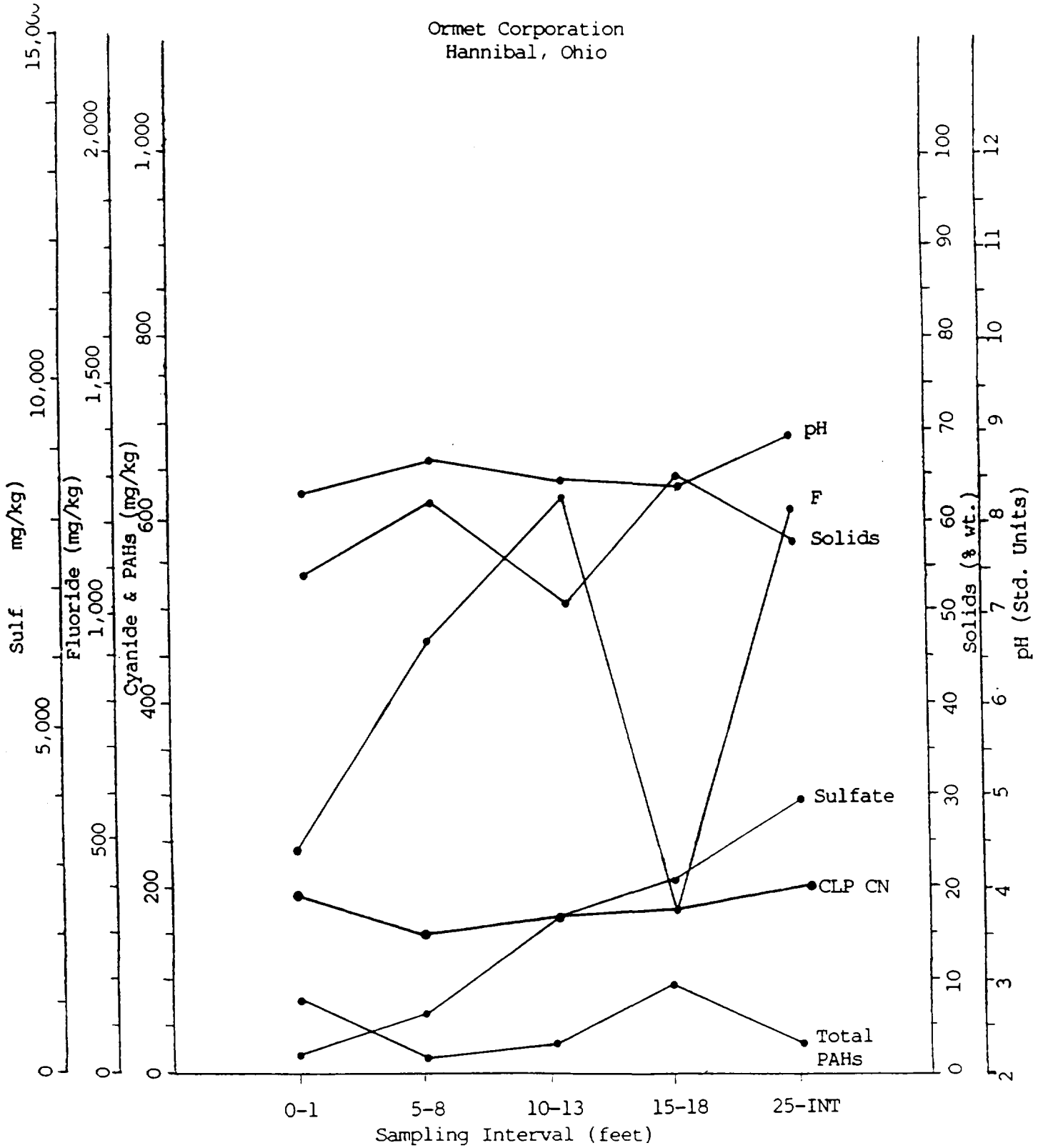


Figure 40
Concentrations of Selected Metals
in Former Disposal Pond 5D

Ormet Corporation
Hannibal, Ohio

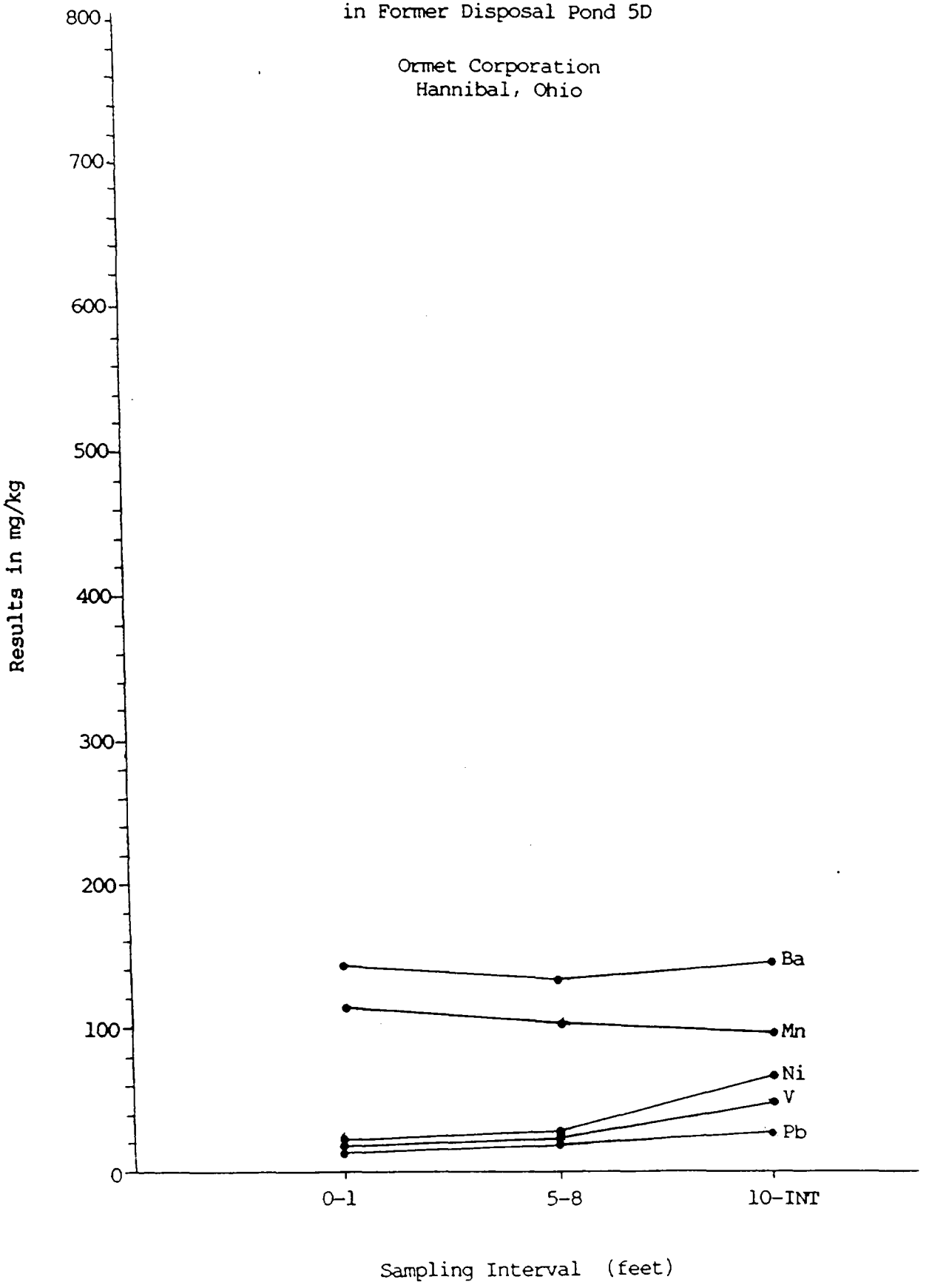
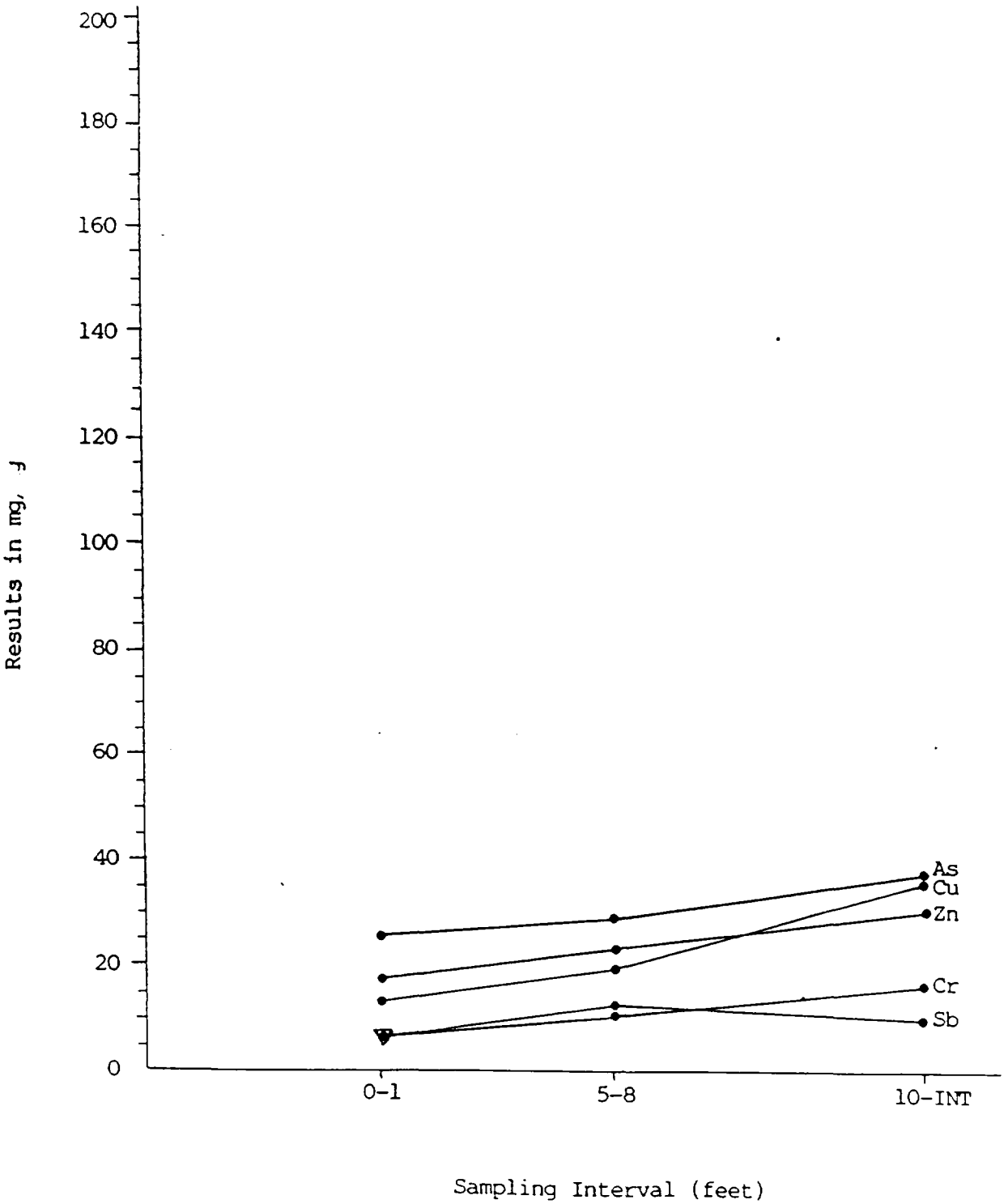


Figure 41
Concentrations of Selected Metals
in Former Disposal Pond 5D

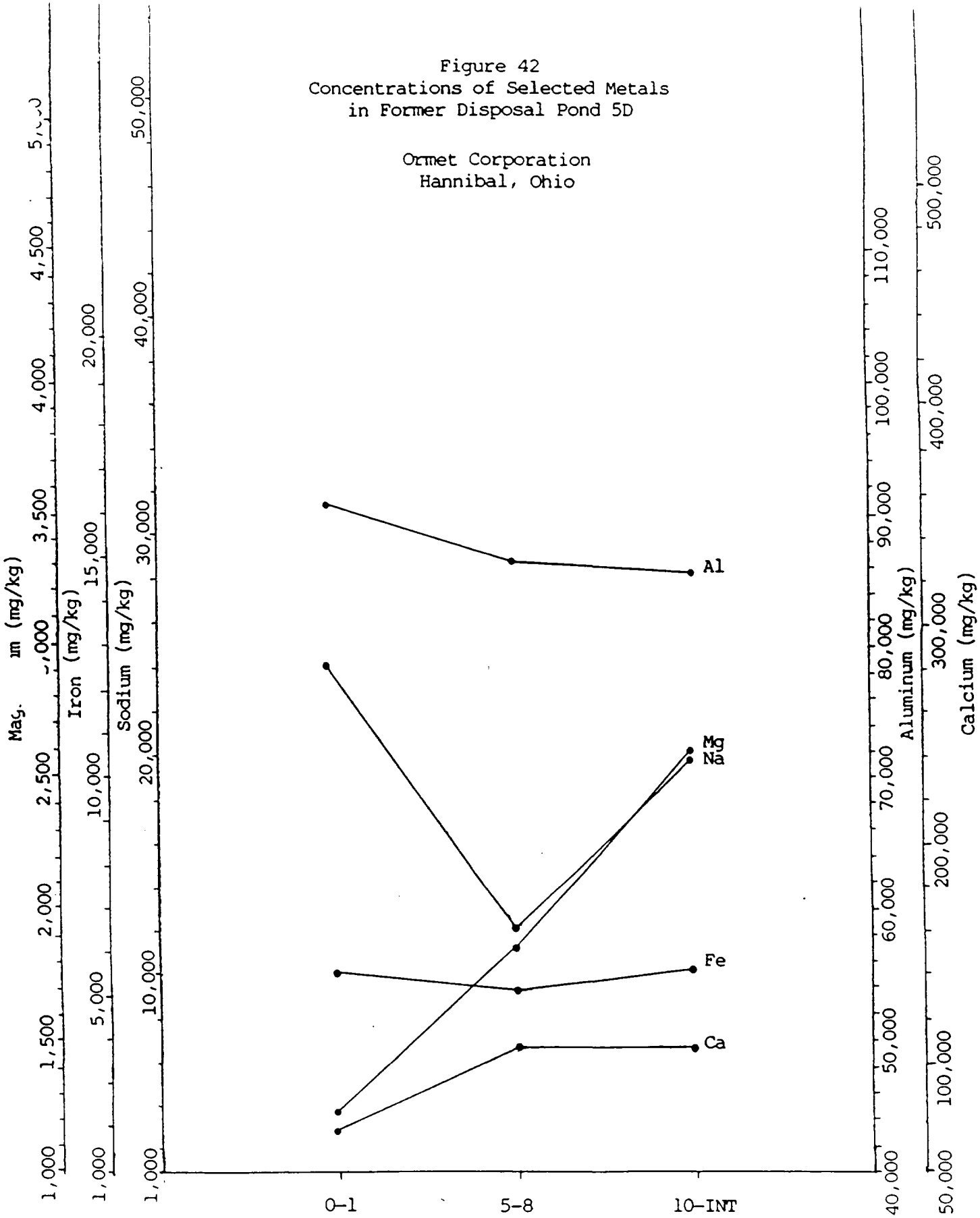
Ormet Corporation
Hannibal, Ohio




▽ - Parameter was below detection, the plotted value is the detection limit.

Figure 42
Concentrations of Selected Metals
in Former Disposal Pond 5D

Ormet Corporation
Hannibal, Ohio




Sampling Interval (feet)

Figure 43
Concentrations of Selected Parameters
in Former Disposal Pond 5D

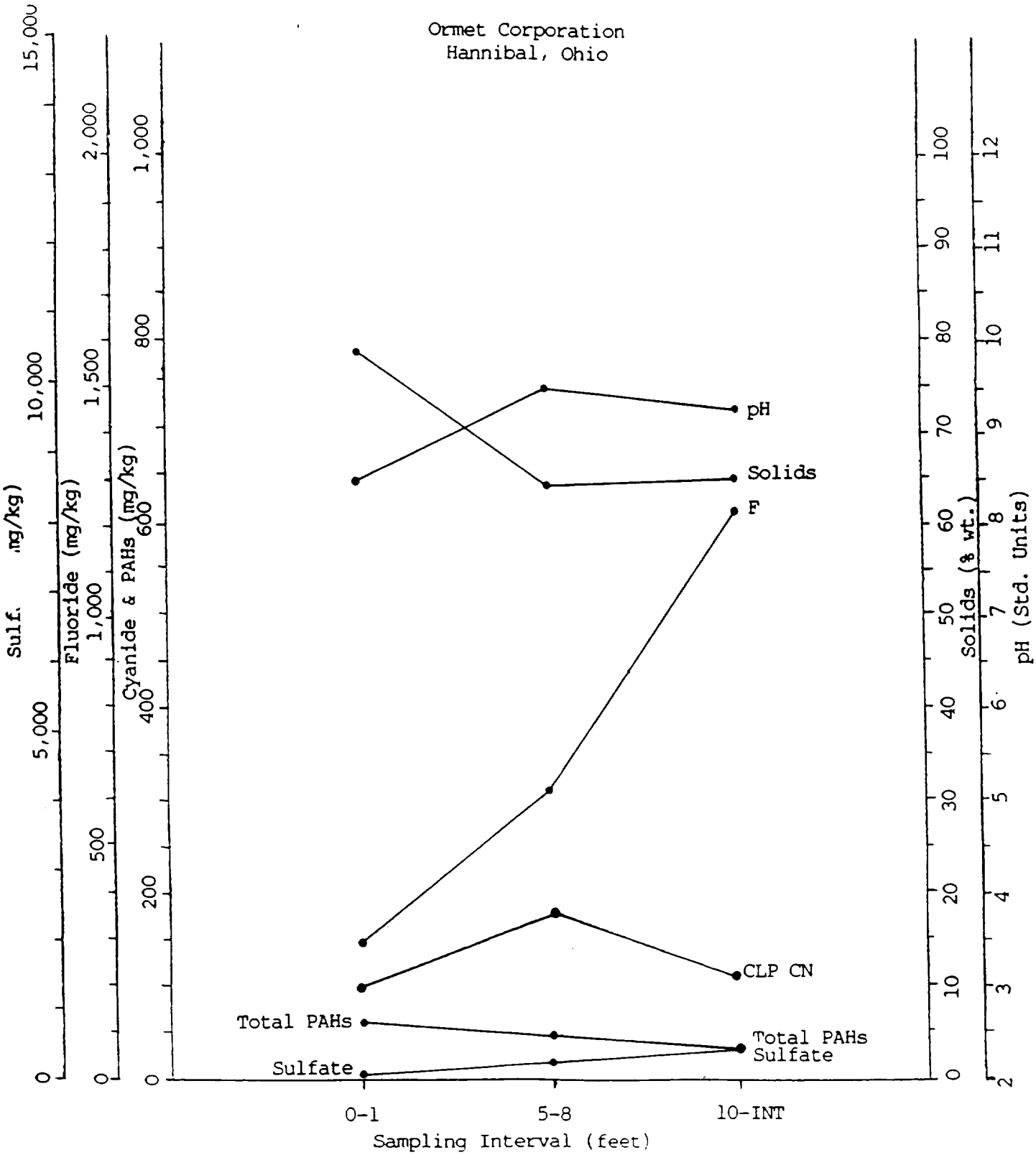


Figure 44
Concentrations of Selected Metals
in Former Disposal Pond 5E

Ormet Corporation
Hannibal, Ohio

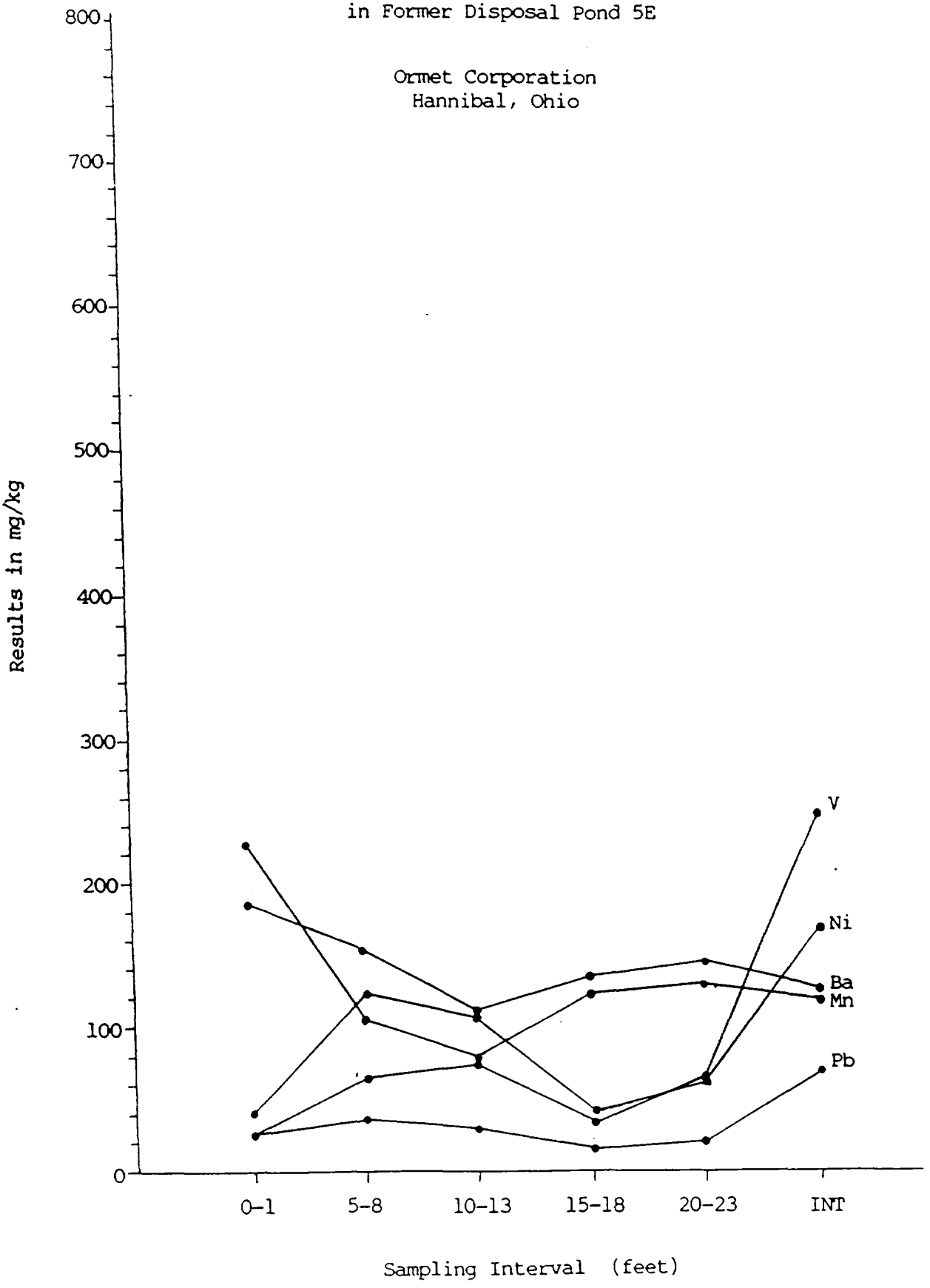
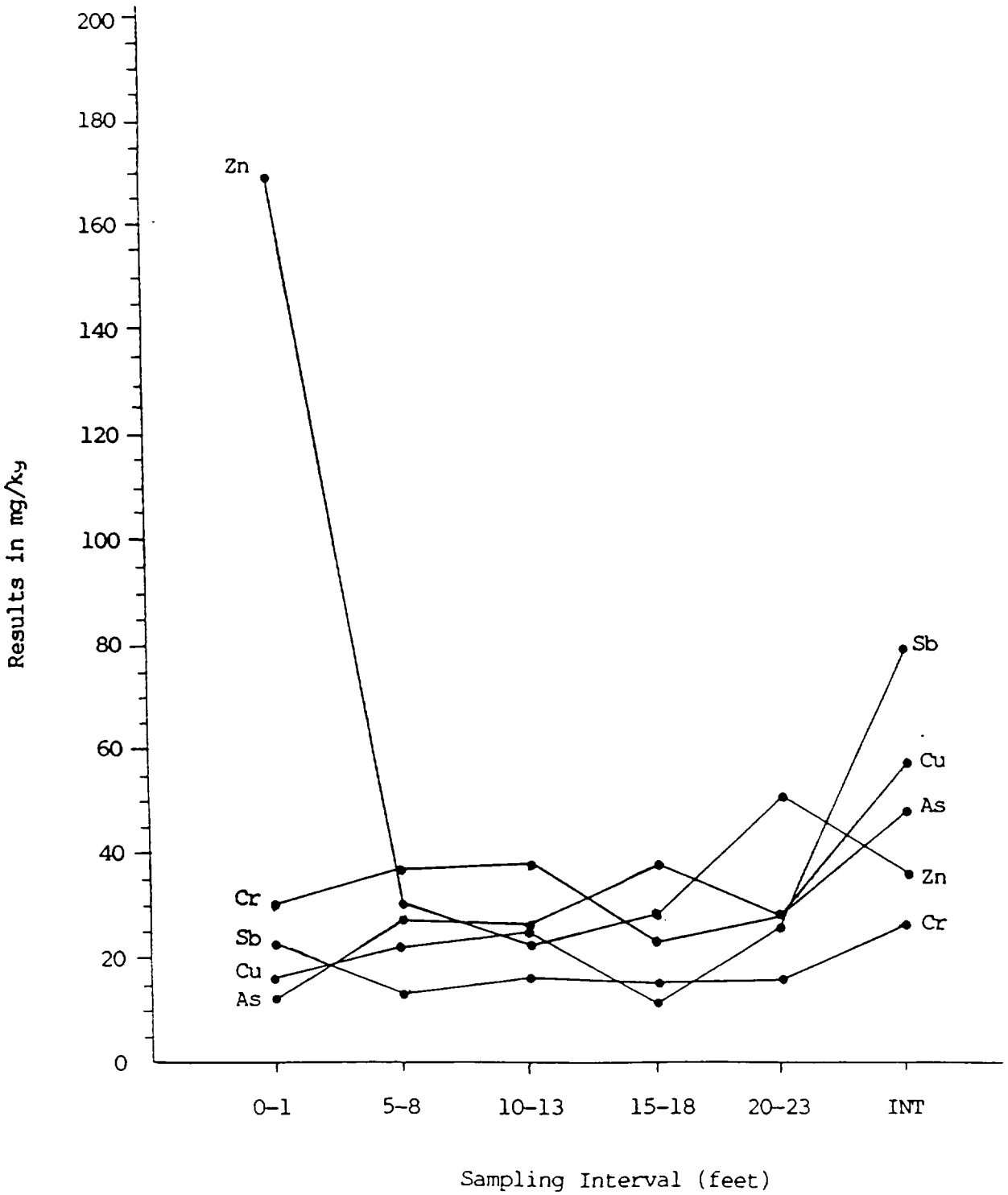


Figure 45
Concentrations of Selected Metals
in Former Disposal Pond 5E

Ormet Corporation
Hannibal, Ohio



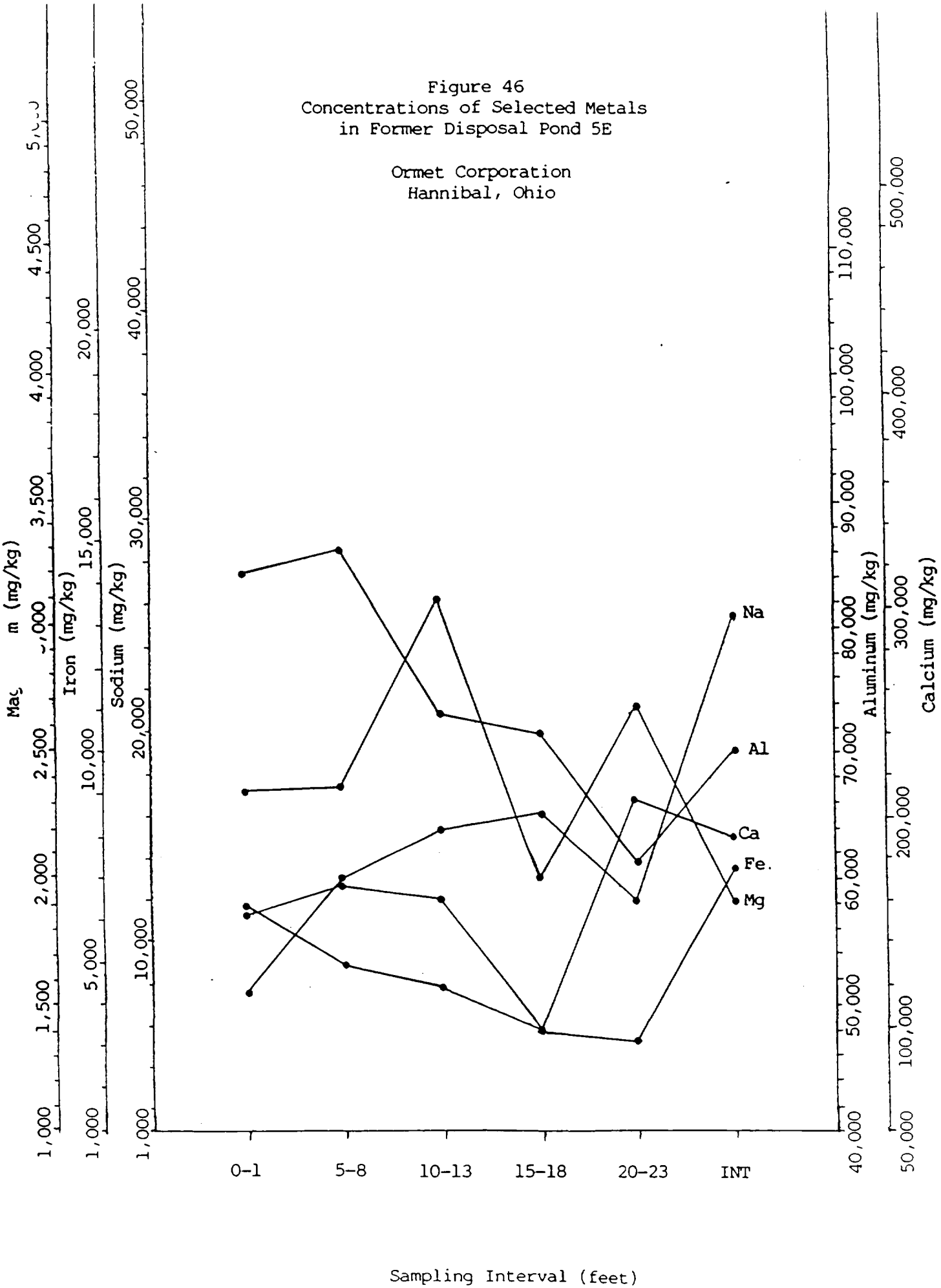
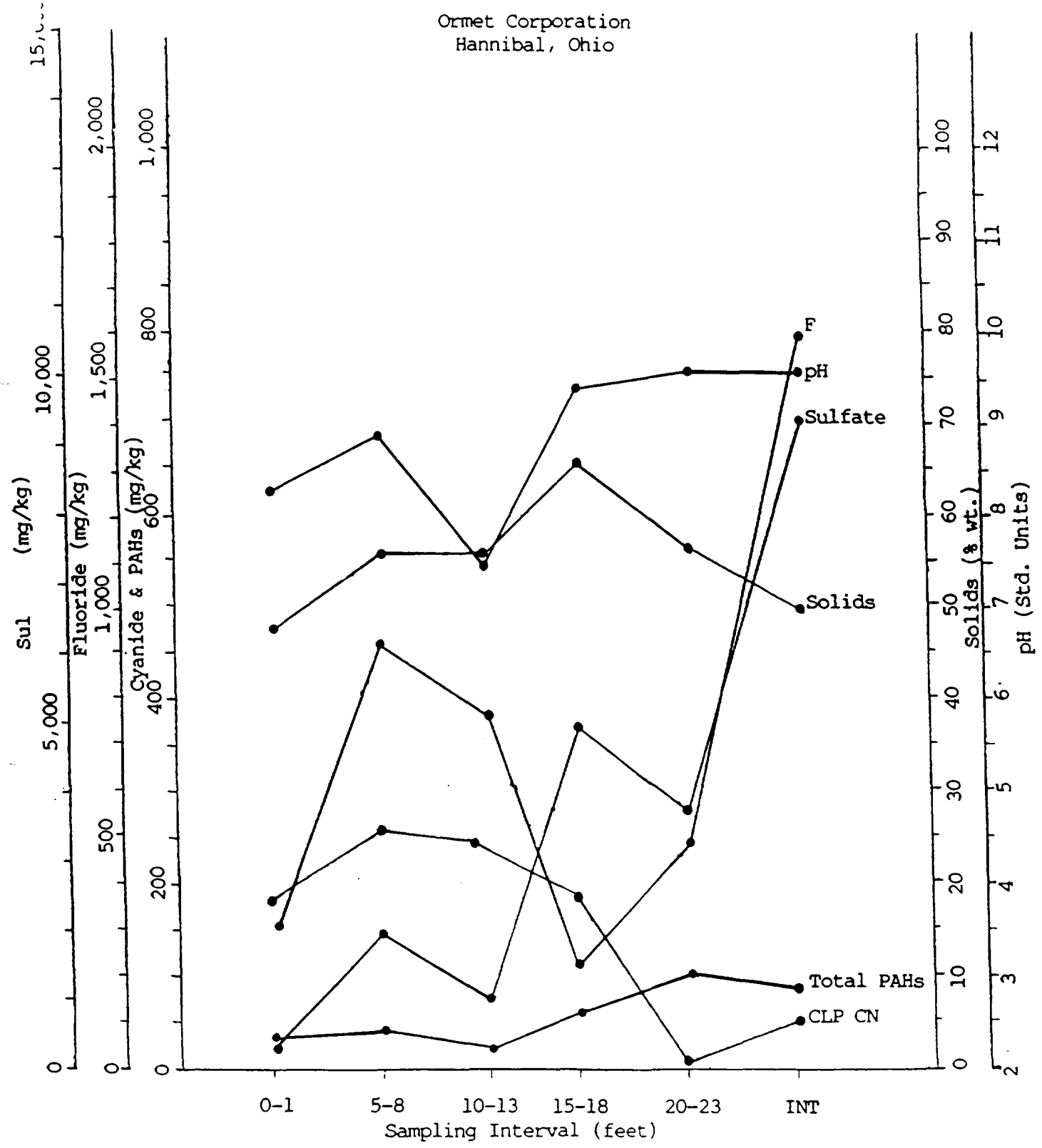


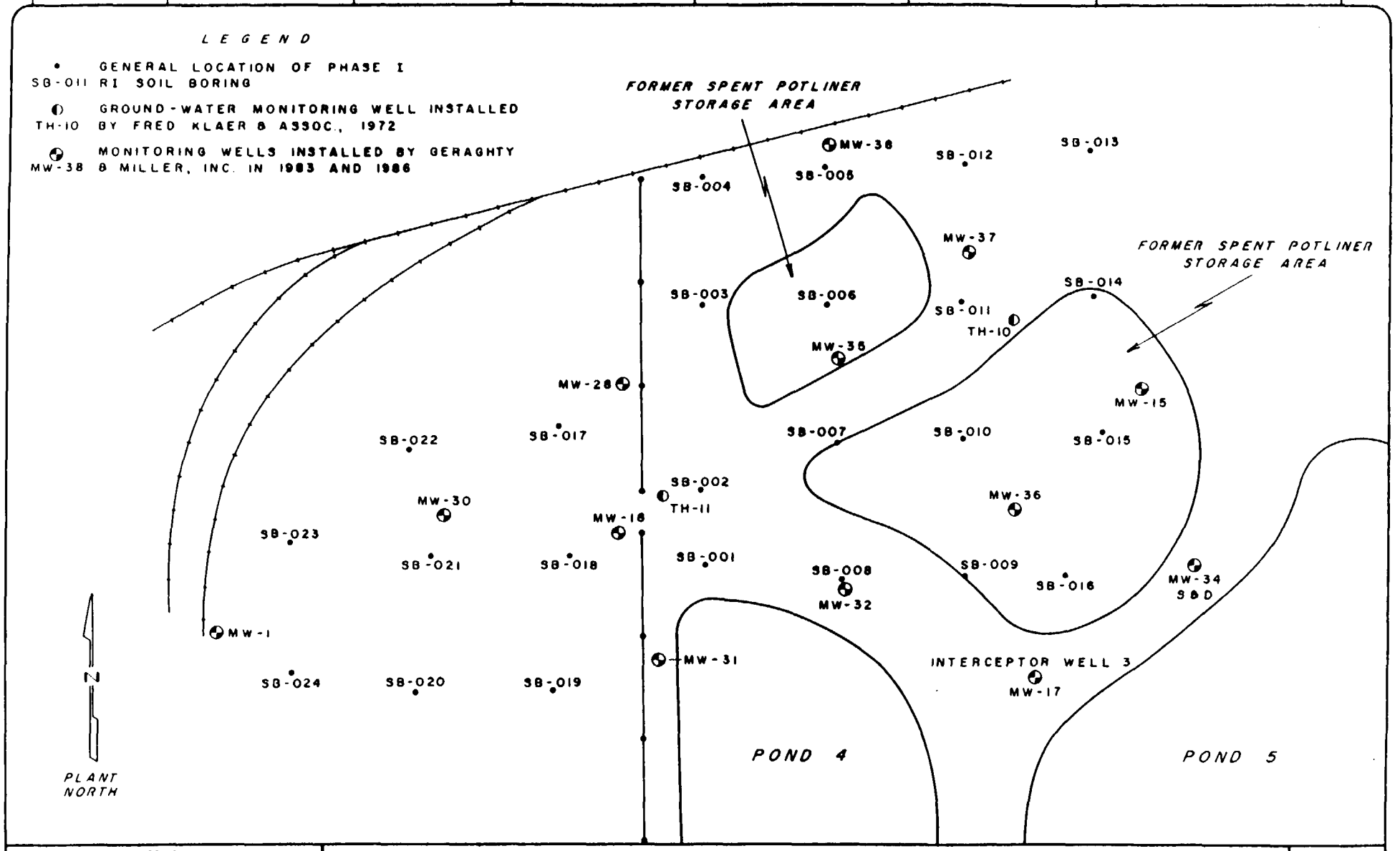
Figure 46
Concentrations of Selected Metals
in Former Disposal Pond 5E
Ormet Corporation
Hannibal, Ohio
Mag m (mg/kg)
Iron (mg/kg)
Sodium (mg/kg)
Aluminum (mg/kg)
Calcium (mg/kg)
Na
Al
Ca
Fe.
Mg
0-1
5-8
10-13
15-18
20-23
INT
Sampling Interval (feet)

Figure 47
Concentrations of Selected Parameters
in Former Disposal Pond 5E

Ormet Corporation
Hannibal, Ohio



| DATE: 06JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

GENERAL LOCATIONS OF SOIL BORINGS IN THE FORMER SPENT POTLINER STORAGE AREA

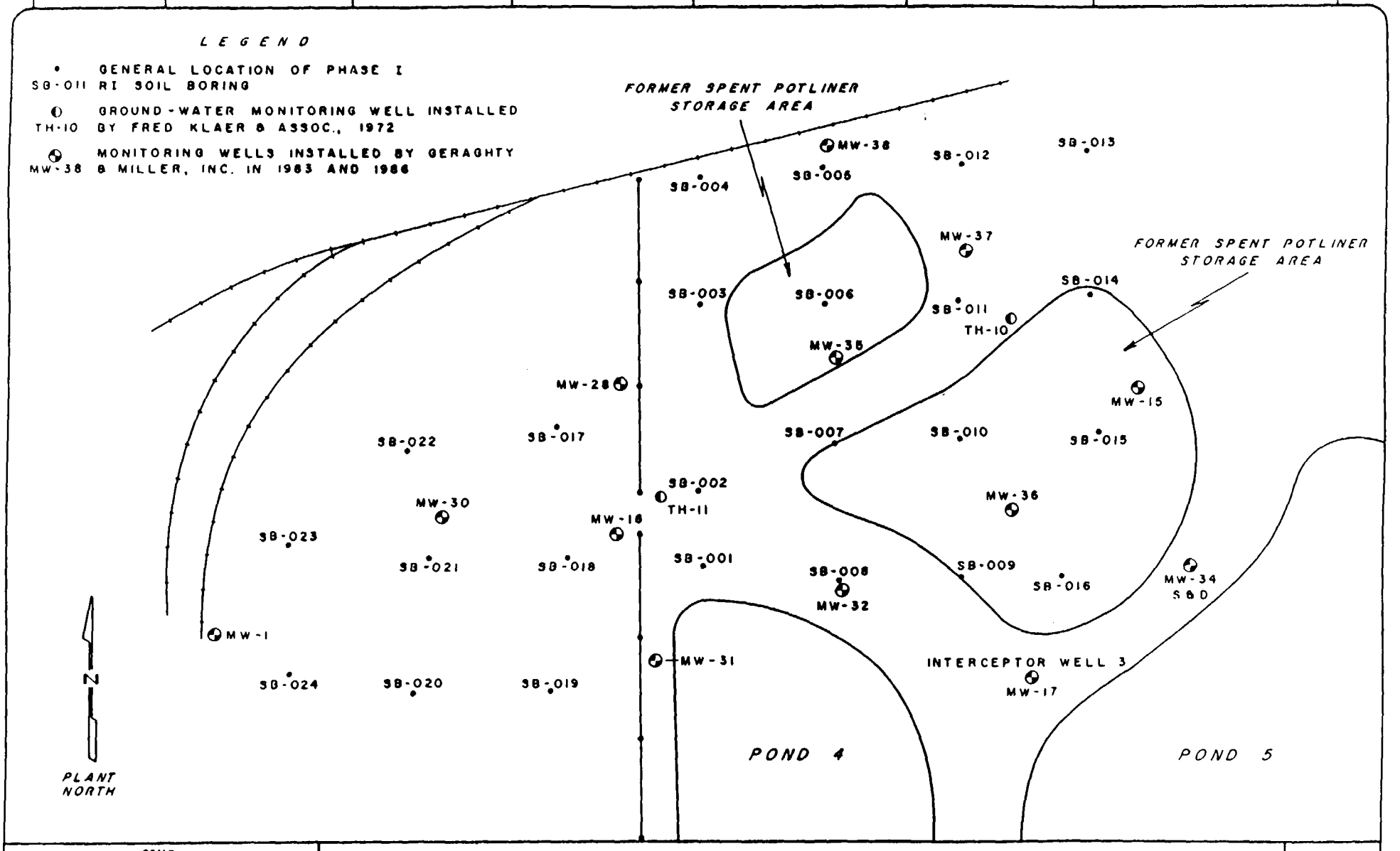
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 48

156764

DATE: 06JU..91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
Environmental Services

GENERAL LOCATIONS OF SOIL BORINGS IN THE FORMER SPENT POTLINER STORAGE AREA

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 48A

156784

| DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
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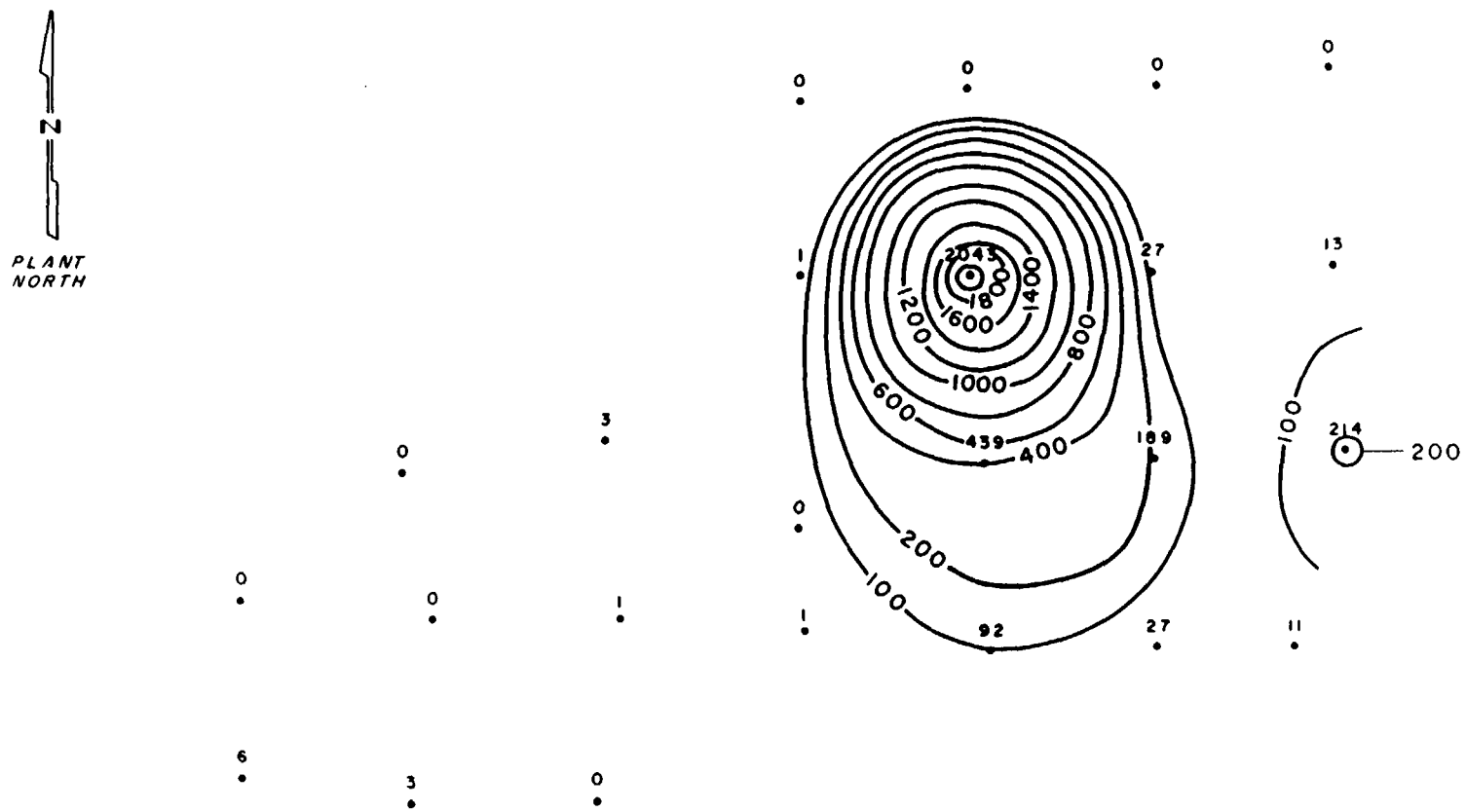



SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

TOTAL CYANIDE ISOPLETH 0-2FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

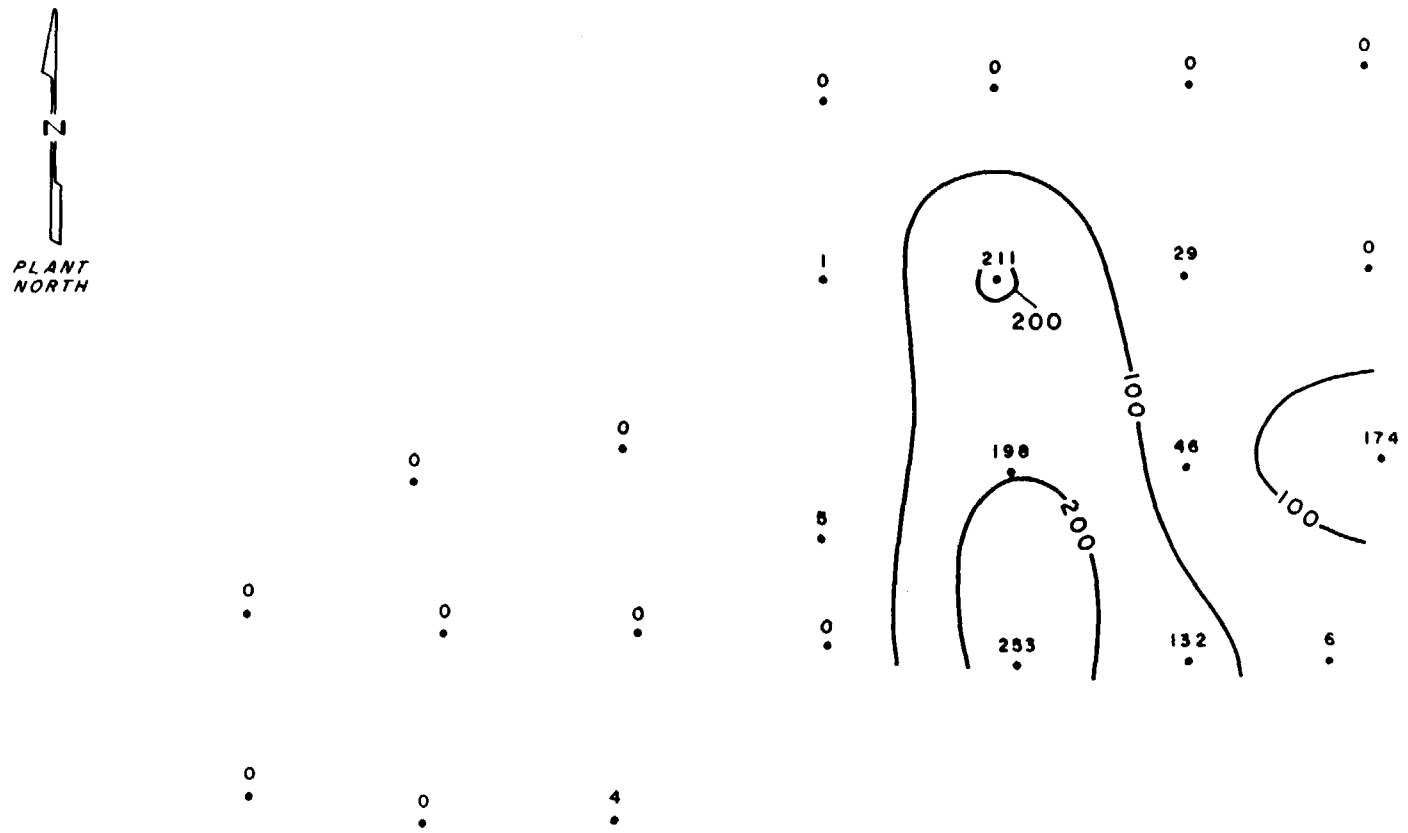
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 49

156764

DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | CO... ..ER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

TOTAL CYANIDE ISOPLETH 2-4FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

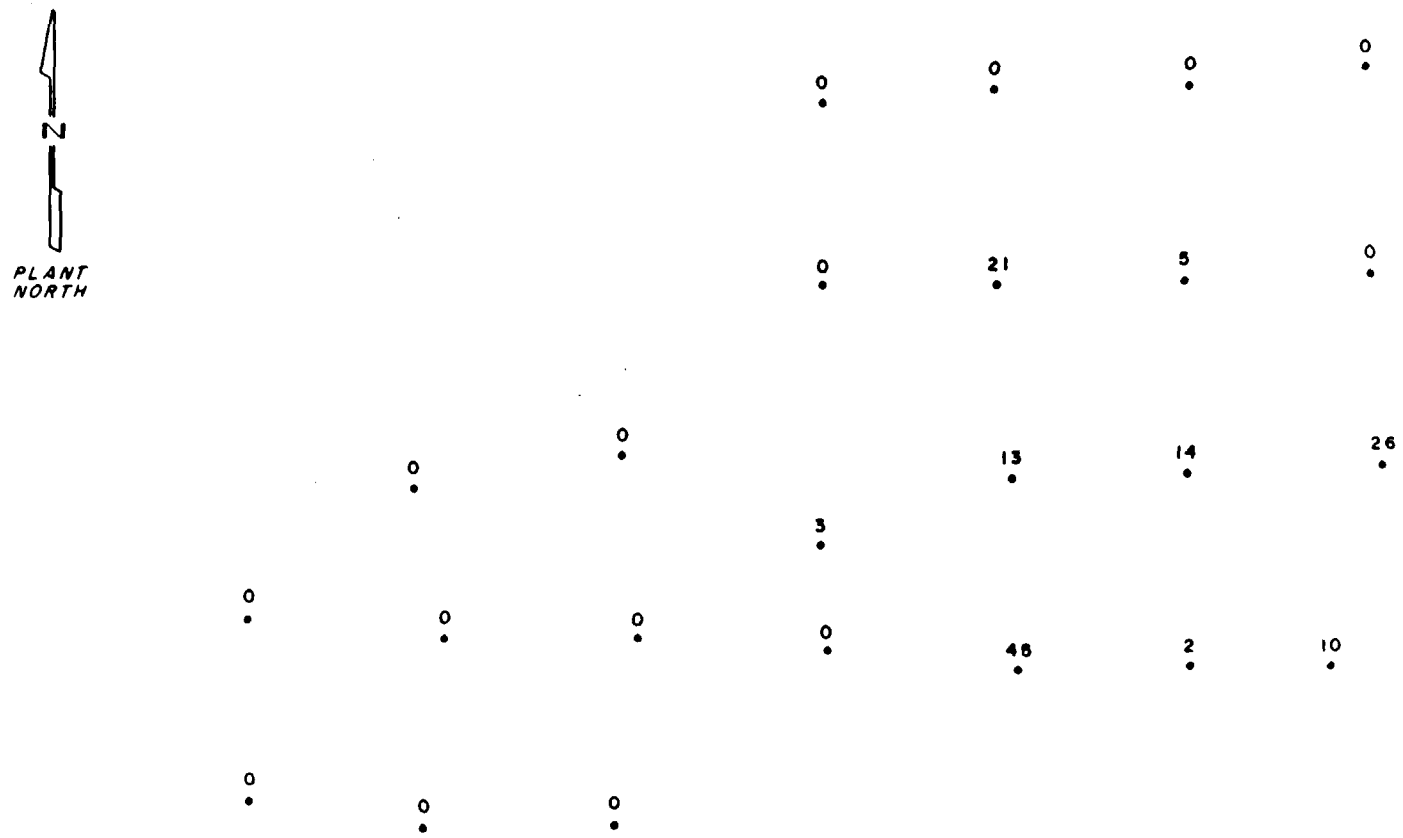
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 50

156764

DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | CO. ..ER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

TOTAL CYANIDE ISOPLETH 4-6 FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

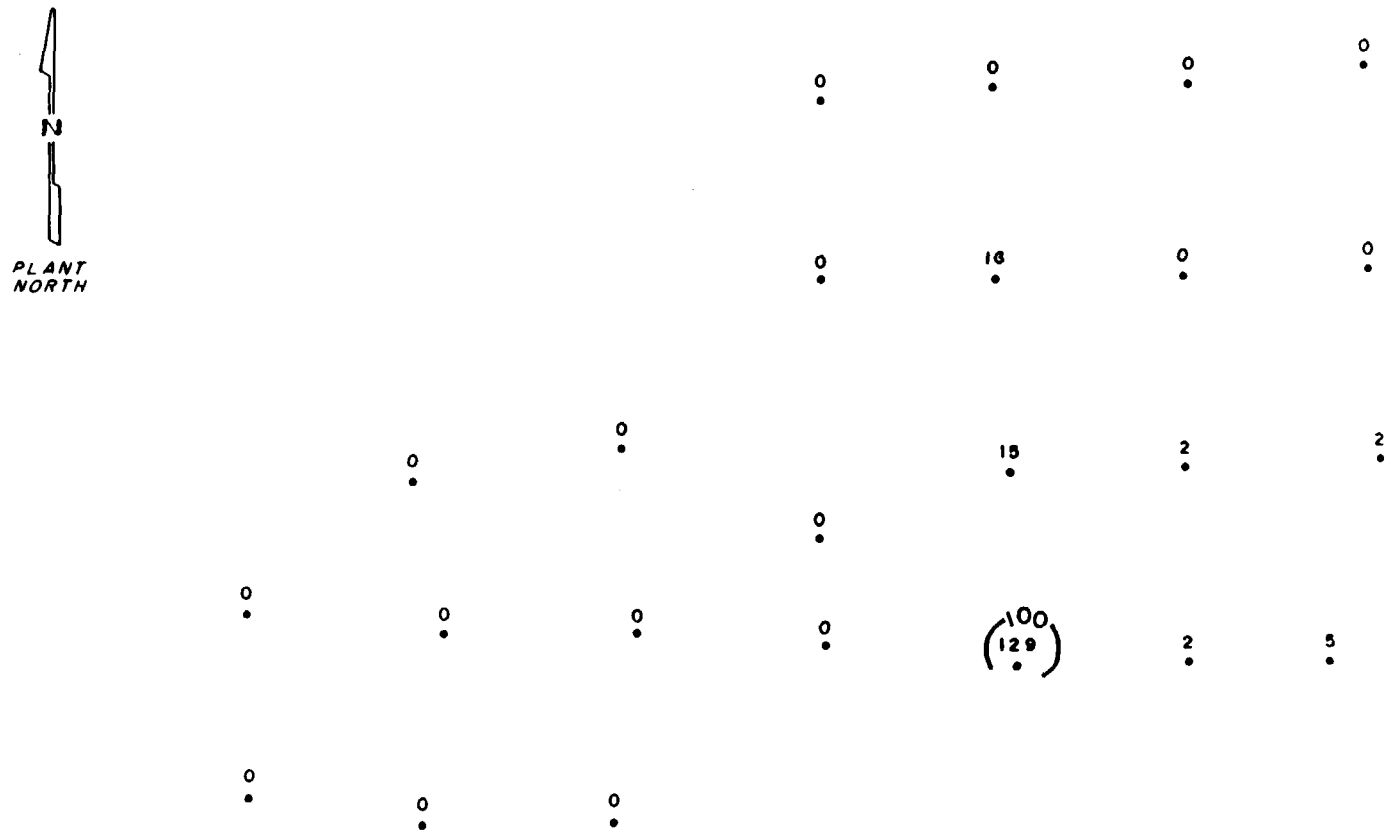
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 51

156764

| DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | CUMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

TOTAL CYANIDE ISOPLETH 6-8FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

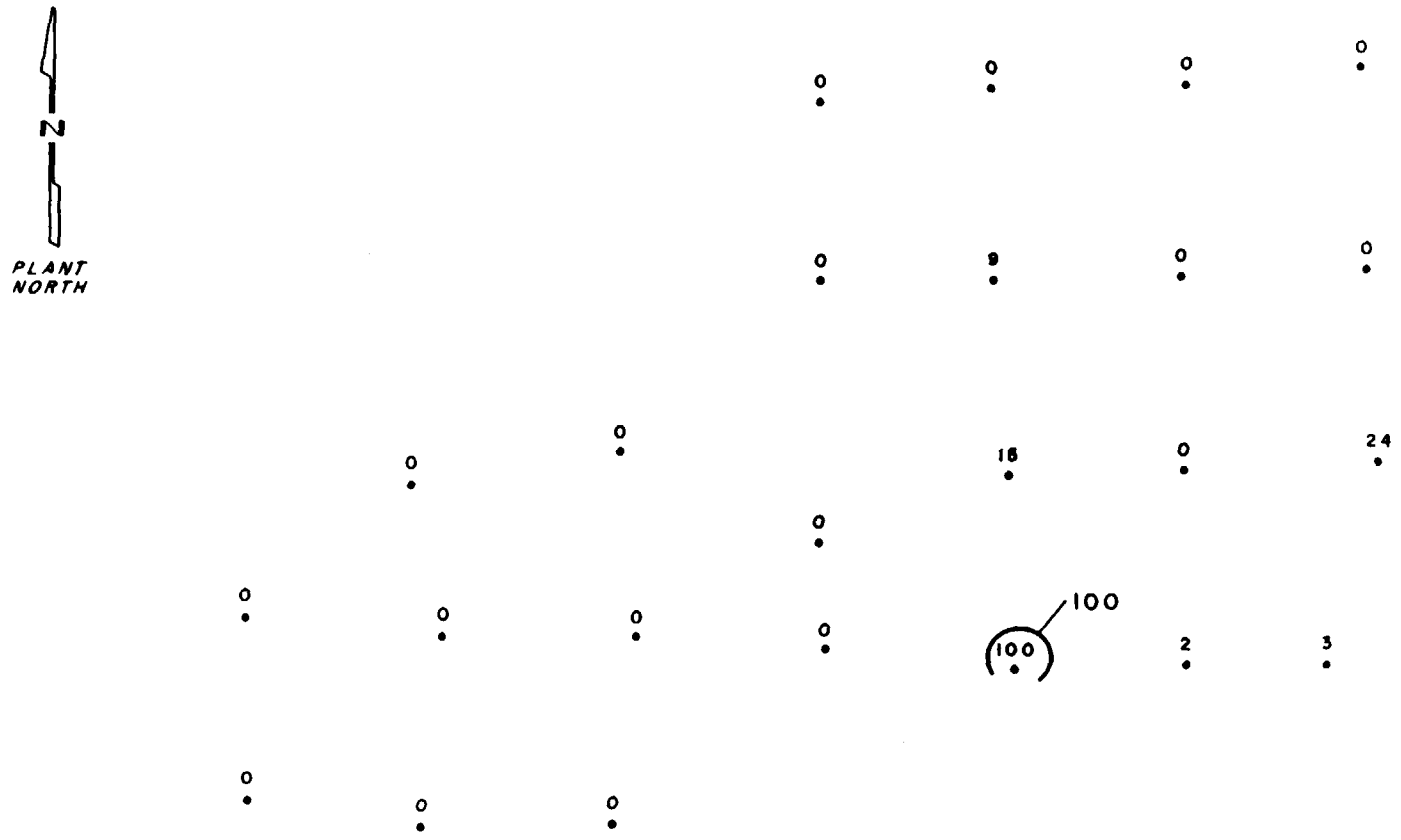
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 52

156764

DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | CUMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

TOTAL CYANIDE ISOPLETH 8-10FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 53

156764

| DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
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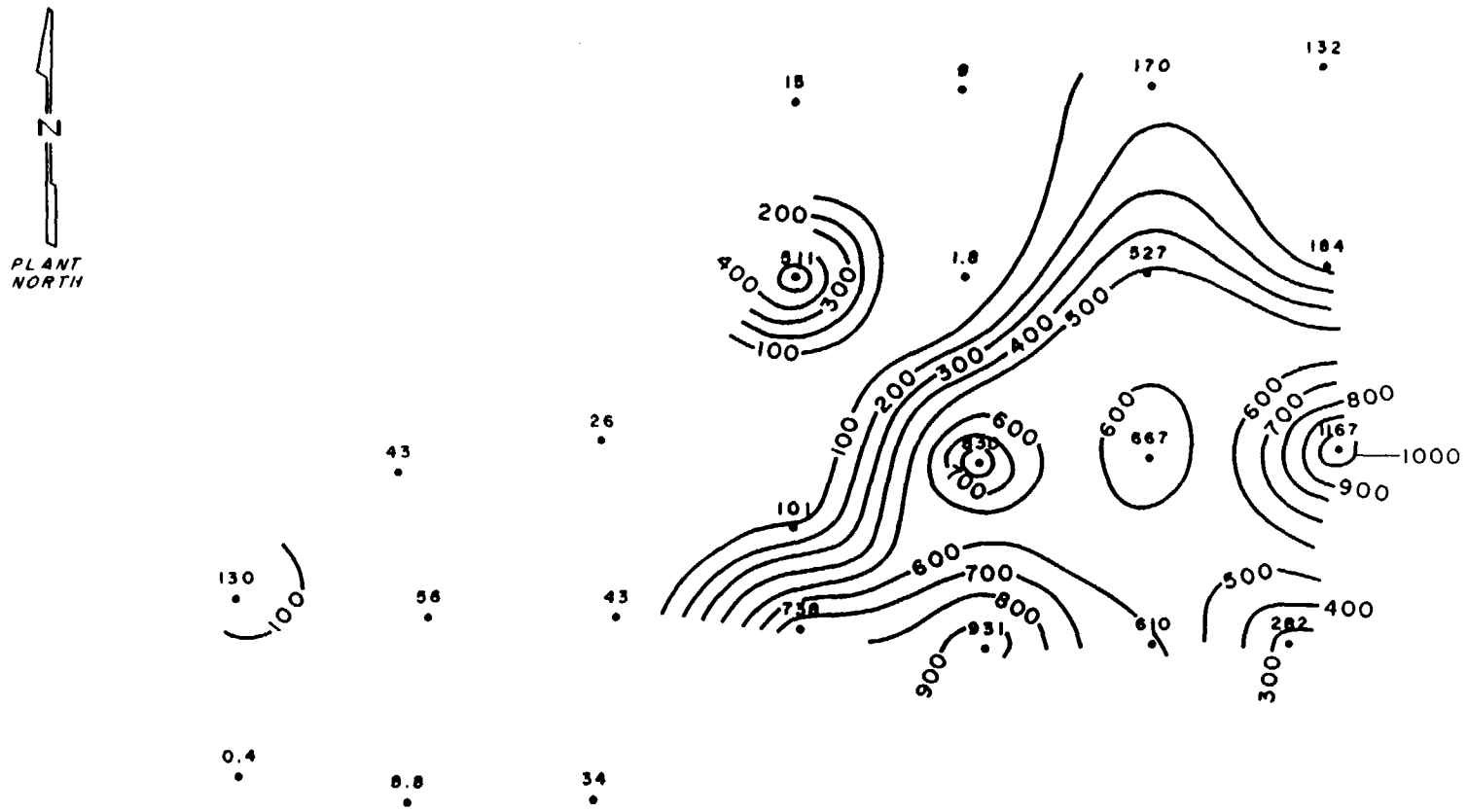



SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

FLUORIDE ISOPLETH 0-2FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 54

156764

| DATE: 01JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|

SCALE
0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

FLUORIDE ISOPLETH 2-4FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 55

156/64

| DATE: 03JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|

SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

FLUORIDE ISOPLETH 4-6 FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

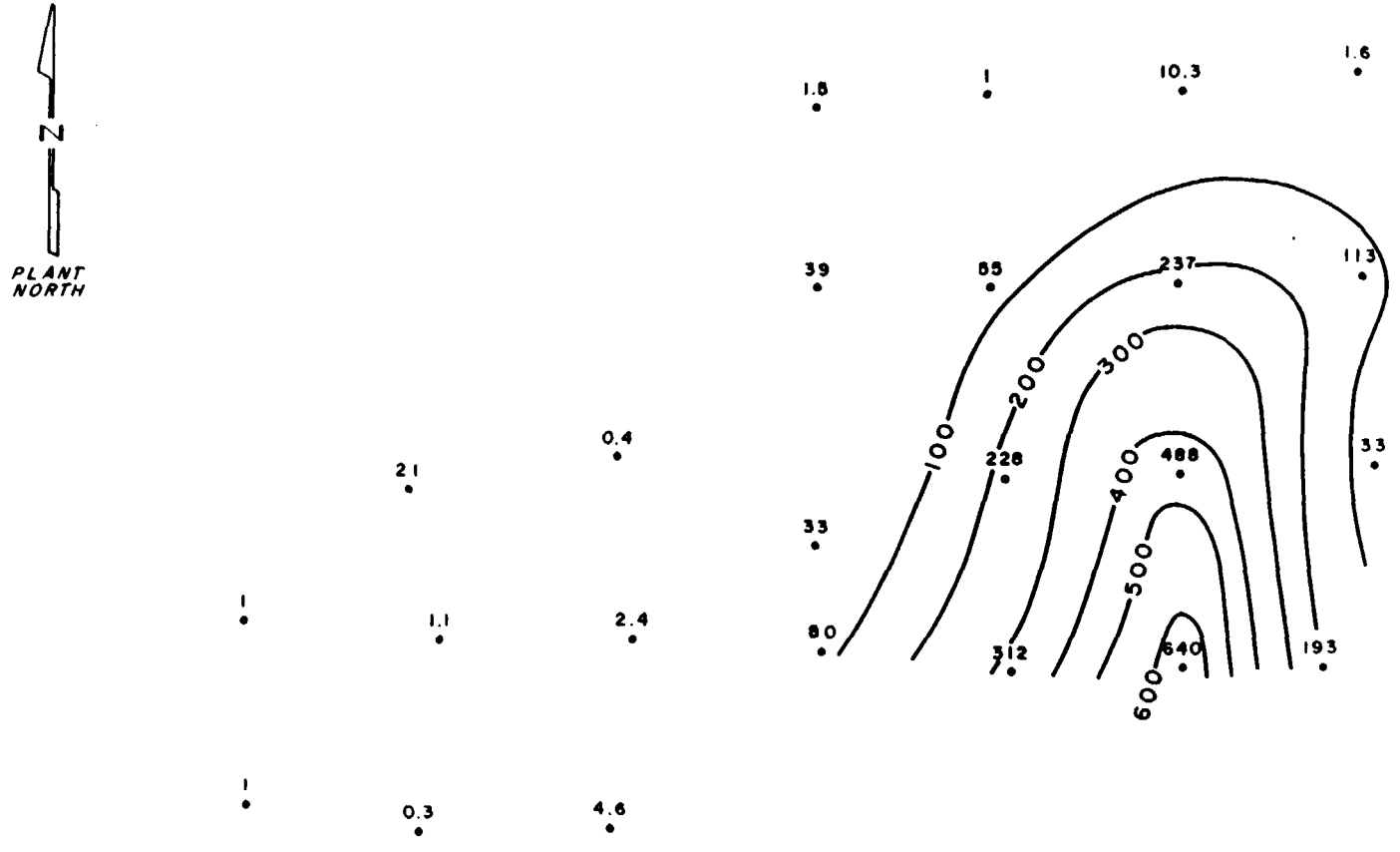
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 56

156784

| DATE: 03JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | Com...R: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

FLUORIDE ISOPLETH 6-8 FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

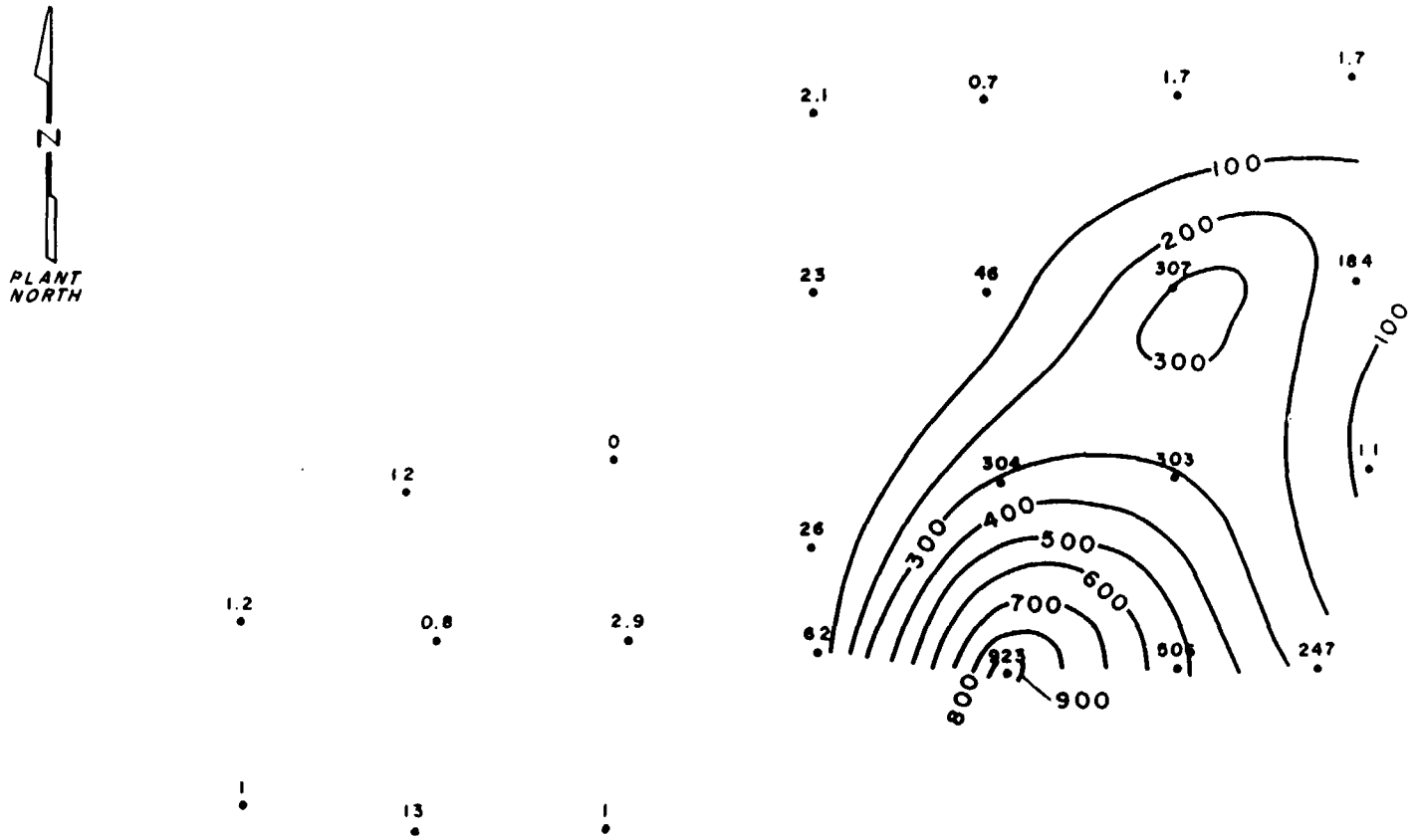
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 57

156784

DATE: 03JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | DR: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

FLUORIDE ISOPLETH 8-10FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

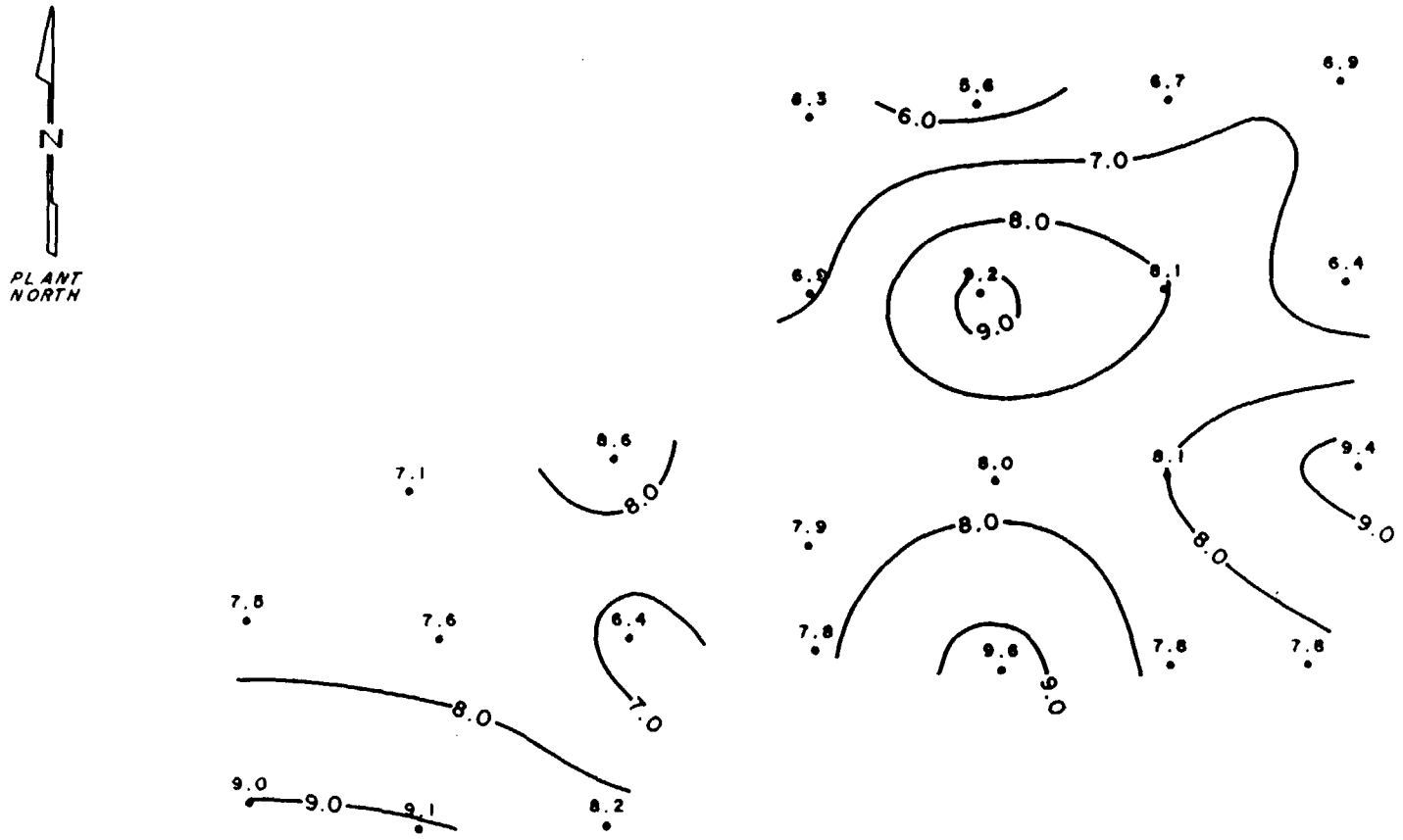
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 58

150.84

| DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

pH ISOPLETH 0-2FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

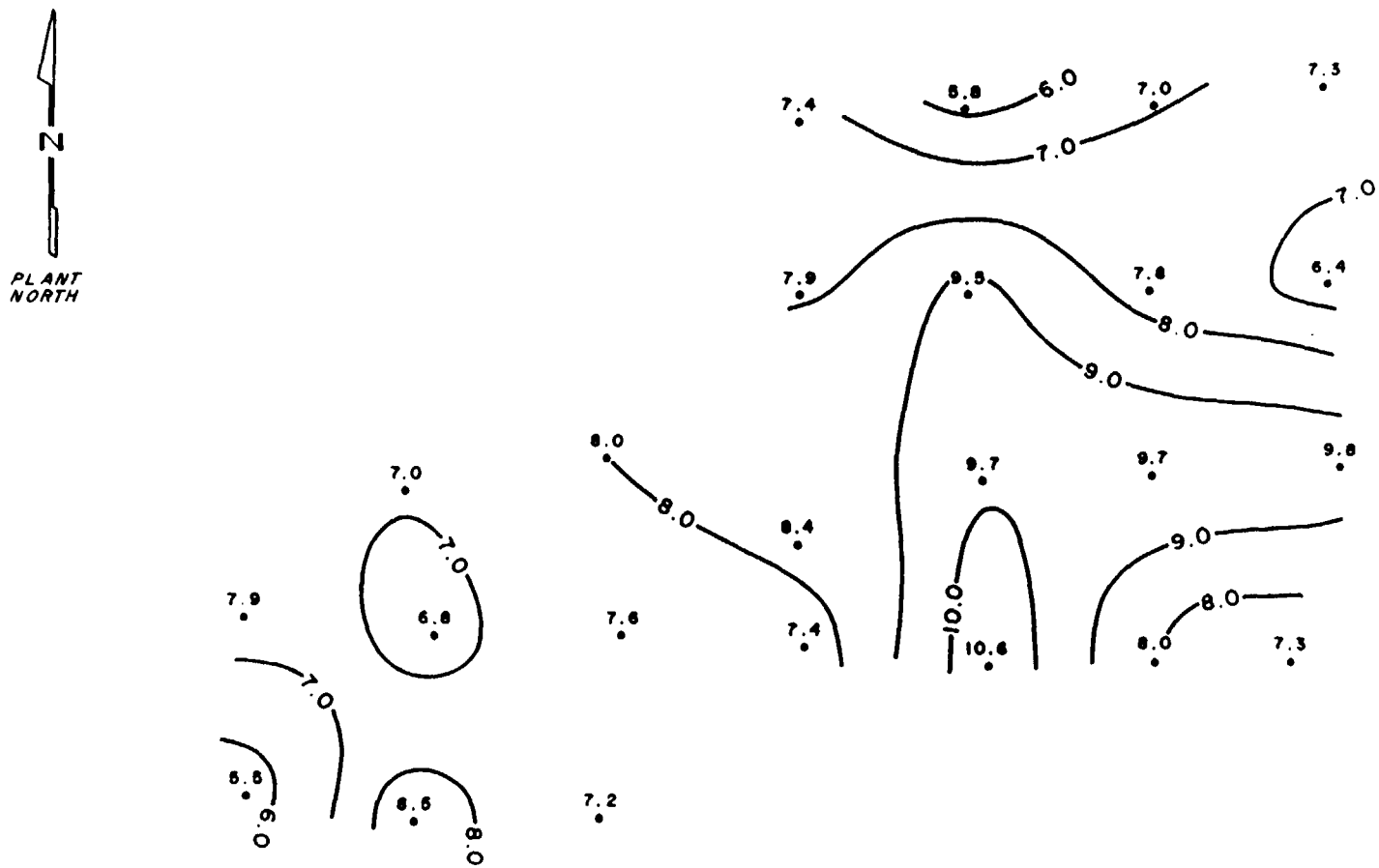
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 59

156784

| DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

pH ISOPLETH 2-4FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

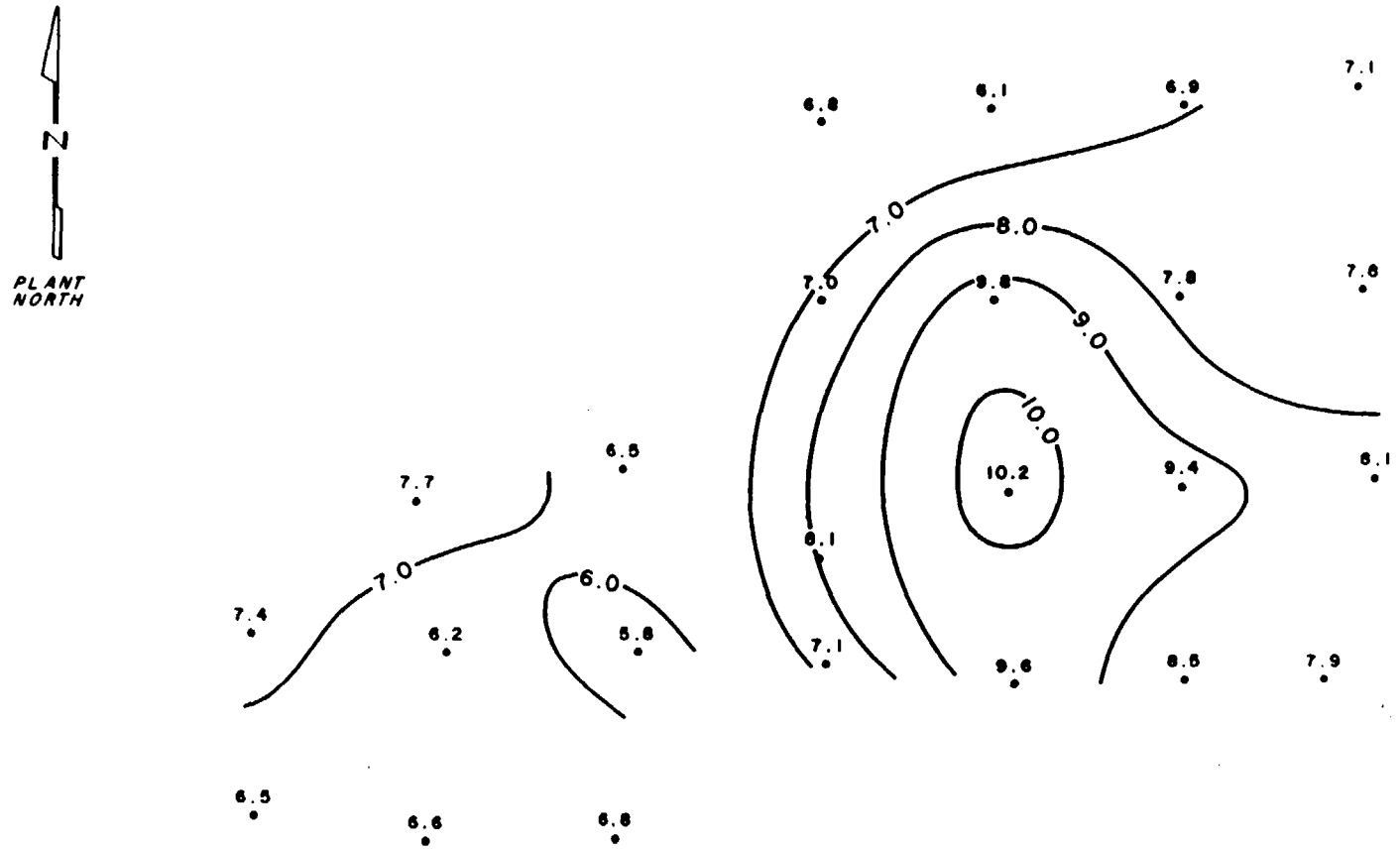
# ORMET CORPORATION

HANNIBAL OHIO

FIGURE 60

15878A

DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

pH ISOPLETH 4-6FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

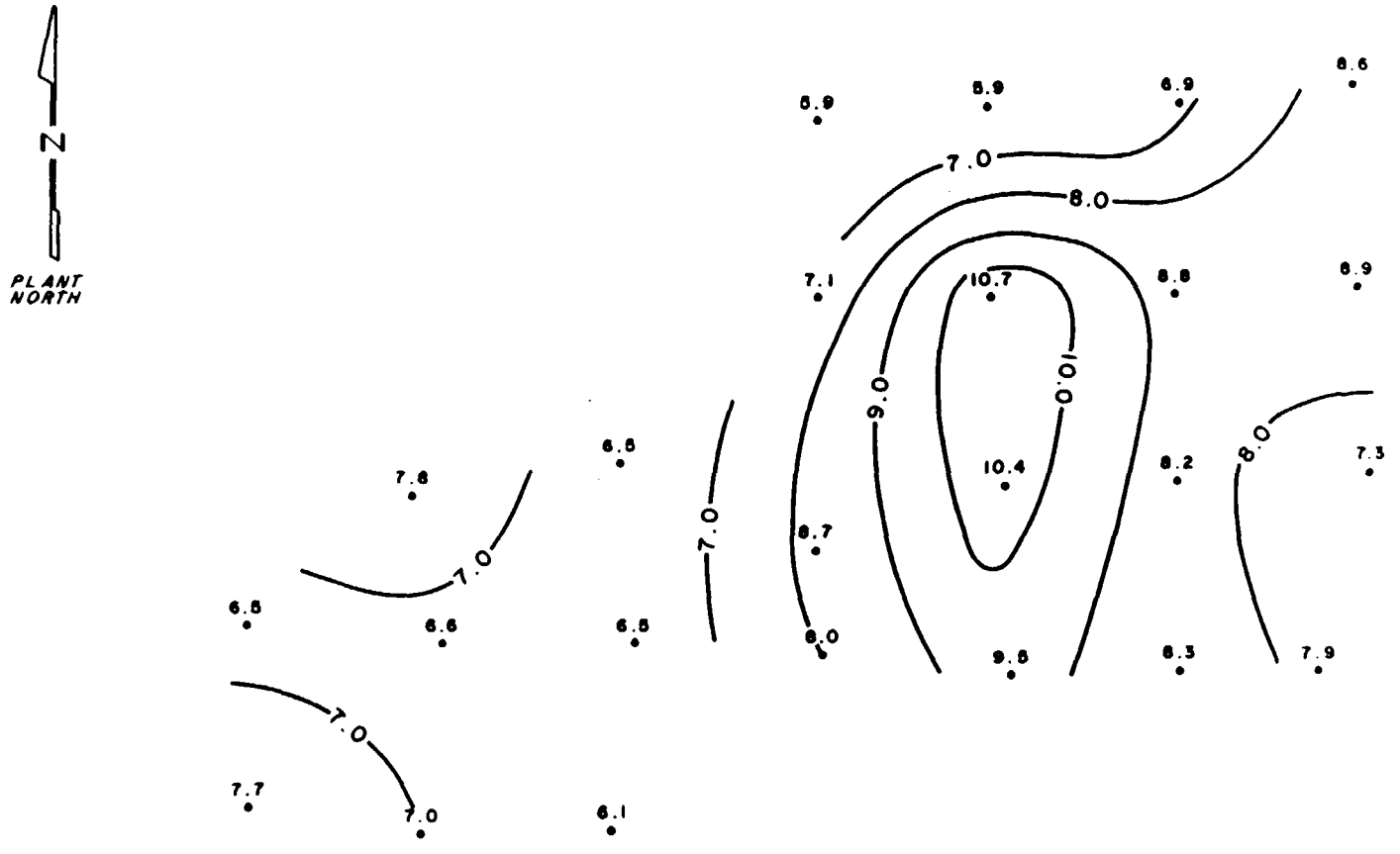
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 61

156764

DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

pH ISOPLETH 6-8FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

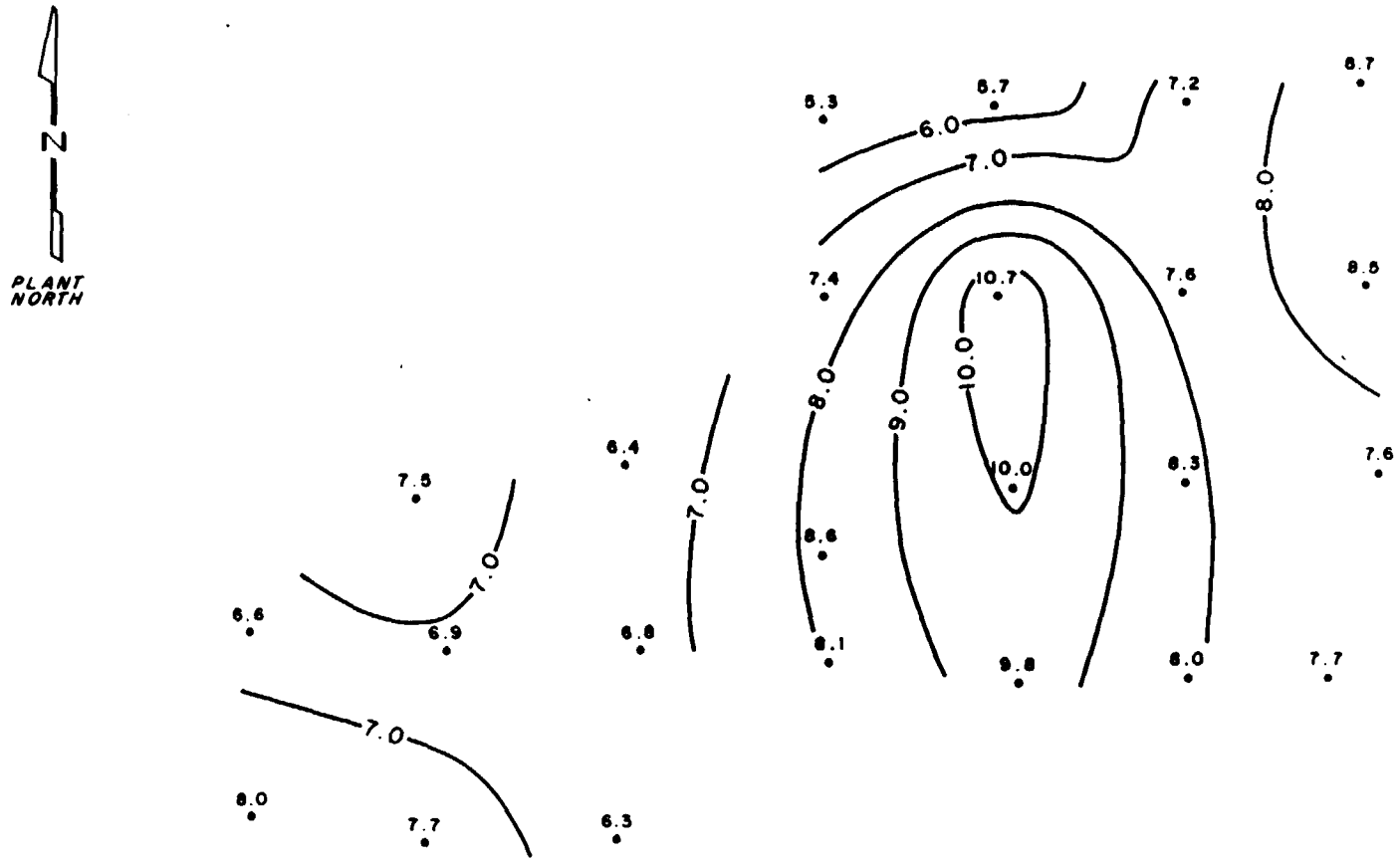
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 62

156764

| DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

pH ISOPLETH 8-10FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 63

156784

| DATE: 03JUN91 | PRJCT. NO.: PA00706 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
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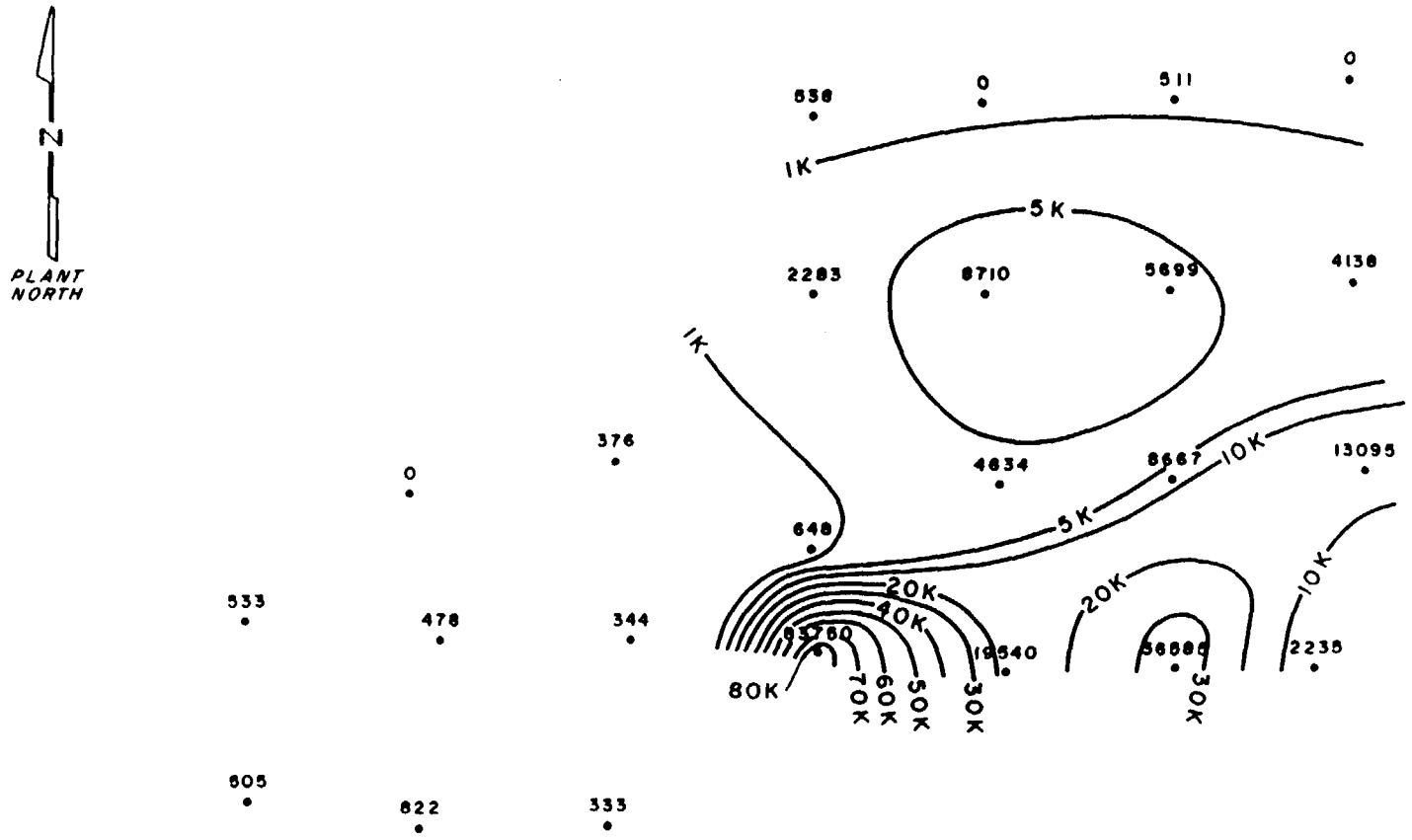



SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

SODIUM ISOPLETH 0-2FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

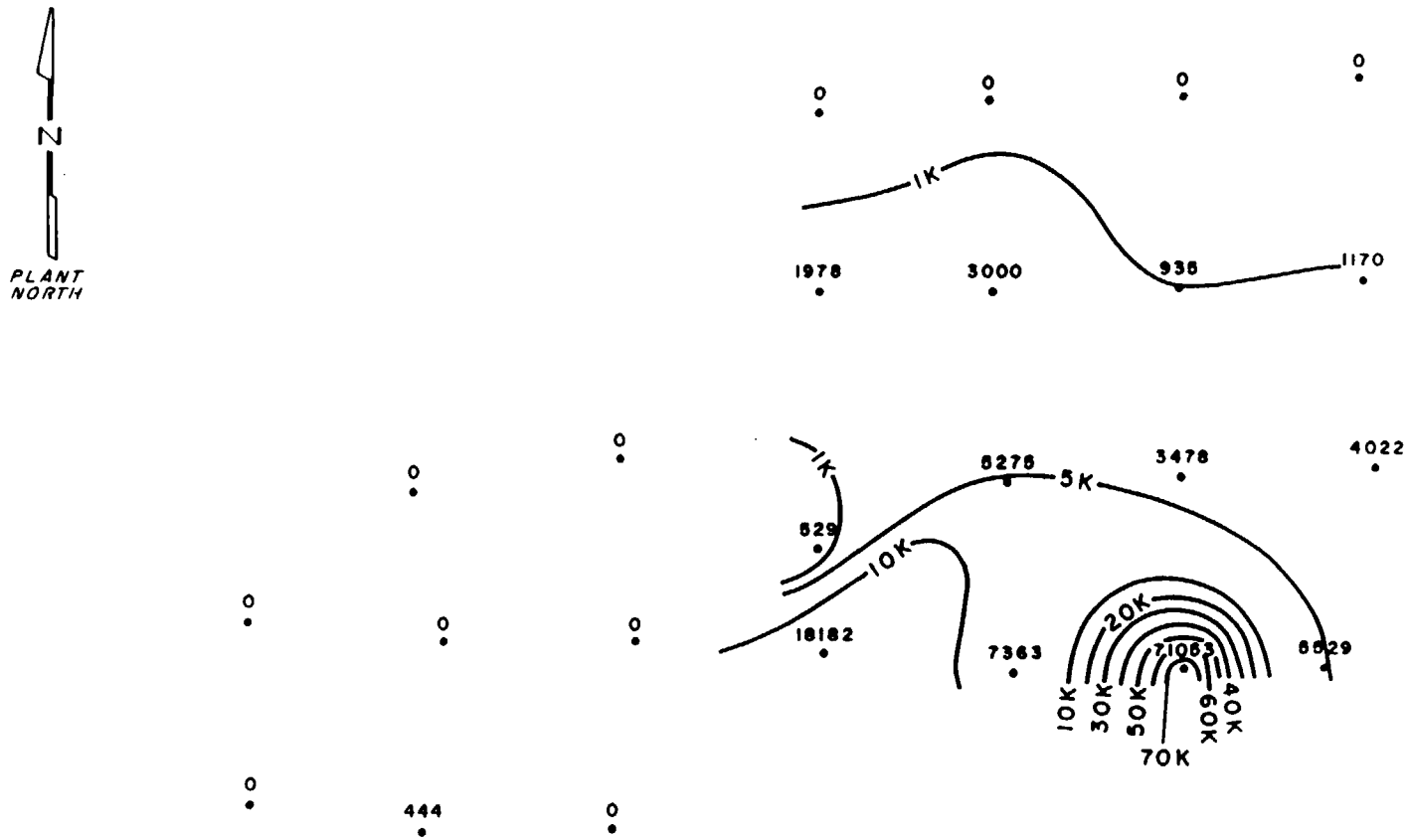
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 64

156764

DATE: 03JUN91 | PRJCT. NO.: PA00706 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

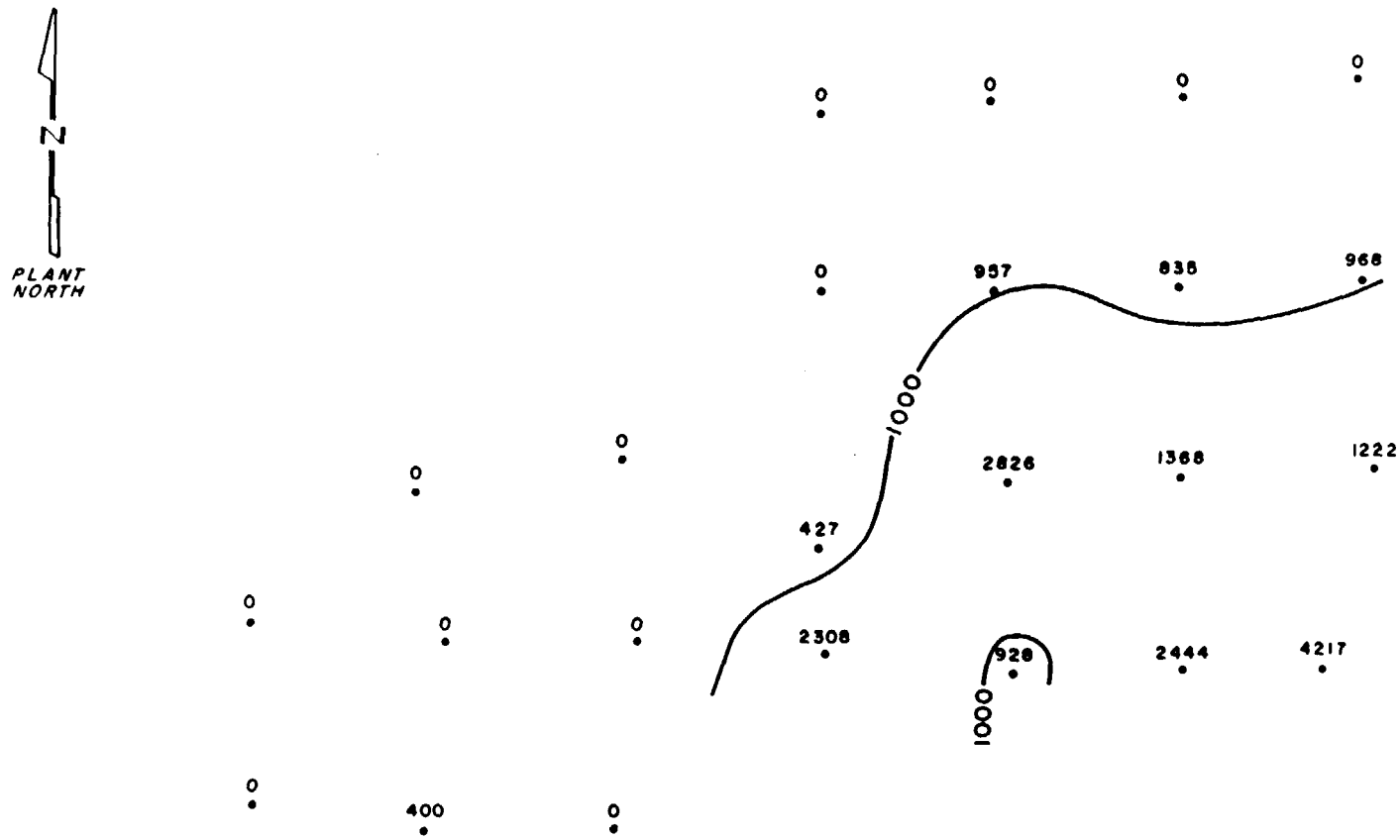
SODIUM ISOPLETH 2-4FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 65

DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

SODIUM ISOPLETH 4-6FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

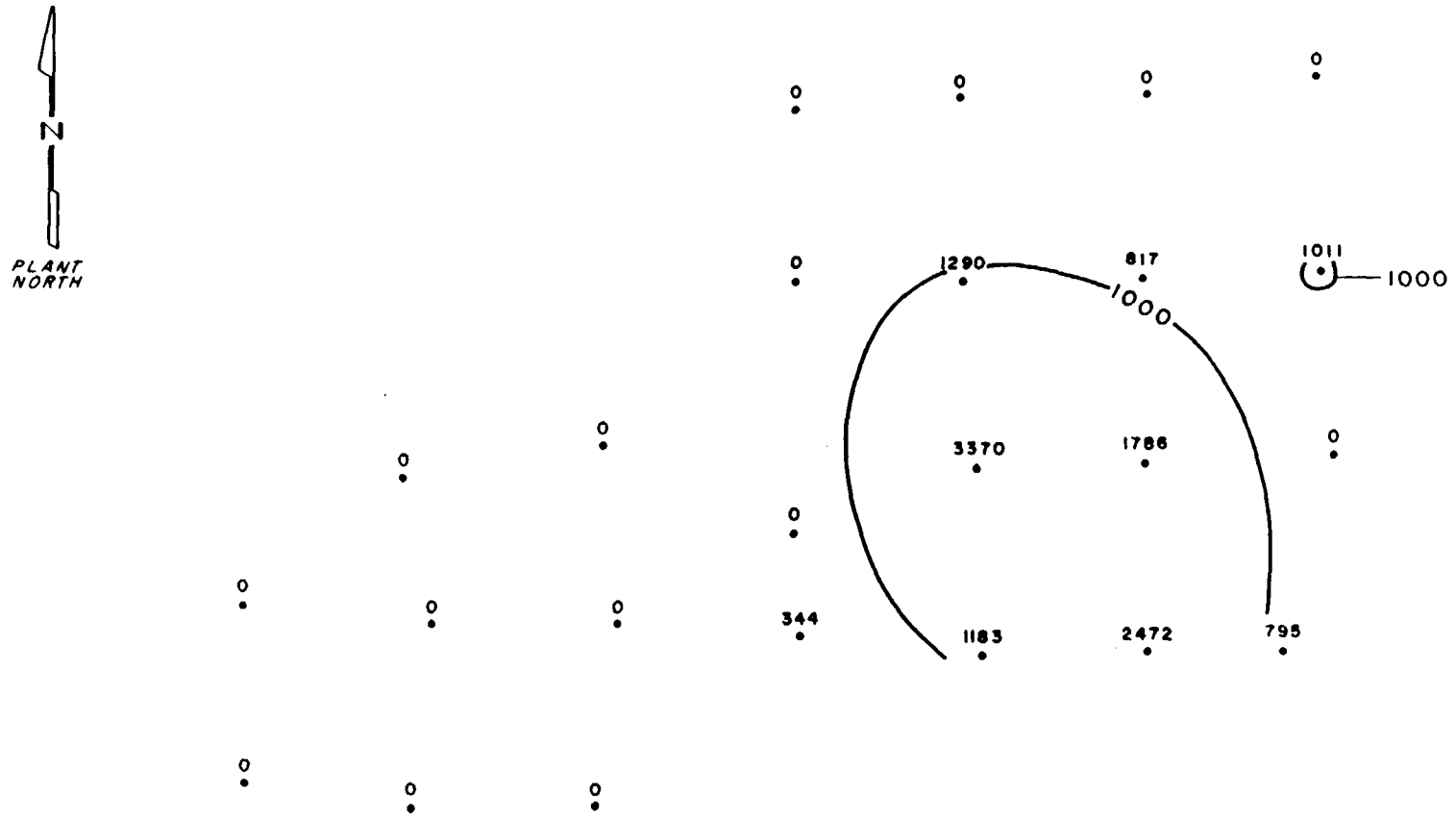
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 66

156784

| DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
|---|---|---|---|---|---|---|




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

SODIUM ISOPLETH 6-8FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

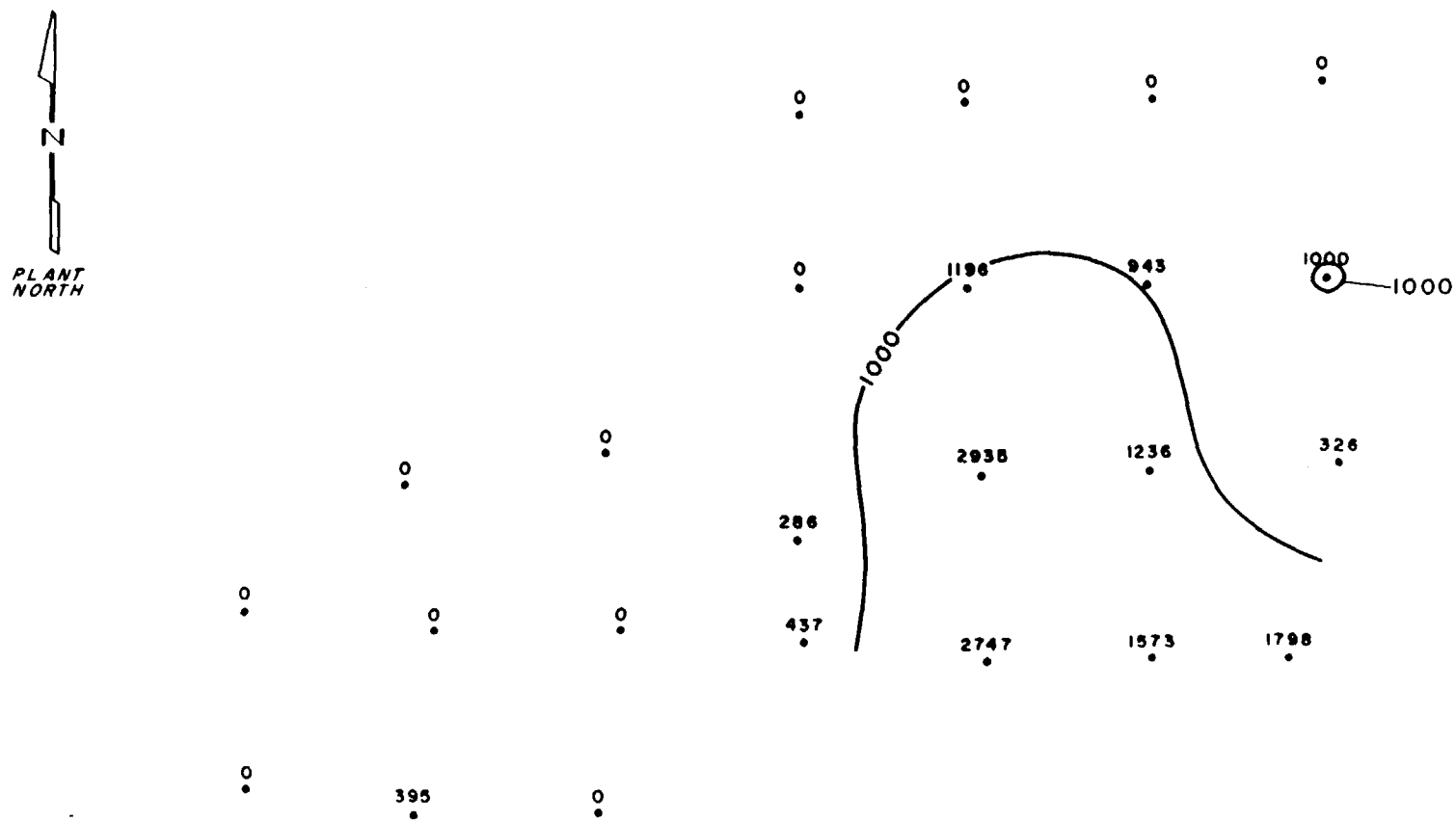
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 67

158784

DATE: 04JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD F...: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

SODIUM ISOPLETH 8-10FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 68

156764

| DATE: 04JUN01 | PRJCT. NO.: PA00708 | FILE NO.: | CAD: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
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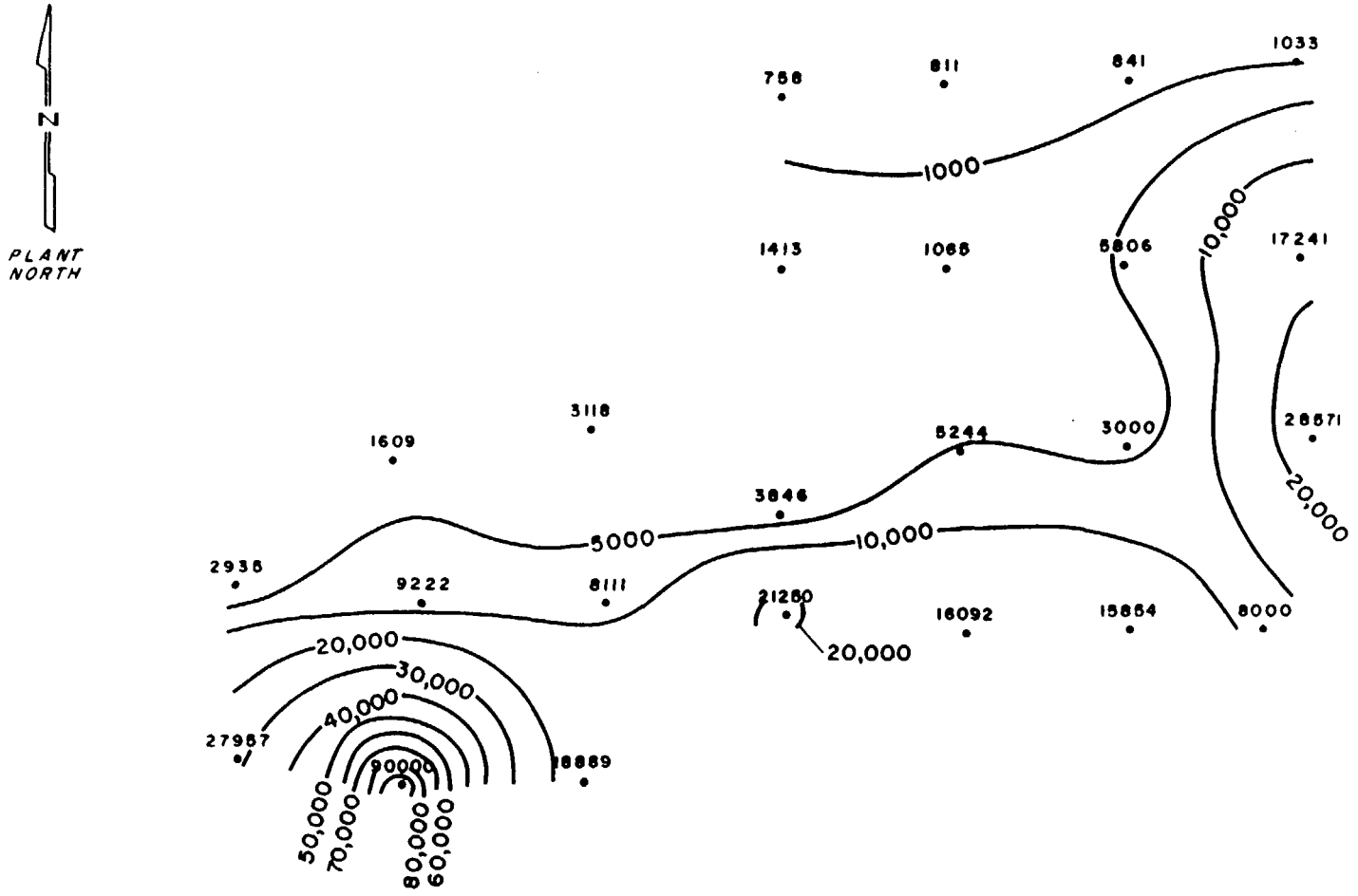



SCALE 0 — 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

CALCIUM ISOPLETH 0-2FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

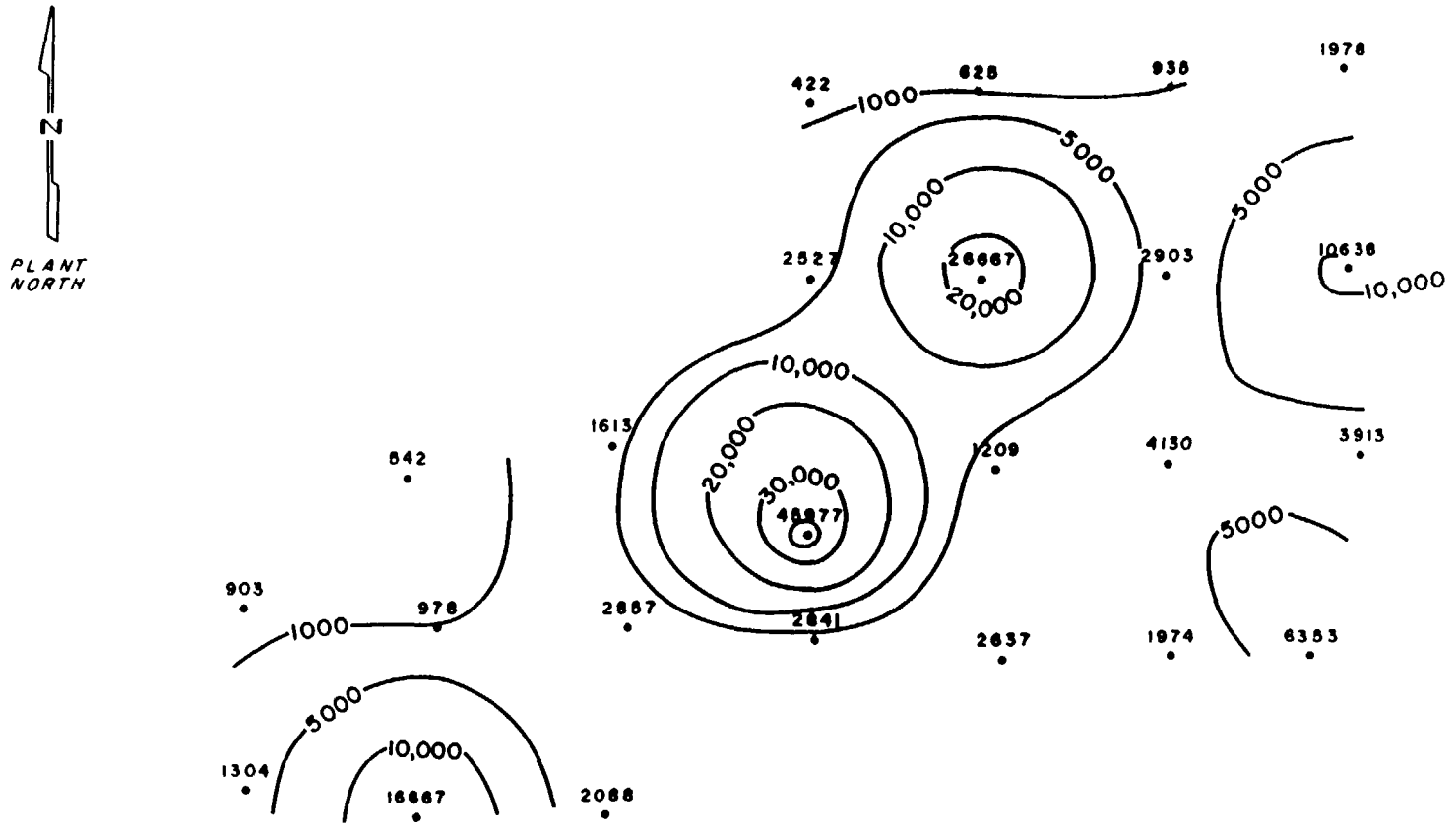
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 69

156784

DATE: 06JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD | NON-CAD | COMPILER: R. FARGO | MGR. R. FARGO | DRAFTER: S. LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

CALCIUM ISOPLETH 2-4FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

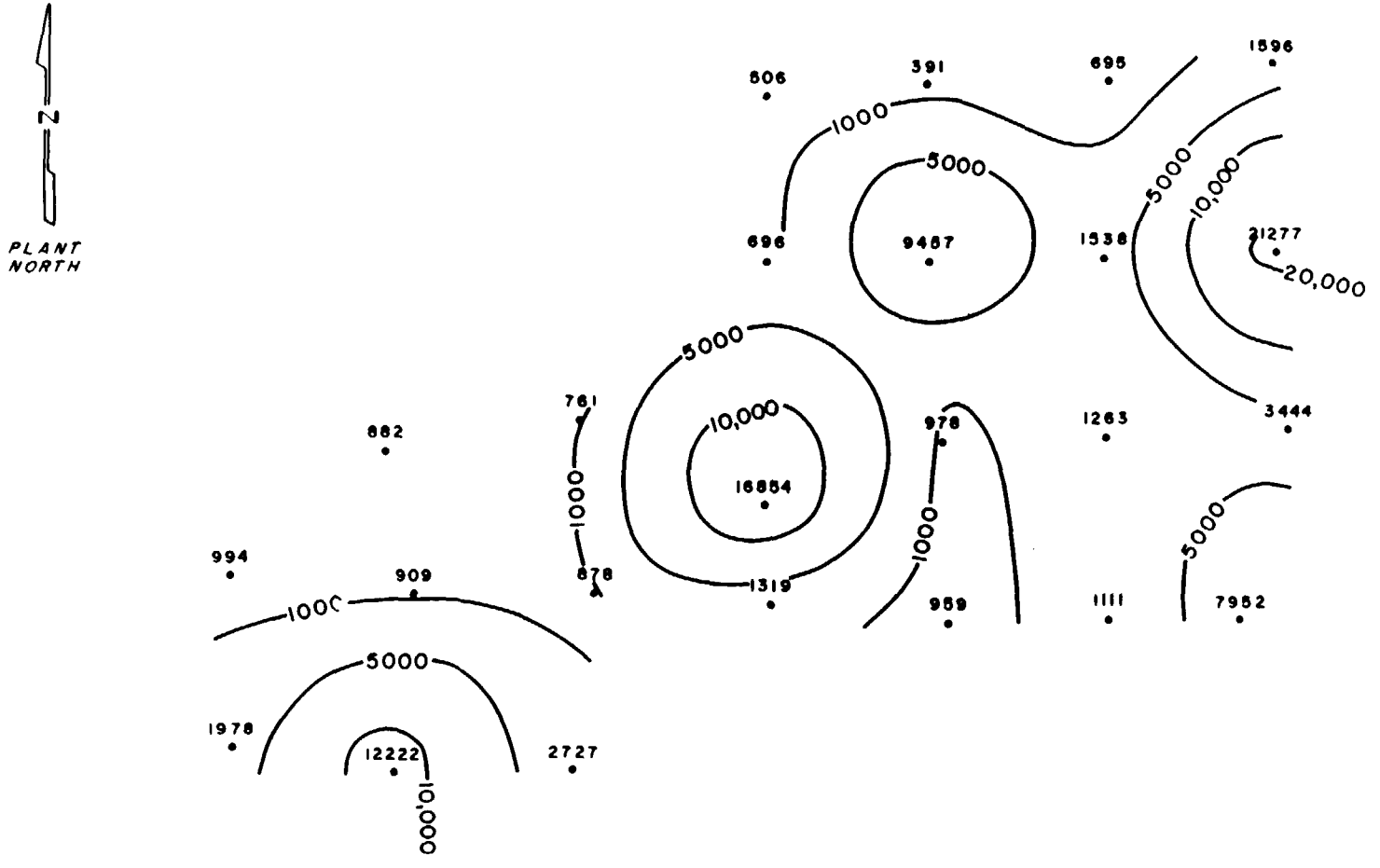
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 70

156784

DATE: 05JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

CALCIUM ISOPLETH 4-6FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 71

15678A

| DATE: 05JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD FILE: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S. LOFTUS |
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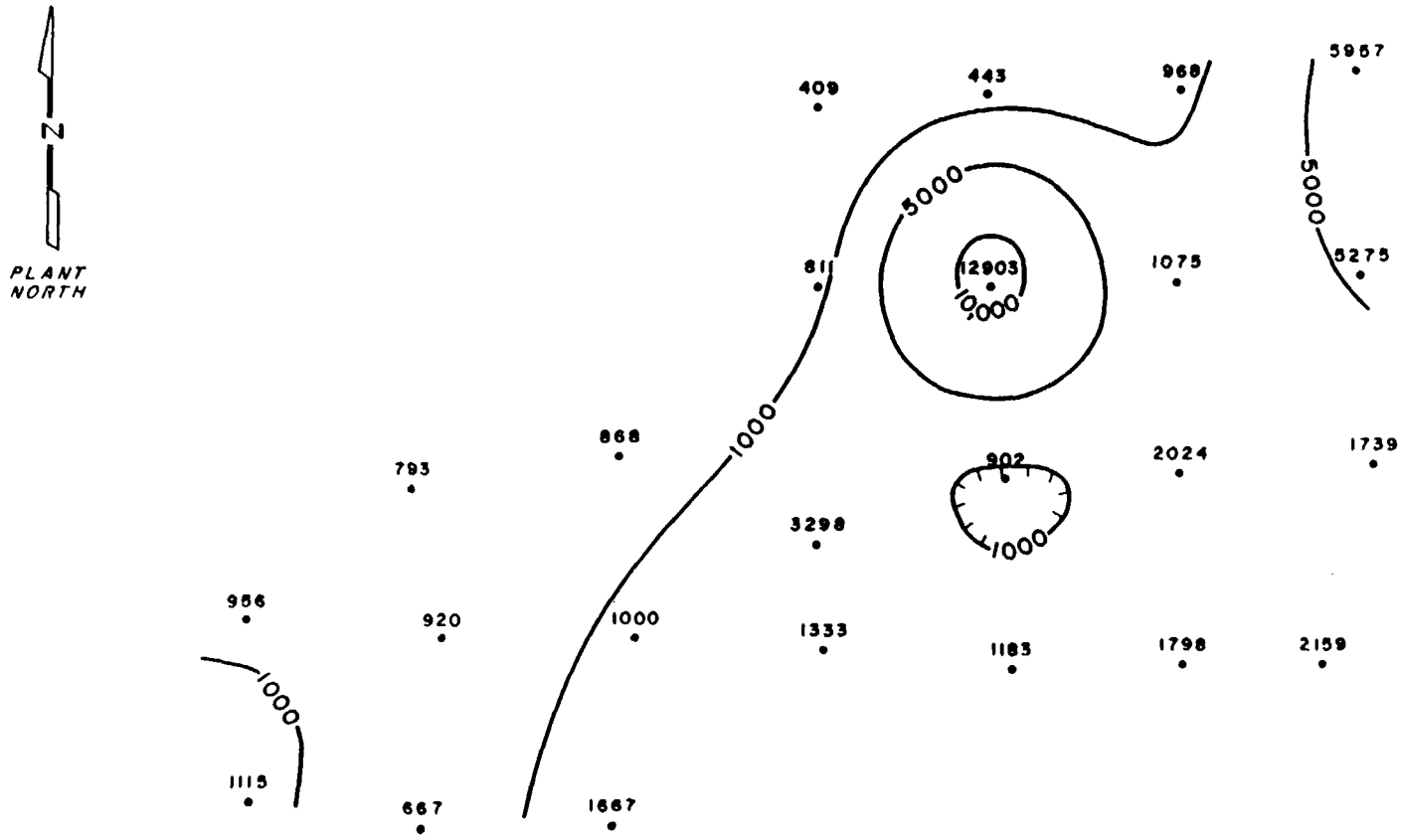



SCALE
0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

CALCIUM ISOPLETH 6-8 FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

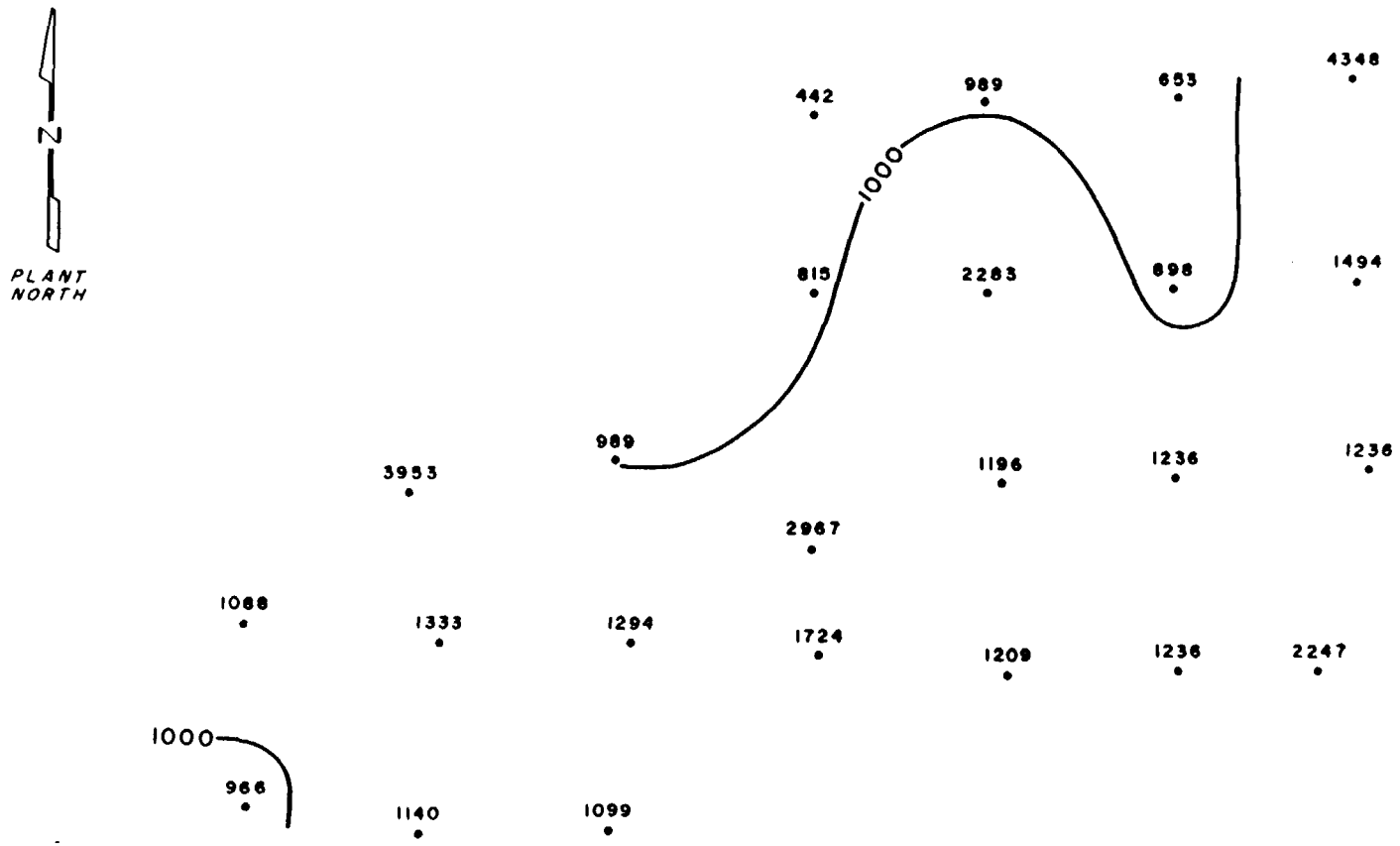
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 72

156784

DATE: 05JUN91 | PRJCT. NO.: PA00708 | FILE NO.: | CAD . ☑: NON-CAD | COMPILER: R. FARGO | MGR.: R. FARGO | DRAFTER: S LOFTUS




SCALE 0 200'

GERAGHTY & MILLER, INC.
*Environmental Services*

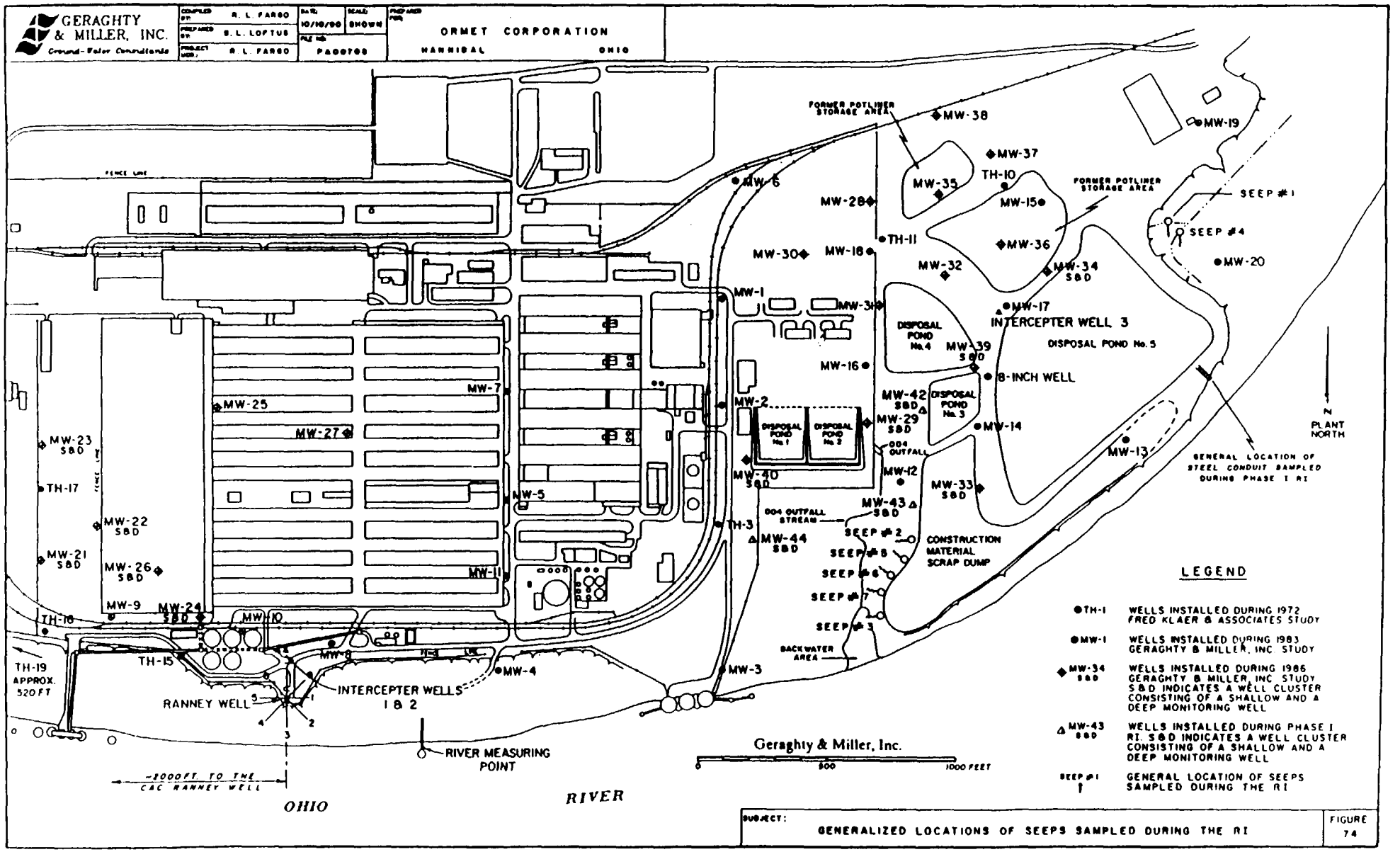
CALCIUM ISOPLETH 8-10FOOT DEPTH
FORMER SPENT POTLINER STORAGE AREA
(ALL CONTOURS IN MG/KG)

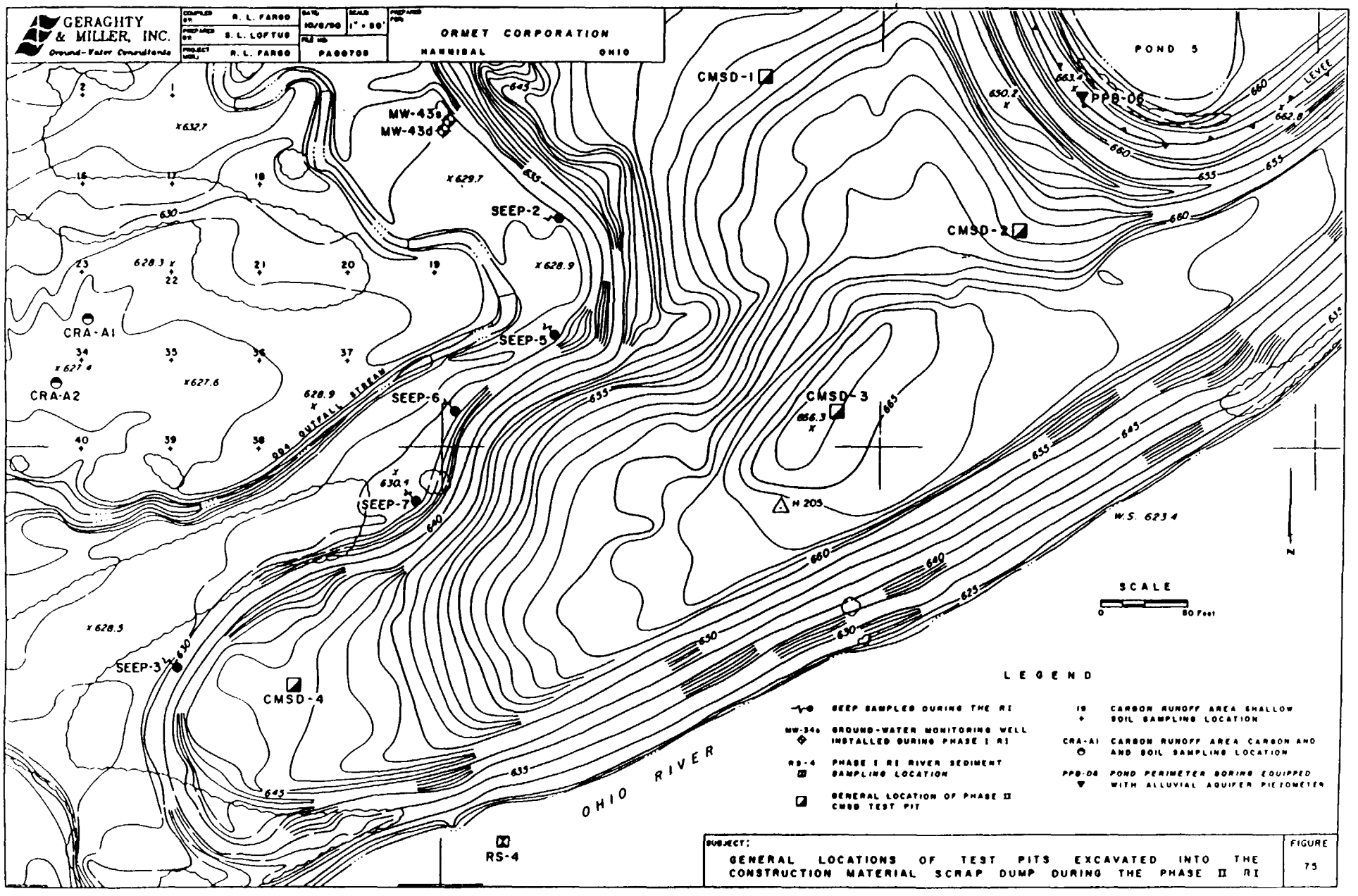
ORMET CORPORATION

HANNIBAL OHIO

FIGURE 73

156764


GERAGHTY & MILLER, INC.
Ground-Water Consultants
R. L. FARGO
S. L. LOFTUS
R. L. FARGO
10/10/90
SHOWN
P400708
ORMET CORPORATION
HANNIBAL OHIO
FENCE LINE
FORMER POTLINER STORAGE AREA
MW-38
MW-19
MW-37
TH-10
MW-35
MW-15
SEEP #1
SEEP #4
MW-6
MW-28
TH-11
MW-36
MW-20
MW-30
MW-18
MW-32
MW-34 S&D
MW-1
MW-31
MW-17
INTERCEPTER WELL 3
DISPOSAL POND No. 4
DISPOSAL POND No. 5
MW-39 S&D
MW-16
8-INCH WELL
MW-7
MW-42 S&D
DISPOSAL POND No. 3
MW-2
MW-29 S&D
MW-14
MW-25
MW-27
DISPOSAL POND No. 1
DISPOSAL POND No. 2
004 OUTFALL
MW-13
N
PLANT NORTH
GENERAL LOCATION OF STEEL CONDUIT SAMPLED DURING PHASE I RI
MW-23 S&D
TH-17
MW-40 S&D
MW-12
MW-33 S&D
MW-5
MW-43 S&D
004 OUTFALL STREAM
MW-22 S&D
TH-3
MW-44 S&D
SEEP #2
CONSTRUCTION MATERIAL SCRAP DUMP
MW-21 S&D
MW-26 S&D
SEEP #5
SEEP #6
MW-11
MW-9
MW-24 S&D
MW-10
SEEP #7
TH-16
SEEP #3
BACKWATER AREA
TH-19 APPROX. 520 FT
TH-15
MW-8
MW-4
MW-3
INTERCEPTER WELLS 1 & 2
RANNEY WELL
RIVER MEASURING POINT
Geraghty & Miller, Inc.
0
500
1000 FEET
~2000 FT TO THE CAC RANNEY WELL
OHIO
RIVER
LEGEND
TH-1 WELLS INSTALLED DURING 1972 FRED KLAER & ASSOCIATES STUDY
MW-1 WELLS INSTALLED DURING 1983 GERAGHTY & MILLER, INC STUDY
MW-34 S&D WELLS INSTALLED DURING 1986 GERAGHTY & MILLER, INC STUDY S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
MW-43 S&D WELLS INSTALLED DURING PHASE I RI. S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
SEEP #1 GENERAL LOCATION OF SEEPS SAMPLED DURING THE RI
SUBJECT: GENERALIZED LOCATIONS OF SEEPS SAMPLED DURING THE RI
FIGURE 74




SUBJECT:
GENERAL LOCATIONS OF TEST PITS EXCAVATED INTO THE CONSTRUCTION MATERIAL SCRAP DUMP DURING THE PHASE II RI

FIGURE 75

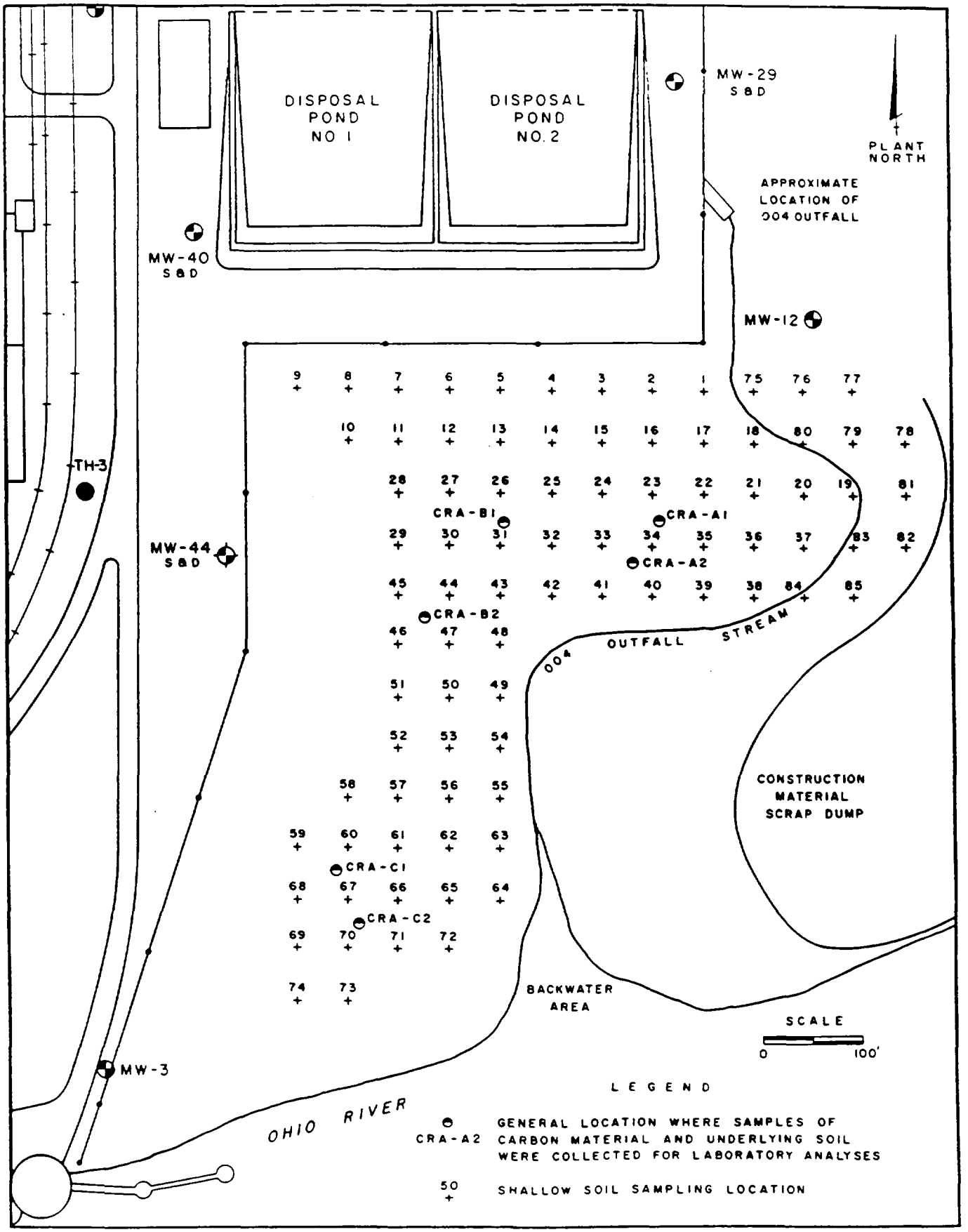



FIGURE 76. General Configuration of Carbon Runoff and Deposition Area Sampling Grid.

Ormet Corporation

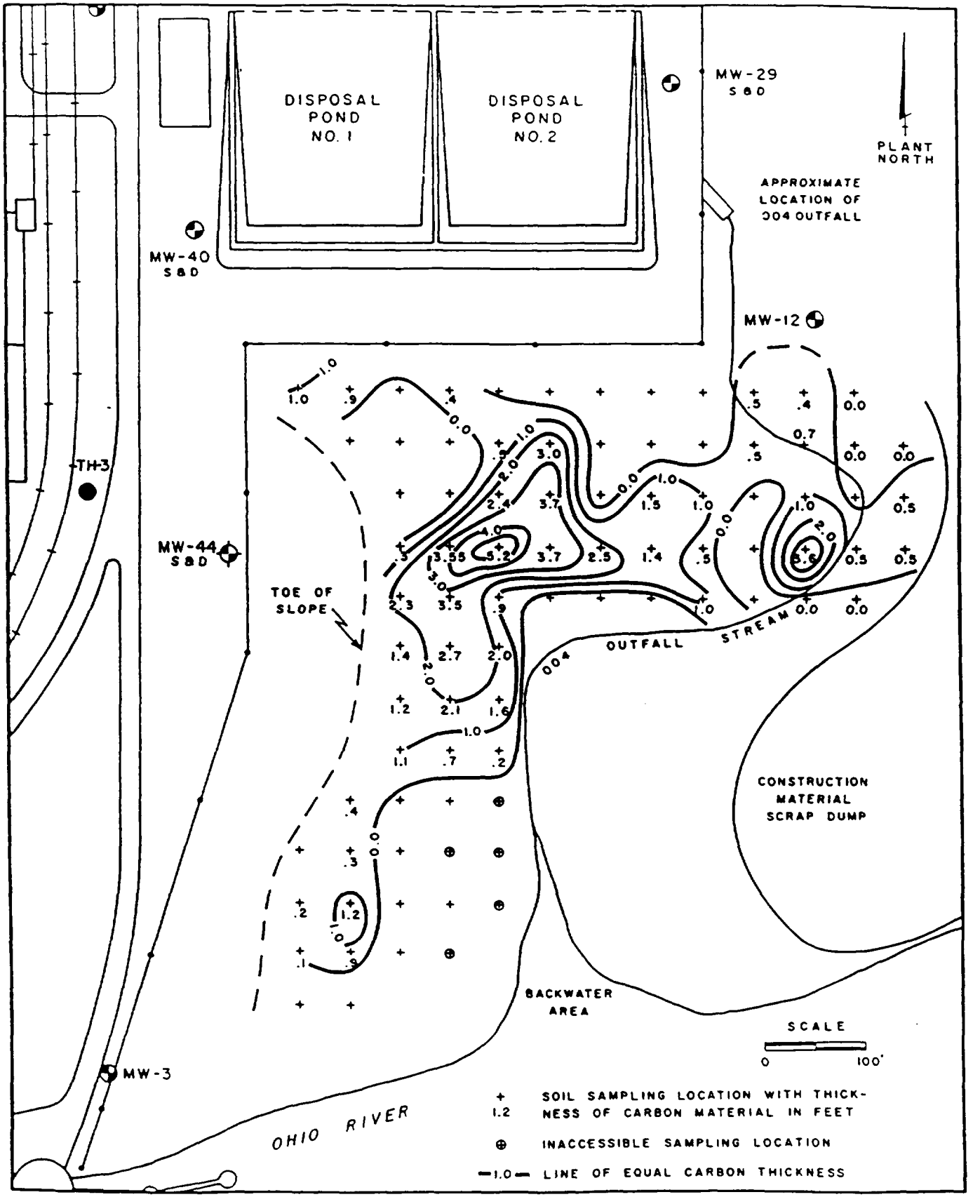



FIGURE 77. Generalized Isopach Map of Carbon Material in the Carbon Runoff and Deposition Area.

Ormet Corporation
Hannibal, Ohio

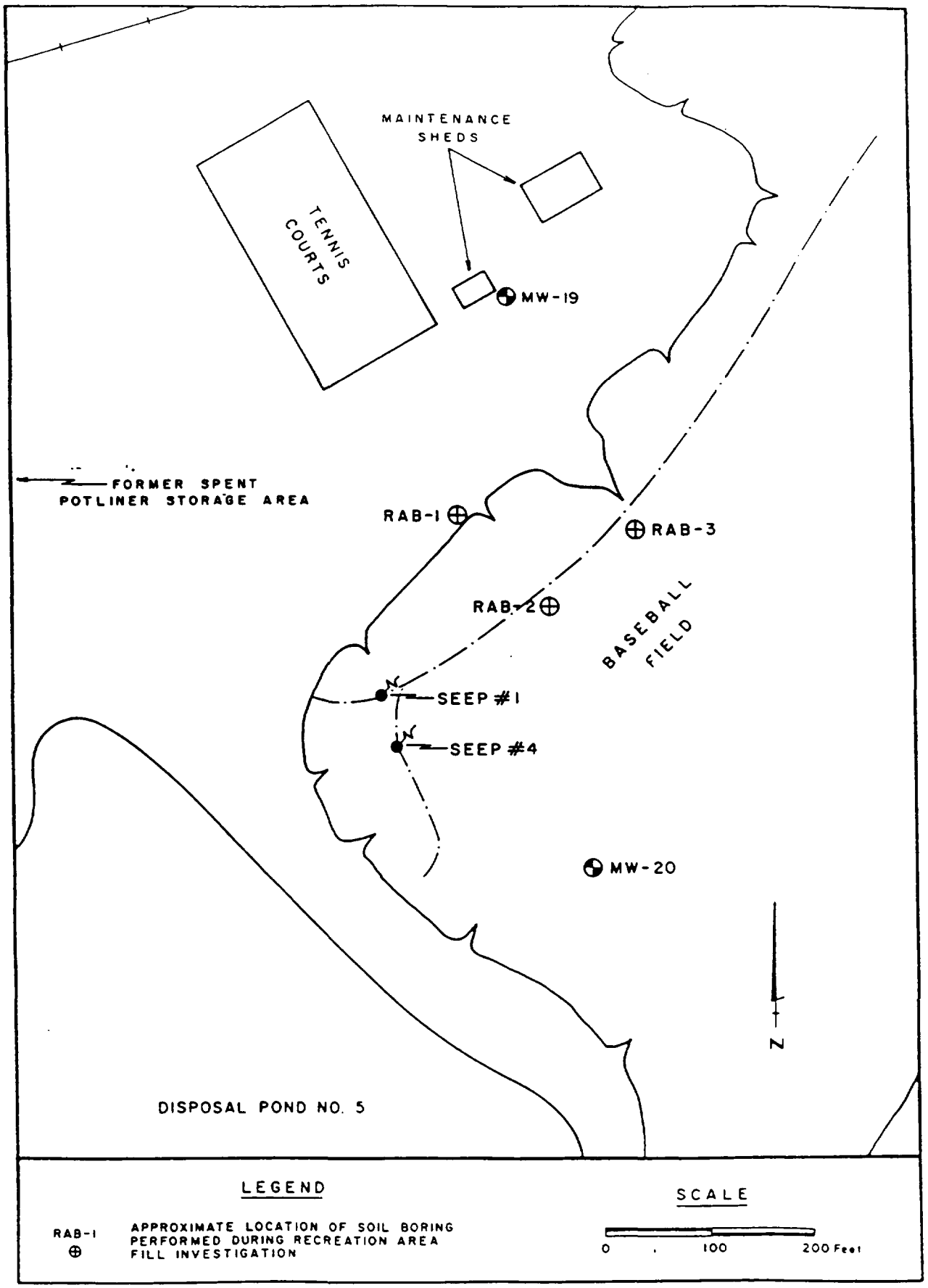



FIGURE 78. General Locations of Ballfield Seeps and Recreation Area Soil Borings.

Ormet Corporation
Hannibal, Ohio

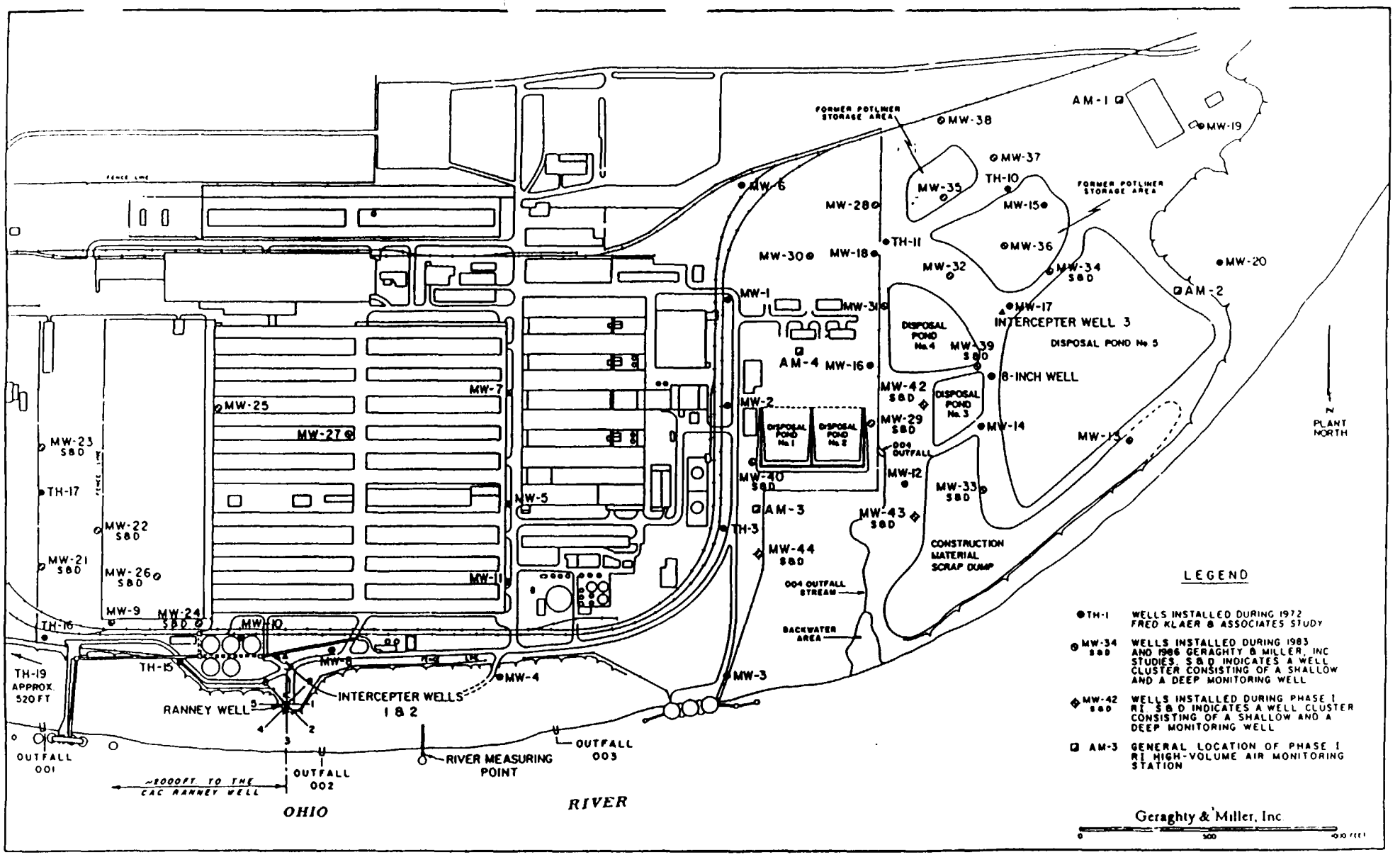
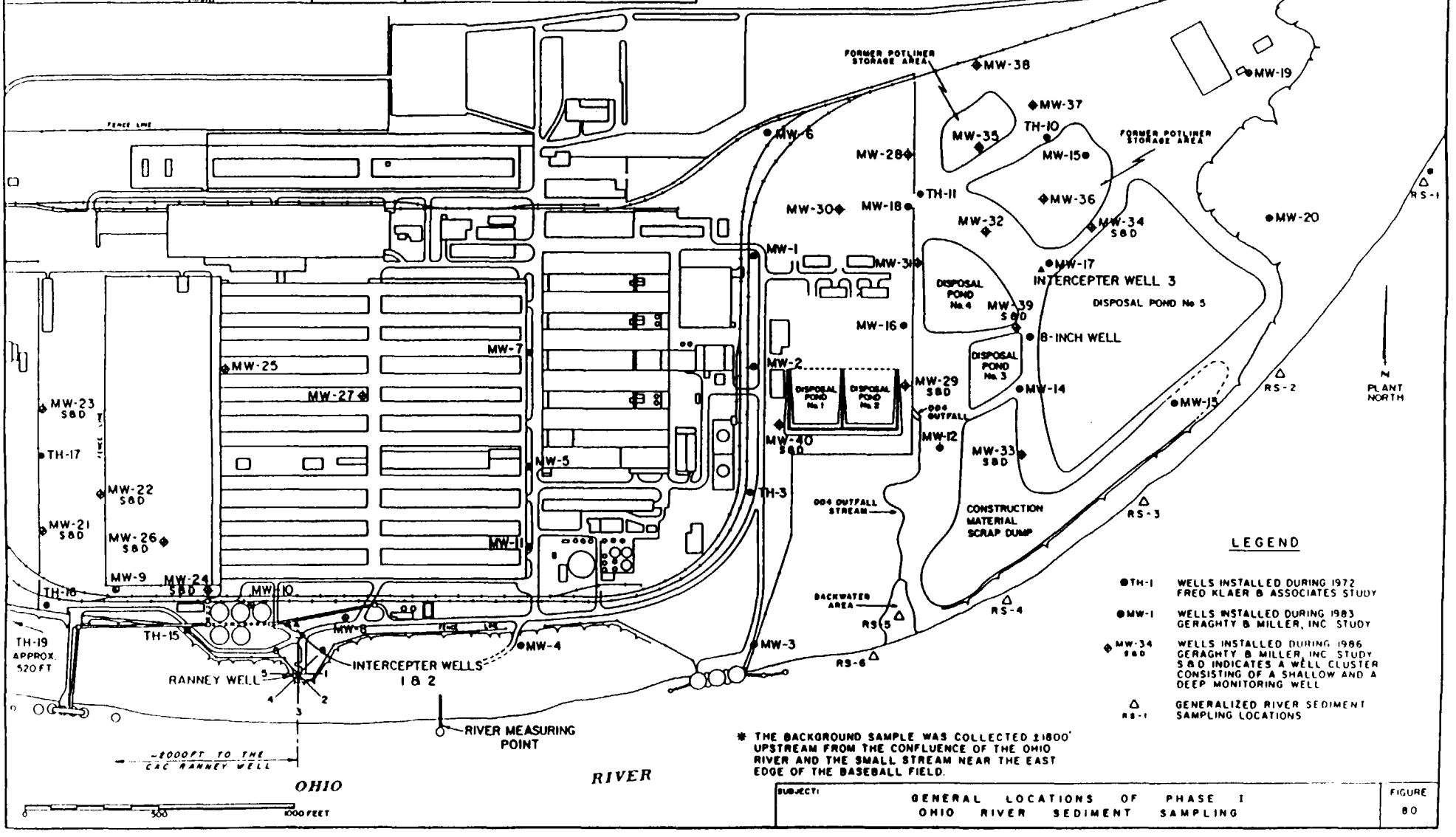



FIGURE 79. General Locations of High-Volume Air Monitoring Stations.

Ormet Corporation
Hannibal, Ohio

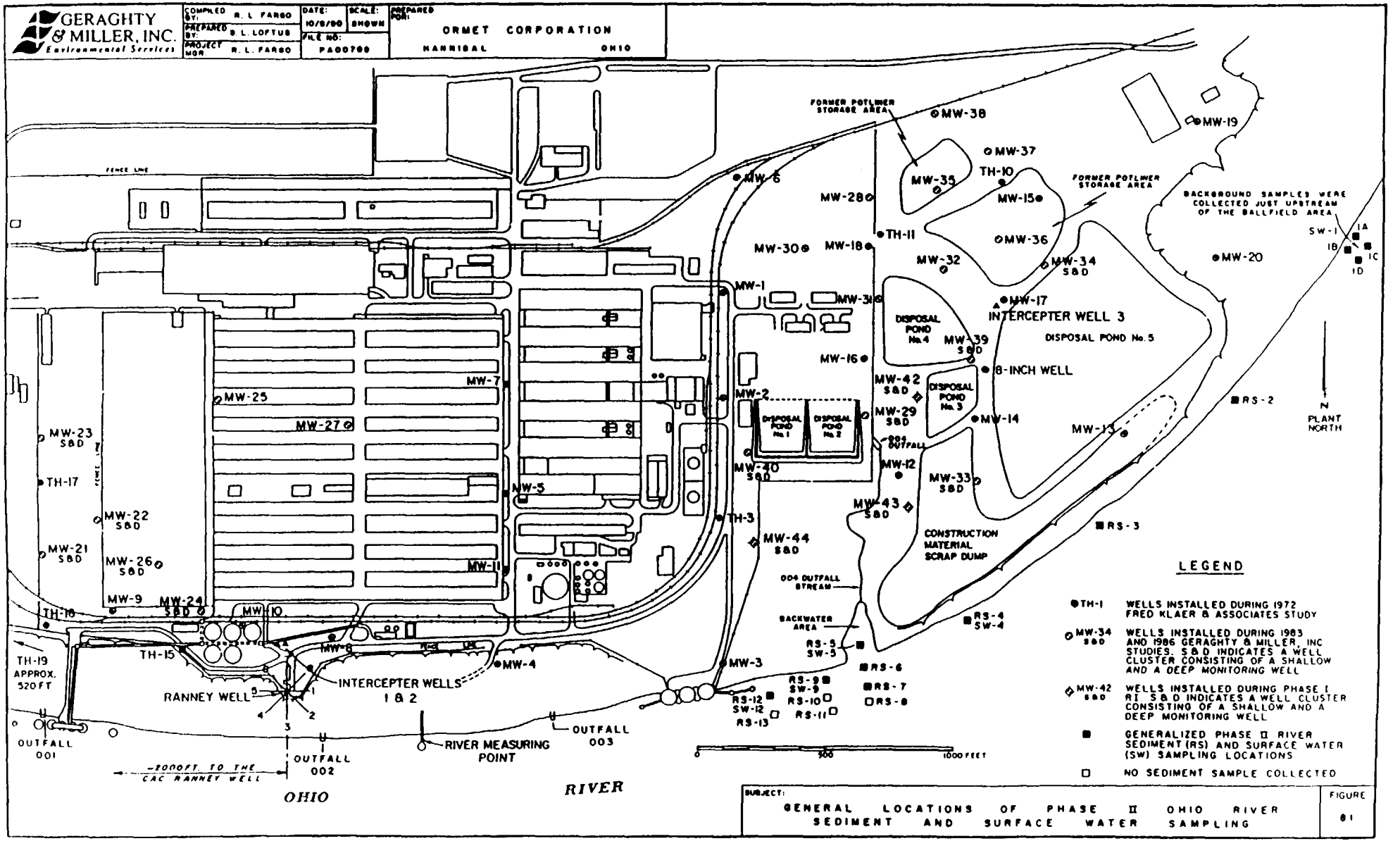
GERAGHTY & MILLER, INC.
Environmental Services

COMPILED BY: R L FARGO
PREPARED BY: D. L. LOFTUS
PROJECT MGR. R L FARGO
DATE: 1/25/91
SCALE: SHOWN
FILE NO: PA00700
PREPARED FOR: ORMET CORPORATION
HANNIBAL OHIO




SUBJECT: GENERAL LOCATIONS OF PHASE I OHIO RIVER SEDIMENT SAMPLING

FIGURE 80


GERAGHTY & MILLER, INC.
Environmental Services
COMPILED BY: R. L. FARGO
PREPARED BY: B. L. LOFTUS
PROJECT MGR: R. L. FARGO
DATE: 10/8/90
SCALE: SHOWN
FILE NO: PA00700
PREPARED FOR: ORMET CORPORATION
HANNIBAL OHIO
FENCE LINE
FORMER POTLINER STORAGE AREA
MW-38
MW-19
MW-37
TH-10
MW-35
MW-15
MW-6
MW-28
TH-11
MW-36
MW-30
MW-18
MW-32
MW-34 S&D
MW-20
BACKGROUND SAMPLES WERE COLLECTED JUST UPSTREAM OF THE BALLFIELD AREA
SW-1
1A
1B
1C
1D
MW-1
MW-31
MW-17
INTERCEPTER WELL 3
DISPOSAL POND No. 4
MW-39 S&D
DISPOSAL POND No. 5
MW-16
8-INCH WELL
MW-42 S&D
DISPOSAL POND No. 3
MW-2
MW-29 S&D
MW-14
MW-13
RS-2
N
PLANT NORTH
DISPOSAL POND No. 1
DISPOSAL POND No. 2
004 OUTFALL
MW-40 S&D
MW-12
MW-33 S&D
MW-43 S&D
MW-7
MW-25
MW-27
MW-23 S&D
TH-17
MW-5
MW-22 S&D
TH-3
MW-44 S&D
CONSTRUCTION MATERIAL SCRAP DUMP
RS-3
MW-21 S&D
MW-26 S&D
MW-11
004 OUTFALL STREAM
MW-9
MW-24 S&D
MW-10
TH-16
BACKWATER AREA
RS-4 SW-4
RS-5 SW-5
TH-15
MW-8
MW-4
MW-3
RS-6
TH-19 APPROX. 520 FT
INTERCEPTER WELLS 1 & 2
RANNEY WELL
RS-9 SW-9
RS-7
RS-10
RS-8
RS-12 SW-12
RS-11
RS-13
OUTFALL 001
OUTFALL 002
OUTFALL 003
RIVER MEASURING POINT
~2000 FT. TO THE CAC RANNEY WELL
0
500
1000 FEET
OHIO
RIVER
LEGEND
TH-1 WELLS INSTALLED DURING 1972 FRED KLAER & ASSOCIATES STUDY
MW-34 S&D WELLS INSTALLED DURING 1983 AND 1986 GERAGHTY & MILLER, INC STUDIES. S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
MW-42 S&D WELLS INSTALLED DURING PHASE I RI. S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
GENERALIZED PHASE II RIVER SEDIMENT (RS) AND SURFACE WATER (SW) SAMPLING LOCATIONS
NO SEDIMENT SAMPLE COLLECTED
SUBJECT: GENERAL LOCATIONS OF PHASE II OHIO RIVER SEDIMENT AND SURFACE WATER SAMPLING
FIGURE 81

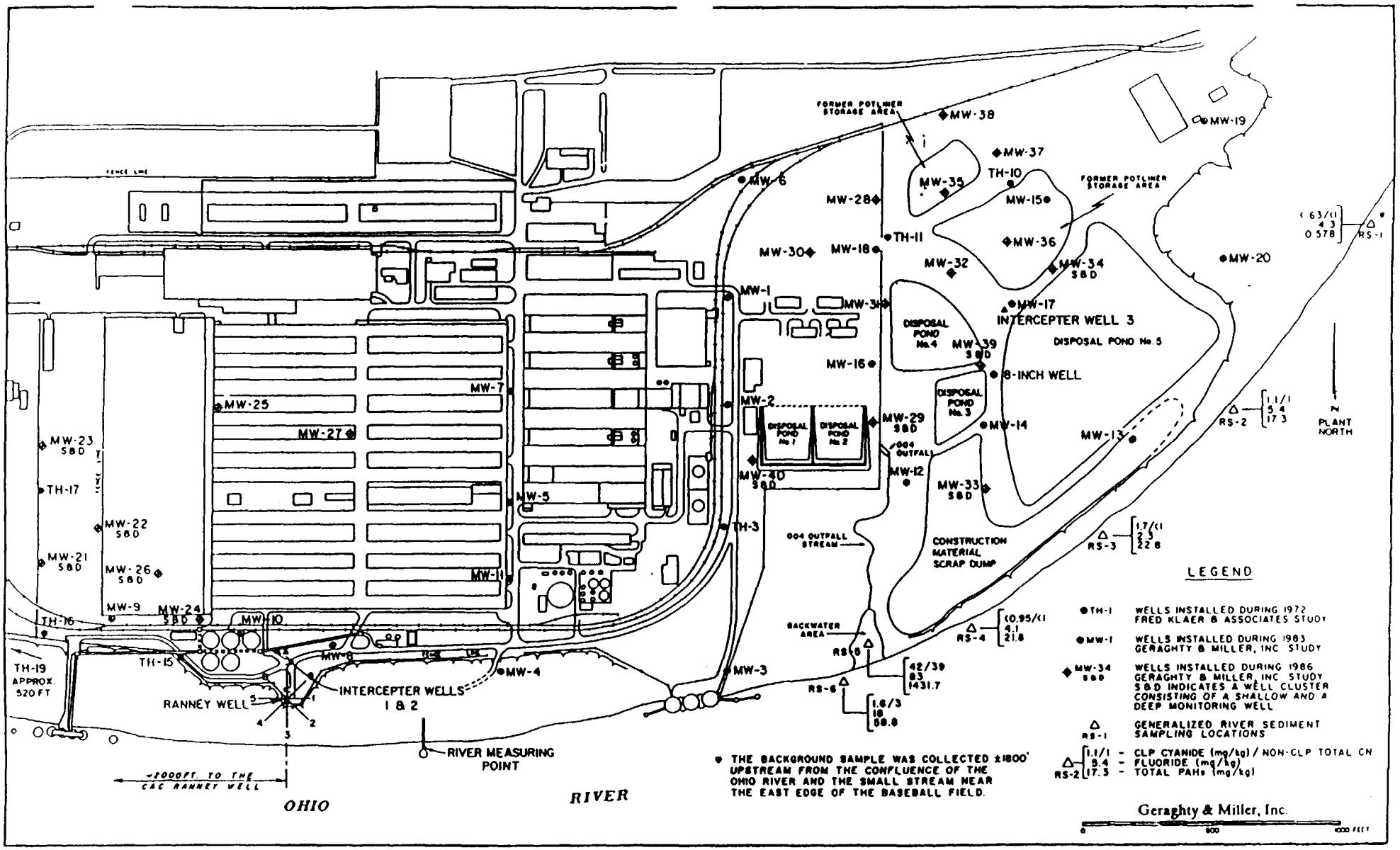



FIGURE 82. Concentrations of Selected Parameters in Phase I Ohio River Sediment Samples.

Ormet Corporation
Hannibal, Ohio

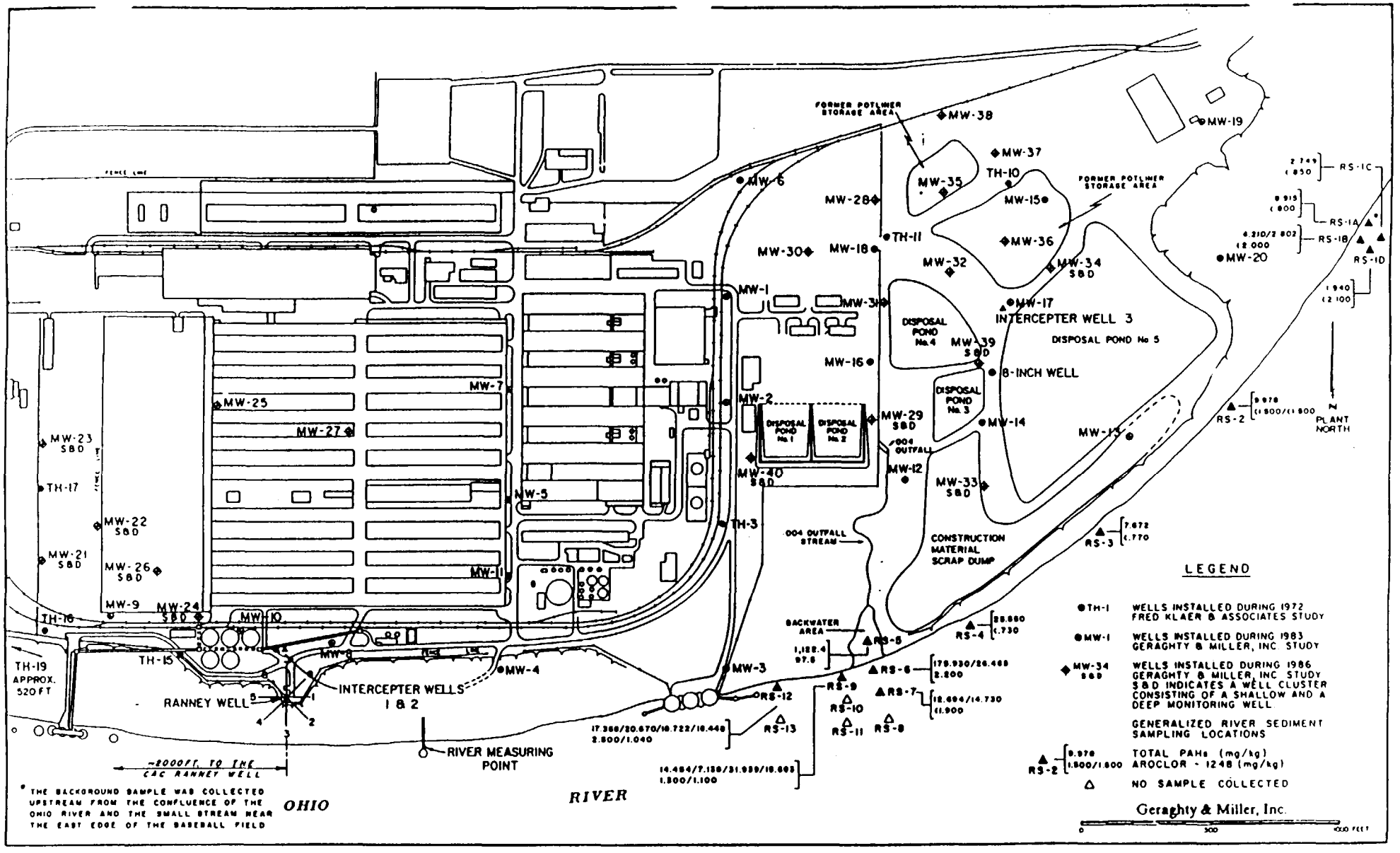
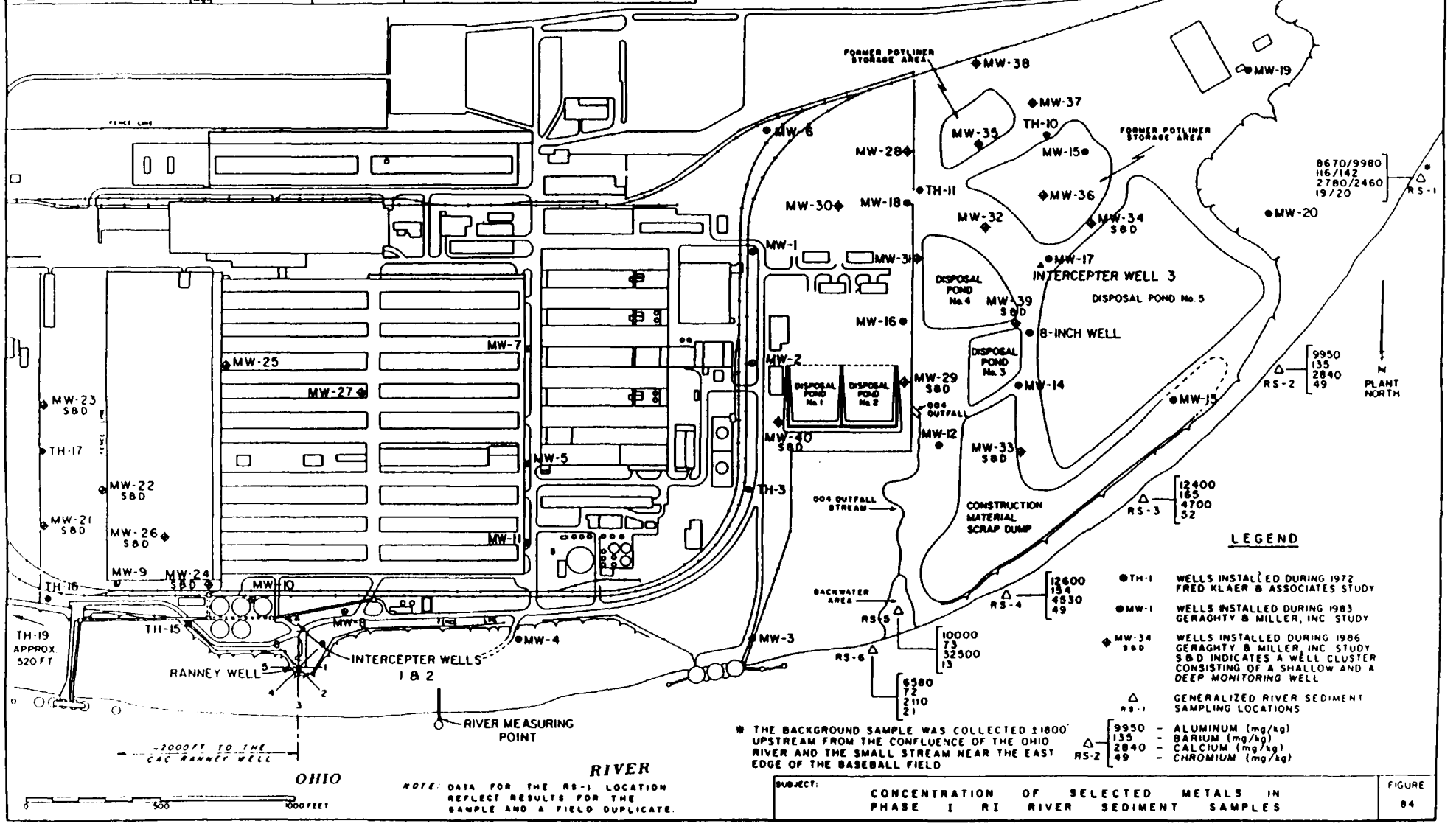
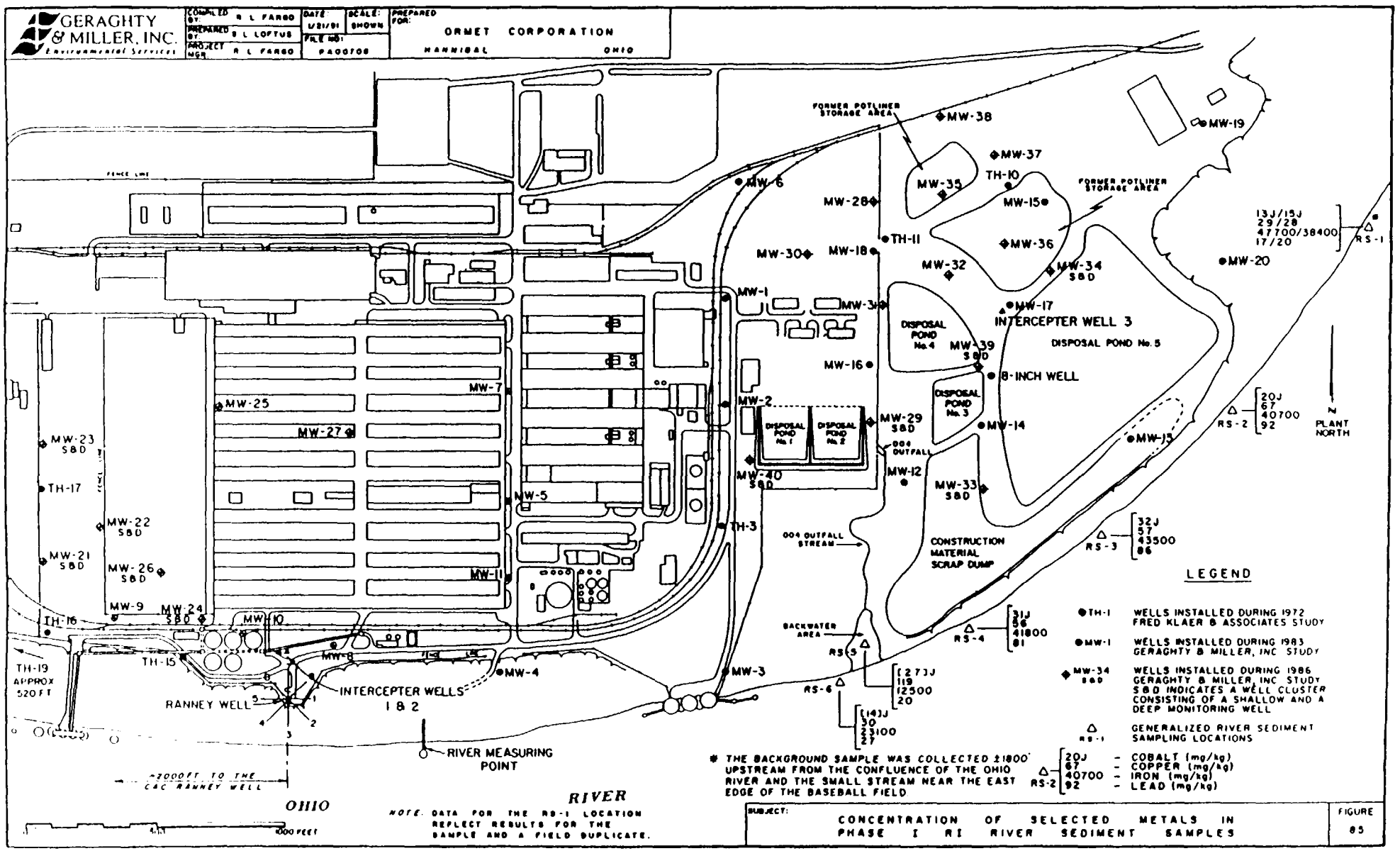


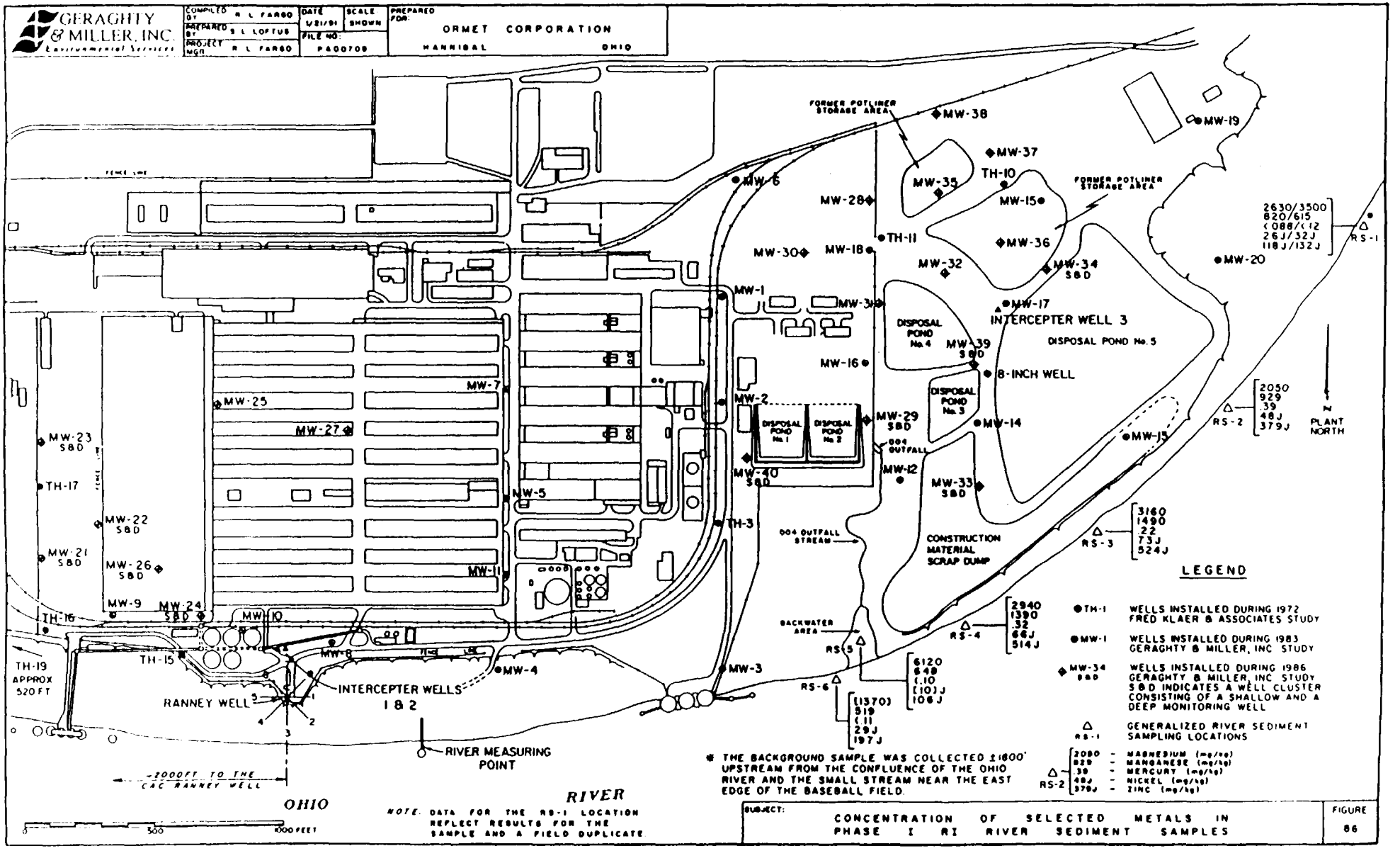

FIGURE 83. Concentrations of Total PAHs and Arochlor 1248 in Phase II Ohio River Sediment Samples.

Ormet Corporation
Hannibal, Ohio

(NOTE: more than one number shown for a parameter reflects the analysis of field duplicates and/or laboratory re-analyses.)


GERAGHTY & MILLER, INC.
Environmental Services
COMPILED BY R L FARGO
PREPARED BY S L LOFTUS
PROJECT MGR R L FARGO
DATE 1/21/91
SCALE: SHOWN
FILE NO. PA00708
PREPARED FOR: ORMET CORPORATION HANNIBAL OHIO
FORMER POTLINER STORAGE AREA
MW-38
MW-19
MW-37
TH-10
MW-35
MW-15
MW-6
MW-28
TH-11
MW-36
MW-30
MW-18
MW-32
MW-34 S&D
MW-20
8670/9980
116/142
2780/2460
19/20
RS-1
MW-1
MW-31
MW-17
INTERCEPTER WELL 3
DISPOSAL POND No.4
MW-39 S&D
DISPOSAL POND No.5
MW-16
8-INCH WELL
DISPOSAL POND No.3
MW-7
MW-25
MW-2
DISPOSAL POND No.1
DISPOSAL POND No.2
MW-29 S&D
MW-14
RS-2
9950
135
2840
49
N
PLANT NORTH
MW-27
MW-23 S&D
004 OUTFALL
MW-13
MW-40 S&D
MW-12
MW-33 S&D
TH-17
MW-5
MW-22 S&D
TH-3
004 OUTFALL STREAM
CONSTRUCTION MATERIAL SCRAP DUMP
RS-3
12400
165
4700
52
MW-21 S&D
MW-26 S&D
MW-11
MW-9
MW-24 S&D
TH-16
MW-10
BACKWATER AREA
RS-4
12600
154
4530
49
RS-5
TH-19 APPROX 520 FT
TH-15
MW-8
MW-4
MW-3
RS-6
10000
73
32500
13
RANNEY WELL
INTERCEPTER WELLS 1 & 2
6580
72
2110
21
RIVER MEASURING POINT
~2000 FT TO THE CAC RANNEY WELL
OHIO RIVER
0 500 1000 FEET
LEGEND
TH-1 WELLS INSTALLED DURING 1972 FRED KLAER & ASSOCIATES STUDY
MW-1 WELLS INSTALLED DURING 1983 GERAGHTY & MILLER, INC STUDY
MW-34 S&D WELLS INSTALLED DURING 1986 GERAGHTY & MILLER, INC STUDY S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
RS-1 GENERALIZED RIVER SEDIMENT SAMPLING LOCATIONS
RS-2
9950 - ALUMINUM (mg/kg)
135 - BARIUM (mg/kg)
2840 - CALCIUM (mg/kg)
49 - CHROMIUM (mg/kg)
* THE BACKGROUND SAMPLE WAS COLLECTED ±1800' UPSTREAM FROM THE CONFLUENCE OF THE OHIO RIVER AND THE SMALL STREAM NEAR THE EAST EDGE OF THE BASEBALL FIELD
NOTE: DATA FOR THE RS-1 LOCATION REFLECT RESULTS FOR THE SAMPLE AND A FIELD DUPLICATE.
SUBJECT: CONCENTRATION OF SELECTED METALS IN PHASE I RI RIVER SEDIMENT SAMPLES
FIGURE 84


GERAGHTY & MILLER, INC.
Environmental Services
COMPILED BY: R L FARGO
PREPARED BY: R L LOFTUS
PROJECT MGR: R L FARGO
DATE: 1/21/91
SCALE: SHOWN
FILE NO: PA00706
PREPARED FOR:
ORMET CORPORATION
HANNIBAL OHIO
FENCE LINE
FORMER POTLINER STORAGE AREA
MW-38
MW-19
MW-37
TH-10
MW-35
MW-15
MW-6
MW-28
TH-11
MW-36
MW-30
MW-18
MW-32
MW-34 S&D
MW-20
MW-1
MW-31
MW-17
INTERCEPTER WELL 3
DISPOSAL POND No. 4
MW-39 S&D
DISPOSAL POND No. 5
MW-16
8-INCH WELL
MW-7
MW-25
MW-2
DISPOSAL POND No. 3
MW-29 S&D
MW-14
MW-27
DISPOSAL POND No. 1
DISPOSAL POND No. 2
004 OUTFALL
MW-13
MW-23 S&D
MW-40 S&D
MW-12
TH-17
MW-5
MW-33 S&D
MW-22 S&D
TH-3
004 OUTFALL STREAM
CONSTRUCTION MATERIAL SCRAP DUMP
MW-21 S&D
MW-26 S&D
MW-11
MW-9
MW-24 S&D
MW-10
TH-16
BACKWATER AREA
TH-19 APPROX 520 FT
TH-15
MW-8
MW-4
MW-3
INTERCEPTER WELLS 1 & 2
RANNEY WELL
RIVER MEASURING POINT
~2000 FT. TO THE CAC RANNEY WELL
OHIO
RIVER
NOTE: DATA FOR THE RS-1 LOCATION REFLECT RESULTS FOR THE SAMPLE AND A FIELD DUPLICATE.
RS-1 13J/15J 29/28 47700/38400 17/20
RS-2 20J 67 40700 92
RS-3 32J 57 43500 86
RS-4 31J 56 41800 81
RS-5 [27]J 119 12500 20
RS-6 [14]J 30 23100 27
N PLANT NORTH
LEGEND
TH-1 WELLS INSTALLED DURING 1972 FRED KLAER & ASSOCIATES STUDY
MW-1 WELLS INSTALLED DURING 1983 GERAGHTY & MILLER, INC STUDY
MW-34 S&D WELLS INSTALLED DURING 1986 GERAGHTY & MILLER, INC STUDY S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
RS-1 GENERALIZED RIVER SEDIMENT SAMPLING LOCATIONS
RS-2 20J - COBALT (mg/kg)
67 - COPPER (mg/kg)
40700 - IRON (mg/kg)
92 - LEAD (mg/kg)
* THE BACKGROUND SAMPLE WAS COLLECTED ≈1800' UPSTREAM FROM THE CONFLUENCE OF THE OHIO RIVER AND THE SMALL STREAM NEAR THE EAST EDGE OF THE BASEBALL FIELD
SUBJECT: CONCENTRATION OF SELECTED METALS IN PHASE I RI RIVER SEDIMENT SAMPLES
FIGURE 85


GERAGHTY & MILLER, INC.
Environmental Services
COMPILED BY R L FARGO
PREPARED BY S L LOFTUS
PROJECT MGR R L FARGO
DATE 1/21/91
SCALE SHOWN
FILE NO: PA00709
PREPARED FOR: ORMET CORPORATION
HANNIBAL OHIO
FORMER POTLINER STORAGE AREA
MW-38
MW-19
MW-37
TH-10
MW-35
MW-15
MW-6
MW-28
TH-11
MW-36
MW-30
MW-18
MW-32
MW-34 S&D
MW-20
MW-1
MW-31
MW-17
INTERCEPTER WELL 3
DISPOSAL POND No. 4
MW-39 S&D
DISPOSAL POND No. 5
MW-16
8-INCH WELL
MW-7
MW-25
MW-2
DISPOSAL POND No. 3
MW-29 S&D
MW-14
MW-27
DISPOSAL POND No. 1
DISPOSAL POND No. 2
004 OUTFALL
MW-15
MW-23 S&D
MW-40 S&D
MW-12
MW-33 S&D
TH-17
MW-5
MW-22 S&D
TH-3
004 OUTFALL STREAM
CONSTRUCTION MATERIAL SCRAP DUMP
MW-21 S&D
MW-26 S&D
MW-11
MW-9
MW-24 S&D
MW-10
TH-16
BACKWATER AREA
TH-15
MW-8
MW-4
MW-3
TH-19 APPROX 520 FT
RANNEY WELL
INTERCEPTER WELLS 1 & 2
RIVER MEASURING POINT
~2000FT TO THE CAC RANNEY WELL
OHIO RIVER
0 500 1000 FEET
2630/3500
820/615
<088/<12
26J/32J
118J/132J
RS-1
2050
929
.39
48J
379J
RS-2
N
PLANT NORTH
3160
1490
.22
73J
524J
RS-3
2940
1390
.32
66J
514J
RS-4
RS-5
6120
648
<.10
[10]J
106J
RS-6
[1370]
519
<.11
29J
197J
LEGEND
TH-1 WELLS INSTALLED DURING 1972 FRED KLAER & ASSOCIATES STUDY
MW-1 WELLS INSTALLED DURING 1983 GERAGHTY & MILLER, INC STUDY
MW-34 S&D WELLS INSTALLED DURING 1986 GERAGHTY & MILLER, INC STUDY S&D INDICATES A WELL CLUSTER CONSISTING OF A SHALLOW AND A DEEP MONITORING WELL
RS-1 GENERALIZED RIVER SEDIMENT SAMPLING LOCATIONS
RS-2
2050 - MAGNESIUM (mg/kg)
929 - MANGANESE (mg/kg)
.39 - MERCURY (mg/kg)
48J - NICKEL (mg/kg)
379J - ZINC (mg/kg)
* THE BACKGROUND SAMPLE WAS COLLECTED ±1600' UPSTREAM FROM THE CONFLUENCE OF THE OHIO RIVER AND THE SMALL STREAM NEAR THE EAST EDGE OF THE BASEBALL FIELD.
NOTE: DATA FOR THE RS-1 LOCATION REFLECT RESULTS FOR THE SAMPLE AND A FIELD DUPLICATE
SUBJECT: CONCENTRATION OF SELECTED METALS IN PHASE I RI RIVER SEDIMENT SAMPLES
FIGURE 86

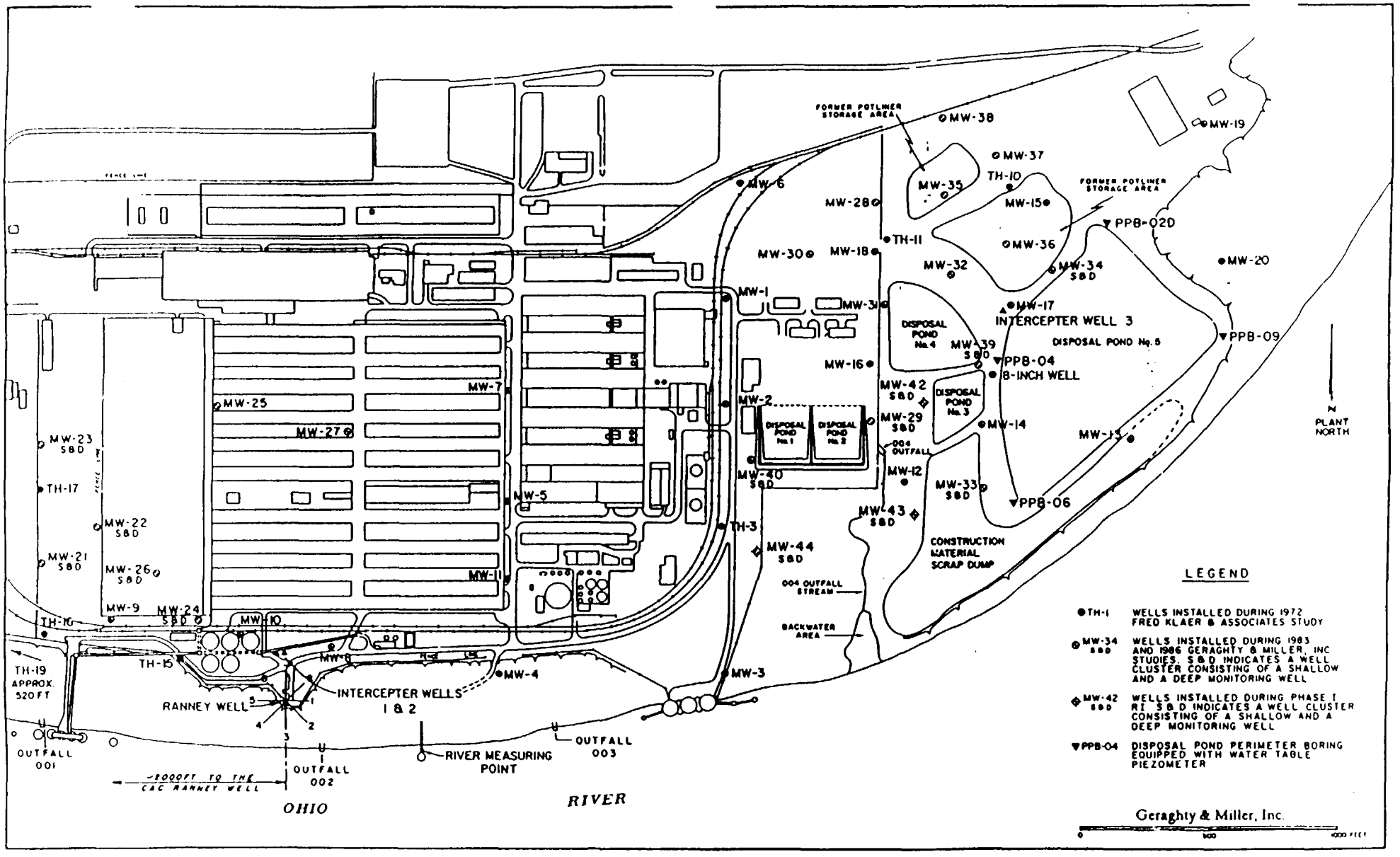



FIGURE 87. General Locations of Ground-Water Monitoring Wells Installed During the Phase I RI.

Ormet Corporation
Hannibal, Ohio

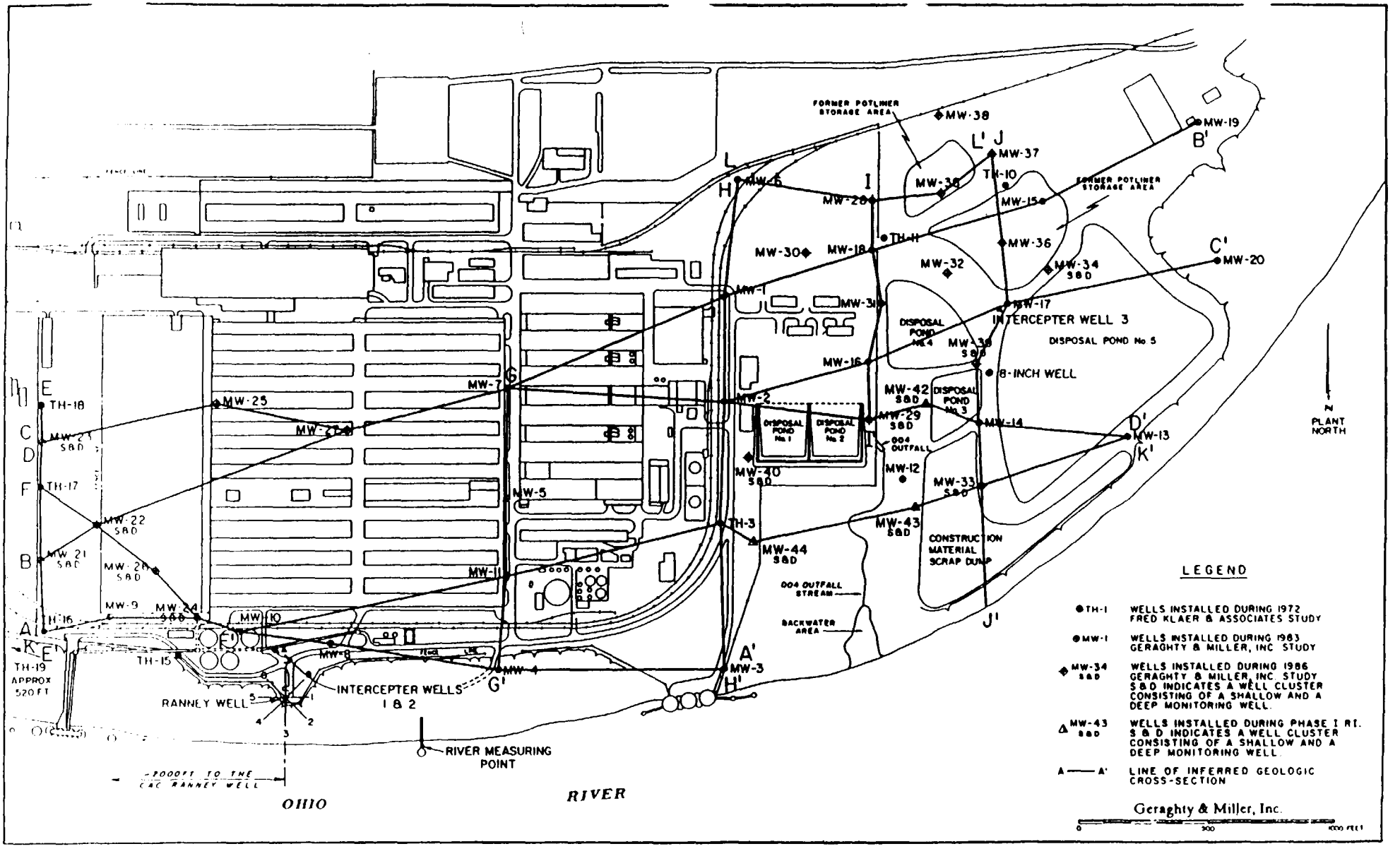



FIGURE 88. Orientation of Generalized Geologic Cross-Sections.

Ormet Corporation
Hannibal, Ohio

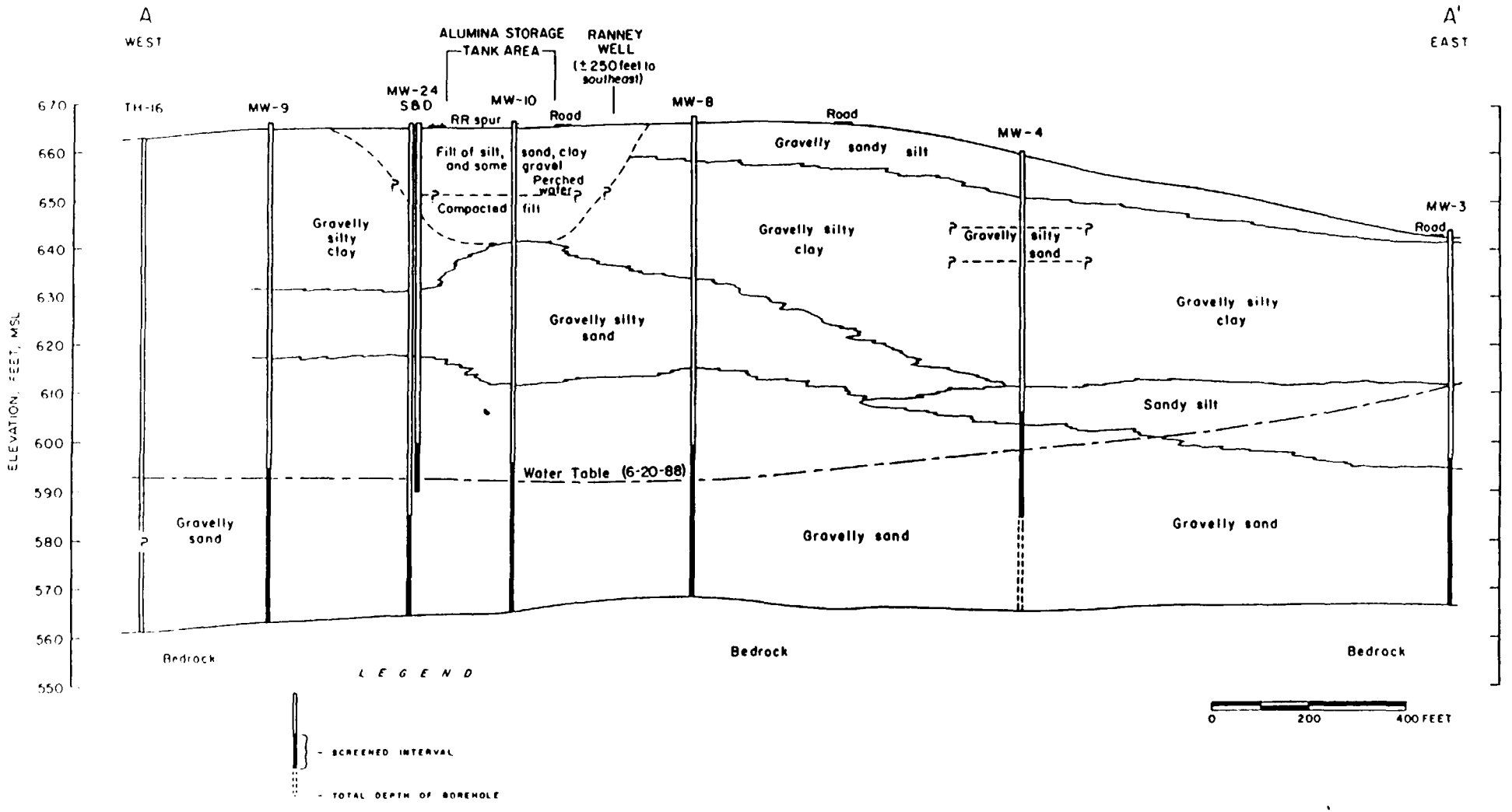



FIGURE 89. Generalized Geologic Cross-Section A-A'.

Ormet Corporation
Hannibal, Ohio

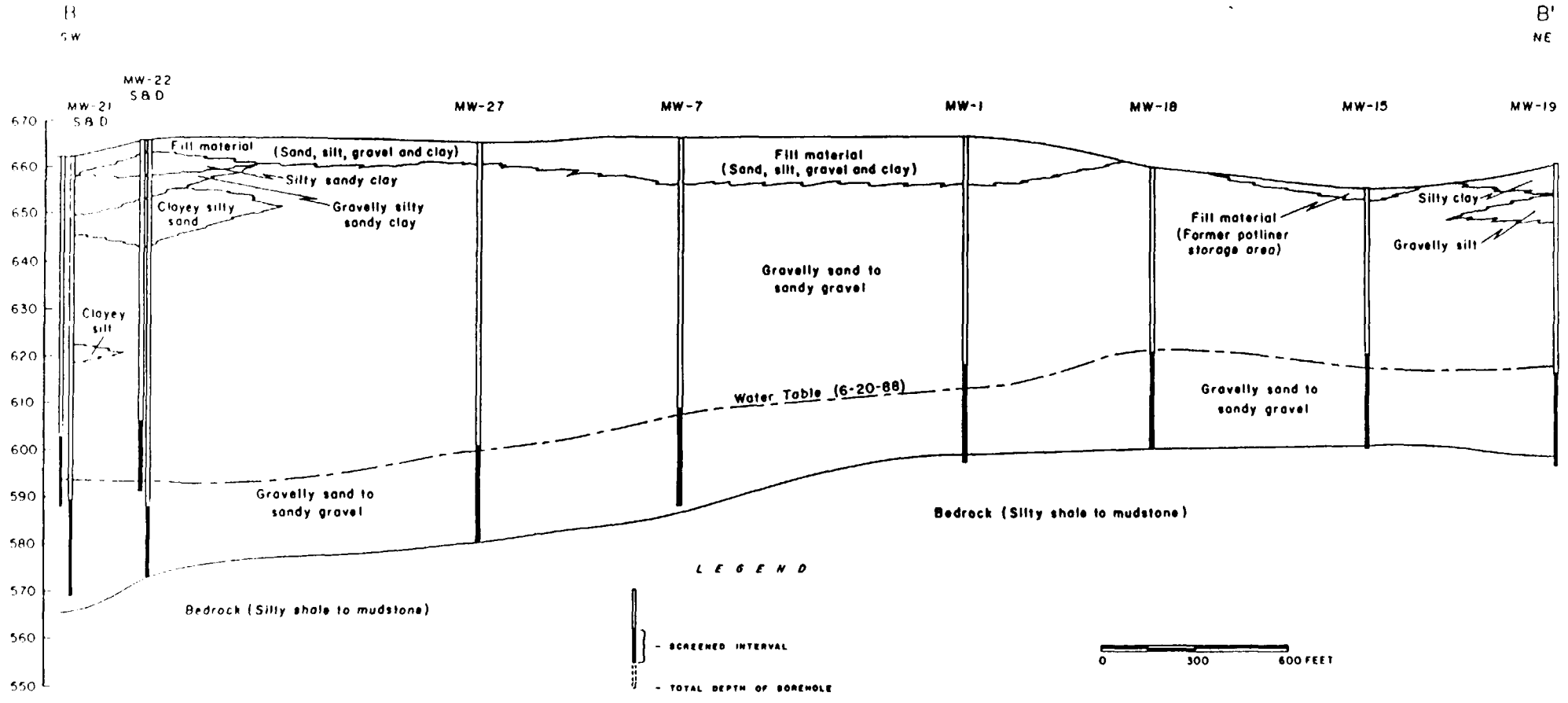



FIGURE 90. Generalized Geologic Cross-Section B-B'.

Ormet Corporation
Hannibal, Ohio

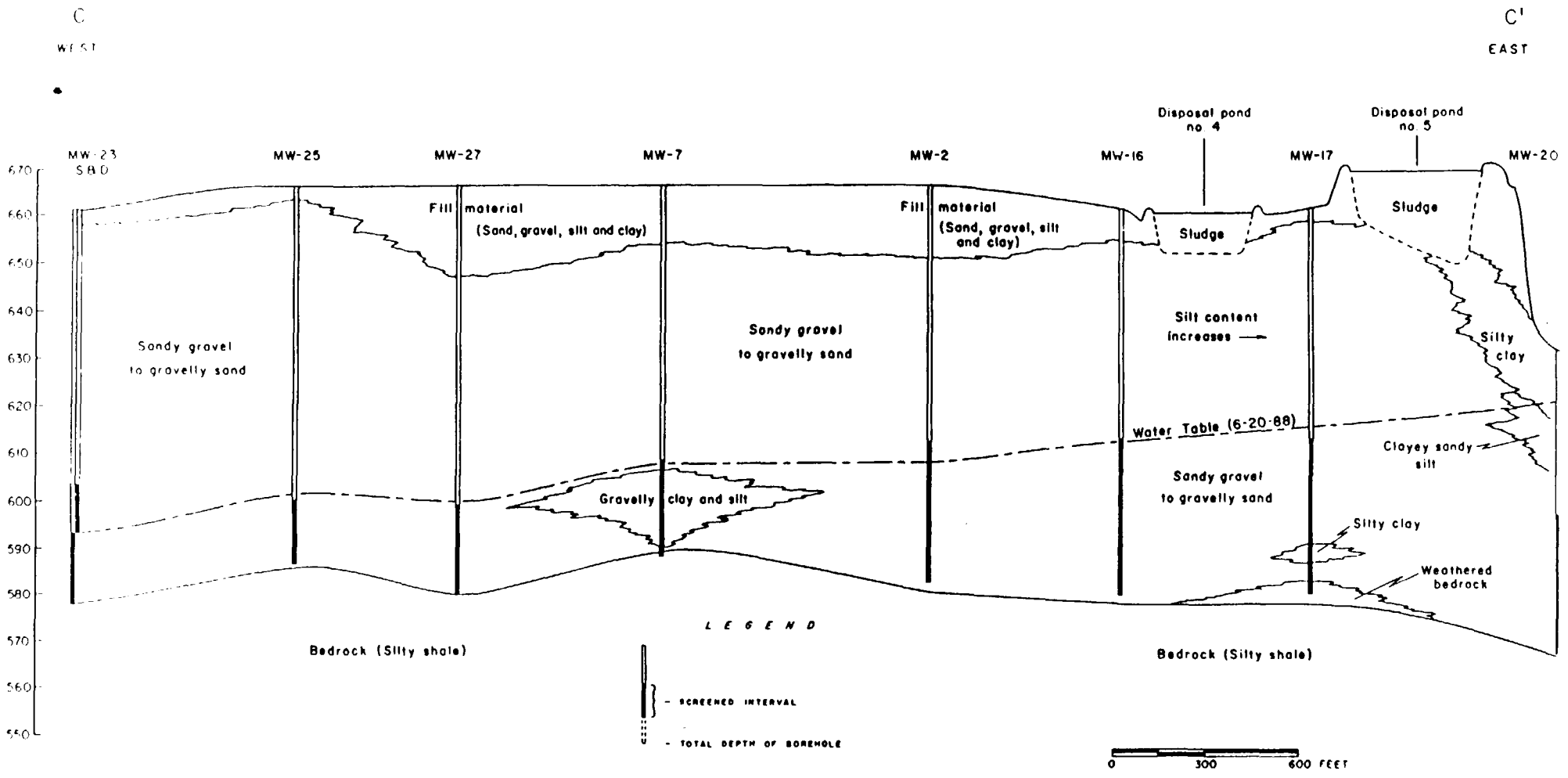



FIGURE 91. Generalized Geologic Cross-Section C-C'.

Ormet Corporation
Hannibal, Ohio

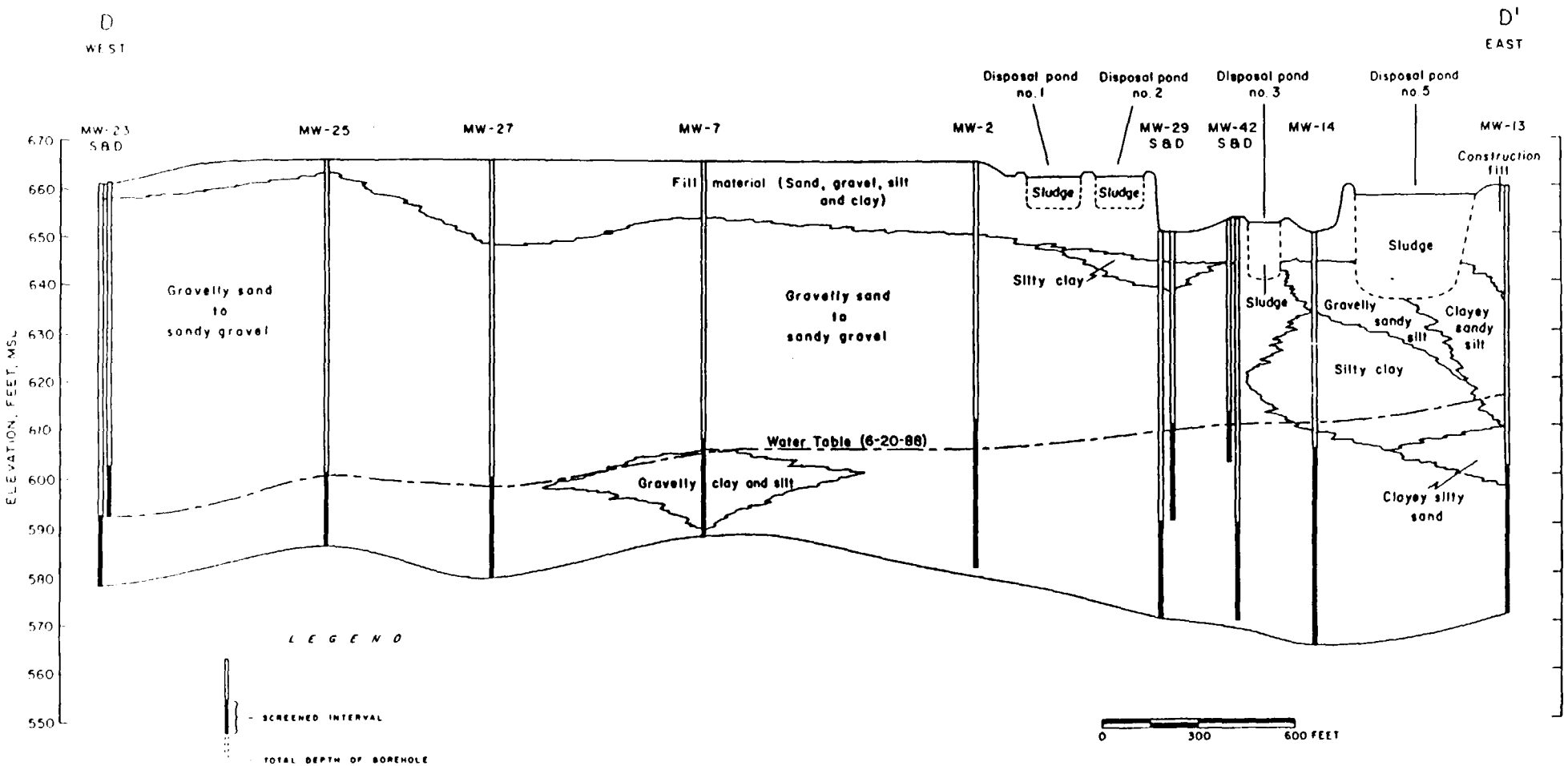



FIGURE 92. Generalized Geologic Cross-Section D-D'.

Ormet Corporation
Hannibal, Ohio

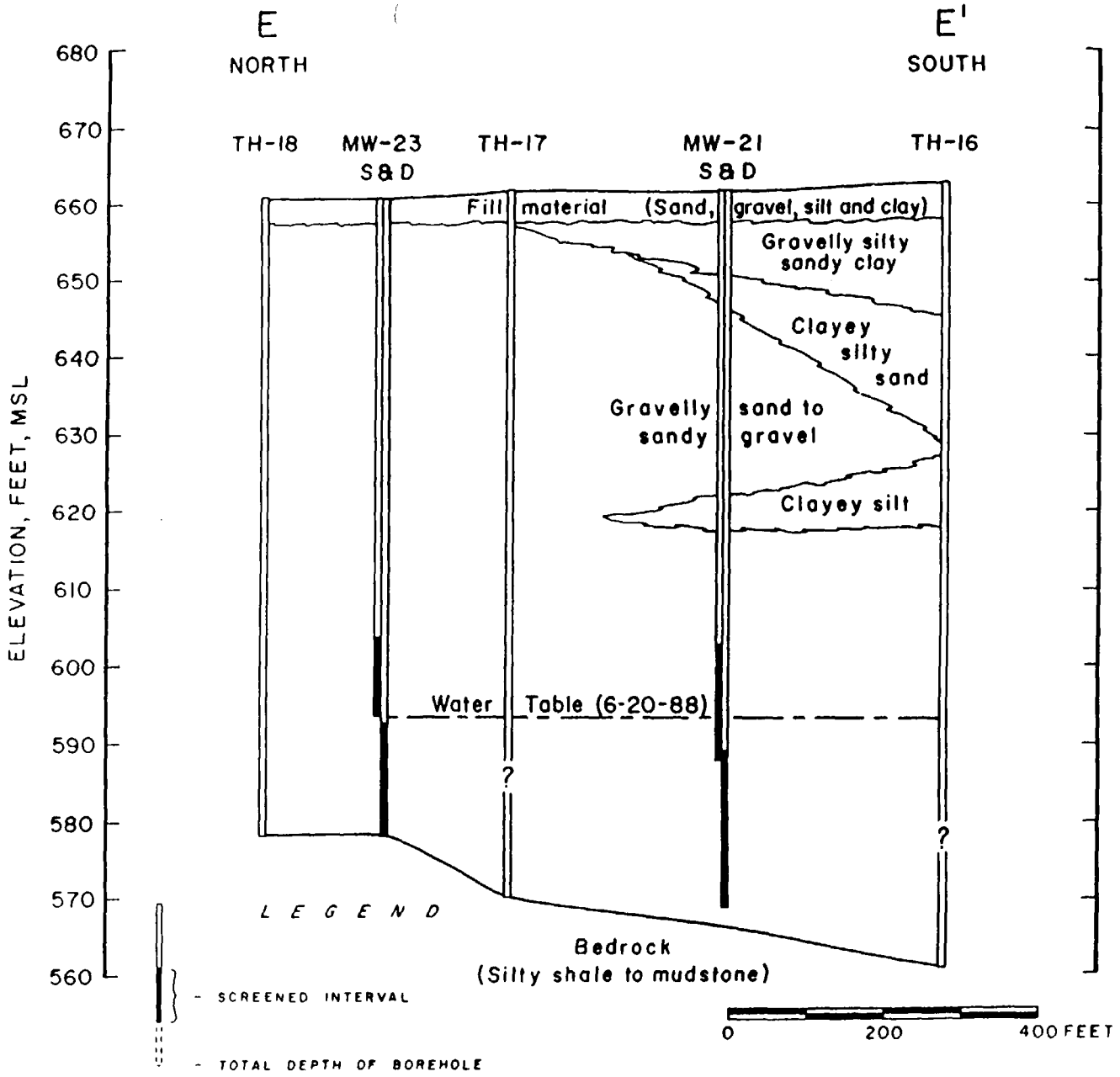



FIGURE 93. Generalized Geologic Cross-Section E-E'.

Ormet Corporation
Hannibal, Ohio

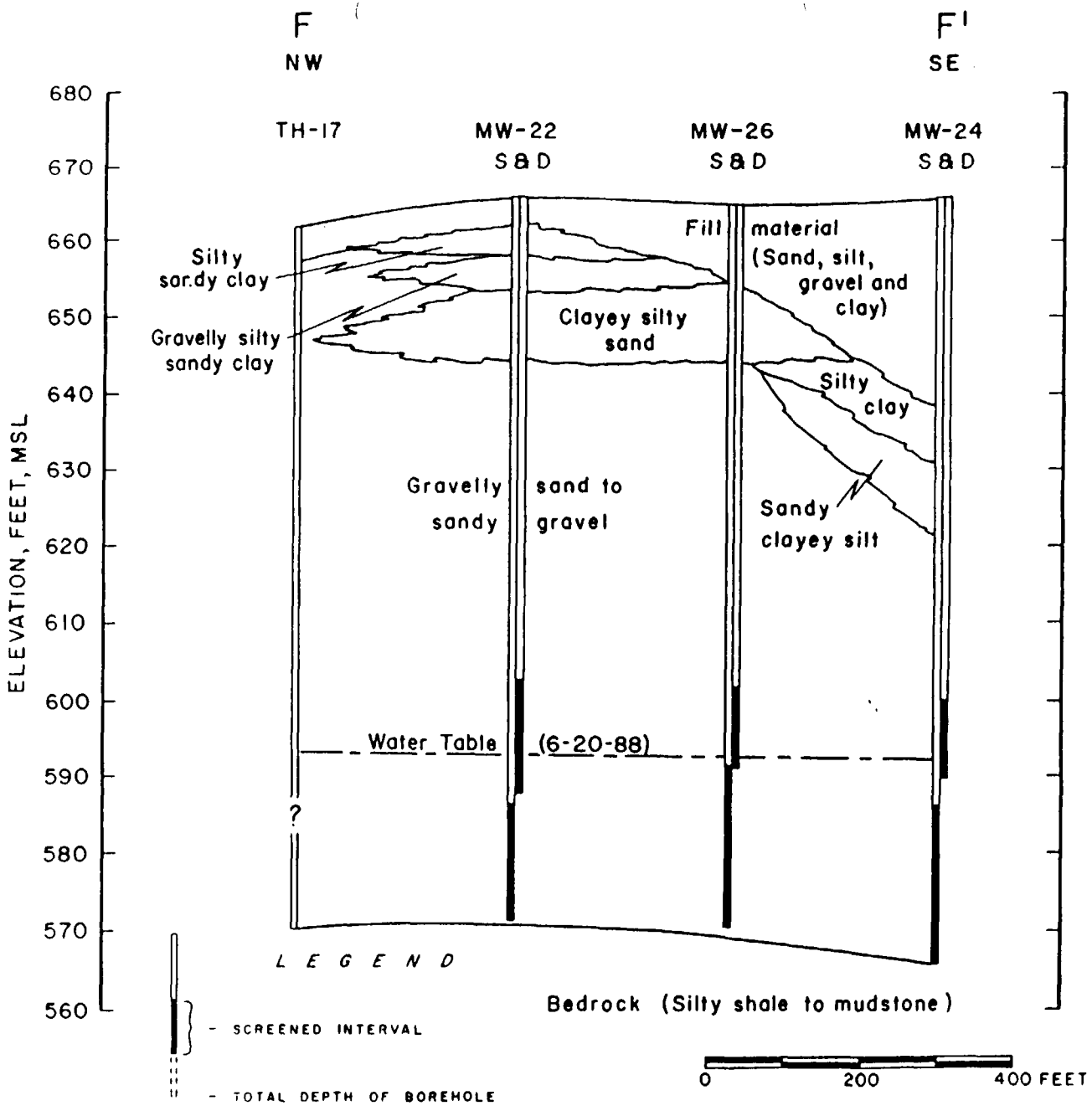



FIGURE 94. Generalized Geologic Cross-Section F-F'.

Ormet Corporation
Hannibal, Ohio

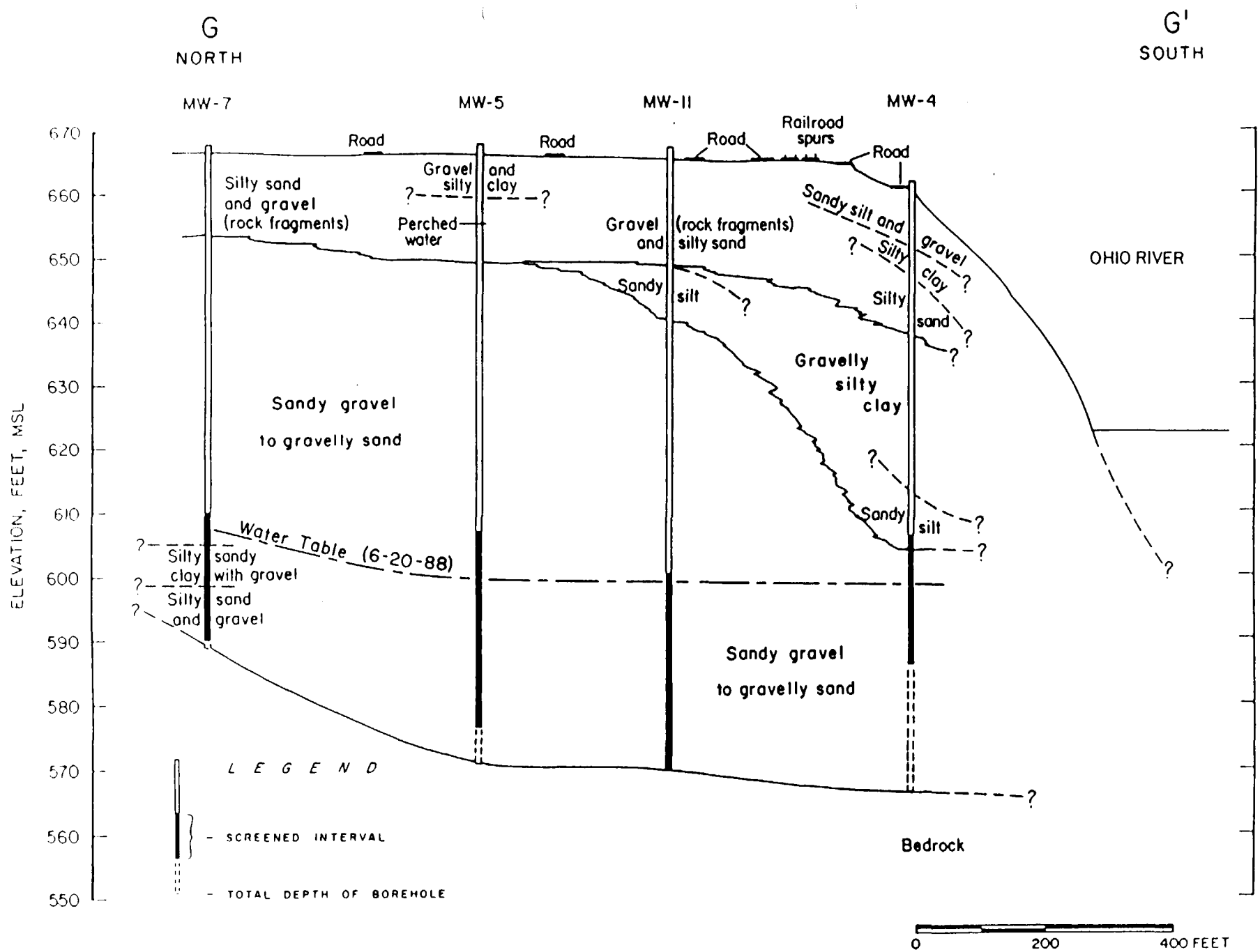



FIGURE 95. Generalized Geologic Cross-Section G-G'.

Ormet Corporation
Hannibal, Ohio

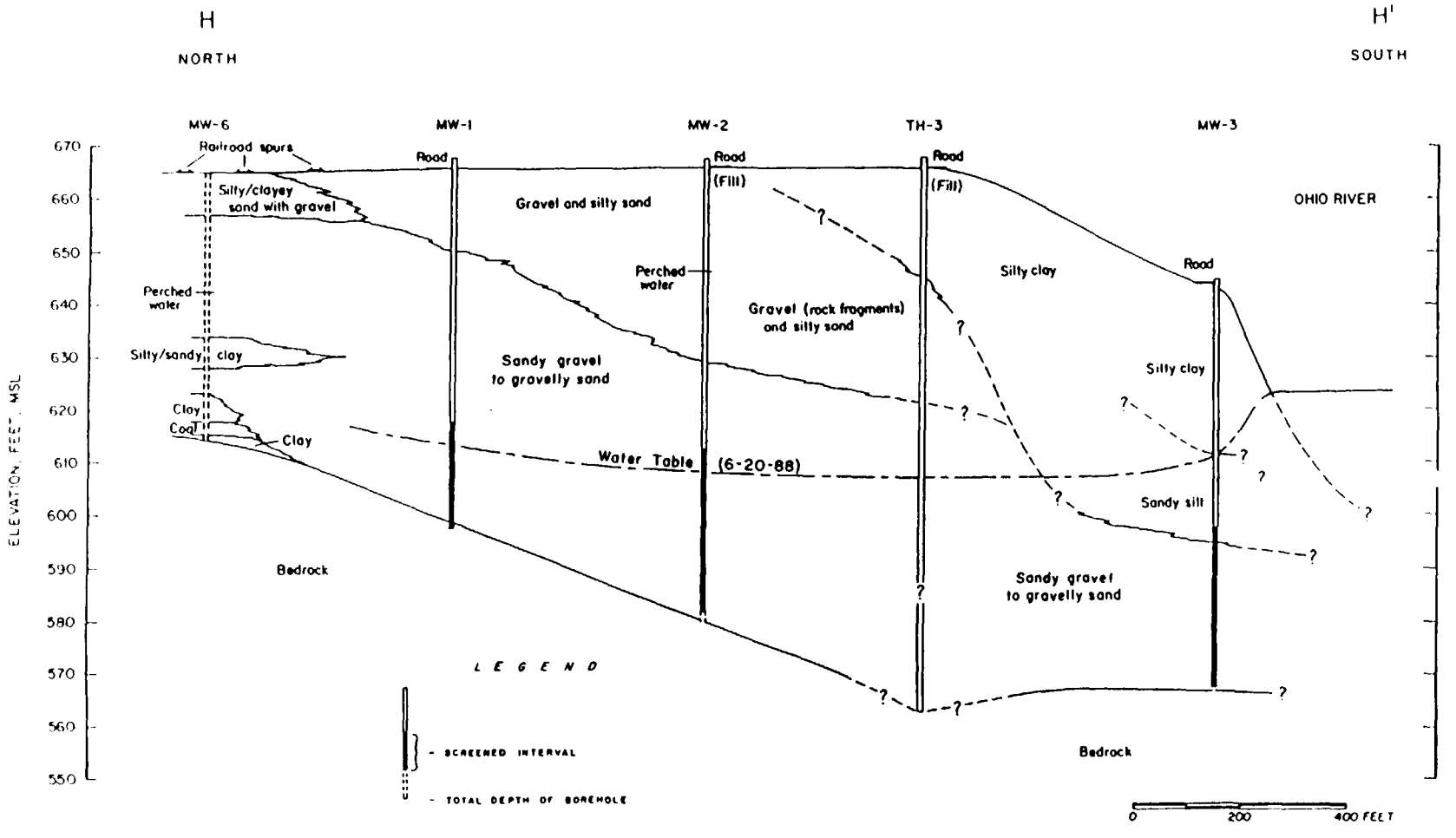



FIGURE 96. Generalized Geologic Cross-Section H-H'.

Ormet Corporation
Hannibal, Ohio

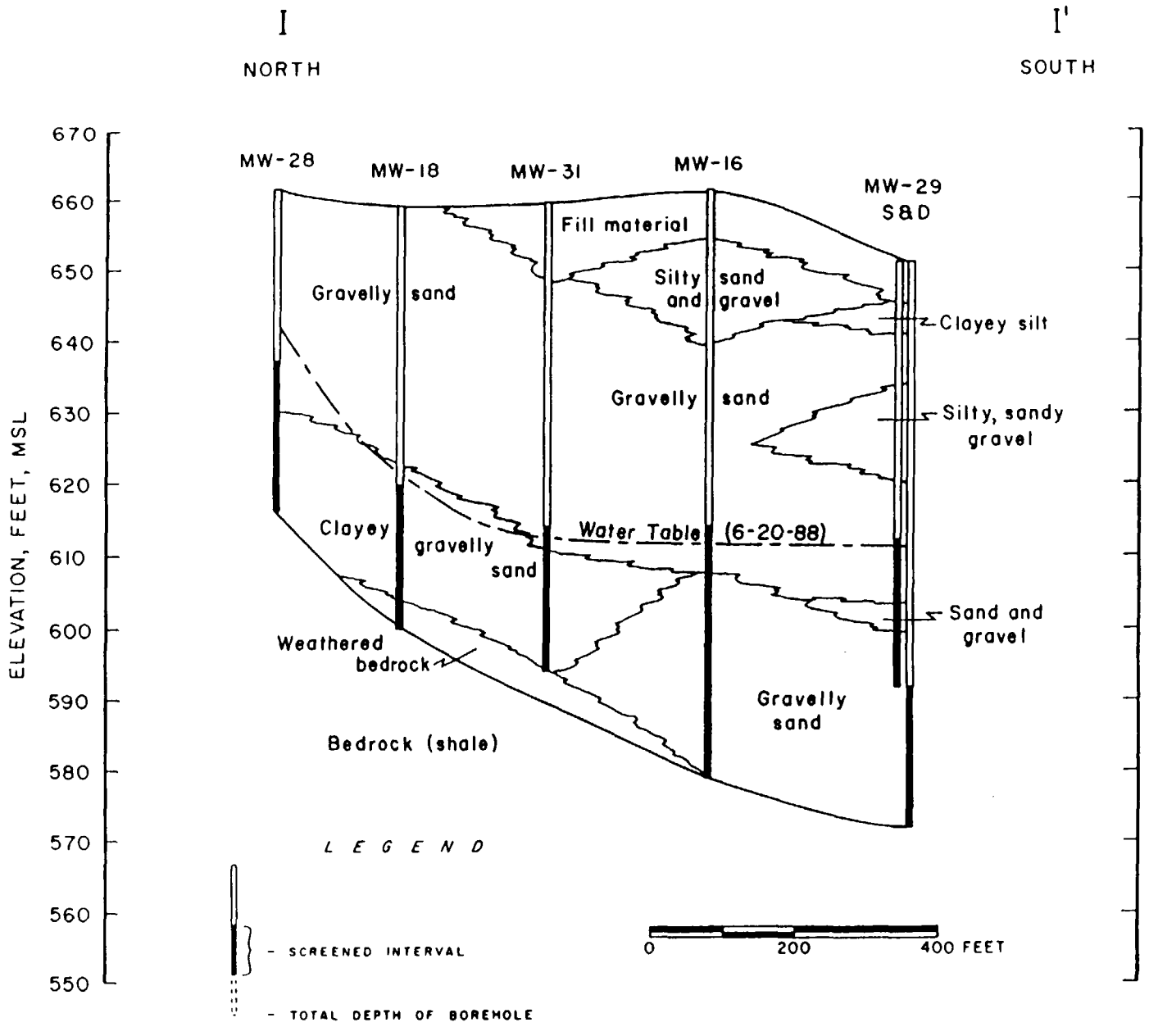



FIGURE 97. Generalized Geologic Cross-Section I-I'.

Ormet Corporation
Hannibal, Ohio

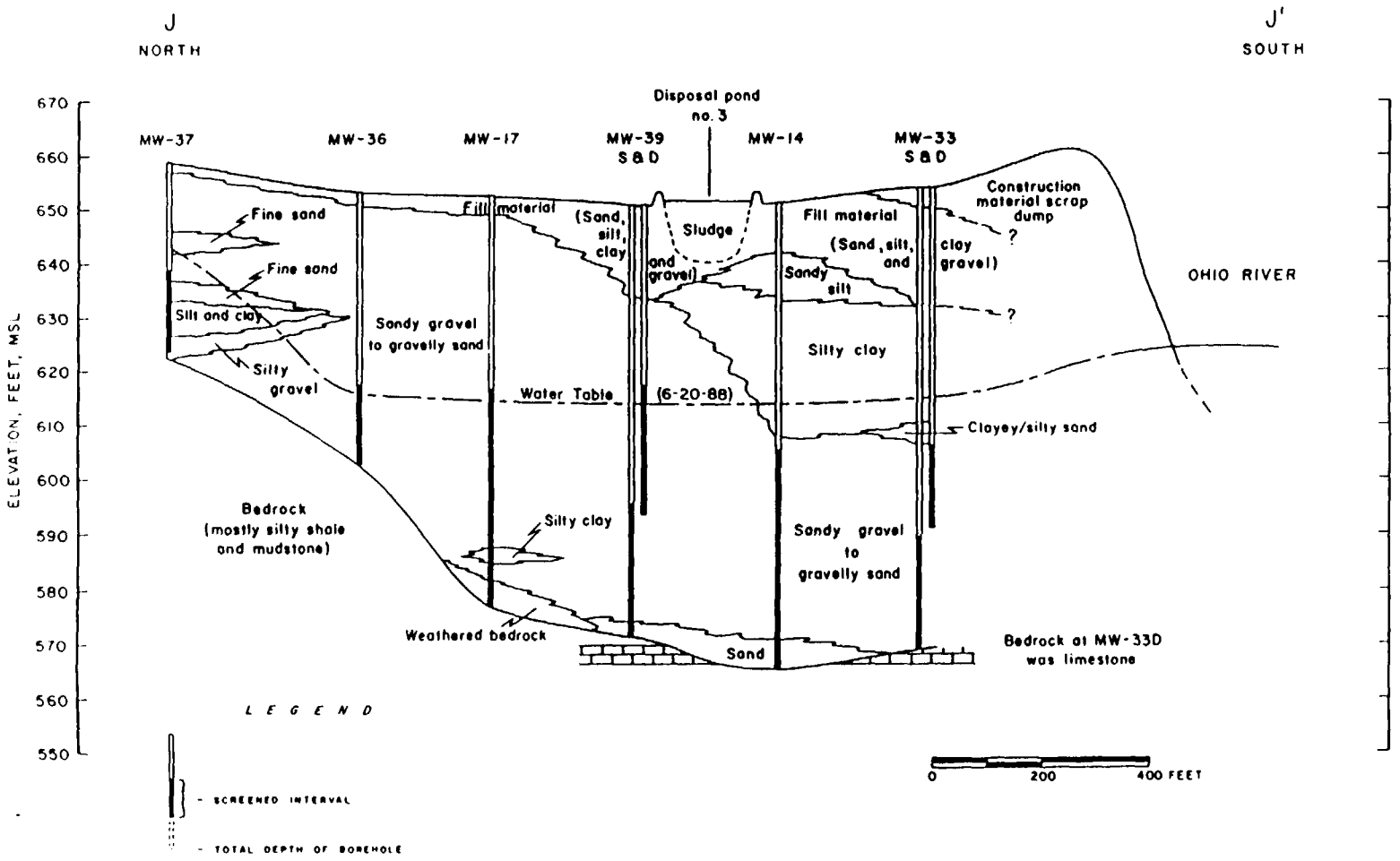



FIGURE 98. Generalized Geologic Cross-Section J-J'.

Ormet Corporation
Hannibal, Ohio

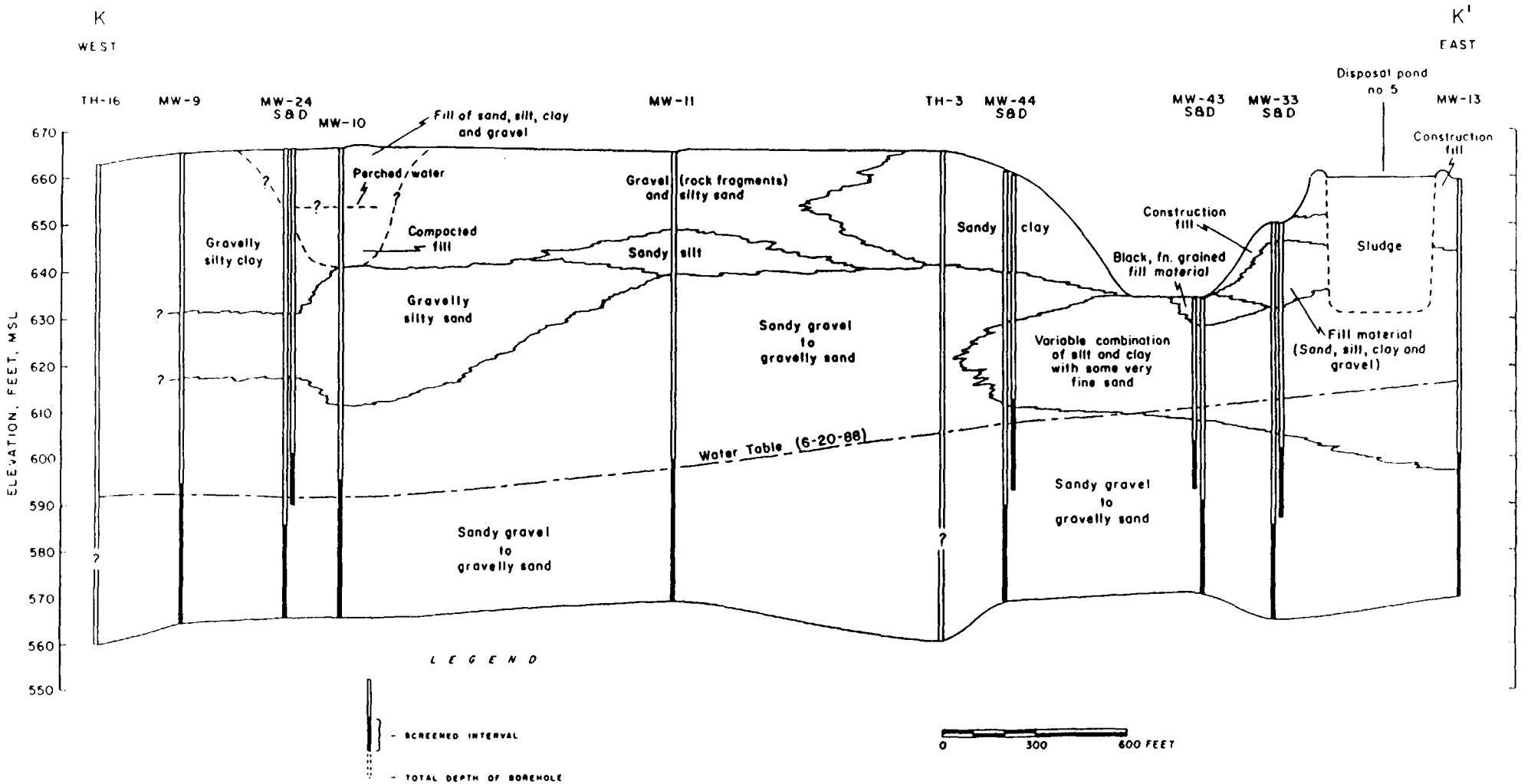



FIGURE 99. Generalized Geologic Cross-Section K-K'.

Ormet Corporation
Hannibal, Ohio

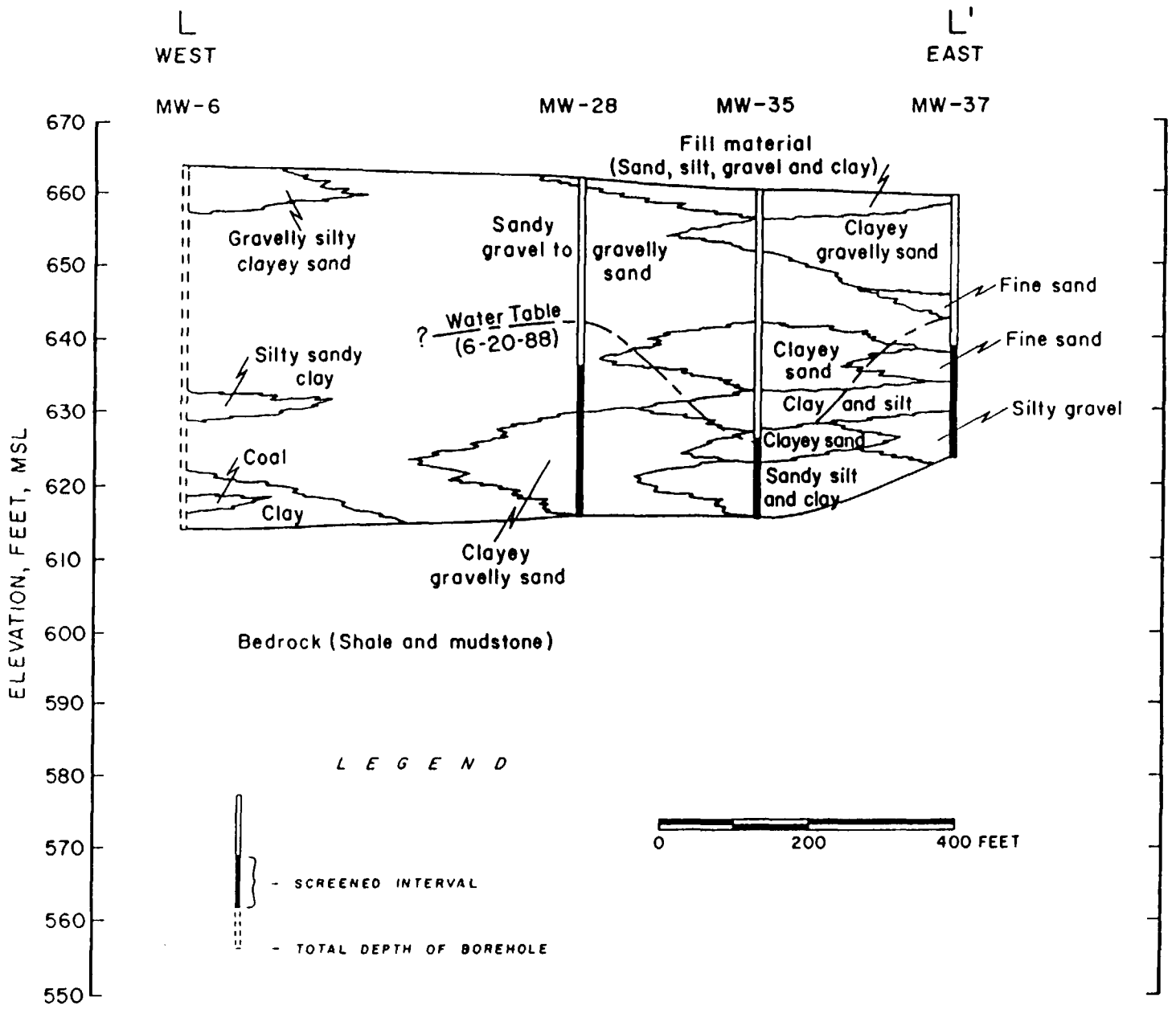



FIGURE 100. Generalized Geologic Cross-Section L-L'.

Ormet Corporation
Hannibal, Ohio

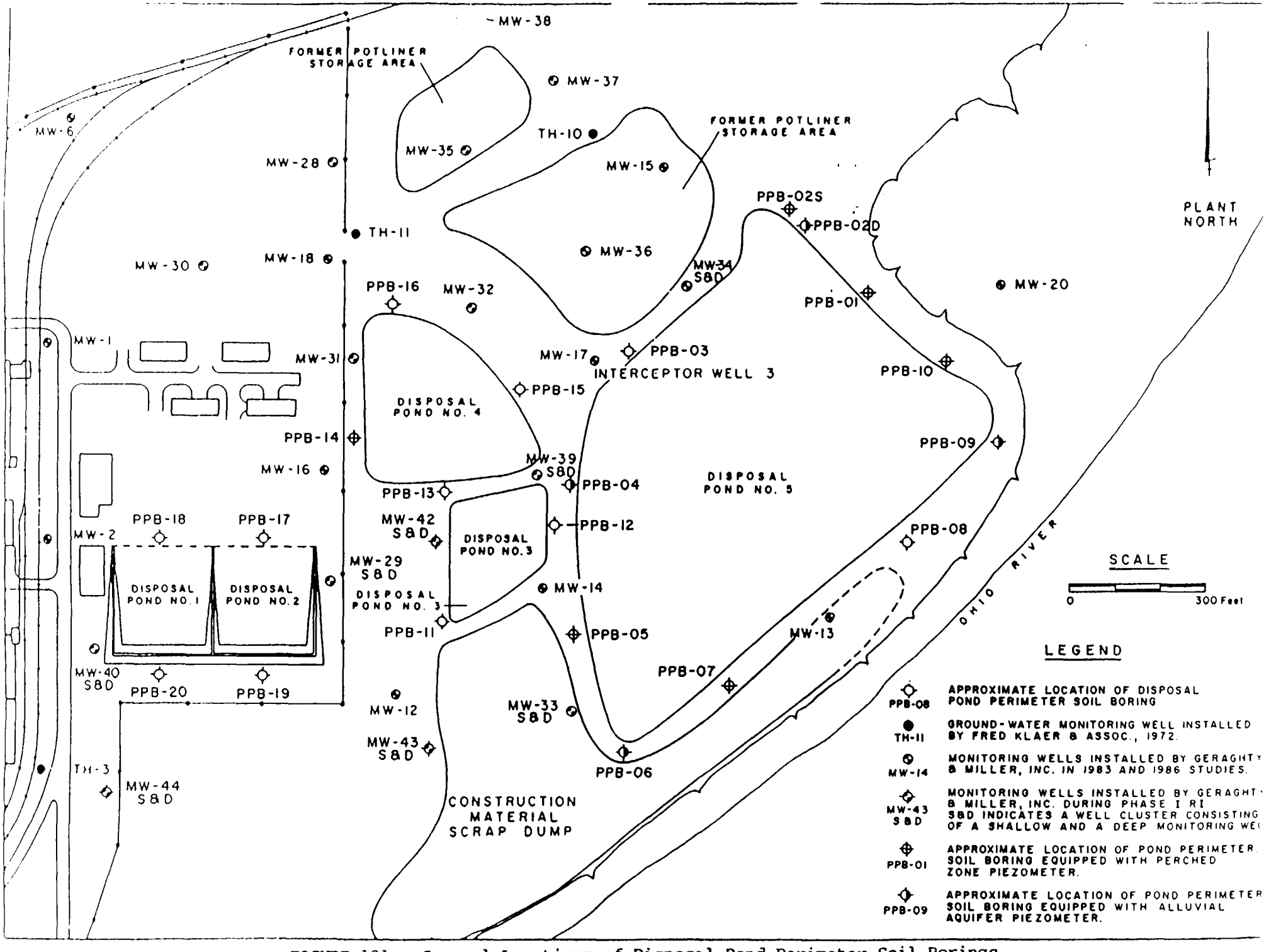
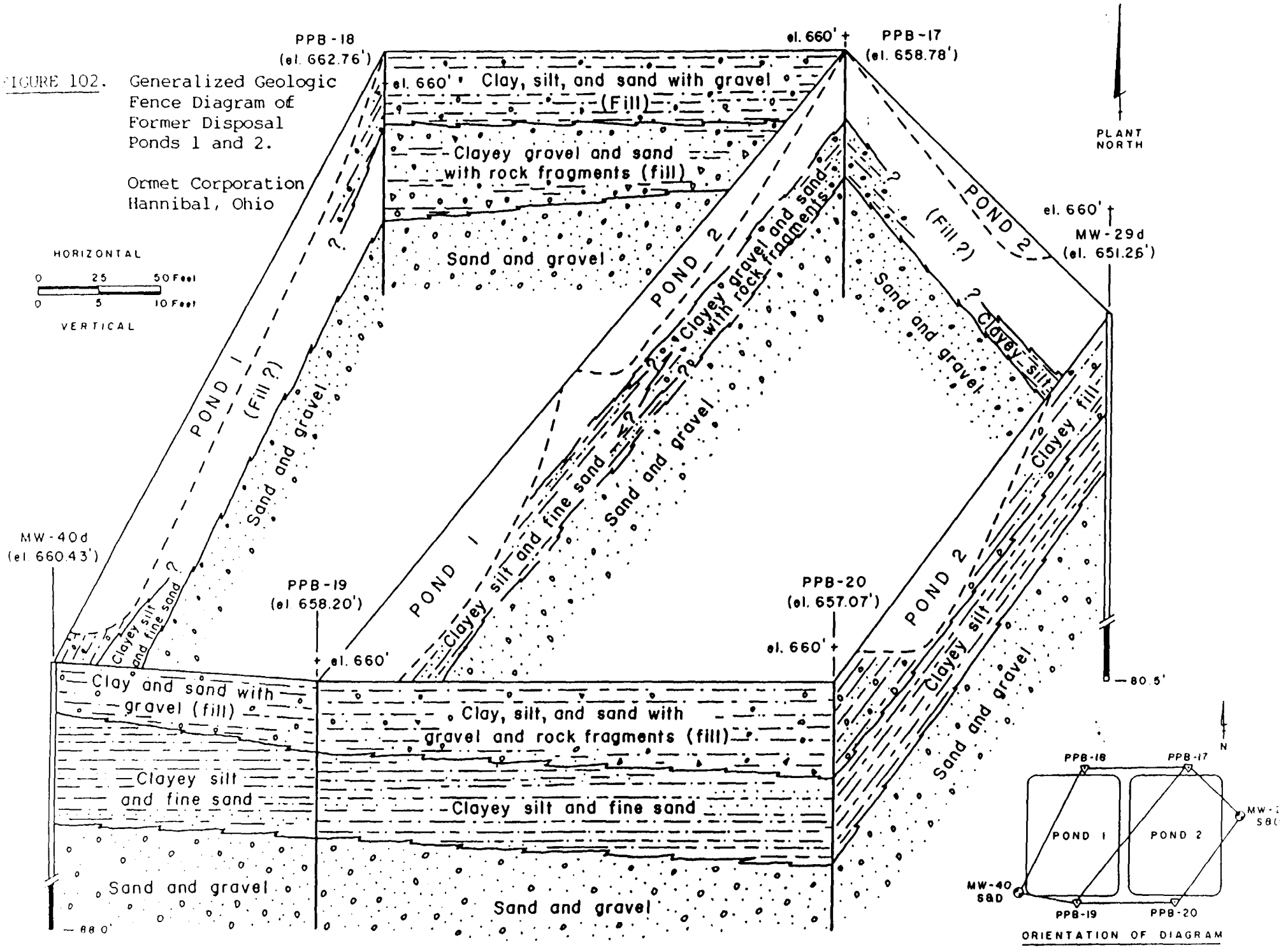



FIGURE 101. General Locations of Disposal Pond Perimeter Soil Borings.

FIGURE 102. Generalized Geologic Fence Diagram of Former Disposal Ponds 1 and 2.

Ormet Corporation
Hannibal, Ohio



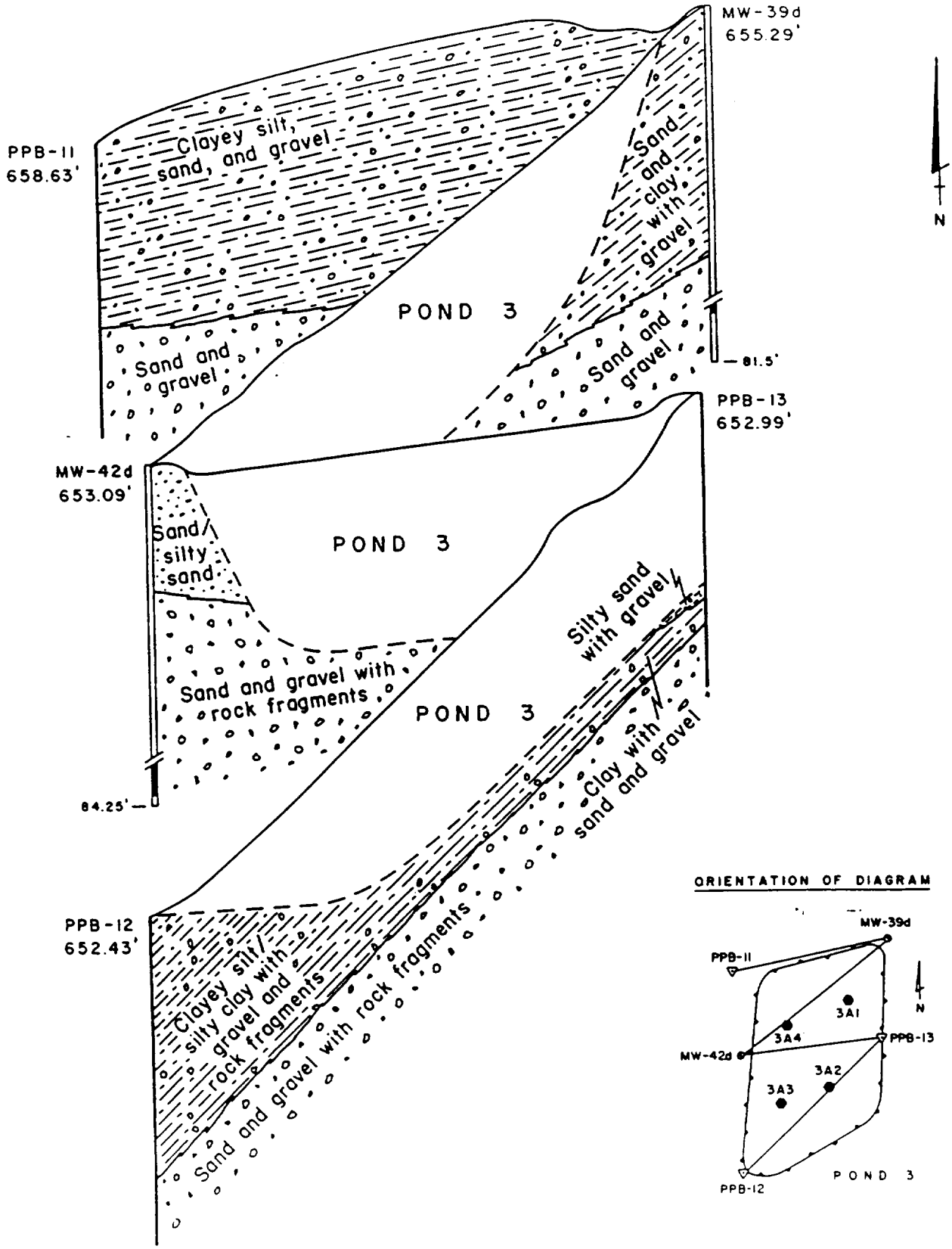



FIGURE 103. Generalized Geologic Fence Diagram for Former Disposal Pond 3.

Ormet Corporation
Hannibal, Ohio

HORIZONTAL
0 25 50 Feet
0 5 10 Feet
VERTICAL

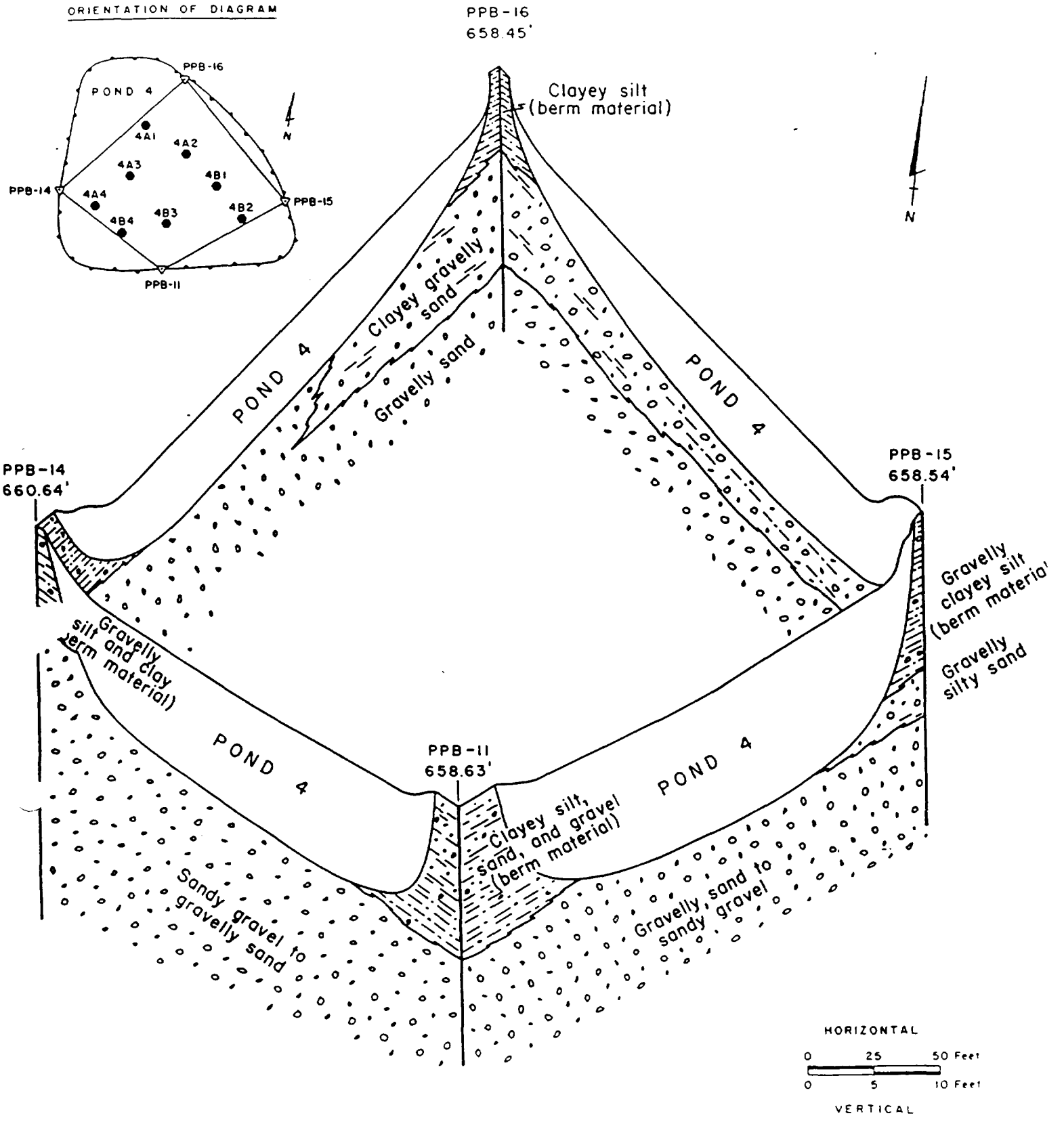



FIGURE 104. Generalized Geologic Fence Diagram for Former Disposal Pond 4.

Ormet Corporation
Hannibal, Ohio

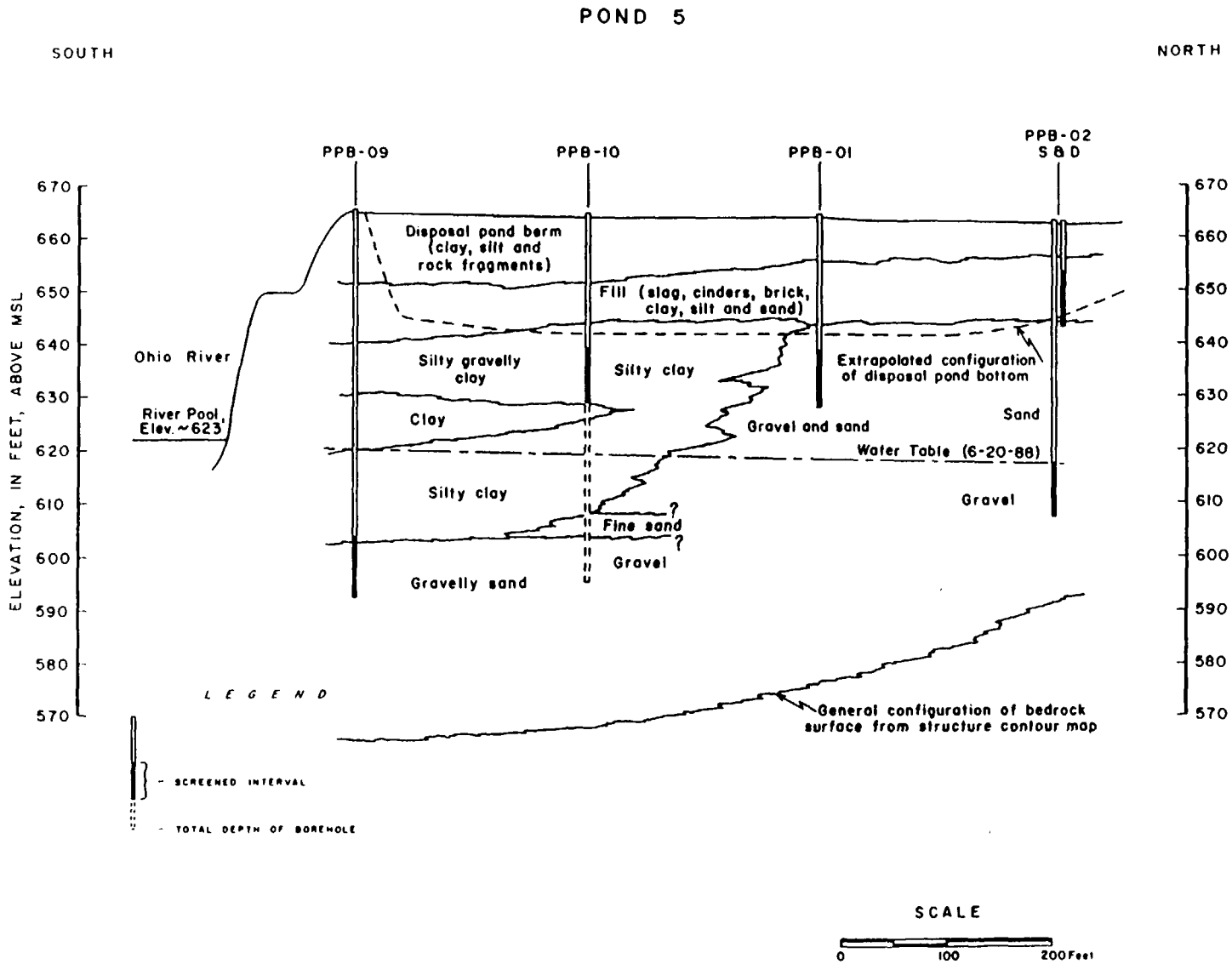



FIGURE 105. Generalized North-South Geologic Cross-Section Across Former Disposal Pond 5.

Ormet Corporation
Hannibal, Ohio

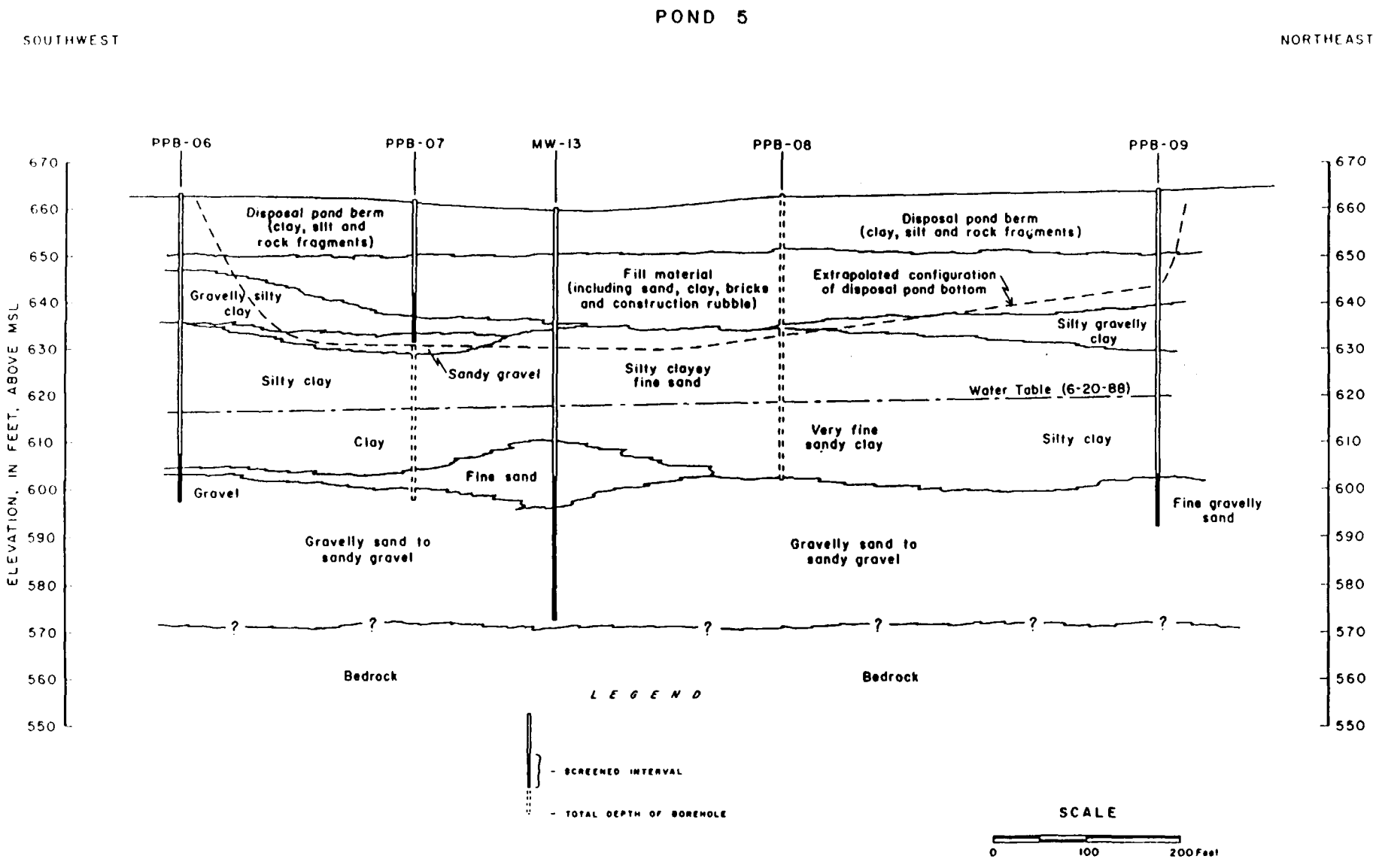



FIGURE 106. Generalized Northeast-Southwest Geologic Cross-Section Across Former Disposal Pond 5.

Ormet Corporation
Hannibal, Ohio

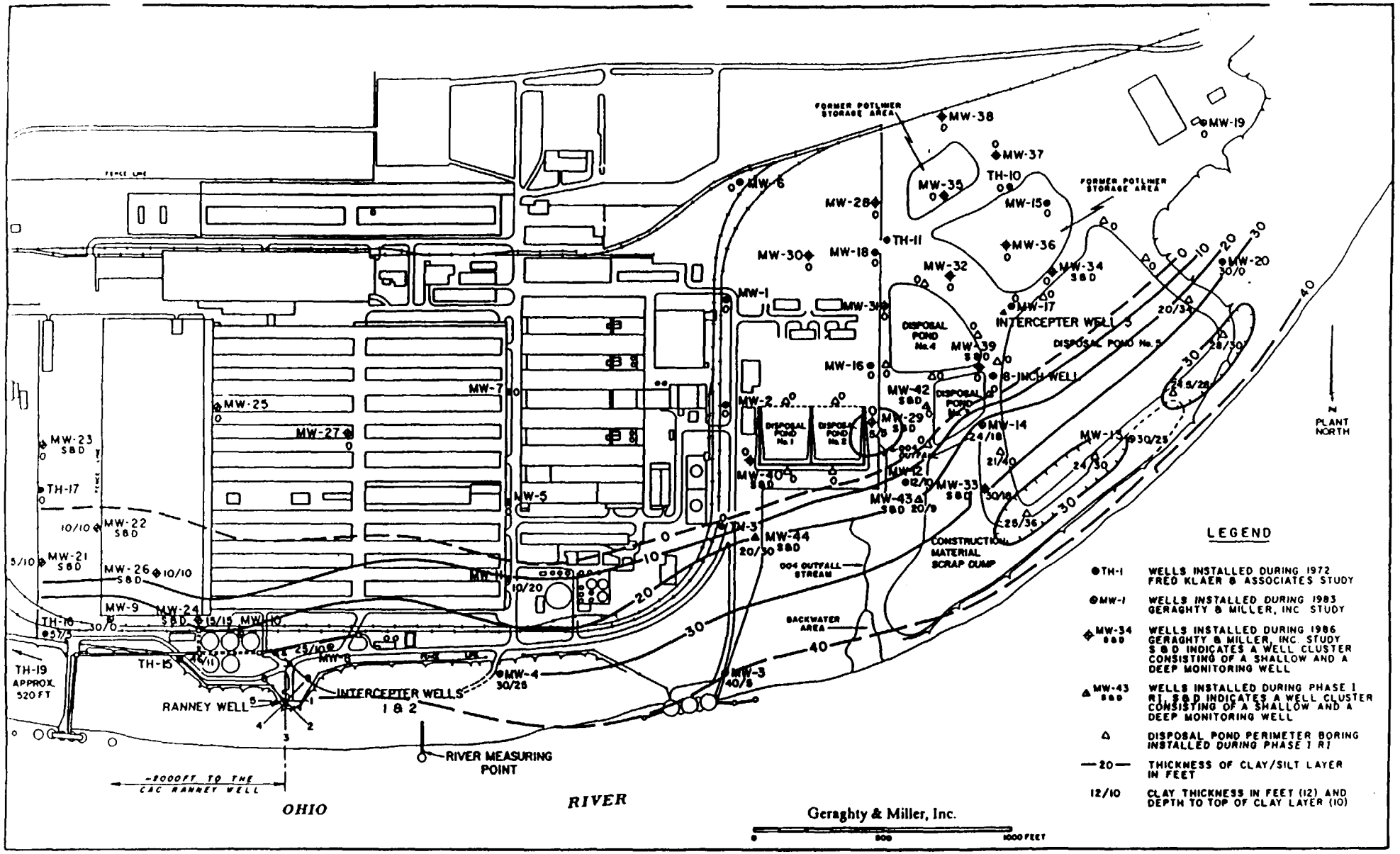



FIGURE 107. Generalized Isopach Map for the Clay and Silt Layer.

Ormet Corporation
Hannibal, Ohio

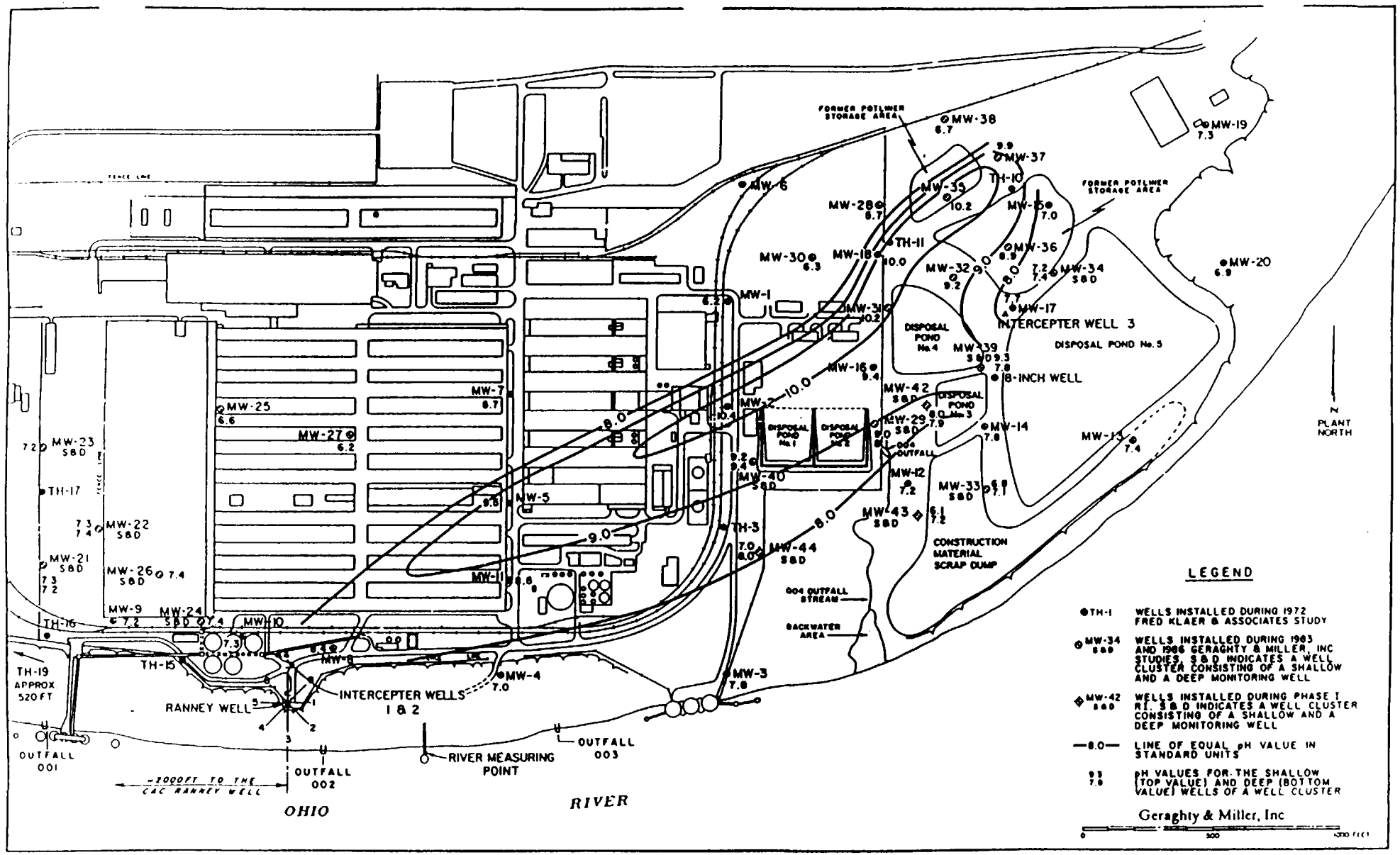
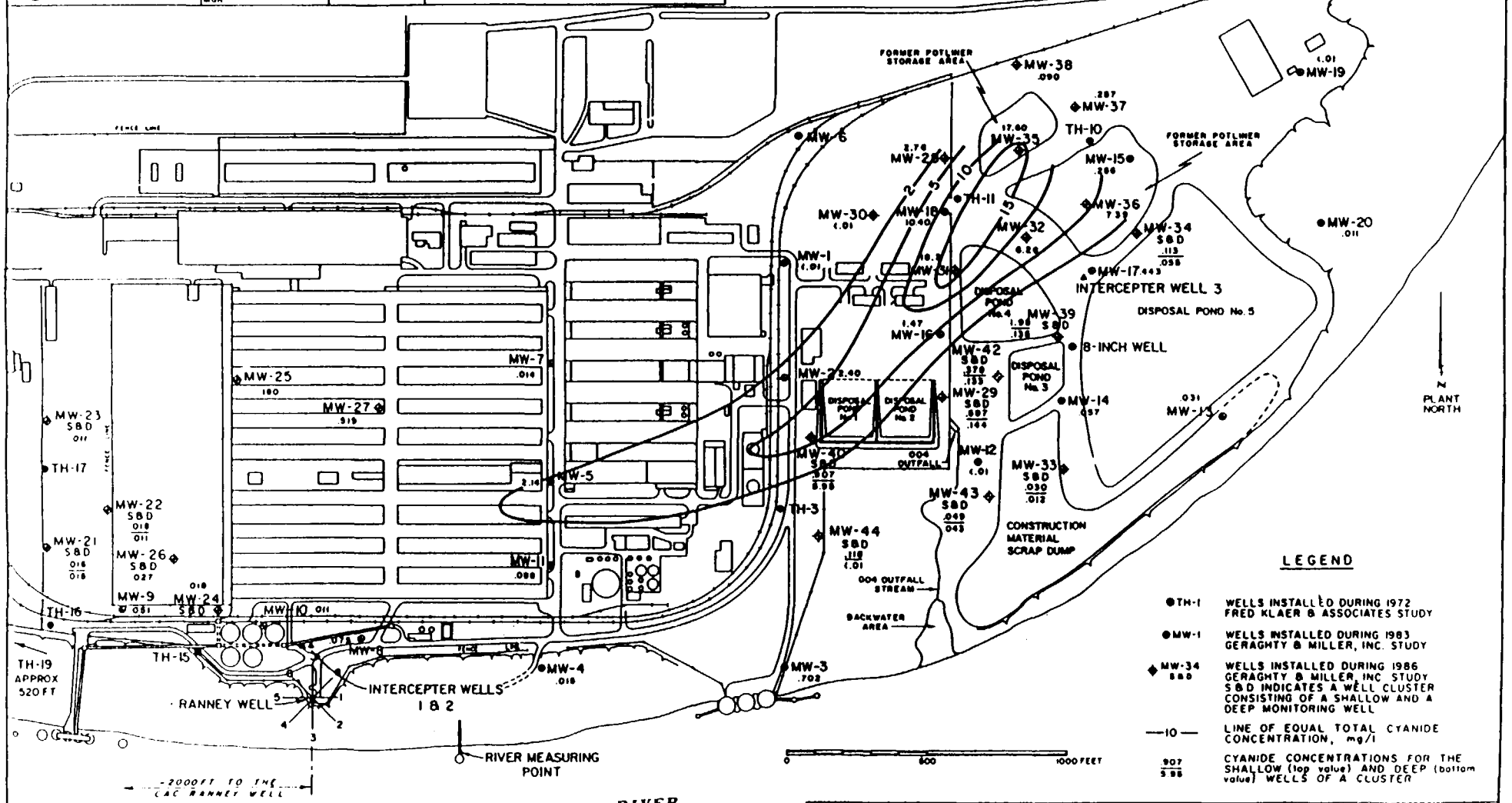



FIGURE 108. Generalized pH Isopleth Map Based on Water-Quality Data from the Phase I RI.

Ormet Corporation
Hannibal, Ohio

GERAGHTY & MILLER, INC.
Environmental Services

| | | | |
|---|---|---|---|
| COMPILED BY: R. L. FARGO | DATE: 10/19/90 | SCALE: SHOWN | PREPARED FOR: ORMET CORPORATION, HANNIBAL, OHIO |
| PREPARED BY: S. L. LOFTUS | FILE NO: PA00709 | | |
| PROJECT MGR: R. L. FARGO | | | |




NOTE: RESULTS FOR MW-3 AND MW-34B BASED ON DATA FROM PHASE II RESAMPLING

SUBJECT: GENERALIZED TOTAL CYANIDE ISOPLETH MAP FOR PHASE I CLP CYANIDE RESULTS FOR ALLUVIAL AQUIFER MONITORING WELLS

FIGURE 109

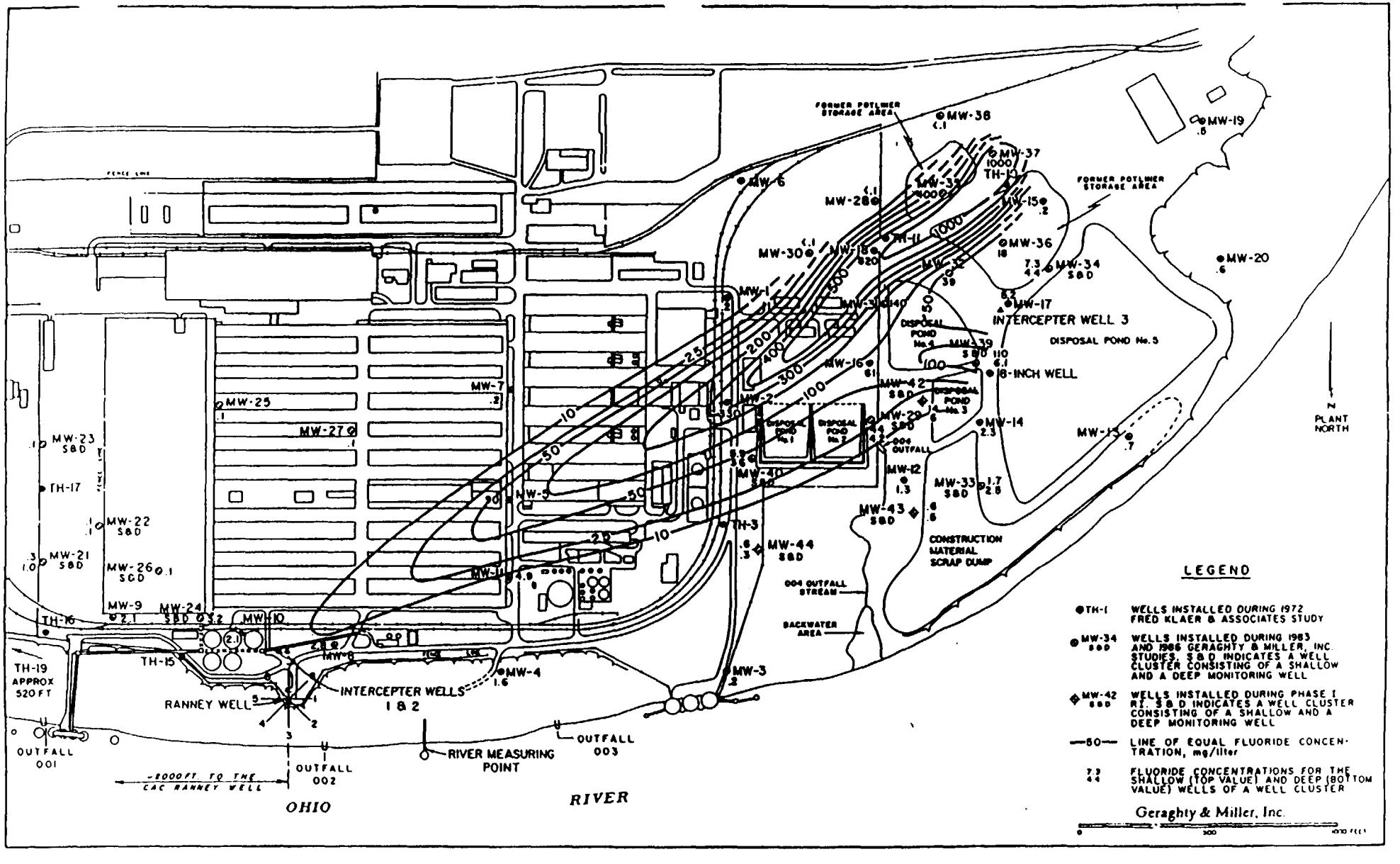



FIGURE 110. Generalized Fluoride Isopleth Map Based on Water-Quality Data from the Phase I RI.

Ormet Corporation
Hannibal, Ohio

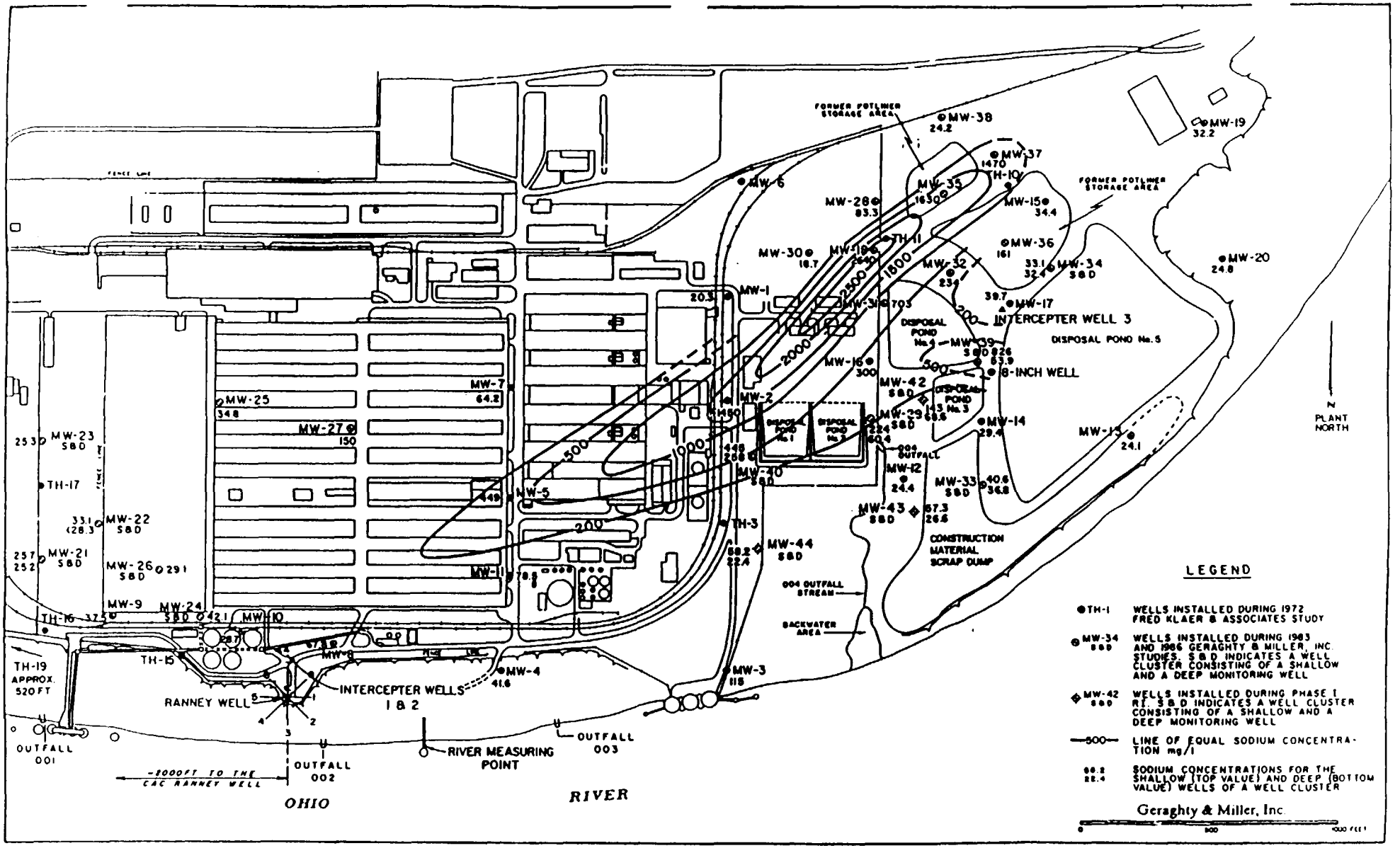



FIGURE 111. Generalized Sodium Isopleth Map Based on Water-Quality Data from the Phase I RI.

Ormet Corporation
Hannibal, Ohio

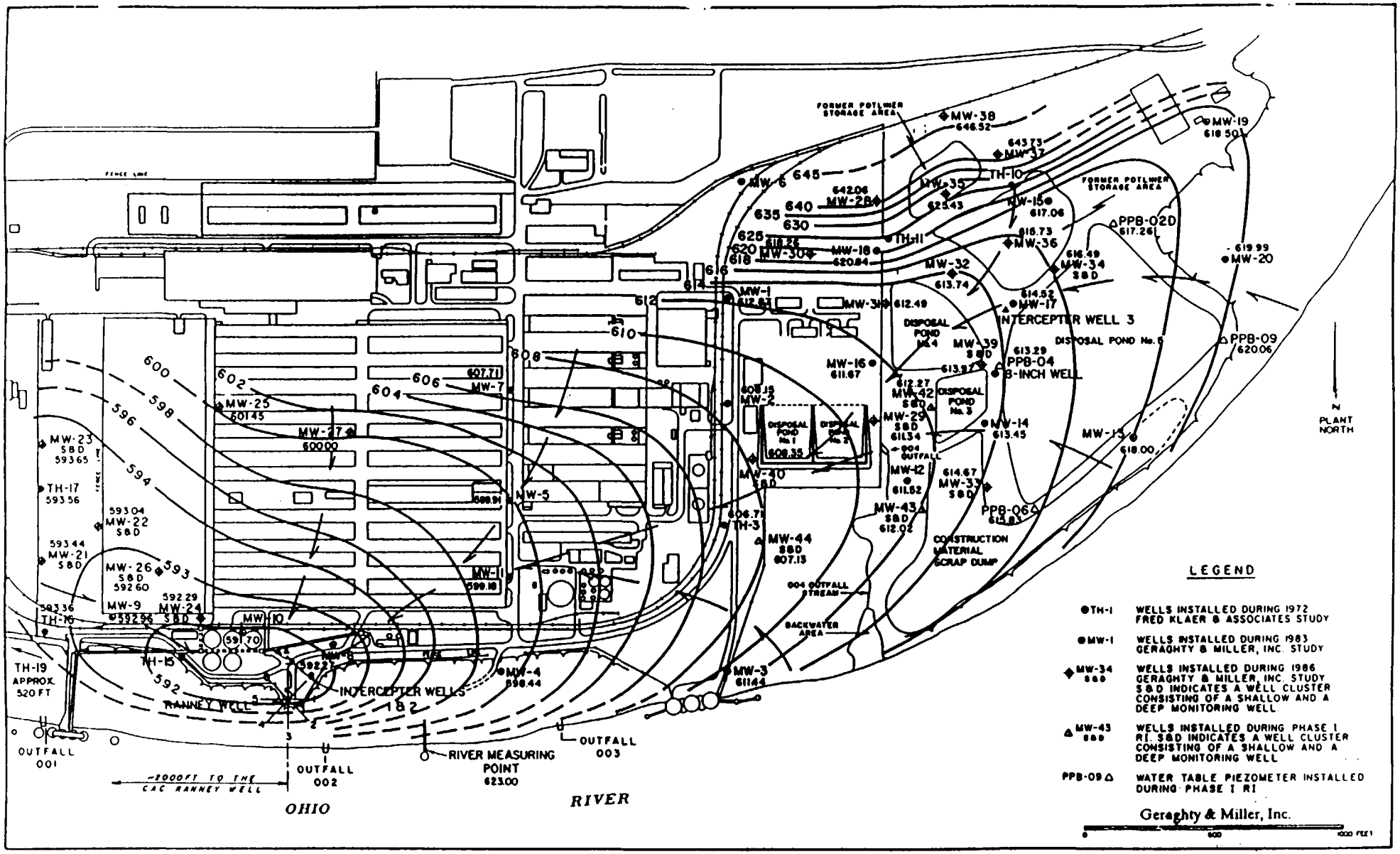



FIGURE 112. Inferred Water-Table Contour Map Based on Water-Level Data Collected 6-20-88.

Ormet Corporation
Hannibal, Ohio

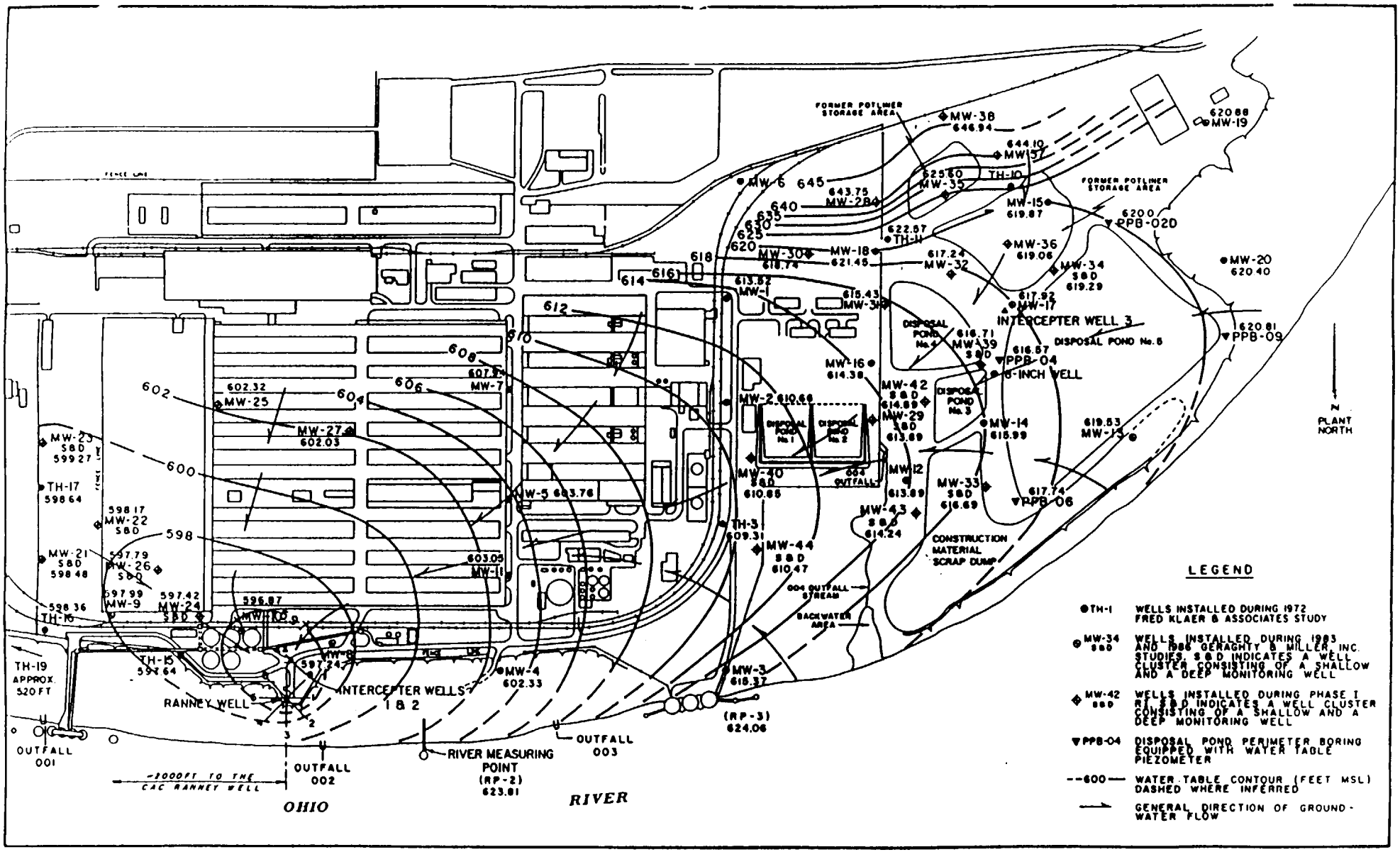



FIGURE 113. Inferred Water-Table Contour Map Based on Water-Level Data Collected 2-20-90.

Ormet Corporation
Hannibal, Ohio