DEPARTMENT OF THE AIR FORCE
AIR FORCE BASE CONVERSION AGENCY

JUL 31 2002

MEMORANDUM FOR SEE DISTRIBUTION LIST

FROM: AFBCA/DA-Griffiss
Environmental Section
153 Brooks Road
Rome, NY 13441-4205

SUBJECT: Submittal – Final Three Mile Creek Feasibility Study Addendum and Long-Term Monitoring Program Outlines for Three Mile and Six Mile Creeks

1. Attached please find the final Three Mile Creek Feasibility Study (FS) Addendum dated July 2002 and the Long-Term Monitoring Program Outlines dated July 2002 for Three Mile and Six Mile Creeks. The final FS Addendum contains a proposed remedial action scenario that was agreed upon for Three Mile Creek including the off-base portion and pond. Also included are long-term monitoring outlines for Three Mile and Six Mile Creeks that will be incorporated into the proposed remedial actions. Please note that the proposed remedy for Six Mile Creek is outlined in the Six Mile Creek Summary Memorandum dated March 2000 that was transmitted on March 20, 2000.

2. With regards to the Base-Wide Wetlands Management Plan, Technical Memorandum #4, a conceptual wetlands restoration plan utilizing the Three Mile Creek Floodplain has been proposed by the Air Force. Once regulatory concerns have been addressed, a detailed wetlands restoration plan will be developed. The wetlands restoration plan will be incorporated into the proposed final remedy for Three Mile Creek and presented in the Three Mile Creek proposed plan. The implementation of the wetlands restoration plan will be performed in conjunction with the Three Mile Creek remedial action. However, should the regulatory community determine that the utilization of the Three Mile Creek Floodplain for wetlands restoration is not feasible, the Three Mile Creek proposed plan will only include the proposed remedial action.

3. Presently, the Three Mile Creek remedial action is scheduled to commence in the spring of 2003. To expedite the process, the draft Three Mile Creek and Six Mile Creek proposed plans are presently being developed and will contain the proposed final remedies for both creeks and the proposed wetlands restoration plan utilizing the Three Mile Creek Floodplain. As stated earlier, if the utilization of the Three Mile Creek Floodplain wetlands restoration plan is determined to be not feasible, that portion will be removed from the Three Mile Creek proposed plan prior to finalization and dissemination for public review and comment.

4. Your assistance is greatly appreciated. If you have any questions, please contact Mike Wojnas at (315) 330-2275.

MICHAEL F. MCDERMOTT
BRAC Environmental Coordinator

Attachments:
1. Final Three Mile Creek FS Addendum
2. Long-Term Monitoring Plan Outlines

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DRAFT

OUTLINE

Prepared for:

Three Mile Creek Area of Concern
Long-Term Monitoring Program
Former Griffiss Air Force Base
Rome, New York

through

The Air Force Center for Environmental Excellence
3207 Sidney Brooks
Brooks AFB, TX 78235-5344

Prepared by:

FPM Group, Ltd.
153 Brooks Road
Rome, NY 13441

Contract No. F41624-95-D-8003
Delivery Order No. 10

Revision 0.0
July 2002

Introduction

- Extent- 10,000-ft, 10-ft wide natural stream and pond.
- Location- From two stormwater culvert outlets located at Ellsworth Road and Wright Drive southeast to the New York State Barge Canal (See Figure 1).
- Drainage- Receives run-off from Landfills 4, 5, and 6, Electric Power Substation and the south central part of the Base including floordrains.
- Receptors- Human dermal contact with surface water and sediments, human ingestion of fish, and aquatic organisms within the system and downstream of the system.

Background

- Metals analyses were performed in 1981 on samples from one upstream and one downstream location along Three Mile Creek. Results indicated 12 metals detected at these two locations.
- A preliminary study was performed in 1987 on streambed sediment, soil, surface water and groundwater samples collected from six locations. Numerous metals were detected in all six sediment samples, oil and grease were detected in four of the six sediment samples and the highest polyaromatic hydrocarbon (PAH) concentrations were detected at the upstream locations. Detected polychlorinated biphenyls (PCBs) were contributed to a ruptured transformer incident at the electric power substation in 1986. Five pesticides were also detected. Surface water, soil, and groundwater results indicated numerous metals and inorganic compounds.
- Fish tissue and sediment samples were collected in 1988 in Three Mile Creek and PCBs were detected in the sediment samples. The fish samples also contained PCBs, as well as PAHs, lead, chromium, selenium, and nickel.
- In 1995 New York State Department of Environmental Conservation (NYSDEC) collected PISCES (passive in-situ chemical extraction sample) samples from one location in Three Mile Creek. This test analyzed for PCBs and other organochlorines. PCB and DDE were detected.
- In 1997, NYSDEC collected samples from three fish species (including white sucker) for PCB tissue analysis from the off-base section of Three Mile Creek. The detected concentrations exceeded the bioaccumulation threshold (0.11 mg/kg) with an average concentration of 1.42 mg/kg and a maximum concentration of 2.1 mg/kg PCB. The exceedance caused New York State Department of Health (NYSDOH) to post a fish consumption health advisory for white sucker in Three Mile Creek.
- Remedial and Supplemental Investigations (in 1994 and 1997) collected surface water and sediment samples from Three Mile Creek and the New York State Barge Canal.
- Surface water results revealed detections for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), metals, pesticides, herbicides, PCBs, dioxins/furans, glycols, and radionuclides.
- Sediment results reveal VOCs, SVOCs, pesticides, PCBs, and metals throughout Three Mile Creek. Based on these results, areas of remediation with concentrations exceeding site cleanup levels were identified.

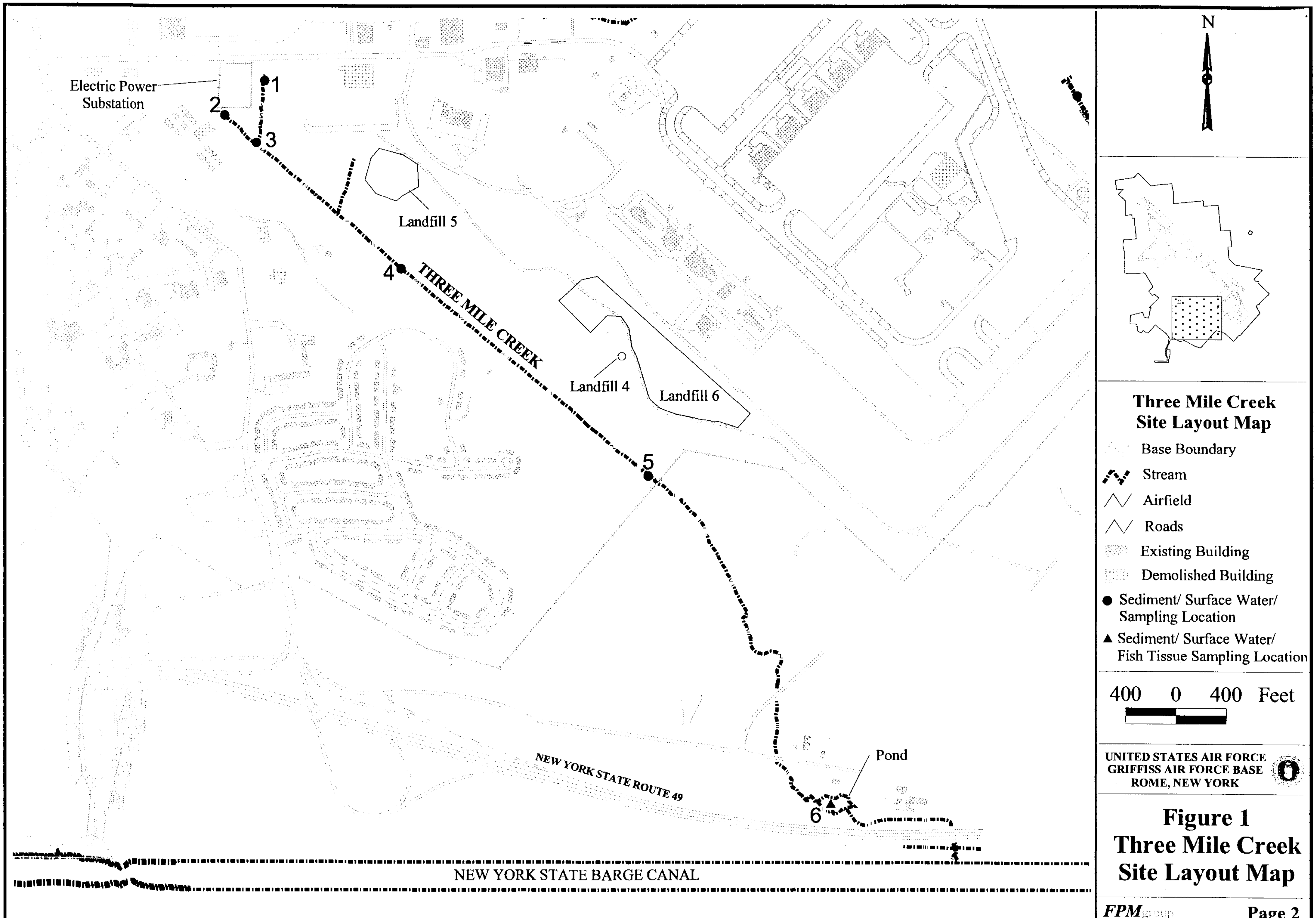

Figure 1
Three Mile Creek Site Layout Map

Feasibility Study

- Draft Feasibility Study completed by Ecology and Environment, Inc., was submitted in January 1998.
- Conducted an alternative analysis of remedial actions, including no action (including monitoring), institutional actions, and sediment excavation activities.
- Based on an evaluation of all alternatives, a remediation technology of sediment excavation, disposal, and clean backfill was deemed the most feasible.
- A Draft Feasibility Study Addendum was completed by Ecology and Environment, Inc. in March 2000.
- A final Feasibility Study was submitted in July 2002 during which the vertical extent of the contamination was investigated along and downstream of Three Mile Creek and cleanup recommendations were made.

Recommendations

- Implement the remedial alternative of sediment excavation, disposal, and clean backfill with annual monitoring as recommended in the Final Feasibility Study Addendum dated July 2002.

Three Mile Creek LTM Plan

The LTM program for Three Mile Creek will be implemented after Remedial Action (RA) completion and site restoration. The sampling will be performed during a period when water levels and - flows in the creek are representative for 'normal' conditions.

LTM Objectives – Sampling of sediment and surface water in Three Mile Creek is recommended to achieve the following objectives:

- Establish Baseline sediment concentrations six month following RA completion,
- Monitor and confirm the effectiveness of the RAs that have or will be performed at potential sources of contamination (Landfill 4, 5, and 6, the Electrical Power Substation), and
- Monitor the potential influx of contaminants from potential sources of contamination (i.e. early warning system).

LTM Extent – To demonstrate the absence of contaminants of concern (COCs) above Baseline[1] concentrations, annual monitoring for VOCs, SVOCs, metals, pesticides and PCBs is recommended for both sediment and surface water (see Table 1). Fish tissue samples will be collected at one location to identify the tissue contamination and potential bioaccumulation of COCs. Fish tissue samples will be collected every five years until the results of two consecutive rounds of sampling do not exceed the NYSDOH fish consumption health advisory threshold level. Larger fish will be collected for analyses as they would be expected to have higher concentrations than smaller and younger based on size and age alone. All sampling locations can be found on Figure 1 and in Table 2.

[1] Baseline sediment samples will be collected six months following RA completion. The six month period will allow sediment backfilling to stabilize.

Table 1
Three Mile Creek LTM Sampling Rationale

Matrix	*Analysis*	*Frequency*	*Rationale*
Sediment/ Surface water	VOCs, SVOCs, metals, PCBs & pesticides	Annually	Monitoring of the effectiveness of the proposed RA at Three Mile Creek and adjacent potential source sites. Frequency based on relatively low flow regime and limited sediment transport.
Fish tissue	PCBs, pesticides & metals	Every five years	Monitoring of fish for PCBs, pesticides and metals is proposed to identify potential bioaccumulation of contaminants of concern.

Table 2
Three Mile Creek Sampling Locations and Analyses

Location Number	Location within Three Mile Creek	Detailed Location Description	Sample Matrix	No. of samples per location	Analyses performed per sample	Total No. of Analyses
1	On the northern side of the northern fork of TMC (Three Mile Creek)	Appr. 30 ft south of the culvert on Ellsworth Road	Sediment	1	Full suite[1] and dioxins	6
			Surface water	1	Full suite[1]	5
2	On the northern side of the southern fork of TMC	Appr. 30 ft south of the culvert of Wright Drive	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
3	In the 'fork' of TMC	Appr. 600 ft downstream of the culvert on Ellsworth Road	Sediment	1	Full suite[1] and dioxins	6
			Surface water	1	Full suite[1]	5
4	Downstream of Landfill 5	Appr. 1500 ft downstream of the fork in TMC	Sediment	1	Full suite[1] and dioxins	6
			Surface water	1	Full suite[1]	5

[1] Full suite of analyses includes VOCs (SW 8260), SVOCs (SW 8270), metals (SW 6010B), pesticides (SW 8085) and PCBs (SW 8082).

Table 2 (Continued)
Three Mile Creek Sampling Locations and Analyses

Location Number	Location within Three Mile Creek	Detailed Location Description	Sample Matrix	No. of samples per location	Analyses performed per sample	Total No. of Analyses
5	Downstream of Landfill 4 and 6 (i.e. upstream of Base boundary)	Appr. 4200 ft downstream of the fork on TMC	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
6	Off-Base pond	Appr. 1 mile southeast of base boundary	Sediment	1	PCBs and metals	2
			Surface water	1	PCBs and metals	2
			Fish tissue	3[2]	PCBs, pesticides and metals	3[2]

[1] Full suite of analyses includes VOCs (SW 8260), SVOCs (SW 8270), metals (SW 6010B), pesticides (SW 8085) and PCBs (SW 8082).
[2] Three large specimens of each species designated for sampling will be collected.

LTM Re-evaluation Criteria – The LTM plan will be re-evaluated annually to assess the creek conditions. Proposed re-evaluation procedures follow:

- The results from sampling events will be compared to baseline concentrations which serve as general guidelines for changes in/or releases to Three Mile Creek. If the concentration detected exceeds two times baseline concentrations, the Air Force, in consultation with the EPA and NYSDEC, will evaluate modifying the LTM network to identify potential causes of concentration increases.

DRAFT

OUTLINE

Prepared for:

Six Mile Creek Area of Concern
Long-Term Monitoring Program
Former Griffiss Air Force Base
Rome, New York

through

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Contract No. F41624-95-D-8003
Delivery Order No. 10

Revision 0.0
July 2002

Introduction

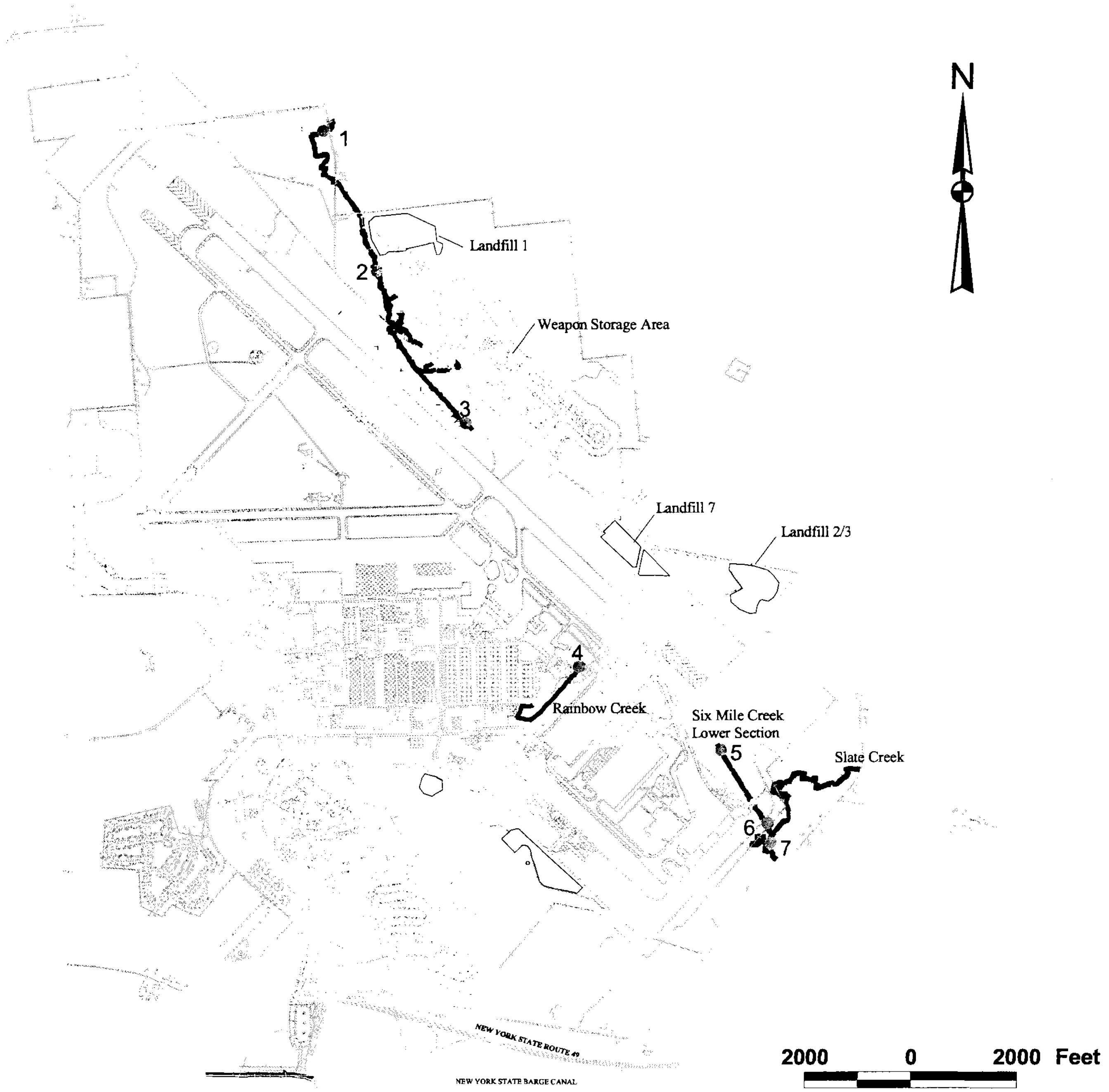
- Extent- 15,600-ft natural stream, including 7,200-ft runway culvert.
- Location- From Butternut Creek diversion ditch in the north southeast to the New York State Barge Canal (see Figure 1).
- Drainage- Receives run-off from Landfill 1, 2/3, and 7, Weapon Storage Area (WSA), WSA Landfill, runway, on-base shops, and Rainbow Creek.
- Receptors- Human dermal contact with surface water and sediments, human ingestion of fish, and aquatic organisms within the system and downstream of the system.

Background

- Metals analyses performed in 1981 at 11 locations along Six Mile Creek revealed 11 metals detected in at least one location and 12 other metals detected at one or more sampling locations.
- Fish tissue and bottom sediment samples were collected in 1988 from one upsteam and one downstream location in Six Mile Creek. Polyaromatic Hydrocarbons (PAHs) and Polychlorinated Biphenyls (PCBs) were detected in the downstream samples. The PAHs detections were consistent with the results from control sites from other studies. Downstream fish samples contained higher concentrations of arsenic, cadmium, iron, and manganese. Mercury and nickel were also detected.
- In 1995 New York State Department of Environmental Conservation (NYSDEC) collected PISCES (passive in-situ chemical extraction sample) samples from one location in the lower range of Six Mile Creek. This test analyzed for PCBs and other organochlorines. No contaminants were detected.
- Remedial and Supplemental Investigations (in 1994 and 1997) collected surface water, and sediment samples from Six Mile Creek, Mohawk River, and the New York State Barge Canal.
- Surface water results revealed limited, low-levels of Semi-Volatile Organic Compounds (SVOCs), metals, pesticides, cyanide and hydrogen sulfide.
- Sediment results revealed limited, low-levels of Volatile Organic Compounds (VOCs), metals, and PCBs and slightly higher levels for SVOCs and pesticides throughout Six Mile Creek.

Feasibility Study

- Draft Feasibility Study completed by Ecology and Environment, Inc. (E&E), was submitted in January 1998.
- Conducted an alternative analysis of remedial actions, including no action (including monitoring), institutional actions, and sediment excavation activities.
- The no action alternative with annual monitoring was determined to be most feasible.
- A Draft Six Mile Creek Summary Memorandum was submitted by E&E in March 2000.



Six Mile Creek
Site Layout Map

Base Boundary	Roads
Stream	Existing Building
Airfield	Demolished Building

UNITED STATES AIR FORCE
GRIFFISS AIR FORCE BASE
ROME, NEW YORK

Figure 1
Six Mile Creek Site Layout Map

FPM group

Recommendations

- Implement no remedial actions with annual monitoring as recommended in the Draft Six Mile Creek Summary Memorandum dated March 2000.
- Design sampling program with upgradient and downgradient locations to monitor the Remedial Action (RA) effectiveness of the RAs that have /or will be performed at other AOC sites to eliminate further contamination from on-base AOC sites that were potential sources (Landfill 1, 2/3, and 7, WSA, WSA Landfill, Building 35, Pumphouse 5, and Rainbow Creek).

Six Mile Creek LTM Plan

The LTM program for the Six Mile Creek AOC will be implemented shortly after approval by regulatory agencies and it will be performed during a period when water levels and - flows in the creek are representative for 'normal' conditions.

<u>LTM Objectives</u> - Sampling of sediment and surface water in Six Mile Creek is recommended to achieve the following objectives:

- Establish Baseline concentrations during first sampling round,
- Monitor and confirm the effectiveness of the RAs that have or will be performed at potential sources of contamination ((Landfill 1, 2/3, and 7, WSA, WSA Landfill, Building 35, Pumphouse 5, and Rainbow Creek), and
- Monitor the potential influx of contaminants from potential sources of contamination (i.e. early warning system).

<u>LTM Extent</u> - Given the elevated concentrations for several COCs, annual monitoring for VOCs, SVOCs, metals, pesticides and PCBs is recommended for both sediment and surface water (see Table 1). Fish tissue samples will be collected at one location to identify the tissue contamination and potential bioaccumulation of COCs. Fish tissue samples will be collected every five years until the results of two consecutive rounds of sampling do not exceed the NYSDOH fish consumption health advisory threshold level. Larger fish will be collected for analyses as they would be expected to have higher concentrations than smaller and younger based on size and age alone. All sampling locations can be found on Figure 1 and in Table 2.

Table 1
Six Mile Creek AOC LTM Sampling Rationale

Matrix	*Analysis*	*Frequency*	*Rationale*
Sediment & Surface water	VOCs, SVOCs, metals, pesticides & PCBs	Annually	Monitoring the effectiveness of the RAs performed at adjacent potential source sites. Frequency based on relatively low flow regime and limited sediment transport.
Fish tissue	PCBs & metals	Every five years	Monitoring if fish for PCBs and metals is proposed to identify potential bioaccumulation of contaminants of concern.

Table 2
Six Mile Creek Sampling Locations and Analyses

Location Number	Upstream/ Downstream part of Six Mile Creek	Detailed Location description	Sample Matrix	No of samples per location	Analyses performed per samples	Total No of analyses
1	Upstream	Slightly downstream of the on-Base entrance of SMC	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
2	Upstream	Slightly downstream of Landfill 1	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
3	Upstream	Slightly upstream of the culvert entrance	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
4	Upstream	At the entrance of the culvert in Rainbow Creek	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
5	Downstream	Slightly downstream of the culvert exit	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5

[1] Full suite of analyses includes VOCs (SW 8260), SVOCs (SW 8270), metals (SW 6010B), pesticides (SW 8085) and PCBs (SW 8082).

Table 2 (continued)
Six Mile Creek Sampling Locations and Analyses

6	Downstream	Slightly downstream of the Perimeter Road underpass, north of the Base boundary	Sediment	1	Full suite[1]	5
			Surface water	1	Full suite[1]	5
7	Downstream; off-Base	At the confluence of Slate and Six Mile Creek	Fish Tissue	3[2]	PCBs and metals	6

[1] Full suite of analyses includes VOCs (SW 8260), SVOCs (SW 8270), metals (SW 6010B), pesticides (SW 8085) and PCBs (SW 8082).
[2] Three large specimens of each species designated for sampling will be collected.

<u>LTM Re-evaluation Criteria</u> – The LTM plan will be re-evaluated annually to assess the creek conditions. Proposed re-evaluation procedures follow:

- The results from sampling events will be compared to baseline concentrations which serve as general guidelines for changes in/or releases to Six Mile Creek. If the concentration detected exceeds two times baseline concentrations, the Air Force, in consultation with the EPA and NYSDEC, will evaluate modifying the LTM network to identify potential causes of concentration increases.

Responses to USEPA Comments
On the April 2002 Revised Three Mile Creek Feasibility Study Addendum
June 18, 2002

Feasibility Study Addendum

General Comments

1) The impact of reducing or eliminating the contamination at other AOCs (Landfills 5 & 6, Hardfills 49C & 49D, and the Electrical Power Substation) which have acted as sources to Three Mile Creek (TMC) should be discussed as "source control".

Response: The text in Section 5.1 has been revised to include a statement that all the known possible sources contributing to the contamination found in Three Mile Creek have been mitigated or will undergo a Remedial Action in the near future.

Specific Comments

2) Section 1.2, Background Information, page 1-1: The statement that TMC is a "drainage ditch" should be removed. TMC was a creek prior to being channelized and should be restored to a more ecologically productive habitat after remediation.

Response: The text has been changed as requested.

3) Sections 2.2.5 & 2.3: Polychlorinated biphenyls should be treated collectively. Because PCBs have been detected in fish and sediments of TMC at elevated levels, they are one of the primary COPCs at the TMC Area of Concern (AOC). Similarly, total PAHs and the sums of DDT, DDD and DDE should be considered, as well as the individual COPCs (where individual criteria are available).

Response: These chemicals are discussed in the text within their chemical groups and as individual compounds. However, in terms of exceedance of screening criteria, individual compounds were examined since total criteria for these chemical groups are not always available and the mix of compounds in that group may not match the mix that is at the site. The lab analysis also gives different chemical constituents for each group, and each may have a different mode of toxicity that makes one contaminant of a group more of a concern than another. Therefore, grouping them all together may unnecessarily place concern on all PCBs and all PAHs, etc. The value in examining the COPC as individual compounds is much greater than as groups of chemicals.

4) Section 2.3.5: The document needs to be more specific regarding the scope and findings of the ecological risk assessment.

Response: An elaborated scope and conclusions from the Ecological Risk Assessment has been added to the text as requested.

5) Section 2.3.6, page 2-10: The recommended range for TOC that should be used for establishing screening criteria is 0.2% - 12%, not 2.0% (NYSDEC, 1999 - Technical Guidance for Screening Contaminated Sediments, page 8, paragraph D, Item 2.).

Response: The text has been changed as requested.

6) Section 2.3.7, page 2-11: It should be noted that the impacts of habitat destruction as a result of remedial activities (sediment removal in the creek and access requirements) are short term impacts which are an unavoidable result of the work. However, incidental impacts to the aquatic habitat and wetlands (e.g., access roads, dewatering areas, and staging areas) should be avoided, if possible, and/or minimized to the greatest extent possible (Management Practices Federal Register/Volume 51, No. 219/Part 330.6). All areas impacted during the work will require restoration.

Response: The text has been changed as requested.

7) Figure 2-3c: The concentrations of lead and cadmium in pond sediments that are reported in the figure have not been changed to mg/kg as the figure key indicates.

Response: The TMC Pond results were removed from Figure 2-3c because they are properly illustrated on Figure 2-5a.

8) Section 4.3 and 5.1: The statement that "incidental damage to surrounding habitat in this area would likely be great..." should be deleted. As discussed above, the design for any work in TMC must meet regulations and ARARs designed to minimize unnecessary disturbance to existing habitat. Different means of accessing the stream corridor for sediment excavation should be evaluated.

Response: The text has been changed as requested.

9) Section 5.1, page 5-3, Scenarios 5 and 6: Depending upon the efficacy of the proposed remediation, promoting flooding of the wetland areas adjacent to TMC may not be recommended.

Response: Additional work will be performed to determine whether creating the wetland is feasible. Scenarios 5 and 6 would only be implemented if agreed upon by all parties after the additional work is complete.

10) Section 5.1, page 5-4: It should be noted that long term monitoring may extend past the five year review date. Long-term monitoring should be conducted until the remedial action objectives or PRGs are met. In addition, monitoring associated with remediation of Landfills 5 and 6 will be included in the monitoring plan for TMC. This may also include surface water, sediments and biota.

Response: A Long-Term Monitoring program for Three Mile Creek is under development and will be forwarded for your review in the near future.

11) Section 5.2.1, page 5-6 & Section 5.2.3, page 5-7: As noted above, long term monitoring for the off-base portions of TMC may extend past the five year review date. It should be indicated whether surface water monitoring should include other inorganics in addition to lead.

Response: See response to Comment No. 10.

Responses to C. Dowd's (DEC F&WL) Comments
On the April 2002 Revised Three Mile Creek Feasibility Study Addendum
May 16, 2002

1) Section 2.2.5 Selection of Surface Water Screening Criteria - It is incorrect to compare individual biphenyl compounds to the NYS water quality standards for PCB. The standard is for total PCBs.

Response: The surface water samples in question were originally reported in the RI published by Law Environmental in 1996. While there were no PCBs detected in the samples under the PCB test methods, biphenyl compounds were detected in one sample under the SVOC analysis. While the statement is true that the NYS water quality standard is for total PCBs, each of the individual biphenyls detected in the RI sample exceeded this total, therefore, the total biphenyls also will exceed the standard. A note will be added to the text to clarify this matter.

2) Section 2.3.5 Ecological Assessment - NYSDEC disagrees with the characterization of the ecological assessment and conclusions drawn therefrom because the methods and analysis of the assessment were flawed.

Response: The discussion presented in Section 2.3.5 was taken directly from the RI, which was published by Law in 1996. A statement that NYSDEC does not concur with the characterization of the assessment and the conclusions drawn form the RI will be added to the text.

3) Section 2.3.6 Selection of Sediment Screening Criteria, pg 2-6 - Table 2-6 references EPA 1989 as the source of the 2,3,7,8 TCDD equivalency factors, however EPA 1989 is not listed in the references. In addition, the most recent World Health Organization TEFs are presented in Van den Berg et al. (1998) Toxic Equivalency Factors for PCBs, PCDDs and PCDFs for Humans and Wildlife from Environmental Health Perspectives, 106(12) 775-792.

Response: EPA 1989 will be added to the reference section. As far as the World Health Organization TEFs are concerned, for consistency purposes, the EPA TEFs that were used in the approved RI (Law 1996) were used for this report also.

4) Table 2-3a - The NYSDEC criterion for wildlife bioaccumulation of DDT applies to the sum of DDT and the daughter compounds.

Response: The NYSDEC criteria values for DDT and its daughter products (DDD and DDE) in Table 2-3a apply to the sum of DDT and its daughter products. A footnote will be added to the table. However, it should be noted that although the NYSDEC criteria were part of the screening process, the NYSDEC criterion was not used for screening DDT and its daughter products because it was not the most stringent.

5) Section 2.3.6 Selection of Sediment Screening Criteria, pg 2-10 - What is the reference for the upper and lower recommended percentages for total organic carbon? The NYSDEC Technical Guidance for Screening Contaminated Sediments (TGSCS) identifies a lower limit of 0.2 %, not 2.0%. The average TOC of 29.6% indicated for Landfill 6 sediments is extremely high. Were these results evaluated in laboratory QA/QC?

Response: The 2% lower limit in the table is incorrect. It will be changed to 0.2 % as stated in the comment and the data will be re-screened. The TOC values were evaluated in the laboratory QA/QC, and are believed to be accurate because the sediments were taken in a wetland with a high organic content.

6) Figure 2-3b, 2-3c and 2-5a - Please include an entry for total PAHs.

Response: These Figures were derived from other reports: Figure 2-3 was derived from RI, and 2-5 was from the SI. It is not necessary to re-tabulate the data for total PAHs from previous reports since total PAHs are presented on Figure 3-6.

7) Table 3-4a, 3-4b, 3-5 - Please include an entry for total PAHs and compare to the ER-L for total PAHs from Long and Morgan (1991) and the TGSCS which is 4 ppm.

Response: An entry for total PAHs will be added to the tables; however, the ER-L from Long and Morgan (1991) represents the sum of a select list of PAHs, not all of them. Therefore, the comparison cannot be made. The value from Long and Morgan is also an ultra-conservative number that is designated by Long and Morgan as having a low confidence value. In addition, the TGSCS value of 4 ppm was actually derived from Long and Morgan. Therefore, since the screening value does not represent total PAHs, and it has a low confidence value, a screening value for total PAHs will not be added to the table.

8) Section 4.3 and 5.1 - The statement that "incidental damage to surrounding habitat in this area would likely be great..." should be deleted. The design for any work in Threemile Creek must meet regulations and ARARs designed to minimize unnecessary disturbance to existing habitat. There has been no evaluation presented here on different means of accessing the stream corridor for the purpose of excavating sediments.

Response: The best route of entry to minimize disturbance of the existing habitat will be evaluated; however, the Creek is surrounded by habitat on all sides, therefore, some damage is unavoidable. This disturbance will be mitigated as part of the Wetland Management Plan for Griffiss. The text will be changed to clarify this matter.

9) Section 5.1 page 5-3 - Scenarios 5 and 6 which incorporate consideration of the wetland mitigation program should be eliminated from consideration. The Base-wide Wetlands Management Plan has not yet been finalized and the proposed off-site wetland mitigation is still under review by the Agencies. In addition, the wetland mitigation proposal involves promoting flooding of wetland areas adjacent to Threemile Creek. It would be unwise to do so until the efficacy of the proposed remediation can be demonstrated. In addition, limited sampling of these adjacent wetland areas has been undertaken. It would be equally unwise to proceed with the mitigation scheme until the quality of the areas to be flooded is known.

Response: The scenarios represent various possible options. A recommendation section has been added to the report to indicate the preferred alternative.

10) Section 5.1 page 5-4 - While EPA may require a five year review of post-remedial monitoring data, this does not imply that monitoring only occurs for five years. Long-term monitoring must be conducted until the remedial action objectives or PRGs are met. Post-remedial monitoring for Threemile Creek will also include benthic community monitoring to ensure that a healthy benthic community is reestablished in the stream after remediation. In addition, monitoring associated with remediation of Landfills 5 and 6 will be included in the monitoring plan for Threemile Creek. This may also include surface water, sediments and biota.

Response: It is understood that post-remedial monitoring will be conducted until remedial action objectives are met or PRGs are met. A Long-Term Monitoring program for Three Mile Creek is under development and will be forwarded for your review in the near future.

001002_UK04_02_02_00-B0925

Final Three Mile Creek Feasibility Study Addendum Former Griffiss Air Force Base Rome, New York

July 2002

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List of Acronyms

AMSL	above mean sea level
AFBCA	Air Force Base Conversion Agency
AFCEE	Air Force Center for Environmental Excellence
AOC	Area of Concern
ARARs	applicable or relevant and appropriate requirements
ASC	Ecology and Environment, Inc., Analytical Services Center
BGS	below ground surface
BTOCB	below top of creek bed
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 – Superfund
CFR	United States Code of Federal Regulations
CWA	Clean Water Act
1,2-DCB	1,2-dichlorobenzene
1,4-DCB	1,4-dichlorobenzene
E & E	Ecology and Environment, Inc.
EPA	United States Environmental Protection Agency
ERDC	United States Army Engineers Research and Development Laboratory
ER-L	effects range-low
FS	Feasibility Study
GPS	Global Positioning System
Griffiss AFB	former Griffiss Air Force Base
LAW	Law Environmental, Inc.
LDR	land disposal restriction
LEL	lowest effect level

List of Acronyms (Cont.)

TOC	total organic carbon
TRPH	total recoverable petroleum hydrocarbon
TSD	treatment, storage, and disposal
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOCs	volatile organic compounds
WAD	Work Authorization Directive

1 Introduction

Ecology and Environment, Inc. (E & E), under contract to the United States Army Corps of Engineers (USACE), Kansas City District, Contract No. DAC41-99-D-005, Work Authorization Directive (WAD) 04, has prepared this revised Feasibility Study (FS) Addendum document for the Three Mile Creek (TMC) Area of Concern (AOC) at the former Griffiss Air Force Base (Griffiss AFB) in Rome, New York (see Figures 1-1 and 1-2). This document summarizes the data findings of various site investigations, especially the 2001 TMC sediment sampling, and offers final recommendations for Three Mile Creek remedial planning, including a description of the recommended remedial approach.

1.1 Purpose

This revised report updates the March 2000 TMC FS addendum by incorporating the latest round of sampling data (2001 TMC sediment sampling), revising screening criteria based on regulatory updates, determining the driving factors for the clean-up of the creek, and proposing final clean-up measures.

1.2 Background Information

The TMC AOC includes the entire length of the creek from headwaters to outfall. TMC is an approximately 10,000-foot-long, 10-foot-wide creek, with water depths ranging from 2 inches to 2 feet. The headwaters of TMC originate at the points of discharge for the central portion of the base storm water collection system. These two discharge points are located on the south side of Ellsworth Road and former Wright Drive, near the Electrical Power Substation. The creek flows to the southeast and empties into the New York State Barge Canal (NYSBC) 1 mile south of the installation. The creek channel was dredged and straightened in 1942 during the initial stages of base construction and was dredged and straightened again at least once in 1961.

The creek receives both surface water runoff and groundwater from the surrounding watershed, including the Electrical Power Substation, former Landfill 4, Landfills 5 and 6, and storm water drainage from the south-central portion of the base, which reportedly contains discharges from floor drains.

The drainage ditch located adjacent to the Hardfill 49D area to the north of Landfill 5 forms, in effect, a "tributary" to TMC, and contaminants found there reflect those found in the creek rather than those found at the landfill. This Landfill 5 drainage ditch is included in the TMC AOC and is part of this FS Addendum.

TMC is classified as a Class C stream according to the New York Code of Rules and Regulations (NYCRR) Part 701. The best usage for Class C stream waters is fishing, where waters shall be suitable for fish propagation and survival. Based on an Aquatic Habitat Assessment performed by Law Environmental, Inc., (Law) in 1993 (Law 1996), at least 12 species of fish are found in TMC. Due to the presence of polychlorinated biphenyls (PCBs) in fish tissue, the New York State Department of Health (NYSDOH) has posted a fish advisory for TMC. NYSDOH recommends that people eat no more than one meal per month of White Sucker from this creek.

The current land use for the site is public/recreational/open space and wetlands. The future land use, defined by the Griffiss Local Development Corporation document, *A Master Reuse Strategy for Griffiss Air Force Base, Rome, New York* (Griffiss Local Development Corporation 1995), is to remain a wetland/surface water area.

1.3 Previous Site Investigations

Investigations conducted at the TMC site between 1981 and 2002 are presented below:

- In 1981, Fred C. Hart Associates, Inc. (Hart 1982), performed an investigation that included metals analyses of two sediment samples collected from an upstream and a downstream location.

- A preliminary study of the TMC basin for sediment, soil, surface water, and groundwater was conducted in 1987 by the United States Geological Survey (USGS) (USGS 1988). Acid-extractable metals, polycyclic aromatic hydrocarbons (PAHs), PCBs, and pesticide analyses were conducted on streambed sediments from six locations. The investigation also included collection and analysis of four surface water samples, installation of 13 monitoring wells, sampling of seven wells, and collection and analysis, for metals and selected inorganic analytes, of soil cores from 12 sites near TMC.

- In 1988, the United States Fish and Wildlife Service (USFWS) conducted a study to assess the extent of contamination in both fish and sediments in TMC (USFWS 1989).

- As part of the Remedial Investigation (RI) performed for USACE between September 1993 and April 1995, Law collected 30 sediment samples from 15 locations and 12 surface water samples from 12 locations from the TMC AOC and the drainage ditch component of the Landfill 5 AOC (Law 1996). In addition, they collected benthic and drift invertebrates from four general locations to assess species abundance and numbers, and fish at four general locations to survey species diversity and numbers, and to obtain fish tissue for chemical analyses.

- In 1995 the New York Department of Environmental Conservation (NYSDEC) conducted passive in situ chemical extraction sampling (PISCES) at one location in TMC.

- In 1997 NYSDEC collected White Suckers, Creek Chub, and Pugnosed Minnow for tissue analysis from the off-base portion of TMC. Because PCB concentrations in White Suckers exceeded the threshold used by NYSDOH, a fish advisory was posted for this species at TMC.

- As part of the base-wide supplemental investigation (SI) to the RI performed by E & E in June 1997, two additional surface water and three PISCES samples were collected from TMC (E & E 1998a). Soil and leachate samples were also collected from Landfill 5. No sediment samples were collected during the 1997 SI.

- Also, in 1997, as part of a separate program, Parsons Engineering Science, Inc. performed sediment sampling for the Air Force Center for Environmental Excellence (AFCEE) at the Landfill 5 drainage ditch (Parsons 1997).

- In July 1998, additional SI samples were taken from the off-base portion of TMC (E & E 1998b). These included two surface water samples and eight sediment samples tested for Target Compound List (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, and PCBs; organophosphorus pesticides; organochlorine herbicides; dioxins and furans; total recoverable petroleum hydrocarbons (TRPH); total organic carbon (TOC); Target Analyte List (TAL) metals, including mercury and hexavalent chromium; cyanide; percent solids; and radionuclides, including strontium 89 and 90, and total uranium.

- In July 1999, representatives from the Air Force Base Conversion Agency (AFBCA), USACE, NYSDEC, United States Environmental Protection Agency (EPA), USFWS, and E & E visually inspected the habitat quality of TMC (E & E 1999a).

- In November 1999, six off-base TMC pond samples were collected by E & E and were tested for TCL PCBs, cadmium, lead, TOC, and percent solids. In addition, E & E also visually surveyed and recorded (via Global Positioning System [GPS]) silt sediment deposits along a 1,500-foot section of TMC downgradient of the base boundary (E & E 2000a).

- In May and June 2001, as part of the base FSs, E & E collected 68 samples at 26 locations from the on-base portion of TMC; four samples from the top 6 inches at four locations in the Landfill 6 (LF6) wetland; and 12 samples at six locations from the off-base pond. Each sample location was vertically profiled (except the LF6 wetland) with samples to depths of 3.5 feet below creek bottom (E & E 2001a).

- In late 2001, E & E reviewed historical remedial documents related to TMC to assess past impacts on the wetlands. An assessment of potential wetland impacts was then performed using available wetland boundaries, draft remedial design documents, and historical sample results. Field verification inspections were also performed to verify current wetland boundaries (E & E 2001b, 2001c, 2002). Results of the wetlands investigation are incorporated in the recommendations presented in Section 4 of this revised FS addendum.

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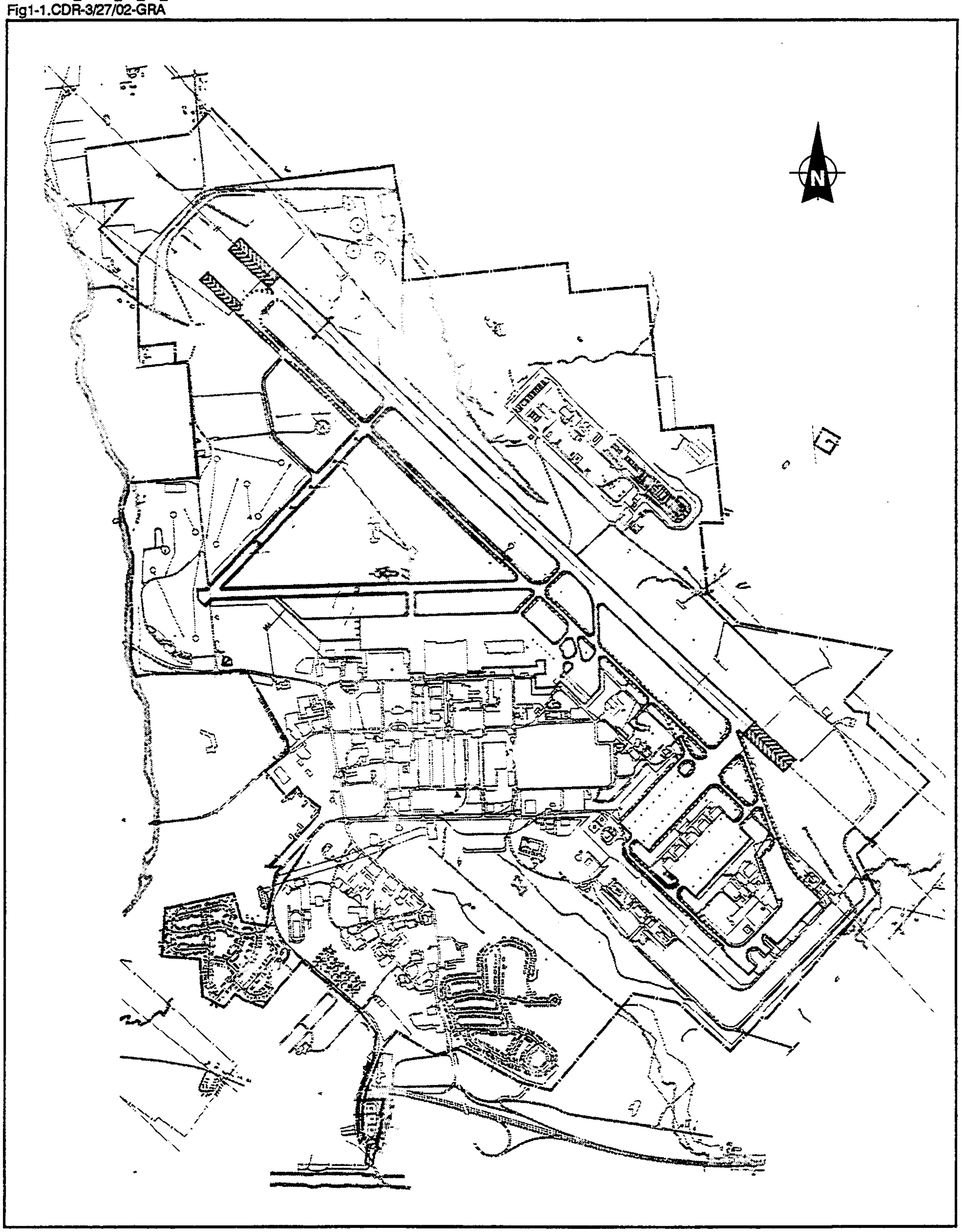

Figure 1-1 FORMER GRIFFISS AFB SITE LOCATION MAP

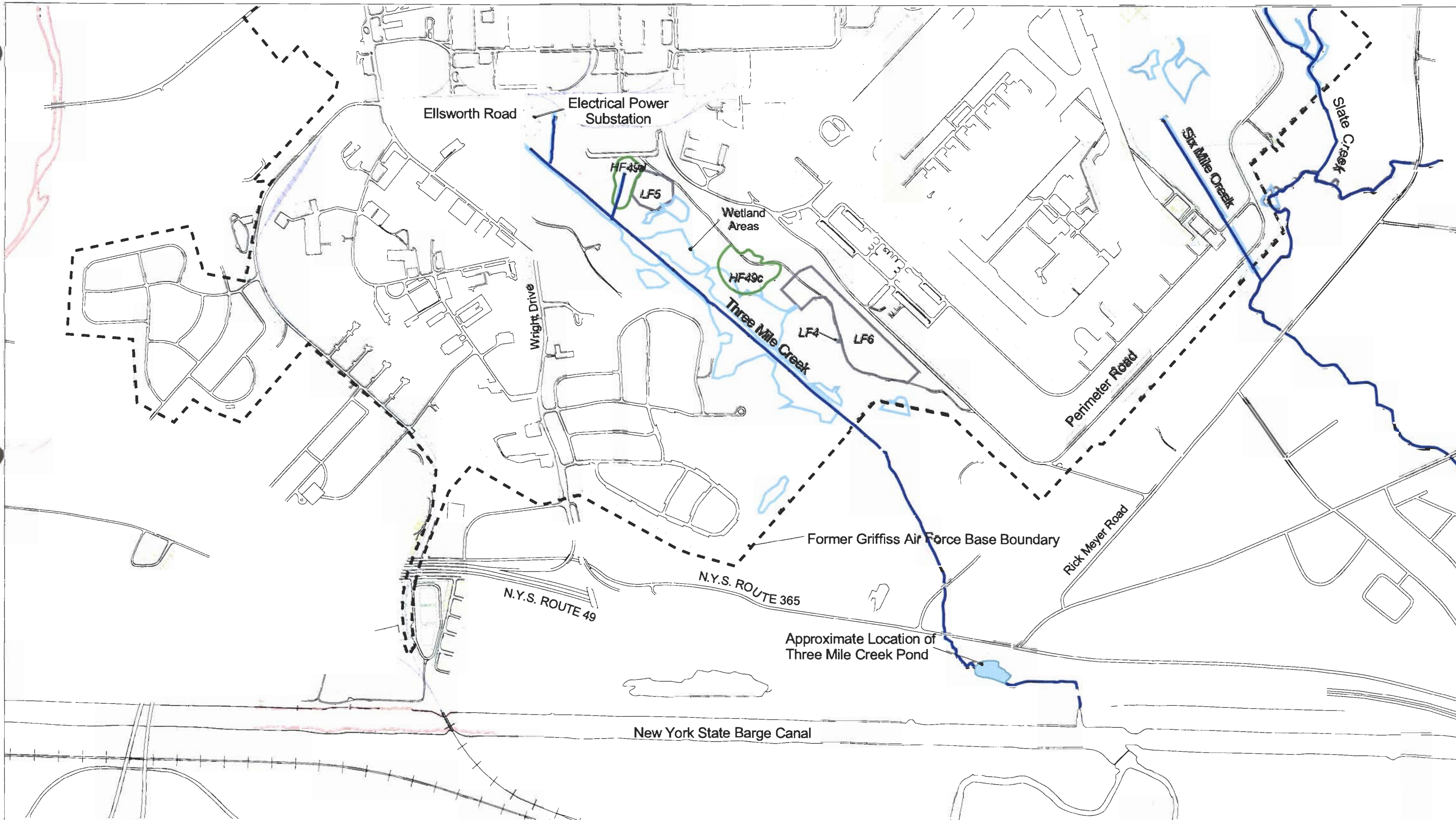

Figure 1-2
Three Mile Creek Base Map
Former Griffiss Air Force Base

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2 Analytical Data Screening

2.1 Screening Process

2.1.1 Background

This section addresses contamination in the surface water and sediments. Chemicals analyzed for and detected at this AOC include VOCs, SVOCs, dioxins/furans, glycols, radionuclides, pesticides, herbicides, PCBs, and inorganics. Potential recreational populations may be exposed to chemicals detected in site media through ingestion of fish and incidental ingestion of and dermal contact with sediment and surface water. Fish and benthic organisms are directly exposed to chemicals in the surface water and sediments. Other wildlife (aquatic and terrestrial) that comes into contact with the surface water, sediments, fish, or benthic organisms are also potential receptors of contamination.

Chemical-specific screening criteria were developed for each medium at this site based on an evaluation of applicable or relevant and appropriate requirements (ARARs), other criteria and guidelines to be considered (TBCs), and findings of the site-specific baseline risk assessment presented in the RI. This evaluation determines those levels at which the contaminants can be present but still be deemed protective of human health and the environment.

2.1.2 Applicable or Relevant and Appropriate Requirements

An ARAR may be either "applicable" or "relevant and appropriate." Applicable requirements are those substantive environmental protection standards, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, remedial action, location, or other circumstance at a Superfund site. Relevant and appropriate requirements are those substantive environmental protection requirements promulgated under federal and state law that, although not legally applicable to the circumstances at the site, address situations sufficiently similar to those encountered at the site so that their use is well-suited to the particular site.

2.1.3 TBCs

TBCs are nonpromulgated federal or state standards or guidance documents that are to be used on an "as appropriate" basis in developing screening criteria. Because they are not promulgated or enforceable, they do not have the same status as ARARs and are not considered required cleanup standards.

2.1.4 Site-Specific Risk Assessment

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980-Superfund (CERCLA) requires that remedial actions be protective of human health and the environment. Health and environmental risk estimates from the site-specific risk assessment were considered in developing chemical-specific screening criteria. The United States Environmental Protection Agency (EPA) has adopted the policy that acceptable exposures to known or suspected carcinogens are generally those that represent an excess upperbound lifetime cancer risk to an individual of between 10^{-4} and 10^{-6} (40 United States Code of Federal Regulations [CFR] 300.430[E][2][i][A][2]).

This regulatory section also defines 10^{-6} as the "point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants...or...pathways of exposure." While 10^{-6} is a point of departure for determining remedial goals, values corresponding to risks in the range of 10^{-4} to 10^{-6} are acceptable for identification of acceptable risks. The Air Force has elected to use the more conservative carcinogenic risk level of 10^{-5} to derive site-specific risk-based preliminary screening values to provide an additional level of protectiveness in evaluating this AOC. This value was selected to ensure that total risk from the site is below 10^{-4} should more than one compound be encountered at its 10^{-5} carcinogenic risk level. The site-specific human-health risk-based values are presented in the contaminant screening tables corresponding to a carcinogenic risk of 10^{-5}.

For noncarcinogens (systemic toxicants), the EPA defines acceptable exposures as those to which the human population, including sensitive subgroups, may be exposed without adverse effects during a lifetime or part of a lifetime, incorporating an adequate safety margin (40 CFR 300.430[E][2][i][A][1]). This acceptable exposure level is best approximated by a hazard index of unity (1.0). If the hazard index is less than unity, adverse effects would not be expected, while a hazard index greater than unity suggests that such an exposure may result in adverse effects.

2.1.5 Determination of Extent of Contaminated Media

Screening criteria are set by evaluating the available ARARs, TBCs, and site-specific risk values for each contaminant. In general, primary consideration is given to ARARs or site-specific risk values as preliminary screening values. If no ARARs or site-specific risk values exist for a given contaminant, then the most appropriate TBC value is selected as the preliminary screening value. These preliminary screening values are then compared to site data to identify which contaminants may be of concern. These contaminants are then reviewed to see whether the contaminants are likely due to upgradient, off-base sources. The screening criteria set by this process are then again compared to site data to identify areas that may need attention.

2.2 Surface Water Screening Criteria

2.2.1 Sampling and Analysis

Surface water samples were collected from 12 locations in Three Mile Creek (TMCSW-1 through TMCSW-12; see Figures 2-1 and 2-2) between May and July 1994 (Law 1996). VOCs, SVOCs, pesticides, herbicides, PCBs, dioxins/furans, metals, glycols, and radionuclides were detected in the surface water collected from this site. Under an SI, two surface water samples were collected on June 11, 1997, from the culvert outfall effluent (TMCSW-13 and TMCSW-14; see Figure 2-1). No contaminants exceeded detection limits in these two samples (E & E 1998a). Surface water was also collected in July 1998 from two off-base locations (TMCSW-16 and TMCSW-22) between the base boundary and the Barge Canal under this SI (see Figure 2-2). VOCs, metals, TRPH, TOC, and total uranium were detected in the samples taken from these locations (E & E 1998c).

In addition, PISCES were collected from three locations (TMCP-1 through TMCP-3) in Three Mile Creek (see Figure 2-1) and analyzed for pesticides and PCBs. Pesticides were detected in two of these samples (E & E 1998a).

While PISCES sample results were used as a screening tool for surface water contamination, they cannot be compared to surface water ARARs or TBCs, nor can they be used to develop preliminary screening values. In addition, since fish bioaccumulate contaminants more through consumption rather than through the intake of water, the PISCES samples, for the purposes of this FS, will not be used as data related to the potential uptake of contaminants by fish.

PISCES results for sample TMCP-1 were not found to exceed detection limits. PISCES samples TMCP-2 and TMCP-3 were both found to contain dieldrin, endosulfan sulfate, and gamma-BHC. The results associated with sample TMCP-3 were one order of magnitude greater than those of sample TMCP-2. In addition, 4,4-DDD was detected in sample TMCP-3, but not in sample TMPC-2. Table 2-1 shows these results.

The pesticides detected in the PISCES samples were not detected in the surface water samples taken in Three Mile Creek. This may be due to the fact that PISCES samples are time-composite samples of surface water, while surface water samples are grab samples.

2.2.2 ARARs

The intent of the water quality regulations established under the federal Clean Water Act (CWA) (33 USC 1251-1376, 40 CFR 121) and 6 NYCRR Parts 700-705 water quality regulations for surface waters is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. To achieve these objectives, ambient surface water quality standards have been set. The EPA chronic values for the protection of aquatic life and human health, for consumption of organisms only, have been identified as relevant and appropriate ARARs and were chosen over acute values in order to provide a conservative approach. Three Mile Creek has been classified as a Class C stream; therefore, NYSDEC Class C surface water standards have been identified as applicable ARARs for this creek.

2.2.3 TBCs

Water quality regulations presented under 6 NYCRR, Parts 700-705, also include guidance values for some compounds in lieu of standards. These guidance values are identified TBCs for this site.

2.2.4 Site Risk Assessment

As noted above, 10^{-5} carcinogenic risk levels have been identified as appropriate for this site. Except for extremely low detections of one PAH, no surface water samples exceed this risk level. Human health risk values (contaminant concentrations that represent cancer risks in excess of 10^{-5} or a hazard index of 1) were developed for contaminants found at the site for which cancer risks or hazard indices could be calculated. These values are included in Table 2-2.

2.2.5 Selection of Surface Water Screening Criteria

Screening criteria for surface water are selected from the values presented in Table 2-2. For the surface water at the Three Mile Creek AOC, the lowest of the NYSDEC surface water standards, the EPA's National Water Quality Criteria, or the site-specific risk values were used as the candidate screening criteria. If none of these were available, New York State TBC values were used as screening criteria.

A summary of chemical-specific surface water ARARs and TBCs is presented in Table 2-2. The following is a summary of proposed screening criteria for surface water at the Three Mile Creek site:

- No VOCs were found to exceed preliminary screening values in surface waters of Three Mile Creek;

- Seven SVOCs were found to exceed preliminary screening values.
  - Hexachlorobenzene was detected above its preliminary screening value of 0.0077 micrograms per liter (µg/L) in on-site surface water sample TMCSW-1 at a concentration of 0.032 µg/L.
  - Bis(2-ethylhexyl)phthalate was also found to slightly exceed preliminary screening values in only one on-site surface water sample. The presence of this compound is probably associated with the protective gloves used for field sampling and lab analysis activities. Because laboratory or field contamination is the likely cause of the presence of this compound, bis(2-ethylhexyl)-phthalate will not be addressed further.

- Five biphenyls were detected in sample TMCSW-1. Although the screening value for PCBs is for total PCBs, it should be noted that each individual PCB detected in this sample exceeded the criterion for total PCBs; therefore, the total sample PCBs also exceeded the criterion.

■ Four pesticides (alpha-chlordane, gamma-chlordane, 4,4-'DDT, and malathion) were found to exceed preliminary screening values in on-site surface waters of Three Mile Creek. Both alpha- and gamma-chlordane were detected above the preliminary screening value of 0.0043 µg/L in one discrete upstream sample location (TMCSW-1) at concentrations of 0.012 and 0.014 µg/L, respectively. 4,4'-DDT was found to exceed its preliminary screening value of 0.001 µg/L in three on-site sample locations (TMCSW-4, TMCSW-5, and TMCSW-6). Concentrations for these samples were 0.078, 0.089, and 0.1 µg/L, respectively. Malathion was found to have a concentration of 0.21 µg/L in on-site surface water sample TMCSW-6, which exceeds its respective preliminary screening value of 0.1 µg/L.

■ Six metals (aluminum, arsenic, iron, lead, selenium, and zinc) were found to exceed their respective preliminary screening values of 100, 1.4, 300, 6.3, 1.0, and 30 µg/L in the surface waters of Three Mile Creek. Aluminum was detected in on-site sample locations TMCSW-3 and TMCSW-6 at concentrations of 130 and 370 µg/L, respectively, as well as in both off-base sample locations at a concentration of 140 µg/L. Arsenic was detected at a concentration of 3 µg/L in on-site sample locations TMCSW-7 and TMCSW-10. Lead and selenium were each detected in only one discrete on-site sample location each (TMCSW-6 and TMCSW-1, respectively), with corresponding concentrations of 10 and 5 µg/L. Lead was also detected at a concentration of 6.8 µg/L in off-base sample location TMCSW-22. Iron was detected in on-site sample locations TMCSW-6 and TMCSW-11 at concentrations of 590 and 500 µg/L, respectively, as well as in off-base sample location TMCSW-22 at a concentration of 330 µg/L. Zinc was detected in four on-site surface water sample locations (TMCSW-5, TMCSW-6, TMCSW-9, and TMCSW-11) at concentrations of 140, 63, 100, and 38 µg/L, respectively.

2.2.6 Contaminated Surface Water

At Three Mile Creek, contaminated surface water could pose a risk to humans and fauna through their consumption of aquatic life. However, because the headwaters of the creek are no longer contaminated and contaminated sediments are proposed for remediation, surface water will be indirectly remediated. Continued monitoring of surface water and fish can be conducted to gauge the health of the creek. Recommended monitoring is discussed in Section 5.

2.3 Sediment Screening Criteria

2.3.1 Sampling and Analysis

As part of the RI, sediment samples were collected between May 1994 and April 1995 at two depths (0 to 6 inches and 6 to 12 inches) from 15 locations below the sediment/surface water interface of Three Mile Creek (TMCSD-1 through TMCSD-12 and LF5SD-1 through LF5SD-3) (see Figures 2-3a, 2-3b, 2-3c, and 2-5). Results from this investigation are included in Appendix D (Law 1996). As part of a separate investigation (Parsons 1997), 21 sediment samples were also collected and analyzed for PCBs during a pre-design investigation at Hardfills 49A, 49B, 49C, and 49D, including 14 samples from seven locations at the open drainage swale adjacent to Hardfill 49D, three grab samples from upgradient storm drains, and four samples from upstream open drainage ditches that feed to storm drains (Patrick Square) (see Figure 2-4). The 14 samples from the drainage ditch adjacent to Hardfill 49D confirm the drainage ditch sampling results from the RI. The other areas sampled are located in the Patrick Square area, are upgradient of the Landfill 5 drainage ditch, and are outside the limits of the Three Mile Creek AOC. Results from the additional PCB sampling are included in Appendix E. These pre-design sample results, which confirm PCB contamination in the drainage ditch and do not provide any additional extent-of-contamination information, are not included in the contamination summary presented in this section. VOCs, SVOCs, pesticides, herbicides, PCBs, dioxins/furans, metals, and radionuclides were detected in the sediment samples collected from the site.

As part of the Supplemental Investigation, creek sediments were collected from eight off-base locations between the base boundary and the Barge Canal (TMCSD-15 through TMCSD-22; see Figures 2-5 and 2-5a) in July 1998. VOCs, SVOCs, pesticides, metals, dioxin/furans, TRPH, TOC, hexavalent chromium, total uranium, and radionuclides were detected in these samples (E & E 1998b).

In 1999, samples were collected from five locations in the pond in the downstream portion of the creek (TMCSD-25 through TMCSD-28; see Figures 2-5, 2-5a, and 2-7). These samples were analyzed for PCBs, cadmium, and lead (E & E 1999a).

In May and June 2001, 68 samples were collected at 26 locations from the on-base portion of TMC (see Figure 2-6). Eleven of those locations were the same as RI sample locations. In addition, four samples were collected from the LF6 wetland adjacent to TMC (see Figure 3-1), and 12 samples were collected from six locations from the off-base TMC pond (see Figure 2-7). The creek samples and pond samples were vertically profiled to a depth of 3.5 feet. All creek and wetland samples were tested for VOCs, SVOCs, PCBs, pesticides, metals, and TRPH (E & E 2001a). The pond samples were tested only for PCBs, cadmium, and lead. The results of this investigation are presented in Section 3.

2.3.2 ARARs

No chemical-specific ARARs were identified for sediments.

2.3.3 TBCs

The primary TBCs identified for sediments at the Three Mile Creek site are the EPA Sediment Quality Criteria, 1996; the "effects range-low" (ER-L) values from Long and Morgan (1991); the "lowest effect level" (LEL) value from Persaud and Jaagumagi (1993); and NYSDEC Technical Guidance for Screening Contaminated Sediments (January 1999). These criteria were developed to evaluate the impact of sediment contamination on aquatic life, and in some cases, impacts to humans and wildlife through bioaccumulation.

2.3.4 Site Risk Assessment

Human health risk values (contaminant concentrations that represent cancer risks in excess of 10^{-5} or a hazard index of 1) were developed for contaminants found at the site for which cancer risks or hazard indices could be calculated. These values are included in Tables 2-3a, 2-3b, 2-4, and 2-5.

2.3.5 Ecological Assessment

An environmental assessment was conducted for this AOC during the RI in order to evaluate the potential for adverse impacts to ecological receptors potentially exposed to contaminants present at the Three Mile Creek AOC. It should be noted that NYSDEC does not concur with the characterization presented in the ecological assessment or the conclusions drawn in the RI.

Based on the RI assessment, the potential for adverse effects is considered insignificant for the northern water snake, short-tailed shrew (except in the drainage ditch adjacent to Landfill 5), raccoon, and American woodcock, the four receptors that were quantitatively evaluated for the assessment. However, comparisons of composite whole-body fish tissue analytical results to NYSDEC ecological guidelines indicate that a potential exists for adverse effects to piscivorous wildlife from dietary exposure to PCBs, DDT, aldrin/dieldrin, and mercury. The NYSDEC fish-tissue guideline for PCBs (0.11 mg/kg fresh weight) was exceeded by the greatest margin, often by two to three orders of magnitude, in fish from Three Mile Creek. For example, the Aroclor 1260 concentration in composite creek chub samples from the creek typically exceeded 10 mg/kg fresh weight, and in several samples exceeded 25 mg/kg fresh weight. The NYSDEC fish-tissue guideline for aldrin/dieldrin (0.022 mg/kg fresh weight) typically was exceeded by a factor of five in creek chub samples from the creek. In contrast, only marginal exceedances were noted for the NYSDEC fish-tissue guidelines for mercury (0.5 mg/kg fresh weight) and DDT and metabolites (0.2 mg/kg fresh weight) in creek chub samples from Three Mile Creek.

An aquatic assessment was conducted at Three Mile Creek in order to evaluate creek habitat, in situ water quality, benthic and drift macroinvertebrate communities, and fish populations. Whole body fish tissue samples were collected and analyzed for the assessment. Sediment also was collected for toxicity testing. Four locations in Three Mile Creek upstream from the base boundary were included in the assessment. The results are summarized below. Some fish tissue analytical results are described above.

Benthic macroinvertebrate populations were classified as "slightly impaired" at two downstream locations compared with the most upstream location, which was considered a reference site. However, sediment toxicity testing did not indicate that the population impairment was due to sediment chemical contamination. Instead, an evaluation of stream habitat parameters, such as substrate composition, suggests that differences in macroinvertebrate populations between upstream and downstream locations are the result of differences in habitat quality between locations.

Although no diseases were observed, fish communities in Three Mile Creek were generally found to be in "poor" condition. The RI concluded that this was also likely the result of inferior habitat quality. Due to past channelization, Three Mile Creek is linear upstream from the base boundary and does not provide the habitat diversity found in unaltered streams with prominent pools, riffles, and meanders.

Analyses of composite whole-body fish samples indicated a spatial trend in PCB contamination in fish in Three Mile Creek. The Aroclor 1260 concentration in the fish sample collected at the most upstream location was approximately three times greater than those found in samples from the three downstream locations. This may be due to the proximity of the upstream sample location to the Electric Power Substation, where PCB transformer oil was reportedly released years ago.

In summary, the work done at Three Mile Creek during the RI identified chemical contamination in the creek from past activities at the base. However, observable adverse impacts on benthic life and fish in the creek unequivocally attributable to the contamination were not evident. In contrast, bioaccumulative chemicals, most notably PCBs, were found in fish from the creek in excess of NYSDEC fish-tissue guidelines for the protection of piscivorous wildlife. This result does not concur with the results of the wildlife risk evaluation, which do not predict risks to wildlife from bioaccumulative chemicals. However, the suite of wildlife receptors evaluated was limited, and did not include piscivorous birds, which are know to be sensitive to PCBs, DDT, and other such bioaccumulative chemicals.

2.3.6 Selection of Sediment Screening Criteria

Fish and benthic organisms are directly exposed to chemicals in surface water and sediments. Other wildlife (aquatic and terrestrial) that come into contact with the surface water, sediments, fish, or benthic organisms are also potential receptors of contamination. Therefore, the levels of contaminants found in the most recent samples were compared to chemical-specific screening criteria deemed protective of the wildlife and the environment along with site human health risk levels (see Tables 2-3a, 2-3b, 2-4, and 2-5). These criteria are based on those presented in the RI (Law 1996) and the March 2000 FS addendum (E & E 2000b). Derivation of the 2,3,7,8-TCDD equivalence value is presented in Table 2-6.

The various screening criteria were compared and the most stringent criterion for each parameter was used to evaluate the data. However, some of the screening criteria used to evaluate the organic parameters are site-specific criteria calculated based on the

TOC content. Therefore, the most stringent criteria for the organic parameters for the TMC main channel, LF6 wetland, and TMC pond samples were different and were all evaluated separately. The screening processes for the organic parameters are described below and presented in Tables 2-3a and 2-3b, and 2-4. However, the screening criteria for the inorganic parameters are not based on TOC content, therefore, only one screening table was generated for all of the areas (see Table 2-5). The most stringent values for the metals are the Long and Morgan lowest effect levels (LEL) (see Table 2-5).

Screening of TMC Channel Sediments

The sediments retrieved from the on-base portion of the TMC channel and its Landfill 5 tributary were divided into two groups: the upper, loose, sediments, and the underlying, tight, native soils. Due to the very wide range of TOC concentrations detected in the samples, TOC was averaged for each group (i.e., sediments and native soils) and the screening criteria were calculated separately. The average TOC was calculated at 5.4% for the sediments and 0.5% for the native soils, which is only slightly higher than the recommended minimum of 0.2%. The most stringent criterion for each parameter was identified and used for each of the two groups. Tables 2-3a and 2-3b present the screening process for these organic parameters.

Screening of LF6 Wetland Sediments

The analytical results for the sediments samples collected from the Landfill 6 wetlands were compared to the most stringent screening criteria. The average TOC for the Landfill 6 samples was 29.6%, which is higher than the 12% maximum recommended value. Therefore, the maximum recommended TOC of 12% was used in the calculations. Table 2-4 presents the screening process for these organic parameters.

Screening of Pond Sediments

The analytical results for the sediments samples collected from the off-base TMC pond were compared to the most stringent screening criteria. The most stringent criterion for Aroclor 1620 is the Ontario LEL (see Tables 2-3a, 2-3b, and 2-4). Because the Ontario LELs are not site-specific calculated values, the average TOC for the pond samples was not used for the determination of the screening level for the pond samples.

2.3.7 Contaminated Sediment Area

Sediments in Three Mile Creek were determined to be contaminated with VOCs, SVOCs, pesticides, PCBs, metals, and dioxins/furans. Sediment samples with concentrations exceeding site screening criteria were identified throughout the length of the creek. However, the levels of these contaminants must be weighed against the habitat destruction that would be brought on by sediment excavation in the creek. Although short-term impacts on the habitat are an unavoidable result of the remedial activities (sediment removal in the creek and access requirements), incidental impacts on the aquatic habitat and wetlands (e.g., access roads, dewatering areas, and staging areas) will be avoided when possible or minimized to the greatest extent practicable. All disturbances will be mitigated as part of the Wetland Management Plan. Section 3 presents the results of previous investigations. Section 4 documents the quality of habitat of Three Mile Creek in order to weigh the need to maintain habitat quality against the need to remove contamination. The final determination of the extent of sediment requiring remediation is made in Section 5.

Table 2-1 Analytical Data Summary of the Positive Results for the PISCES Samples, Three Mile Creek

Sample No.:	TMCP-1	TMCP-2	TMCP-3
Sample Date:	6/20/97	6/20/97	6/20/97
Sample Depth (ft):	0 - 0	0-0	0 - 0
Pesticides/PCBs (8081) (µg)			
4,4-DDD	ND	ND	0.0066 J
Dieldrin	ND	0.0066 J	0.025 J
Endosulfan sulfate	ND	0.0088 J	0.013 J
gamma-BHC (Lindane)	ND	0.0058 J	0.017 J

Key:

J = Estimated concentration
ND = Not detected.
P - PISCES sample.
PCBs = Polychlorinated biphenyls.
µg = Micrograms.

Table 2-2 Screening Process for Surface Water, Three Mile Creek (concentrations in μg/L unless noted)

Contaminant	ARARs: Federal[a] EPA AQC for Protection of Aquatic Life	ARARs: Federal[a] EPA WQC for Protection of Human Health	ARARs: NYSDEC[b] Class C Surface Water Standards	TBCs: NYSDEC[b] Class C Surface Water Guidance	Concentration Corresponding to Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Preliminary Screening Value	Maximum Concentration	Screening Value
Volatiles								
1,3-Dichlorobenzene	—	2,600	5[g]	—	—	5	0.19	NA
1,4-Dichlorobenzene	—	2,600	5[g]	—	3,900	5	0.16	NA
cis-1,2-Dichloroethene	—	—	—	—	28,900	28,900	0.19	NA
1,1,1-Trichloroethane	—	—	—	—	—	—	0.2	NA
Benzene	—	71	10		649	10	0.49	NA
Chlorobenzene	—	21,000	5	—	29,700	5	0.79	NA
p-isopropyltoluene	—	—	—	—	—	—	0.39	NA
Tetrachloroethene	—	8.85	—	1.0[H(B)]	2,250	88.5	0.12	NA
Trichloroethene	—	81	40	11.0[H(B)]	14,700	40	1.4	NA
Semivolatiles								
1,2-Diphenylhydrazine	—	0.54	—	0.05	273	5.4	0.024	NA
2,2,3,3,4,4,6-Heptachlorobiphenyl	—	—	0.00012	—	—	0.00012	0.18	0.00012
2,2,3,4,6-Pentachlorobiphenyl	—	—	0.00012	—	—	0.00012	0.028	0.00012
2,2,4,4,5,6-Hexachlorobiphenyl	—	—	0.00012	—	—	0.00012	0.019	0.00012
2,3-Dichlorobiphenyl	—	—	0.00012	—	—	0.00012	0.022	0.00012
2,2,4,4-Tetrachlorobiphenyl	—	—	0.00012	—	—	0.00012	0.024	0.00012
2,4,5-Trichlorophenol	—	9,800	1.0[h]	—	69,700	1.0	0.0099	NA
2,4,6-Trichlorophenol	—	6.5	1.0[h]	—	10,300	1.0	0.013	NA
2-Chlorobiphenyl	—	—	0.00012	—	—	1.0	0.039	NA
2,4-Dichlorophenol	—	790	1.0[h]	—	5,080	1.0	0.02	NA
3,3-Dichlorobenzidine	—	0.077	—	—	500	0.77	0.00099	NA
Acenaphthylene	—	—	—	—	—	—	0.015	NA
Anthracene	—	110,000	—	3.8	113,000	110,000	0.04	NA
Benzo(a)anthracene	—	0.049	—	0.03	12	0.31	0.1	NA
Benzo(a)pyrene	—	0.049	—	0.0012[H(B)]	0.8	0.31	0.12	NA
Benzo(b)fluoranthene	—	0.049	—	—	8.5	0.31	0.2	NA
Benzo(g,h,i)perylene	—	—	—	—	—	—	0.1	NA
Benzo(k)fluoranthene	—	0.049	—	—	26	0.31	0.078	NA
Benzyl butyl phthalate	—	5,200	—	—	235,000	235,000	0.2	NA
Bis (2-ethylhexyl)phthalate	—	5.9	0.6	—	10,900	0.6	0.8	NA
Chrysene	—	0.049	—	—	1,250	0.31	0.2	NA
Di-n-butylphthalate	—	12,000	—	—	141,000	12,000	0.1	NA
Dibenz(a,h)anthracene	—	0.049	—	—	0.4	0.31	0.03	NA

Table 2-2 Screening Process for Surface Water, Three Mile Creek (concentrations in μg/L unless noted)

	ARARs			TBCs				
	Federal[a]		NYSDEC[b]	NYSDEC[b]				
Contaminant	EPA AQC for Protection of Aquatic Life	EPA WQC for Protection of Human Health	Class C Surface Water Standards	Class C Surface Water Guidance	Concentration Corresponding to Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Preliminary Screening Value	Maximum Concentration	Screening Value
Diethyl phthalate	—	120,000	—	—	2,780,000	120,000	0.1	NA
Dimethyl phthalate	—	2,900,000	—	—	—	2,900,000	0.7	NA
Dioctyl adipate	—	—	—	—	25,600	25,600	0.06	NA
Fluorene	—	14,000	—	0.54	21,000	14,000	0.04	NA
Hexachlorobenzene	—	0.00077	0.00003	—	21	0.0077	0.032	0.0077
Hexachlorocyclopentadiene	—	17,000	0.45	—	5,500	0.45	0.013	NA
Indeno (1,1,3-cd) pyrene	—	0.049	—	—	5.4	0.31	0.1	NA
N-nitrosodiphenylamine	—	8.1	—	—	42,700	160	0.016	NA
Pentachlorophenol	13[d]	8.2	1.0[h]	—	94	0.4	0.04	NA
Phenanthrene	—	—	—	5	—	—	0.26	NA
Pyrene	—	11,000	—	4.6	8,090	8,090	0.3	NA
Pesticides								
Aldicarb sulfoxide	—	—	—	—	4,060	4,060	0.69	NA
Alpha-chlordane	0.0043	0.0022	0.00002[H(B) i]	—	189	0.0043	0.012	0.0043
Dicamba	—	—	—	—	111,000	111,000	1.9	NA
Gamma-chlordane	0.0043	0.0059	0.00002[H(B) i]	—	350	0.0043	0.014	0.0043
Malathion	0.1	—	0.1	—	81,200	0.1	0.21	0.1
Methoxychlor	0.03	—	0.03	—	11,200	0.03	0.011	NA
Prometon	—	—	—	—	61,800	61,800	0.5	NA
4,4'-DDT	0.001	0.00059	0.00001[H(B)]	—	50	0.001	0.1	0.001
Inorganics								
Aluminum	87	—	100	—	4,040,000	100	370	100
Antimony	—	4,300	—	—	1,620	1,620	17	NA
Arsenic	150[e]	0.14	150	—	288	1.4	3	1.4
Barium	—	—	-	-	283,000	283,000	110	NA
Calcium	—	—	—	—	—	—	872	NA
Iron	1,000	—	300	—	—	300	590	300
Lead	2.5[c,e]	—	6.3[c]	—	—	6.3	10	6.3
Magnesium	—	—	—	—	—	-	15,700	NA
Manganese	—	100	—	—	93,300	93,300	99	NA
Molybdenum	—	—	—	—	20,200	20,200	160	NA
Potassium	—	—	—	—	—	—	2,200	NA
Selenium	5	11,000	4.6	—	20,200	1.0	5	1.0
Sodium	—	—	—	—	—	—	40,600	NA

Table 2-2 Screening Process for Surface Water, Three Mile Creek (concentrations in µg/L unless noted)

	ARARs			TBCs				
	Federal [a]		NYSDEC [b]	NYSDEC [b]				
Contaminant	EPA AQC for Protection of Aquatic Life	EPA WQC for Protection of Human Health	Class C Surface Water Standards	Class C Surface Water Guidance	Concentration Corresponding to Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Preliminary Screening Value	Maximum Concentration	Screening Value
Strontium	—	—	—	—	2,430,000	2,430,000	430	NA
Zinc	120[c,e]	69,000	30[c]	—	1,230,000	30	180	30
Radionuclides (pCi/L)								
Strontium-90	—	—	—	—	—	—	1.2	NA
Total uranium	—	—	—	—	—	—	7	NA
Other Compounds								
Fluoride	—	—	3,411[c]	—	—	3,411	67	NA
Glycols	—	—	—	500,000[f]	8,400,000	8,400,000	170	NA
Nitrogen-nitrate	—	—	—	—	—	—	29	NA
Petroleum hydrocarbons	—	—	—	—	—	—	1,000	NA
Ammonia-Nitrogen	—	—	—	—	—	—	2,000	NA

a USEPA National Recommended Water Quality Criteria, Volume 64 No. 77/Notices, April 1999. Continuous Concentration Criteria for the Freshwater Aquatic life Protection and Protection of Human Health for Consumption of Organism Only are listed.

b NYSDEC Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Technical and Operational Guidance Series (1.1.1), June 1998. (the aquatic value was listed when available).

c Value based upon hardness.

d Value at pH 7.8.

e Criteria for this metal is expressed as a function of water effect ration (WER), as defined in 40 CFR 131.36(c).

f Value for ethylene glycol.

g Value for sum of 1,2-,1,3-, and 1,4-dichlorobenzene.

h Value for sum of all chlorinated phenols.

i Value for chlordane.

H(B) Human health risk value.

Key:

— = Level has not been established.
ARARs = Applicable or relevant and appropriate requirements
EPA = Environmental Protection Agency.
µg/L = Micrograms per liter.
NA = Not applicable.
NYSDEC = New York State of Environmental Conservation
pCi/L = picoCurie per liter.
TBCs = Criteria and guidelines to be considered.

Table 2-3a Screening Process for Organic Parameters for the Three Mile Creek Channel and the Landfill 5 Tributary Sediment Samples, Three Mile Creek, Griffiss Air Force Base, Rome, New York

Analyte	TBCs								
	Federal Guidance Values			NYSDEC Guidance Values[4]				Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Screening Value[6]
				Benthic Aquatic Life		Bioaccumulation			
	EPA SQC[1]	Long & Morgan[2]	Ontario Standards[3]	Acute	Chronic	Wildlife	Human		
PCBs - 8082 (μg/Kg)									
Aroclor 1242	23[d]	50	70[a]	144,665.90	1,011.32	73.36	0.0419	-	70
Aroclor 1260	23[d]	50	5	144,665.90	1,011.32	73.36	0.0419	6,290	5
Total 2,3,7,8-TCDD equivalent (ng/Kg)									
TCDD equivalent	-	-	-	-	-	10	524	-	10
Pesticides - 8081A (μg/Kg)									
4,4′-DDD	-	2	8	57640[c]	52.4[c]	52.4[c]	0.524[c]	331,000	2
4,4′-DDE	-	2	5	57640[c]	52.4[c]	52.4[c]	0.524[c]	234,000	2
4,4′-DDT	-	1	7	57640[c]	52.4[c]	52.4[c]	0.524[c]	233,000	1
Aldrin	-	-	2	-	-	40.348	5.24	4,660	2
alpha-Chlordane[b]	-	0.5	7	73.36	1.572	0.314	0.0524	61,100	0.314
delta-BHC	-	-	-	660.24	3.144	78.6	3.144	-	3.144
Dieldrin	52	0.02	2	-	471.6	40.35	5.24	4,960	0.02
Endosulfan I	-	-	-	40.872	1.572	-	-	-	1.572
Endosulfan II	-	-	-	40.872	1.572	-	-	-	1.572
Endosulfan sulfate	-	-	-	-	-	-	-	-	-
Endrin	20	-	3	-	209.6	41.92	41.92	315,000	3
Endrin aldehyde	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-BHC	3.7[d]	-	3	660.24	3.144	78.6	3.144	-	3
gamma-Chlordane	-	0.5	7	73.36	1.572	0.314	0.0524	61,000	0.314
Heptachlor	-	-	-	686.44	5.24	1.572	0.0419	-	1.572
Heptachlor epoxide	-	-	5	686.44	5.24	1.572	0.0419	-	1.572
Methoxychlor	-	-	-	-	31.44	-	-	11,200	31.44
TCL VOCs - 8260B (μg/Kg)									
1,1,2,2-Tetrachloroethane	940[d]	-	-	-	-	-	15.72	-	940[d]
1,2-Dichlorobenzene	340[d]	-	-	6,288	628.8	-	-	94,500,000	628.8
1,2-Dichloroethane	-	-	-	-	-	-	36.68	-	-
1,2-Dichloroethene, Total	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	350[d]	-	-	6,288	628.8	-	-	3,310,000	628.8
2-Butanone	-	-	-	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	105,000,000	-
Benzene	57[d]	-	-	5,397.20	1,467.20	-	31.44	273,000	1,467.20
Carbon disulfide	-	-	-	-	-	-	-	105,000,000	-
Chlorobenzene	820[d]	-	-	1,813.04	183.4	-	-	21,000,000	183.4
Chloroform	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Ethylbenzene	3,600[d]	-	-	11,108.80	1,257.60	-	-	-	1,257.60
m,p-Xylene	25[d]	-	-	43,649.20	4,820.80	-	-	-	4,820.80
o-Xylene	-	-	-	43,649.20	4,820.80	-	-	-	4,820.80
Tetrachloroethene	530[d]	-	-	-	-	-	41.92	-	530[d]
Toluene	670[d]	-	-	12,314	2,567.60	-	-	-	2,567.60
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Trichloroethene	1,600[d]	-	-	-	-	-	104.8	6,320,000	1,600[d]
Vinyl chloride	-	-	-	-	-	-	3.668	-	-
Xylenes, Total	-	-	-	43,649.20	4,820.80	-	-	-	4,820.80

Table 2-3a Screening Process for Organic Parameters for the Three Mile Creek Channel and the Landfill 5 Tributary Sediment Samples, Three Mile Creek, Griffiss Air Force Base, Rome, New York

	Federal Guidance Values			NYSDEC Guidance Values [4]				Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Screening Value [5]
				Benthic Aquatic Life		Bioaccumulation			
Analyte	EPA SQC [1]	Long & Morgan [2]	Ontario Standards [3]	Acute	Chronic	Wildlife	Human		
TCL SVOCs - 8270C (µg/Kg)									
1,2,4-Trichlorobenzene	9,200[d]	-	-	47,684	4,768.40	-	-	10,500,000	4,768.40
1,2-Dichlorobenzene	340[d]	-	-	6,288	628.8	-	-	94,500,000	628.8
1,3-Dichlorobenzene	1,700[d]	-	-	6,288	628.8	-	-	-	628.8
1,4-Dichlorobenzene	350[d]	-	-	6,288	628.8	-	-	3,310,000	628.8
2,4-Dimethylphenol [c]	-	-	-	-	26.2	-	-	21,000,000	26.2
2-Methylnaphthalene	-	70	-	15,929.60	1781.6			-	65
2-Methylphenol [c]	-	-	-	-	26.2	-	-	52,600,000	26.2
4-Methylphenol [c]	-	-	-	-	26.2	-	-	5,300,000	26.2
Acenaphthene	620	16	-	-	7336	620	620	63,300,000	16
Acenaphthylene	-	-	-	-	-	-	-	-	-
Anthracene	-	85	220	51,666.40	5,606.80	-	-	316,000,000	85
Benz(a)anthracene	-	261	320	4,925.60	628.8	-	-	109,000	261
Benzo(a)pyrene	-	430	370	-	-	-	68.12	10,900	370
Benzo(b)fluoranthene	-	-	-	-	-	-	68.12	109,000	-
Benzo(g,h,i)perylene	-	-	170	-	-	-	-	-	170
Benzo(k)fluoranthene	-	-	240	-	-	-	68.12	1,090,000	240
Benzoic acid	-	-	-	-	-	-	-	4.2×10^9	-
Benzyl alcohol	-	-	-	-	-	-	-	316,000,000	-
Bis(2-ethylhexyl)phthalate	-	-	-	-	10,453.80	-	-	5,680,000	10,453.80
Carbazole	-	-	-	-	-	-	-	3,970,000	-
Chrysene	-	384	340	-	-	-	68.12	10,900,000	340
Dibenz(a,h)anthracene	-	63.4	60	-	-	-	-	10,900	60
Dibenzofuran	2,000[d]	-	-	-	-	-	-	4,210,000	2,000[d]
Di-n-octyl phthalate	-	-	-	-	-	-	-	-	-
Fluoranthene	2,900	600	750	-	53,448	-	-	42,100,000	600
Fluorene	540[d]	35	190	3,825.20	419.2	-	-	42,200,000	35
Indeno(1,2,3-cd)pyrene	-	-	200	-	-	-	68.12	108,000	200
Naphthalene	480[d]	160	-	13,519.20	1,572	-	-	42,100,00	160
Phenanthrene	850	240	560	-	6,288	-	-	-	240
Phenol [c]	-	-	-	-	26.2	-	-	632,000,000	26.2
Pyrene	-	665	490	459,810	50,356.40	-	-	31,600,000	490
Total Recoverable Petroleum Hydrocarbons (TRPH) - 418.1M (mg/Kg)									
TRPH	-	-	-	-	-	-	-	-	-

[1] USEPA Office of Solid Waste and Emergency Response, January 1996 interim sediment criteria value for non polar organic contaminants.
[2] Long & Morgan, 1991.
[3] Ontario Standards - Lowest Effect Level. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario, June 1994.
[4] NYSDEC Technical Guidance for Screening Contaminated Sediments, January 1999. This is a calculated value based on a TOC of 5.24%.

[5] Final Screening Value represents most stringent criteria for ecological endpoints (it does not include the human bioaccumulation criteria or the site human health risk levels).
[a] Screening value for total PCBs.
[b] Screening values for chlordane.
[c] Screening values for unchlorinated phenols.
[d] Sediment quality benchmark (SQB) is listed because SQC is not available. SQBs were used in the selection of the most stringent ecological criteria only when no other federal or NYSDEC criteria were available.
[e] The NYSDEC sediment criterion listed for DDT and its daughter products (DDD and DDE) applies to the sum of DDT and its daughter products.

Key:

mg/Kg = Micrograms per kilogram.
PCB = Polychlorinated biphenyls.
SVOC = Semivolatile organic compound.
SQC = Sediment quality criteria.
TCB = To be considered.
VOC = Volatile organic compound.
µg/Kg = Micrograms per kilogram.
- = Level has not been established

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T23a_23b-25 fin.xls-T2-3a Criteria Table (5.24)-7/5/2002

Table 2-3b Screening Process for Organic Parameters for the Three Mile Creek Channel and the Landfill 5 Tributary Native Soil Samples, Three Mile Creek, Griffiss Air Force Base, Rome, New York

Analyte	TBCs								
	Federal Guidance Values			NYSDEC Guidance Values [4]				Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Screening Value [5]
				Benthic Aquatic Life		Bioaccumulation			
	EPA SQC [1]	Long & Morgan [2]	Ontario Standards [3]	Acute	Chronic	Wildlife	Human		
PCBs - 8082 (µg/Kg)									
Aroclor 1242	23[d]	50	70 [a]	13,804	96.5	7	0.004	-	7
Aroclor 1260	23[d]	50	5	13,804	96.5	7	0.004	6,290	5
Total 2,3,7,8-TCDD equivalent (ng/Kg)									
TCDD equivalent	-	-	-	-	-	1	50	-	1
Pesticides - 8081A (µg/Kg)									
4,4´-DDD	-	2	8	5500 [c]	5 [c]	5 [c]	0.05 [c]	331,000	2
4,4´-DDE	-	2	5	5500 [c]	5 [c]	5 [c]	0.05 [c]	234,000	2
4,4´-DDT	-	1	7	5500 [c]	5 [c]	5 [c]	0.05 [c]	233,000	1
Aldrin	-	-	2	-	-	3.85	0.5	4,660	2
alpha-Chlordane [b]	-	0.5	7	7	0.15	0.03	0.005	61,100	0.03
delta-BHC	-	-	-	63	0.3	7.5	0.3	-	0.3
Dieldrin	52	0.02	2	-	45	3.85	0.5	4,960	0.02
Endosulfan I	-	-	-	3.9	0.15	-	-	-	3.9
Endosulfan II	-	-	-	3.9	0.15	-	-	-	3.9
Endosulfan sulfate	-	-	-	-	-	-	-	-	-
Endrin	20	-	3	-	20	4	4	315,000	3
Endrin aldehyde	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-BHC	3.7[d]	-	3	63	0.3	7.5	0.3	-	0.3
gamma-Chlordane	-	0.5	7	7	0.15	0.03	0.005	61,000	0.03
Heptachlor	-	-	-	65.5	0.5	0.15	0.004	-	0.15
Heptachlor epoxide	-	-	5	65.5	0.5	0.15	0.004	-	0.15
Methoxychlor	-	-	-	-	3	-	-	11,200	3
TCL VOCs - 8260B (µg/Kg)									
1,1,2,2-Tetrachloroethane	940[d]	-	-	-	-	-	1.5	-	940[d]
1,2-Dichlorobenzene	340[d]	-	-	600	60	-	-	94,500,000	60
1,2-Dichloroethane	-	-	-	-	-	-	3.5	-	-
1,2-Dichloroethene, Total	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	350[d]	-	-	600	60	-	-	3,310,000	60
2-Butanone	-	-	-	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	-	-
Benzene	57[d]	-	-	515	140	-	3	273,000	140
Carbon disulfide	-	-	-	-	-	-	-	105,000,000	-
Chlorobenzene	820[d]	-	-	173	17.5	-	-	21,000,000	17.5
Chloroform	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Ethylbenzene	3,600[d]	-	-	1,060	120	-	-	-	120
m,p-Xylene	25[d]	-	-	4,165	460	-	-	-	460
o-Xylene	-	-	-	4,165	460	-	-	-	460
Tetrachloroethene	530[d]	-	-	-	-	-	4	-	530[d]
Toluene	670[d]	-	-	1,174	245	-	-	-	245
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
Trichloroethene	1,600[d]	-	-	-	-	-	10	6,320,000	1,600[d]
Vinyl chloride	-	-	-	-	-	-	0.35	-	-
Xylenes, Total	-	-	-	4,165	460	-	-	-	460

Table 2-3b Screening Process for Organic Parameters for the Three Mile Creek Channel and the Landfill 5 Tributary Native Soil Samples, Three Mile Creek, Griffiss Air Force Base, Rome, New York

Analyte	Federal Guidance Values			NYSDEC Guidance Values [4]				Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Screening Value [5]
				Benthic Aquatic Life		Bioaccumulation			
	EPA SQC [1]	Long & Morgan [2]	Ontario Standards [3]	Acute	Chronic	Wildlife	Human		
TCL SVOCs - 8270C (µg/Kg)									
1,2,4-Trichlorobenzene	9,200[d]	-	-	4,550	455	-	-	10,500,000	455
1,2-Dichlorobenzene	340[d]	-	-	600	60	-	-	94,500,000	60
1,3-Dichlorobenzene	1,700[d]	-	-	600	60	-	-	94,500,000	60
1,4-Dichlorobenzene	350[d]	-	-	600	60	-	-	94,500,000	60
2,4-Dimethylphenol [c]	-	-	-	-	2.5	-	-	21,000,000	2.5
2-Methylnaphthalene	-	65	-	1,520	170	-	-	-	65
2-Methylphenol [c]	-	-	-	-	2.5	-	-	52,600,000	2.5
4-Methylphenol [c]	-	-	-	-	2.5	-	-	5,300,000	2.5
Acenaphthene	620	16	-	-	700	-	-	63,300,000	16
Acenaphthylene	-	-	-	-	-	-	-	-	-
Anthracene	-	85.3	220	4,930	535	-	-	316,000,000	85.3
Benz(a)anthracene	-	261	320	470	60	-	-	109,000	60
Benzo(a)pyrene	-	430	370	-	-	-	6.5	10,900	370
Benzo(b)fluoranthene	-	-	-	-	-	-	6.5	109,000	-
Benzo(g,h,i)perylene	-	-	170	-	-	-	-	-	170
Benzo(k)fluoranthene	-	-	240	-	-	-	6.5	1,090,000	240
Benzoic acid	-	-	-	-	-	-	-	4.2×10^9	-
Benzyl alcohol	-	-	-	-	-	-	-	316,000,000	-
Bis(2-ethylhexyl)phthalate	-	-	-	-	997.5	-	-	5,680,000	399
Carbazole	-	-	-	-	-	-	-	3,970,000	-
Chrysene	-	384	340	-	-	-	6.5	10,900,000	340
Dibenz(a,h)anthracene	-	63.4	60	-	-	-	-	10,900	60
Dibenzofuran	2.000[d]	-	-	-	-	-	-	4,210,000	2.000[d]
Di-n-octyl phthalate	-	-	-	-	-	-	-	-	-
Fluoranthene	2,900	600	750	-	5,100	-	-	42,100,000	600
Fluorene	540[d]	35	190	365	40	-	-	42,200,000	35
Indeno(1,2,3-cd)pyrene	-	-	200	-	-	-	6.5	108,000	200
Naphthalene	480[d]	160	-	1,290	150	-	-	42,100,00	150
Phenanthrene	850	240	560	-	600	-	-	-	240
Phenol [c]	-	-	-	-	2.5	-	-	632,000,000	2.5
Pyrene	-	665	490	43,875	4,805	-	-	31,600,000	490
Total Recoverable Petroleum Hydrocarbons (TRPH) - 418.1M (mg/Kg)									
TRPH	-	-	-	-	-	-	-	-	-

[1] USEPA Office of Solid Waste and Emergency Response, January 1996 interim sediment criteria value for non polar organic contaminants.

[2] Long & Morgan, 1991.

[3] Ontario Standards - Lowest Effect Level. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario, June 1994.

[4] NYSDEC Technical Guidance for Screening Contaminated Sediments, January 1999. This is a calculated value based on a TOC of 0.2%.

[5] Final Screening Value represents most stringent criteria for ecological endpoints (it does not include the human bioaccumulation criteria or the site human health risk levels).

[a] Screening value for total PCBs.

[b] Screening values for chlordane.

[c] Screening values for unchlorinated phenols.

[d] Sediment quality benchmark (SQB) is listed because SQC is not available. SQBs were used in the selection of the most stringent ecological criteria only when no other federal or

[e] The NYSDEC sediment criterion listed for DDT and its daughter products (DDD and DDE) applies to the sum of DDT and its daughter products.

Key:

mg/Kg = Micrograms per kilogram.
PCB = Polychlorinated biphenyls.
SVOC = Semivolatile organic compound.
SQC = Sediment quality criteria.
TBC = To be considered.
VOC = Volatile organic compound.
µg/Kg = Micrograms per kilogram.
- = Level has not been established

Table 2-4 Screening Process for Organic Parameters for the Landfill 6 Sediment Samples, Three Mile Creek, Griffiss Air Force Base, Rome, New York

	TBCs								
	Federal Guidance Values			NYSDEC Guidance Values [4]				Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Screening Value [5]
				Benthic Aquatic Life		Bioaccumulation			
Analyte	EPA SQC [1]	Long & Morgan [2]	Ontario Standards [3]	Acute	Chronic	Wildlife	Human		
PCBs - 8082 (µg/Kg)									
Aroclor 1260	23[6]	50	5	331,296	2,316	168	0.096	6,290	5
Total 2,3,7,8-TCDD equivalent (ng/Kg)									
TCDD equivalent	-	-	-	-	-	24	1200	-	24
Pesticides - 8081A (µg/Kg)									
4,4′-DDD	-	2	8	132,000 [7]	120 [7]	120 [7]	1.2 [7]	331,000	2
4,4′-DDE	-	2	5	132,000 [7]	120 [7]	120 [7]	1.2 [7]	234,000	2
4,4′-DDT	-	1	7	132,000 [7]	120 [7]	120 [7]	1.2 [7]	233,000	1
alpha-BHC		-	-	1,512	7.2	180	7.2	13,600	7.2
delta-BHC	-	-	-	1,512	7.2	180	7.2	-	7.2
Endosulfan I	-	-	-	93.6	3.6	-	-	-	3.6
Endosulfan II	-	-	-	93.6	3.6	-	-	-	3.6
Endosulfan sulfate	-	-	-	-	-	-	-	-	-
Endrin aldehyde	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	5	1,572	12	3.6	0.096	-	3.6
Methoxychlor	-	-	-	-	72	-	-	11,200	72
TCL VOCs - 8260B (µg/Kg)									
1,2-Dichlorobenzene	340[6]	-	-	14,400	1,440	-	-	94,500,000	1,440
Trichloroethene	1600[6]	-	-	-	-	-	240	6,320,000	1600[6]
TCL SVOCs - 8270C (µg/Kg)									
Acenaphthylene	-	-	-	-	-	-	-	-	-
Anthracene	-	85.3	220	118,320	12,840	-	-	316,000,000	85.3
Benz(a)anthracene	-	261	320	11,280	1,440	-	-	109,000	261
Benzo(a)pyrene	-	430	370	-	-	-	156	10,900	370
Benzo(b)fluoranthene	-	-	-	-	-	-	156	109,000	-
Benzo(g,h,i)perylene	-	-	170	-	-	-	-	-	170
Benzo(k)fluoranthene	-	-	240	-	-	-	156	1,090,000	240
Benzoic acid	-	-	-	-	-	-	-	4.2×10^9	-
Benzyl alcohol	-	-	-	-	-	-	-	316,000,000	-
Carbazole	-	-	-	-	-	-	-	3,970,000	-
Chrysene	-	384	340	-	-	-	156	10,900,000	340
Dibenz(a,h)anthracene	-	63.4	60	-	-	-	-	10,900	60
Fluoranthene	2900	600	750	-	122,400	-	-	42,100,000	600
Indeno(1,2,3-cd)pyrene	-	-	200	-	-	-	156	108,000	200
Phenanthrene	850	240	560	-	14,400	-	-	-	240
Pyrene	-	665	490	1053000	115,320	-	-	31,600,000	490
Total Recoverable Petroleum Hydrocarbons (TRPH) - 418.1M (mg/Kg)									
TRPH	-	-	-	-	-	-	-	-	-

[1] USEPA Office of Solid Waste and Emergency Response, January 1996 interim sediment criteria value for non polar organic contaminants.

[2] Long & Morgan, 1991.

[3] Ontario Standards - Lowest Effect Level. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario, June 1994.

[4] NYSDEC Technical Guidance for Screening Contaminated Sediments, January 1999. This is a calculated value based on a TOC of 12%.

[5] Final Screening Value represents most stringent criteria for ecological endpoints (it does not include the human bioaccumulation criteria or the site human health risk levels).

[6] Sediment quality benchmark (SQB) is listed because SQC is not available. SQBs were used in the selection of the most stringent ecological criteria only when no other federal or NYSDEC

[7] The NYSDEC sediment criterion listed for DDT and its daughter products (DDD and DDE) applies to the sum of DDT and its daughter products.

Key:

mg/Kg = Micrograms per kilogram.
PCB = Polychlorinated biphenyls.
SQC = Sediment quality criteria.
SVOC = Semivolatile organic compound.
TBC = To be considered.
VOC = Volatile organic compound.
µg/Kg = Micrograms per kilogram.
- = Level has not been established.

Table 2-5 Screening Process for Inorganic Parameters
Three Mile Creek, Griffiss Air Force Base, Rome, New York

Sediment Criteria for Inorganic Analytes				
	Ontario Standards Lowest Effect Level [1]	Long & Morgan [2]	Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Final Screening Value
Metals by Method 6010B and 7470A/71A (mg/Kg)				
Aluminum	-	-	1,100,000	-
Arsenic	6	33	40.3	6
Barium	-	-	73,600	-
Beryllium	-	-	18.5	-
Cadmium	0.6	5	473	0.6
Calcium	-	-	-	-
Chromium	26	80	1,050,000	26
Cobalt	-	-	63,100	-
Copper	16	70	42,000	16
Iron	20000	-	-	20000
Lead	31	35	-	31
Magnesium	-	-	-	-
Manganese	460	-	24,200	460
Mercury	2	0.15	-	0.15
Nickel	16	30	21,000	16
Potassium	-	-	-	-
Silver	-	1	5,270	1
Sodium	-	-	-	-
Thallium	-	-	-	-
Vanadium	-	-	7,380	-
Zinc	120	120	316,000	120
Hexavalent Chromium - 7196A (mg/Kg)				
Chromium, Hexavalent	-	-	5,170	-
Cyanide, Total - 9012A (mg/Kg)				
Cyanide	-	-	21,100	-

[1] Ontario Standards - Lowest Effect Level. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario, June 1994.

[2] Effects Range- Low (Long & Morgan 1991).

Key:

mg/Kg = Micrograms per kilogram.

- = Level has not been established

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-2a		TMCSD-2b		TMCSD-6a		TMCSD-6b		Toxicity Equivalency Factors[a]
Sample Date:	4/18/1995		4/18/1995		4/18/1995		4/18/1995		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	0	0	4.8	0.48	2.1	0.21	2.3	0.23	0.1
2,3,7,8-TCDD	0	0	0.97	9.7	1.3	1.3	1	1	1
2,3,4,7,8-PeCDF	NA	—	NA	—	NA	—	NA	—	0.5
2,3,4,6,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8-PeCDF	1.6	0.08	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	NA	—	NA	—	NA	—	NA	—	0.1
1,2,3,7,8,9-HxCDD	1.8	0.18	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	2.5	0.25	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	3.9	0.39	0	0	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	16.7	1.67	13	1.3	4.9	0.49	0	0	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	6.3	0.06	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	0	0	23.5	0.24	834	8.34	9.8	0.1	0.01
1,2,3,4,6,7,8-HpCDD	0	0	54.7	0.55	23.4	0.23	24.7	0.25	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	55.3	0.06	1931	1.93	21	0.02	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	77.6	0.78	227	0.23	263	0.26	0.001
Total 2,3,7,8-TCDD		2.63		13.11		12.73		1.86	
Total TCDF	9.9	0	29.5	0	10.6	0	14.1	0	0
Total TCDD	1.4	0	2.5	0	2.1	0	1.5	0	0
Total PeCDF	26	0	46.4	0	14.4	0	21.3	0	0
Total PeCDD	0	0	4.9	0	0	0	0	0	0
Total HxCDF	53.9	0	43	0	20.6	0	22.5	0	0
Total HxCDD	24.6	0	17.1	0	14.5	0	14.3	0	0
Total HpCDF	65.4	0	62.6	0	21.1	0	25.8	0	0
Total HpCDD	135	0	118	0	48.9	0	53.2	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-7a		TMCSD-7b		TMCSD-8a		TMCSD-8b		Toxicity
Sample Date:	4/18/1995		4/18/1995		4/18/1995		4/18/1995		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	2.9	0.29	0	0	4.9	0.49	0.1
2,3,7,8-TCDD	0	0	0	0	2.2	2.2	1.3	1.3	1
2,3,4,7,8-PeCDF	NA	—	NA	—	NA	—	NA	—	0.5
2,3,4,6,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	2.4	0.12	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	NA	—	NA	—	NA	—	NA	—	0.1
1,2,3,7,8,9-HxCDD	2	0.2	0	0	4.2	0.42	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	3.2	0.32	0	0	0.1
1,2,3,6,7,8-HxCDD	2.8	0.28	0	0	8.1	0.81	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	4.9	0.49	15	1.5	8.8	0.88	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	1.5	0.15	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	4.2	0.04	0	0	0.01
1,2,3,4,6,7,8-HpCDF	0	0	10.4	0.1	0	0	21.6	0.22	0.01
1,2,3,4,6,7,8-HpCDD	0	0	43.7	0.44	0	0	57.6	0.58	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	23.3	0.02	0	0	49.4	0.05	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	49.3	0.5	0	0	449	0.45	0.001
Total 2,3,7,8-TCDD		0.48		1.84		5.56		3.97	
Total TCDF	9.6	0	19.8	0	49.9	0	43.8	0	0
Total TCDD	1.9	0	2	0	3.9	0	4.3	0	0
Total PeCDF	33.1	0	23.2	0	62.1	0	41.3	0	0
Total PeCDD	0	0	0	0	2.2	0	0	0	0
Total HxCDF	14.8	0	26.7	0	79.5	0	52.6	0	0
Total HxCDD	13.7	0	19.6	0	56.3	0	30.1	0	0
Total HpCDF	27.7	0	28.5	0	86.2	0	54.2	0	0
Total HpCDD	74.6	0	95.6	0	197	0	117	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-9a		TMCSD-9		TMCSD-15		TMCSD-16		Toxicity
Sample Date:	4/18/1995		4/18/1995		7/9/1998		7/9/1998		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	1.8	0.18	6	0.6	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	2.4	2.4	0	0	0	0	1
2,3,4,7,8-PeCDF	NA	—	NA	—	1.5	0.75	0	0	0.5
2,3,4,6,7,8-HxCDF	0	0	5.5	0.55	1.4	0.14	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	NA	—	NA	—	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	1	0.1	0.92	0.09	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	1.8	0.18	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	10.6	1.06	3.1	0.31	0	0	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	7.8	0.08	30.1	0.3	9.5	0.1	6.9	0.07	0.01
1,2,3,4,6,7,8-HpCDD	17.8	0.18	55	0.55	22.5	0.23	12	0.12	0.01
1,2,3,4,6,7,8,9-OCDF	20.2	0.02	74	0.07	11.1	0.01	8.2	0.01	0.001
1,2,3,4,6,7,8,9-OCDD	119	0.12	428	0.43	160	1.6	76.4	0.76	0.001
Total 2,3,7,8-TCDD		0.58		5.96		3.42		1.05	
Total TCDF	15.4	0	55.1	0	12.4	0	3.7	0	0
Total TCDD	1.2	0	3.8	0	1.3	0	2	0	0
Total PeCDF	17.1	0	72.4	0	12.9	0	0	0	0
Total PeCDD	9.6	0	6	0	0	0	0	0	0
Total HxCDF	15.4	0	68	0	15.8	0	0	0	0
Total HxCDD	7.7	0	32.8	0	9.4	0	0	0	0
Total HpCDF	19.9	0	79.8	0	18.3	0	13.6	0	0
Total HpCDD	35.9	0	119	0	41.6	0	22.6	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-17		TMCSD-17R		TMCSD-18		TMCSD-19		Toxicity
Sample Date:	7/8/1998		7/22/1998		7/8/1998		7/8/1998		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	0	0	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	0.51	0.51	0	0	0	0	1
2,3,4,7,8-PeCDF	0	0	2.7	1.4	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	1.1	0.11	0	0	4.5	0.45	4.2	0.42	0.1
1,2,3,7,8-PeCDF	0.73	0.04	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	1.8	0.18	2.4	0.24	5.1	0.51	3.7	0.37	0.1
1,2,3,6,7,8-HxCDF	0.93	0.09	1.6	0.16	2.8	0.28	0	0	0.1
1,2,3,6,7,8-HxCDD	1.6	0.16	0	0	0	0	2.9	0.29	0.1
1,2,3,4,7,8-HxCDF	2.3	0.23	0	0	8	0.8	7.1	0.71	0.1
1,2,3,4,7,8-HxCDD	0	0	0.99	0.099	0	0	2	0.2	0.1
1,2,3,4,7,8,9-HpCDF	0	0	1.8	0.02	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	6.8	0.07	18.5	0.19	28.5	0.29	24.8	0.25	0.01
1,2,3,4,6,7,8-HpCDD	13.6	0.14	38.5	0.39	50.8	0.51	51.1	0.51	0.01
1,2,3,4,6,7,8,9-OCDF	10.1	0.01	29	0.03	33.6	0.03	33.6	0.03	0.001
1,2,3,4,6,7,8,9-OCDD	91.8	0.92	29.5	2.95	356	3.56	340	3.4	0.001
Total 2,3,7,8-TCDD		1.95		5.989		6.43		6.18	
Total TCDF	8.7	0	20	0	34.6	0	42.1	0	0
Total TCDD	3.8	0	2.1	0	6.1	0	5.8	0	0
Total PeCDF	10.9	0	32.9	0	46.1	0	51.3	0	0
Total PeCDD	0	0	0	0	6.3	0	8.5	0	0
Total HxCDF	6.3	0	30.1	0	24.9	0	34.2	0	0
Total HxCDD	9.5	0	18.3	0	24.4	0	25.9	0	0
Total HpCDF	6.8	0	38.5	0	32.2	0	46.8	0	0
Total HpCDD	27.4	0	71.8	0	102	0	98.6	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-20		TMCSD-20R		TMCSD-21		TMCSD-22		Toxicity Equivalency Factors[a]
Sample Date:	7/7/1998		7/22/1998		7/7/1998		7/7/1998		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	1.3	0.13	0	0	0	0	0.55	0.06	0.1
2,3,7,8-TCDD	0	0	0	0	0	0	0	0	1
2,3,4,7,8-PeCDF	0	0	1.9	1	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	1.6	0.16	0	0	1.5	0.15	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0.63	0.03	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	0	0	0.24	0.02	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	1.4	0.14	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	1.1	0.11	1.1	0.11	0	0	0.1
1,2,3,6,7,8-HxCDD	0	0	1.3	0.13	1.8	0.18	0	0	0.1
1,2,3,4,7,8-HxCDF	3.2	0.32	0	0	1.5	0.15	0	0	0.1
1,2,3,4,7,8-HxCDD	2.6	0.26	0.5	0.05	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0.98	0.01	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	7.4	0.07	0	0	6.6	0.07	0	0	0.01
1,2,3,4,6,7,8-HpCDD	15.7	0.16	0	0	18.6	0.19	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	11.2	0.01	15.7	0.16	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	97.6	0.98	158	1.58	94.2	0.94	16.5	0.17	0.001
Total 2,3,7,8-TCDD		2.09		3.23		1.79		0.23	
Total TCDF	12.9	0	21	0	7.8	0	1.7	0	0
Total TCDD	3.4	0	0	0	2.7	0	0	0	0
Total PeCDF	9	0	27.9	0	13.2	0	0	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	12.7	0	20.5	0	11	0	0	0	0
Total HxCDD	7.7	0	9.3	0	12.4	0	0	0	0
Total HpCDF	13.3	0	25.1	0	10.4	0	0	0	0
Total HpCDD	33.5	0	41.4	0	34.4	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-22/D		LF5SD-2A		LF5SD-2B		LF5SD-3A		Toxicity
Sample Date:	7/7/1998		4/18/1995		4/18/1995		4/18/1995		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	8.7	0.87	63.1	6.31	2.8	0.28	0.1
2,3,7,8-TCDD	0	0	1.6	1.6	13.9	13.9	1.6	1.6	1
2,3,4,7,8-PeCDF	0	0	9	4.5	72.5	36.25	0	0	0.5
2,3,4,6,7,8-HxCDF	0	0	0	0	31.2	3.12	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	15.9	0.8	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	8.4	0.84	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	20.3	2.03	0	0	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	11.3	1.13	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	10.3	1.03	81	8.1	0	0	0.1
1,2,3,4,7,8-HxCDD	0	0		—	NA	—	NA	—	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	22.5	0.23	0	0	0.01
1,2,3,4,6,7,8-HpCDF	0	0	22.1	0.22	149	1.49	12.6	0.13	0.01
1,2,3,4,6,7,8-HpCDD	4.4	0.04	48.4	0.48	221	2.21	23.9	0.24	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	53.3	0.05	349	0.35	23.1	0.02	0.001
1,2,3,4,6,7,8,9-OCDD	13.8	0.14	353	0.35	1620	1.62	174	0.17	0.001
Total 2,3,7,8-TCDD		0.18		9.1		78.38		2.44	
Total TCDF	1.7	0	91.3	0	741	0	22.9	0	0
Total TCDD	2.6	0	3.2	0	22.6	0	1.9	0	0
Total PeCDF	0	0	134	0	985	0	35.3	0	0
Total PeCDD	0	0	0	0	10.3	0	133	0	0
Total HxCDF	0	0	61.6	0	454	0	22.3	0	0
Total HxCDD	0	0	19	0	101	0	9.7	0	0
Total HpCDF	0	0	53.9	0	372	0	30.7	0	0
Total HpCDD	9.2	0	103	0	492	0	52.7	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	LF5SD-3B		LF5SD-5A		LF5SD-5B		LF5SD-6A		Toxicity
Sample Date:	4/18/1995		4/18/1995		4/18/1995		4/18/1995		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	13	1.3	7.7	0.77	7.9	0.79	0.1
2,3,7,8-TCDD	0	0	1.2	1.2	1.1	1.1	2.4	2.4	1
2,3,4,7,8-PeCDF	0	0	0	0	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	0	0	5.5	0.55	0	0	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	NA	—	NA	—	NA	—	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	5	0.5	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	5	0.5	5	0.5	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	10.7	1.07	6.3	0.63	9.2	0.92	0.1
1,2,3,4,7,8-HxCDD	NA	—	NA	—	NA	—	NA	—	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	0	0	20.8	0.208	10.5	0.105	23.6	0.236	0.01
1,2,3,4,6,7,8-HpCDD	0	0	56	0.56	37.1	0.371	71	0.71	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	32.2	0.032	18.5	0.0185	33.7	0.0337	0.001
1,2,3,4,6,7,8,9-OCDD	30.7	0.03	340	0.34	255	0.255	554	0.554	0.001
Total 2,3,7,8-TCDD		0.03		5.26		3.7495		6.6437	
Total TCDF	2.3	0	77.7	0	65.5	0	48.5	0	0
Total TCDD	0	0	16.1	0	14.1	0	15.1	0	0
Total PeCDF	0	0	60.5	0	41	0	41.2	0	0
Total PeCDD	0	0	20	0	13.7	0	12.1	0	0
Total HxCDF	0	0	51.1	0	28.9	0	45.5	0	0
Total HxCDD	0	0	36.9	0	31.6	0	48.1	0	0
Total HpCDF	5.7	0	45.4	0	22.6	0	52	0	0
Total HpCDD	5.3	0	118	0	79.1	0	149	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	LF5SD-6B		LF5SD-1-Z3		LF5SD-1-Z4		LF5SD-2-Z2		Toxicity Equivalency Factors[a]
Sample Date:	4/18/1995		5/31/2001		5/31/2001		5/31/2001		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	2	0.2	1	0.1	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	0	0	0	0	0	0	1
2,3,4,7,8-PeCDF	0	0	1.8	0.9	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	0	0	1.7	0.17	0	0	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	NA	—	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	5	0.5	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	5	0.05	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	3	0.3	0	0	0	0	0.1
1,2,3,4,7,8-HxCDD	NA	—	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	5	0.05	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDD	10.1	0.101	23.1	0.231	0	0	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	0	0	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	93.5	0.0935	152	0.152	0	0	0	0	0.001
Total 2,3,7,8-TCDD		0.9945		1.853		0		0	
Total TCDF	12.7	0	20.9	0	0	0	0	0	0
Total TCDD	2.8	0	0	0	0	0	0	0	0
Total PeCDF	8.8	0	26.1	0	0	0	0	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	8.7	0	0	0	0	0	0	0	0
Total HxCDD	8.4	0	0	0	0	0	0	0	0
Total HpCDF	7.4	0	13.5	0	0	0	0	0	0
Total HpCDD	23.1	0	50.5	0	0	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	LF5SD-2-Z4		LF5SD-3-Z2		LF5SD-3-Z4		TMCSD-1-Z3		Toxicity
Sample Date:	5/31/2001		5/31/2001		5/31/2001		6/4/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	0.7	0.07	0	0	7.5	0.75	0.1
2,3,7,8-TCDD	0	0	0.62	0.62	0	0	0.71	0.71	1
2,3,4,7,8-PeCDF	0	0	0.76	0.38	0	0	16.7	8.35	0.5
2,3,4,6,7,8-HxCDF	0	0	0.71	0.071	0	0	12.2	1.22	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	6.3	0.315	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	0	0	2.3	0.23	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	0	0	14.9	1.49	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	0	0	2.1	0.21	0.1
1,2,3,4,7,8-HxCDF	0	0	1.4	0.14	0	0	172	17.2	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0.85	0.085	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	68.3	6.83	0.01
1,2,3,4,6,7,8-HpCDF	0	0	0	0	0	0	133	13.3	0.01
1,2,3,4,6,7,8-HpCDD	0	0	0	0	0	0	18.9	0.189	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	8.7	0.0087	0	0	464	0.464	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	0	0	0	0	0	0	0.001
Total 2,3,7,8-TCDD		0		1.2897		0		51.343	
Total TCDF	0	0	10.3	0	0	0	122	0	0
Total TCDD	0	0	0.62	0	0	0	13.2	0	0
Total PeCDF	0	0	5.4	0	0	0	202	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	0	0	8.3	0	0	0	315	0	0
Total HxCDD	0	0	0	0	0	0	12.5	0	0
Total HpCDF	0	0	7.1	0	0	0	381	0	0
Total HpCDD	0	0	0	0	0	0	43	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-1-Z4		TMCSD-2-Z3		TMCSD-2-Z3/D		TMCSD-2-Z4		Toxicity
Sample Date:	6/4/2001		6/4/2001		6/4/2001		6/4/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	1.3	0.13	1.2	0.12	0	0	0	0	0.1
2,3,7,8-TCDD	3.3	3.3	0.92	0.92	0.81	0.81	0	0	1
2,3,4,7,8-PeCDF	2	1	2.5	1.25	3.7	1.85	0	0	0.5
2,3,4,6,7,8-HxCDF	4	0.4	2.8	0.28	4.7	0.47	0.82	0.082	0.1
1,2,3,7,8-PeCDF	0.93	0.0465	0	0	1.3	0.065	0.33	0.0165	0.05
1,2,3,7,8-PeCDD	4.1	2.05	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	5	0.5	1.8	0.18	3.2	0.32	0.62	0.062	0.1
1,2,3,6,7,8-HxCDF	3.5	0.35	2	0.2	3.4	0.34	0	0	0.1
1,2,3,6,7,8-HxCDD	4.5	0.45	2.9	0.29	3.5	0.35	0.7	0.07	0.1
1,2,3,4,7,8-HxCDF	10.8	1.08	12.8	1.28	26.8	2.68	2.2	0.22	0.1
1,2,3,4,7,8-HxCDD	0	0	0.98	0.098	1.3	0.13	0	0	0.1
1,2,3,4,7,8,9-HpCDF	3.7	0.37	0	0	13.4	1.34	1	0.1	0.01
1,2,3,4,6,7,8-HpCDF	74.6	7.46	38.1	3.81	38.9	3.89	10	1	0.01
1,2,3,4,6,7,8-HpCDD	62	0.62	42.5	0.425	60.6	0.606	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	78.5	0.0785	61	0.061	104	0.104	12.2	0.0122	0.001
1,2,3,4,6,7,8,9-OCDD	253	0.253	351	0.351	512	0.512	100	0.1	0.001
Total 2,3,7,8-TCDD		18.088		9.265		13.467		1.6627	
Total TCDF	63.3	0	30.7	0	40	0	12.4	0	0
Total TCDD	8.9	0	3.9	0	1.5	0	0	0	0
Total PeCDF	60.6	0	42.6	0	52	0	9	0	0
Total PeCDD	11.9	0	5.5	0	0	0	0	0	0
Total HxCDF	82.2	0	58.1	0	78.4	0	11.9	0	0
Total HxCDD	57.1	0	32.3	0	21.5	0	5.3	0	0
Total HpCDF	131	0	80.4	0	102	0	20.7	0	0
Total HpCDD	133	0	90.7	0	121	0	26	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-3-Z3		TMCSD-3-Z4		TMCSD-5-2-Z3		TMCSD-5-2-Z4		Toxicity Equivalency Factors[a]
Sample Date:	6/4/2001		6/4/2001		6/1/2001		6/1/2001		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	1.9	0.19	0.84	0.084	0.6	0.06	0	0	0.1
2,3,7,8-TCDD	0	0	0.4	0.4	0	0	0	0	1
2,3,4,7,8-PeCDF	3.7	1.85	2	1	2	1	0	0	0.5
2,3,4,6,7,8-HxCDF	4.2	0.42	2	0.2	2.8	0.28	0	0	0.1
1,2,3,7,8-PeCDF	0.99	0.0495	0.5	0.025	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0.84	0.42	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	2.7	0.27	1.4	0.14	1.6	0.16	0	0	0.1
1,2,3,6,7,8-HxCDF	3	0.3	1.6	0.16	2	0.2	0	0	0.1
1,2,3,6,7,8-HxCDD	4.4	0.44	1.3	0.13	2.3	0.23	0	0	0.1
1,2,3,4,7,8-HxCDF	19.5	1.95	6.9	0.69	7.1	0.71	0	0	0.1
1,2,3,4,7,8-HxCDD	0	0	0.8	0.08	0.49	0.049	0	0	0.1
1,2,3,4,7,8,9-HpCDF	7.7	0.77	2.8	0.28	2	0.2	0	0	0.01
1,2,3,4,6,7,8-HpCDF	42.7	4.27	17.2	1.72	69	6.9	0	0	0.01
1,2,3,4,6,7,8-HpCDD	103	1.03	20.5	0.205	28	0.28	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	129	0.129	23.8	0.0238	57.2	0.0572	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	1480	1.48	163	0.163	196	0.196	0	0	0.001
Total 2,3,7,8-TCDD		13.1485		5.3008		10.7422		0	
Total TCDF	45.7	0	32.7	0	276	0	2	0	0
Total TCDD	2.5	0	1.2	0	0.93	0	0	0	0
Total PeCDF	50.9	0	33	0	118	0	2	0	0
Total PeCDD	0	0	0	0	0.84	0	0	0	0
Total HxCDF	84.5	0	30.5	0	68.3	0	0	0	0
Total HxCDD	21.6	0	3.5	0	18.9	0	0	0	0
Total HpCDF	122	0	19.9	0	134	0	0	0	0
Total HpCDD	211	0	41.9	0	57.2	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-5-Z3		TMCSD-5-Z4		TMCSD-6-Z3		TMCSD-6-Z4		Toxicity
Sample Date:	6/1/2001		6/1/2001		6/1/2001		6/1/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	3.8	0.38	0	0	1.4	0.14	0	0	0.1
2,3,7,8-TCDD	1.8	1.8	0	0	0.91	0.91	0	0	1
2,3,4,7,8-PeCDF	14	7	1.7	0.85	4.1	2.05	0	0	0.5
2,3,4,6,7,8-HxCDF	17.3	1.73	3.2	0.32	4.8	0.48	0	0	0.1
1,2,3,7,8-PeCDF	7.3	0.365	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0.47	0.235	1.2	0.6	0	0	0.5
1,2,3,7,8,9-HxCDF	1.3	0.13	0	0	0.41	0.041	0	0	0.1
1,2,3,7,8,9-HxCDD	7.6	0.76	1.6	0.16	3	0.3	0	0	0.1
1,2,3,6,7,8-HxCDF	16.5	1.65	2.1	0.21	3.5	0.35	0	0	0.1
1,2,3,6,7,8-HxCDD	13.6	1.36	1.8	0.18	3.7	0.37	0	0	0.1
1,2,3,4,7,8-HxCDF	115	11.5	4.8	0.48	17.8	1.78	0	0	0.1
1,2,3,4,7,8-HxCDD	2.6	0.26	0.38	0.038	1	0.1	0	0	0.1
1,2,3,4,7,8,9-HpCDF	46.5	4.65	1.4	0.14	7	0.7	0	0	0.01
1,2,3,4,6,7,8-HpCDF	171	17.1	52.2	5.22	55.4	5.54	0	0	0.01
1,2,3,4,6,7,8-HpCDD	281	2.81	34.7	0.347	60.7	0.607	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	441	0.441	41.6	0.0416	79	0.079	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	1810	1.81	215	0.215	459	0.459	0	0	0.001
Total 2,3,7,8-TCDD		53.746		8.4366		14.506		0	
Total TCDF	122	0	63	0	219	0	0.86	0	0
Total TCDD	3.6	0	0	0	1.9	0	0	0	0
Total PeCDF	238	0	71.8	0	119	0	0	0	0
Total PeCDD	0	0	1.3	0	1.2	0	0	0	0
Total HxCDF	435	0	68.3	0	94.9	0	0	0	0
Total HxCDD	39	0	23	0	10.5	0	0	0	0
Total HpCDF	551	0	100	0	122	0	0	0	0
Total HpCDD	485	0	110	0	123	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-6-Z4/D		TMCSD-7-1-Z2		TMCSD-7-1-Z3		TMCSD-7-Z2		Toxicity
Sample Date:	6/1/2001		5/31/2001		5/31/2001		5/31/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	6.9	0.69	0	0	0.91	0.091	0.1
2,3,7,8-TCDD	0	0	23.5	23.5	0	0	0	0	1
2,3,4,7,8-PeCDF	0	0	13.2	6.6	0	0	1.8	0.9	0.5
2,3,4,6,7,8-HxCDF	0	0	22.7	2.27	0	0	2.6	0.26	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	16.4	1.64	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	13.5	1.35	0	0	1.5	0.15	0.1
1,2,3,6,7,8-HxCDD	0	0	18.9	1.89	0	0	2.3	0.23	0.1
1,2,3,4,7,8-HxCDF	0	0	32	3.2	0	0	5.8	0.58	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	17.1	1.71	0	0	3.2	0.32	0.01
1,2,3,4,6,7,8-HpCDF	0	0	189	18.9	0	0	17.6	1.76	0.01
1,2,3,4,6,7,8-HpCDD	0	0	295	2.95	0	0	37.6	0.376	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	348	0.348	0	0	37.4	0.0374	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	2270	2.27	0	0	312	0.312	0.001
Total 2,3,7,8-TCDD		0		67.318		0		5.0164	
Total TCDF	0	0	895	0	31.4	0	87.5	0	0
Total TCDD	0	0	46.2	0	0	0	0	0	0
Total PeCDF	0	0	788	0	17.3	0	72.7	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	0	0	422	0	0	0	49.5	0	0
Total HxCDD	0	0	45.4	0	0	0	0	0	0
Total HpCDF	0	0	434	0	0	0	44	0	0
Total HpCDD	0	0	645	0	0	0	79.4	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-7-Z3		TMCSD-8-1-Z3		TMCSD-8-1-Z4		TMCSD-8-1-Z4/D		Toxicity Equivalency Factors[a]
Sample Date:	5/30/2001		5/30/2001		5/30/2001		5/30/2001		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	17.5	1.75	0	0	0	0	0	0	0.1
2,3,7,8-TCDD	20.1	20.1	0	0	0	0	0	0	1
2,3,4,7,8-PeCDF	16.3	8.15	1.1	0.55	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	26.2	2.62	2	0.2	0	0	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	5.5	0.55	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	14.7	1.47	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	16.1	1.61	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	18.6	1.86	1.3	0.13	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	35.7	3.57	2.4	0.24	0	0	0.25	0.025	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	245	24.5	20.2	2.02	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDD	304	3.04	16.1	0.161	0	0	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	616	0.616	19.8	0.0198	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	2240	2.24	132	0.132	0	0	0	0	0.001
Total 2,3,7,8-TCDD		72.076		3.4528		0		0.025	
Total TCDF	1040	0	63.8	0	0	0	0	0	0
Total TCDD	30.9	0	0	0	0	0	0	0	0
Total PeCDF	875	0	45.4	0	0	0	0	0	0
Total PeCDD	12.8	0	0	0	0	0	0	0	0
Total HxCDF	448	0	29.2	0	0	0	0.25	0	0
Total HxCDD	33.3	0	1.3	0	0	0	0	0	0
Total HpCDF	605	0	38.4	0	0	0	0	0	0
Total HpCDD	658	0	35	0	0	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-8-2-Z2		TMCSD-9-1-Z2		TMCSD-9-1-Z4		TMCSD-9-2-Z2		Toxicity
Sample Date:	5/30/2001		5/30/2001		5/30/2001		5/30/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	2.2	0.22	1.8	0.18	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	1.3	1.3	0	0	0	0	1
2,3,4,7,8-PeCDF	6.6	3.3	0	0	0	0	0.46	0.23	0.5
2,3,4,6,7,8-HxCDF	13.4	1.34	3.1	0.31	0	0	0.42	0.042	0.1
1,2,3,7,8-PeCDF	0	0	1.1	0.055	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	3	0.3	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	7.9	0.79	2.2	0.22	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	4.9	0.49	3	0.3	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	14.3	1.43	5	0.5	0.22	0.022	0.75	0.075	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	2	0.2	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	91	9.1	21.7	2.17	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDD	51.1	0.511	41	0.41	0	0	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	110	0.11	34.8	0.0348	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	333	0.333	322	0.322	0	0	0	0	0.001
Total 2,3,7,8-TCDD		17.624		6.3018		0.022		0.347	
Total TCDF	790	0	123	0	0	0	3.3	0	0
Total TCDD	5.5	0	2.8	0	0	0	0	0	0
Total PeCDF	584	0	93.4	0	0	0	2.4	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	210	0	51.4	0	0.22	0	3.2	0	0
Total HxCDD	26.3	0	8.4	0	0	0	1	0	0
Total HpCDF	164	0	46	0	0	0	4.4	0	0
Total HpCDD	115	0	85.2	0	0	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-9-3-Z3		TMCSD-9-3-Z4		TMCSD-9-4-Z3		TMCSD-9-4-Z4		Toxicity
Sample Date:	5/29/2001		5/29/2001		5/29/2001		5/29/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0.4	0.04	0	0	0.4	0.04	0	0	0.1
2,3,7,8-TCDD	0.22	0.22	0	0	0.25	0.25	0	0	1
2,3,4,7,8-PeCDF	0.71	0.355	0	0	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	1.1	0.11	0	0	1.3	0.13	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0.27	0.135	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	1.2	0.12	0	0	0.1
1,2,3,6,7,8-HxCDF	0.6	0.06	0	0	0.72	0.072	0	0	0.1
1,2,3,6,7,8-HxCDD	0.83	0.083	0	0	1	0.1	0	0	0.1
1,2,3,4,7,8-HxCDF	1.6	0.16	0.2	0.02	2.4	0.24	0	0	0.1
1,2,3,4,7,8-HxCDD	0.41	0.041	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0.47	0.047	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	4.6	0.46	0	0	5.6	0.56	0	0	0.01
1,2,3,4,6,7,8-HpCDD	0	0	0	0	17	0.17	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	0	0	9.1	0.0091	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	0	0	95.3	0.0953	0	0	0.001
Total 2,3,7,8-TCDD		1.711		0.02		1.7864		0	
Total TCDF	21.7	0	0	0	25.5	0	0.12	0	0
Total TCDD	0.74	0	0	0	0.68	0	0.14	0	0
Total PeCDF	13.7	0	0	0	13.8	0	0	0	0
Total PeCDD	0.27	0	0	0	0	0	0.39	0	0
Total HxCDF	12.7	0	0.2	0	14.1	0	0	0	0
Total HxCDD	5.5	0	0	0	3.2	0	0	0	0
Total HpCDF	5.1	0	0	0	11	0	0	0	0
Total HpCDD	26.8	0	0	0	34	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-9-4-Z4/D		TMCSD-9-Z2		TMCSD-9-Z4		TMCSD-10-1-Z3		Toxicity Equivalency Factors[a]
Sample Date:	5/29/2001		5/30/2001		5/30/2001		5/24/2001		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	0	0	0.49	0.049	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	0	0	0	0	0	0	1
2,3,4,7,8-PeCDF	0	0	0	0	0	0	0	0	0.5
2,3,4,6,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8-PeCDF	0	0	0.3	0.015	0	0	0	0	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDF	0	0	5.9	0.59	0	0	0	0	0.01
1,2,3,4,6,7,8-HpCDD	0	0	16	0.16	0	0	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	18.1	0.0181	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	111	0.111	0	0	0	0	0.001
Total 2,3,7,8-TCDD		0		0.9431		0		0	
Total TCDF	0	0	28.2	0	0	0	2.4	0	0
Total TCDD	0.12	0	0.25	0	0	0	0	0	0
Total PeCDF	0	0	16.9	0	0	0	1.7	0	0
Total PeCDD	0	0	0	0	0	0	0	0	0
Total HxCDF	0	0	13.8	0	0	0	0	0	0
Total HxCDD	0	0	0	0	0	0	0.81	0	0
Total HpCDF	0	0	16.8	0	0	0	0	0	0
Total HpCDD	0	0	50.4	0	0	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-10-1-Z4		TMCSD-10-2-Z3		TMCSD-10-2-Z4		TMCSD-10-3-Z3		Toxicity
Sample Date:	5/24/2001		5/24/2001		5/24/2001		5/23/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	0	0	0	0	0	0	0.1
2,3,7,8-TCDD	0	0	0	0	0	0	2	2	1
2,3,4,7,8-PeCDF	0	0	0	0	0	0	6	3	0.5
2,3,4,6,7,8-HxCDF	0	0	0	0	0	0	7	0.7	0.1
1,2,3,7,8-PeCDF	0	0	0	0	0	0	1.9	0.095	0.05
1,2,3,7,8-PeCDD	0	0	0	0	0	0	1.4	0.7	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0.56	0.056	0.1
1,2,3,7,8,9-HxCDD	0	0	0	0	0	0	4.1	0.41	0.1
1,2,3,6,7,8-HxCDF	0	0	0	0	0	0	3.8	0.38	0.1
1,2,3,6,7,8-HxCDD	0	0	0	0	0	0	5.1	0.51	0.1
1,2,3,4,7,8-HxCDF	0	0	0	0	0	0	13.1	1.31	0.1
1,2,3,4,7,8-HxCDD	0	0	0	0	0	0	0	0	0.1
1,2,3,4,7,8,9-HpCDF	0	0	0	0	0	0	5.2	0.52	0.01
1,2,3,4,6,7,8-HpCDF	0	0	3.1	0.31	0	0	59	5.9	0.01
1,2,3,4,6,7,8-HpCDD	0	0	0	0	0	0	98.7	0.987	0.01
1,2,3,4,6,7,8,9-OCDF	0	0	0	0	0	0	74.2	0.0742	0.001
1,2,3,4,6,7,8,9-OCDD	0	0	0	0	0	0	788	0.788	0.001
Total 2,3,7,8-TCDD		0		0.31		0		17.4302	
Total TCDF	0	0	14.9	0	0	0	111	0	0
Total TCDD	0	0	0	0	0	0	5.9	0	0
Total PeCDF	0	0	14.8	0	0	0	113	0	0
Total PeCDD	0	0	0	0	0	0	5.5	0	0
Total HxCDF	0	0	0	0	0	0	94.1	0	0
Total HxCDD	0	0	0	0	0	0	43.8	0	0
Total HpCDF	0	0	6.5	0	0	0	132	0	0
Total HpCDD	0	0	0	0	0	0	199	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-10-3-Z3/D		TMCSD-10-3-Z4		TMCSD-10-Z3		TMCSD-10-Z4		Toxicity Equivalency Factors[a]
Sample Date:	5/23/2001		5/23/2001		5/29/2001		5/29/2001		
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	
2,3,7,8-TCDF	1.6	0.16	0	0	0.65	0.065	0.1	0.01	0.1
2,3,7,8-TCDD	1.7	1.7	0.38	0.38	0.25	0.25	0.07	0.07	1
2,3,4,7,8-PeCDF	3.7	1.85	0	0	0.53	0.265	0.07	0.035	0.5
2,3,4,6,7,8-HxCDF	4.3	0.43	0	0	0.71	0.071	0.09	0.009	0.1
1,2,3,7,8-PeCDF	0.92	0.046	0	0	0	0	0.09	0.0045	0.05
1,2,3,7,8-PeCDD	0.9	0.45	0	0	0	0	0	0	0.5
1,2,3,7,8,9-HxCDF	0.46	0.046	0	0	0	0	0.07	0.007	0.1
1,2,3,7,8,9-HxCDD	2.9	0.29	0.97	0.097	0.51	0.051	0	0	0.1
1,2,3,6,7,8-HxCDF	0	0	1.1	0.11	0.37	0.037	0.11	0.011	0.1
1,2,3,6,7,8-HxCDD	3.5	0.35	0.86	0.086	0.63	0.063	0	0	0.1
1,2,3,4,7,8-HxCDF	8.6	0.86	2.3	0.23	1.3	0.13	0.16	0.016	0.1
1,2,3,4,7,8-HxCDD	1.3	0.13	0	0	0.23	0.023	0	0	0.1
1,2,3,4,7,8,9-HpCDF	3.2	0.32	0	0	0.63	0.063	0	0	0.01
1,2,3,4,6,7,8-HpCDF	29.5	2.95	14.8	1.48	4.2	0.42	0	0	0.01
1,2,3,4,6,7,8-HpCDD	61.8	0.618	0	0	0	0	0	0	0.01
1,2,3,4,6,7,8,9-OCDF	45.2	0.0452	15.8	0.0158	0	0	0	0	0.001
1,2,3,4,6,7,8,9-OCDD	495	0.495	92.6	0.0926	0	0	0	0	0.001
Total 2,3,7,8-TCDD		10.7402		2.4914		1.438		0.1625	
Total TCDF	70.1	0	83.4	0	14.8	0	0.1	0	0
Total TCDD	3.2	0	1	0	0.38	0	0.07	0	0
Total PeCDF	70.4	0	53.5	0	10.2	0	0.16	0	0
Total PeCDD	2.1	0	0	0	0	0	0	0	0
Total HxCDF	56.9	0	25.2	0	9.3	0	0.54	0	0
Total HxCDD	29.9	0	5.7	0	2	0	0	0	0
Total HpCDF	71.4	0	27.8	0	9.4	0	0	0	0
Total HpCDD	124	0	30.8	0	0	0	0	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	TMCSD-11-Z3		TMCSD-11-Z4		LF6SD-1-1-Z1		LF6SD-1-1-Z1/D		Toxicity
Sample Date:	5/24/2001		5/24/2001		5/31/2001		5/31/2001		Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	0	0	0	0	6.2	0.62	5.9	0.59	0.1
2,3,7,8-TCDD	0.85	0.85	0	0	1.3	1.3	1.3	1.3	1
2,3,4,7,8-PeCDF	2	1	0	0	7	3.5	7.4	3.7	0.5
2,3,4,6,7,8-HxCDF	2	0.2	0	0	10	1	10.9	1.09	0.1
1,2,3,7,8-PeCDF	1.9	0.095	0	0	3.5 J	0.175	4.2 J	0.21	0.05
1,2,3,7,8-PeCDD	1.2	0.6	0	0	2.3 J	1.15	2.5 J	1.25	0.5
1,2,3,7,8,9-HxCDF	0	0	0	0	0	0	0	0	0.1
1,2,3,7,8,9-HxCDD	2.8	0.28	0	0	5.7 J	0.57	6 J	0.6	0.1
1,2,3,6,7,8-HxCDF	1.8	0.18	0	0	6.2 J	0.62	6.3 J	0.63	0.1
1,2,3,6,7,8-HxCDD	8.8	0.88	0	0	5 J	0.5	5.1 J	0.51	0.1
1,2,3,4,7,8-HxCDF	9	0.9	0	0	14.2	1.42	15	1.5	0.1
1,2,3,4,7,8-HxCDD	0.64	0.064	0	0	2.4 J	0.24	2.3 J	0.23	0.1
1,2,3,4,7,8,9-HpCDF	4.3	0.43	0	0	3.4 J	0.34	4.6 J	0.46	0.01
1,2,3,4,6,7,8-HpCDF	13.6	1.36	0	0	41.8	4.18	37.7	3.77	0.01
1,2,3,4,6,7,8-HpCDD	45.8	0.458	0	0	57.6	0.576	60.2	0.602	0.01
1,2,3,4,6,7,8,9-OCDF	38.3	0.0383	0	0	41.4	0.0414	46	0.046	0.001
1,2,3,4,6,7,8,9-OCDD	184	0.184	0	0	273	0.273	280	0.28	0.001
Total 2,3,7,8-TCDD		7.5193		0		16.5054		16.768	
Total TCDF	57.2	0	0	0	138 J	0	147 J	0	0
Total TCDD	0.85	0	0	0	17.3	0	16.7	0	0
Total PeCDF	22.4	0	0	0	90.2 J	0	79.2 J	0	0
Total PeCDD	1.2	0	0	0	11	0	16.6	0	0
Total HxCDF	25.2	0	0	0	80.1	0	77.4	0	0
Total HxCDD	64.6	0	0	0	56.7	0	61.2	0	0
Total HpCDF	35	0	0	0	70.6	0	66.1	0	0
Total HpCDD	94.3	0	0	0	116	0	123	0	0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

Table 2-6
DIOXINS AND FURANS IN SEDIMENT SAMPLES
THREE MILE CREEK (ng/kg)

Sample I.D.:	LF6SD-2-1-Z1		LF6SD-3-1-Z1		LF6SD-4-1-Z1				Toxicity
Sample Date:	5/31/2001		5/31/2001		5/23/2001				Equivalency
Compound	Actual	Weighted	Actual	Weighted	Actual	Weighted	Actual	Weighted	Factors[a]
2,3,7,8-TCDF	2.1 J	0.21	2.5	0.25	5.1	0.51			0.1
2,3,7,8-TCDD	0.72 J	0.72	0	0	4.9	4.9			1
2,3,4,7,8-PeCDF	3.7 J	1.85	5	2.5	11.8	5.9			0.5
2,3,4,6,7,8-HxCDF	5.9 J	0.59	16.6	1.66	27.7	2.77			0.1
1,2,3,7,8-PeCDF	1.8 J	0.09	3 J	0.15	12.4 J	0.62			0.05
1,2,3,7,8-PeCDD	1.1 J	0.55	2.1 J	1.05	4.5	2.25			0.5
1,2,3,7,8,9-HxCDF	0 U	0	0.83 J	0.083	0.78 J	0.078			0.1
1,2,3,7,8,9-HxCDD	3 J	0.3	8.8 J	0.88	17.1	1.71			0.1
1,2,3,6,7,8-HxCDF	3.4 J	0.34	7.7	0.77	13.6	1.36			0.1
1,2,3,6,7,8-HxCDD	3.2 J	0.32	7.4	0.74	15	1.5			0.1
1,2,3,4,7,8-HxCDF	7.6	0.76	18.6	1.86	28.9	2.89			0.1
1,2,3,4,7,8-HxCDD	1.2 J	0.12	3.3 J	0.33	8.1	0.81			0.1
1,2,3,4,7,8,9-HpCDF	0 U	0	5.6	0.56	12.7	1.27			0.01
1,2,3,4,6,7,8-HpCDF	22.8	2.28	53.3	5.33	172	17.2			0.01
1,2,3,4,6,7,8-HpCDD	34.5	0.345	78.7	0.787	192	1.92			0.01
1,2,3,4,6,7,8,9-OCDF	26.1	0.0261	40.7	0.0407	195	0.195			0.001
1,2,3,4,6,7,8,9-OCDD	178	0.178	293	0.293	1230 J	1.23			0.001
Total 2,3,7,8-TCDD		8.6791		17.2837		47.113			
Total TCDF	53.3 J	0	64.8 J	0	345 J	0			0
Total TCDD	5.6	0	11.5	0	27.4	0			0
Total PeCDF	56.8 J	0	55.3	0	348 J	0			0
Total PeCDD	7.3	0	14.4	0	60.3	0			0
Total HxCDF	42.1	0	81.5	0	276	0			0
Total HxCDD	31.4	0	88	0	149	0			0
Total HpCDF	42.8	0	84.1	0	327	0			0
Total HpCDD	71	0	162	0	399	0			0

a Based on I-TEFs/89; USEPA 1989.

Key:

NA = Not analyzed.

TMCSW-1	
2,2,3,3,4,4,6-Heptachlorobiphenyl	0.018
2,2,3,4,6-Pentachlorobiphenyl	0.028
2,2,4,4,5,6-Hexachlorobiphenyl	0.019
2,3-Dichlorobiphenyl	0.022
2,2,4,4-Tetrachlorobiphenyl	0.024
Hexachlorobenzene	0.032
Alpha Chlordane	0.012
Gamma Chlordane	0.014
Selenium	5

TMCSW-3	
Aluminum	130

TMCSW-4	
4,4'-DDT	0.078

TMCSW-5	
4,4'-DDT	0.089
Zinc	140

TMCSW-6	
Malathion	0.21
4,4'-DDT	0.1
Aluminum	370
IRON	590
Lead	10
Zinc	63

TMCSW-7	
Arsenic	3

TMCSW-9	
Zinc	100

TMCSW-10	
Arsenic	3

TMCSW-11	
IRON	500
ZINC	38

LEGEND

- REMEDIAL AND SUPPLEMENTAL INVESTIGATION SURFACE WATER (SW) SAMPLE LOCATIONS
- SUPPLEMENTAL INVESTIGATION PISCES SAMPLE LOCATION
- —x— FENCE

NOTES:

1) ALL ANALYTICAL RESULTS ARE IN $\mu g/L$.

2) TMC-5 IS THE APPROXIMATE LOCATION OF THE WATER QUALITY SAMPLE.

N

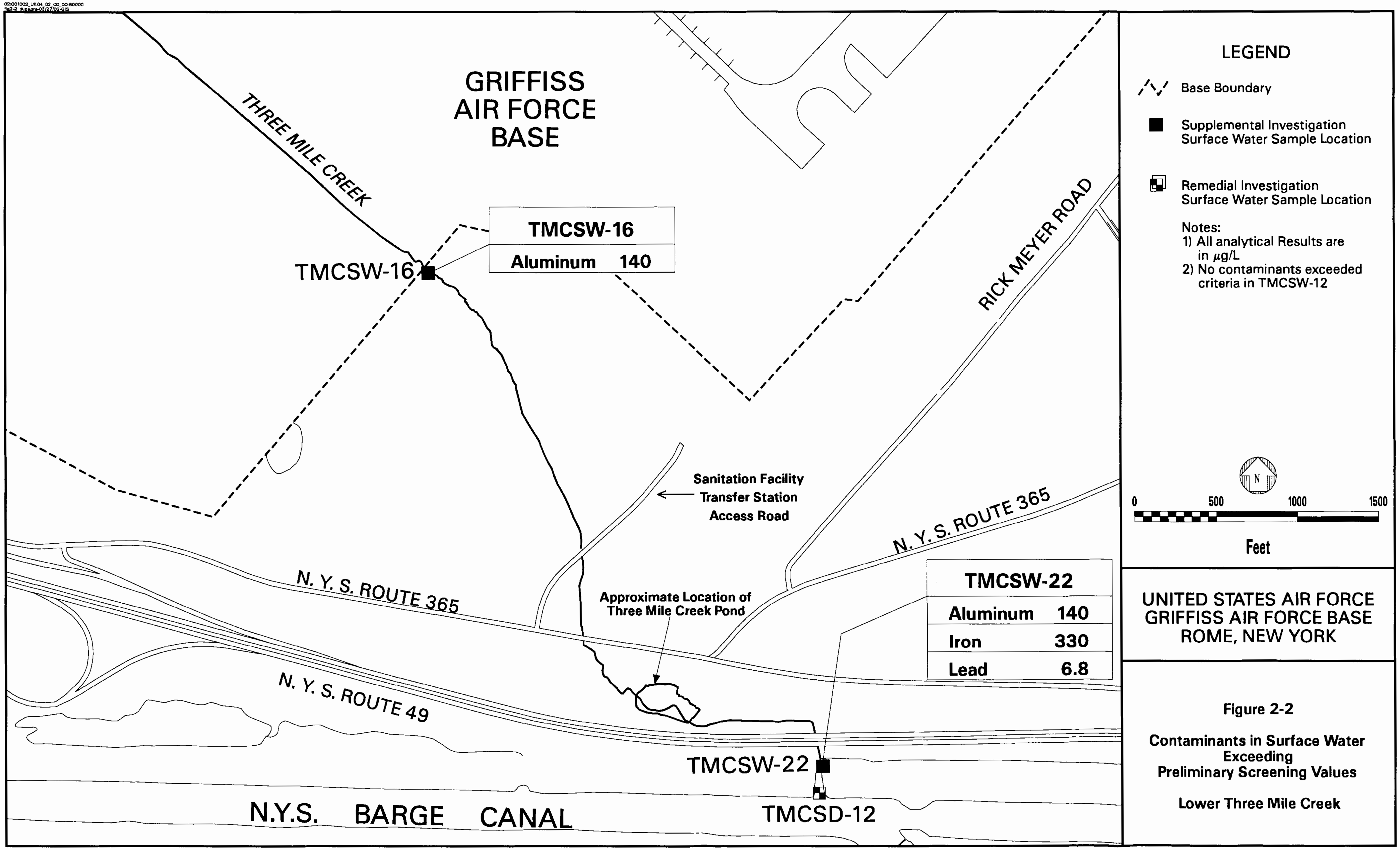
SCALE IN FEET

0 400 800 1,200

UNITED STATES AIR FORCE
GRIFFISS AIR FORCE BASE
ROME, NEW YORK

Figure 2-1
CONTAMINANTS IN SURFACE WATER EXCEEDING PRELIMINARY SCREENING VALUES UPPER THREE MILE CREEK

PLOTTED BI 07/3/02 mao
F:/GRIFFIS/00/3MILECREEK/MARCH2002FS/Ke6S704bFS.dwg



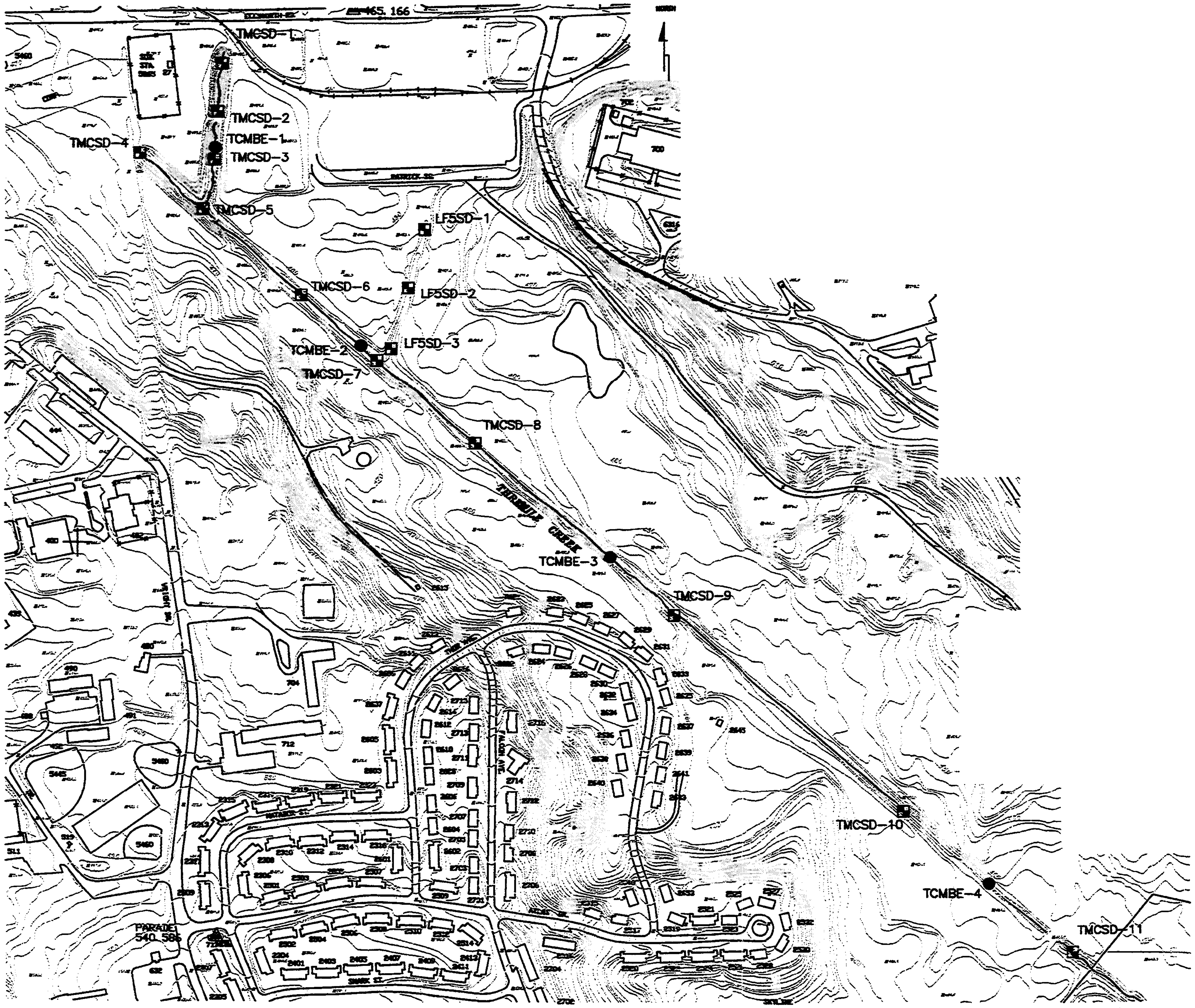
UNITED STATES AIR FORCE
GRIFFISS AIR FORCE BASE
ROME, NEW YORK

Figure 2-2

Contaminants in Surface Water Exceeding Preliminary Screening Values

Lower Three Mile Creek

KE6s3mileFS.dwg



LEGEND

■ REMEDIAL INVESTIGATION SEDIMENT SAMPLE LOCATION

● REMEDIAL INVESTIGATION BENTHIC MACROINVERTEBRATE SAMPLE LOCATION

NOTES:

1. ANALYTICAL RESULTS ARE IN $\mu g/kg$.
2. SOURCE: AFBCA, FEB 2001

N

SCALE IN FEET

0 400 800 1,200

UNITED STATES AIR FORCE
GRIFFISS AIR FORCE BASE
ROME, NEW YORK

Figure 2-3a

REMEDIAL INVESTIGATION SEDIMENT SAMPLE LOCATIONS UPPER THREE MILE CREEK

ecology and environment

PLOTTED BUFF: ?/?/02 JJK
F:/GRIFFIS/KE6000/3MILECREEK/MARCH2002FS/Ke6S3mileFS.dwg

TMCSD	1a (0-6")	1b (6"-1')
ACENAPHTHENE	84	-
ANTHRACENE	240	29
BENZO(a) ANTHRACENE	750	130
BENZO(a) PYRENE	570	150
BENZO(b) FLUORANTHENE	690	250
BENZO(k) FLUORANTHENE	560	150
CADMIUM	3.2	-
CHRYSENE	680	180
COPPER	21.8	-
DIELDRIN	12	-
FLUORANTHENE	1300	240
LEAD	92.8	40.2
NICKEL	16.7	-
PCB-1260	520	350
PHENANTHRENE	1100	140
PYRENE	1200	230
ZINC	121	-
p,p-DDD	-	9.8
p,p-DDE	10	8.8
ACENAPHTHENE	-	27

TMCSD	2a (0-6")	2b (6"-1')
ALDRIN	15.8	8
AZINPHOS, METHYL (GUTHION)	79	-
CADMIUM	1.7	3.8
COPPER	52.5	74.3
DI BENZO(a,h) ANTHRACENE	8700	12000
FLUORANTHENE	84000	120000
LEAD	94.6	203
NICKEL	33.9	41.3
ZINC	153	207
2-METHYLNAPHTHALENE	5100	8100
ACENAPHTHENE	11000	19000
ANTHRACENE	19000	28000
BENZO(a) ANTHRACENE	51000	63000
BENZO(a) PYRENE	35000	44000
BENZO(b) FLUORANTHENE	41000	48000
BENZO(k) FLUORANTHENE	28000	39000
CHRYSENE	43000	55000
FLUORENE	12000	20000
NAPHTHALENE	15000	23000
PCB-1260	5660	2430
PCB-1254	-	1230
PHENANTHRENE	91000	120000
PYRENE	89000	100000
CHROMIUM TOTAL	-	28.4
SILVER	-	2.2
ARSENIC	-	9.9
FLUORANTHENE	84000	120000

TMCSD	3a (0-6")	3b (6"-1')
ALDRIN	12.6	6.5
AZINPHOS, METHYL (GUTHION)	230	110
MERCURY	0.23	-
COPPER	61.4	75.2
ACENAPHTHYLENE	59	810
FLUORANTHENE	160000	99000
LEAD	141	164
NICKEL	43.3	32.5
ZINC	145	-
2-METHYLNAPHTHALENE	20000	12000
ACENAPHTHENE	31000	18000
ANTHRACENE	40000	27000
BENZO(a) ANTHRACENE	89000	51000
BENZO(a) PYRENE	62000	37000
BENZO(b) FLUORANTHENE	73000	50000
BENZO(k) FLUORANTHENE	49000	26000
CHRYSENE	77000	42000
FLUORENE	34000	25000
NAPHTHALENE	56000	36000
PCB-1260	2320	8260
PCB-1254	1500	-
PHENANTHRENE	190000	120000
PYRENE	140000	78000
CHROMIUM TOTAL	37	46.9
SILVER	2.9	7.6
ARSENIC	10.4	-
DI BENZO(a,h) ANTHRACENE	16000	6300
p,p-DDD	-	170
p,p-DDE	-	48.2

TMCSD	4a (0-6")	4b (6"-1')
1,2-DICHLOROBENZENE	990	-
1,4-DICHLOROBENZENE	800	-
MERCURY	0.36	-
COPPER	61.2	-
ACENAPHTHYLENE	320	-
FLUORANTHENE	11000	250
LEAD	166	60.2
NICKEL	20.9	-
ZINC	152	-
2-METHYLNAPHTHALENE	490	-
ACENAPHTHENE	1100	12
ANTHRACENE	2200	41
BENZO(a) ANTHRACENE	6800	-
BENZO(a) PYRENE	6400	120
BENZO(b) FLUORANTHENE	8600	140
BENZO(k) FLUORANTHENE	5800	71
CHRYSENE	7800	-
FLUORENE	1600	-
NAPHTHALENE	960	-
PHENANTHRENE	9400	210
PYRENE	9400	260
CHROMIUM TOTAL	40.7	-
SILVER	2.7	-
ARSENIC	19.8	-
DI BENZO(a,h) ANTHRACENE	970	-
CADMIUM	9.5	-

TMCSD	5a (0-6")	5b (6"-1')
1,2-DICHLOROBENZENE	1200	42
1,4-DICHLOROBENZENE	1600	36
MERCURY	0.22	0.2
COPPER	34.5	36.3
ACENAPHTHYLENE	580	280
FLUORANTHENE	21000	14000
LEAD	76.1	110
NICKEL	22	20.4
ZINC	186	170
2-METHYLNAPHTHALENE	640	750
ACENAPHTHENE	2100	2500
ANTHRACENE	3400	4000
BENZO(a) ANTHRACENE	15000	15000
BENZO(a) PYRENE	2200	2200
BENZO(b) FLUORANTHENE	14000	9700
BENZO(k) FLUORANTHENE	8500	7900
CHRYSENE	14000	9700
FLUORENE	3600	3400
NAPHTHALENE	870	2100
PHENANTHRENE	15000	20000
PYRENE	28000	19000
ALDRIN	-	3.8
SILVER	1.2	1.3
DI BENZO(a,h) ANTHRACENE	2100	1700
CHLOROBENZENE	72	17
PENTACHLOROPHENOL	260000	-
PCB-1260	8600	6010.

TMCSD	6a (0-6")	6b (6"-1')
1,2-DICHLOROBENZENE	340	-
1,4-DICHLOROBENZENE	160	-
MERCURY	-	0.34
COPPER	40.8	60.8
ACENAPHTHYLENE	130	13
FLUORANTHENE	29000	390
LEAD	121	196
NICKEL	22.6	-
ZINC	184	-
2-METHYLNAPHTHALENE	1300	-
ACENAPHTHENE	2700	16
ANTHRACENE	5800	56
BENZO(a) ANTHRACENE	12000	-
BENZO(a) PYRENE	10000	-
BENZO(b) FLUORANTHENE	14000	230
BENZO(k) FLUORANTHENE	4900	130
CHRYSENE	13000	230
FLUORENE	3300	-
NAPHTHALENE	3800	-
PHENANTHRENE	26000	320
PYRENE	19000	390
ALDRIN	21.4	-
CADMIUM	-	7.2
DI BENZO(a,h) ANTHRACENE	1600	-
CHLOROBENZENE	16	68
p,p-DDD	-	990
PCB-1260	2820	9600
CHROMIUM TOTAL	55.4	42.1
ARSENIC	-	17.5
2,3,7,8-TCDD	-	30
BENZENE	-	4

TMCSD	7a (0-6")	7b (6"-1')
1,2-DICHLOROBENZENE	1600	-
1,4-DICHLOROBENZENE	1600	6800
MERCURY	0.7	0.5
COPPER	73.1	51.4
ACENAPHTHYLENE	490	-
FLUORANTHENE	17000	6400
LEAD	195	206
NICKEL	27.8	20.4
ZINC	172	-
2-METHYLNAPHTHALENE	770	-
ACENAPHTHENE	1800	660
ANTHRACENE	3600	1300
BENZO(a) ANTHRACENE	-	3700
BENZO(a) PYRENE	10000	2400
BENZO(b) FLUORANTHENE	15000	3900
BENZO(k) FLUORANTHENE	7200	1300
CHRYSENE	-	3100
FLUORENE	2700	810
NAPHTHALENE	1400	-
PHENANTHRENE	16000	5200
PYRENE	16000	5200
DIEDRIN	-	62
CADMIUM	7.2	29.4
DI BENZO(a,h) ANTHRACENE	1800	-
CHLOROBENZENE	160000	130000
p,p-DDD	160	950
PCB-1260	11000	-
CHROMIUM TOTAL	47.2	37.2
ARSENIC	27.9	21.2
p,p-DDT	-	310
BENZENE	10000	2200
p,p-DDE	-	870
SILVER	5.9	-
VINYL CHLORIDE	3	-
DIELDRIN	-	62
HEPTACHLOR EPOXIDE	-	70
PARATHION, METHYL	-	120
MIREX	-	170

NOTES

1. All units are in ppb (ug/kg) except for inorganics, cyanide, and total glycols, which are in ppm (mg/L or mg/kg), and dioxin which is in ppt (ng/kg or pg/L).
2. Source: AFBCA, Feb 2001.

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Figure 2-3b
REMEDIAL INVESTIGATION
SEDIMENT SAMPLE RESULTS
UPPER THREE MILE CREEK

TMCSD	8a (0–6")	8b (6"–1')
1,2–DICHLOROBENZENE	220	610
1,4–DICHLOROBENZENE	200	–
MERCURY	0.4	0.3
COPPER	67.6	126
ACENAPHTHYLENE	230	640
FLUORANTHENE	11000	8800
LEAD	205	316
NICKEL	22.9	27.5
ZINC	184	278
2–METHYLNAPHTHALENE	360	440
ACENAPHTHENE	810	580
ANTHRACENE	1600	960
BENZO(a) ANTHRACENE	6300	7200
BENZO(a) PYRENE	4600	6100
BENZO(b) FLUORANTHENE	5400	8100
BENZO(k) FLUORANTHENE	4700	5600
CHRYSENE	5300	7100
FLUORENE	1000	830
NAPHTHALENE	680	510
PHENANTHRENE	8500	7200
PYRENE	10000	8400
CADMIUM	7.7	23.8
ARSENIC	26.7	50.2
CHLOROBENZENE	32	10
PCB–1260	6600	5600
SILVER	6.8	4.4
BENZENE	10	12
CHROMIUM TOTAL	65.8	58.8

TMCSD	9a (0–6")	9b (6"–1')
1,2–DICHLOROBENZENE	570	1700
1,4–DICHLOROBENZENE	120	310
MERCURY	0.42	0.29
COPPER	75.3	42
ACENAPHTHYLENE	300	–
FLUORANTHENE	11000	1600
LEAD	211	91.2
NICKEL	24.6	17.5
ZINC	184	–
2–METHYLNAPHTHALENE	240	120
ACENAPHTHENE	300	100
ANTHRACENE	1100	170
BENZO(a) ANTHRACENE	3200	490
BENZO(a) PYRENE	3000	330
BENZO(b) FLUORANTHENE	5400	600
BENZO(k) FLUORANTHENE	3300	190
CHRYSENE	4300	670
FLUORENE	500	170
NAPHTHALENE	320	140
PHENANTHRENE	4000	1100
PYRENE	5600	1300
DI BENZO(a,h) ANTHRACENE	130	59
CHLOROBENZENE	6	–
PCB–1260	2400	330
SILVER	4	–
ARSENIC	17.7	8.9
2,3,7,8–TCDD	9.1	–
CADMIUM	13.3	6
CHROMIUM TOTAL	44.7	–
p,p–DDD	–	140
p,p–DDT	–	480
MANGANESE		

TMCSD	10a (0–6")	10b (6"–1')
1,2–DICHLOROBENZENE	97	–
ACENAPHTHYLENE	82	–
FLUORANTHENE	2800	690
LEAD	36.5	40.7
ACENAPHTHENE	120	–
ANTHRACENE	340	120
BENZO(a) ANTHRACENE	1700	460
BENZO(a) PYRENE	1200	310
BENZO(b) FLUORANTHENE	1700	320
BENZO(k) FLUORANTHENE	920	230
CHRYSENE	1500	340
FLUORENE	200	–
NAPHTHALENE	87	–
PHENANTHRENE	1700	560
PYRENE	2400	280
DI BENZO(a,h) ANTHRACENE	–	70
CHLOROBENZENE	2	10
PCB–1260	3400	1600
SILVER	1.8	–
ARSENIC	6.2	6.6
CADMIUM	1.6	–
CHROMIUM TOTAL	–	64.6

TMCSD	11a (0–6")	11b (6"–1')
1,2–DICHLOROBENZENE	56	–
1,4–DICHLOROBENZENE	–	57
ENDRIN	36	–
ACENAPHTHYLENE	53	–
FLUORANTHENE	3300	1100
	42.2	68
NICKEL	–	27.8
2–METHYLNAPHTHALENE	140	–
ACENAPHTHENE	210	–
ANTHRACENE	440	130
BENZO(a) ANTHRACENE	2000	530
BENZO(a) PYRENE	1400	430
BENZO(b) FLUORANTHENE	1900	580
BENZO(k) FLUORANTHENE	1300	360
CHRYSENE	1400	470
FLUORENE	340	–
NAPHTHALENE	340	–
PHENANTHRENE	2500	740
PYRENE	2800	860
DI BENZO(a,h) ANTHRACENE	320	–
CHLOROBENZENE	5	4
PCB–1260	1500	1100
SILVER	–	3190
p,p–DDD	30	20
p,p–DDE	8.3	5.7

LF5SD		
ALPHA–CHLORDANE	9	–
BENZO(a) ANTHRACENE	–	150
BENZO(a) PYRENE	160	140
	120	350
CHRYSENE	230	230
COPPER	18.2	18.8
FLUORANTHENE	510	400
PARATHION, METHYL	2.9	–
PCB–1260	580	1000
PHENANTHRENE	270	210
p,p–DDE	24	25
p,p–DDT	66	–
DIELDRIN	–	8.8
ENDRIN	–	13

LF5SD	2a (0–6")	2b (6"–1')
ALPHA–CHLORDANE	120	380
ACENAPHTHENE	140	90
ARSENIC	12.5	11.2
BENZO(a) ANTHRACENE	1100	1700
BENZO(a) PYRENE	1400	1800
BENZO(b) FLUORANTHENE	1500	3200
BENZO(k) FLUORANTHENE	1500	1300
	880	990
CHRYSENE	2300	1800
COPPER	41.2	77
FLUORANTHENE	2300	3300
	178	252
MANGANESE	1210	660
MERCURY	1	0.94
NICKEL	18.4	30.1
PCB–1260	33000	110000
PENTACHLOROPHENOL	10000	–
PHENANTHRENE	1100	1800
2,3,7,8–TCDD	22	38
	334	319
GUTHION	–	180
CHROMIUM	–	32.6
GAMA–CHLORDANE	–	2200

LF5SD	3a (0–6")	3b (6"–1')
ALPHA–CHLORDANE	24	–
ACENAPHTHENE	140	180
ACENAPHTHYLENE	–	100
BENZO(a) ANTHRACENE	1400	1500
BENZO(a) PYRENE	1700	1200
BENZO(b) FLUORANTHENE	2000	1700
BENZO(k) FLUORANTHENE	1600	1200
	1300	360
CHRYSENE	2500	1400
COPPER	–	18.7
FLUORANTHENE	2000	2300
	39.6	50.8
MANGANESE	476	294
MERCURY	0.29	0.26
GUTHION	–	140
PCB–1260	11000	48000
ANTHRACENE	–	360
PHENANTHRENE	1500	1600
2,3,7,8–TCDD	4.1	13

NOTES
1. All units are in ppb (ug/kg) except for inorganics, cyanide, and total glycols, which are in ppm (mg/L or mg/kg), and dioxin which is in ppt (ng/kg or pg/L).
2. Source: AFBCA, Feb 2001.

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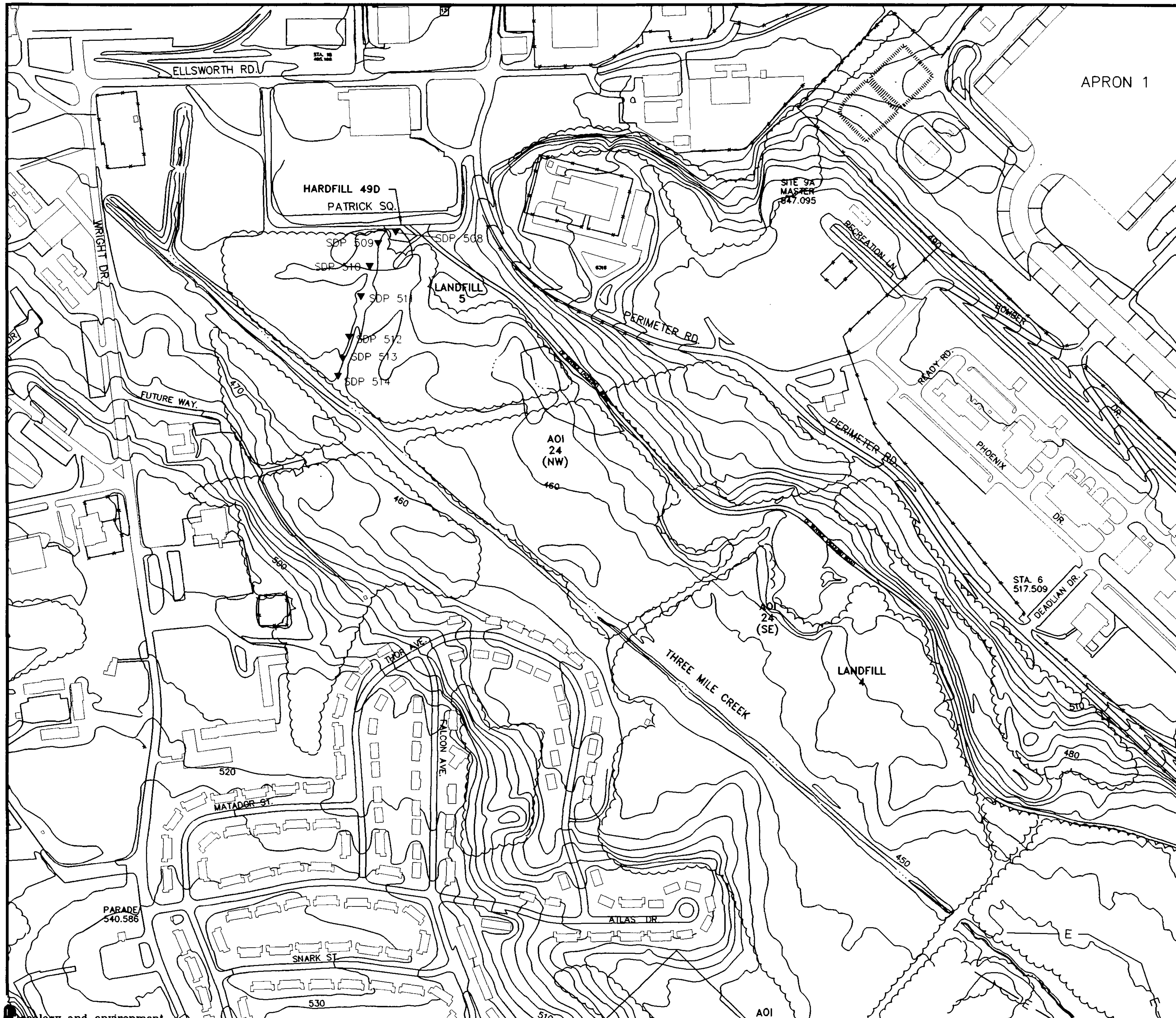
Figure 2–3c

REMEDIAL INVESTIGATION
SEDIMENT SAMPLE RESULTS
UPPER THREE MILE CREEK

KE6S701BFS.dwg



LEGEND

▼ ADDITIONAL STUDY SEDIMENT SAMPLE (PARSONS 1997)

NOTES:

1. ADDITIONAL ANALYTICAL RESULTS ARE IN $\mu g/kg$.

SDP 508 (0.–0.5')	
AROCLOR–1242	70
AROCLOR–1260	80
SDP 508 (1–1.5')	
AROCLOR–1260	390

SDP 509 (0–0.5')	
AROCLOR–1260	230
SDP 509 (1–1.5')	
AROCLOR–1260	160

SDP 510 (0–0.5')	
AROCLOR–1260	150
SDP 510 (1–1.5')	
AROCLOR–1260	6,900

SDP 511 (0–0.5')	
AROCLOR–1260	8,940
SDP 511 (1–1.5')	
AROCLOR–1260	80

SDP 512 (0–0.5')	
AROCLOR–1260	65,000
SDP 512 (1–1.5')	
AROCLOR–1260	50

SDP 513 (0–0.5')	
AROCLOR–1260	3,610

SDP 514 (0–0.5')	
AROCLOR–1260	230

N

SCALE IN FEET

0 400 800 1,200

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Figure 2–4
CONTAMINANTS IN SEDIMENT
FROM ADDITIONAL SAMPLES
EXCEEDING PRELIMINARY SCREENING VALUES
UPPER THREE MILE CREEK

ecology and environment

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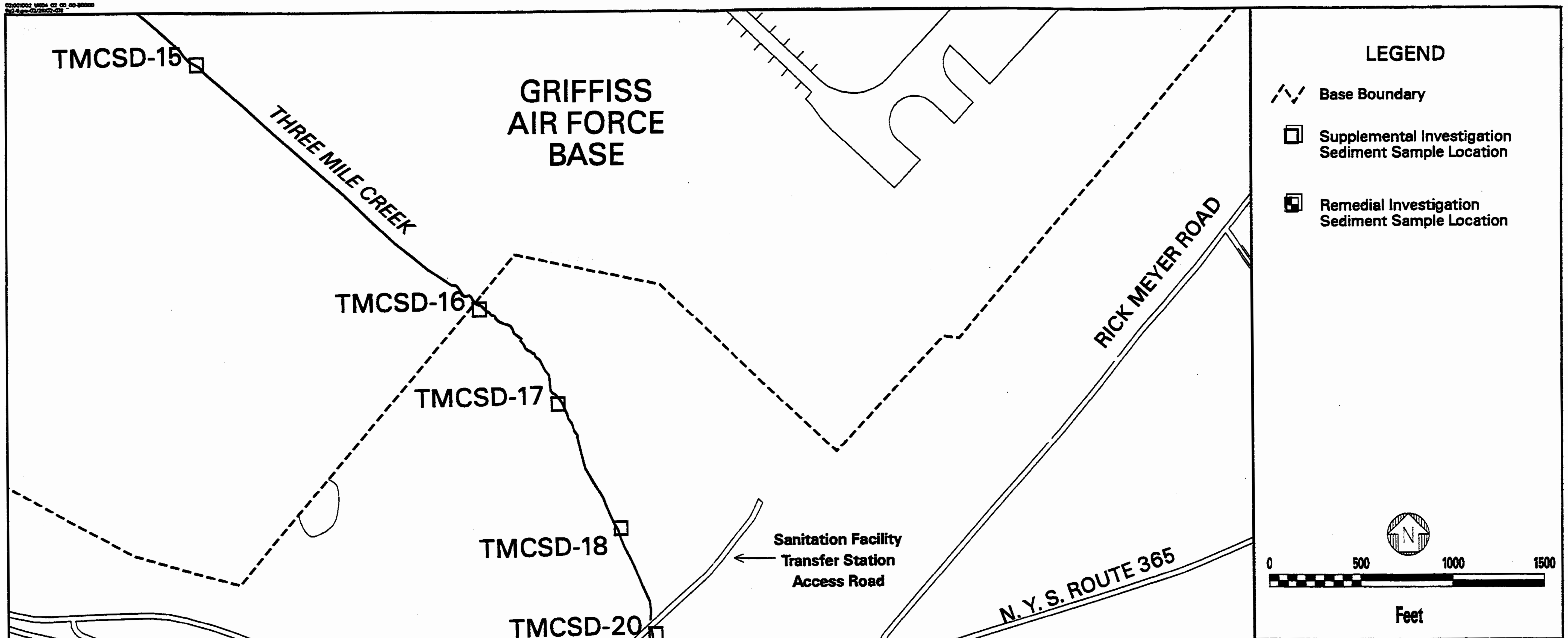

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Figure 2-5

Sediment Contaminants Exceeding Preliminary Screening Values

Lower Three Mile Creek

KE6S710B

TMCSD-15	
ANTHRACENE	290
BENZO(A)ANTHRACENE	760
BENZO(A)PYRENE	700
BENZO(B)FLUORANTHENE	680
BENZO(K)FLUORANTHENE	1,100
CHRYSENE	850
DIBENZ(A,H)ANTHRACENE	110
FLUORANTHENE	1,400
FLUORENE	170
INDENO(1,2,3-CD)PYRENE	?????
PHENANTHRENE	1,300
PYRENE	1,700
2,3,7,8-TCDD EQUIVALENT	0.0034
AROCLOR 1260	400
LEAD	50,000

TMCSD-16	
ACENAPHTHENE	170
ANTHRACENE	360
BENZO(A)ANTHRACENE	710
BENZO(A)PYRENE	640
BENZO(B)FLUORANTHENE	600
BENZO(K)FLUORANTHENE	960
CHRYSENE	770
DIBENZ(A,H)ANTHRACENE	77
FLUORANTHENE	1,300
FLUORENE	280
INDENO(1,2,3-CD)PYRENE	???????/
2-METHYLNAPHTHALENE	88
PHENANTHRENE	1,400
PYRENE	1,600
2,3,7,8-TCDD EQUIVALENT	0.0011
AROCLOR 1260	400

TMCSD-17	
TETRACHLOROETHENE	6.4
ANTHRACENE	270
BENZO(A)ANTHRACENE	810
BENZO(A)PYRENE	800
BENZO(B)FLUORANTHENE	750
BENZO(K)FLUORANTHENE	970
CHRYSENE	900
DIBENZ(A,H)ANTHRACENE	130
FLUORANTHENE	1,700
FLUORENE	130
INDENO(1,2,3-CD)PYRENE	???????/
PHENANTHRENE	1,100
PYRENE	1,700
4,4'-DD	7.6
2,3,7,8-TCDD EQUIVALENT	0.0060
AROCLOR 1260	370

TMCSD-18	
ANTHRACENE	170
BENZO(A)ANTHRACENE	540
BENZO(A)PYRENE	570
BENZO(B)FLUORANTHENE	600
BENZO(K)FLUORANTHENE	860
CHRYSENE	660
DIBENZ(A,H)ANTHRACENE	92
FLUORANTHENE	1,100
FLUORENE	88
INDENO(1,2,3-CD)PYRENE	79
PHENANTHRENE	750
PYRENE	1,400
2,3,7,8-TCDD EQUIVALENT	0.0064
AROCLOR 1260	590
LEAD	45,000

TMCSD-19	
ANTHRACENE	130
BENZO(A)ANTHRACENE	430
BENZO(A)PYRENE	440
BENZO(B)FLUORANTHENE	460
BENZO(K)FLUORANTHENE	630
CHRYSENE	540
FLUORANTHENE	840
FLUORENE	68
INDENO(1,2,3-CD)PYRENE	78
PHENANTHRENE	560
PYRENE	960
2,3,7,8-TCDD EQUIVALENT	0.0062
AROCLOR 1260	470
LEAD	45,000

TMCSD-20	
4-METHYLPHENOL	100
ACENAPHTHENE	650
ANTHRACENE	1,200
BENZO(A)ANTHRACENE	2,000
BENZO(A)PYRENE	1,700
BENZO(B)FLUORANTHENE	1,600
BENZO(K)FLUORANTHENE	2,100
CHRYSENE	2,000
DIBENZ(A,H)ANTHRACENE	250
FLUORANTHENE	3,400
FLUORENE	910
INDENO(1,2,3-CD)PYRENE	250
2-METHYLNAPHTHALENE	440
NAPENANTHRENE	1,200
PHENANTHRENE	4,000
PYRENE	4,900
2,3,7,8-TCDD EQUIVALENT	0.0032
AROCLOR 1260	180

TMCSD-21	
ANTHRACENE	180
BENZO(A)ANTHRACENE	97
BENZO(A)PYRENE	120
BENZO(B)FLUORANTHENE	89
BENZO(K)FLUORANTHENE	140
CHRYSENE	140
2,3,7,8-TCDD EQUIVALENT	0.0018
AROCLOR 1260	27

TMCSD-22	
AROCLOR 1260	270

TMCSD-23-IL	
AROCLOR 1260	2100
CADMIUM	8320
LEAD	178,000

TMCSD-24-NS	
AROCLOR 1260	1700
CADMIUM	6440
LEAD	125,000

TMCSD-25-MC	
AROCLOR 1260	1430
CADMIUM	5690
LEAD	85,700

TMCSD-26-NS	
AROCLOR 1260	149

TMCSD-27-MC	
AROCLOR 1260	1130
CADMIUM	7570
LEAD	143,000

TMCSD-28-OL	
AROCLOR 1260	824
CADMIUM	7860
LEAD	147,000

NOTES:

1) ALL ANALYTICAL RESULTS ARE IN µg/kg, UNLESS OTHERWISE NOTED.

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Figure 2–5a
CONTAMINANTS IN SEDIMENT EXCEEDING PRELIMINARY SCREENING VALUES
LOWER THREE MILE CREEK

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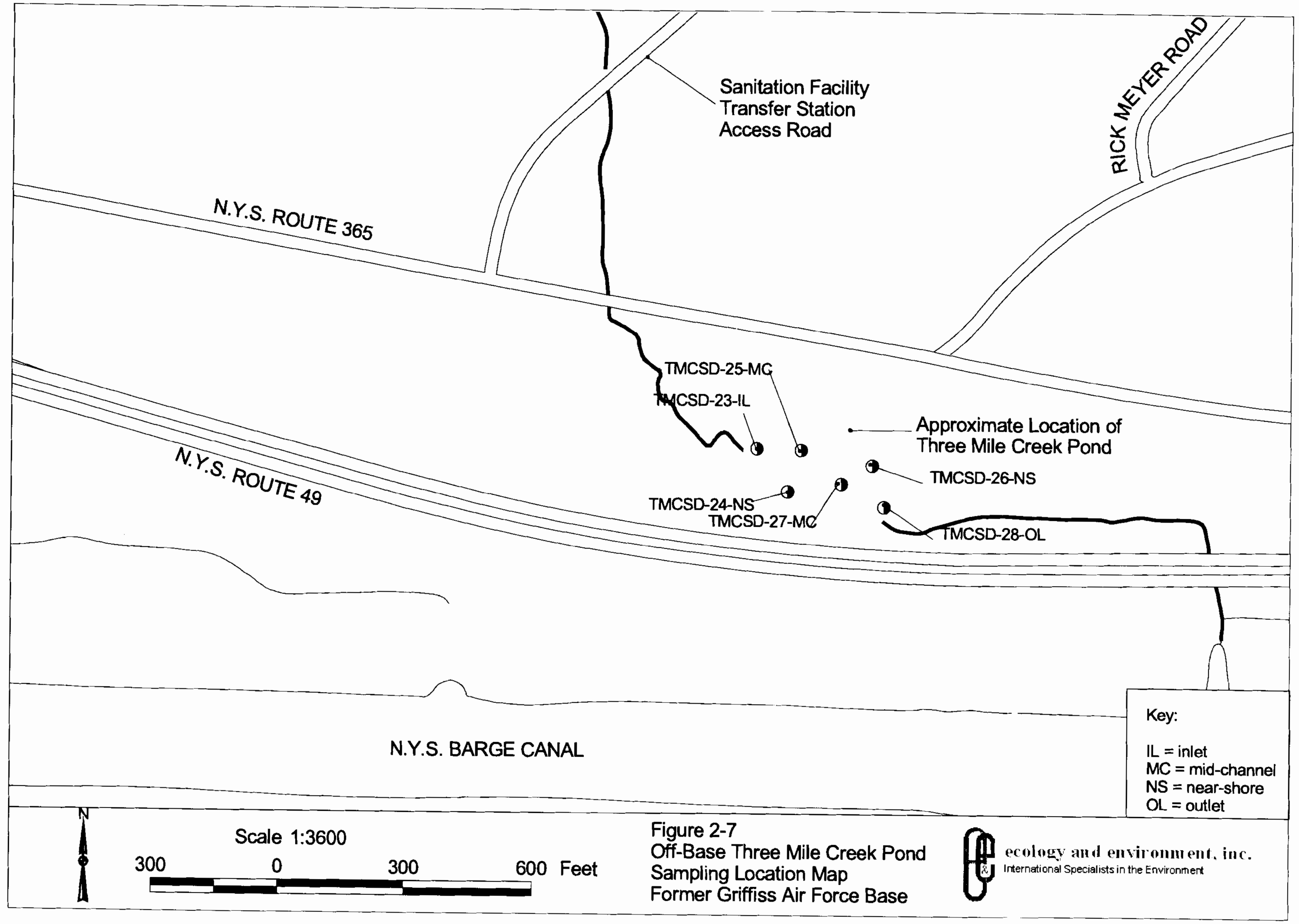

Figure 2-7
Off-Base Three Mile Creek Pond
Sampling Location Map
Former Griffiss Air Force Base

3 2001 Three Mile Creek Sediment Sampling

3.1 Introduction

E & E performed the 2001 TMC sediment sampling field investigations between May 22, 2001, and June 5, 2001 (E & E 2001a). Samples were shipped to E & E's Analytical Services Center (ASC) located in Lancaster, New York, for all laboratory analyses except for dioxins/furans analyses, which were performed by Triangle Laboratories, located in Durham, North Carolina. Split samples were analyzed by the United States Army Engineer Research and Development Center (ERDC) Quality Assurance Laboratory, located in Omaha, Nebraska. Sample location and creek bed elevation surveys were performed by LaFave, White, and McGivern, L.S., P.C. located in Boonville, New York.

This section of the revised FS summarizes the data findings of the investigation. Recommendations for the remediation of the TMC channel and pond were developed in conjunction with the conclusions of the current wetland mitigation program being evaluated for the on-base portion of the TMC channel and floodplain. Recommendations are presented in Section 5 of this report.

3.2 Purpose of Investigation

The purpose of this investigation was to:

- Determine the type of contaminants present in the sediments in the TMC channel, off-base pond, and the LF6 wetland sediments;
- Define the vertical and lateral extent of contamination in the on-base portion of TMC channel and Landfill 5 (LF5) tributary and off-base pond; and

- Determine the appropriate depth for sediment remediation.

3.3 Field Investigation

All work was performed in accordance with the May 2001 USACE-approved Field Sampling Plan (FSP) (E & E 2001d), which was an addendum to the E & E 1998 TMC channel and 1999 TMC pond FSPs (E & E 1998b and 1999c), and the 1997 SI Final Work Plan (E & E 1997a). Deviations from the FSP methodologies are documented on Field Adjustment Forms presented in Appendix A of this report. In addition, due to unforeseen difficulties encountered in the field, a number of planned sample intervals were skipped at some locations and additional samples were collected in other locations. The deviations from the planned sample intervals and locations are summarized in Table A-1 of Appendix A.

3.3.1 TMC On-Base Channel and Landfill 5 Tributary Sediment Sampling

Twenty-two sample locations were selected from the on-base portion of the creek based on the AFBCA's February 23, 2001, Additional Sediment Sampling Map, and as described in E & E's May 2001 FSP. Three distinct depth intervals were selected to be sampled at the selected locations including the 0.5- to 1.5-foot, the 1.5- to 2.5-foot, and the 2.5- to 3.5-foot intervals to supplement the 0- to 0.5-foot and 0.5- to 1.0-foot intervals sampled during the RI (Law 1996). If an interval was sampled at a location during the RI, the interval was not included in the May 2001 FSP (E & E 2001d). A total of 64 samples were planned to be collected from the TMC channel for laboratory analysis (see Table 3-1 and Figure 2-6).

During the field activities, it was discovered that the sediment core sampler was not capable of penetrating the sediments to the desired depth and it was therefore modified in the field. In addition, at several locations (see Table 3-2 and Figure 2-6) the underlying soils, consisting primarily of tight sands, were encountered beneath the sediments. Because of the underlying tight soils, the sediment core sampler did not always retrieve full recovery. Therefore, a number of planned sample intervals were either skipped or modified due to limited penetration or recovery (see Field Adjustment Form in Appendix A and Tables 1A and 2A). Table 3-1 presents a listing of the samples, including planned, skipped, and additional samples; Table 3-2 presents a summary of the actual sample depths and matrix descriptions.

As per the FSP, all the samples were collected using dedicated acetate liners and catchers in the sampler core tube. At each location, the top 6 inches of sediment were removed and the sampler was twisted and pushed into the sediments. At some locations, resistance was encountered and the sampler was pounded to the desired depth of 3.5 feet below top of creek bed (BTOCB) using a slam bar. The depth that resistance was encountered was recorded. In some cases refusal was encountered before the 3.5-foot depth was reached. The sample location was then moved a few feet to an undisturbed area, and the process was repeated. The length of the retrieved sample was measured and then the liner was cut to specific lengths to partition samples into the desired depths. When native soils were encountered, the depth intervals were modified so that the samples were representative of the sediment and the native soil portions. All samples were submitted for TCL VOCs, SVOCs, pesticides, and PCBs; dioxins and furans; TRPH; TOC; TAL metals, including mercury and hexavalent chromium; cyanide; and percent solids (see Table 3-1) analyses using the same analytical methods and data quality objectives as those used during the RI. However, at certain locations where the gravel creek bottom was encountered, insufficient sample volume was retrieved for analysis of the full suite of parameters. Therefore, some of the planned analyses were eliminated, and only the most critical parameters were tested. The parameters were prioritized in the following order, starting with the most critical: PCBs, metals, pesticides, SVOCs, hexavalent chromium, TOC, TRPH, cyanide, then VOCs (see field adjustment form in Appendix A). The samples were tested for an abbreviated set of analyses. As previously agreed upon with the regulators and per the FSP, analyses for organophosphorus pesticides, organochlorine herbicides, and radionuclides were not performed under this investigation.

Sampling was performed between May 22 and June 5, 2001. All samples were immediately placed in a cooler with ice and they were packaged and shipped to the off-site laboratory in accordance with the procedures outlined in the FSP. All work was performed by personnel using Level D protection.

The native soils consisted of either uniformly sorted, brown tight sands, or also tight low plasticity clay with some silt and fine sand, or alternating layers of sand and clay. At 16 of the 25 sampling locations, these tight underlying native soils were readily distinguished from the creek sediments and were sampled as a separate sample even if they were encountered at depth intervals other than the predetermined ones. The elevation where native soils were encountered varied from 441.87 feet above mean sea level (AMSL) at TMCSD-11 to 454.11 feet AMSL at LF5SD-1 (see Table 3-3 and Figure 2-6).

During the sampling activities and as per the FSP, the creek water depth in the center of the channel and the width of the creek from the top of each high water bank was measured at each sampling location. All sample locations and the elevation of the centerline of the creek channel (where accessible) were recorded by the subcontracted surveyor (see Appendix B). Table 3-3 presents the physical characteristics of the creek at each sampling location, including width of the creek, depth of water, surveyed elevation of top of creek bed (where accessible), and elevation of top of native soils, where encountered.

3.3.2 LF6 Wetland Sediment Sampling

According to the FSP, sediment samples were also collected from the 0- to 0.5-foot interval from four LF6 wetland locations (LF6SD-1-1 through LF6SD-4-1) (see Figure 3-1 and Table 3-1). LF6 wetland samples were collected on May 23 and 24, 2001, using dedicated stainless steel spoons. All LF6 samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs; dioxins and furans; TRPH; TAL metals, including hexavalent chromium and mercury; cyanide; TOC; and percent solids.

All samples were immediately placed in a cooler with ice and were packaged and shipped to the off-site laboratory in accordance with the procedures outlined in the FSP. All work was performed by personnel using Level D protection.

3.3.3 Off-Base TMC Pond Sediment Sampling

TMC goes through a small pond located south of NYS Route 365, just upstream from NYS Route 49. Sediment samples were collected from this small off-base pond on May 25 and June 5, 2001 (see Figure 2-7). The samples were collected from the approximate locations sampled in November 1999. One sample was collected immediately downstream of the inlet of the pond and one sample was collected immediately upstream of the pond outlet. The length of the pond between the inlet and outlet sampling points was then divided in two even segments. Two samples were collected inside each segment, not including the inlet and outlet samples. A near-shore and a mid-channel sample were collected from each segment. The two near-shore samples were collected at opposite sides of the pond. The mid-channel samples were collected at the deepest point of each segment (see Table 3-1). The sampling team determined the deepest location in each segment using a weighted measuring tape and a rod. All sampling points were accessed by boat.

The November 1999 sediment samples were collected from the 0- to 0.5-foot below surface interval. Under this investigation, two depth-specific samples (1.5 to 2.5 feet and 2.5 to 3.0 feet) were collected at each location using the sediment core sampler as specified in the FSP (see Table 3-1).

In addition to the 12 original samples collected from the pond, two duplicate and split samples, one matrix spike/matrix spike duplicate (MS/MSD), and one equipment rinsate were also collected, in accordance with the 1997 QAPjP and 2001 QAPjP addendum.

The samples were collected using the sediment core sampler assembled with a dedicated acetate liner and catcher in the sampler core tube. The water depth was measured and recorded for each location (see Table 3-3). The retrieved sample was measured and the liner was cut to the appropriate lengths in order to partition the retrieved sample at the desired depth intervals. All the pond samples were analyzed for the same parameters as the 1999 SI pond samples (i.e., TCL PCBs, TAL lead and cadmium, TOC, and percent solids).

All samples were immediately placed in a cooler with ice and were packaged and shipped to the off-site laboratory in accordance with the procedures outlined in the FSP. All work was performed by personnel using Level D protection.

3.4 Summary of Results

This section discusses the findings and conclusions of the 2001 TMC sampling program. The TMC channel and pond and the Landfill 6 wetlands sediment samples were analyzed for TCL VOCs, SVOCs, pesticides; PCBs; dioxins/furans; TRPH; metals (including mercury and hexavalent chromium); cyanide; TOC; and percent solids. Summaries of the complete analytical data for all the samples collected are presented in Appendix C.

3.4.1 On-Base Three Mile Creek Channel and Landfill 5 Tributary

Summaries of the analyte concentrations detected in the TMC on-base channel and the Landfill 5 tributary sediments are presented in Table 3-4a, and native soils are presented in Table 3-4b. Positive values are in bold, shaded cells indicate values that exceed the most stringent ecological criteria, and cells that are "boxed" indicate values that exceed human health risk levels. The samples were divided into sediment and native soil and presented in separate tables because the screening criteria is dependant on TOC concentrations, and TOC was averaged for each group due to great difference between the groups. Figure 3-1 presents the sample locations. The total concentrations of PCBs, pesticides, dioxins, VOCs, PAHs, and the individual concentrations of four pesticides (4,4-DDD, 4,4-DDT, total of alpha and beta-chlordane, and total of heptachlor and heptachlor epoxide), four VOCs (1,2-dichlorobenzene [1,2-DCB], 1-4-dichlorobenzene [1,4-DCB], benzene, and chlorobenzene), one PAH (benz(a)anthracene), and four metals (arsenic, cadmium, copper, and lead) are also presented graphically as vertical profiles in Figures 3-2 through 3-10. The vertical profile figures also include the RI data from samples collected from 0- to 0.5-foot and 0.5- to 1-foot depths. However, in some cases, the 2001 sample intervals overlap the 0.5- to 1-foot RI interval. In those cases, the 2001 data is presented in the figures.

PCBs

Two PCBs (Aroclors 1242 and 1260) were detected in the 2001 samples collected from the on-base portion of the TMC channel and its Landfill 5 tributary. Aroclor 1242 was detected in one sample, TMCSD-4-Z4, at a concentration of 71.4 µg/kg, which is slightly higher than its ecological screening level of 70 µg/kg. Aroclor 1260 was detected at all the sampling locations in at least one of the depth intervals sampled during this investigation. The levels of Aroclor 1260 ranged from non-detect in 12 samples to 45,300 µg/Kg in upgradient sample TMCSD-1-Z3. The samples in which PCBs were not detected are the deepest samples at each location. All but two sediment samples and about half of the native soil samples contained Aroclor 1260 in excess of ecological screening criteria, and TMCSD-1, -2, -3, -5, and –11 contained levels in excess of the human health risk level. The ecological screening level was exceeded at all depths 0 to

3.5 feet BGS; however, the human health risk level was only exceeded between depths of 1.1 to 2.7 feet BGS.

Figure 3-2 presents a vertical profile of PCB concentrations in samples collected during both the RI and this investigation, with the lowest concentration range (shown in the figure as orange) representing PCB concentrations lower than the ecological screening level. PCBs less than 1000 μg/Kg (1 part per million [PPM]) are represented by orange, light blue, green, and light purple. Only one sample, TMCSD-5-1, in the 2.5- to 3.5-foot interval, contained PCBs at concentrations higher than 1 PPM. In general, PCB concentrations are higher in the upstream locations, with the highest concentration of 110,000 μg/Kg detected in the RI sample LF5SD-2b (at the 0.5-to 1-foot depth). Such high PCB levels were not found in any of the other samples. Since the RI was performed between September 1993 and April 1995, the RI shallow intervals have since been either buried under new sediments or have been transported and deposited downstream. Therefore, a direct comparison of shallow (0- to 1-foot interval) versus deep (1- to 3.5-foot interval) samples cannot be performed. However, a general decreasing trend in samples from both investigations is observed not only from upstream to downstream, but also with depth. In addition, the shallow RI samples contained higher concentrations than the samples collected in 2001 at deeper depths at the same location, except for sample TMCSD-11-Z3 (1.1- to 2.3-foot depth), which contained Aroclor 1260 at a concentration of 11,700 μg/Kg, which is an order of magnitude higher than those detected at the shallower intervals at this location (1,500 and 1,100 μg/Kg in the 0- to 0.5-foot and 0.5- to 1-foot depth samples, respectively). The creek bottom at this location is deep, forming a mini-plunge pool from water discharging from a culvert under a dirt roadbed. The deeper water allows more sedimentation to take place, even during higher flow conditions. The high concentration of PCBs in this location is confined to the sediment portion of the creek, leaving the underlying soils relatively free of PCB contamination. Moreover, in all cases where the native soils were sampled, they were found to contain lower concentrations of PCBs than the samples collected from the sediments deposited above them, and in eight locations (LF5SD-2, LF5SD-3, TMCSD-5, -9-1, -9-4, -10, -10-2, -and -11), PCBs were not detected at all in the native soil sample portion.

Pesticides

Eighteen pesticides were detected in the on-base portion of the TMC channel and its Landfill 5 tributary during the 2001 investigation and 16 were found at concentrations exceeding the ecological screening criteria in at least one sample. None of these compounds exceeded human health risk levels. The concentrations of pesticides may be biased high where high levels of PCBs are present due to matrix interferences.

Figure 3-3 presents a vertical profile of total pesticide concentration detected in samples collected during both the RI and this investigation. Seven deep (LF5SD-2, -3, TMCSD-5-2, -9-1, -9-3, -9-4, and -10 from 2001) and five shallow (TMCSD-4, -5, -8, -9, and -10 from the RI) samples did not contain any pesticides. High total pesticide concentrations (higher than 1,000 μg/Kg) were detected in samples TMCSD-5-Z3, TMCSD-7b, TMCSD-3-Z3, LF5SD-2b, TMCSD-10-Z4, and TMCSD-6b. Although, in general, the deepest samples contain lower total pesticides concentrations, samples TMCSD-4-Z4, and -10-3-Z4 were found to have the highest concentrations at these locations. Also, the Z3 samples collected from the north tributary and location TMCSD-5 were found to have consistently higher concentrations than the rest of the samples collected at these locations. In addition, with a couple exceptions, the 0.5- to 1-foot interval samples collected from the main channel were found to have the highest concentrations.

Figures 3-3a through 3-3d present vertical profiles for selected pesticides (4,4-DDD, 4,4-DDT, total of alpha and beta-chlordane, and total of heptachlor and heptachlor epoxide). These pesticides were selected because they were found at concentrations higher than the screening criteria during this investigation and because they were also detected in both deep and the intermediate sample depths. The first range of concentrations presented in Figures 3-3a and 3-3b (shown in the figure as orange) represents levels lower than the screening criteria. The first two ranges (shown in orange and blue) in Figures 3-3c and 3-3d represent levels lower than the screening levels for the native soils (2% TOC) and sediment samples (5.4%), respectively.

Concentrations of 4,4-DDD and 4,4-DDT were detected higher than screening criteria across the whole length of the on-base portion of the creek and its tributaries. Although in most cases the deep samples contained these pesticides at concentrations lower than the screening levels, 4,4-DDD was found in the Z4 samples at concentrations exceeding the screening levels at two locations (TMCSD-2 and TMCSD-10-3), and 4,4-

DDT was found in concentrations exceeding the screening levels at six locations (TMCSD-1, TMCSD-3, TMCSD-4, TMCSD-5, TMCSD-6, and TMCSD-10-3). Similarly, total chlordanes were not detected at concentrations higher than the screening levels in most of the deep samples. They were, however, detected at concentrations higher than the screening level at four locations (TMCSD-1, TMCSD-4, TMCSD-5, and TMCSD-6). Heptachlor epoxide and epoxide were detected at a few locations during this investigation, and, with the exception of sample TMCSD-7b, they were not detected at all during the RI. The highest concentrations were detected in upstream locations, at the confluence of the two tributary channels. At location TMCSD-5-1, they were also detected in the deep sample collected from the soil layer at a depth of 2.8 to 3.5 feet BTOCB.

The following sample locations contained pesticides at concentrations higher than their screening levels in the deep sediment/soil layer: TMCSD-1 (4,4-DDT, and gamma-chlordane), TMCSD-2 (4,4-DDD and heptachlor), TMCSD-3 (4,4-DDT and heptachlor epoxide), TMCSD-4 (4,4-DDT, alpha-chlordane, and heptachlor epoxide), TMCSD-5 (4,4-DDT, alpha-chlordane, and heptachlor epoxide), TMCSD-5-1 (heptachlor epoxide), TMCSD-6 (4,4-DDT, alpha-chlordane, and endosulfan I), LF5SD-1 (alpha-chlordane), TMCSD-8-2 (gamma-chlordane and heptachlor epoxide), TMCSD-9 (heptachlor epoxide), TMCSD-10-2 (heptachlor epoxide and methoxychlor), TMCSD-10-3 (4,4-DDD and 4,4-DDT), and TMCSD-11 (heptachlor epoxide).

Dioxins

Dioxins were detected in 33 of the 49 samples tested (including duplicates) at concentrations ranging from 0.02 to 72.076 nanograms per kilogram (ng/Kg). Dioxins were detected at levels exceeding the ecological screening criterion of 10 ng/Kg and 1 ng/Kg for sediment and native soil, respectively, in 12 of the sediment samples analyzed. Dioxins were detected above ecological criteria in only one of the native soil samples (TMCSD-10-3-24). The human health risk levels for dioxins were not exceeded in any of the samples. The highest concentrations were detected in samples TMCSD-1-Z3, TMCSD-5-Z3, TMCSD-7-Z3, and TMCSD-7-1-Z2.

Figure 3-4 presents a vertical profile of total 2,3,7,8 tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD), of which equivalent concentrations were detected in samples collected during both the RI and this investigation. In general, dioxin concentrations decreased both downstream and with depth. Although dioxins exceeded ecological screening criteria in the 2.5- to 3.5-foot interval in five samples, all five samples were sediment, not native soil. The highest concentrations were consistently detected in the 1.5- to 2.5-foot depth.

VOCs

Twenty-one VOCs were detected in the on-base portion of the TMC channel and its Landfill 5 tributary during the 2001 investigation. Twelve samples did not contain any VOCs at various depth intervals. The only VOCs detected at concentrations higher than ecological screening criteria are 1,2-DCB, 1-4-DCB, benzene, and chlorobenzene. No VOCs were detected above human health risk levels.

DCB compounds are target compounds for both VOCs, by Method 8260B, and SVOCs, by Method 8270C. The DCBs have high boiling points and are at the high end of the VOC purgeable range and low end of the SVOC extraction range. The base practical quantitation limit (PQL) for the VOC method is 10 μg/Kg and the base PQL for the SVOC method is 330 μg/Kg. The PQLs are corrected for percent moisture and a dilution factor. The results show that the SVOCs results are consistently higher than the VOC results for the DCBs. In the five cases where DCBs were detected by the VOC method and not the SVOC method, the SVOC method samples were analyzed at a dilution and had an elevated PQL. In summary, the results indicate that the purge efficiency of the DCBs has been significantly reduced in the VOC analysis, most likely due to the high level of organic carbon in the sediments; therefore, the results reported as extractable SVOCs are more reliable.

Figure 3-5 presents a vertical profile of total VOC concentration detected in samples collected during both the RI and this investigation. The highest total VOC concentrations (higher than 100,000 ppb) were detected at location TMCSD-7 during both investigations. Upstream, most of the RI samples contained lower total VOC levels than the 2001 deeper samples collected at the same location. Nine of the 13 native soil samples collected from the main channel contained total VOCs at concentrations lower than 1 μg/Kg. Total VOC concentrations did not exceed 100 μg/Kg in any of the 2001 samples collected downstream of TMCSD-8-2, although such concentrations were detected in the shallow RI samples TMCSD-9a and TMCSD-9b (0- to 0.5-foot and 0.5- to 1-foot depth).

Figures 3-5a through 3-5d present vertical profiles for the four VOCs detected at concentrations higher than screening levels. Since 1,2-DCB and 1,4-DCB were analyzed by both methods, the highest levels detected were used to generate these illustrations. The first two ranges (shown in orange and blue) in these figures represent concentrations lower than the screening levels for the native soils (2% TOC) and sediment samples (5.4%).

The LF5 channel and north channel samples did not contain any of the four VOCs selected (1,2-DCB, 1,4-DCB, benzene, chlorobenzene) at concentrations higher than the screening levels, except for chlorobenzene in sample LF5SD-2a. Moreover, none of the 2001 samples collected downstream of location TMCSD-7 contained these four compounds at concentrations higher than their screening levels. Benzene was detected at one location, TMCSD-7, at concentrations higher than screening levels. At that location, the two shallow samples collected during the RI and the 1.5- to 2.5-foot interval sample (Z3) collected during this investigation were found to contain very high concentrations of the four VOCs, whereas the concentrations found in the 2001 0.5- to 1.5-foot interval sample (Z2) were several orders of magnitude lower. The highest concentration of 1,2-DCB was found in sediment sample TMCSD-5-2-Z3 (1.2- to 2.7-foot depth); the highest concentration of 1,4-DCB was detected in RI sample TMCSD-7b (0.5- to 1-foot depth) and 2001 sample TMCSD-5-Z4 (2.5- to 3.5-foot depth), and the highest benzene and chlorobenzene concentrations were detected in RI sample TMCSD-7a (0- to 0.5-foot depth) and 2001 sample TMCSD-7-Z3 (1.5- to 2.4-foot depth). None of the native soil samples contained the four VOCs at concentrations higher than their screening levels.

SVOCs

Thirty-one SVOCs were detected in the on-base portion of the TMC channel and its Landfill 5 tributary during the 2001 investigation, and 26 were found at concentrations exceeding the screening criteria in at least one sample. Most of these exceedences were ecological; however, two PAHs [benzo(a)pyrene and dibenzo(a,h)anthracene] exceeded human health risk levels in four samples (TMCSD-1, -2, -3, and –5) 1.5 to 2.7 feet BGS. Seventeen samples did not contain any SVOCs at various depth intervals. SVOCs detected at concentrations higher than the screening criteria include 16 PAHs (carbazole and dibenzofluorene are very similar to PAHs so they are discussed with them in this report), three unchlorinated phenol compounds, and 1,2,4-trichlorobenzene 1,2-DCB, 1,3-DCB, and 1,4-DCB compounds. The results for the 1,2-DCB and 1,4-DCB are discussed in the VOCs section.

Figure 3-6 presents a vertical profile of total PAH concentration detected in samples collected during both the RI and this investigation. The highest concentrations of total PAHs were detected in the north channel and TMCSD-5. Twelve of the 16 native soil samples contained less than 1 μg/Kg of total PAHs. The shallow RI samples (0- to 0.5-foot depth) contained high concentrations of total PAHs. Similar concentrations were either detected in the 2001 samples collected at the same location or immediately downstream of them.

Figure 3-6a presents a vertical profile of benz(a)anthracene concentrations, with the lowest range (shown in orange) representing concentrations lower than the screening level. Benz(a)anthracene was selected for illustration because it was detected across the whole length of the on-base portion of TMC and its tributaries and has a relatively low ecological screening level. Benz(a)anthracene was detected at concentrations higher than its ecological screening level of 60 μg/Kg in four samples collected from the native soil layer (TMCSD-5-1-Z4, TMCSD-6-Z4, TMCSD-9-2-22, and TMCSD-10-3-24). Moreover, it was detected at concentrations higher than its screening level in five deep sediment samples (TMCSD-1, TMCSD-2, TMCSD-3, TMCSD-4, and TMCSD-5-1), all at the headwaters of the creek. Similar to other contaminants, a general decreasing trend is observed from upstream to downstream, with the highest concentration of this PAH found at upstream location TMCSD-5 and in the north channel.

TRPH

TRPH was detected in all 28 RI samples and 19 of the 25 2001 samples. There are no ecological or human health risk screening levels available for TRPH. Two of the 2001 samples in which TRPH was detected were collected from the native soils layer (TMCSD-5-1-Z4 and TMCSD-10-3-Z4). TRPH levels ranged from non-detectable (ND) to 10,700 mg/kg in RI sample TMCSD-6b (0.5- to 1-foot depth). The range of detected TRPH in the 0- to 0.5-foot depth interval from RI samples is 34.8 mg/kg to 9,450 mg/kg with an average of 3,000 mg/kg. The range of detected TRPH in the 0.5- to 3.5-foot depth interval from both RI and 2001 samples is 39.3 mg/kg to 10,700 mg/kg with an average of 1,400 mg/kg. TRPH was typically detected at above-average levels in both the surface and subsurface samples near the headwaters of the creek between the north channel and the LF5 channel (although the LF5 channel had levels well below average), and below-average levels were detected downstream near the installation boundary. TRPH was not generally detected in between these two areas. Each of these areas represent areas of increased deposition along the creek. Figure 3-7 presents a vertical profile of TRPH concentrations.

Metals and Cyanide

Twenty metals were detected in the on-base portion of the TMC channel and its LF5 tributary during the 2001 investigation, including 10 that were detected at concentrations exceeding their ecological screening criteria. The metals detected at concentrations higher than ecological screening criteria included arsenic, cadmium, chromium, copper, iron, lead, manganese, mercury, nickel, and zinc. Although metals were detected in every sample, no metal levels exceeded the ecological screening criteria in 13 samples, of which eight (mostly downstream) are of native soil beneath the creek sediments. Only one metal (arsenic) exceeded the human health risk level in one sample (TMCSD-1) at a depth of 1.8 to 2.4 feet BGS.

Figures 3-8 through 3-11 show vertical profiles for arsenic, cadmium, copper, and lead concentrations from both the RI and current investigation samples. Arsenic, copper, and lead were selected for illustration because they were found in the majority of the samples at levels exceeding ecological criteria and lead is a concern for the off-base pond; cadmium was selected because it is also a contaminant of concern for the off-base pond. The lowest range shown in each figure (shown in orange) represents concentrations lower than the screening level. The distribution of the metals concentrations is sporadic, except for a general decreasing trend in concentration from shallow to deeper samples. Also, similar to other contaminants, the 1.5- to 2.5-foot depth samples at TMCSD-10-3 contained higher concentrations of arsenic, cadmium, and lead; and TMCSD-11 contained higher concentrations of arsenic and cadmium than those found in the shallower and deeper samples. In addition, the shallow sample collected from TMCSD-4 during the RI contained higher concentrations of all four of these metals than the samples collected at deeper depths.

Arsenic, cadmium, copper, and lead levels generally exceeded ecological criteria in sediments only, not in native soils underlying the sediments. Most of the exceedences were at various depths near the headwaters and north and LF5 channels, and shallower depths further downstream. However, none of the LF5 samples contained cadmium at concentrations higher than the screening level. None of the samples collected downstream of location TMCSD-9 contained copper at concentrations higher than the ecological screening level of 16 mg/Kg. The highest copper level of 128 mg/Kg was found in sample TMCSD-8b (0.5- to 1-foot depth), collected during the RI. This location was not sampled during this investigation due to the presence of very soft, very loose, lightweight, organic materials found at this area. This material was not retrievable with the sampler and it was present everywhere between this location and TMCSD-7-1. The only other location where a similar copper concentration (97 mg/Kg) was detected was in upstream sample TMCSD-2-Z3 (1.8- to 2.4-foot depth), collected during this investigation.

Hexavalent chromium was detected in 13 of the samples at concentrations ranging from ND to 2.8 mg/Kg. One of the samples that contained hexavalent chromium was collected from the underlying soils.

Cyanide was detected in eight samples. None of the Landfill 5 samples or samples taken from downgradient of TMCSD-8-2 contained cyanide. Also, none of the native soil samples contained cyanide.

3.4.2 Landfill 6 Wetlands

Summaries of the analytical results for the Landfill 6 sediments are presented in Table 3-5.

PCBs

One PCB, Aroclor 1260, was detected in the Landfill 6 samples collected from the 0- to 0.5-foot BGS interval. PCB concentrations ranged from ND, in sample LF6SD-3-1-Z1, to 964 µg/Kg, in sample LF6SD-4-1-Z1. In all three samples in which Aroclor 1260 was detected, it was found at concentrations exceeding its ecological screening criterion of 5 µg/Kg. No PCBs were detected in the wetland sample above human health risk levels.

Pesticides

Twelve pesticides were detected in the Landfill 6 sediment samples. 4,4-DDD, 4,4-DDE, 4,4-DDT, endosulfan I and II, and heptachlor epoxide were found at concentrations exceeding their ecological screening criteria. The lowest concentration for five of these six pesticides was detected in sample LF6SD-3-1-Z1 (the lowest heptachlor epoxide was detected in LF6SD-4-1-Z1), and the highest concentrations were detected in sample LF6SD-4-1-Z1 (except for heptachlor epoxide). No pesticides were detected in the wetland samples above human health risk levels. The concentrations of pesticides may be biased high where high levels of PCBs were detected due to matrix interferences.

Dioxins

Concentrations of dioxins/furans detected in the Landfill 6 wetland sediment samples, ranged from 8.68 ng/kg to 47.113 ng/kg. Only one sample (LF65D-4-1-Z1) contained dioxins/furans above the screening level of 24 ng/kg.

VOCs

Two VOCs, 1,2-DCB and trichloroethene (TCE), were detected in the Landfill 6 samples. These compounds were detected in sample LF6SD-4-1-Z1 at levels lower than the ecological and human health risk screening criteria.

SVOCs

Sixteen SVOCs were detected in the Landfill 6 sediment samples. Twelve of these SVOCs, including 11 PAHs and benzoic acid, were detected at concentrations exceeding their ecological screening criteria. The PAHs detected at concentrations higher than screening criteria included anthracene, benz(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. All these PAHs were detected at concentrations higher than their ecological screening levels in sample LF6SD-4-1-Z1, which was also found to contain the highest concentrations of all of these PAHs except benzo(b)pyrene. The lowest concentrations of these PAHs were found in sample LF6SD-3-1-Z1. No SVOCs were detected in wetland samples above human health risk levels.

TRPH

No TRPH were detected in any of the Landfill 6 wetland sediment samples.

Metals and Cyanide

Nineteen metals were detected in the Landfill 6 sediment samples, including 10 that were detected at concentrations exceeding their ecological screening criteria and one (arsenic) exceeding its human health risk level. The metals detected at levels higher than ecological screening criteria included arsenic, cadmium, chromium, copper, iron, lead, manganese, nickel, mercury, and zinc. All these metals were detected at concentrations higher than their ecological screening level and higher than the human health risk level for arsenic in sample LF6SD-4-1-Z1, which was also found to contain the highest concentrations of most of the metals detected. The lowest concentrations of most of the metals were found in sample LF6SD-3-1-Z1.

No hexavalent chromium was detected in any of the Landfill 6 samples. Low levels of cyanide were detected in all the samples at concentrations ranging from 0.598 mg/Kg, in LF6SD-3-1-Z1, to 1.38 mg/Kg, in LF6SD-1-1-Z1.

3.4.3 Off-Base Three Mile Creek Pond

Summaries of the analytical results for the off-base TMC pond sediments are presented in Table 3-6. Figures 3-12 through 3-14 present vertical profiles of the PCBs, cadmium, and lead concentrations detected in both the 1999 and 2001 sampling events.

PCBs

One PCB, Aroclor 1260, was detected in the pond samples collected during the 1999 and the 2001 investigations. Aroclor 1260 was detected at concentrations higher than its ecological screening criterion of 5 μg/kg in all the samples except for sample TMCSD-26-NS-Z4, collected from the 2.5- to 3-foot depth interval, which did not contain any PCBs. Location TMCSD-26-NS exhibited the lowest concentrations of PCBs for each of the three depth intervals. The 1999 shallow (0- to 0.5-foot depth) samples contained higher Aroclor 1260 concentrations than the deeper samples collected under this investigation, with the exception of location TMCSD-28-OL, located near the pond outlet. The highest level, 2,100 µg/Kg, was detected in sample TMCSD-23-IL (0- to 0.5-foot interval), which was collected near the inlet of the pond. The highest concentration detected in the 2001 samples, 1,370 µg/Kg, was found in deep sample TMCSD-OL-Z4 (2.5- to 3-foot depth), at the outlet of the pond. No PCBs were detected in pond samples above human health risk levels.

Metals

Cadmium and lead were detected at all the sample locations. Cadmium was not detected in samples TMCSD-25-MC-Z4 (2.4- to 3-foot depth), TMCSD-26-NS-Z3 (1.5- to 2.5-foot depth), and TMCSD-26-NS-Z4 (2.5- to 3-foot depth). As with the PCBs, the highest concentration of cadmium was found in shallow inlet sample TMCSD-23-IL (0- to 0.5-foot depth), and the highest concentration of lead was found in mid-channel sample TMCSD-27-MC-Z3 (1.5- to 2.5-foot depth). Location TMCSD-26 exhibited the lowest concentrations for each depth interval for both lead and cadmium.

Similar to PCB levels, cadmium concentrations at each location were highest in the shallow samples, whereas lead concentrations were highest in the middle sampling interval. Both metals were detected in concentrations higher than ecological screening levels in at least one sample at each location, with the exception of lead, which was not detected at concentrations higher than its ecological screening criterion at location TMCSD-26-NS. No metals were detected in pond samples above human health risk levels.

3.4.4 Summary and Conclusions

3.4.4.1 On-Base TMC Channel and LF5 Tributary

Multiple sediment sampling events within the on-base portion of TMC and LF5 Tributary have determined that contaminants are present throughout the creek at various concentration levels and at various depths. The sediments in the on-base portions of the creek (where full penetration was measurable) range in thickness from 0.5 feet at TMCSD-9-2 to 2.8 feet at TMCSD-5-1. Of the 25 locations sampled in 2001, native soils were readily discernible beneath the creek sediments at 16 locations. Where native soil was encountered, the sediments averaged a thickness of 1.75 feet. Significant areas of deposition (i.e., greater than 3.5 feet thick) occur near the headwaters at TMCSD-5, representing the confluence of the north channel and the main channel; and mid-stream at TMCSD-8-1. More subtle areas of deposition (approximately 2 to 2.5 feet) occur at the confluence of the main channel and the LF5 channel; and further downstream at TMCSD-9-4 and TMCSD-11 (see Figures 2-6 and 3-1). The depositional areas at TMCSD-8-1 and TMCSD-9-4 are the result of topographic highs in the stream bottom immediately downstream of these locations causing the water to pool behind them. Beaver activity in the vicinity of TMCSD-8-1 has also caused water to back up, resulting in increased sedimentation rates. Small pools of water also intermittently form at TMCSD-9-1 due to the presence a small rise in elevation (cobbly area); and TMCSD-10-3 and TMCSD-11 due to the presence of a culvert beneath a dirt road between these two locations. Deposition also occurs in these areas as particles settle to the bottom of the pooled water.

Summary

The following points summarize the remedial investigations of the on-base TMC channel and LF5 tributary:

- PCBs were detected at all 26 RI and 2001 samples locations in at least one depth interval at levels exceeding the ecological screening criteria of 5 µg/Kg. PCBs above human health risk levels were only detected at five locations (TMCSD-1, -2, -3, -5, and –11) at depths of 1.1 to 2.7 feet BGS. The highest concentrations of PCBs occur near the headwaters (main channel, north channel, and LF5 tributary). All of the highest concentrations (i.e., greater than 10,000 µg/Kg [10 PPM]) occur in sediments no deeper than 2.5 feet. Concentrations greater than 1,000 µg/Kg (1 PPM) were only detected in sediment samples all less than 2.5 feet in depth, except for one native soil sample (TMCSD-5-1-Z4), at a depth of 2.8 to 3.5 feet.

- Pesticides were detected at all 26 RI and 2001 sample locations in at least one depth interval at levels exceeding ecological screening criteria. No pesticides exceeded human health risk levels. Ecological exceedences in the 2.5- to 3.5-foot depth interval occurred in nine samples near the headwaters (including the main channel, north channel and LF5 tributary) between TMCSD-1 and TMCSD-6; two mid-stream locations (TMCSD-8-1 and TMCSD-9); and three downstream locations near the installation boundary (TMCSD-10-2, -10-3, and -11).

- Dioxins were detected at 23 of the 26 RI and 2001 sample locations in at least one depth interval. Where detected, dioxin concentrations exceeded ecological screening criteria in 12 of the 2001 sediment samples analyzed. Dioxins exceeded ecological screening criteria in one native soil sample. No dioxins were detected above human health risk levels.

- VOCs were detected in 24 of the 26 RI and 2001 sample locations in at least one depth interval. Concentrations exceeded ecological screening criteria in 10 sediment samples near the headwaters of the creek, including the main and north channel and LF5 tributary between TMCSD-1 and -9. Exceedences in the 2.5- to 3.5-foot depth interval occurred in only one sample (TMCSD-5), at the confluence of the north and main channels. No VOCs were detected above human health risk levels.

- SVOCs were detected at all 26 RI and 2001 sample locations in at least one depth interval. Concentrations exceeded ecological screening criteria in all but one sediment sample (TMCSD-10-1) and three native soil samples. Exceedences in the 2.5- to 3.5-foot depth interval occurred in eight samples near the headwaters (main channel and north channel) between TMCSD-1 and TMCSD-5-2; and one downstream location near the installation boundary (TMCSD-10-3 [native soil]). Two PAHs (one in TMCSD-1, -2, -3, and -5; and two in TMCSD-5) were detected above human health risk levels at depths of 1.5 to 2.7 feet BGS.

- Metals were detected at all 26 RI and 2001 sample locations in at least one depth interval. Concentrations exceeded ecological screening criteria in all but four sediment samples (TMCSD-9-1, -10, -10-1, and -10-2) and seven native soil samples. Exceedences in the 2.5- to 3.5-foot depth interval occurred in eight samples near the headwaters (main channel, north channel, and LF5) between TMCSD-1 and TMCSD-5-1, and LF5SD-1 and -2; three midstream (TMCSD-8-1, -9, and -9-3); and four downstream locations near the installation boundary (TMCSD-10-2, and -10-3). Only one metal exceeded human health risk levels in the TMCSD-1 at a depth of 1.8 to 2.4 feet BGS.

- TRPHs were detected at 21 of the 26 RI and 2001 sample locations in at least one depth interval. TRPH was not detected at TMCSD-8-1, -9-2, -9-3, -9-4, and -10-1. TRPH was detected in the 2.5- to 3.5-foot depth interval in five samples near the headwaters (main channel and north channel) between TMCSD-1 and TMCSD-5-1; and one downstream location near the installation boundary (TMCSD-10-3 [native soil]) at levels ranging from 160 to 2,040 mg/Kg with an average of 650 mg/Kg.

General Conclusions

The following general conclusions can be made from the investigation of the on-base TMC channel and LF5 tributary:

- As expected, contaminant levels were highest upstream and decreased in concentration downstream. Contaminant levels also decreased with depth;

- Contaminant levels were higher in areas of obvious deposition compared to surrounding areas;

- Sediments were readily discernible underlying native soils through observations of more than half of the locations sampled. The ability to distinguish between creek sediments and underlying native soils was also enhanced by the chemical composition of the samples (i.e., the levels of TOC were significantly higher in sediment samples compared to native soils);

- The underlying native soil layer (where identified) was significantly less contaminated, and in many cases contaminant-free, than the overlying sediments; and

- Exceedences occurred in the 2.5- to 3.5-depth interval between the headwaters (main and north channel) to the LF5 tributary (including the tributary itself); intermittently mid-stream at TMCSD-8-1, -9, and -9-3; and downstream near the installation boundary at TMCSD-10-2, -10.3, and -11).

3.4.4.2 LF6 Wetlands

Samples of LF6 wetland sediment were collected on the TMC floodplain, downgradient of LF6 to the northeast of TMC, and northeast of the sediment berm along the creek bank (see Figure 3-1). All samples were collected from a depth of 0 to 0.5 foot.

Summary

The following points summarize the remedial investigations of the LF6 wetlands:

- Aroclor 1260 was detected in three of the four samples, and pesticides were detected in all four samples, all at concentrations higher than the ecological screening criteria. The highest concentrations of Aroclor 1260 and pesticides were found in sample LF6SD-4-1. None of these compounds exceeded human health risk levels;

- No dioxins, TRPH, or hexavalent chromium were detected in any of the samples;

- VOCs were only detected in LF6SD-4-1, at concentrations lower than both ecological screening criteria and human health risk levels;

- SVOCs were detected in all four of the samples at concentrations higher than the ecological screening criteria. PAHs were highest in sample LF6SD-4-1.

In addition, the highest level of benzoic acid was detected in LF6SD-3-1. None of these SVOCs exceeded human health risk levels; and

- Metals were detected in all four of the samples. Ten metals were detected at concentrations exceeding ecological screening criteria and one was detected above the human health risk level. The highest concentrations of metals were detected in LF6SD-4-1. Low levels of cyanide were detected in all four samples, at concentrations ranging from 0.598 to 1.38 mg/Kg.

General Conclusions

The following general conclusions can be made from the investigation of the on-base LF6 wetlands:

- All of the sediment samples were found to contain contaminants of concern at concentrations higher than the screening criteria. As expected, the presence of the same contaminants in these samples as TMC samples indicates that flood waters from the creek are depositing contaminants on the floodplain.

- The sample with highest levels of contaminants of concern is LF6SD-4-1. This sample is close to the installation boundary, where high levels of contamination were detected in TMC (TMCSD-10-3). Based on topographic contours, when the creek floods in this area, the LF6SD-4-1 sample location is likely inundated with flood waters that transport contaminants from the creek to the floodplain.

3.4.4.3 Off-Base Pond

The off-base pond receives water from TMC and discharges it to the New York State Barge Canal. Vertical profile sediment samples were collected within the pond near the inlet, outlet, mid-channel (mid-pond), and near-shore (see Figure 2-7).

Summary

The following points summarize the remedial investigations of the off-base pond:

- PCBs were found at all locations at concentrations higher than the ecological screening criteria but below human health risk levels. The highest concentration detected in the 1999 shallow samples (0- to 0.5-foot interval) was 2,100 μg/Kg from the inlet location, and the highest concentration in the 2001 subsurface samples was 1,370 μg/Kg in the deep sample (2.5- to 3-foot interval) at the outlet location.

- Cadmium was detected at all 1999 and 2001 locations at concentrations higher than the ecological screening criteria but below the human health risk level.

As with the PCBs, the highest level was detected 1999 in the shallow inlet sample.

- Lead was detected at all 1999 and 2001 locations at concentrations higher than the ecological screening criteria but below the human health risk level. The highest concentration was detected in the 2001 mid-channel sample at a depth of 1.5 to 2.5 feet.

General Conclusions

The following general conclusions can be made from the investigation of the off-base pond:

- Contaminants from TMC are settling to the pond bottom due to the increased water depth and lower water-flow rates. Sedimentation rates are highest near the inlet under normal flow conditions and highest near the outlet under high-flow (i.e., storm) conditions.

- Contaminants are present to depths to 3 feet at all locations tested except TMCSD-26-NS.

Table 3-1
Sample Listing
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Date	Sample Number	Lab [a]	Sample Depth	Matrix	WP	Stat	Type	TCL VOCs -SW8260B	TCL SVOCs -SW8270C	TCL Pesticides -SW8081A	TCL Dioxins & Furans -EPA 1613B	TAL Metals/Mercury-SW6010B/7471A	Hexavalent chromium - SW7196A	Cyanide -SW9012A	TRPH -EPA 415.1M	TCL PCBs -SW8082	TOC -Lloyd Kahn	Lead and Cadmium -SW6010B	% Solids -ASTM_D2216
									ANALYSES [b]											
TMC Channel and LF5 Tributary	6/4/2001	TMCSD-1-Z3	ASC/TRI	1.8'-2.4'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-1-Z4	ASC/TRI	2.4'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-2-Z3	ASC/TRI	1.5'-2.7'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-2-Z3/D	ASC/TRI	1.5'-2.7'	Sediment	Y	T	FD	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-2-Z3/S	ERDC	1.5'-2.7'	Sediment	Y	T	FR	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-2-Z4	ASC/TRI	2.7'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-3-Z3	ASC/TRI	1.6'-2.4	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/4/2001	TMCSD-3-Z4	ASC/TRI	2.4'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-4-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	6/1/2001	TMCSD-4-Z4	ASC/TRI	2.9'-3.5'	Sediment	Y	T	N	X	X	X	S	X	X	X	X	X	X		X
	6/1/2001	TMCSD-5-Z3	ASC/TRI	1.6'-2.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-5-Z4	ASC/TRI	2.5'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-5-1-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-5-1-Z2 (MS/MSD)	ASC/TRI		Sediment QC	Y	S	MS	S	S	S	S	S	S	S	S	S	S		
		TMCSD-5-1-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	6/1/2001	TMCSD-5-1-Z4	ASC/TRI	2.8'-3.5'	Sediment	Y	T	N	X	X	X	S	X	X	X	X	X	X		X
		TMCSD-5-2-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-5-2-Z2/D	ASC/TRI		Sediment	Y	S	FD	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-5-2-Z2/S	ERDC		Sediment	Y	S	FR	S	S	S	S	S	S	S	S	S	S		S
	6/1/2001	TMCSD-5-2-Z3	ASC/TRI	1.4'-2.7'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-5-2-Z4	ASC/TRI	2.7'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-6-Z3	ASC/TRI	1.3'-2.8'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-6-Z3 (MS/MSD)	ASC/TRI	1.3'-2.8'	Sediment QC	N	T	MS	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-6-Z4	ASC/TRI	2.8'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-6-Z4/D	ASC/TRI	2.8'-3.5'	Sediment	N	T	FD	X	X	X	X	X	X	X	X	X	X		X
	6/1/2001	TMCSD-6-Z4/S	ERDC	2.8'-3.5'	Sediment	N	T	FR	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	TMCSD-7-Z2	ASC/TRI	0.5'-1.5'	Sediment	N	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	TMCSD-7-Z3	ASC/TRI	1.5'-2.4'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-7-Z4	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/31/2001	TMCSD-7-1-Z2	ASC/TRI	0.5'-1.1'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	TMCSD-7-1-Z2 (MS/MSD)	ASC/TRI	0.5'-1.1'	Sediment QC	N	T	MS	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-7-1-Z2/D	ASC/TRI		Sediment	Y	S	FD	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-7-1-Z2/S	ERDC		Sediment	Y	S	FR	S	S	S	S	S	S	S	S	S	S		S
	5/31/2001	TMCSD-7-1-Z3	ASC/TRI	1.1'-2.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-7-1-Z4	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S

Table 3-1
Sample Listing
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Date	Sample Number	Lab [a]	Sample Depth	Matrix	WP	Stat	Type	TCL VOCs -SW8260B	TCL SVOCs -SW8270C	TCL Pesticides -SW8081A	TCL Dioxins & Furans -EPA 1613B	TAL Metals/Mercury-SW6010B/7471A	Hexavalent chromium - SW7196A	Cyanide -SW9012A	TRPH -EPA 415.1M	TCL PCBs -SW8082	TOC -Lloyd Kahn	Lead and Cadmium -SW6010B	% Solids -ASTM_D2216
		TMCSD-8-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-8-Z4	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-8-1-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/30/2001	TMCSD-8-1-Z3	ASC/TRI	2.2'-2.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-8-1-Z4	ASC/TRI	2.5'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-8-1-Z4/D	ASC/TRI	2.5'-3.5'	Sediment	N	T	FD	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-8-1-Z4/S	ERDC	2.5'-3.5'	Sediment	N	T	FR	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-8-2-Z2	ASC/TRI	0.5'-0.9'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-8-2-Z2 (MS/MSD)	ASC/TRI		Sediment QC	Y	S	MS	S	S	S	S	S	S	S	S	S	S		
	5/30/2001	TMCSD-8-2-Z3	ASC/TRI	0.9 - 2.5	Sediment	Y	T	N	X	X	X	S	X	X	X	X	X	X		X
		TMCSD-8-2-Z4	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/30/2001	TMCSD-9-Z2	ASC/TRI	0.5'-1.6'	Sediment	N	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-9-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/30/2001	TMCSD-9-Z4	ASC/TRI	1.6'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-9-1-Z2	ASC/TRI	0.5'-1.0'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-9-1-Z2/D	ASC/TRI		Sediment	Y	S	FD	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-1-Z2/S	ERDC		Sediment	Y	S	FR	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-1-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/30/2001	TMCSD-9-1-Z4	ASC/TRI	1.0'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/30/2001	TMCSD-9-2-Z2	ASC/TRI	0.5'-1.1'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-9-2-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-2-Z4	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-3-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/29/2001	TMCSD-9-3-Z3	ASC/TRI	0.5'-1.1'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-9-3-Z4	ASC/TRI	1.1'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-9-4-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-4-Z2/D	ASC/TRI		Sediment	Y	S	FD	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-9-4-Z2/S	ERDC		Sediment	Y	S	FR	S	S	S	S	S	S	S	S	S	S		S
	5/29/2001	TMCSD-9-4-Z3	ASC/TRI	0.5'-1.85'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-9-4-Z4	ASC/TRI	1.85'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-9-4-Z4/D	ASC/TRI	1.85'-3.5'	Sediment	N	T	FD	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-9-4-Z4/S	ERDC	1.85'-3.5'	Sediment	N	T	FR	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-10-Z3	ASC/TRI	0.5'-1.65'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/29/2001	TMCSD-10-Z4	ASC/TRI	1.65'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-10-1-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		

Table 3-1
Sample Listing
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Date	Sample Number	Lab [a]	Sample Depth	Matrix	WP	Stat	Type	ANALYSES [b]: TCL VOCs -SW8260B	TCL SVOCs -SW8270C	TCL Pesticides -SW8081A	TCL Dioxins & Furans -EPA 1613B	TAL Metals/Mercury-SW6010B/7471A	Hexavalent chromium - SW7196A	Cyanide -SW9012A	TRPH -EPA 415.1M	TCL PCBs -SW8082	TOC -Lloyd Kahn	Lead and Cadmium -SW6010B	% Solids -ASTM_D2216
		TMCSD-10-1-Z2 (MS/MSD)	ASC/TRI		Sediment QC	Y	S	MS	S	S	S	S	S	S	S	S	S	S		
	5/24/2001	TMCSD-10-1-Z3	ASC/TRI	1.7'-2.2'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	TMCSD-10-1-Z4	ASC/TRI	2.4'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-10-2-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/24/2001	TMCSD-10-2-Z3	ASC/TRI	1.1'-2.1'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	TMCSD-10-2-Z4	ASC/TRI	2.5'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
		TMCSD-10-3-Z2	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-10-3-Z2/D	ASC/TRI		Sediment	Y	S	FD	S	S	S	S	S	S	S	S	S	S		S
		TMCSD-10-3-Z2/S	ERDC		Sediment	Y	S	FR	S	S	S	S	S	S	S	S	S	S		S
	5/23/2001	TMCSD-10-3-Z3	ASC/TRI	1.5'-2.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	TMCSD-10-3-Z3/D	ASC/TRI	1.5'-2.5'	Sediment	N	T	FD	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	TMCSD-10-3-Z3/S	ERDC	1.5'-2.5'	Sediment	N	T	FR	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	TMCSD-10-3-Z4	ASC/TRI	2.5'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	TMCSD-10-3-Z4 (MS/MSD)	ASC/TRI	2.5'-3.5'	Sediment QC	N	T	MS	X	X	X	X	X	X	X	X	X	X		
	5/24/2001	TMCSD-11-Z3	ASC/TRI	1.1'-2.3'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	TMCSD-11-Z4	ASC/TRI	2.5'-3.5'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	LF5SD-1-Z3	ASC/TRI	1.4'-2.4'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	LF5SD-1-Z4	ASC/TRI	2.4'-3.4'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	LF5SD-2-Z2	ASC/TRI	0.5'-2.3'	Sediment	N	T	N	X	X	X	X	X	X	X	X	X	X		X
		LF5SD-2-Z3	ASC/TRI		Sediment	Y	S	N	S	S	S	S	S	S	S	S	S	S		S
	5/31/2001	LF5SD-2-Z4	ASC/TRI	2.3'-3.3'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	LF5SD-3-Z2	ASC/TRI	0.5'-2.3'	Sediment	N	T	N	X	X	X	X	X	X	X	X	X	X		X
		LF5SD-3-Z3	ASC/TRI		Sediment	Y	S	N	X	X	X	X	X	X	X	X	X	X		X
	5/31/2001	LF5SD-3-Z4	ASC/TRI	2.3'-3.3'	Sediment	Y	T	N	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	RB-1	ASC/TRI	-	Eqpt. Washwater	Y	T	RB	X	X	X	X	X	X	X	X	X	X		
	5/29/2001	RB-2	ASC/TRI	-	Eqpt. Washwater	Y	T	RB	X	X	X	X	X	X	X	X	X	X		
	5/30/2001	RB-3	ASC/TRI	-	Eqpt. Washwater	Y	T	RB	X	X	X	X	X	X	X	X	X	X		
	6/4/2001	RB-4	ASC/TRI	-	Eqpt. Washwater	Y	T	RB	X	X	X	X	X	X	X	X	X	X		
	5/24/2001	TB-1	ASC	-	Water/QC Matrix	Y	T	TB	X											
	5/29/2001	TB-2	ASC	-	Water/QC Matrix	Y	T	TB	X											
	5/30/2001	TB-3	ASC	-	Water/QC Matrix	Y	T	TB	X											
	6/4/2001	TB-4	ASC	-	Water/QC Matrix	Y	T	TB	X											
		TB-5	ASC	-	Water/QC Matrix	N	T	TB	X											

Table 3-1
Sample Listing
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Date	Sample Number	Lab[a]	Sample Depth	Matrix	WP	Stat	Type	TCL VOCs -SW8260B	TCL SVOCs -SW8270C	TCL Pesticides -SW8081A	TCL Dioxins & Furans -EPA 1613B	TAL Metals/Mercury-SW6010B/7471A	Hexavalent chromium - SW7196A	Cyanide -SW9012A	TRPH -EPA 415.1M	TCL PCBs -SW8082	TOC -Lloyd Kahn	Lead and Cadmium -SW6010B	% Solids -ASTM_D2216
									ANALYSES[b]											
LF6 Wetlands	5/24/2001	LF6SD-1-1-Z1	ASC/TRI	0-0.5'	Sediment	Y	T	N1	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	LF6SD-1-1-Z1/D	ASC/TRI	0-0.5'	Sediment	Y	T	FD1	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	LF6SD-1-1-Z1/S	ERDC	0.0.5'	Sediment	Y	T	FR1	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	LF6SD-2-1-Z1	ASC/TRI	0-0.5'	Sediment	Y	T	N1	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	LF6SD-3-1-Z1	ASC/TRI	0-0.5'	Sediment	Y	T	N1	X	X	X	X	X	X	X	X	X	X		X
	5/24/2001	LF6SD-4-1-Z1	ASC/TRI	0-0.5'	Sediment	Y	T	N1	X	X	X	X	X	X	X	X	X	X		X
	5/23/2001	LF6SD-4-1-Z1 (MS/MSD)	ASC/TRI	0-0.5'	Sediment QC	Y	T	MS	X	X	X	X	X	X	X	X	X	X		
Off-Base TMC Pond	6/5/2001	TMCSD-23-IL-Z3	ASC/TRI	1.4'-2.2'	Sediment	Y	T	N									X		X	X
	6/5/2001	TMCSD-23-IL-Z3/D	ASC/TRI	1.4'-2.2'	Sediment	Y	T	FD									X		X	X
	6/5/2001	TMCSD-23-IL-Z3/S	ERDC	1.4'-2.2'	Sediment	Y	T	FR									X		X	X
	6/5/2001	TMCSD-23-IL-Z4	ASC/TRI	2.2'-3.0'	Sediment	Y	T	N									X	X	X	X
	6/5/2001	TMCSD-24-NS-Z3	ASC/TRI	1.2'-1.8'	Sediment	Y	T	N									X	X	X	X
	6/5/2001	TMCSD-24-NS-Z4	ASC/TRI	1.8'-3.0'	Sediment	Y	T	N									X		X	X
	6/5/2001	TMCSD-25-MC-Z3	ASC/TRI	0.9'-1.8'	Sediment	Y	T	N									X		X	X
	6/5/2001	TMCSD-25-MC-Z4	ASC/TRI	2.4'-3.0'	Sediment	Y	T	N									X		X	X
	5/25/2001	TMCSD-26-NS-Z3	ASC/TRI	1.5'-2.5'	Sediment	Y	T	N									X	X	X	X
		TMCSD-26-NS-Z3 (MS/MSD)	ASC/TRI		Sediment QC	Y	S	MS									S	S	S	
	5/25/2001	TMCSD-26-NS-Z4	ASC/TRI	2.5'-3.0'	Sediment	Y	T	N									X	X	X	X
	5/25/2001	TMCSD-27-MC-Z3	ASC/TRI	1.5'-2.5'	Sediment	Y	T	N									X	X	X	X
	5/25/2001	TMCSD-27-MC-Z3 (MS/MSD)	ASC/TRI	1.5'-2.5'	Sediment QC	N	T	MS									X	X	X	
		TMCSD-27-MC-Z3/D	ASC/TRI		Sediment	Y	S	FR									S	S	S	S
		TMCSD-27-MC-Z3/S	ERDC		Sediment	Y	S	FD									S	S	S	S
	5/25/2001	TMCSD-27-MC-Z4	ASC/TRI	2.5'-3.0'	Sediment	Y	T	N									X	X	X	X
	5/25/2001	TMCSD-28-OL-Z3	ASC/TRI	1.5'-2.5'	Sediment	Y	T	N									X	X	X	X
	5/25/2001	TMCSD-28-OL-Z3/D	ASC/TRI	1.5'-2.5'	Sediment	N	T	FD									X	X	X	X
	5/25/2001	TMCSD-28-OL-Z3/S	ASC/TRI	1.5'-2.5'	Sediment	N	T	FR									X	X	X	X
	5/25/2001	TMCSD-28-OL-Z4	ASC/TRI	2.5'-3.0'	Sediment	Y	T	N									X	X	X	X
	6/5/2001	RB-5	ASC/TRI	-	Eqpt. Washwater	Y	T	RB									X		X	

Table 3-1
Sample Listing
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Date	Sample Number	Lab [a]	Sample Depth	Matrix	WP	Stat	Type	TCL VOCs -SW8260B	TCL SVOCs -SW8270C	TCL Pesticides -SW8081A	TCL Dioxins & Furans -EPA 1613B	TAL Metals/Mercury-SW6010B/7471A	Hexavalent chromium - SW7196A	Cyanide -SW9012A	TRPH -EPA 415.1M	TCL PCBs -SW8082	TOC -Lloyd Kahn	Lead and Cadmium -SW6010B	% Solids -ASTM_D2216

ANALYSES[b] (spans the analysis columns)

[a] Triangle Laboratories performed dioxin and furan analyses only.
[b] The analyses marked as "X" are the ones performed. The analyses marked as "S" are analyses scheduled but not performed (the sample was not collected or not enough volume was retrieved

Key:

ASC = E & E's Analytical Services Center
/D = duplicate
Depth = depth interval at which sample will be collected
Eqpt. = equipment
ERDC = United States Army Engineer Research and Development Center
FD = field duplicate
FR = field split/replicate
IL = inlet pond sample
LF5 = Landfill 5
LF6 = Landfill 6
MC = mid-channel pond sample
MS/MSD = matrix spike/matrix spike duplicate
N = original sample
NS = near-shore pond sample
OL = outlet pond sample
Pest = pesticides
PCB = polychlorinated biphenyls
QC = quality control sample

RB = rinsate blank
/S = split.
SD = sediment sample
Stat = Status (O= Open, T= Taken, S= Skipped)
SVOCs = semivolatile organic compounds
TAL = target analyte list
TB = trip blank
TCL = target compound list
TMC = Three Mile Creek
TOC = total organic carbon
TRI = Triangle Laboratories, Inc.
TRPH = total recoverable petroleum hydrocarbons
VOCs = volatile organic compounds
WP = sample in work plan (Y= yes, N= no)
Z1 = 0 to 0.5 foot (actual depth recorded on table).
Z2 = 0.5 to 1 foot (actual depth recorded on table)
Z3 = 1.5 to 2.5 feet (actual depth recorded on tabl
Z4 = 2.5 to 3.5 feet (actual depth recorded on tabl

Table 3-2
Summary of Three Mile Creek, Landfill 6, and Off-site Pond Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Sample Depth ft. BTOCB	Sample Description
TMC Channel and Landfill 5 Tributary		
TMCSD-1-Z3	1.8 - 2.4	Dark gray silt with 30% clay and trace rounded gravel up to 0.5 inch in diameter, sheen present
TMCSD-1-Z4	2.4 - 3.5	Dark gray very fine to coarse sand with some silt and 40% fine to medium gravel
TMCSD-2-Z3	1.5 - 2.7	0.3 feet of black to gray, fine to coarse sand and little fine gravel above 0.2 feet of black to gray sand and fine gravel
TMCSD-2-Z4	2.7 - 3.5	Gray to black fine to coarse sand and fine to medium gravel, trace silt
TMCSD-3-Z3	1.6 - 2.4	Gray/brown very fine to coarse sand with 25% rounded fine to medium gravel, and trace gray silt
TMCSD-3-Z4	2.4 - 3.5	Gray silt with 5% rounded gravel
TMCSD-4-Z4	2.9 - 3.5	Coarse sand and gravel
TMCSD-5-Z3	1.6 - 2.5	Fine gravel and sand
TMCSD-5-Z4	2.5 - 3.5	Sand and gravel mixed in a tar-like material, strong fuel odor
TMCSD-5-1-Z4	2.8 - 3.5	Medium to coarse sand and fine gravel -native soil (not sure what depth sample collected from)
TMCSD-5-2-Z3	1.4 - 2.7	Black organic muck, strong organic odor
TMCSD-5-2-Z4	2.7 - 3.5	Brown medium and fine sand and some gray clay layers (native soil), some black staining
TMCSD-6-Z3	1.3 - 2.8	Black organic muck
TMCSD-6-Z4	2.8 - 3.5	Brown medium sand and some coarse sand -native soil
TMCSD-7-Z2	0.5 - 1.5	Silty, clayey sediment, fuel odor
TMCSD-7-Z3	1.5 - 2.4	Black, silty, clayey sediment, fuel odor
TMCSD-7-1-Z2	0.5 - 1.1	Dark organic silty muck
TMCSD-7-1-Z3	1.1 - 2.5	Dark organic silty muck (actual recovery 0.9 feet)
TMCSD-8-Z3		Swampy area, high organic content, high water content, no cohesion, sample not retrievable
TMCSD-8-Z4		
TMCSD-8-1-Z3	2.2 - 2.5	Brown sand and silt, with not decomposed wood pieces, little scarce black staining
TMCSD-8-1-Z4	2.5 - 3.5	Brown sandy and silty sediment, with not decomposed wood pieces, little scarce black staining
TMCSD-8-2-Z2	0.5 - 0.9	Black, medium sand with little gravel
TMCSD-8-2-Z3	0.9 - 2.5	Gray gravel and little sand
TMCSD-9-Z2	0.5 - 1.6	Coarse and medium sand and fine gravel, very rooty
TMCSD-9-Z4	1.6 - 3.5	Grayish brown, uniform medium sand - native soil (0.5 feet recovered)
TMCSD-9-1-Z2	0.5' - 1.0'	Sand and fine gravel (0.5 feet recovered)
TMCSD-9-1-Z4	1.0' - 3.5'	Coarse, uniformly sized sand - native soil (1 foot recovered)
TMCSD-9-2-Z2	0.5 - 1.1	Coarse to medium sand with some fine gravel. A light, high void, low density, light brown (almost fluffy) material (not sediment) was found underneath the sand, but it was not retrievable due to its consistency.
TMCSD-9-3-Z3	0.5 - 1.1	Coarse to medium sand with some fine gravel (0.5 foot maximum recovery)
TMCSD-9-3-Z4	1.1 - 3.5	Grayish brown, silty, clayey, very soft, low density sediment (0.75 foot maximum recovery)
TMCSD-9-4-Z3	0.5 - 1.85	Black organic sediment (5 inches recovered)
TMCSD-9-4-Z4	1.85 - 3.5	Gray sand with little silt - native soil (1 foot recovered)
TMCSD- 10' -Z3	0.5 - 1.65	Black, organic sediment, strong odor
TMCSD- 10' -Z4	1.65 - 3.5	Gray silt and sand - native soil (1foot recovered)
TMCSD- 10' -1-Z3	1.7 - 2.2	Silty, clayey sand, saturated, no cohesion, high water content (soupy), and gravel
TMCSD- 10' -1-Z4	2.4 - 3.5	Silty, clayey sand, wet -native soil
TMCSD- 10' -2-Z3	1.1 - 2.1	Dark, organic muck with sand and silt, with a black sheen
TMCSD- 10' -2-Z4	2.5 - 3.5	Low plasticity clay with silt and sand - native soil
TMCSD- 10' -3-Z3	1.5 - 2.5	Brown sand and silt with some gravel and some black fine material
TMCSD- 10' -3-Z4	2.5 - 3.5	Tight brown sand, moist to wet - native soil
TMCSD- 11-Z3	1.1 - 2.3	Black mainly organic muck
TMCSD- 11-Z4	2.5 - 3.5	Brown sand - native soil
LF5SD-1-Z3	1.4 - 2.4	Sand mixed with fine gravel and some muck (1 foot recovered)
LF5SD-1-Z4	2.4 - 3.4	Medium sand and fine gravel -native soil (1 foot recovered)
LF5SD-2-Z2	0.5 - 2.3	Black, clayey, organic sediment and some sand (1 foot recovered)
LF5SD-2-Z4	2.3 - 3.3	Gray medium sand - native soil
LF5SD-3-Z2	0.5 - 2.3	Some muck, dark brown (approx. 3 inches thick), and uniform medium sand (-native soil part of it)
LF5SD-3-Z4	2.3 - 3.3	Alternating brown medium sand an gray clay layers
LF6SD-1- 1-Z1	0' - 0.5	Black, organic, silty
Landfill 6 Wetlands		
LF6SD-2-1-Z1	0' - 0.5	Black, organic, silty
LF6SD-3-1-Z1	0' - 0.5	Black, organic, silty
LF6SD-4-1-Z1	0' - 0.5	Black, organic, silty
Off-site Three Mile Creek Pond		
TMCSD- 23-IL-Z3	1.4' - 2.2'	Dark gray clay-sized muck with some non-decomposed organic material
TMCSD- 23-IL-Z4	2.2' - 3.0'	Dark gray very fine to fine sand and silt with little medium to coarse sand and trace gravel (up to 0.5 inches in diameter)
TMCSD- 24-NS-Z3	1.2' - 1.8'	Black silty muck
TMCSD- 24-NS-Z4	1.8' - 3.0'	Dark gray, silt and clay with 20% very fine to fine sand
TMCSD- 25-MC-Z3	0.9' - 1.8'	Black clay-sized muck with little silt and non-decomposed organic material

Key at the end of Table.

Table 3-2
Summary of Three Mile Creek, Landfill 6, and Off-site Pond Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Sample Depth ft. BTOCB	Sample Description
TMCSD- 25-MC-Z4	2.4' - 3.0'	Gray, very fine sand and silt, trace medium to coarse sand, and non-decomposed organic material
TMCSD- 26-NS-Z3	1.5' - 2.5'	Silty sand sediment
TMCSD- 26-NS-Z4	2.5' - 3.0'	Sand
TMCSD- 27-MC-Z3	1.5' - 2.5'	Black silty muck
TMCSD- 27-MC-Z4	2.5' - 3.0'	Black silty muck
TMCSD- 28-OL-Z3	1.5' - 2.5'	Black silty muck
TMCSD- 28-OL-Z4	2.5' - 3.0'	Black silty muck

Key:

BTOCB = Below top of creek bed.

ft. = Feet.

Key at the end of Table.

Table 3-3
Physical Characteristics of Sampling Locations,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Location	Elevation [a] ft. AMSL	Northing	Easting	Water Depth ft. ATOCB	Water Elevation ft. AMSL	Channel Width ft.	Native Soil Elevation ft. AMSL
TMC Channel and Landfill 5 Tributary							
TMCSD-1	453.890	1174654.984	1132524.022	1.5	455.39	10	-
TMCSD-2	451.840	1174459.682	1132508.608	0.8	452.64	5.8	-
TMCSD-3	451.510	1174284.497	1132496.696	0.25	451.76	14	-
TMCSD-4	454.790	1174307.459	1132226.773	0.3	455.09	4.3	-
TMCSD-5	451.700	1174106.666	1132456.400	0.4	452.1	9	-
TMCSD-5-1	451.790	1174002.014	1132584.156	0.4	452.19	11	448.99
TMCSD-5-2	451.600	1173903.486	1132692.494	0.4	452	16	448.9
TMCSD-6	450.860	1173798.856	1132812.391	0.55	451.41	13	449.060
TMCSD-7	451.600	1173563.671	1133086.679	0.4	452	9	-
TMCSD-7-1	450.810	1173419.982	1133271.632	0.2	451.01	10	-
TMCSD-8	450.530	1173264.783	1133443.619	0.5	451.03	14	-
TMCSD-8-1	450.030	1173111.388	1133621.370	0.2	450.23	14	-
TMCSD-8-2	450.840	1172932.353	1133843.968	1.2	452.04	12	449.94
TMCSD-9	448.850	1172640.978	1134168.218	0.2	449.05	10.6	447.250
TMCSD-9-1	447.670	1172596.709	1134236.810	0.5	448.17	8.5	446.670
TMCSD-9-2	447.870	1172432.168	1134430.806	0.25	448.12	9	447.37
TMCSD-9-3	446.820	1172269.386	1134626.971	0.5	447.32	12	-
TMCSD-9-4	446.340	1172103.452	1134823.169	0.3	446.64	10	444.490
TMCSD-10	446.640	1171939.274	1135008.166	0.4	447.04	10.6 to 16 max	444.990
TMCSD-10-1	445.970	1171790.040	1135184.373	0.4	446.37	8.5	443.570
TMCSD-10-2	445.270	1171648.311	1135346.714	0.4	445.67	10.2	442.970
TMCSD-10-3	444.530	1171508.174	1135513.807	1.25	445.78	12.1	442.530
TMCSD-11	443.770	1171428.136	1135618.258	0.5	444.27	6.5	441.870
LF5SD-1	456.020	1174033.881	1133261.024	0.3	456.32	5 to 9.5 max	454.020
LF5SD-2	454.360	1173825.172	1133201.646	0.2	454.56	7 to 10.5 max	452.360
LF5SD-3	452.600	1173606.475	1133138.491	0.25	452.85	3.5 to 5 max	451.600
Landfill 6							
LF6SD-1-1	452.730	1172525.151	1134465.741	NA	NA	NA	NA
LF6SD-2-1	452.250	1172253.863	1134788.860	NA	NA	NA	NA
LF6SD-3-1	454.060	1171974.936	1135121.375	NA	NA	NA	NA
LF6SD-4-1	450.530	1171643.050	1135499.851	NA	NA	NA	NA
TMC Pond							
TMCSD-23-IL	NA	NA	NA	2[b]	NA	NA	NA
TMCSD-24-NS	NA	NA	NA	1.8[b]	NA	NA	NA
TMCSD-25-MS	NA	NA	NA	0.5[b]	NA	NA	NA
TMCSD-26-NS	NA	NA	NA	1.1[b]	NA	NA	NA
TMCSD-27-MC	NA	NA	NA	3.1[b]	NA	NA	NA
TMCSD-28-OL	NA	NA	NA	3.9[b]	NA	NA	NA

[a] Elevation of centerline of creek bed.

[b] Water depths were measured below pond surface (BPS).

Key:

AMSL = Above Mean Sea Level.
ATOCB = Above top of centerline of creek bed.
BPS = below pond surface.
ft. = Feet.
IL = Inlet.
max = Maximum.
MC = mid-channel.
NA = Not applicable.
NS = near surface.
TMC = Three Mile Creek.
\- = No discernible native soil layer encountered.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID:	TMCSD-1-Z3	TMCSD-1-Z4	TMCSD-2-Z3	TMCSD-2-Z3/D	TMCSD-2-Z4	TMCSD-3-Z3	TMCSD-3-Z4
			Depth (ft):	1.8 - 2.4	2.4 - 3.5	1.5 - 2.7	1.5 - 2.7	2.7 - 3.5	1.6 - 2.4	2.4 - 3.5
			Date:	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)										
NA	NA	Total Organic Carbon		**20500**	**31400**	**8850 J**	**21500 J**	**12800**	**39100**	**53000**
TCL PCBs - 8082 (µg/Kg)										
NA	70	Aroclor 1242		7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U
6290	5	Aroclor 1260		**45300**	**175**	**7800**	**7390**	**618**	**12700**	**702**
2,3,7,8-TCDD equivalent (ng/Kg)										
331,000	10	Total 2,3,7,8-TCDD equivalent		**51.343**	**18.088**	9.265	**13.467**	**1.6627**	**13.1485**	**5.3008**
TCL Pesticides - 8081A (µg/Kg)										
331,000	2	4,4′-DDD		1200 U	73.1 U	183 U	**84.8 NJ**	**16.7 NJ**	394 U	80.0 U
234,000	2	4,4′-DDE		1200 U	73.1 U	183 U	173 U	33.3 U	394 U	80.0 U
233,000	1	4,4′-DDT		1590 U	**14.8 NJ**	244 U	231 U	44.4 U	**219 NJ**	**12.5 NJ**
4,660	2	Aldrin		1590 U	**540 NJ**	**385 NJ**	**410 NJ**	44.4 U	**1560 NJ**	**38.2 NJ**
61,100	0.314	alpha-Chlordane		398 U	24.4 U	61.1 U	57.8 U	11.1 U	131 U	26.7 U
NA	3.144	delta-BHC[1]		797 U	**12.4 NJ**	122 U	116 U	22.2 U	263 U	53.3 U
4,960	0.02	Dieldrin		1990 U	122 U	306 U	289 U	55.5 U	657 U	133 U
NA	1.572	Endosulfan I		**1040 NJ**	122 U	**85.6 NJ**	**75.9 NJ**	**10.1 NJ**	657 U	133 U
NA	1.572	Endosulfan II		1200 U	73.1 U	183 U	173 U	33.3 U	394 U	80.0 U
NA	NA	Endosulfan sulfate		**679 NJ**	146 U	**98.6 NJ**	**80.0 NJ**	66.6 U	**218 NJ**	160 U
315,000	3	Endrin		1590 U	97.4 U	244 U	231 U	44.4 U	525 U	107 U
NA	NA	Endrin aldehyde		3980 U	244 U	611 U	578 U	111 U	1310 U	267 U
NA	NA	Endrin ketone		1200 U	**45.6 NJ**	**289 NJ**	**225 NJ**	**30.4 NJ**	**892 NJ**	**41.4 NJ**
NA	3	gamma-BHC[1]		797 U	48.7 U	122 U	116 U	22.2 U	263 U	53.3 U
61,000	0.314	gamma-Chlordane		797 U	**25.0 NJ**	122 U	116 U	22.2 U	263 U	53.3 U
NA	1.572	Heptachlor		1200 U	73.1 U	183 U	173 U	**3.53 NJ**	394 U	80.0 U
NA	1.572	Heptachlor epoxide		1990 U	122 U	306 U	289 U	55.5 U	657 U	**34.7 NJ**
11,200	31.44	Methoxychlor		15900 U	974 U	2440 U	2310 U	444 U	5250 U	1070 U

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-1-Z3 Depth (ft): 1.8 - 2.4 Date: 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/04/01	TMCSD-2-Z4 2.7 - 3.5 06/04/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01
TCL VOCs - 8260B (μg/Kg)									
NA	940	1,1,2,2-Tetrachloroethane	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
94,500,000	628.8	1,2-Dichlorobenzene	9.48 U	**8.71 J**	5.70 U	**1.39 J**	**2.55 J**	**2.14 J**	**8.97 J**
NA	NA	1,2-Dichloroethane	**3.08 J**	**1.93 J**	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	NA	1,2-Dichloroethene, Total	9.48 U	**7.12 J**	5.70 U	5.45 U	**3.59 J**	6.09 U	6.22 UJ
3,310,000	628.8	1,4-Dichlorobenzene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	NA	2-Butanone	19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ
105,000,000	NA	Acetone	19.0 U	12.3 UJ	**9.57 J**	10.9 U	**15.8**	12.2 U	12.4 UJ
273,000	1467.2	Benzene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
105,000,000	NA	Carbon disulfide	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
21,000,000	183.4	Chlorobenzene	9.48 U	**8.32 J**	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	NA	Chloroform	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	**2.32 J**
NA	NA	cis-1,2-Dichloroethene	**3.09 J**	**7.12 J**	5.70 U	5.45 U	**3.59 J**	6.09 U	6.22 UJ
NA	1257.6	Ethylbenzene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	4820.8	m,p-Xylene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	4820.8	o-Xylene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	530	Tetrachloroethene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	**16.7 J**
NA	2567.6	Toluene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
NA	1,600	trans-1,2-Dichloroethene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ
6,320,000	1,600	Trichloroethene	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	**205 J**
NA	NA	Vinyl chloride	**5.98 J**	12.3 UJ	11.4 U	10.9 U	**6.18 J**	12.2 U	12.4 UJ
NA	4820.8	Xylenes, Total	9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte / Sample ID: / Depth (ft): / Date:	TMCSD-1-Z3 1.8 - 2.4 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/04/01	TMCSD-2-Z4 2.7 - 3.5 06/04/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	4768.4	1,2,4-Trichlorobenzene	**587 J**	3820 U	1170 U	3570 U	344 U	4130 U	419 U
94,500,000	628.8	1,2-Dichlorobenzene	**619 J**	3820 U	1170 U	3570 U	**85.0 J**	4130 U	**544**
NA	628.8	1,3-Dichlorobenzene	**282 J**	3820 U	1170 U	3570 U	344 U	4130 U	419 U
3,310,000	628.8	1,4-Dichlorobenzene	**324 J**	3820 U	1170 U	3570 U	344 U	4130 U	**512**
21,000,000	26.2	2,4-Dimethylphenol [2]	647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U
NA	65	2-Methylnaphthalene	**266 J**	**4270**	**937 J**	**6860 J**	**280 J**	**13700**	**89.7 J**
52,600,000	26.2	2-Methylphenol [2]	647 U	3820 U	1170 U	3570 U	344 U	**882 J**	419 U
5,300,000	26.2	4-Methylphenol [2]	647 U	3820 U	1170 U	**1330 J**	344 U	**3110 J**	419 U
63,300,000	16	Acenaphthene	**425 J**	**6900**	**2040 J**	**10200 J**	**641**	**20200**	**216 J**
NA	NA	Acenaphthylene	647 U	**1030 J**	**895 J**	**3930 J**	**205 J**	**4430**	**141 J**
316,000,000	85	Anthracene	**689**	**12700**	**4900 J**	**20300 J**	**1670**	**37900 J**	**579**
109,000	261	Benz(a)anthracene	**1060**	**19400**	**14500 J**	**30600 J**	**2900**	**57300**	**911 J**
10,900	370	Benzo(a)pyrene	**679 J**	$\boxed{\textbf{14400 J}}$	**6340 J**	$\boxed{\textbf{22800 J}}$	**2150 J**	$\boxed{\textbf{42500}}$	**762 J**
109,000	NA	Benzo(b)fluoranthene	**675 J**	**12600 J**	**7640 J**	**18900 J**	**1680 J**	**32300 J**	**883 J**
NA	170	Benzo(g,h,i)perylene	**383 J**	**6970 J**	**1550 J**	**5860 J**	**707 J**	**9140 J**	**211 J**
1,090,000	240	Benzo(k)fluoranthene	**708 J**	**11700 J**	**6330 J**	**15600 J**	**1380 J**	4130 U	**707 J**
4.2×10^9	NA	Benzoic acid	1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U
316,000,000	NA	Benzyl alcohol	647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U
5,680,000	10453.8	Bis(2-ethylhexyl)phthalate	647 U	3820 U	1170 U	3570 U	344 U	**1710 J**	419 U
3,970,000	NA	Carbazole	**528 J**	**8090**	**3830 J**	**14300 J**	**1010**	**24000 J**	**315 J**
10,900,000	340	Chrysene	**1140**	**18700**	**14600 J**	**31200 J**	**2720**	**54600**	**952 J**
10,900	60	Dibenz(a,h)anthracene	**265 J**	**4970 J**	**1230 J**	**4900 J**	**491 J**	**7730 J**	**157 J**
4,210,000	2,000[d]	Dibenzofuran	**410 J**	**6720**	**1930 J**	**10900 J**	**569**	**21500**	**169 J**
NA	NA	Di-n-octyl phthalate	647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U
42,100,000	600	Fluoranthene	**2940**	**46500**	**31400 J**	**77700 J**	**6040**	**131000**	**2050**
42,200,000	35	Fluorene	**451 J**	**8350**	**2290 J**	**12900 J**	**757**	**24800**	**260 J**
108,000	200	Indeno(1,2,3-cd)pyrene	**740**	**15300**	**1560 J**	**7540 J**	**1020**	**11100 J**	**262 J**
42,100,00	160	Naphthalene	**828**	**12400**	**2650 J**	**19600 J**	**809**	**41100 J**	**229 J**
NA	240	Phenanthrene	**3210**	**49900**	**31500 J**	**82100 J**	**5910**	**156000**	**1970**
632,000,000	26.2	Phenol [2]	647 U	3820 U	1170 U	3570 U	344 U	**1360 J**	419 U
31,600,000	490	Pyrene	**2070**	**23700 J**	**23700 J**	**37500 J**	**4740**	**99600**	**908 J**
NA	NA	Total PAHs	**17467**	**284600**	**159822**	**433690**	**35679**	**788900**	**11771.7**

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Table 3-4a.

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte Sample ID: / Depth (ft): / Date:	TMCSD-1-Z3 1.8 - 2.4 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/04/01	TMCSD-2-Z4 2.7 - 3.5 06/04/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01
TAL Metals - 6010B/7470A/71A (mg/Kg)									
1,100,000	NA	Aluminum	14300	16100	3610	4610	10500	4220	9630
40.3	6	Arsenic	46.5	13.0	7.1	6.8	12.1	5.9	14.1
73,600	NA	Barium	111 J	73.4 J	230 J	1530 J	65.3 J	23.7 J	60.2 J
18.5	NA	Beryllium	1.9	0.12 U	0.10 U	0.12 U	0.36 J	0.11 U	0.43 J
473	0.6	Cadmium	6.5	9.9	2.9	3.1	0.11 U	0.64 U	0.11 U
NA	NA	Calcium	31600 J	93200 J	46300 J	44300 J	25400 J	28500 J	39700 J
1,050,000	26	Chromium	44.7	35.4	25.8	44.3	20.4	37.8	18.7
63,100	NA	Cobalt	10.4	7.1	3.1	5.1	6.4	3.6	6.7
42,000	16	Copper	97.0	74.8	40.6	40.7	34.1	46.3	36.9
NA	20,000	Iron	17900 J	12200 J	11600 J	12500 J	26800 J	13800 J	22700 J
NA	31	Lead	56.1	56.9	81.0	110	26.7	108	36.2
NA	NA	Magnesium	2460 J	7980 J	3090 J	4070 J	4190 J	2990 J	7500 J
24,200	460	Manganese	84.1 J	1280 J	111 J	134 J	599 J	131 J	298 J
NA	0.15	Mercury	0.65 J	0.60 J	0.21 J	0.18 J	0.086 J	0.22 J	0.42 J
21,000	16	Nickel	27.4	15.5	20.8	28.7	15.2	28.2	18.2
NA	NA	Potassium	1260 J	2860 J	490 J	580 J	934 J	609 J	1210 J
NA	NA	Sodium	810	2060	128	137	74.6 J	127	200
NA	NA	Thallium	0.79 U	0.47 U	0.42 U	0.47 U	0.70 J	0.45 U	0.46 U
7,380	NA	Vanadium	112 J	18.3 J	83.8 J	49.7 J	26.0 J	62.4 J	23.6 J
316,000	120	Zinc	149	98.4	157	224	68.8	146	68.0
Hexavalent Chromium - 7196A (mg/Kg)									
5,170	NA	Hexavalent Chromium	1.4 J	0.96 J	0.80 J	0.74 J	4.9 U	7.1	0.94 J
Total Cyanide - 9012A (mg/Kg)									
21,100	NA	Cyanide	0.454 J	0.613 U	0.171 J	0.178 J	0.547 U	0.675 U	0.681 U
TRPH - 418.1M (mg/Kg)									
NA	NA	TRPH	633 J	880	687	1350	450 U	650	187 J
Percent Moisture (wt%)									
NA	NA	Percent Moisture	50.6	19.3	19.1	15.7	11.2	24.4	25.8

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Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte / Sample ID: / Depth (ft): / Date:	TMCSD-4-Z4 2.9 - 3.5 06/01/01	TMCSD-5-Z3 1.6 - 2.5 06/01/01	TMCSD-5-Z4 2.5 - 3.5 06/01/01	TMCSD-5-2-Z3 1.4 - 2.7 06/01/01	TMCSD-6-Z3 1.3 - 2.8 06/01/01	LF5SD-1-Z3 1.4 - 2.4 05/31/01	LF5SD-2-Z2 0.5 - 2.3 05/31/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)									
NA	NA	Total Organic Carbon	72000	51100	54100	78700	49900	33400	42400
TCL PCBs - 8082 (µg/Kg)									
NA	70	Aroclor 1242	**71.4 J**	988 U	20.6 U	30.2 U	255 U	257 U	841 U
6290	5	Aroclor 1260	**38.8 J**	**10700**	**33.8**	**110**	**1530**	**1340**	**5290**
2,3,7,8-TCDD equivalent (ng/Kg)									
331,000	10	Total 2,3,7,8-TCDD equivalent	NS	**53.746**	8.4366	**10.7422**	**14.506**	1.853	ND
TCL Pesticides - 8081A (µg/Kg)									
331,000	2	4,4′-DDD	34.2 U	185 U	3.10 U	**2.42 NJ**	**8.49 NJ**	**20.9 NJ**	**30.9 NJ**
234,000	2	4,4′-DDE	34.2 U	185 U	3.10 U	4.53 U	38.2 U	38.5 U	126 U
233,000	1	4,4′-DDT	**9.63 NJ**	**471 NJ**	**1.43 NJ**	**6.72 NJ**	51.0 U	**107 NJ**	168 U
4,660	2	Aldrin	45.6 U	**95.9 NJ**	4.13 U	6.04 U	51.0 U	51.3 U	168 U
61,100	0.314	alpha-Chlordane	**25.0 NJ**	61.7 U	**5.37 NJ**	**5.97 NJ**	**32.0 NJ**	**11.7 NJ**	**28.5 NJ**
NA	3.144	delta-BHC [1]	22.8 U	123 U	2.06 U	3.02 U	25.5 U	25.7 U	84.1 U
4,960	0.02	Dieldrin	57.0 U	309 U	5.16 U	7.55 U	63.7 U	**33.5 NJ**	210 U
NA	1.572	Endosulfan I	**25.0 NJ**	**35.0 NJ**	**5.37 NJ**	**5.97 NJ**	**32.0 NJ**	64.1 U	210 U
NA	1.572	Endosulfan II	34.2 U	185 U	3.10 U	4.53 U	38.2 U	38.5 U	126 U
NA	NA	Endosulfan sulfate	68.4 U	370 U	**2.60 NJ**	9.06 U	76.4 U	77.0 U	252 U
315,000	3	Endrin	45.6 U	247 U	4.13 U	6.04 U	51.0 U	51.3 U	168 U
NA	NA	Endrin aldehyde	114 U	617 U	**1.43 NJ**	15.1 U	127 U	128 U	421 U
NA	NA	Endrin ketone	**473 NJ**	**1540 NJ**	**26.3 NJ**	**0.597 NJ**	38.2 U	38.5 U	126 U
NA	3	gamma-BHC [1]	22.8 U	123 U	2.06 U	3.02 U	25.5 U	25.7 U	84.1 U
61,000	0.314	gamma-Chlordane	22.8 U	123 U	2.06 U	3.02 U	**7.33 NJ**	**12.1 NJ**	**33.8 NJ**
NA	1.572	Heptachlor	34.2 U	185 U	3.10 U	4.53 U	38.2 U	38.5 U	126 U
NA	1.572	Heptachlor epoxide	**11.2 NJ**	**439 NJ**	**4.85 NJ**	**3.87 NJ**	**12.4 NJ**	64.1 U	210 U
11,200	31.44	Methoxychlor	456 U	**1760 NJ**	**29.0 NJ**	60.4 U	510 U	513 U	1680 U

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-2-Z3	TMCSD-6-Z3	LF5SD-1-Z3	LF5SD-2-Z2
		Depth (ft):	2.9 - 3.5	1.6 - 2.5	2.5 - 3.5	1.4 - 2.7	1.3 - 2.8	1.4 - 2.4	0.5 - 2.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	05/31/01
TCL VOCs - 8260B (µg/Kg)									
NA	940	1,1,2,2-Tetrachloroethane	5.85 UJ	6.15 UJ	619 U	40.1 UJ	34.6 U	6.66 UJ	8.40 UJ
94,500,000	628.8	1,2-Dichlorobenzene	5.85 UJ	**3.12 J**	**415 J**	40.1 UJ	34.6 U	6.66 UJ	8.40 UJ
NA	NA	1,2-Dichloroethane	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	NA	1,2-Dichloroethene, Total	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
3,310,000	628.8	1,4-Dichlorobenzene	5.85 UJ	**5.70 J**	**4820**	40.1 UJ	34.6 U	6.66 UJ	8.40 UJ
NA	NA	2-Butanone	11.7 UJ	12.3 U	1200 U	80.2 U	69.2 U	**7.66 J**	**7.32 J**
105,000,000	NA	Acetone	11.7 UJ	12.3 U	1200 U	80.2 U	69.2 U	**32.5 J**	**35.3 J**
273,000	1467.2	Benzene	5.85 UJ	**70.7**	**154 J**	40.1 U	34.6 U	6.66 U	8.40 U
105,000,000	NA	Carbon disulfide	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
21,000,000	183.4	Chlorobenzene	5.85 UJ	**45.1**	**28800**	**3430**	**178 J**	6.66 U	8.40 U
NA	NA	Chloroform	**1.78 J**	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	NA	cis-1,2-Dichloroethene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	1257.6	Ethylbenzene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	4820.8	m,p-Xylene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	4820.8	o-Xylene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	530	Tetrachloroethene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	2567.6	Toluene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	1,600	trans-1,2-Dichloroethene	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
6,320,000	1,600	Trichloroethene	**22.1 J**	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U
NA	NA	Vinyl chloride	11.7 UJ	12.3 U	1200 U	80.2 U	69.2 U	13.3 U	16.8 U
NA	4820.8	Xylenes, Total	5.85 UJ	6.15 U	619 U	40.1 U	34.6 U	6.66 U	8.40 U

Key at the end of Table.

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-2-Z3	TMCSD-6-Z3	LF5SD-1-Z3	LF5SD-2-Z2
		Sample ID:	TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-2-Z3	TMCSD-6-Z3	LF5SD-1-Z3	LF5SD-2-Z2
		Depth (ft):	2.9 - 3.5	1.6 - 2.5	2.5 - 3.5	1.4 - 2.7	1.3 - 2.8	1.4 - 2.4	0.5 - 2.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	05/31/01
TCL SVOCs - 8270C (μg/Kg)									
10,500,000	4768.4	1,2,4-Trichlorobenzene	1710 U	7140 U	230 J	398 J	168 J	431 UJ	556 U
94,500,000	628.8	1,2-Dichlorobenzene	1710 U	7140 U	1410	7500	955	431 UJ	556 U
NA	628.8	1,3-Dichlorobenzene	1710 U	7140 U	953 U	243 J	391 U	431 UJ	556 U
3,310,000	628.8	1,4-Dichlorobenzene	1710 U	7140 U	5140	3610	1690	431 UJ	556 U
21,000,000	26.2	2,4-Dimethylphenol [2]	1710 U	7140 U	953 U	461 U	391 U	431 UJ	556 U
NA	65	2-Methylnaphthalene	304 J	12200	419 J	185 J	275 J	431 UJ	556 U
52,600,000	26.2	2-Methylphenol [2]	1710 U	7140 U	953 U	461 U	391 U	431 UJ	556 U
5,300,000	26.2	4-Methylphenol [2]	1710 U	2390 J	953 U	461 U	391 U	431 UJ	556 U
63,300,000	16	Acenaphthene	575 J	17000	380 J	291 J	550	431 UJ	556 U
NA	NA	Acenaphthylene	528 J	3010 J	773 J	693	796	129 J	206 J
316,000,000	85	Anthracene	1130 J	36900	1080	1120	1970	141 J	330 J
109,000	261	Benz(a)anthracene	2690	56000	1350	1490 J	2740	144 J	378 J
10,900	370	Benzo(a)pyrene	2990	34000	1470	1230	2200	173 J	456 J
109,000	NA	Benzo(b)fluoranthene	3190	29800	1450	2660	1770 J	245 J	488 J
NA	170	Benzo(g,h,i)perylene	1150 J	24600	691 J	376 J	601	431 UJ	185 J
1,090,000	240	Benzo(k)fluoranthene	3160	32100	1260	461 U	2090	234 J	514 J
4.2 x 10^9	NA	Benzoic acid	4290 U	18000 U	2400 U	1160 U	984 U	1080 UJ	1400 U
316,000,000	NA	Benzyl alcohol	1710 U	7140 U	953 U	461 U	391 U	431 UJ	556 U
5,680,000	10453.8	Bis(2-ethylhexyl)phthalate	1710 U	7140 U	953 U	339 J	246 J	431 UJ	556 U
3,970,000	NA	Carbazole	1160 J	32800	334 J	441 J	930	70.8 J	110 J
10,900,000	340	Chrysene	4440	53700	1660	1660 J	2820	196 J	477 J
10,900	60	Dibenz(a,h)anthracene	605 J	16600	436 J	293 J	455	431 UJ	102 J
4,210,000	2,000[d]	Dibenzofuran	541 J	21300	232 J	195 J	453	431 UJ	556 U
NA	NA	Di-n-octyl phthalate	1710 U	7140 U	953 U	461 U	391 U	431 UJ	556 U
42,100,000	600	Fluoranthene	3410 U	139000	3370	3670	6380	540	967
42,200,000	35	Fluorene	906 J	22900	398 J	304 J	659	431 UJ	556 U
108,000	200	Indeno(1,2,3-cd)pyrene	1980	19500 J	1550	267 J	476 J	431 UJ	225 J
42,100,00	160	Naphthalene	251 J	32000	819 J	251 J	488	431 UJ	556 U
NA	240	Phenanthrene	3410 U	162000	1800	2440	4880	173 J	448 J
632,000,000	26.2	Phenol [2]	1710 U	7140 U	953 U	461 U	391 U	431 UJ	556 U
31,600,000	490	Pyrene	5260	101000	2110	1980 J	3940	223 J	349 J
NA	NA	Total PAHs	30860	846410	21582	19546	34473	2268.8	5235

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: Depth (ft): Date:	TMCSD-4-Z4 2.9 - 3.5 06/01/01	TMCSD-5-Z3 1.6 - 2.5 06/01/01	TMCSD-5-Z4 2.5 - 3.5 06/01/01	TMCSD-5-2-Z3 1.4 - 2.7 06/01/01	TMCSD-6-Z3 1.3 - 2.8 06/01/01	LF5SD-1-Z3 1.4 - 2.4 05/31/01	LF5SD-2-Z2 0.5 - 2.3 05/31/01
TAL Metals - 6010B/7470A/71A (mg/Kg)										
1,100,000	NA	Aluminum		**5000**	**4860**	**7100**	**8490**	**5850**	**7930**	**7100**
40.3	6	Arsenic		**4.4**	**9.2**	**17.1**	**24.2**	**13.2**	**5.8**	**9.2**
73,600	NA	Barium		**35.3**	**34.6**	**61.7**	**78.4**	**45.2**	**39.1**	**49.1**
18.5	NA	Beryllium		0.11 U	**0.24 J**	**0.52**	**0.73**	0.13 U	0.13 U	**0.19 J**
473	0.6	Cadmium		0.11 U	**1.5**	**27.0**	**40.4**	**11.0**	0.13 U	0.15 U
NA	NA	Calcium		**32100**	**25600**	**8160**	**11400**	**18900**	**4680 J**	**19000 J**
1,050,000	26	Chromium		**9.9**	**27.8**	**43.8**	**40.6**	**19.0**	**22.4**	**12.5**
63,100	NA	Cobalt		**3.7**	**4.3**	**5.7**	**8.5**	**4.8**	**6.3**	**5.9**
42,000	16	Copper		**22.7**	**49.8**	**37.2**	**60.4**	**39.4**	**16.4**	**26.8**
NA	20,000	Iron		**13800**	**15300**	**21200**	**28500**	**14800**	**14300**	**22500**
NA	31	Lead		**55.6**	**181**	**156**	**170**	**84.7**	**19.3**	**61.9**
NA	NA	Magnesium		**2930 J**	**2980 J**	**2380 J**	**2810 J**	**3650 J**	**4540 J**	**5200 J**
24,200	460	Manganese		**322**	**120**	**250**	**132**	**138**	**143**	**339**
NA	0.15	Mercury		**0.028 J**	**0.23 J**	**0.10 J**	**0.40 J**	**0.14 J**	**0.11 J**	**0.20 J**
21,000	16	Nickel		**9.3**	**28.5**	**14.4**	**24.4**	**16.1**	**13.4**	**14.0**
NA	NA	Potassium		**812 J**	**778 J**	**1090 J**	**1260 J**	**618 J**	**1550 J**	**1340 J**
NA	NA	Sodium		**140**	**135**	**181**	**265**	**85.6 J**	**134 J**	**102 J**
NA	NA	Thallium		0.43 U	0.43 U	0.39 U	0.52 U	0.53 U	0.54 U	0.61 U
7,380	NA	Vanadium		**12.0**	**55.9**	**20.5**	**45.2**	**27.7**	**24.5**	**21.1**
316,000	120	Zinc		**112 J**	**144 J**	**111 J**	**124 J**	**103 J**	**49.3 J**	**112 J**
Hexavalent Chromium - 7196A (mg/Kg)										
5,170	NA	Hexavalent Chromium		**1.6 J**	**1.3 J**	**0.89 J**	7.3 UJ	4.8 UJ	**1.3 J**	**1.4 J**
Total Cyanide - 9012A (mg/Kg)										
21,100	NA	Cyanide		**0.150 J**	0.637 UJ	0.510 UJ	**0.281 J**	0.664 UJ	0.673 U	0.828 U
TRPH - 418.1M (mg/Kg)										
NA	NA	TRPH		**468 J**	**641**	**2040**	**2880**	**1470**	**1480**	683 U
Percent Moisture (wt%)										
NA	NA	Percent Moisture		**15.0**	**20.7**	**6.54**	**34.4**	**23.9**	**25.7**	**41.1**

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID:	LF5SD-3-Z2	TMCSD-7-Z2	TMCSD-7-Z3	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4
			Depth (ft):	0.5 - 2.3	0.5 - 1.5	1.5 - 2.4	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5
			Date:	05/31/01	05/31/01	05/31/01	05/31/01	05/31/01	05/30/01	05/30/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)										
NA	NA	Total Organic Carbon		**6230**	**25700**	**72100**	**205000**	**5270**	**211000**	**177000**
TCL PCBs - 8082 (µg/Kg)										
NA	70	Aroclor 1242		252 U	544 U	282 U	178 U	23.0 U	97.8 U	74.7 U
6290	5	Aroclor 1260		**657**	**2540**	**997**	**568**	**30.2**	**107**	74.7 U
2,3,7,8-TCDD equivalent (ng/Kg)										
331,000	10	Total 2,3,7,8-TCDD equivalent		**1.2897**	**5.0164**	**72.076**	**67.318**	ND	**3.4528**	ND
TCL Pesticides - 8081A (µg/Kg)										
331,000	2	4,4′-DDD		37.8 U	**23.6 NJ**	**105 NJ**	**31.4 NJ**	**3.10 NJ**	**4.29 NJ**	11.2 U
234,000	2	4,4′-DDE		37.8 U	81.7 U	42.3 U	33.3 U	3.45 U	14.7 U	11.2 U
233,000	1	4,4′-DDT		50.4 U	109 U	**97.7 NJ**	**38.9 NJ**	4.60 U	**2.81 NJ**	14.9 U
4,660	2	Aldrin		50.4 U	109 U	**24.9 NJ**	44.4 U	4.60 U	19.6 U	14.9 U
61,100	0.314	alpha-Chlordane		**4.20 NJ**	27.2 U	14.1 U	**26.6 NJ**	1.15 U	4.89 U	3.74 U
NA	3.144	delta-BHC [1]		25.2 U	54.4 U	28.2 U	22.2 U	2.30 U	9.78 U	7.47 U
4,960	0.02	Dieldrin		62.9 U	136 U	70.4 U	55.5 U	5.75 U	24.4 U	18.7 U
NA	1.572	Endosulfan I		62.9 U	136 U	70.4 U	55.5 U	5.75 U	24.4 U	18.7 U
NA	1.572	Endosulfan II		37.8 U	81.7 U	42.3 U	33.3 U	3.45 U	14.7 U	**3.45 J**
NA	NA	Endosulfan sulfate		75.5 U	163 U	84.5 U	66.6 U	6.90 U	29.3 U	22.4 U
315,000	3	Endrin		50.4 U	109 U	56.3 U	44.4 U	4.60 U	**3.82 NJ**	**2.89 J**
NA	NA	Endrin aldehyde		**40.7 NJ**	272 U	141 U	111 U	**2.11 NJ**	48.9 U	37.4 U
NA	NA	Endrin ketone		37.8 U	**160 NJ**	**209 NJ**	33.3 U	3.45 U	14.7 U	11.2 U
NA	3	gamma-BHC [1]		25.2 U	54.4 U	28.2 U	22.2 U	2.30 U	9.78 U	7.47 U
61,000	0.314	gamma-Chlordane		**2.66 NJ**	**18.0 NJ**	**12.9 NJ**	**4.47 NJ**	**0.705 NJ**	9.78 U	7.47 U
NA	1.572	Heptachlor		37.8 U	81.7 U	42.3 U	33.3 U	3.45 U	**4.02 NJ**	11.2 U
NA	1.572	Heptachlor epoxide		62.9 U	**75.0 NJ**	**131 NJ**	**13.6 NJ**	**1.25 NJ**	24.4 U	18.7 U
11,200	31.44	Methoxychlor		504 U	1090 U	**310 NJ**	444 U	46.0 U	196 U	149 U

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	LF5SD-3-Z2 0.5 - 2.3 05/31/01	TMCSD-7-Z2 0.5 - 1.5 05/31/01	TMCSD-7-Z3 1.5 - 2.4 05/31/01	TMCSD-7-1-Z2 0.5 - 1.1 05/31/01	TMCSD-7-1-Z3 1.1 - 2.5 05/31/01	TMCSD-8-1-Z3 2.2 - 2.5 05/30/01	TMCSD-8-1-Z4 2.5 - 3.5 05/30/01
TCL VOCs - 8260B (μg/Kg)										
NA	940	1,1,2,2-Tetrachloroethane		6.41 U	6.31 UJ	**257 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 UJ
94,500,000	628.8	1,2-Dichlorobenzene		6.41 U	**5.84 J**	7.08 UJ	**8.15 J**	**17.2 J**	25.8 U	18.6 UJ
NA	NA	1,2-Dichloroethane		6.41 U	6.31 U	**36.9 J**	**4.86 J**	5.92 U	25.8 U	18.6 U
NA	NA	1,2-Dichloroethene, Total		6.41 U	6.31 U	**7.51 J**	**27.9 J**	**5.78 J**	25.8 U	18.6 U
3,310,000	628.8	1,4-Dichlorobenzene		6.41 U	**7.02 J**	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 UJ
NA	NA	2-Butanone		**6.21 J**	**7.11 J**	14.2 UJ	21.9 UJ	11.8 U	**32.0 J**	**19.9 J**
105,000,000	NA	Acetone		**19.9 J**	**28.6 J**	**19.4 J**	**57.3 J**	**17.5 J**	**134**	**88.8 J**
273,000	1467.2	Benzene		6.41 U	**54.3 J**	**2980 J**	**9.16 J**	5.92 U	25.8 U	18.6 U
105,000,000	NA	Carbon disulfide		6.41 U	6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	**6.55 J**
21,000,000	183.4	Chlorobenzene		**1.78 J**	**224 J**	**111000**	**32.1 J**	**5.31 J**	**30.6**	18.6 U
NA	NA	Chloroform		6.41 U	6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U
NA	NA	cis-1,2-Dichloroethene		6.41 U	6.31 U	**3.24 J**	**27.2 J**	**5.63 J**	**13.7 J**	18.6 U
NA	1257.6	Ethylbenzene		6.41 U	6.31 U	**17.2 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 U
NA	4820.8	m,p-Xylene		6.41 U	6.31 U	**5.99 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 U
NA	4820.8	o-Xylene		6.41 U	6.31 U	**2.88 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 U
NA	530	Tetrachloroethene		6.41 U	6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U
NA	2567.6	Toluene		6.41 U	**3.17 J**	**6.50 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 U
NA	1,600	trans-1,2-Dichloroethene		6.41 U	6.31 U	**4.30 J**	10.9 UJ	5.92 U	25.8 U	18.6 U
6,320,000	1,600	Trichloroethene		6.41 U	6.31 U	7.08 UJ	10.9 UJ	**2.36 J**	25.8 U	18.6 U
NA	NA	Vinyl chloride		12.8 U	12.6 U	**9.04 J**	21.9 UJ	11.8 U	51.5 U	37.2 U
NA	4820.8	Xylenes, Total		6.41 U	6.31 U	**8.87 J**	10.9 UJ	5.92 UJ	25.8 U	18.6 U

Key at the end of Table.

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T3 j rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	LF5SD-3-Z2	TMCSD-7-Z2	TMCSD-7-Z3	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4
		Depth (ft):	0.5 - 2.3	0.5 - 1.5	1.5 - 2.4	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5
		Date:	05/31/01	05/31/01	05/31/01	05/31/01	05/31/01	05/30/01	05/30/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	4768.4	1,2,4-Trichlorobenzene	410 U	413 U	1400 UJ	725 U	372 U	1700 U	1210 U
94,500,000	628.8	1,2-Dichlorobenzene	410 U	170 J	952 J	1140	100 J	536 J	1210 U
NA	628.8	1,3-Dichlorobenzene	410 U	413 U	1400 UJ	725 U	372 U	1700 U	1210 U
3,310,000	628.8	1,4-Dichlorobenzene	410 U	235 J	2170	370 J	372 U	1700 U	1210 U
21,000,000	26.2	2,4-Dimethylphenol [2]	410 U	204 J	1400 UJ	725 U	372 U	1700 U	1210 U
NA	65	2-Methylnaphthalene	410 U	1920	614 J	350 J	372 U	1700 U	1210 U
52,600,000	26.2	2-Methylphenol [2]	410 U	413 U	1400 UJ	725 U	372 U	1700 U	1210 U
5,300,000	26.2	4-Methylphenol [2]	410 U	250 J	1400 UJ	725 U	372 U	1700 U	1210 U
63,300,000	16	Acenaphthene	410 U	3560 J	1080 J	458 J	372 U	1700 U	1210 U
NA	NA	Acenaphthylene	410 U	949	1080 J	1480	372 U	371 J	1210 U
316,000,000	85	Anthracene	78.4 J	7460 J	2900	2670	37.7 J	396 J	1210 U
109,000	261	Benz(a)anthracene	163 J	11400 J	5750	3700 J	69.5 J	395 J	1210 U
10,900	370	Benzo(a)pyrene	170 J	7960 J	5170 J	3300 J	57.5 J	465 J	1210 U
109,000	NA	Benzo(b)fluoranthene	148 J	9470 J	4500 J	3610 J	58.1 J	541 J	1210 U
NA	170	Benzo(g,h,i)perylene	156 J	1500	2580 J	995 J	372 U	1700 U	1210 U
1,090,000	240	Benzo(k)fluoranthene	148 J	7600 J	4810 J	2810 J	67.0 J	517 J	1210 U
4.2×10^9	NA	Benzoic acid	1030 U	1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U
316,000,000	NA	Benzyl alcohol	410 U	413 U	1400 UJ	725 U	372 U	1700 U	1210 U
5,680,000	10453.8	Bis(2-ethylhexyl)phthalate	410 U	279 J	479 J	156 J	372 U	1700 U	1210 U
3,970,000	NA	Carbazole	410 U	5170 J	1450	800	372 U	1700 U	1210 U
10,900,000	340	Chrysene	182 J	10500 J	6210	4650 J	76.1 J	495 J	1210 U
10,900	60	Dibenz(a,h)anthracene	77.7 J	1250	1690 J	704 J	372 U	1700 U	1210 U
4,210,000	2,000[d]	Dibenzofuran	410 U	3940 J	839 J	294 J	372 U	1700 U	1210 U
NA	NA	Di-n-octyl phthalate	410 U	413 U	1400 UJ	725 J	372 U	1700 U	1210 U
42,100,000	600	Fluoranthene	259 J	27700	14500	8820	167 J	1270 J	1210 U
42,200,000	35	Fluorene	410 U	4550 J	1110 J	702 J	372 U	1700 U	1210 U
108,000	200	Indeno(1,2,3-cd)pyrene	348 J	1430 J	5860	1220 J	372 U	1700 U	1210 U
42,100,00	160	Naphthalene	410 U	6360 J	1230 J	340 J	372 U	1700 U	1210 U
NA	240	Phenanthrene	164 J	31200	9470	4780	96.0 J	524 J	1210 U
632,000,000	26.2	Phenol [2]	410 U	413 U	1400 UJ	725 U	372 U	1700 U	1210 U
31,600,000	490	Pyrene	273 J	20700	8010	3750 J	153 J	475 J	1210 U
NA	NA	Total PAHs	2167.1	164619	78853	45433	781.9	5449	ND

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	LF5SD-3-Z2	TMCSD-7-Z2	TMCSD-7-Z3	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4
			Depth (ft):	0.5 - 2.3	0.5 - 1.5	1.5 - 2.4	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5
			Date:	05/31/01	05/31/01	05/31/01	05/31/01	05/31/01	05/30/01	05/30/01
TAL Metals - 6010B/7470A/71A (mg/Kg)										
1,100,000	NA	Aluminum		4980	5300	8790	8540	6060	7270	6170
40.3	6	Arsenic		2.9	8.7	32.8	13.7	6.6	19.9	4.6
73,600	NA	Barium		26.6	34.6	86.5	58.3	24.1	78.7	46.4
18.5	NA	Beryllium		0.13 U	0.20 J	0.68 J	0.22 U	0.12 J	0.45 U	0.36 U
473	0.6	Cadmium		0.13 U	2.1 J	12.7 J	12.3 J	0.11 U	5.0	0.36 U
NA	NA	Calcium		20200 J	22100 J	45400 J	48000 J	26400 J	12700 J	8220 J
1,050,000	26	Chromium		6.0	18.5	35.9	37.0	8.6	17.9	7.5
63,100	NA	Cobalt		3.8	4.3	7.2	7.5	5.8	6.0 J	5.1 J
42,000	16	Copper		17.1	43.5	72.5	69.4	15.7	32.7	20.8
NA	20,000	Iron		10600	14300	23200	21400	15600	16900	21900
NA	31	Lead		12.2	77.9	182	153	10.2	38.0	4.6
NA	NA	Magnesium		4630 J	3400 J	3220 J	6550 J	6390 J	3180	3770
24,200	460	Manganese		441	112	199	244	307	141	166
NA	0.15	Mercury		0.21 J	0.11 J	0.20 J	0.46 J	0.047 J	0.084 J	0.057 UJ
21,000	16	Nickel		8.3	17.0	23.9	27.2	11.2	12.9	10.5
NA	NA	Potassium		1010 J	930 J	1310 J	1100 J	1200 J	939	830
NA	NA	Sodium		74.7 J	113 J	179	138 J	115	534	385
NA	NA	Thallium		0.51 U	0.56 U	0.55 U	0.89 U	0.60 J	1.8 U	1.5 U
7,380	NA	Vanadium		11.3	32.0	45.3	47.0	14.9	23.5	12.2
316,000	120	Zinc		33.7 J	113 J	173 J	176 J	31.9 J	87.4	60.1
Hexavalent Chromium - 7196A (mg/Kg)										
5,170	NA	Hexavalent Chromium		5.3 U	0.92 J	5.8 U	9.8 U	4.4 U	19 U	16 U
Total Cyanide - 9012A (mg/Kg)										
21,100	NA	Cyanide		0.642 U	0.689 U	0.280 J	0.479 J	0.590 U	2.55 U	1.90 U
TRPH - 418.1M (mg/Kg)										
NA	NA	TRPH		519 U	370 J	1600	1060	477 U	2060 U	1520 U
Percent Moisture (wt%)										
NA	NA	Percent Moisture		22.9	28.2	31.0	55.2	16.1	80.6	73.7

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-9-Z2	TMCSD-9-1-Z2	TMCSD-9-3-Z3	TMCSD-9-3-Z4	TMCSD-9-4-Z3
			Depth (ft):	2.5 - 3.5	0.5 - 0.9	0.5 - 1.6	0.5 - 1	0.5 - 1.1	1.1 - 3.5	0.5 - 1.85
			Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)										
NA	NA	Total Organic Carbon			**113000**	**43700**	**33600**	**25500**	**77000**	**25600**
TCL PCBs - 8082 (μg/Kg)										
NA	70	Aroclor 1242		91.6 U	29.6 U	28.1 U	23.3 U	38.0 U	49.9 U	28.6 U
6290	5	Aroclor 1260		91.6 U	**17.7 J**	**231**	**259**	**361**	49.9 U	**473**
2,3,7,8-TCDD equivalent (ng/Kg)										
331,000	10	Total 2,3,7,8-TCDD equivalent		**0.025**	**17.624**	**0.9431**	**6.3018**	**1.711**	**0.02**	**1.7864**
TCL Pesticides - 8081A (μg/Kg)										
331,000	2	4,4′-DDD		13.7 U	**3.79 NJ**	21.1 U	35.0 U	**20.8 NJ**	37.4 U	**9.98 NJ**
234,000	2	4,4′-DDE		13.7 U	4.43 U	21.1 U	35.0 U	28.5 U	37.4 U	21.5 U
233,000	1	4,4′-DDT		18.3 U	**1.15 NJ**	**8.18 NJ**	**9.14 NJ**	**11.1 NJ**	49.9 U	**11.4 NJ**
4,660	2	Aldrin		18.3 U	11.2 U	**31.6 NJ**	**112 NJ**	**32.0 NJ**	49.9 U	**76.6 NJ**
61,100	0.314	alpha-Chlordane		4.58 U	1.48 U	**1.50 NJ**	**4.52 NJ**	**5.61 NJ**	12.5 U	**5.67 NJ**
NA	3.144	delta-BHC[1]		9.16 U	2.96 U	14.1 U	23.3 U	19.0 U	25.0 U	14.3 U
4,960	0.02	Dieldrin		22.9 U	7.39 U	35.1 U	58.3 U	**17.3 NJ**	62.4 U	35.8 U
NA	1.572	Endosulfan I		22.9 U	7.39 U	35.1 U	58.3 U	47.6 U	62.4 U	**5.72 NJ**
NA	1.572	Endosulfan II		13.7 U	4.43 U	21.1 U	35.0 U	28.5 U	37.4 U	21.5 U
NA	NA	Endosulfan sulfate		27.5 U	8.87 U	42.2 U	70.0 U	57.1 U	74.9 U	42.9 U
315,000	3	Endrin		**4.22 J**	5.91 U	28.1 U	46.7 U	38.0 U	49.9 U	28.6 U
NA	NA	Endrin aldehyde		45.8 U	14.8 U	70.3 U	117 U	**60.2 NJ**	125 U	**65.3 NJ**
NA	NA	Endrin ketone		13.7 U	**2.24 NJ**	**15.0 NJ**	**23.8 NJ**	**16.0 NJ**	37.4 U	**20.9 NJ**
NA	3	gamma-BHC[1]		9.16 U	2.96 U	14.1 U	23.3 U	19.0 U	25.0 U	**5.98 NJ**
61,000	0.314	gamma-Chlordane		9.16 U	2.96 U	14.1 U	23.3 U	**8.79 NJ**	25.0 U	**9.01 NJ**
NA	1.572	Heptachlor		13.7 U	4.43 U	21.1 U	35.0 U	28.5 U	37.4 U	21.5 U
NA	1.572	Heptachlor epoxide		22.9 U	7.39 U	35.1 U	58.3 U	**9.05 NJ**	62.4 U	**25.1 NJ**
11,200	31.44	Methoxychlor		183 U	59.1 U	281 U	467 U	380 U	499 U	**50.6 NJ**

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte — Sample ID: / Depth (ft): / Date:	TMCSD-8-1-Z4/D 2.5 - 3.5 05/30/01	TMCSD-8-2-Z2 0.5 - 0.9 05/30/01	TMCSD-9-Z2 0.5 - 1.6 05/30/01	TMCSD-9-1-Z2 0.5 - 1 05/30/01	TMCSD-9-3-Z3 0.5 - 1.1 05/29/01	TMCSD-9-3-Z4 1.1 - 3.5 05/29/01	TMCSD-9-4-Z3 0.5 - 1.85 05/29/01
TCL VOCs - 8260B (μg/Kg)									
NA	940	1,1,2,2-Tetrachloroethane	4.88 UJ	7.25 UJ	6.96 UJ	5.97 U	10.0 U	14.0 U	7.22 U
94,500,000	628.8	1,2-Dichlorobenzene	4.88 UJ	**2.84 J**	6.96 UJ	5.97 U	10.0 U	14.0 U	7.22 U
NA	NA	1,2-Dichloroethane	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	NA	1,2-Dichloroethene, Total	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
3,310,000	628.8	1,4-Dichlorobenzene	4.88 UJ	7.25 UJ	6.96 UJ	5.97 U	10.0 U	14.0 U	7.22 U
NA	NA	2-Butanone	**3.77 J**	14.5 U	**4.51 J**	11.9 U	20.0 U	28.0 U	14.4 U
105,000,000	NA	Acetone	**18.0 J**	14.5 U	**22.1 J**	**14.8**	20.0 U	**57.8**	14.4 U
273,000	1467.2	Benzene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
105,000,000	NA	Carbon disulfide	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
21,000,000	183.4	Chlorobenzene	4.88 U	**2.22 J**	**5.95 J**	5.97 U	10.0 U	14.0 U	**2.83 J**
NA	NA	Chloroform	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	NA	cis-1,2-Dichloroethene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	1257.6	Ethylbenzene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	4820.8	m,p-Xylene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	4820.8	o-Xylene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	530	Tetrachloroethene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	2567.6	Toluene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	1,600	trans-1,2-Dichloroethene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
6,320,000	1,600	Trichloroethene	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U
NA	NA	Vinyl chloride	9.77 U	14.5 U	13.9 U	11.9 U	20.0 U	28.0 U	14.4 U
NA	4820.8	Xylenes, Total	4.88 U	7.25 U	6.96 U	5.97 U	10.0 U	14.0 U	7.22 U

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte / Sample ID: / Depth (ft): / Date:	TMCSD-8-1-Z4/D 2.5 - 3.5 05/30/01	TMCSD-8-2-Z2 0.5 - 0.9 05/30/01	TMCSD-9-Z2 0.5 - 1.6 05/30/01	TMCSD-9-1-Z2 0.5 - 1 05/30/01	TMCSD-9-3-Z3 0.5 - 1.1 05/29/01	TMCSD-9-3-Z4 1.1 - 3.5 05/29/01	TMCSD-9-4-Z3 0.5 - 1.85 05/29/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	4768.4	1,2,4-Trichlorobenzene	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
94,500,000	628.8	1,2-Dichlorobenzene	1540 U	**1010 J**	448 U	393 U	650 U	915 U	478 U
NA	628.8	1,3-Dichlorobenzene	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
3,310,000	628.8	1,4-Dichlorobenzene	1540 U	**127 J**	448 U	393 U	650 U	915 U	478 U
21,000,000	26.2	2,4-Dimethylphenol [2]	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
NA	65	2-Methylnaphthalene	1540 U	485 U	448 U	**78.9 J**	650 U	915 U	478 U
52,600,000	26.2	2-Methylphenol [2]	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
5,300,000	26.2	4-Methylphenol [2]	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
63,300,000	16	Acenaphthene	1540 U	**104 J**	**130 J**	**221 J**	**390 J**	915 U	**267 J**
NA	NA	Acenaphthylene	1540 U	**144 J**	**82.0 J**	393 U	650 U	915 U	**165 J**
316,000,000	85	Anthracene	1540 U	**371 J**	**425 J**	**514**	**810**	915 U	**1090**
109,000	261	Benz(a)anthracene	1540 U	**747**	**676 J**	**836 J**	**1140 J**	915 U	**1690**
10,900	370	Benzo(a)pyrene	1540 U	**704 J**	**607 J**	**619 J**	**1010 J**	915 U	**1310 J**
109,000	NA	Benzo(b)fluoranthene	1540 U	**531 J**	**522 J**	**630 J**	**996 J**	915 U	**1130 J**
NA	170	Benzo(g,h,i)perylene	1540 U	**674 J**	**197 J**	**194 J**	**349 J**	915 U	**419 J**
1,090,000	240	Benzo(k)fluoranthene	1540 U	**603 J**	**644 J**	**694 J**	**938 J**	915 U	**1330 J**
4.2 x 10^9	NA	Benzoic acid	3880 U	1220 U	1130 U	**1970**	**4240**	2300 U	1200 U
316,000,000	NA	Benzyl alcohol	1540 U	485 U	448 U	**205 J**	650 U	915 U	478 U
5,680,000	10453.8	Bis(2-ethylhexyl)phthalate	1540 U	485 U	**87.3 J**	393 U	650 U	915 U	478 U
3,970,000	NA	Carbazole	1540 U	**163 J**	**209 J**	**305 J**	**351 J**	915 U	**471 J**
10,900,000	340	Chrysene	1540 U	**874**	**711 J**	**876 J**	**1220 J**	915 U	**1710**
10,900	60	Dibenz(a,h)anthracene	1540 U	**268 J**	**112 J**	**114 J**	**172 J**	915 U	**233 J**
4,210,000	2,000[d]	Dibenzofuran	1540 U	485 U	**102 J**	**166 J**	**179 J**	915 U	**211 J**
NA	NA	Di-n-octyl phthalate	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
42,100,000	600	Fluoranthene	1540 U	**1110**	**1430**	**1820**	**2470**	915 U	**4330**
42,200,000	35	Fluorene	1540 U	**129 J**	**137 J**	**202 J**	**323 J**	915 U	**396 J**
108,000	200	Indeno(1,2,3-cd)pyrene	1540 U	**1290**	**336 J**	**336 J**	**508 J**	915 U	**838**
42,100,00	160	Naphthalene	1540 U	**126 J**	**136 J**	**182 J**	**117 J**	915 U	**140 J**
NA	240	Phenanthrene	1540 U	**1100**	**1270**	**1980**	**2640**	915 U	**3570**
632,000,000	26.2	Phenol [2]	1540 U	485 U	448 U	393 U	650 U	915 U	478 U
31,600,000	490	Pyrene	1540 U	**1560**	**685 J**	**901 J**	**1300 J**	915 U	**1600**
NA	NA	Total PAHs	ND	**10498**	**8411**	**10668.9**	**14913**	ND	**20900**

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-9-Z2	TMCSD-9-1-Z2	TMCSD-9-3-Z3	TMCSD-9-3-Z4	TMCSD-9-4-Z3
		Sample ID:	Z4/D	Z2	TMCSD-9-Z2	Z2	Z3	Z4	Z3
		Depth (ft):	2.5 - 3.5	0.5 - 0.9	0.5 - 1.6	0.5 - 1	0.5 - 1.1	1.1 - 3.5	0.5 - 1.85
		Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
TAL Metals - 6010B/7470A/71A (mg/Kg)									
1,100,000	NA	Aluminum	**7220**	**10200**	**5760**	**6750**	**4100**	**6700**	**4050**
40.3	6	Arsenic	**3.6 J**	**20.7**	**8.8**	**4.7**	**4.6**	**7.2**	**1.8**
73,600	NA	Barium	**60.9**	**128**	**45.2**	**41.5**	**56.5**	**274**	**50.7**
18.5	NA	Beryllium	0.45 U	**0.67**	0.12 U	**0.15 J**	0.18 U	0.27 U	0.13 U
473	0.6	Cadmium	0.45 U	**6.2**	0.12 U	0.11 U	0.18 U	**0.29 J**	0.13 U
NA	NA	Calcium	**10400 J**	**13600 J**	**22500 J**	**13700 J**	**21500 J**	**238000 J**	**16300 J**
1,050,000	26	Chromium	**9.6**	**28.0**	**11.8**	**5.9**	**41.0**	**9.8**	**240**
63,100	NA	Cobalt	**6.1 J**	**8.1**	**5.2**	**4.9**	**3.5 J**	**4.9 J**	**3.7**
42,000	16	Copper	**24.6**	**58.5**	**61.8**	**12.4**	**12.5**	**13.9**	**12.2**
NA	20,000	Iron	**23100**	**26800**	**17400**	**17700**	**14300**	**20500**	**11100**
NA	31	Lead	**4.9**	**85.6**	**38.3**	**10.1**	**138**	**2.6**	**921**
NA	NA	Magnesium	**4150**	**5950**	**6880**	**4370**	**3060**	**7890**	**4670**
24,200	460	Manganese	**179**	**348**	**443**	**269**	**297**	**420**	**237**
NA	0.15	Mercury	0.075 UJ	**0.42 J**	**0.038 J**	**0.028 J**	**0.039 J**	0.043 UJ	**0.028 J**
21,000	16	Nickel	**13.7**	**21.1**	**14.6**	**11.2**	**7.6**	**10.2**	**7.3**
NA	NA	Potassium	**1050**	**1300**	**826**	**543**	**743**	**1510**	**495**
NA	NA	Sodium	**454**	**363**	**139**	**87.3 J**	**334**	**562**	**222**
NA	NA	Thallium	1.8 U	0.52 U	0.48 U	0.43 U	0.71 U	1.1 U	0.54 U
7,380	NA	Vanadium	**13.4**	**40.3**	**21.9**	**11.5**	**11.1**	**15.8**	**9.4**
316,000	120	Zinc	**66.0**	**103**	**93.5**	**46.5**	**57.6**	**41.1**	**66.2**
Hexavalent Chromium - 7196A (mg/Kg)									
5,170	NA	Hexavalent Chromium	18 U	6.2 U	5.8 U	5.1 U	**2.8 J**	12 U	5.2 U
Total Cyanide - 9012A (mg/Kg)									
21,100	NA	Cyanide	2.22 U	**0.394 J**	0.723 U	0.601 U	0.999 U	1.34 U	0.737 U
TRPH - 418.1M (mg/Kg)									
NA	NA	TRPH	1810 U	**680**	**250 J**	**152 J**	823 U	1120 U	590 U
Percent Moisture (wt%)									
NA	NA	Percent Moisture	**77.9**	**33.2**	**29.4**	**19.2**	**51.4**	**64.4**	**32.2**

Key at the end of Table.

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T3 j rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte / Sample ID: / Depth (ft): / Date:	TMCSD-10-Z3 / 0.5 - 1.65 / 05/29/01	TMCSD-10-1-Z3 / 1.7 - 2.2 / 05/24/01	TMCSD-10-2-Z3 / 1.1 - 2.1 / 05/24/01	TMCSD-10-3-Z3 / 1.5 - 2.5 / 05/23/01	TMCSD-10-3-Z3/D / 1.5 - 2.5 / 05/23/01	TMCSD-11-Z3 / 1.1 - 2.3 / 05/24/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)								
NA	NA	Total Organic Carbon	**12400**	**4120**	**8450**	**37700**	**52700**	**24000**
TCL PCBs - 8082 (µg/Kg)								
NA	70	Aroclor 1242	25.5 U	23.3 U	27.1 U	352 U	357 U	1310 U
6290	5	Aroclor 1260	**256**	**106**	**216**	**1480**	**2120**	**11700**
2,3,7,8-TCDD equivalent (ng/Kg)								
331,000	10	Total 2,3,7,8-TCDD equivalent	**1.438**	ND	**0.31**	**17.4302**	**10.7402**	**7.5193**
TCL Pesticides - 8081A (µg/Kg)								
331,000	2	4,4'-DDD	**5.84 NJ**	**3.84 NJ**	**5.35 NJ**	**64.4 NJ**	**76.1 NJ**	**149 NJ**
234,000	2	4,4'-DDE	19.1 U	**0.435 NJ**	**1.23 NJ**	**20.5 NJ**	**15.5 NJ**	197 U
233,000	1	4,4'-DDT	**6.04 NJ**	**15.4 NJ**	**13.6 NJ**	**25.0 NJ**	**32.5 NJ**	263 U
4,660	2	Aldrin	25.5 U	4.66 U	5.41 U	17.6 U	17.8 U	263 U
61,100	0.314	alpha-Chlordane	**1.93 NJ**	**2.64 NJ**	1.35 U	17.6 U	17.8 U	65.7 U
NA	3.144	delta-BHC[1]	12.7 U	2.33 U	2.71 U	17.6 U	17.8 U	131 U
4,960	0.02	Dieldrin	31.9 U	5.82 U	**3.62 NJ**	**6.10 NJ**	**7.64 NJ**	328 U
NA	1.572	Endosulfan I	31.9 U	**2.64 NJ**	6.77 U	35.2 U	35.7 U	328 U
NA	1.572	Endosulfan II	19.1 U	3.49 U	4.06 U	35.2 U	35.7 U	197 U
NA	NA	Endosulfan sulfate	38.2 U	6.98 U	8.12 U	35.2 U	35.7 U	394 U
315,000	3	Endrin	25.5 U	4.66 U	5.41 U	35.2 U	35.7 U	**209 NJ**
NA	NA	Endrin aldehyde	63.7 U	11.6 U	13.5 U	35.2 U	35.7 U	657 U
NA	NA	Endrin ketone	**14.9 NJ**	3.49 U	4.06 U	35.2 U	35.7 U	197 U
NA	3	gamma-BHC[1]	12.7 U	2.33 U	2.71 U	17.6 U	17.8 U	131 U
61,000	0.314	gamma-Chlordane	**3.56 NJ**	**1.17 NJ**	**1.55 NJ**	**17.8 NJ**	**21.2 NJ**	**104 NJ**
NA	1.572	Heptachlor	19.1 U	3.49 U	4.06 U	35.2 U	35.7 U	197 U
NA	1.572	Heptachlor epoxide	31.9 U	**1.56 NJ**	**1.44 NJ**	35.2 U	35.7 U	328 U
11,200	31.44	Methoxychlor	255 U	46.6 U	54.1 U	176 U	178 U	2630 U

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte / Sample ID: / Depth (ft): / Date:	TMCSD-10-Z3 0.5 - 1.65 05/29/01	TMCSD-10-1-Z3 1.7 - 2.2 05/24/01	TMCSD-10-2-Z3 1.1 - 2.1 05/24/01	TMCSD-10-3-Z3 1.5 - 2.5 05/23/01	TMCSD-10-3-Z3/D 1.5 - 2.5 05/23/01	TMCSD-11-Z3 1.1 - 2.3 05/24/01
TCL VOCs - 8260B (μg/Kg)								
NA	940	1,1,2,2-Tetrachloroethane	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
94,500,000	628.8	1,2-Dichlorobenzene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	**2.54 J**
NA	NA	1,2-Dichloroethane	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	NA	1,2-Dichloroethene, Total	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
3,310,000	628.8	1,4-Dichlorobenzene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	**2.00 J**
NA	NA	2-Butanone	**8.81 J**	11.5 U	13.2 U	17.9 U	17.8 U	13.3 U
105,000,000	NA	Acetone	**52.2**	11.5 U	13.2 U	**21.8 J**	17.8 U	13.3 U
273,000	1467.2	Benzene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
105,000,000	NA	Carbon disulfide	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
21,000,000	183.4	Chlorobenzene	6.38 U	**1.55 J**	**7.78**	**5.00 J**	**5.58 J**	**12.4**
NA	NA	Chloroform	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	NA	cis-1,2-Dichloroethene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	1257.6	Ethylbenzene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	4820.8	m,p-Xylene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	4820.8	o-Xylene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	530	Tetrachloroethene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	2567.6	Toluene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	1,600	trans-1,2-Dichloroethene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
6,320,000	1,600	Trichloroethene	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U
NA	NA	Vinyl chloride	12.8 U	11.5 U	13.2 U	17.9 U	17.8 U	13.3 U
NA	4820.8	Xylenes, Total	6.38 U	5.77 U	6.59 U	8.95 U	8.90 U	6.65 U

Key at the end of Table.

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	TMCSD-10-Z3 / 0.5 - 1.65 / 05/29/01	TMCSD-10-1-Z3 / 1.7 - 2.2 / 05/24/01	TMCSD-10-2-Z3 / 1.1 - 2.1 / 05/24/01	TMCSD-10-3-Z3 / 1.5 - 2.5 / 05/23/01	TMCSD-10-3-Z3/D / 1.5 - 2.5 / 05/23/01	TMCSD-11-Z3 / 1.1 - 2.3 / 05/24/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	4768.4	1,2,4-Trichlorobenzene		423 U	375 U	426 U	1620 U	1120 U	174 J
94,500,000	628.8	1,2-Dichlorobenzene		423 U	375 U	426 U	1620 U	1120 U	131 J
NA	628.8	1,3-Dichlorobenzene		423 U	375 U	426 U	1620 U	1120 U	434 U
3,310,000	628.8	1,4-Dichlorobenzene		423 U	375 U	426 U	1620 U	1120 U	172 J
21,000,000	26.2	2,4-Dimethylphenol [2]		423 U	375 U	426 U	1620 U	1120 U	434 U
NA	65	2-Methylnaphthalene		423 U	375 U	426 U	1620 U	1120 U	434 U
52,600,000	26.2	2-Methylphenol [2]		423 U	375 U	426 U	1620 U	1120 U	434 U
5,300,000	26.2	4-Methylphenol [2]		423 U	375 U	426 U	1620 U	1120 U	434 U
63,300,000	16	Acenaphthene		**64.9 J**	375 U	**87.1 J**	**368 J**	**205 J**	**51.8 J**
NA	NA	Acenaphthylene		423 U	**76.6 J**	**83.2 J**	**519 J**	**415 J**	**111 J**
316,000,000	85	Anthracene		**153 J**	**83.8 J**	**257 J**	**1110 J**	**783 J**	**207 J**
109,000	261	Benz(a)anthracene		**318 J**	**140 J**	**449 J**	**2260 J**	**1530 J**	**351 J**
10,900	370	Benzo(a)pyrene		**284 J**	**120 J**	**415 J**	**2110**	**1440**	**334 J**
109,000	NA	Benzo(b)fluoranthene		**249 J**	**88.4 J**	**421 J**	**2400**	**1330**	**392 J**
NA	170	Benzo(g,h,i)perylene		**240 J**	**71.3 J**	**130 J**	**698 J**	**423 J**	**119 J**
1,090,000	240	Benzo(k)fluoranthene		**211 J**	**97.8 J**	**456 J**	**2340**	**2020**	**351 J**
4.2 x 10^9	NA	Benzoic acid		1060 U	942 U	1070 U	4070 U	2820 U	1090 U
316,000,000	NA	Benzyl alcohol		423 U	375 U	426 U	1620 U	1120 U	434 U
5,680,000	10453.8	Bis(2-ethylhexyl)phthalate		423 U	375 U	426 U	1620 U	1120 U	434 U
3,970,000	NA	Carbazole		**78.9 J**	375 U	**131 J**	**563 J**	**349 J**	**89.1 J**
10,900,000	340	Chrysene		**340 J**	**158 J**	**470 J**	**2460 J**	**1670 J**	**426 J**
10,900	60	Dibenz(a,h)anthracene		**99.0 J**	375 U	426 U	**351 J**	**238 J**	434 U
4,210,000	2,000[d]	Dibenzofuran		423 U	375 U	426 U	1620 U	1120 U	434 U
NA	NA	Di-n-octyl phthalate		423 U	375 U	426 U	1620 U	1120 U	434 U
42,100,000	600	Fluoranthene		**508**	**300 J**	**1340**	**7800**	**5250**	**1110**
42,200,000	35	Fluorene		**63.8 J**	375 U	**111 J**	**444 J**	**303 J**	**95.7 J**
108,000	200	Indeno(1,2,3-cd)pyrene		**464**	**131 J**	**149 J**	**549 J**	**351 J**	**136 J**
42,100,00	160	Naphthalene		423 U	375 U	**68.1 J**	**292 J**	1120 U	434 U
NA	240	Phenanthrene		**609**	**175 J**	**831**	**3710**	**2190**	**548**
632,000,000	26.2	Phenol [2]		423 U	375 U	426 U	1620 U	1120 U	434 U
31,600,000	490	Pyrene		**637**	**237 J**	**513 J**	**2940 J**	**1850 J**	**460 J**
NA	NA	Total PAHs		**4319.6**	**1678.9**	**5911.4**	**30914**	**20347**	**4781.6**

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-4a TMC 2001 Creek Sediment - 7/5/2002

Table 3-4a

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-10-Z3	TMCSD-10-1-Z3	TMCSD-10-2-Z3	TMCSD-10-3-Z3	TMCSD-10-3-Z3/D	TMCSD-11-Z3
		Depth (ft):	0.5 - 1.65	1.7 - 2.2	1.1 - 2.1	1.5 - 2.5	1.5 - 2.5	1.1 - 2.3
		Date:	05/29/01	05/24/01	05/24/01	05/23/01	05/23/01	05/24/01
TAL Metals - 6010B/7470A/71A (mg/Kg)								
1,100,000	NA	Aluminum	3210	2910	3820	5320	5330	4090
40.3	6	Arsenic	3.1	3.2	5.1	15.1	15.7	8.2
73,600	NA	Barium	35.6	40.0	59.4	70.0	66.4	34.8
18.5	NA	Beryllium	0.13 U	0.10 U	0.11 U	0.348 J	0.365 J	0.23 J
473	0.6	Cadmium	0.13 U	0.10 U	0.11 U	1.15	1.85	2.3
NA	NA	Calcium	7250 J	15400 J	11600 J	10100	11700	15900 J
1,050,000	26	Chromium	6.6	4.7	11.3	20.1	23.1	10.2
63,100	NA	Cobalt	2.6	2.7	4.5	5.72	5.84	3.9
42,000	16	Copper	12.2	12.9 U	15.5 U	42.8 U	52.6 U	22.0 U
NA	20,000	Iron	8800	8860	12000	17800	17400	12000
NA	31	Lead	15.5	9.6	29.4	73.8	84.0	30.3
NA	NA	Magnesium	2840	5090	3920	3540	3830	4460
24,200	460	Manganese	125	345	247	262	334	245
NA	0.15	Mercury	0.025 J	0.022 J	0.039 J	0.185 J	0.242 J	0.046 J
21,000	16	Nickel	7.9	6.1	10.7	17.6	18.7	9.7
NA	NA	Potassium	482	417 J	456 J	747	620	422 J
NA	NA	Sodium	181	30.2 U	43.1 J	154 U	49.6 J	24.0 U
NA	NA	Thallium	0.51 U	0.41 U	0.45 U	6.16 U	4.43 U	0.33 U
7,380	NA	Vanadium	10.2	7.7	18.4	37.4	41.2	15.2
316,000	120	Zinc	56.0	31.2	74.3	135	136	57.0
Hexavalent Chromium - 7196A (mg/Kg)								
5,170	NA	Hexavalent Chromium	4.4 U	4.4 U	5.4 U	6.6 U	6.9 U	5.5 U
Total Cyanide - 9012A (mg/Kg)								
21,100	NA	Cyanide	0.615 U	0.578 U	0.658 U	0.883 U	0.920 U	0.659 U
TRPH - 418.1M (mg/Kg)								
NA	NA	TRPH	517 U	481 U	346 J	625 J	617 J	434 J
Percent Moisture (wt%)								
NA	NA	Percent Moisture	22.6	16.8	26.9	45.0	46.2	27.1

Key at the end of Table.

Table 3-4a
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

All positive results are hold. Results that exceed the most stringent ecological screening criteria (as selected in Table 3-1a) are shaded. Results exceeding the site human health risk levels are boxed.
An average value of 5.24% TOC was used in the calculation of the criteria, where necessary.

[1] Total Hexachlorocyclohexanes.

[2] Total phenols, unchlorinated.

Key:

J =	Estimated value.
mg/Kg =	Micrograms per kilogram.
N =	Identification tentative.
NA =	Criteria not applicable or not available.
ND =	No dioxins and furans were detected in this sample.
ng/Kg =	Nanograms per kilogram.
NS =	Not sampled.
PCB =	Polychlorinated biphenyls.
TAL =	Target Analyte List.
TCL =	Target Compound List.
TRPH =	Total recoverable petroleum hydrocarbons.
SVOC =	Semivolatile organic compound.
VOC =	Volatile organic compound.
U =	Not detected at the reported value.
µg/Kg =	Micrograms per kilogram.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte Sample ID: / Depth (ft): / Date:	TMCSD-5-1-Z4 2.8 - 3.5 06/01/01	TMCSD-5-2-Z4 2.7 - 3.5 06/01/01	TMCSD-6-Z4 2.8 - 3.5 06/01/01	TMCSD-6-Z4/D 2.8 - 3.5 06/01/01	LF5SD-1-Z4 2.4 - 3.4 05/31/01	LF5SD-2-Z4 2.3 - 3.3 05/31/01	LF5SD-3-Z4 2.3 - 3.3 05/31/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)									
NA	NA	Total Organic Carbon	**6660**	2300 U	2320 U	2340 U	2310 U	2220 U	2120 U
TCL PCBs - 8082 (µg/Kg)									
-	28	Aroclor 1242	499 U	23.2 U	23.3 U	24.0 U	23.4 U	22.4 U	21.7 U
6290	5	Naphthalene	**1790**	23.2 U	**24.9**	**33.4**	**19.3 J**	22.4 U	21.7 U
Total 2,3,7,8-TCDD equivalent (ng/Kg)									
NA	1	TCDD equivalent	NS	ND	ND	ND	ND	ND	ND
TCL Pesticides - 8081A (µg/Kg)									
331,000	2	4,4′-DDD	74.8 U	3.49 U	3.49 U	3.60 U	**0.429 NJ**	3.36 U	3.25 U
234,000	2	4,4′-DDE	74.8 U	3.49 U	3.49 U	3.60 U	3.51 U	3.36 U	3.25 U
233,000	1	4,4′-DDT	99.7 U	4.65 U	**1.15 NJ**	4.80 U	4.68 U	4.48 U	4.33 U
4,660	2	Aldrin	99.7 U	4.65 U	4.66 U	4.80 U	4.68 U	4.48 U	4.33 U
61,100	0.03	alpha-Chlordane	24.9 U	1.16 U	**0.582 NJ**	**0.503 NJ**	**0.234 NJ**	1.12 U	1.08 U
NA	0.3	delta-BHC[1]	49.9 U	2.32 U	2.33 U	2.40 U	2.34 U	2.24 U	2.17 U
4,960	0.02	Dieldrin	125 U	5.81 U	5.82 U	6.00 U	5.85 U	5.60 U	5.41 U
NA	3.9	Endosulfan I	125 U	5.81 U	**0.582 NJ**	6.00 U	5.85 U	5.60 U	5.41 U
NA	3.9	Endosulfan II	74.8 U	3.49 U	3.49 U	3.60 U	3.51 U	3.36 U	3.25 U
NA	NA	Endosulfan sulfate	150 U	6.97 U	6.99 U	7.20 U	7.02 U	6.72 U	6.50 U
315,000	3	Endrin	99.7 U	4.65 U	4.66 U	4.80 U	4.68 U	4.48 U	4.33 U
NA	NA	Endrin aldehyde	249 U	11.6 U	11.6 U	12.0 U	11.7 U	11.2 U	10.8 U
NA	NA	Endrin ketone	**35.2 NJ**	3.49 U	**14.1 NJ**	3.60 U	3.51 U	3.36 U	3.25 U
NA	0.3	gamma-BHC[1]	49.9 U	2.32 U	2.33 U	2.40 U	2.34 U	2.24 U	2.17 U
61,000	0.03	gamma-Chlordane	49.9 U	2.32 U	2.33 U	2.40 U	2.34 U	2.24 U	2.17 U
NA	0.15	Heptachlor	74.8 U	3.49 U	3.49 U	3.60 U	3.51 U	3.36 U	3.25 U
NA	0.15	Heptachlor epoxide	**168 NJ**	5.81 U	5.82 U	6.00 U	5.85 U	5.60 U	5.41 U
11,200	3	Methoxychlor	997 U	46.5 U	46.6 U	48.0 U	46.8 U	44.8 U	43.3 U

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	TMCSD-5-1-Z4	TMCSD-5-2-Z4	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z4	LF5SD-2-Z4	LF5SD-3-Z4
			Depth (ft):	2.8 - 3.5	2.7 - 3.5	2.8 - 3.5	2.8 - 3.5	2.4 - 3.4	2.3 - 3.3	2.3 - 3.3
			Date:	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	05/31/01	05/31/01
TCL VOCs - 8260B (µg/Kg)										
NA	940	1,1,2,2-Tetrachloroethane		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
94,500,000	60	1,2-Dichlorobenzene		6.14 U	**3.85 J**	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	1,2-Dichloroethane		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	1,2-Dichloroethene, Total		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
3,310,000	60	1,4-Dichlorobenzene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	2-Butanone		12.3 U	11.8 U	12.0 U	11.8 U	11.8 U	11.6 U	11.0 U
105,000,000	NA	Acetone		12.3 U	11.8 U	12.0 U	11.8 U	**10.7 J**	**10.8 J**	**7.35 J**
273,000	140	Benzene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
105,000,000	NA	Carbon disulfide		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
21,000,000	17.5	Chlorobenzene		6.14 U	**3.24 J**	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	Chloroform		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	cis-1,2-Dichloroethene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	120	Ethylbenzene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	460	m,p-Xylene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	460	o-Xylene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	530	Tetrachloroethene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	245	Toluene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	trans-1,2-Dichloroethene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
6,320,000	1600	Trichloroethene		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U
NA	NA	Vinyl chloride		12.3 U	11.8 U	12.0 U	11.8 U	11.8 U	11.6 U	11.0 U
NA	460	Xylenes, Total		6.14 U	5.89 U	5.98 U	5.89 U	5.92 U	5.78 U	5.49 U

Key at the end of Table.

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Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-5-1-Z4	TMCSD-5-2-Z4	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z4	LF5SD-2-Z4	LF5SD-3-Z4
		Sample ID:	TMCSD-5-1-Z4	TMCSD-5-2-Z4	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z4	LF5SD-2-Z4	LF5SD-3-Z4
		Depth (ft):	2.8 - 3.5	2.7 - 3.5	2.8 - 3.5	2.8 - 3.5	2.4 - 3.4	2.3 - 3.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	05/31/01	05/31/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	455	1,2,4-Trichlorobenzene	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
94,500,000	60	1,2-Dichlorobenzene	1140 U	**60.3 J**	359 U	361 U	378 U	340 U	332 U
NA	60	1,3-Dichlorobenzene	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
3,310,000	60	1,4-Dichlorobenzene	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
21,000,000	2.5	2,4-Dimethylphenol [2]	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
NA	65	2-Methylnaphthalene	**938 J**	344 U	359 U	361 U	378 U	340 U	332 U
52,600,000	2.5	2-Methylphenol [2]	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
5,300,000	2.5	4-Methylphenol [2]	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
63,300,000	16	Acenaphthene	**1830**	344 U	359 U	361 U	378 U	340 U	332 U
NA	NA	Acenaphthylene	**791 J**	344 U	359 U	361 U	378 U	340 U	332 U
316,000,000	85.3	Anthracene	**4370**	344 U	359 U	361 U	378 U	340 U	332 U
109,000	60	Benz(a)anthracene	**6520**	344 U	359 U	361 U	378 U	340 U	332 U
10,900	370	Benzo(a)pyrene	**5250 J**	344 U	359 U	361 U	378 U	340 U	332 U
109,000	NA	Benzo(b)fluoranthene	**6090 J**	344 U	359 U	361 U	378 U	340 U	332 U
NA	170	Benzo(g,h,i)perylene	**1590 J**	344 U	359 U	361 U	378 U	340 U	332 U
1,090,000	240	Benzo(k)fluoranthene	**3950 J**	344 U	359 U	361 U	378 U	340 U	332 U
4.2×10^9	NA	Benzoic acid	2880 U	866 U	903 U	909 U	950 U	855 U	834 U
316,000,000	NA	Benzyl alcohol	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
5,680,000	399	Bis(2-ethylhexyl)phthalate	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
3,970,000	NA	Carbazole	**2600**	344 U	359 U	361 U	378 U	340 U	332 U
10,900,000	340	Chrysene	**6470**	344 U	359 U	361 U	378 U	340 U	332 U
10,900	60	Dibenz(a,h)anthracene	**1160 J**	344 U	359 U	361 U	378 U	340 U	332 U
4,210,000	2000	Dibenzofuran	**1730**	344 U	359 U	361 U	378 U	340 U	332 U
NA	NA	Di-n-octyl phthalate	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
42,100,000	600	Fluoranthene	**14900**	344 U	359 U	361 U	378 U	340 U	332 U
42,200,000	35	Fluorene	**2000**	344 U	359 U	361 U	378 U	340 U	332 U
108,000	200	Indeno(1,2,3-cd)pyrene	**3530**	344 U	359 U	361 U	378 U	340 U	332 U
42,100,00	150	Naphthalene	**2730**	344 U	359 U	361 U	378 U	340 U	332 U
NA	240	Phenanthrene	**15500**	344 U	359 U	361 U	378 U	340 U	332 U
632,000,000	2.5	Phenol [2]	1140 U	344 U	359 U	361 U	378 U	340 U	332 U
31,600,000	490	Pyrene	**6170**	344 U	359 U	361 U	378 U	340 U	332 U
NA	NA	Total PAHs	**88119**	ND	ND	ND	ND	ND	ND

Key at the end of Table.

Table 3-4b
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-5-1-Z4 2.8 - 3.5 06/01/01	TMCSD-5-2-Z4 2.7 - 3.5 06/01/01	TMCSD-6-Z4 2.8 - 3.5 06/01/01	TMCSD-6-Z4/D 2.8 - 3.5 06/01/01	LF5SD-1-Z4 2.4 - 3.4 05/31/01	LF5SD-2-Z4 2.3 - 3.3 05/31/01	LF5SD-3-Z4 2.3 - 3.3 05/31/01
		Sample ID: / Depth (ft): / Date:							
TAL Metals - 6010B/7470A/71A (mg/Kg)									
1,100,000	NA	Aluminum	5420	4670	4580	4380	4240	6510	3510
40.3	6	Arsenic	7.0	3.5	2.5	2.6	8.8	2.4	2.5
73,600	NA	Barium	33.3	21.1	16.9	15.1	10.5	20.5	14.3
18.5	NA	Beryllium	0.19 J	0.11 U	0.12 U	0.11 U	0.10 U	0.19 J	0.10 U
473	0.6	Cadmium	0.12 U	0.11 U	0.12 U	0.11 U	0.10 U	0.11 U	0.10 U
NA	NA	Calcium	22300	18000	19600	17400	12900 J	24000 J	22900 J
1,050,000	26	Chromium	25.5	5.2	5.1	4.8	4.5	6.7	4.0
63,100	NA	Cobalt	4.5	3.9	3.7	3.4	3.2	4.7	3.2
42,000	16	Copper	35.7	12.3	10.6	11.1	8.7	19.1	9.1
NA	20000	Iron	14600	11100	10500	10000	9730	15100	8480
NA	31	Lead	92.6	3.7	3.5	3.1	3.1	4.2	2.4
NA	NA	Magnesium	3840 J	5950 J	5940 J	5220 J	4250 J	8190 J	4780 J
24,200	460	Manganese	284	327	260	247	178	726	364
NA	0.15	Mercury	0.087 J	0.017 UJ	0.020 UJ	0.019 UJ	0.017 U	0.018 U	0.019 U
21,000	16	Nickel	14.0	8.1	7.6	7.0	7.0	10.1	5.6
NA	NA	Potassium	1070 J	1110 J	1070 J	1020 J	947 J	1250 J	794 J
NA	NA	Sodium	122	91.5 J	96.5 J	86.6 J	77.8 J	116	88.1 J
NA	NA	Thallium	0.48 U	0.44 U	0.47 U	0.45 U	0.41 U	0.45 U	0.41 U
7,380	NA	Vanadium	22.3	9.7	9.8	9.2	8.2	11.5	7.8
316,000	120	Zinc	82.1 J	21.0 J	19.9 J	19.1 J	21.0 J	29.4 J	15.5 J
Hexavalent Chromium - 7196A (mg/Kg)									
5,170	NA	Hexavalent Chromium	5.3 UJ	4.3 UJ	4.5 UJ	5.9 UJ	5.5 U	4.2 U	4.9 U
Total Cyanide - 9012A (mg/Kg)									
21,100	NA	Cyanide	0.617 UJ	0.574 UJ	0.625 UJ	0.602 UJ	0.584 U	0.569 U	0.553 U
TRPH - 418.1M (mg/Kg)									
NA	NA	TRPH	209 J	482 U	490 U	486 U	476 U	464 U	446 U
Percent Moisture (wt%)									
NA	NA	Percent Moisture	21.3	17	18.4	17.7	16	13.8	10.4

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-8-2-Z3	TMCSD-9-Z4	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z4
		Depth (ft):	0.9 - 2.5	1.6 - 3.5	1 - 3.5	0.5 - 1.1	1.85 - 3.5	1.85 - 3.5	1.65 - 3.5
		Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)									
NA	NA	Total Organic Carbon	**4490**	**2680**	2490 U	**2580**	2340 U	2370 U	**2280**
TCL PCBs - 8082 (µg/Kg)									
-	28	Aroclor 1242	20.9 U	24.4 U	23.9 U	24.8 U	21.4 U	23.5 U	21.8 U
6290	5	Naphthalene	**17.9 J**	**64.2**	23.9 U	**116**	21.4 U	23.5 U	21.8 U
Total 2,3,7,8-TCDD equivalent (ng/Kg)									
NA	1	TCDD equivalent	NS	ND	**0.022**	**0.347**	ND	ND	**0.1625**
TCL Pesticides - 8081A (µg/Kg)									
331,000	2	4,4′-DDD	**1.95 NJ**	3.66 U	3.59 U	**4.55 NJ**	3.20 U	3.52 U	3.28 U
234,000	2	4,4′-DDE	3.13 U	3.66 U	3.59 U	3.72 U	3.20 U	3.52 U	3.28 U
233,000	1	4,4′-DDT	**0.519 NJ**	4.88 U	4.79 U	**2.82 NJ**	4.27 U	4.69 U	4.37 U
4,660	2	Aldrin	4.17 U	4.88 U	4.79 U	14.2 U	4.27 U	4.69 U	4.37 U
61,100	0.03	alpha-Chlordane	1.04 U	1.22 U	1.20 U	**0.977 NJ**	1.07 U	1.17 U	1.09 U
NA	0.3	delta-BHC[1]	2.09 U	2.44 U	2.39 U	**0.596 NJ**	2.14 U	2.35 U	2.18 U
4,960	0.02	Dieldrin	5.22 U	6.11 U	5.98 U	**2.12 NJ**	5.34 U	5.86 U	5.46 U
NA	3.9	Endosulfan I	5.22 U	6.11 U	5.98 U	**0.715 NJ**	5.34 U	5.86 U	5.46 U
NA	3.9	Endosulfan II	3.13 U	3.66 U	3.59 U	3.72 U	3.20 U	3.52 U	3.28 U
NA	NA	Endosulfan sulfate	6.26 U	7.33 U	7.18 U	7.44 U	6.41 U	7.04 U	6.55 U
315,000	3	Endrin	4.17 U	**1.05 NJ**	4.79 U	4.96 U	4.27 U	4.69 U	4.37 U
NA	NA	Endrin aldehyde	10.4 U	12.2 U	12.0 U	12.4 U	10.7 U	11.7 U	10.9 U
NA	NA	Endrin ketone	3.13 U	3.66 U	3.59 U	**7.49 NJ**	3.20 U	3.52 U	3.28 U
NA	0.3	gamma-BHC[1]	2.09 U	2.44 U	2.39 U	2.48 U	2.14 U	2.35 U	2.18 U
61,000	0.03	gamma-Chlordane	**0.330 NJ**	2.44 U	2.39 U	2.48 U	2.14 U	2.35 U	2.18 U
NA	0.15	Heptachlor	3.13 U	3.66 U	3.59 U	**0.966 NJ**	3.20 U	3.52 U	3.28 U
NA	0.15	Heptachlor epoxide	**0.730 NJ**	**1.23 NJ**	5.98 U	6.20 U	5.34 U	5.86 U	5.46 U
11,200	3	Methoxychlor	41.7 U	48.8 U	47.9 U	49.6 U	42.7 U	46.9 U	43.7 U

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-8-2-Z3 Depth (ft): 0.9 - 2.5 Date: 05/30/01	TMCSD-9-Z4 1.6 - 3.5 05/30/01	TMCSD-9-1-Z4 1 - 3.5 05/30/01	TMCSD-9-2-Z2 0.5 - 1.1 05/30/01	TMCSD-9-4-Z4 1.85 - 3.5 05/29/01	TMCSD-9-4-Z4/D 1.85 - 3.5 05/29/01	TMCSD-10-Z4 1.65 - 3.5 05/29/01
TCL VOCs - 8260B (µg/Kg)									
NA	940	1,1,2,2-Tetrachloroethane	5.26 UJ	6.00 UJ	6.24 U	6.29 U	5.87 U	5.81 U	5.48 UJ
94,500,000	60	1,2-Dichlorobenzene	5.26 UJ	6.00 UJ	6.24 U	6.29 U	5.87 U	5.81 U	5.48 UJ
NA	NA	1,2-Dichloroethane	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	NA	1,2-Dichloroethene, Total	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
3,310,000	60	1,4-Dichlorobenzene	5.26 UJ	6.00 UJ	6.24 U	6.29 U	5.87 U	5.81 U	5.48 UJ
NA	NA	2-Butanone	10.5 U	12.0 U	12.5 U	12.6 U	11.7 U	11.6 U	11.0 U
105,000,000	NA	Acetone	10.5 U	**11.0 J**	**7.52 J**	12.6 U	11.7 U	11.6 U	11.0 U
273,000	140	Benzene	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
105,000,000	NA	Carbon disulfide	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
21,000,000	17.5	Chlorobenzene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	NA	Chloroform	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	NA	cis-1,2-Dichloroethene	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	120	Ethylbenzene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	460	m,p-Xylene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	460	o-Xylene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	530	Tetrachloroethene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	245	Toluene	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	NA	trans-1,2-Dichloroethene	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
6,320,000	1600	Trichloroethene	5.26 U	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U
NA	NA	Vinyl chloride	10.5 U	12.0 U	12.5 U	12.6 U	11.7 U	11.6 U	11.0 U
NA	460	Xylenes, Total	5.26 UJ	6.00 U	6.24 U	6.29 U	5.87 U	5.81 U	5.48 U

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-8-2-Z3	TMCSD-9-Z4	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z4
		Depth (ft):	0.9 - 2.5	1.6 - 3.5	1 - 3.5	0.5 - 1.1	1.85 - 3.5	1.85 - 3.5	1.65 - 3.5
		Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
TCL SVOCs - 8270C (µg/Kg)									
10,500,000	455	1,2,4-Trichlorobenzene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
94,500,000	60	1,2-Dichlorobenzene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
NA	60	1,3-Dichlorobenzene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
3,310,000	60	1,4-Dichlorobenzene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
21,000,000	2.5	2,4-Dimethylphenol [2]	356 U	394 U	385 U	405 U	383 U	387 U	369 U
NA	65	2-Methylnaphthalene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
52,600,000	2.5	2-Methylphenol [2]	356 U	394 U	385 U	405 U	383 U	387 U	369 U
5,300,000	2.5	4-Methylphenol [2]	356 U	394 U	385 U	405 U	383 U	387 U	369 U
63,300,000	16	Acenaphthene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
NA	NA	Acenaphthylene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
316,000,000	85.3	Anthracene	356 U	394 U	385 U	**57.8 J**	383 U	387 U	369 U
109,000	60	Benz(a)anthracene	356 U	394 U	385 U	**114 J**	383 U	387 U	369 U
10,900	370	Benzo(a)pyrene	356 U	394 U	385 U	**101 J**	383 U	387 U	369 U
109,000	NA	Benzo(b)fluoranthene	356 U	394 U	385 U	**92.0 J**	383 U	387 U	369 U
NA	170	Benzo(g,h,i)perylene	356 U	394 U	385 U	**70.3 J**	383 U	387 U	369 U
1,090,000	240	Benzo(k)fluoranthene	356 U	394 U	385 U	**78.0 J**	383 U	387 U	369 U
4.2 x 10^9	NA	Benzoic acid	896 U	991 U	969 U	1020 U	964 U	973 U	928 U
316,000,000	NA	Benzyl alcohol	356 U	394 U	385 U	405 U	383 U	387 U	369 U
5,680,000	399	Bis(2-ethylhexyl)phthalate	356 U	394 U	385 U	405 U	383 U	387 U	369 U
3,970,000	NA	Carbazole	356 U	394 U	385 U	405 U	383 U	387 U	369 U
10,900,000	340	Chrysene	356 U	394 U	385 U	**122 J**	383 U	387 U	369 U
10,900	60	Dibenz(a,h)anthracene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
4,210,000	2000	Dibenzofuran	356 U	394 U	385 U	405 U	383 U	387 U	369 U
NA	NA	Di-n-octyl phthalate	356 U	394 U	385 U	405 U	383 U	387 U	369 U
42,100,000	600	Fluoranthene	**48.0 J**	394 U	385 U	**194 J**	383 U	387 U	369 U
42,200,000	35	Fluorene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
108,000	200	Indeno(1,2,3-cd)pyrene	356 U	394 U	385 U	**149 J**	383 U	387 U	369 U
42,100,00	150	Naphthalene	356 U	394 U	385 U	405 U	383 U	387 U	369 U
NA	240	Phenanthrene	**70.4 J**	394 U	385 U	**226 J**	383 U	387 U	369 U
632,000,000	2.5	Phenol [2]	356 U	394 U	385 U	405 U	383 U	387 U	369 U
31,600,000	490	Pyrene	**52.8 J**	394 U	385 U	**212 J**	383 U	387 U	369 U
NA	NA	Total PAHs	**171.2**	ND	ND	**1416.1**	ND	ND	ND

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-8-2-Z3	TMCSD-9-Z4	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z4
		Depth (ft):	0.9 - 2.5	1.6 - 3.5	1 - 3.5	0.5 - 1.1	1.85 - 3.5	1.85 - 3.5	1.65 - 3.5
		Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
TAL Metals - 6010B/7470A/71A (mg/Kg)									
1,100,000	NA	Aluminum	**10500**	**4310**	**4020**	**3860**	**4070**	**4260**	**4890**
40.3	6	Arsenic	**10.5**	**14.8**	**0.83 J**	**2.9**	**3.3**	**2.8**	**2.4**
73,600	NA	Barium	**24.7**	**31.0**	**27.3**	**28.2**	**20.3**	**20.8**	**26.5**
18.5	NA	Beryllium	**0.36 J**	0.11 U	0.12 U	**0.12 J**	**0.11 J**	**0.12 J**	**0.16 J**
473	0.6	Cadmium	0.094 U	0.11 U	0.12 U	0.12 U	0.10 U	0.11 U	0.11 U
NA	NA	Calcium	**29800 J**	**19900 J**	**14200 J**	**17900 J**	**18200 J**	**16500 J**	**22100 J**
1,050,000	26	Chromium	**11.5**	**4.7**	**4.5**	**5.0**	**4.3**	**6.3**	**5.5**
63,100	NA	Cobalt	**7.9**	**3.4**	**3.3**	**3.0**	**3.3**	**3.4**	**3.7**
42,000	16	Copper	**33.8**	**24.9**	**7.4**	**9.7**	**9.9**	**14.1**	**13.4**
NA	20000	Iron	**27300**	**11500**	**8410**	**10400**	**10300**	**10500**	**11300**
NA	31	Lead	**9.6**	**3.8**	**2.7**	**11.2**	**3.3**	**3.1**	**3.7**
NA	NA	Magnesium	**11700**	**6800**	**5560**	**4310**	**6070**	**6400**	**6350**
24,200	460	Manganese	**877**	**315**	**243**	**304**	**373**	**383**	**423**
NA	0.15	Mercury	0.015 UJ	0.017 UJ	0.021 UJ	0.019 UJ	0.016 UJ	0.019 UJ	0.015 UJ
21,000	16	Nickel	**18.6**	**7.5**	**6.9**	**7.5**	**6.8**	**8.0**	**8.4**
NA	NA	Potassium	**1650**	**964**	**1060**	**730**	**778**	**901**	**836**
NA	NA	Sodium	**102**	**95.1 J**	**81.0 J**	**126**	**94.0 J**	**83.8 J**	**111 J**
NA	NA	Thallium	**1.2**	0.44 U	0.49 U	0.47 U	0.42 U	0.45 U	0.46 U
7,380	NA	Vanadium	**18.1**	**8.5**	**8.0**	**9.2**	**7.5**	**8.2**	**8.3**
316,000	120	Zinc	**54.5**	**19.4**	**17.3**	**44.9**	**19.5**	**18.7**	**23.0**
Hexavalent Chromium - 7196A (mg/Kg)									
5,170	NA	Hexavalent Chromium	**0.83 J**	5.9 U	4.9 U	5.8 U	4.7 U	6.0 U	5.2 U
Total Cyanide - 9012A (mg/Kg)									
21,100	NA	Cyanide	0.524 U	0.611 U	0.618 U	0.633 U	0.584 U	0.579 U	0.554 U
TRPH - 418.1M (mg/Kg)									
NA	NA	TRPH	436 U	494 U	499 U	512 U	477 U	482 U	457 U
Percent Moisture (wt%)									
NA	NA	Percent Moisture	**8.27**	**19**	**19.9**	**21.8**	**16.1**	**17**	**12.4**

Key at the end of Table.

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T34a_34b_35 rev.xls - 3-4b TMC 2001 Creek Native Soil - 7/5/2002

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	TMCSD-10-1-Z4 / 2.4 - 3.5 / 05/24/01	TMCSD-10-2-Z4 / 2.5 - 3.5 / 05/24/01	TMCSD-10-3-Z4 / 2.5 - 3.5 / 05/23/01	TMCSD-11-Z4 / 2.5 - 3.5 / 05/24/01
Total Organic Carbon - Lloyd Kahn (mg/Kg)							
NA	NA	Total Organic Carbon		**3310**	**2540**	**23300**	2450 U
TCL PCBs - 8082 (µg/Kg)							
-	28	Aroclor 1242		23.8 U	22.0 U	24.1 U	24.2 U
6290	5	Naphthalene		**8.58 J**	22.0 U	**152**	24.2 U
Total 2,3,7,8-TCDD equivalent (ng/Kg)							
NA	1	TCDD equivalent		ND	ND	**2.4914**	ND
TCL Pesticides - 8081A (µg/Kg)							
331,000	2	4,4´-DDD		3.57 U	3.30 U	**190 NJ**	3.63 U
234,000	2	4,4´-DDE		3.57 U	3.30 U	241 U	3.63 U
233,000	1	4,4´-DDT		**0.943 NJ**	4.40 U	**2240 NJ**	4.83 U
4,660	2	Aldrin		4.76 U	4.40 U	121 U	4.83 U
61,100	0.03	alpha-Chlordane		1.19 U	1.10 U	121 U	1.21 U
NA	0.3	delta-BHC[1]		2.38 U	2.20 U	121 U	2.42 U
4,960	0.02	Dieldrin		5.95 U	5.49 U	241 U	6.04 U
NA	3.9	Endosulfan I		5.95 U	5.49 U	241 U	6.04 U
NA	3.9	Endosulfan II		3.57 U	3.30 U	241 U	3.63 U
NA	NA	Endosulfan sulfate		7.14 U	6.59 U	241 U	7.25 U
315,000	3	Endrin		4.76 U	4.40 U	241 U	4.83 U
NA	NA	Endrin aldehyde		11.9 U	11.0 U	241 U	12.1 U
NA	NA	Endrin ketone		3.57 U	3.30 U	241 U	3.63 U
NA	0.3	gamma-BHC[1]		2.38 U	2.20 U	121 U	2.42 U
61,000	0.03	gamma-Chlordane		2.38 U	2.20 U	121 U	2.42 U
NA	0.15	Heptachlor		3.57 U	3.30 U	241 U	3.63 U
NA	0.15	Heptachlor epoxide		5.95 U	**1.41 J**	241 U	**3.07 J**
11,200	3	Methoxychlor		47.6 U	**32.3 J**	1210 U	48.3 U

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-10-1-Z4 Depth (ft): 2.4 - 3.5 Date: 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
TCL VOCs - 8260B (µg/Kg)						
NA	940	1,1,2,2-Tetrachloroethane	5.95 UJ	5.68 UJ	6.39 U	5.98 U
94,500,000	60	1,2-Dichlorobenzene	5.95 UJ	5.68 UJ	**1.88 J**	5.98 U
NA	NA	1,2-Dichloroethane	5.95 U	5.68 U	6.39 U	5.98 U
NA	NA	1,2-Dichloroethene, Total	5.95 U	5.68 U	6.39 U	5.98 U
3,310,000	60	1,4-Dichlorobenzene	5.95 UJ	5.68 UJ	6.39 U	5.98 U
NA	NA	2-Butanone	11.9 U	11.4 U	12.8 U	12.0 U
105,000,000	NA	Acetone	11.9 U	11.4 U	**28.5**	12.0 U
273,000	140	Benzene	5.95 U	5.68 U	6.39 U	5.98 U
105,000,000	NA	Carbon disulfide	5.95 U	5.68 U	6.39 U	5.98 U
21,000,000	17.5	Chlorobenzene	5.95 U	5.68 U	6.39 U	5.98 U
NA	NA	Chloroform	5.95 U	5.68 U	6.39 U	5.98 U
NA	NA	cis-1,2-Dichloroethene	5.95 U	5.68 U	6.39 U	5.98 U
NA	120	Ethylbenzene	5.95 U	5.68 U	6.39 U	5.98 U
NA	460	m,p-Xylene	5.95 U	5.68 U	6.39 U	5.98 U
NA	460	o-Xylene	5.95 U	5.68 U	6.39 U	5.98 U
NA	530	Tetrachloroethene	5.95 U	5.68 U	6.39 U	5.98 U
NA	245	Toluene	5.95 U	5.68 U	6.39 U	5.98 U
NA	NA	trans-1,2-Dichloroethene	5.95 U	5.68 U	6.39 U	5.98 U
6,320,000	1600	Trichloroethene	5.95 U	5.68 U	6.39 U	5.98 U
NA	NA	Vinyl chloride	11.9 U	11.4 U	12.8 U	12.0 U
NA	460	Xylenes, Total	5.95 U	5.68 U	6.39 U	5.98 U

Key at the end of Table.

Table 3-4b
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	TMCSD-10-1-Z4	TMCSD-10-2-Z4	TMCSD-10-3-Z4	TMCSD-11-Z4
		Depth (ft):	2.4 - 3.5	2.5 - 3.5	2.5 - 3.5	2.5 - 3.5
		Date:	05/24/01	05/24/01	05/23/01	05/24/01
TCL SVOCs - 8270C (μg/Kg)						
10,500,000	455	1,2,4-Trichlorobenzene	379 U	350 U	415 U	378 U
94,500,000	60	1,2-Dichlorobenzene	379 U	350 U	**141 J**	378 U
NA	60	1,3-Dichlorobenzene	379 U	350 U	415 U	378 U
3,310,000	60	1,4-Dichlorobenzene	379 U	350 U	415 U	378 U
21,000,000	2.5	2,4-Dimethylphenol [2]	379 U	350 U	415 U	378 U
NA	65	2-Methylnaphthalene	379 U	350 U	415 U	378 U
52,600,000	2.5	2-Methylphenol [2]	379 U	350 U	415 U	378 U
5,300,000	2.5	4-Methylphenol [2]	379 U	350 U	415 U	378 U
63,300,000	16	Acenaphthene	379 U	350 U	415 U	378 U
NA	NA	Acenaphthylene	379 U	350 U	**90.6 J**	378 U
316,000,000	85.3	Anthracene	379 U	350 U	**129 J**	378 U
109,000	60	Benz(a)anthracene	379 U	350 U	**184 J**	378 U
10,900	370	Benzo(a)pyrene	379 U	350 U	**189 J**	378 U
109,000	NA	Benzo(b)fluoranthene	379 U	350 U	**160 J**	378 U
NA	170	Benzo(g,h,i)perylene	379 U	350 U	**139 J**	378 U
1,090,000	240	Benzo(k)fluoranthene	379 U	350 U	**192 J**	378 U
4.2×10^9	NA	Benzoic acid	954 U	880 U	1040 U	952 U
316,000,000	NA	Benzyl alcohol	379 U	350 U	415 U	378 U
5,680,000	399	Bis(2-ethylhexyl)phthalate	379 U	350 U	415 U	378 U
3,970,000	NA	Carbazole	379 U	350 U	415 U	378 U
10,900,000	340	Chrysene	379 U	350 U	**247 J**	378 U
10,900	60	Dibenz(a,h)anthracene	379 U	350 U	**73.1 J**	378 U
4,210,000	2000	Dibenzofuran	379 U	350 U	415 U	378 U
NA	NA	Di-n-octyl phthalate	379 U	350 U	415 U	378 U
42,100,000	600	Fluoranthene	379 U	350 U	**476**	378 U
42,200,000	35	Fluorene	379 U	350 U	415 U	378 U
108,000	200	Indeno(1,2,3-cd)pyrene	379 U	350 U	**258 J**	378 U
42,100,00	150	Naphthalene	379 U	350 U	415 U	378 U
NA	240	Phenanthrene	379 U	350 U	**240 J**	378 U
632,000,000	2.5	Phenol [2]	379 U	350 U	415 U	378 U
31,600,000	490	Pyrene	379 U	350 U	**314 J**	378 U
NA	NA	Total PAHs	ND	ND	**2691.7**	ND

Key at the end of Table.

Table 3-4b

Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples

Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMCSD-10-1-Z4 Depth (ft): 2.4 - 3.5 Date: 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
TAL Metals - 6010B/7470A/71A (mg/Kg)						
1,100,000	NA	Aluminum	**3950**	**3950**	**3380**	**2710**
40.3	6	Arsenic	**4.8**	**3.4**	**6.84**	**1.8**
73,600	NA	Barium	**46.6**	**37.4**	**29.3**	**27.3**
18.5	NA	Beryllium	**0.092 J**	0.11 U	0.640 U	0.093 U
473	0.6	Cadmium	0.061 U	0.11 U	0.793 U	0.093 U
NA	NA	Calcium	**15900 J**	**21600 J**	**11000**	**10800 J**
1,050,000	26	Chromium	**4.3**	**4.7**	**6.86**	**3.2**
63,100	NA	Cobalt	**3.4**	**3.5**	**3.41**	**2.4**
42,000	16	Copper	11.8 U	13.1 U	15.8 U	**6.8**
NA	20000	Iron	**10700**	**11500**	**10100**	**7160**
NA	31	Lead	**3.8**	**3.5**	**16.4**	2.2 U
NA	NA	Magnesium	**6110**	**6770**	**4540**	**3300**
24,200	460	Manganese	**400**	**461**	**256**	**190**
NA	0.15	Mercury	0.019 UJ	0.018 UJ	0.0640 UJ	0.019 UJ
21,000	16	Nickel	**6.9**	**7.1**	**7.40**	**5.2**
NA	NA	Potassium	**490 J**	**608 J**	**529**	**367 J**
NA	NA	Sodium	**26.7 J**	33.1 U	128 U	27.1 U
NA	NA	Thallium	0.24 U	0.46 U	5.12 U	0.37 U
7,380	NA	Vanadium	**7.7**	**7.5**	**9.80**	**5.2**
316,000	120	Zinc	**21.8**	**22.7**	**29.0**	**16.1**
Hexavalent Chromium - 7196A (mg/Kg)						
5,170	NA	Hexavalent Chromium	4.7 U	4.4 U	4.8 U	4.9 U
Total Cyanide - 9012A (mg/Kg)						
21,100	NA	Cyanide	0.595 U	0.558 U	0.616 U	0.616 U
TRPH - 418.1M (mg/Kg)						
NA	NA	TRPH	481 U	455 U	**160 J**	493 U
Percent Moisture (wt%)						
NA	NA	Percent Moisture	**16.8**	**12.1**	**21.9**	**18.8**

Key at the end of Table.

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T34a_34b_35 rev.xls - 3-4b TMC 2001 Creek Native Soil - 7/5/2002

Table 3-4b
Summary of Positive Hits and Screening for Three Mile Creek Channel and Landfill 5 Tributary Native Soil Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

All positive results are bold. Results that exceed the most stringent ecological screening criteria (as selected in Table 3-1b) are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 0.5% TOC was used in the calculation of the criteria, where necessary.

[1] Total Hexachlorocyclohexanes.

[2] Total phenols, unchlorinated.

Key:

J =	Estimated value.
mg/Kg =	Micrograms per kilogram.
N =	Identification tentative.
NA =	Criteria not applicable or not available.
ND =	No dioxins and furans were detected in this sample.
ng/Kg =	Nanograms per kilogram.
NS =	Not sampled.
PCB =	Polychlorinated biphenyls.
TAL =	Target Analyte List.
TCL =	Target Compound List.
TOC =	Total organic carbon.
TRPH =	Total recoverable petroleum hydrocarbons.
SVOC =	Semivolatile organic compound.
VOC =	Volatile organic compound.
U =	Not detected at the reported value.
μg/Kg =	Micrograms per kilogram.

Table 3-5
Summary of Positive Hits and Screening for the Landfill 6 Wetland Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: LF6SD-1-1-Z1	LF6SD-1-1-Z1/D	LF6SD-2-1-Z1	LF6SD-3-1-Z1	LF6SD-4-1-Z1
		Depth (ft):	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
		Date:	5/24/2001	5/24/2001	5/24/2001	5/23/2001	5/23/2001
TOC - Lloyd Kahn (mg/Kg)							
NA	NA	Total Organic Carbon	372000	403000	363000	47700	125000
TCL PCBs - 8082 (µg/Kg)							
6,290	5	Aroclor 1260	92.6	49.4 U	102	30.7 U	964
Total 2,3,7,8-TCDD equivalent (ng/Kg)							
NA	24	TCDD equivalent	16.5054	16.768	8.6791	17.2837	47.113
TCL Pesticides - 8081A (µg/Kg)							
331,000	2	4,4'-DDD	7.73 U	7.42 U	14.3 NJ	3.07 U	81.8 U
234,000	2	4,4'-DDE	19.1 NJ	17.6 J	6.35 NJ	4.59	114 NJ
233,000	1	4,4'-DDT	16.2 NJ	13.9 J	16.5 NJ	3.07 U	172 NJ
13,600	7.2	alpha-BHC	1.81 NJ	2.65 J	8.98 U	0.154 J	40.9 U
NA	7.2	delta-BHC	0.932 NJ	1.17 J	5.99 U	1.54 U	40.9 U
NA	3.6	Endosulfan I	12.9 U	12.4 U	8.88 NJ	3.07 U	81.8 U
NA	3.6	Endosulfan II	4.72 NJ	7.42 U	8.98 U	3.07 U	81.8 U
NA	NA	Endosulfan sulfate	3.00 NJ	14.8 U	2.79 NJ	3.07 U	81.8 U
NA	NA	Endrin aldehyde	16.2 NJ	24.7 U	16.6 NJ	0.398 J	81.8 U
NA	NA	Endrin ketone	7.73 U	7.42 U	2.23 NJ	3.07 U	81.8 U
NA	3.6	Heptachlor epoxide	12.9 U	12.4 U	8.68 NJ	1.07 J	111 NJ
11,200	72	Methoxychlor	103 U	98.9 U	120 U	10.3 J	409 U
TCL VOCs - 8260B (µg/Kg)							
94,500,000	1,440	1,2-Dichlorobenzene	13.2 UJ	12.8 UJ	15.3 UJ	7.81 UJ	7.04 J
6,320,000	1,600	Trichloroethene	13.2 U	12.8 U	15.3 U	7.81 U	5.44 J
TCL SVOCs - 8270C (µg/Kg)							
NA	NA	Acenaphthylene	2560 U	2450 U	299 J	483 U	1130 J
316,000,000	85.3	Anthracene	2560 U	2450 U	233 J	483 U	1260 J
109,000	261	Benz(a)anthracene	2560 U	2450 U	387 J	483 U	2140
10,900	370	Benzo(a)pyrene	2560 U	2450 U	481 J	61.1 J	2460
109,000	NA	Benzo(b)fluoranthene	2560 U	2450 U	763 J	75.9 J	2580
NA	170	Benzo(g,h,i)perylene	2560 U	2450 U	165 J	483 U	1010 J
1,090,000	240	Benzo(k)fluoranthene	2560 U	2450 U	496 J	483 U	2700
4.2 x 10^9	NA	Benzoic acid	8120	6020 J	2970	33600	5050 U
316,000,000	NA	Benzyl alcohol	2560 U	2450 U	984 U	561	2010 U
3,970,000	NA	Carbazole	2560 U	2450 U	984 U	483 U	390 J
10,900,000	340	Chrysene	341 J	348 J	578 J	78.3 J	2960
10,900	60	Dibenz(a,h)anthracene	2560 U	2450 U	984 U	483 U	577 J
42,100,000	600	Fluoranthene	741 J	764 J	1430	179 J	5920
108,000	200	Indeno(1,2,3-cd)pyrene	2560 U	2450 U	984 U	483 U	1220 J
NA	240	Phenanthrene	337 J	350 J	521 J	90.3 J	2670
31,600,000	490	Pyrene	347 J	352 J	735 J	65.3 J	2660
NA	NA	Total PAHs	1766	1814	6088	549.9	29677

Key at the end of Table.

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T34a_34b_35 rev.xls - T3-5 TMC 2001 LF6 - 7/5/2002

Table 3-5
Summary of Positive Hits and Screening for the Landfill 6 Wetland Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	LF6SD-1-1-Z1 0 - 0.5 5/24/2001	LF6SD-1-1-Z1/D 0 - 0.5 5/24/2001	LF6SD-2-1-Z1 0 - 0.5 5/24/2001	LF6SD-3-1-Z1 0 - 0.5 5/23/2001	LF6SD-4-1-Z1 0 - 0.5 5/23/2001
TAL Metals - 6010B/7470A/71A (mg/Kg)								
1,100,000	NA	Aluminum		**9990**	**10600**	**16800**	**12100**	**8780**
40.3	6	Arsenic		**11.1**	**12.5**	**18.5**	**10.6**	$\boxed{\textbf{53.8}}$
73,600	NA	Barium		**1250**	**1400**	**1080**	**124**	**144**
18.5	NA	Beryllium		**0.27 J**	**0.26 J**	**0.79 J**	**0.455 J**	**0.876 J**
473	0.6	Cadmium		**3.8**	**2.5**	**4.6**	0.672 U	**22.2**
NA	NA	Calcium		**20700 J**	**22900 J**	**23400 J**	**1180**	**4440**
1,050,000	26	Chromium		**12.5**	**12.8**	**20.6**	**13.4**	**37.8**
63,100	NA	Cobalt		**3.6 J**	**3.8 J**	**6.1**	**13.3**	**9.90**
42,000	16	Copper		**142**	**134**	**118**	**51.2**	**93.0**
NA	20000	Iron		**8500**	**8870**	**12700**	**15900**	**24400**
NA	31	Lead		**116**	**108**	**116**	**54.3**	**188**
NA	NA	Magnesium		**1130**	**1200**	**2050**	**2590**	**1750**
24,200	460	Manganese		**567**	**596**	**626**	**403**	**678**
NA	0.15	Mercury		**0.68 J**	**0.48 J**	**0.72 J**	**0.381**	**0.804**
21,000	16	Nickel		**15.0**	**15.0**	**17.8**	**13.6**	**23.7**
NA	NA	Potassium		**584 J**	**518 J**	**696 J**	**830**	**1060**
5,270	1	Silver		0.47 U	0.51 U	0.58 U	1.34 U	**0.810 J**
7,380	NA	Vanadium		**34.1**	**35.5**	**41.3**	**34.6**	**38.9**
316,000	120	Zinc		**303**	**285**	**226**	**97.8**	**211**
Hexavalent Chromium - 7196A (mg/Kg)								
5,170	NA	Hexavalent Chromium		11 U	9.7 U	12 U	5.9 U	8.4 U
Total Cyanide - 9012A (mg/Kg)								
21,100	NA	Cyanide		**1.38 J**	**1.07 J**	**0.750 J**	**0.598 J**	**0.747 J**
TRPH - 418.1M (mg/Kg)								
-	NA	TRPH		1060 U	1030 U	1240 U	634 U	842 U
Percent Moisture (wt%)								
NA	NA	Percent Moisture		**62.2**	**61.1**	**67.8**	**36.9**	**52.5**

Notes: All positive results are typed in bold. Results that exceed the most stringent ecological screening criteria (as selected in Tables 3-2 and 3-3) are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 12% TOC was used in the calculation of the criteria, where necessary.

Key:

J = Estimated value.
mg/Kg = Micrograms per kilogram.
N = Identification tentative.
NA = Criteria not applicable or not available.
PCB = Polychlorinated biphenyls.
TAL = Target Analyte List.
TCL = Target Compound List.
TOC = Total organic carbon.
TRPH = Total recoverable petroleum hydrocarbons.
SVOC = Semivolatile organic compound.
VOC = Volatile organic compound.
U = Not detected at the reported value.
µg/Kg = Micrograms per kilogram.

Key at the end of Table.

Table 3-6
Summary of Positive Hits and Screening for the Off-Base TMC Pond Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: TMC-SD-23IL Depth (ft): 0.0.5 Date: 11/9/1999	TMC-SD-23-IL-Z3 1.4 - 2.2 6/5/2001	TMC-SD-23-IL-Z4 2.2 - 3 6/5/2001	TMC-SD-24NS 0.0.5 11/9/1999	TMC-SD-24-NS-Z3 1.2 - 1.8 6/5/2001	TMC-SD-24-NS-Z4 1.8 - 3 6/5/2001
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)								
NA	NA	Total Organic Carbon	**134000**	**33500 J**	**12600**	**60800**	**104000**	**65200**
PCBs by Method 8082 (µg/Kg)								
6,290	5	Aroclor 1260	**2100**	**184**	**145**	**1700**	**142**	**618**
Metals by Method 6010B (mg/Kg)								
473	0.6	Cadmium	**178**	**7.0 J**	**1.9 J**	**125**	**8.1 J**	**11.9 J**
NA	31	Lead	**8.32**	**91.7**	**30.4**	**6.44**	**172**	**170**
Percent Moisture (wt%)								
NA	NA	Percent Moisture	**62.4**	**68.7**	**45.1**	**63.1**	**74.5**	**31**

[a] The most stringent criteria were used. For Aroclor 1260, the Ontario Standards lowest effect level (June 1994) as shown in Tables 3-1a and 3-1b was used. For the

Notes

All positive results are bold. Results that exceed the most stringent ecological screening criteria are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 5.59% TOC was used in the calculation of the criteria, where necessary.

Key:

J = Estimated value.
mg/Kg = Micrograms per kilogram.
NA = Criteria not available.
PCB = Polychlorinated biphenyls.
TAL = Target Analyte List.
TCL = Target Compound List.
U = Not detected at the reported value.
µg/Kg = Micrograms per kilogram.

Table 3-6
Summary of Positive Hits and Screening for the Off-Base TMC Pond Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date:	TMC-SD-25MC 0.0.5 11/9/1999	TMC-SD-25MC/D 0.0.5 11/9/1999	TMC-SD-25-MC-Z3 0.9 - 1.8 6/5/2001	TMC-SD-25-MC-Z3/D 1.4 - 2.2 6/5/2001	TMC-SD-25-MC-Z4 2.4 - 3 6/5/2001	TMC-SD-26NS 0.0.5 11/9/1999	TMCSD-26-NS-Z3 1.5 - 2.5 5/25/2001
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)										
NA	NA	Total Organic Carbon		**28000 J**	**8340 J**	**133000**	**75100 J**	**6990**	**43200**	**25100**
PCBs by Method 8082 (µg/Kg)										
6,290	5	Aroclor 1260		**1430**	**1320**	**489**	**403**	**123**	**149**	**12.0 J**
Metals by Method 6010B (mg/Kg)										
473	0.6	Cadmium		**85.7**	**76.5**	**8.5 J**	**4.8 J**	0.92 U	**26.5**	1.1 U
NA	31	Lead		**5.69**	**4.76**	**175**	**82.2**	**15.7**	**1.70**	**15.9**
Percent Moisture (wt%)										
NA	NA	Percent Moisture		**50.6**	**49.3**	**60.2**	**61.0**	**27.4**	**34.7**	**27.5**

[a] The most stringent criteria were used. For Aroclor 1260, the Ontario Standards lowest effect level (June 1994) as shown in Tables 3-1a and 3-1b was used. For the

Notes

All positive results are bold. Results that exceed the most stringent ecological screening criteria are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 5.59% TOC was used in the calculation of the criteria, where necessary.

Key:

J = Estimated value.
mg/Kg = Micrograms per kilogram.
NA = Criteria not available.
PCB = Polychlorinated biphenyls.
TAL = Target Analyte List.
TCL = Target Compound List.
U = Not detected at the reported value.
µg/Kg = Micrograms per kilogram.

Table 3-6
Summary of Positive Hits and Screening for the Off-Base TMC Pond Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: / Depth (ft): / Date: TMCSD-26-NS-Z4 / 2.5 - 3 / 5/25/2001	TMC-SD-27MC / 0.0.5 / 11/9/1999	TMCSD-27-MC-Z3 / 1.5 - 2.5 / 5/25/2001	TMCSD-27-MC-Z4 / 2.5 - 3 / 5/25/2001
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)						
NA	NA	Total Organic Carbon	**13100**	**63200**	**124000**	**14800**
PCBs by Method 8082 (μg/Kg)						
6,290	5	Aroclor 1260	25.3 U	**1130**	**549**	**253**
Metals by Method 6010B (mg/Kg)						
473	0.6	Cadmium	0.082 U	**143**	**9.9**	**2.4**
NA	31	Lead	**2.6**	**7.57**	**189**	**51.1**
Percent Moisture (wt%)						
NA	NA	Percent Moisture	**21.5**	**61.7**	**72.2**	**35.8**

[a] The most stringent criteria were used. For Aroclor 1260, the Ontario Standards lowest effect level (June 1994) as shown in Tables 3-1a and 3-1b was used. For the

Notes

All positive results are bold. Results that exceed the most stringent ecological screening criteria are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 5.59% TOC was used in the calculation of the criteria, where necessary.

Key:

J = Estimated value.
mg/Kg = Micrograms per kilogram.
NA = Criteria not available.
PCB = Polychlorinated biphenyls.
TAL = Target Analyte List.
TCL = Target Compound List.
U = Not detected at the reported value.
μg/Kg = Micrograms per kilogram.

Table 3-6
Summary of Positive Hits and Screening for the Off-Base TMC Pond Sediment Samples
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Site Human Health Risk Levels of 10^{-5} or Hazard Index of 1	Most Stringent Ecological Criteria	Analyte	Sample ID: Depth (ft): Date:	TMC-SD-28OL 0.0.5 11/9/1999	TMCSD-28-OL-Z3 1.5 - 2.5 5/25/2001	TMCSD-28-OL-Z3/D 1.5 - 2.5 5/25/2001	TMCSD-28-OL-Z4 2.5 - 3 5/25/2001
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)							
NA	NA	Total Organic Carbon		**51000**	**56800**	**56300**	**64500**
PCBs by Method 8082 (µg/Kg)							
6,290	5	Aroclor 1260		**824**	**379**	**437**	**1370**
Metals by Method 6010B (mg/Kg)							
473	0.6	Cadmium		**147**	**5.7**	**6.3**	**11.0**
NA	31	Lead		**7.86**	**155**	**155**	**133**
Percent Moisture (wt%)							
NA	NA	Percent Moisture		**53.8**	**48.7**	**46.3**	**42.5**

* The most stringent criteria were used. For Aroclor 1260, the Ontario Standards lowest effect level (June 1994) as shown in Tables 3-1a and 3-1b was used. For the
Notes

All positive results are bold. Results that exceed the most stringent ecological screening criteria are shaded. Results exceeding the site human health risk levels are boxed.

An average value of 5.59% TOC was used in the calculation of the criteria, where necessary.

Key:

J = Estimated value.
mg/Kg = Micrograms per kilogram.
NA = Criteria not available.
PCB = Polychlorinated biphenyls.
TAL = Target Analyte List.
TCL = Target Compound List.
U = Not detected at the reported value.
µg/Kg = Micrograms per kilogram.

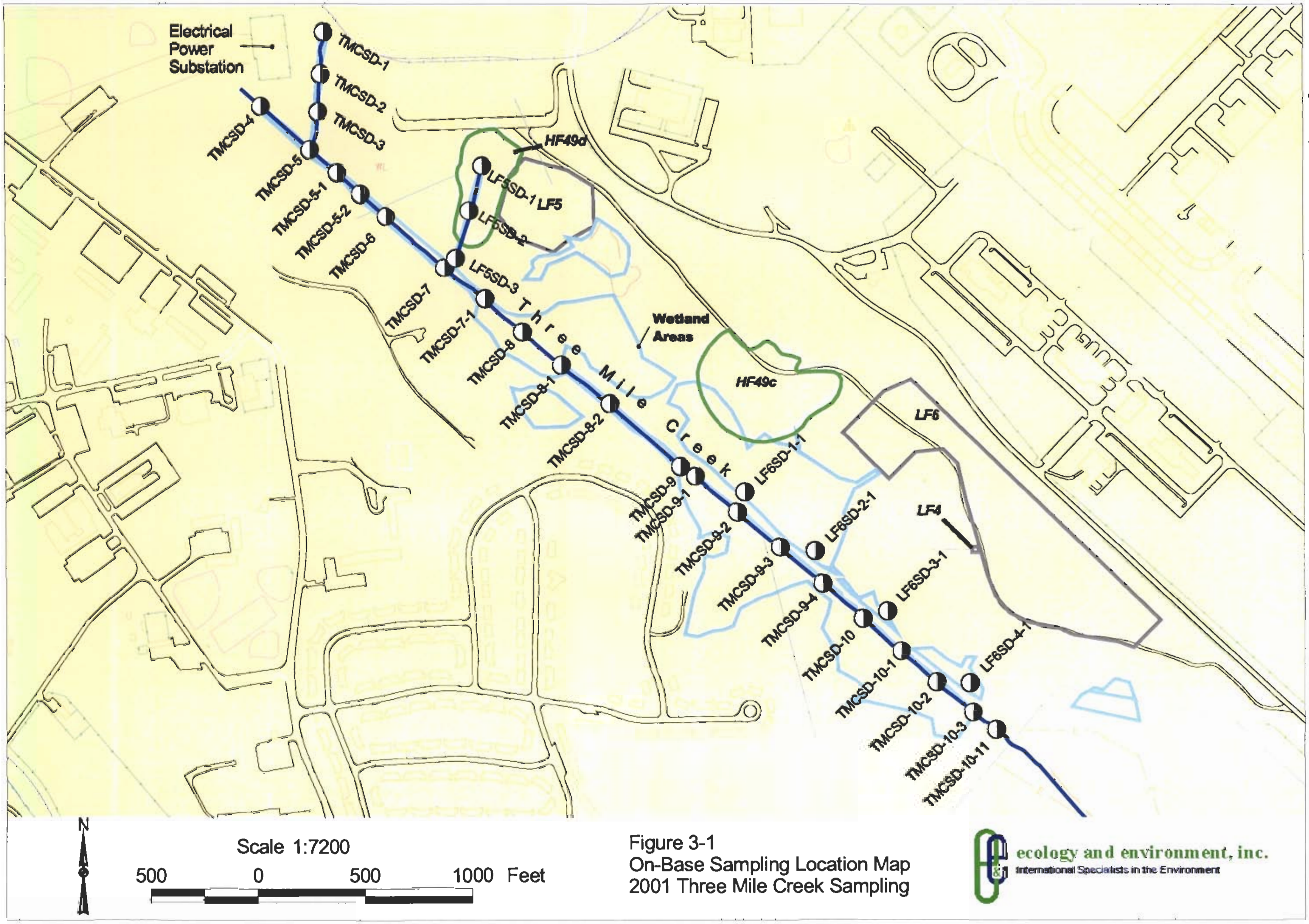

Figure 3-1
On-Base Sampling Location Map
2001 Three Mile Creek Sampling

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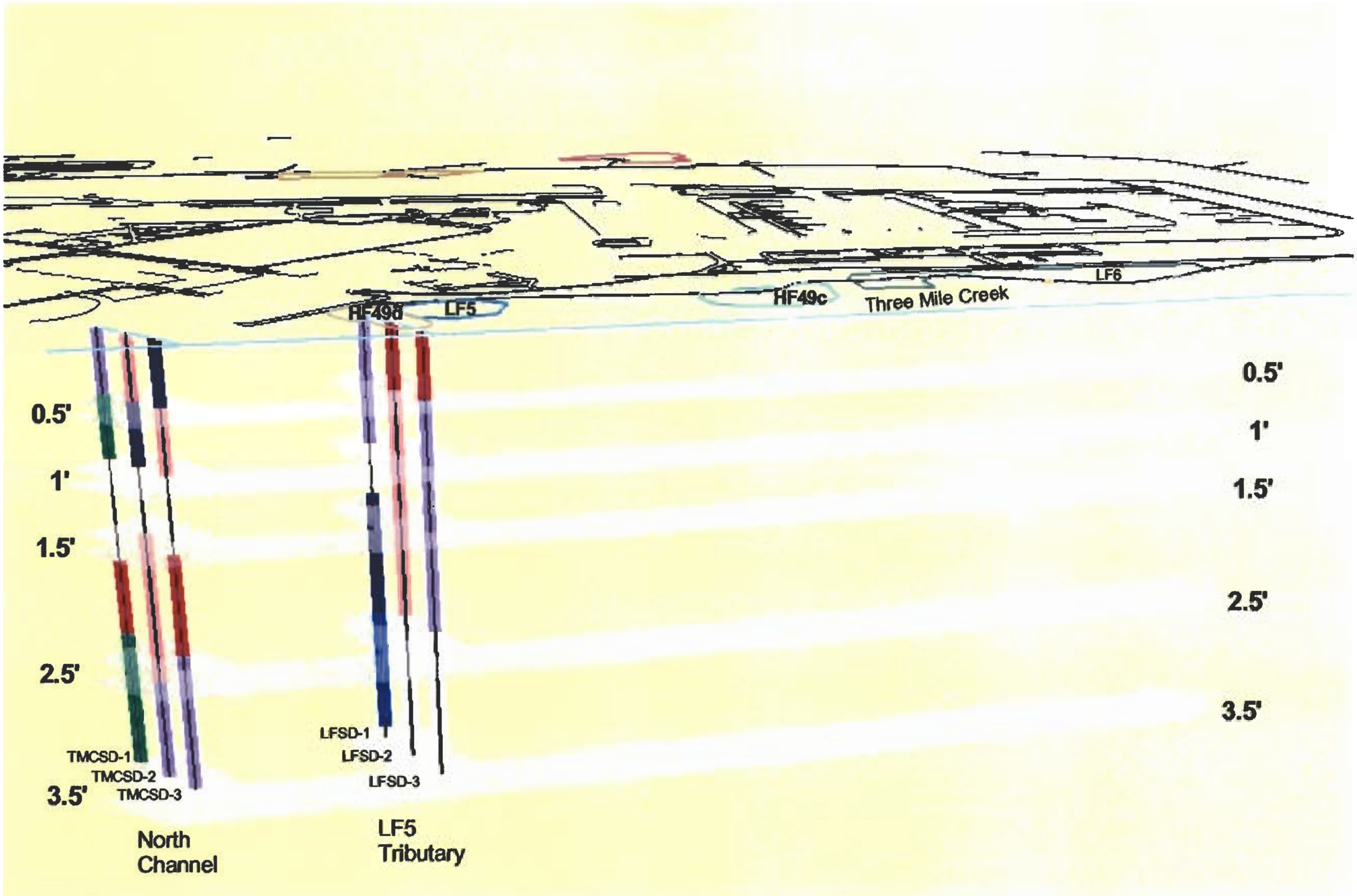

Aroclor 1260 (ppb)

- ND
- ND - 1 (Below the screening level for both sediment and native soil samples)
- 1 - 100
- 100 - 500
- 500 - 1000
- 1000 - 5000
- 5000 - 10000
- 10000 - 50000
- > 50000

Depths Not to Scale

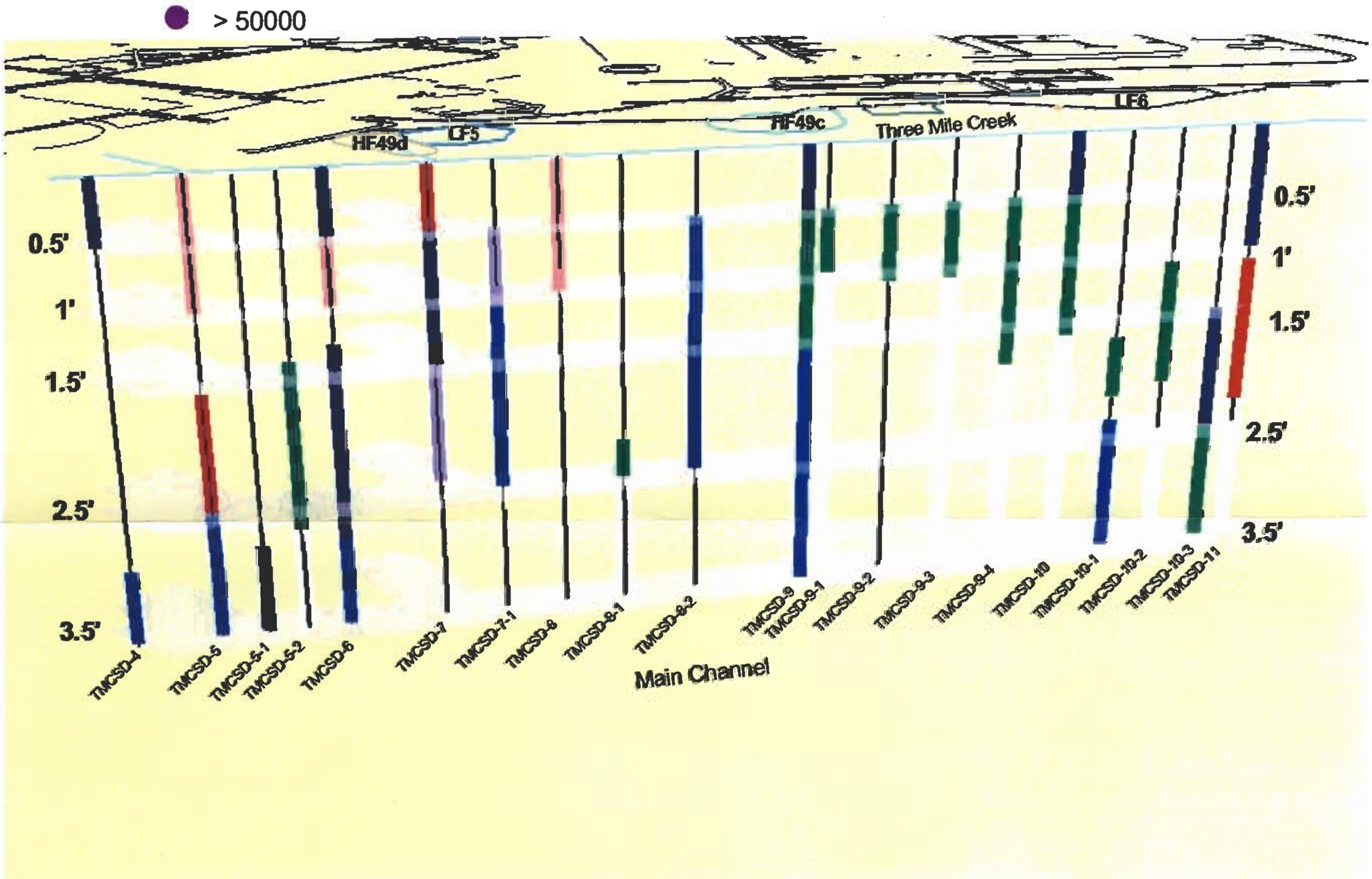

Figure 3-2 Aroclor 1260 Concentration Vertical Profile
Former Griffiss AFB

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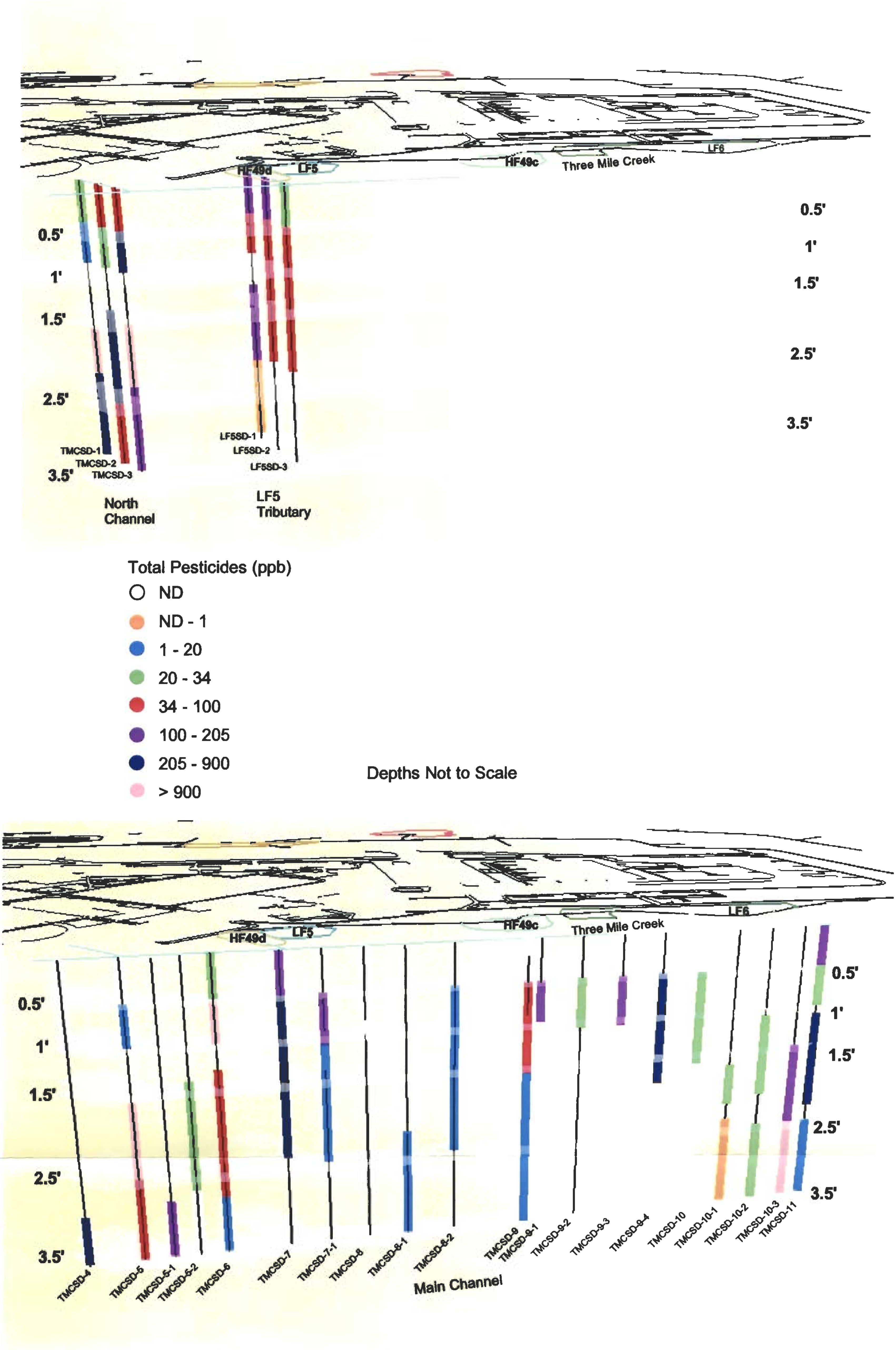

Figure 3-3 Total Pesticide Concentration Vertical Profile
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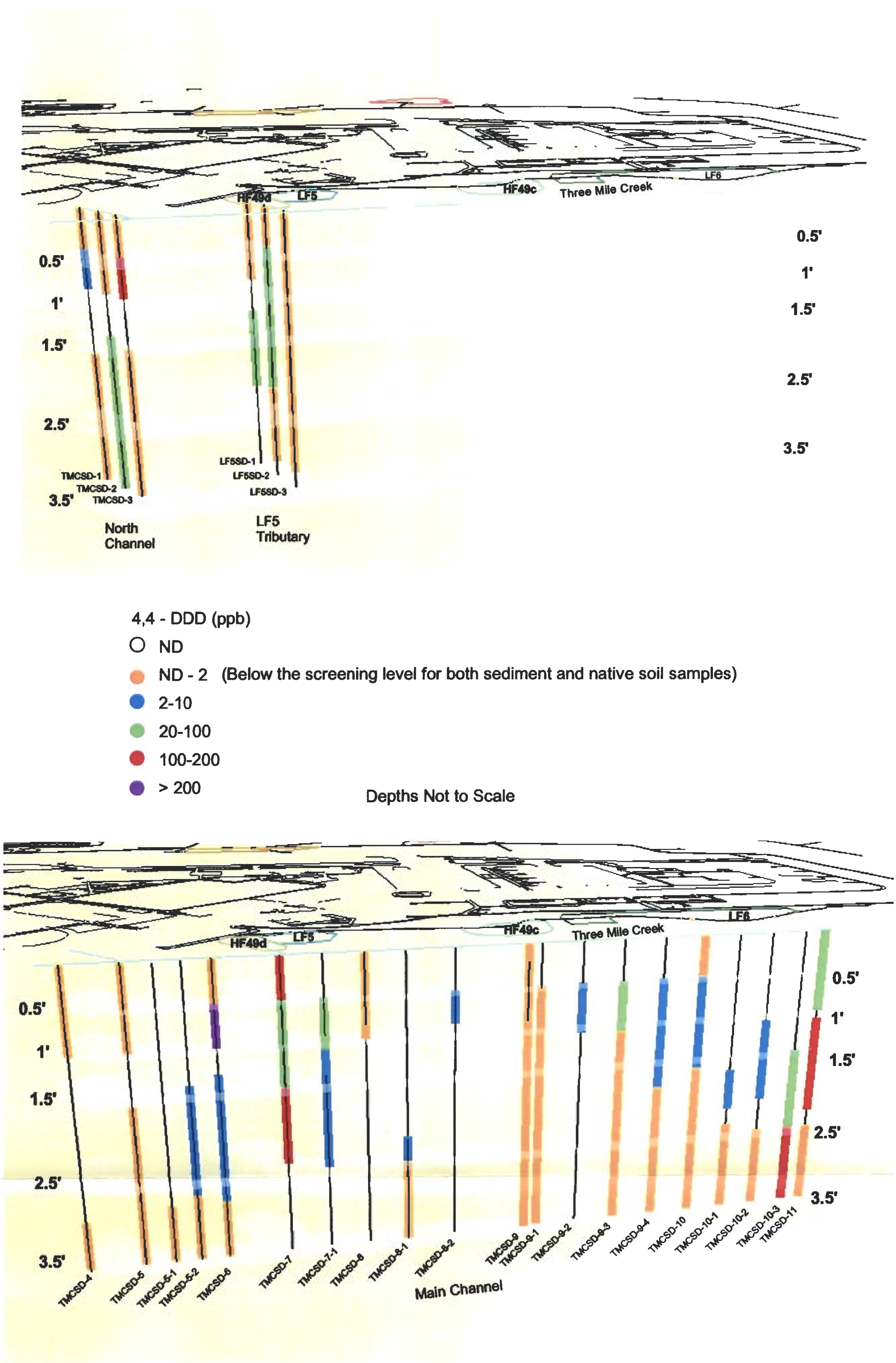

Figure 3-3a 4,4 - DDD Concentration Vertical Profile
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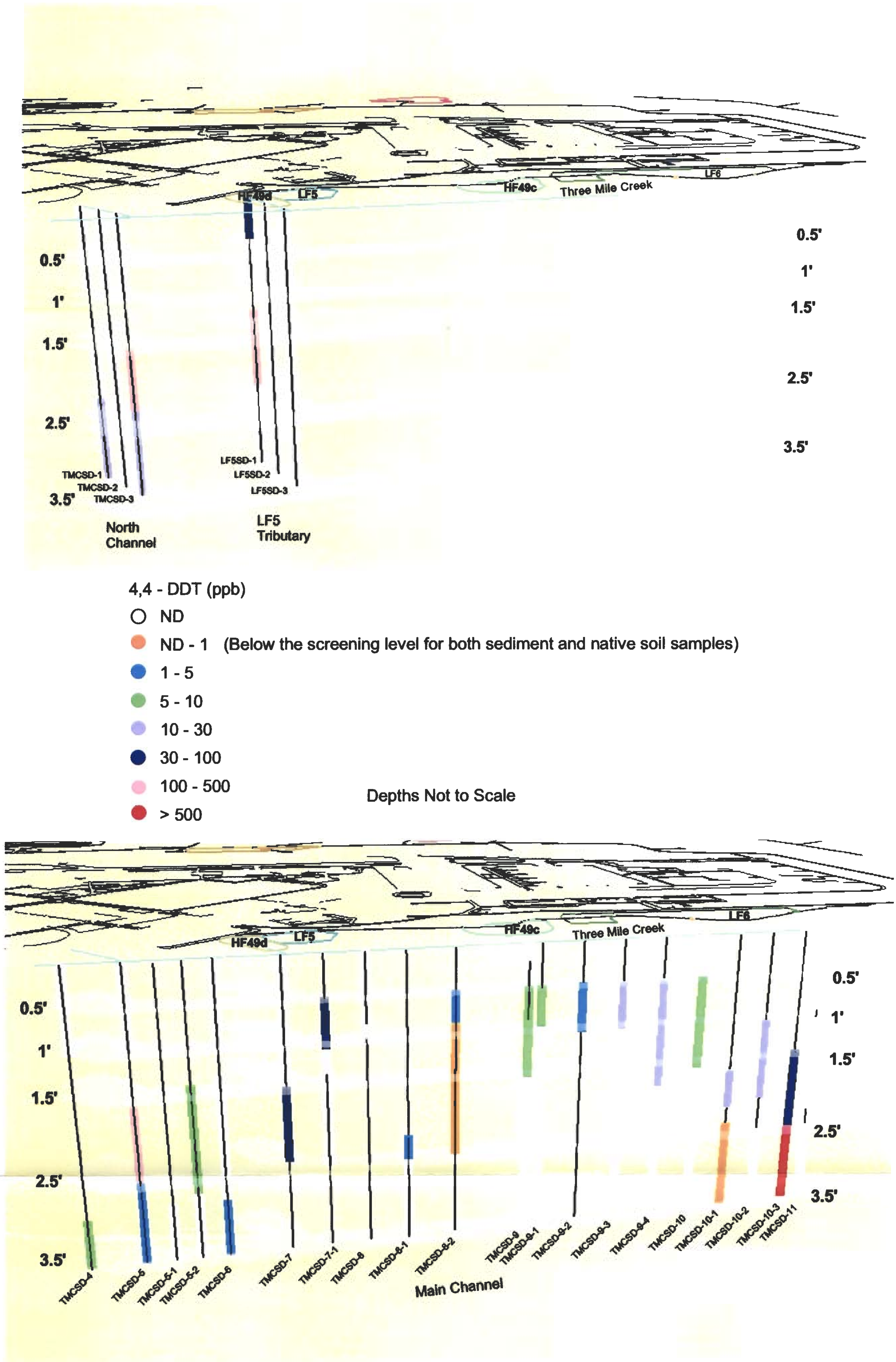

Figure 3-3b 4,4 - DDT Concentration Vertical Profile
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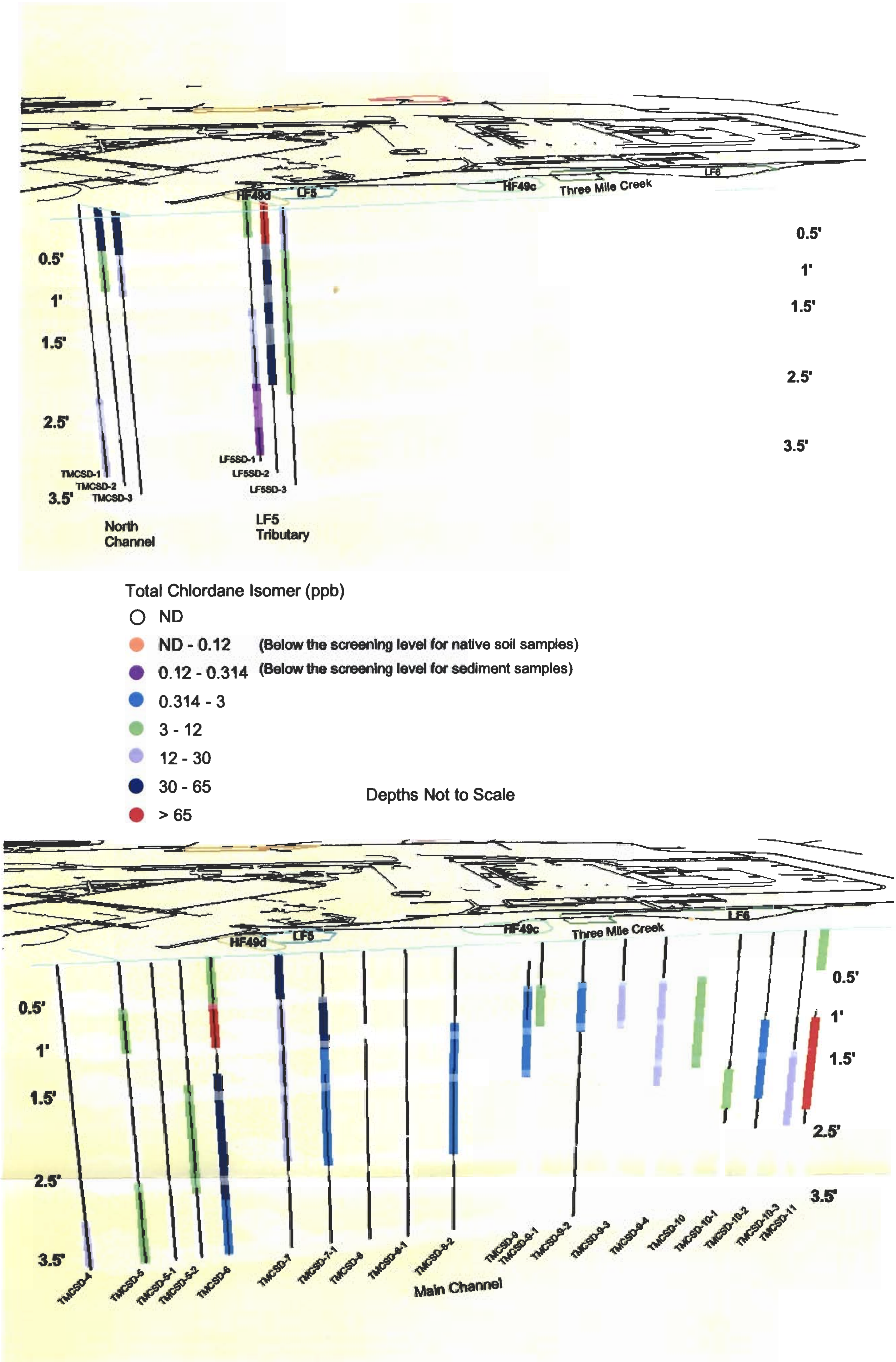

Figure 3-3c Total Chlordane Isomer Concentration Vertical Profile
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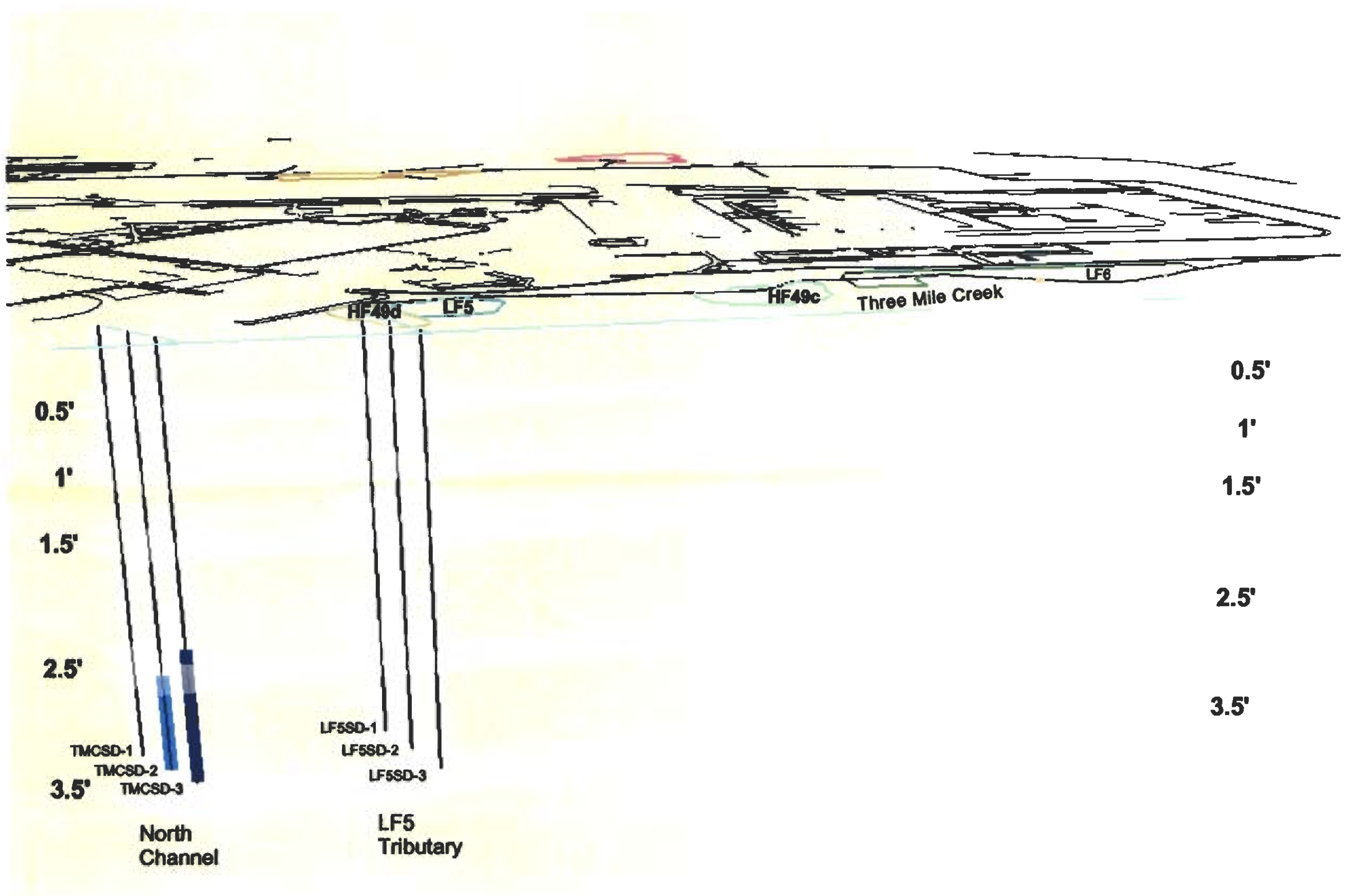

Heptachlor and Heptachlor Epoxide (ppb)

- ND
- ND - 0.6 (Below the screening level for native soil samples)
- 0.6 - 1.572 (Below the screening level for sediment samples)
- 1.572 - 5
- 5 - 15
- 15 - 100
- > 100

Depths Not to Scale

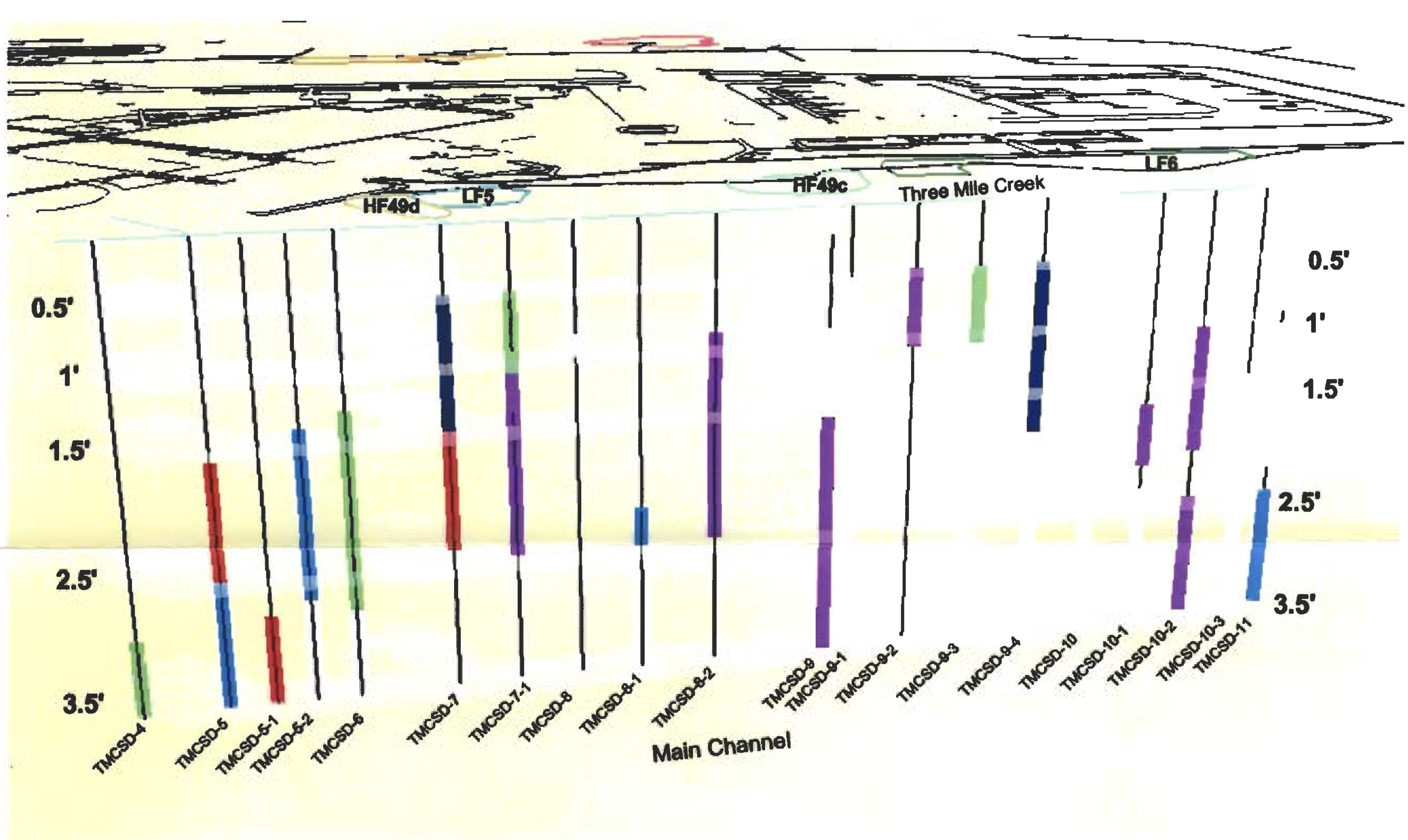

Figure 3-3d Heptachlor and Heptachlor Epoxide Concentration Vertical Profile
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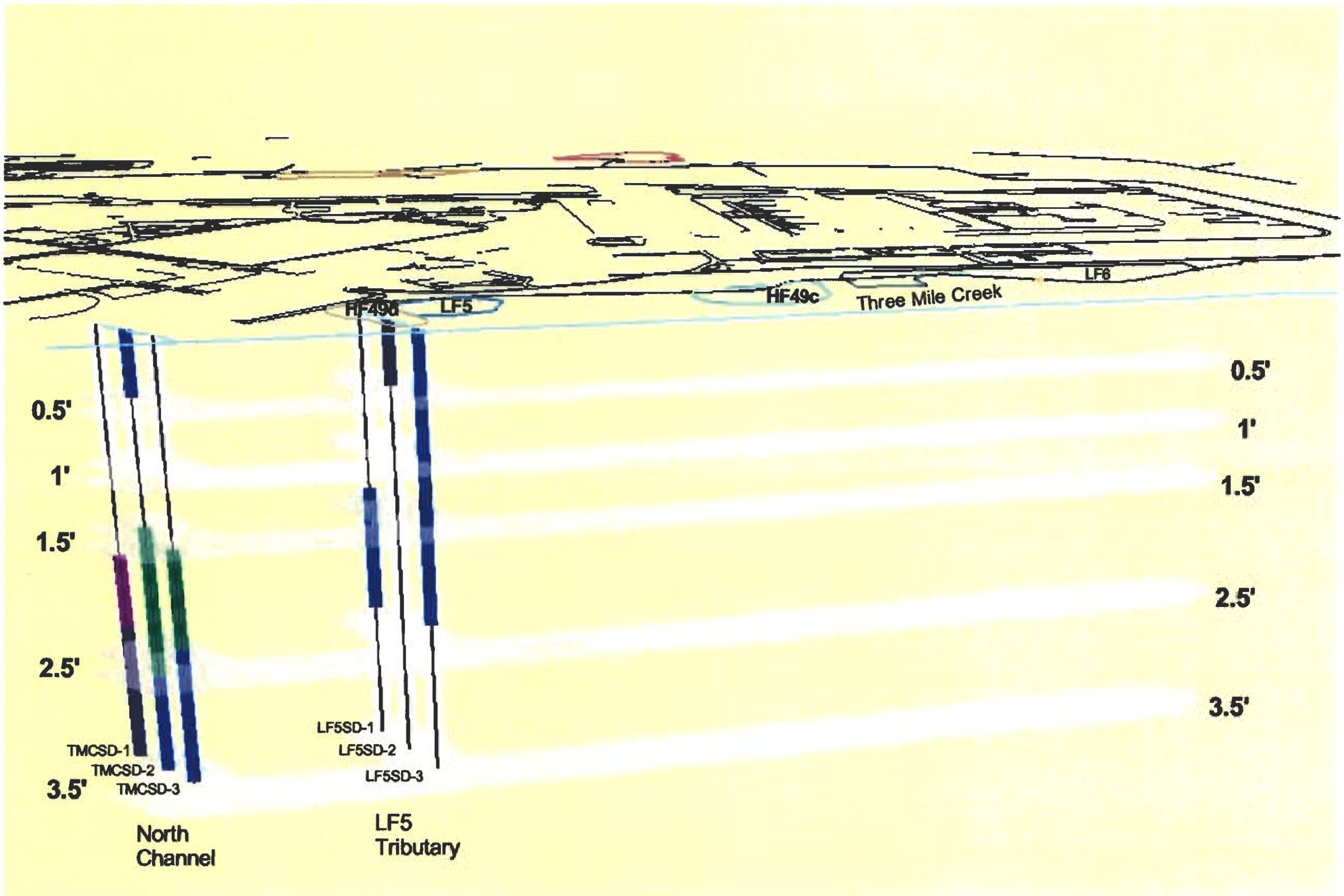

Total 2,3,7,8 TCDD equivalent (ng/Kg)

- ND
- ND - 1 (Below the screening level for both sediment and native soil samples)
- 1 - 7
- 7 - 15
- 15 - 22
- 22 - 40
- > 40

Depths Not to Scale

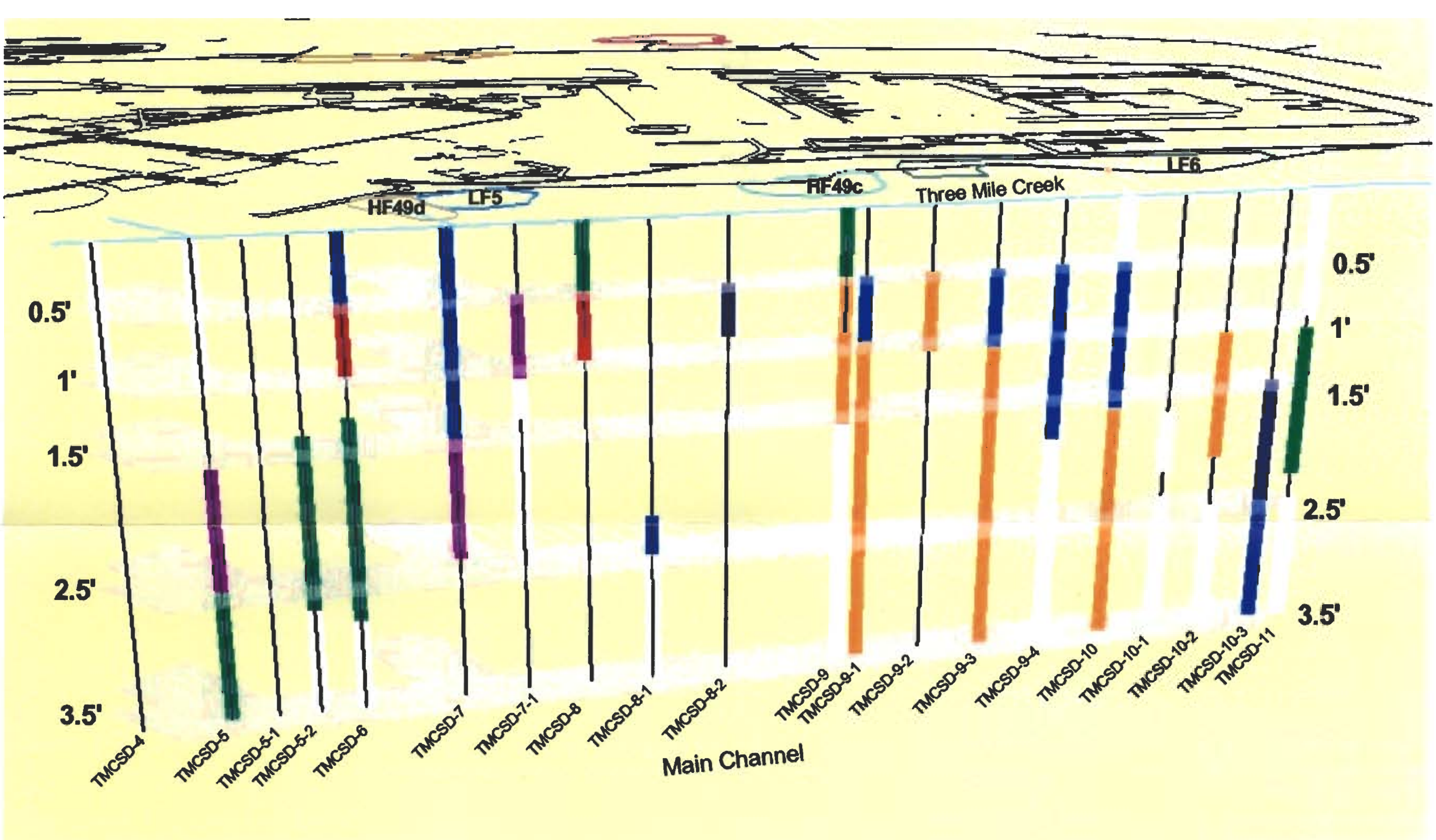

Figure 3-4 Total Dioxin Concentration Vertical Profile
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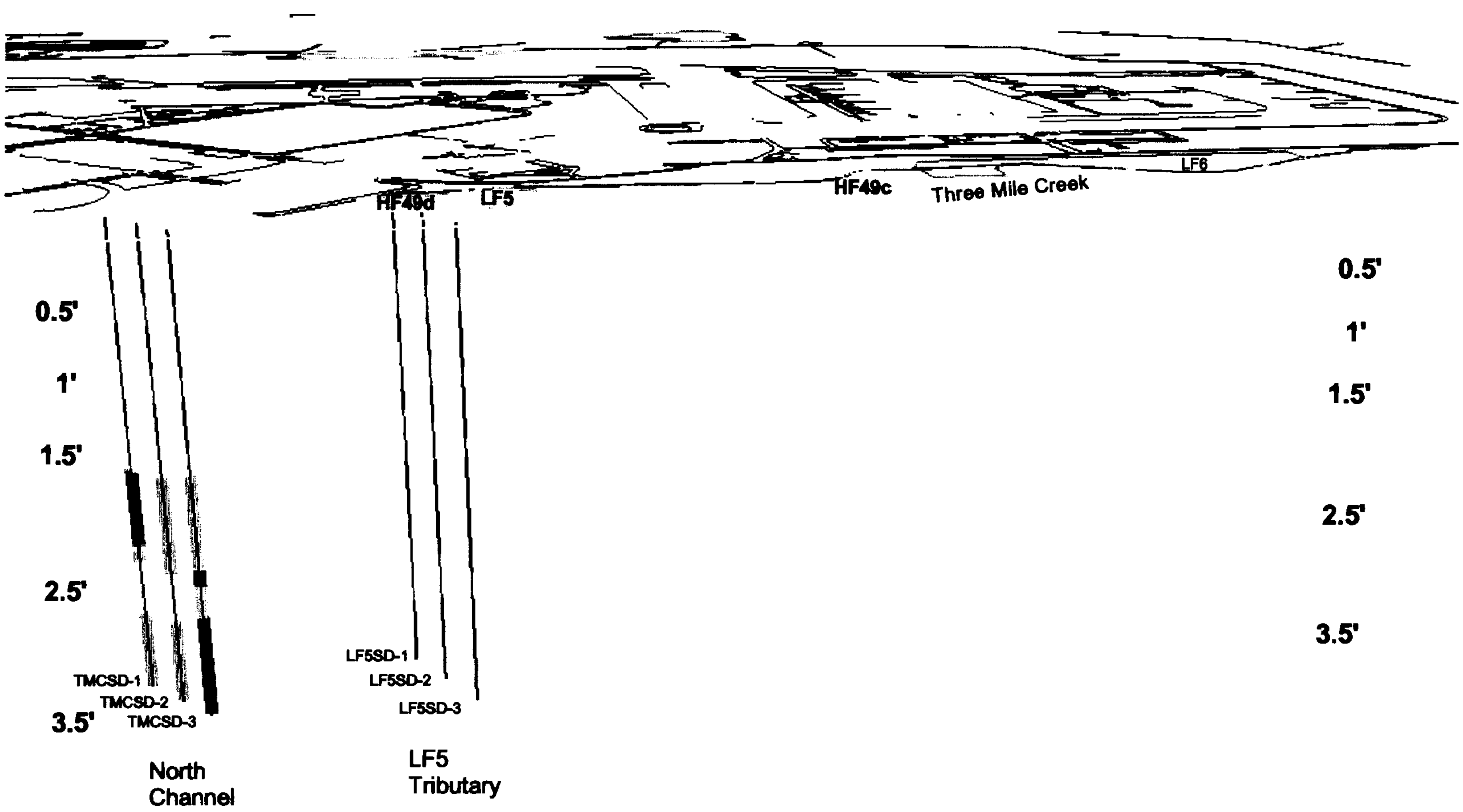

1,2-Dichlorobenzene (ppb)

- ND
- ND - 240 (Below the screening level for native soil samples)
- 240 - 628.8 (Below the screening level for sediment samples)
- 628.8 - 1000
- 1000 - 1500
- > 1500

Depths Not to Scale

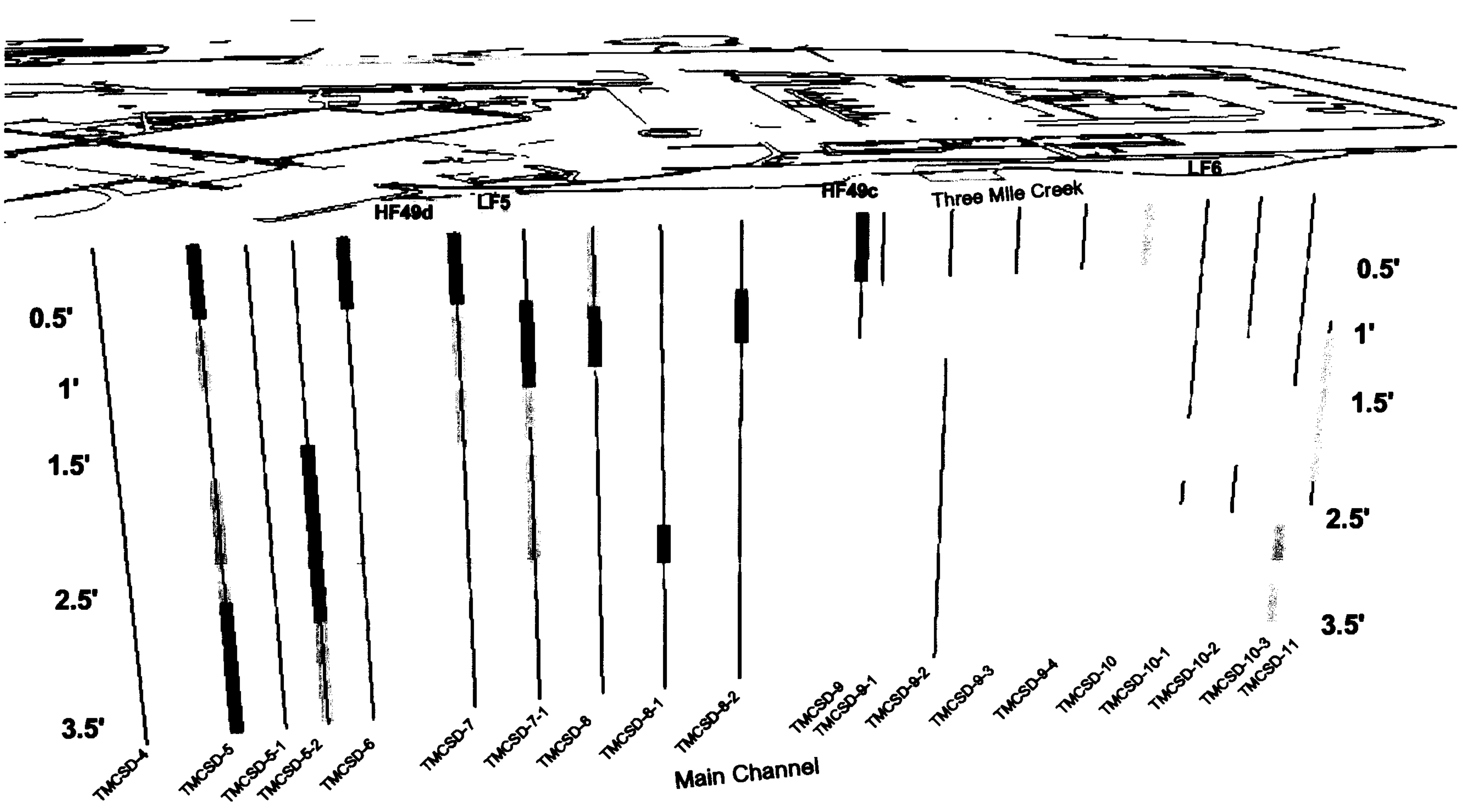

Figure 3-5a 1,2-Dichlorobenzene Concentration Vertical Profile
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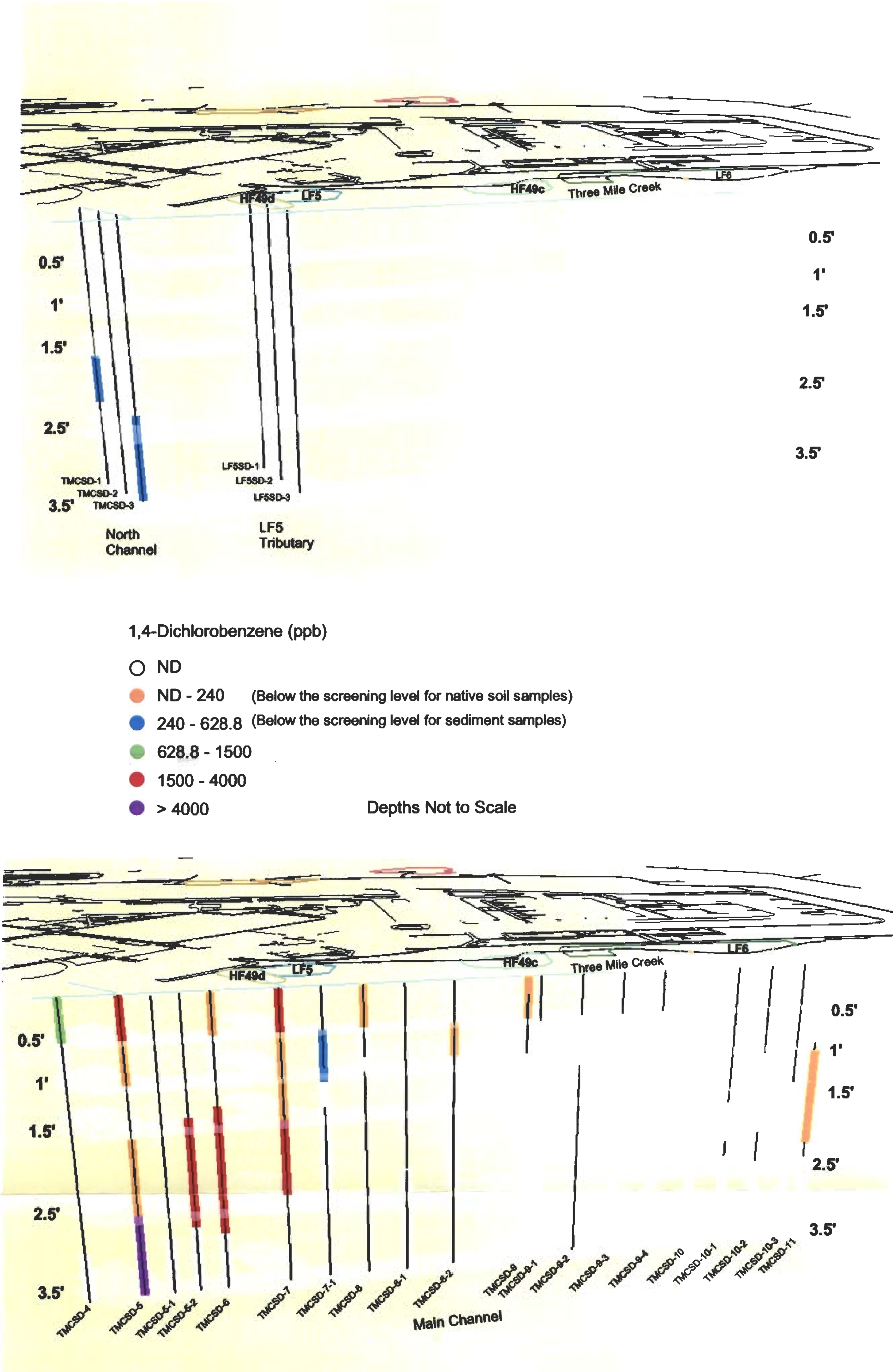

Figure 3-5b 1,4-Dichlorobenzene Concentration Vertical Profile
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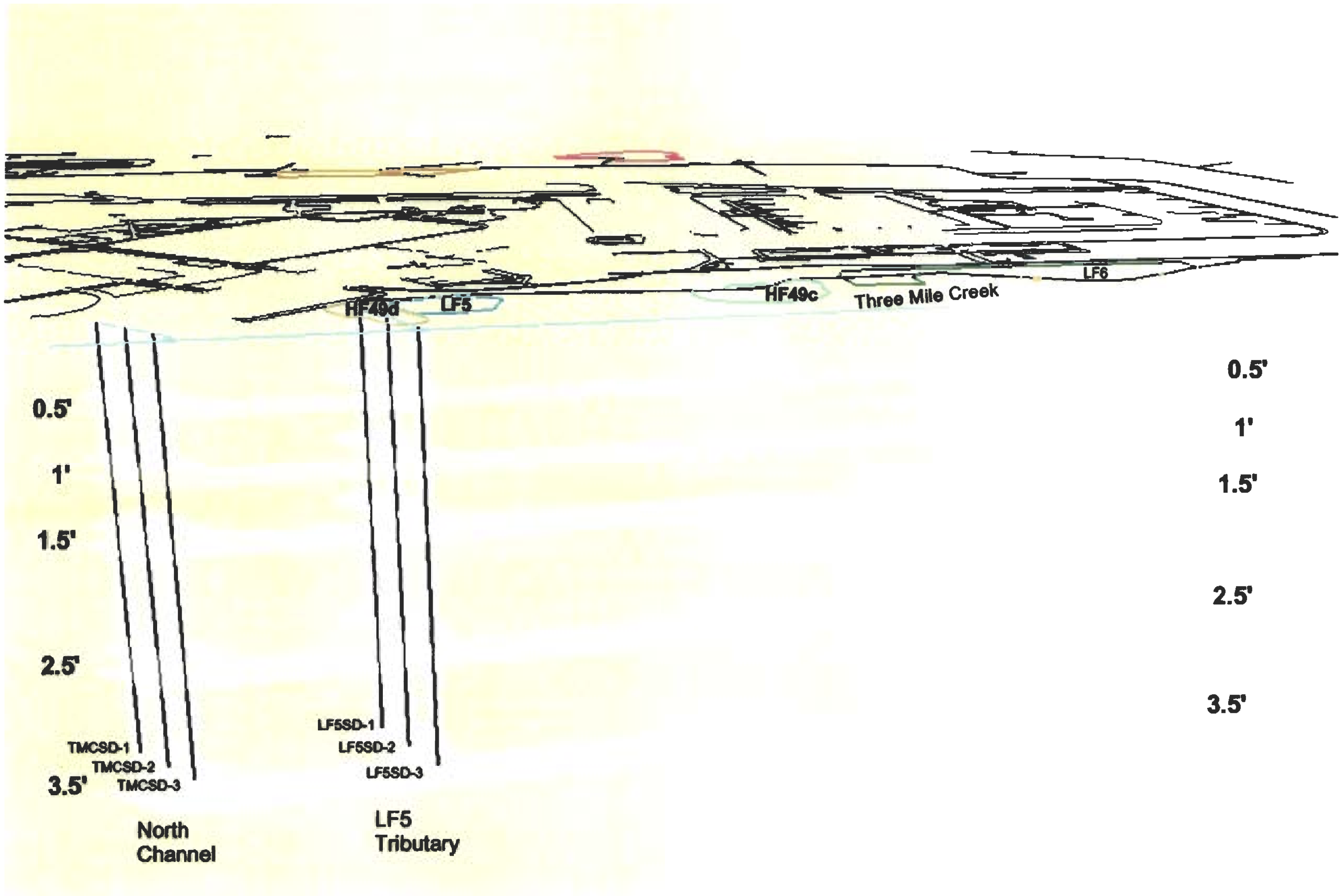

Benzene (ppb)

- ND
- ND - 100 (Below the screening level for native soil samples)
- 100 - 500 (Below the screening level for sediment samples)
- 500 - 1467.2
- > 1467.2

Depths Not to Scale

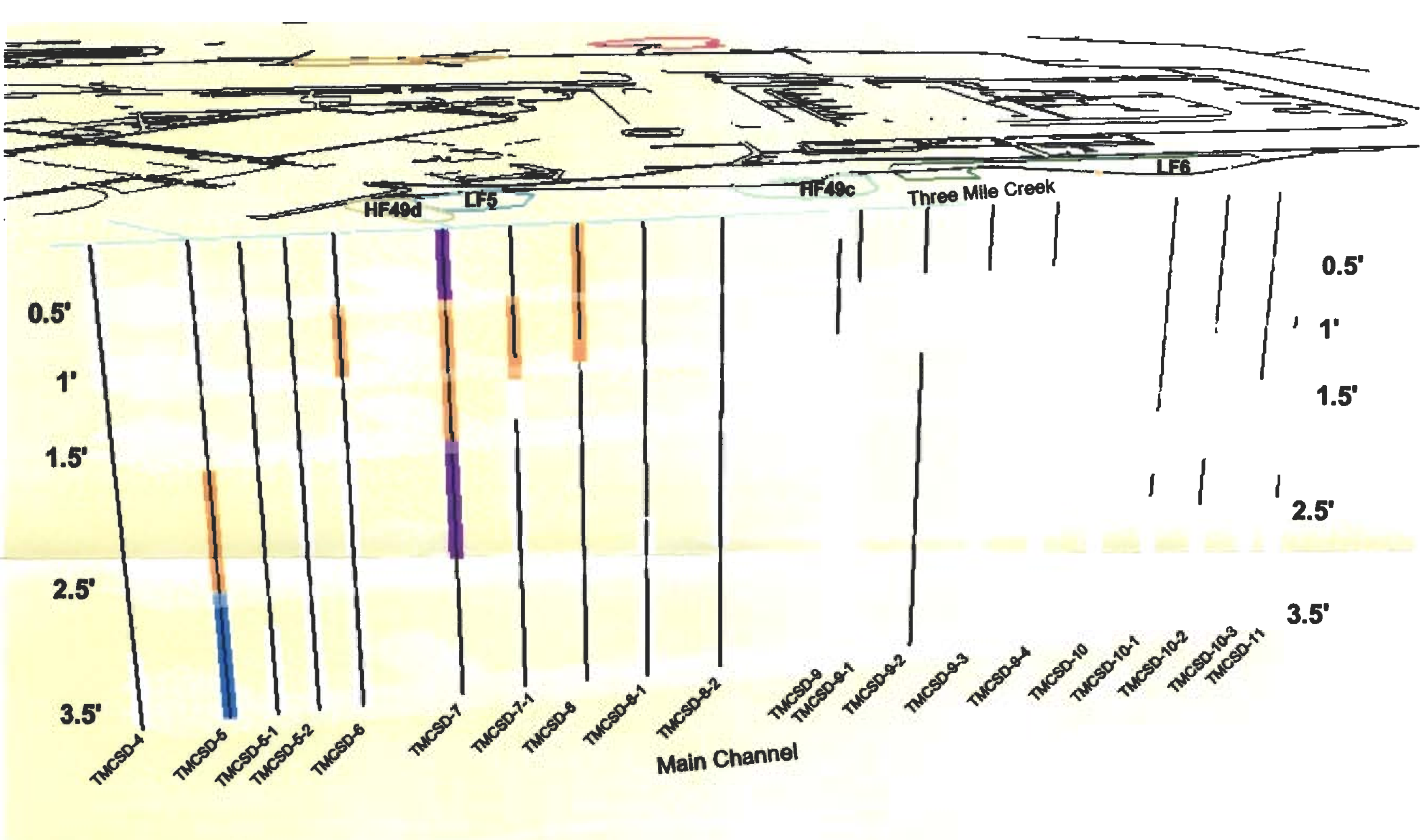

Figure 3-5c Benzene Concentration Vertical Profile
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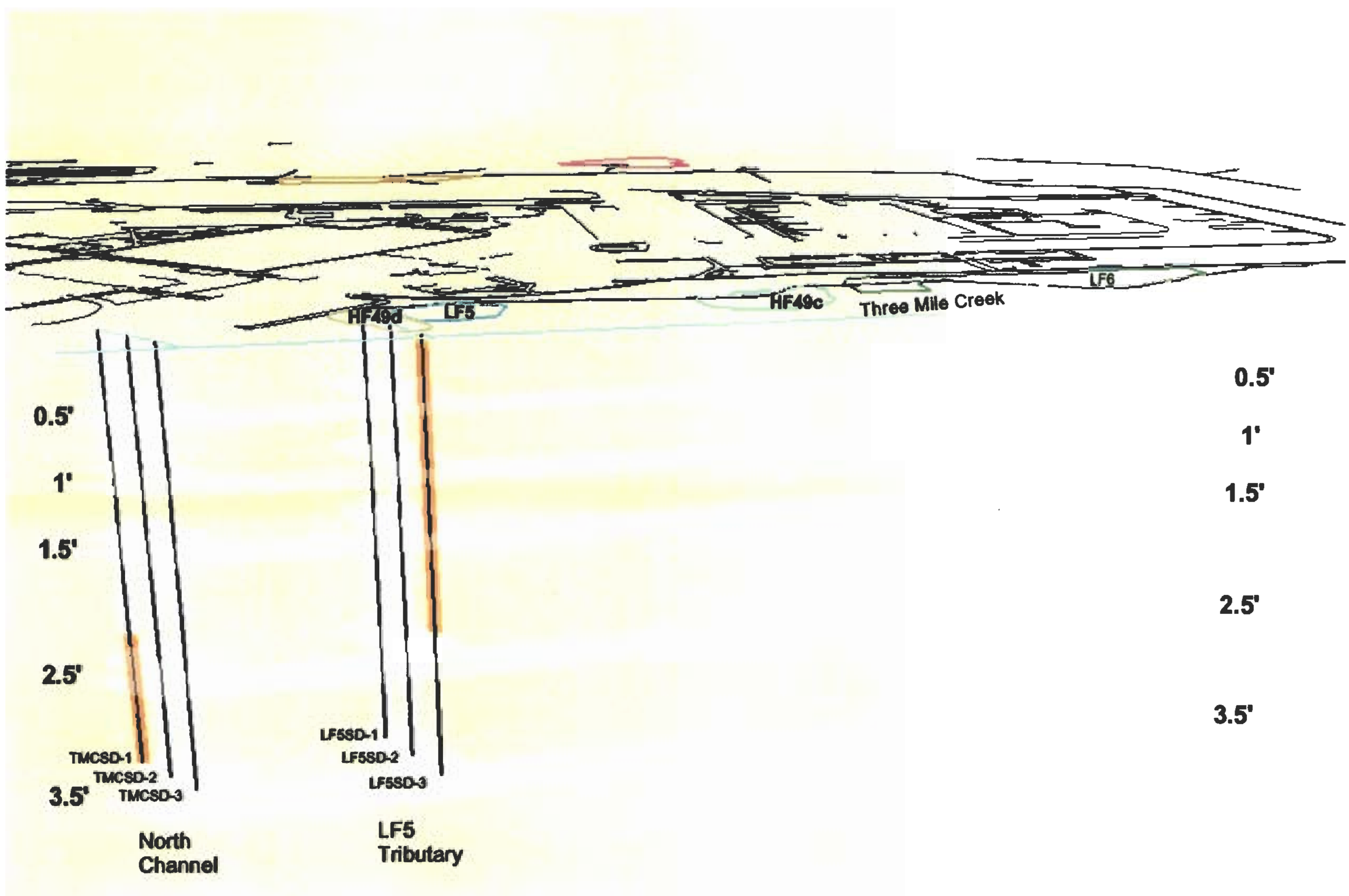

Chlorobenzene (ppb)

- ND
- ND - 70 (Below the screening level for native soil samples)
- 70 - 183.4 (Below the screening level for sediment samples)
- 183.4 - 3500
- 3500 - 35000
- > 35000

Depths Not to Scale

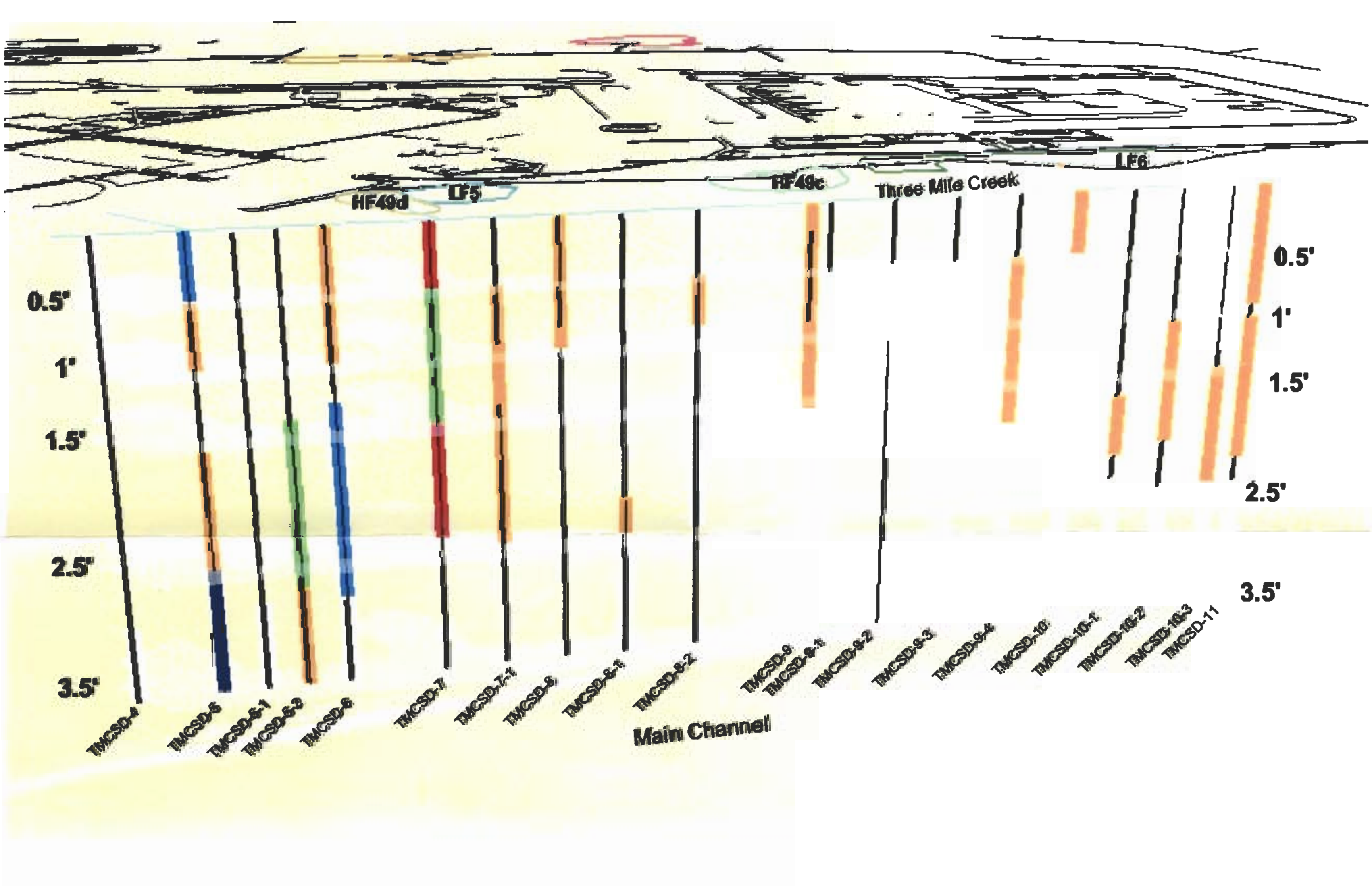

Figure 3-5d Chlorobenzene Concentration Vertical Profile
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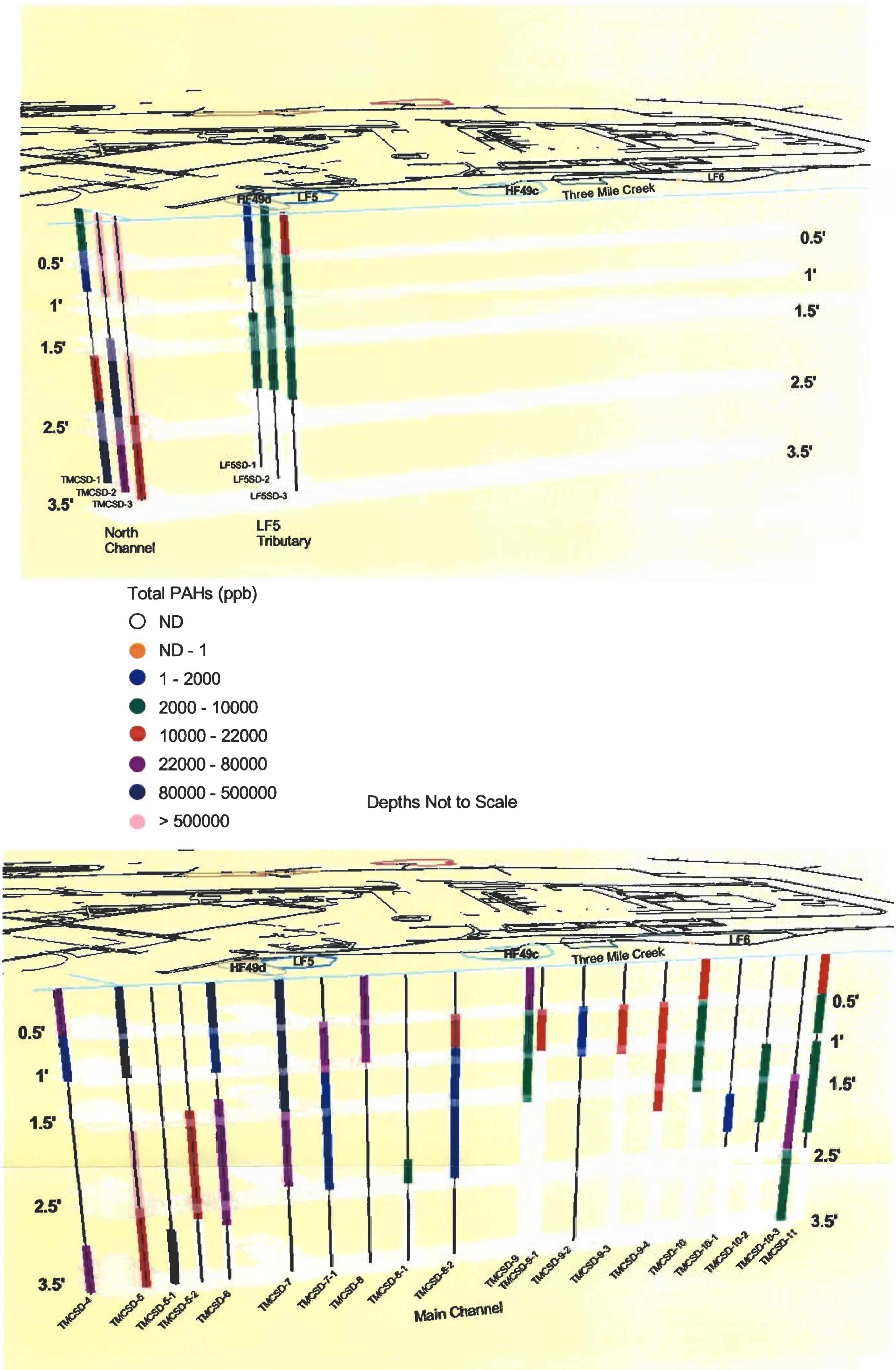

Figure 3-6 Total PAH Concentration Vertical Profile
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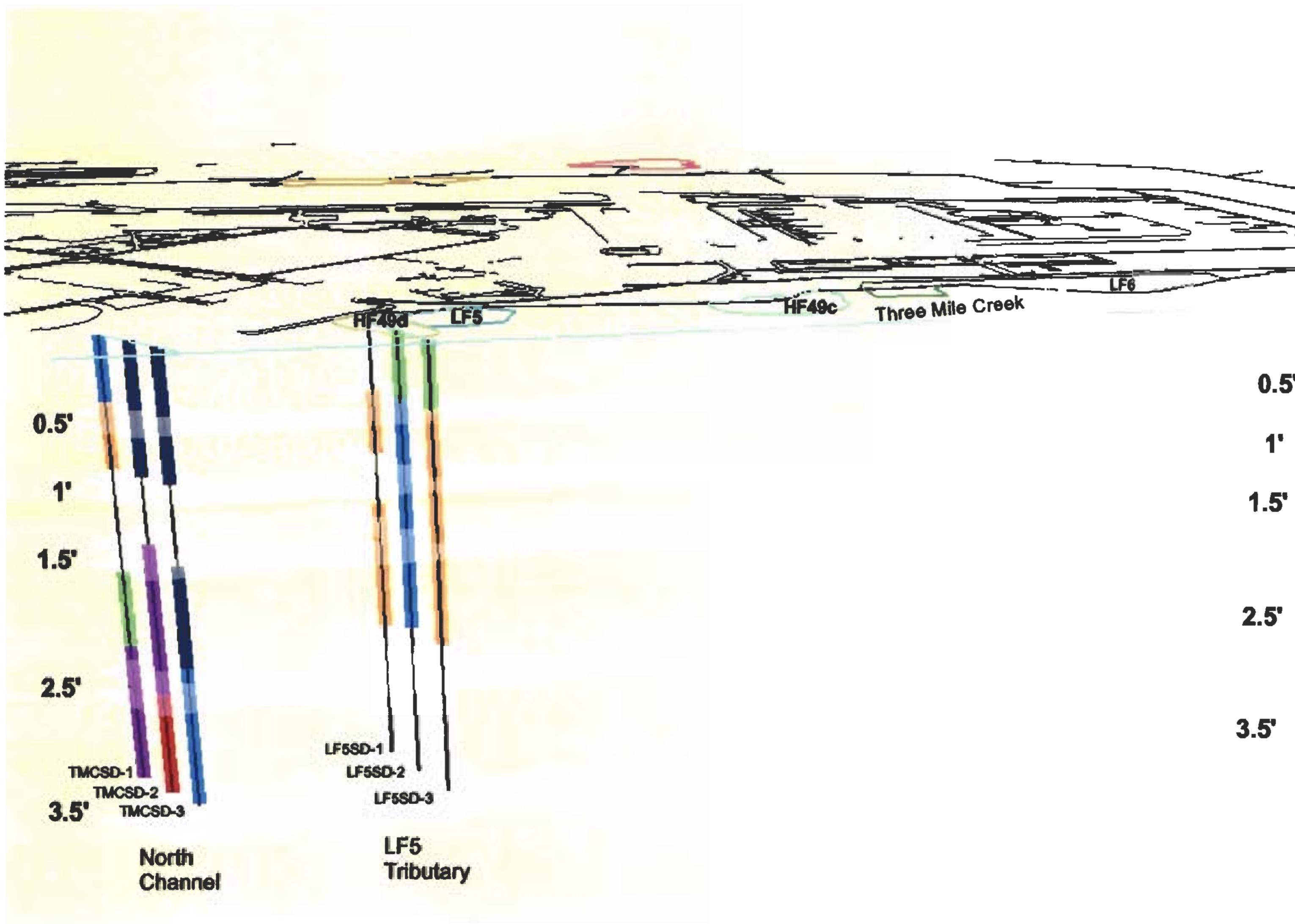

Benz(a)anthracene (ppb)

- ND
- ND - 230 (Below the screening level for both sediment and native soil samples)
- 230 - 1000
- 1000 - 2100
- 2100 - 7500
- 7500 - 40000
- >40000

Depths Not to Scale

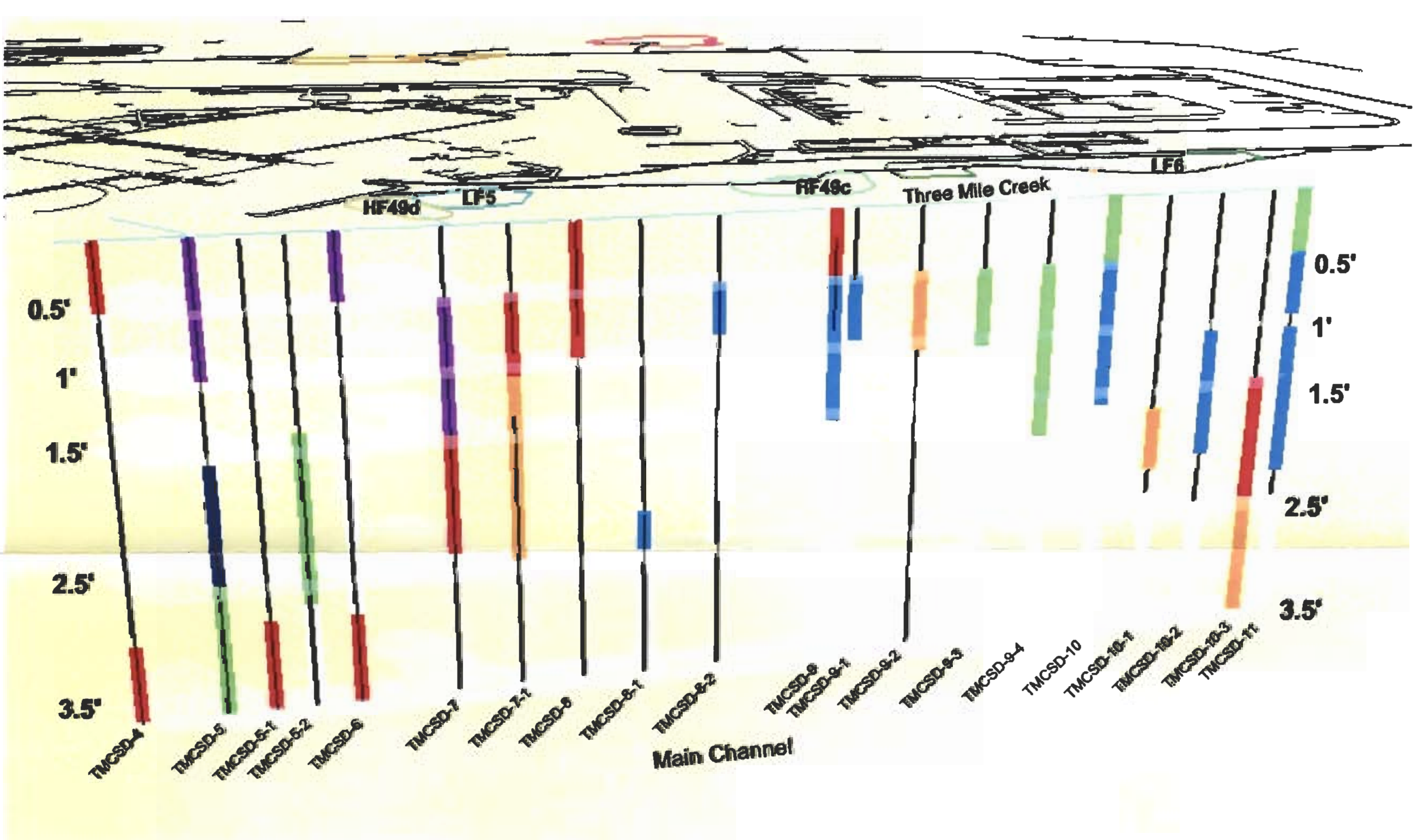

Figure 3-6a Benz(a)anthracene Concentration Vertical Profile
Former Griffiss AFB

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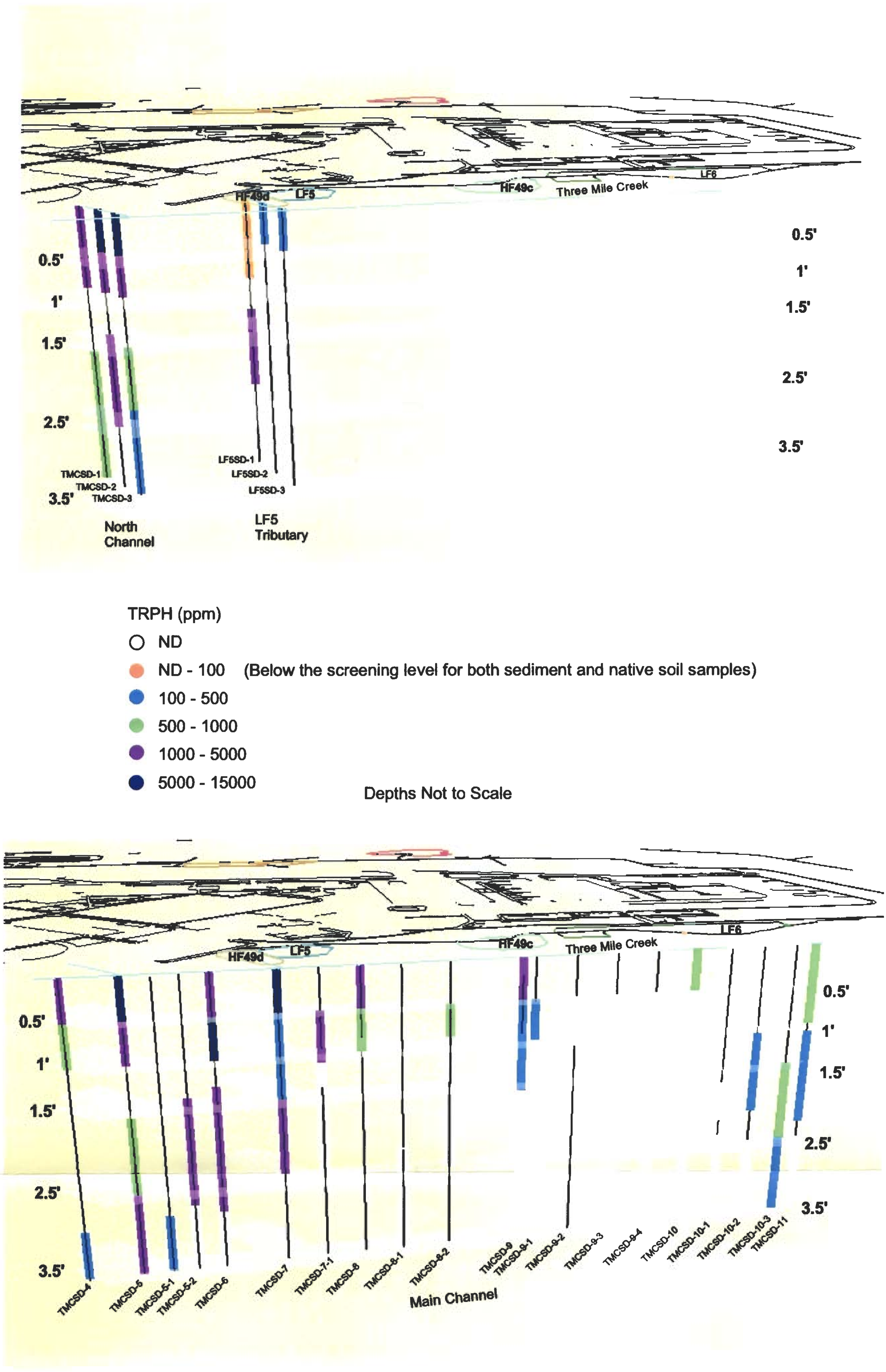

Figure 3-7 TRPH Concentration Vertical Profile
Former Griffiss AFB

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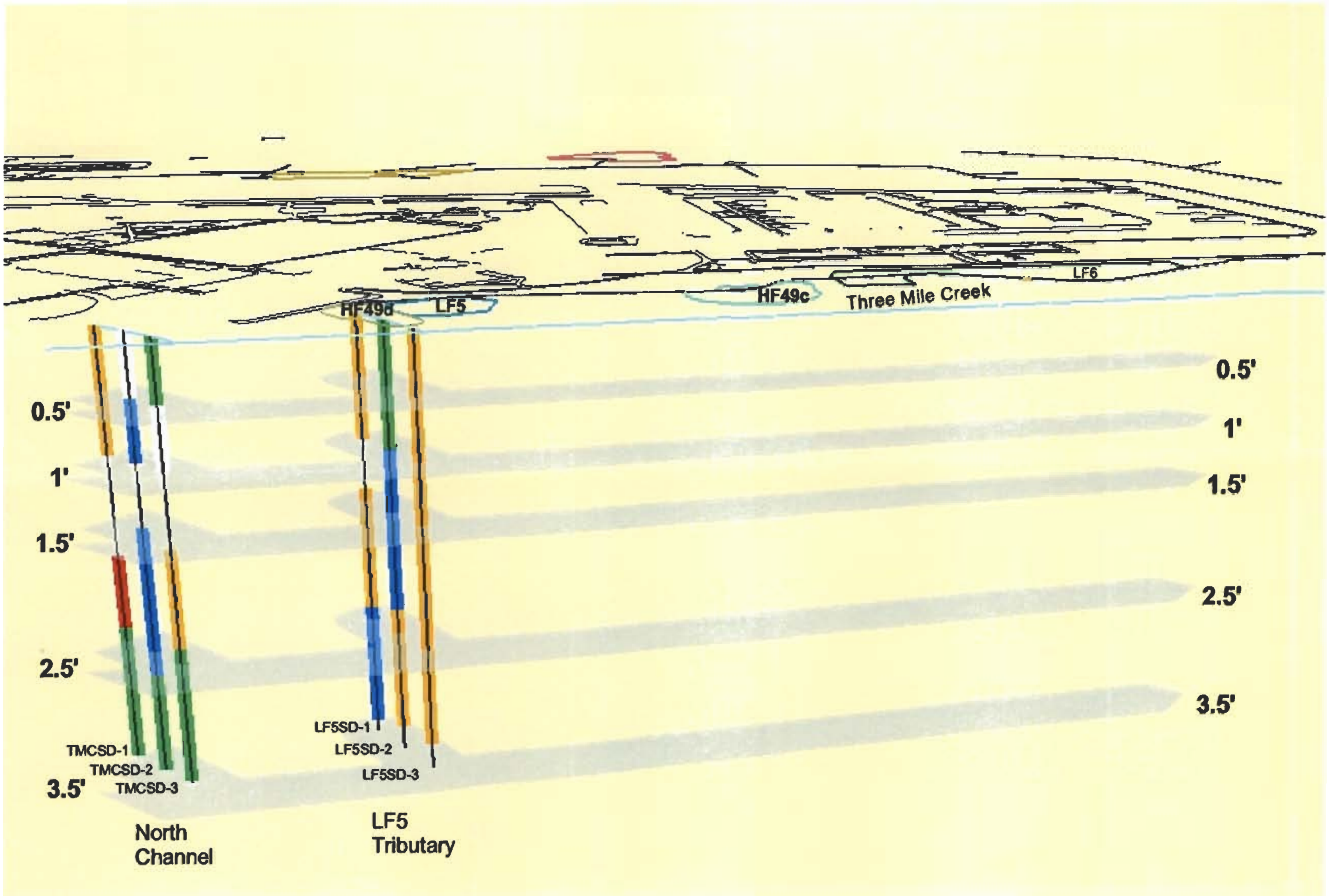

Arsenic (ppm)

- ND
- ND- 6 (Below the screening level for sediment and native soil samples)
- 6 - 10
- 1 - 20
- > 20

Depths Not to Scale

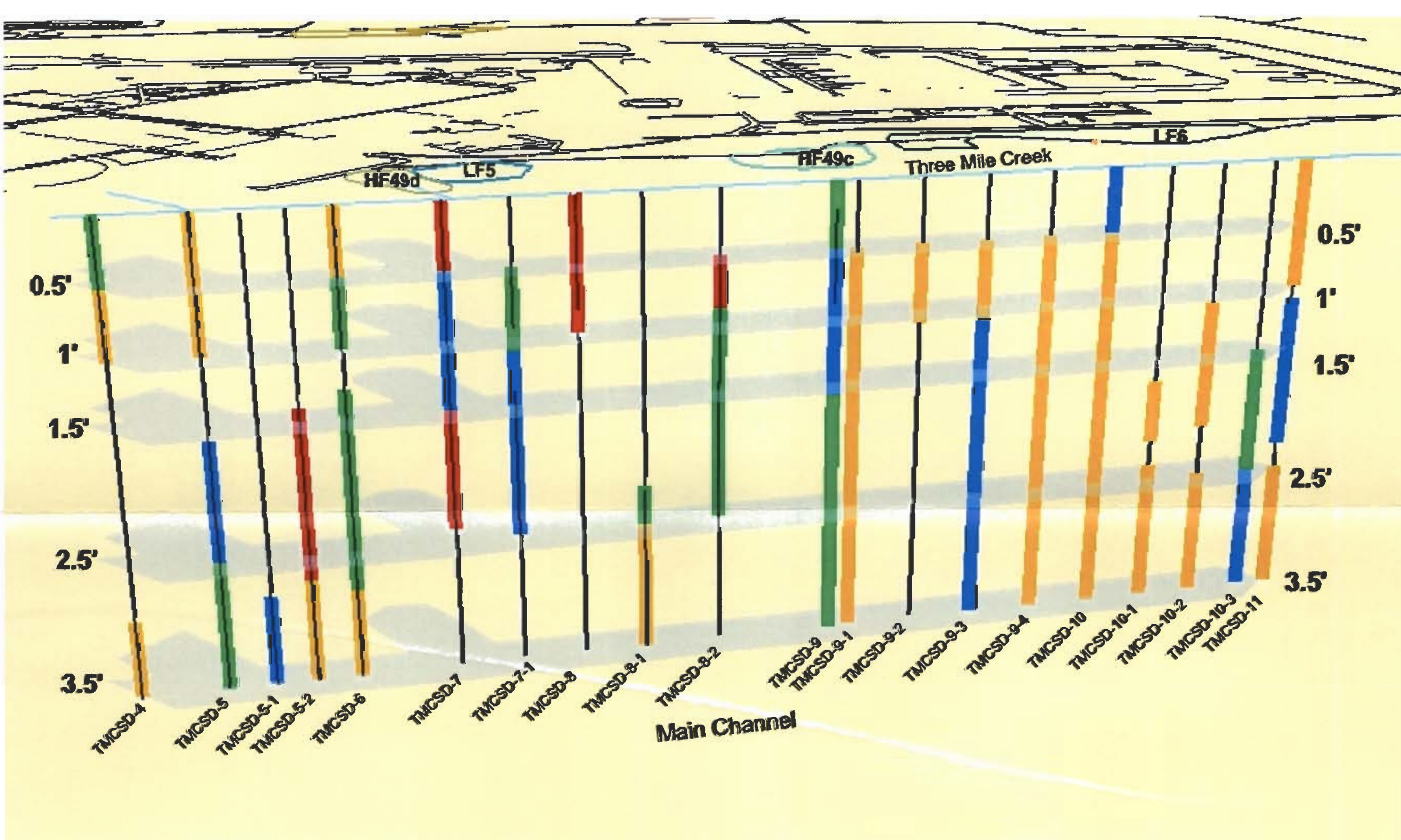

Figure 3-8 Arsenic Concentration Vertical Profile
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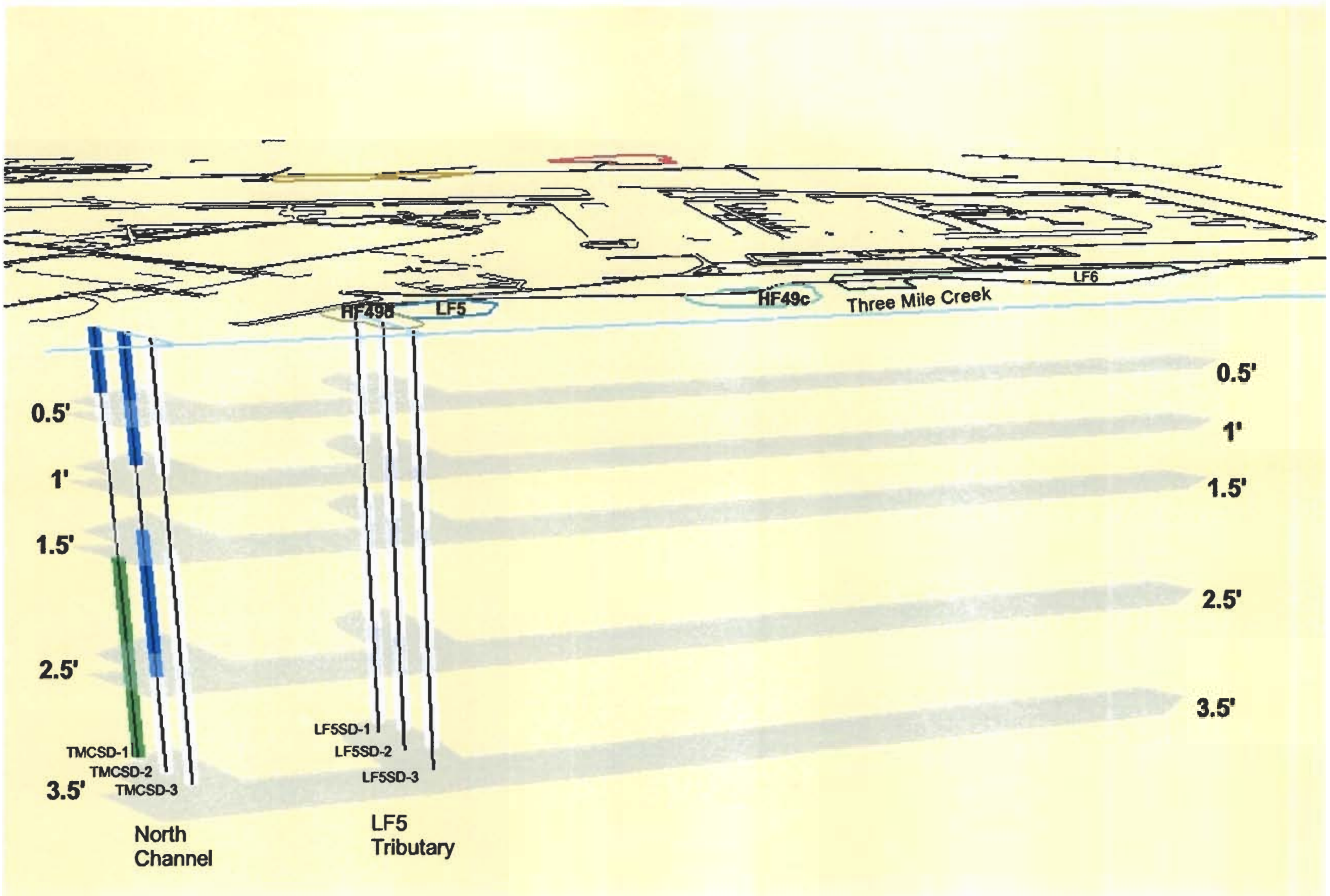

Cadmium (ppm)

- ND
- ND - 0.6 (Below the screening level for sediment and native soil samples)
- 0.6 - 4
- 4 - 10
- > 10

Depths Not to Scale

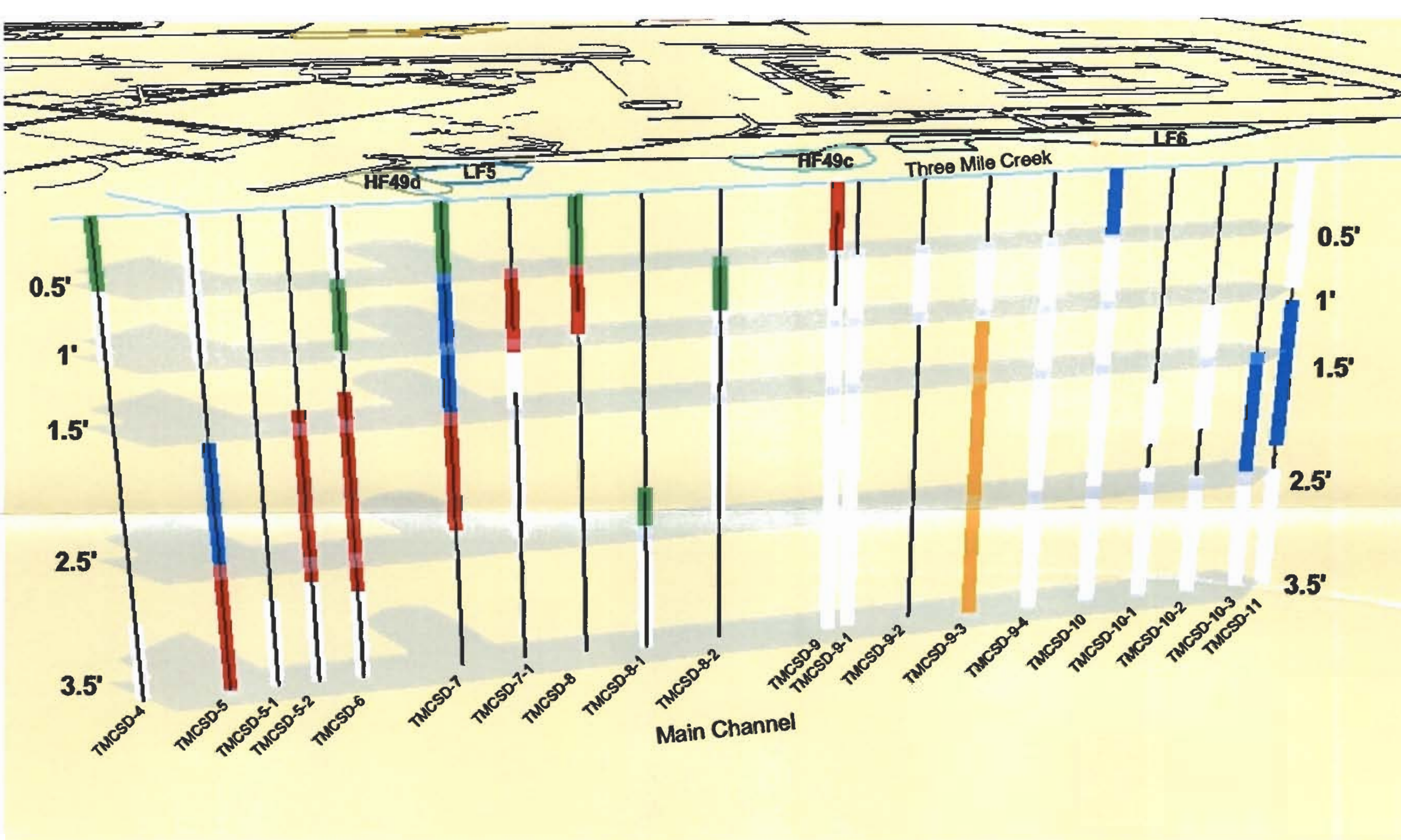

Figure 3-9 Cadmium Concentration Vertical Profile
Former Griffiss AFB

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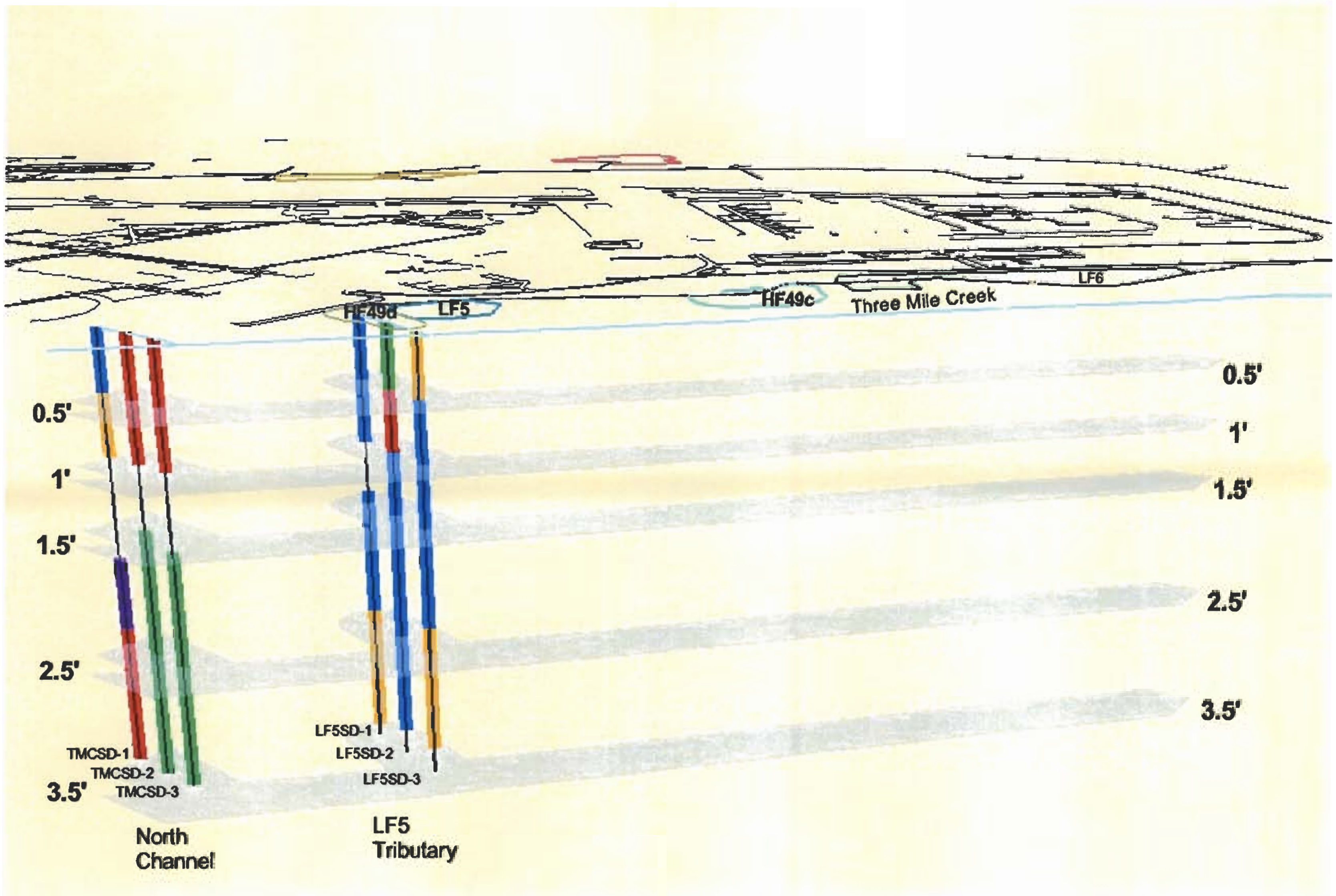

Copper (ppm)

- ND
- ND - 16 (Below the screening level for sediment and native soil samples)
- 16 - 32
- 32 - 50
- 50 - 80
- > 80

Depths Not to Scale

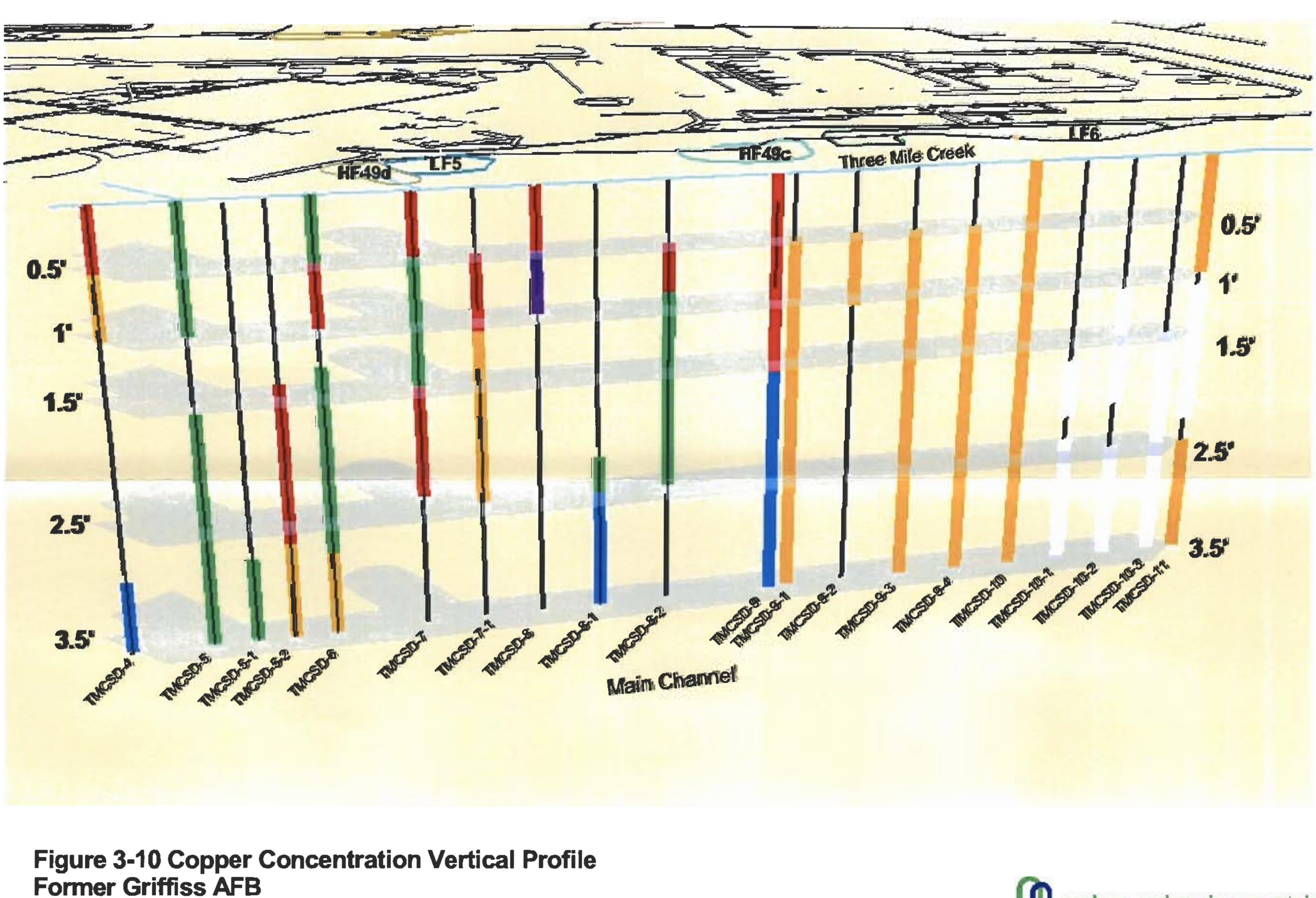

Figure 3-10 Copper Concentration Vertical Profile
Former Griffiss AFB

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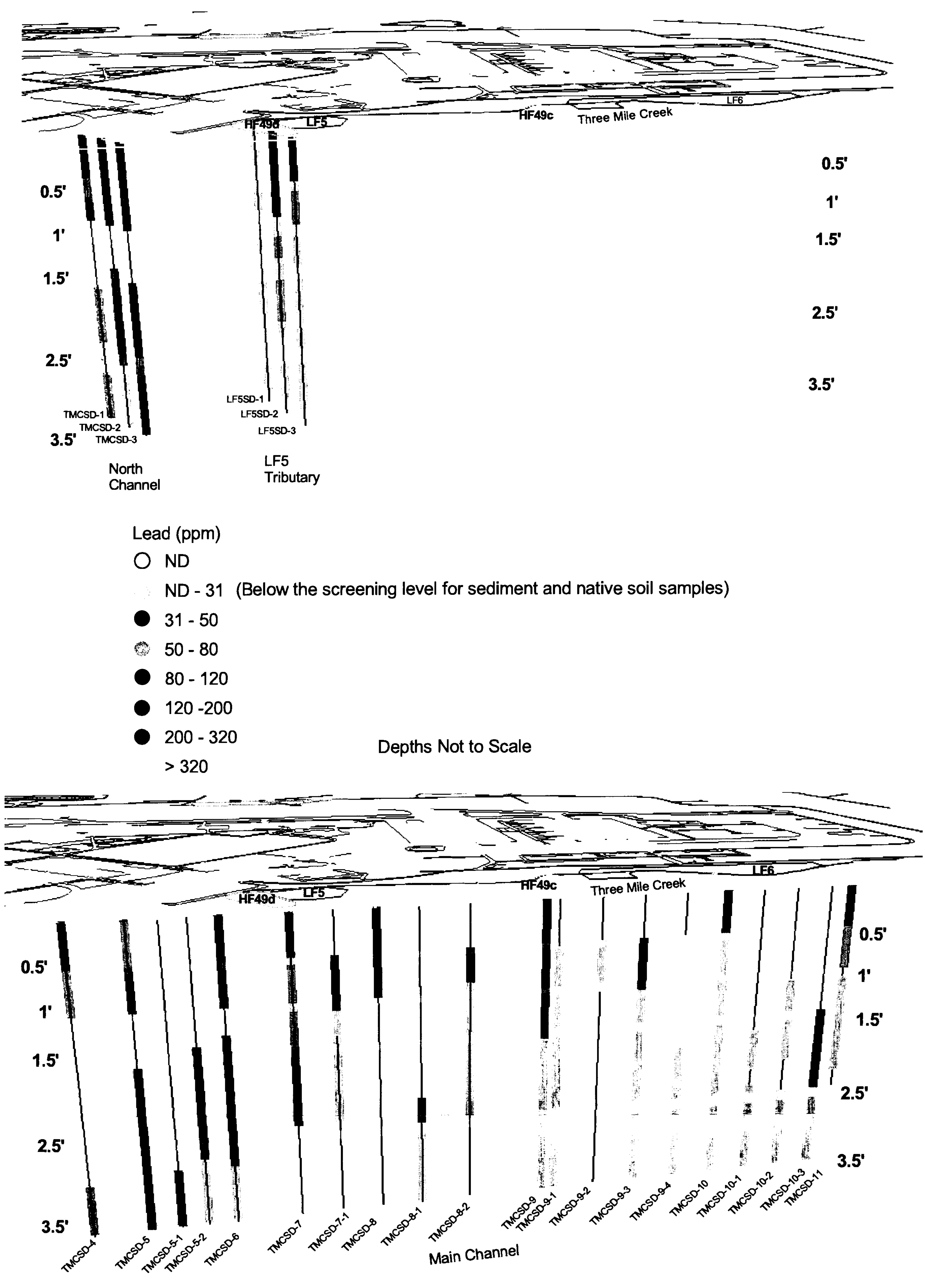

Figure 3-11 Lead Concentration Vertical Profile
Former Griffiss AFB

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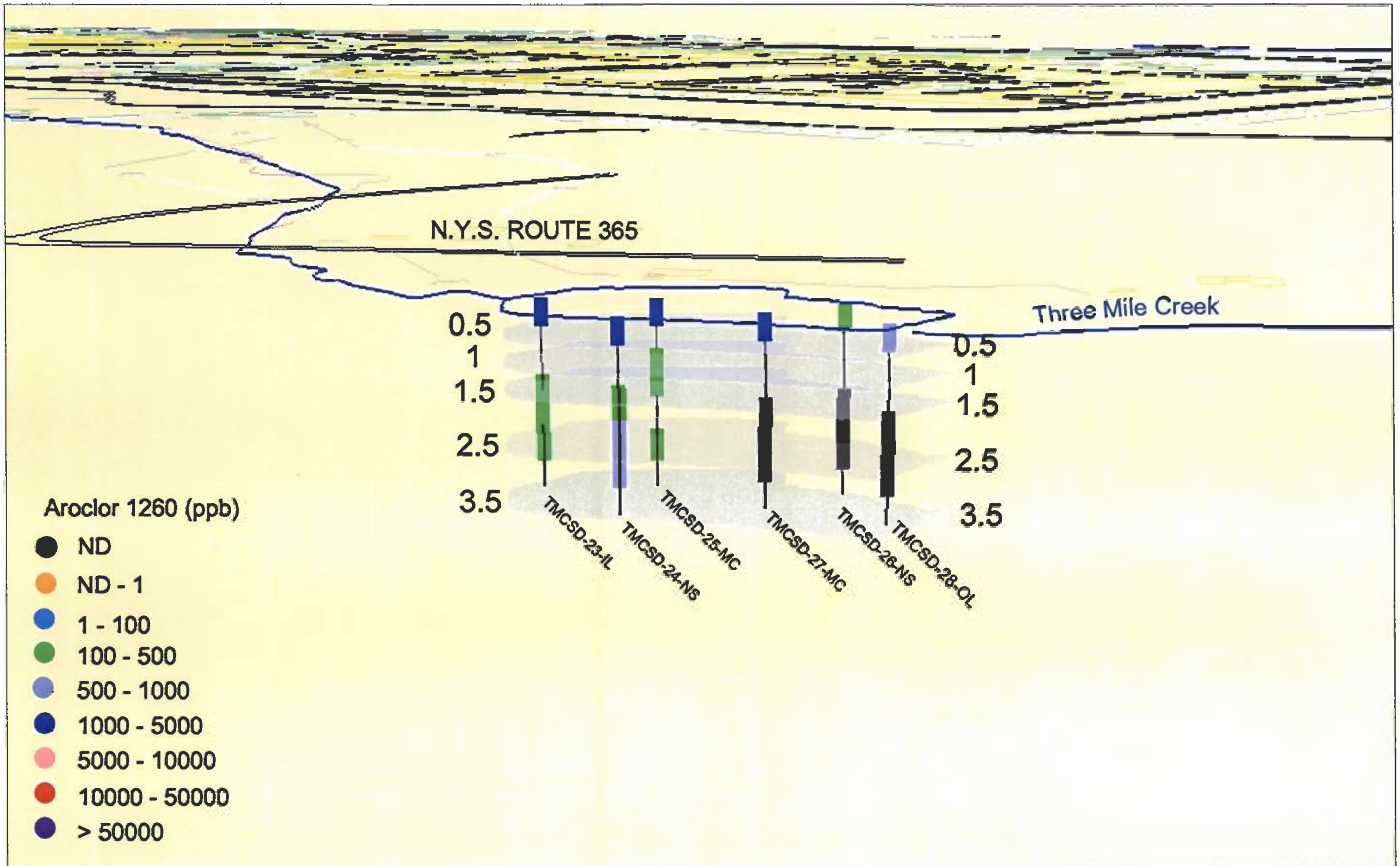

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Figure 3-12
Aroclor 1260 Concentration Vertical Profile
Off-Base Pond
Former Griffiss Air Force Base

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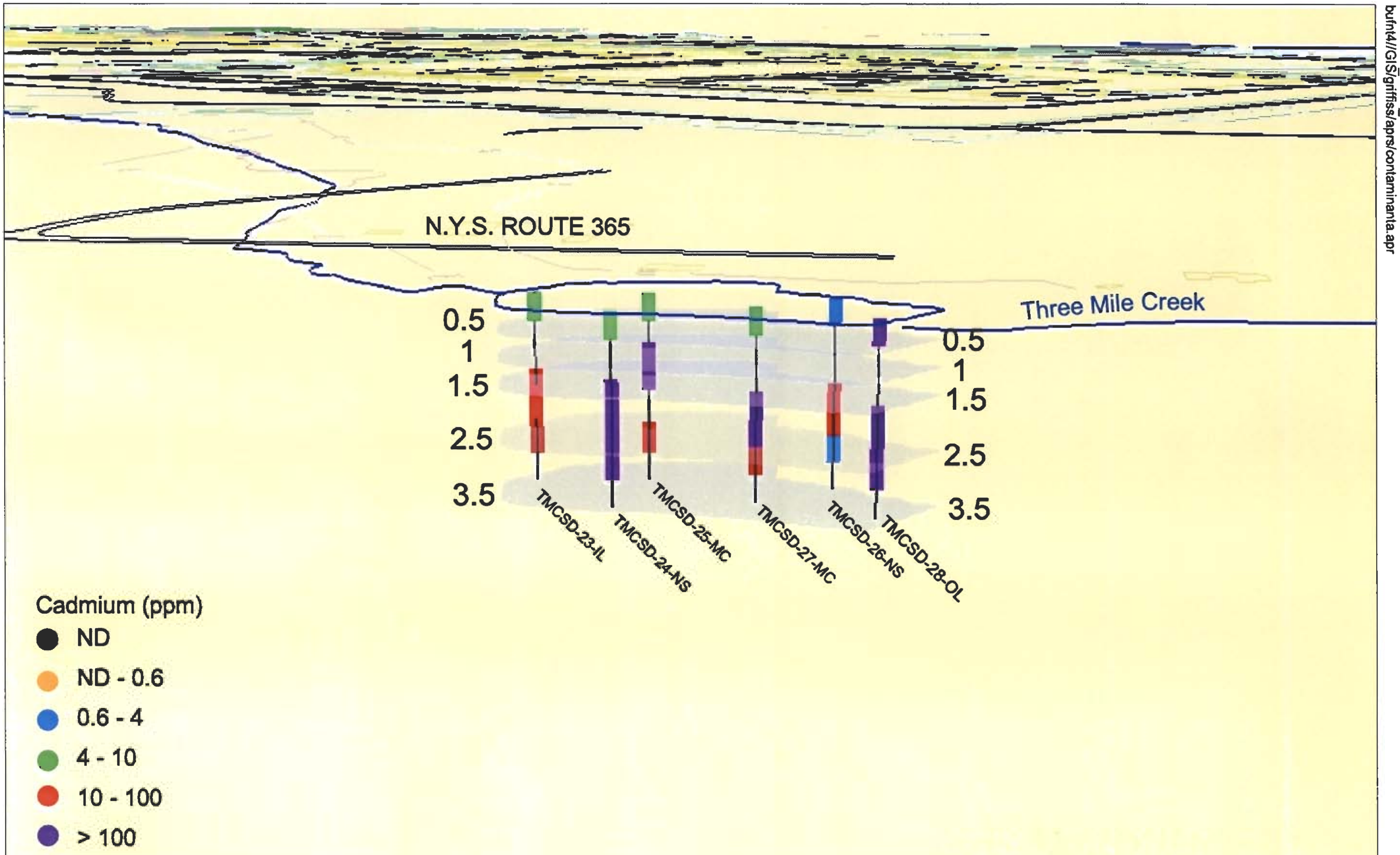

Figure 3-13
Cadmium Concentration Vertical Profile
Off-Base Pond
Former Griffiss Air Force Base

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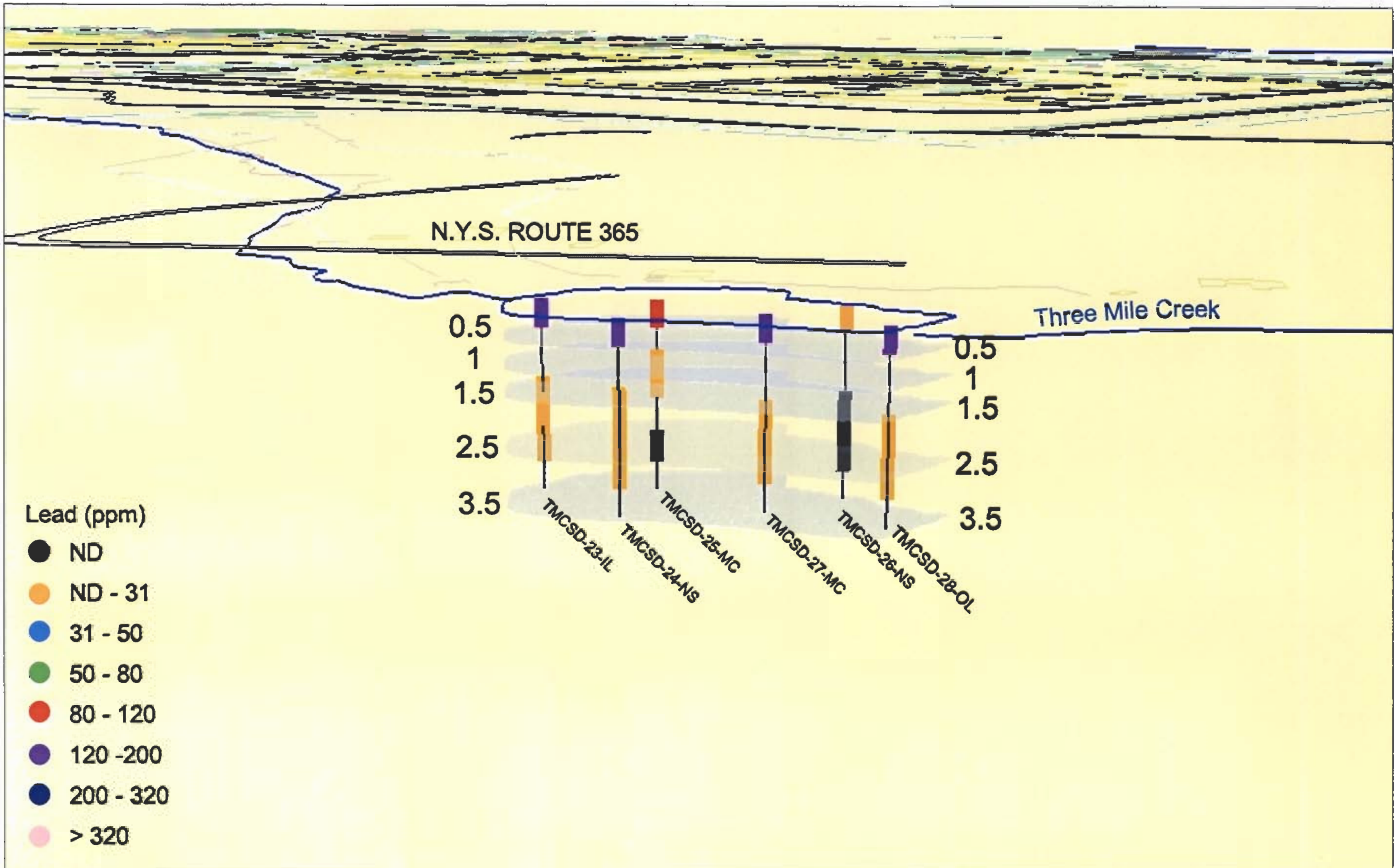

Figure 3-14
Lead Concentration Vertical Profile
Off-Base Pond
Former Griffiss Air Force Base

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4 Three Mile Creek Habitat Quality

In the previous section, areas of sediment and surface water were identified that exceed screening values. However, such exceedences do not necessarily warrant remedial action, especially considering that such remedial action would directly adversely impact the habitat they are meant to protect. The health of the environment in Three Mile Creek and the quality of its habitat were studied in both the RI and in a separate post-FS reviews. The environmental evaluation performed for this AOC during the RI evaluated the potential for adverse impacts to ecological receptors potentially exposed to contaminants present at the Three Mile Creek AOC. Based on this assessment, potential for adverse effects was considered insignificant for the northern water snake, short-tailed shrew (except in the drainage ditch adjacent to Landfill 5), raccoon, and American woodcock. However, comparisons of composite whole-body fish tissue analytical results to NYSDEC ecological guidelines indicated that a high potential exists for adverse effects due to exposure to PCBs, DDT, aldrin/dieldrin, and mercury (Law 1996).

Also as part of the RI, an aquatic assessment was performed at Three Mile Creek in order to evaluate creek habitat, in situ water quality, benthic and drift macroinvertebrate communities, and fish populations. Whole-body fish tissue samples were collected and analyzed during this assessment. Sediment was also collected for toxicity testing. Benthic macroinvertebrate populations were classified as "slightly impaired" at two downstream locations (TMCBE-2 and TMCBE-4) (see Figure 2-3a), exhibiting a lower quality of habitat than the reference location. Although no diseases were observed, fish communities were also found to be in "poor" condition. With the exception of a single sample (from location TMCBE-2) which indicated moderate toxicity, the sediment toxicity test results did not indicate the presence of chemicals in sediments at concentrations toxic to aquatic life. Analyses of composite whole-body fish tissue indicated a spatial trend in PCB distribution, with Aroclor 1260 concentrations in tissues from samples collected at location TMCFS-1 approximately three times greater than those found from the other three downstream locations. Fish tissue data collected by NYSDEC in 1997 confirms the presence of PCBs in Three Mile Creek fish. Concentrations of three of six detected metals were greatest in the lower reaches of the creek. This investigation showed that some impacts on the environment have resulted from the contamination at Three Mile Creek, but that the impacts varied with location. Not only do the observed impacts vary with location, but the quality of habitat at Three Mile Creek varies with location along the creek. To better describe the quality of the habitat in these areas, the Air Force Base Conversion Agency (AFBCA), USACE, NYSDEC, EPA, and the USFWS agreed to jointly visually inspect and review the habitat quality of each section of Three Mile Creek. The habitat quality of the creek is a critical factor in determining whether intrusive measures of remedial action (i.e., sediment excavation) would be appropriate for the areas where sediment sampling results exceeded screening criteria.

The habitat review was conducted on July 15, 1999, and was documented in trip reports by E & E and the USFWS (E & E 1999a). The habitat review walk focused largely on the off-site segment of the creek, extending from the base boundary to the NYSBC. A brief walkover of Three Mile Creek was also conducted on-site.

In late 2001, as part of a basewide wetlands mitigation program, E & E reviewed all historical documents regarding work performed on or around Three Mile Creek, with emphasis on wetland delineations and the presence or absence of contamination (E & E 2001). Following the historical data review, E & E certified wetland specialists field-verified the historical wetland delineations. Recommendations discussed in Section 5 regarding this report incorporate plans for wetland mitigation along Three Mile Creek.

4.1 On-Base Portions of Three Mile Creek

The on-base portion of the stream is characterized as a channelized, straight, sluggish stream with primarily sandy and cobbly substrate. Considerable amounts of mucky, fine sediment have accumulated in deeper pools and behind obstructions and debris (beaver) dams. The onsite portion of the stream extends for about 5,000 feet from its origin at the outfall of two large (60- and 72-inch diameter) storm drains just off the substation at Ellsworth Road to the base boundary. The highest levels of contamination have been found in sediment taken near the headwaters of the stream channel and the Landfill 5 (LF5) tributary feeding into the channel along the first 1,000 to 1,500 feet of Three Mile Creek. The stream originates in a developed area of poor surrounding habitat quality, but enters an extensive forested/wetland area within 500 feet or so downstream of the point of origin. Within the forest/wetland, extending to the base boundary, surrounding habitat quality is high. The forest/wetland consists of a diversity of secondary growth and mature trees, supporting abundant wildlife including wild turkey, deer, raccoon, songbirds, ducks, and herons.

About 1,500 feet downstream from the origin of Three Mile Creek, the stream enters a wide, emergent wetland at a point where several large steam pipes cross the stream immediately downstream of LF5. Until recently, a beaver dam was located just downstream from the pipeline crossing. The formerly flooded area has many standing and fallen dead trees. Numerous frogs, minnows, and dragonflies were observed at this location. Stream data collection station TMC-5 (see Figure 5-1) was located within this wetland area.

Downstream of this wetland, the sediments are relatively thin (1 to 2 feet thick); however, a large amount of sediment accumulation was observed just upstream of the dirt road at the base boundary. The stream is also bordered on both sides by a berm of dredge spoils several feet high in this area, extending to the base boundary. The area around the creek supports a number of large eastern cottonwood trees. USFWS personnel observed that the disturbance of this area during remedial activities would not be of great concern, since it has already been disturbed by the dredging activities and the vegetation consists of typical upland plant species. USFWS also suggested the possibility of improving the habitat by removing the berm to provide an opportunity for the stream to spread. This was also subsequently recommended by E & E during the recent wetland mitigation program (E & E 2001).

Habitat survey station TMC-4 (see Figure 2-1) was located several hundred feet upstream from the base boundary in the forested stream segment, just upstream from the extensive area of fine sediment accumulation.

4.2 Off-Base Portions of Three Mile Creek

For discussion purposes, the off-base portion of Three Mile Creek is divided into two stream segments, each approximately 2000 feet in length. The first segment extends from the base boundary to an access road for a sanitation facility transfer facility; and the second segment extends from that access road to NYSBC (see Figure 2-5).

4.2.1 Base Boundary to the Sanitation Facility Transfer Station Access Road

Three Mile Creek was accessed near the southern base boundary at the culvert where it is crossed by a dirt road. The creek was inspected downstream approximately 2,000 feet to the sanitation facility transfer station access road. Water quality and aquatic habitat conditions were evaluated at two stations in this stream segment (TMC-1 and TMC-2) (see Figure 5-2). Water quality parameters (pH, dissolved oxygen, conductivity, temperature, turbidity) were measured using a Horiba U10 water quality meter. The measurements are summarized in Table 4-1.

This portion of the stream is characterized as a small, sandy-bottomed, meandering stream, with mostly sluggish flow. In the shallower, faster-moving portions of the stream (riffles and runs), the creek bottom consisted almost entirely of sand, with a few cobbles and larger rocks. Mucky sediment fines were found up to a foot or two deep in depositional pools and bends, and behind debris dams. Overall, there is little available substrate for benthic macroinvertebrates, and only a few small minnows and frogs were observed in the stream.

The surrounding land use is early successional field or maintained fields for about the first 1,000 feet downstream from the site boundary, with some small fringing emergent wetlands. Early successional field vegetation is primarily forbs found in reverting agricultural areas, including goldenrods, asters, milkweeds, and similar species. Downstream, the creek flows through a recently-mowed field and passes through a second culvert beneath a farm road. This area is apparently used for hay production. At the edge of the pastureland, another 500 or so feet downstream, Three Mile Creek enters a wide wetland area, with dense riparian vegetation consisting of small trees and shrubs, extending for another 1,000 feet downstream. There was evidence that portions of this area had been flooded by past beaver activity and an apparently abandoned beaver lodge was present near the creek.

No waterfowl (ducks or herons) were observed in this stream segment, but there were numerous tracks and signs of wildlife including raccoon, beaver, deer, and songbirds. The early successional field and mowed field provide limited habitat value for wildlife; however, the shrub/forested wetlands and former beaver area appear to provide relatively high-quality habitat that is largely undisturbed by human activity. There was no obvious evidence of gross contamination noted in the stream surface water or sediment, through color, texture, or odor.

4.2.2 Sanitation Facility Transfer Station Access Road to NYSBC

The remaining 2,000 feet of the downstream portion of Three Mile Creek consists of several small, distinct segments of varied habitat. Between the transfer station access road and New York State (NYS) Route 365, the stream is bordered by small trees and shrubs, similar to, but less open than, the forested wetland located just upstream.

Downstream of NYS Route 365, Three Mile Creek enters a short stretch (about 100 feet) of shallow, fast-flowing high-quality stream habitat. The substrate consists of large rocks, cobbles, and gravel, supporting an abundance of benthic invertebrates including caddisflies, amphipods, and crayfish. The streamside vegetation consists of trees and shrubs. Many minnows and small fish were observed in this area.

The stream then meanders through a short segment of open field and empties into a small pond just upstream from NYS Route 49. The pond appeared to be stagnant, with abundant algae, and ringed by cattails.

An aquatic habitat survey was conducted and water quality field parameters were measured at a third station, TMC-3 (see Figure 5-2), located in the open field just upstream from the pond. At this location, the substrate was dominated by cobble and gravel; numerous minnows and small fish were observed.

4.3 Summary of Habitat Quality for Three Mile Creek

Overall, water quality in Three Mile Creek is adequate to support aquatic life, as summarized by the field parameters shown in Table 4-1. Dissolved oxygen ranged from 8.2 to 9.5 milligrams per liter (mg/L) and was probably near saturation. The relatively alkaline pH of 7.1 to 7.4 is well within the recommended range of 6.5 to 9 for surface water bodies (EPA 1999). The conductivity of Three Mile Creek ranged from 770 to 980 microSiemens per centimeter (µS/cm), which is a normal level for freshwater. The stream water was relatively clear, as indicated by the low turbidity readings (i.e., less than 10 NTUs). With the exception of a slight decrease in conductivity, there was no readily apparent change in water quality from near the stream origin (TMC-5) (see Figure 2-1) to the last survey point just upstream from NYS Route 49 (TMC-3) (see Figure 5-2).

In terms of features of the aquatic habitat such as substrate conditions, flow, channel alteration, and deposition, the aquatic habitat is of relatively low quality in many sections on-site. The aquatic habitat has greater quality off-base, primarily due to the presence of a natural channel and increasing prevalence rocky/gravelly substrate downstream from the base boundary. However, the quality of the surrounding habitat varies with land use and does not necessarily increase off-base. On-site portions of Three Mile Creek include wetland and forested habitat that support abundant wildlife. The stream is an important resource for wildlife both on-site and off-base as a source of food and drinking water. The best route of entry to minimize disturbance of the existing habits will be evaluated. All disturbances will be mitigated as part of the Wetland Management Plan.

Table 4-1 Water Quality Field Parameters at Three Mile Creek July 15-16, 1999

Station	Temp (°C)	DO (mg/L)	pH (s.u.)	Conductivity (µS/cm)	Turbidity (NTUs)
Three Mile Creek					
TMC-1	14.3	8.2	7.4	795	10
TMC-2	14.6	8.6	7.4	780	7
TMC-3	16.0	9.5	7.1	770	3
TMC-4	14.9	8.4	7.3	920	3
TMC-5	17.4	9.2	7.2	980	10

Key:

°C = Degrees centigrade.
DO = Dissolved oxygen.
µs/cm = MicroSiemens per centimeter.
mg/L = Milligrams per liter.
NTUs = Nephelometric turbidity units.
s.u. = Standard units.

5 Description of Alternatives for Three Mile Creek Remediation

Based on the findings of the habitat review walk and the analytical data collected during the RI, SI, and other investigations, the following remedial approach is presented for various sections of the creek.

5.1 On-Base Portion of Three Mile Creek

The on-base portion of Three Mile Creek contains the highest levels of sediment contamination, although it also contains some high-quality surrounding habitat. Generally, this contamination is greatest along the first 1,000 to 1,500 feet of the main channel and the entire north channel and LF5 channel. Approximately 500 feet from the origin, the creek enters a forest/wetland, extending to the base boundary, with a surrounding ecosystem that provides valuable habitat for wildlife, including reptiles, amphibians, mammals, and birds. However, the high concentrations of VOCs, SVOCs, pesticides, PCBs, metals, and dioxins/furans found in sediment throughout this portion of the creek warrant excavation of the creek sediments. Once these contaminated sediments are removed, a significant portion of the risks to human health and the environment would also be removed. Therefore, it is recommended that the entire on-base portion of Three Mile Creek to be excavated.

Since the contamination exceeds screening criteria to depths greater than 3.5 feet and has entered into the underlying native soils at several locations (see Figure 5-1), six

These scenarios are based on the following generalizations and assumptions:

- The average on-base creek width is 10 feet (with a range of 3.5 to 16 feet);
- The average on-base sediment thickness is 2.4 feet (with a range of 0.5 to >3.5 feet);
- The total on-base creek length (including the north channel, main channel, and LF5 channel) is 5,600 feet, resulting in an estimated volume of 5,000 cubic yards of creek sediments;
- The dredge spoils (berms) on either side of the on-base creek banks are 3 feet high, 5 feet wide, and 1,500 feet long, resulting in 1,700 cubic yards of material;
- Contaminants including VOCs, SVOCs, PCBs, pesticides, dioxins, and metals exceeded screening criteria in sediments at multiple depth intervals in the on-base portion of the creek. Most of the contamination was detected in the sediments, with a few localized areas of contaminated native soils beneath the sediments. The contaminants with widespread distribution above screening criteria that are driving the sediment cleanup include PCBs, SVOCs, PAHs, and metals. The distribution, including areal and vertical extent, of these contaminants (in excess of screening criteria) was very similar with the following exceptions:
  - At location TMCSD-9-3 arsenic concentrations detected above screening criteria at the sampling locations extend to 3.5 feet below creek bottom, whereas PCBs and pesticide concentrations above screening criteria extend only 1 foot below creek bottom; and
  - Pesticides at TMCSD-10-2 and TMCSD-11 are above screening criteria at 3.5 feet below creek bottom, but PCBs and PCBs and arsenic, respectively, are above screening criteria only to depths of 2 feet below creek bottom.

Based on this information the following cleanup scenarios are proposed for consideration:

- **Scenario 1:** Excavate to native soils along the entire length of the on-base portion of the creek and backfill with clean soils to original grade;
- **Scenario 2:** Excavate to native soils along the entire length of the on-base portion of the creek, excavate localized areas of contaminated native soils, and backfill with clean soils to original grade;

- **Scenario 3:** Excavate to a uniform depth of 2.5 feet below creek bottom and backfill with clean soils to original grade;
- **Scenario 4:** Excavate to a uniform depth of 2.5 feet below creek bottom, excavate localized areas of remaining contaminated sediments/native soils, and backfill with clean soils to original grade;
- **Scenario 5:** Same as Scenario 1 (excavate to native soils along the entire length of the on-base portion of the creek and backfill with clean soils to original grade), except remove only 1 foot of sediment between TMCSD-8 and TMCSD-10-2 because 2 to 3 feet of clean soil will be placed over the entire area to raise the original elevation as part of the wetland mitigation program;
- **Scenario 6:** Same as Scenario 3 (excavate to a uniform depth of 2.5 feet below creek bottom and backfill with clean soils to original grade), except remove only 1 foot of sediment between TMCSD-8 and TMCSD-10-2 because 2 to 3 feet of clean soil will be placed over the entire area to raise the original elevation as part of the wetland mitigation program.

A summary of the specifics of each of the scenarios is presented in Table 5-1. Costs associated with these scenarios are rough estimates based on the following assumptions:

1. 3.5 feet of sediments will be excavated throughout the pond area.
2. Sediment processing consists of draining on a temporary staging area.
3. 10% of the dredged material will be considered hazardous, 90% non-hazardous.
4. 30% swell of in-place material due to dredging.
5. The staging area will be temporary cover over unexcavated area for draining soil.
6. Volumes for dredging scenarios 1 through 6 are based on the specific depths and start and end stations in Table 5-1.
7. Volumes for dredging the off-base stream and pond areas are based on the TMC FS addendum dated 3/2000.
8. The haul road will be a 30-foot-wide cleared and grubbed area beside the creek.

9. All work will be completed under one project.

These costs do not include the five-year annual sampling of the creek and pond. The rough estimate to perform this monitoring is $275,794. A summary of estimated costs is presented in Appendix F.

In summary, most of the remaining contamination (if any) will be at least 2.5 feet below creek bottom in all scenarios, except for eight locations in scenario 1 (where contaminants will be at 0.5 foot at one location, 1 foot at two locations, 1.5 feet at three locations, and 2 feet at two locations); and four locations in scenario 5 (where contaminants will be at 1 foot at one location, 1.5 feet at two locations, and 2 feet at two locations). Scenarios 2 and 4 result in the removal of all contamination (based on the available sampling data to date). Scenarios 5 and 6 leave the most contaminants in place, and scenarios 1 and 3 leave a conservative amount of contaminants in place.

The removal of the 1,700 cubic yards of dredge spoils along the on-base portion of the creek bank (berms) will be performed regardless of which scenario is selected.

Monitoring of the creek's main channel, north channel, and LF5 channel will be continued, including the collection of water quality data (temperature, dissolved oxygen, pH, conductivity, turbidity) and environmental samples (surface water and fish tissue) for laboratory analysis. A comprehensive Long-term Monitoring Plan for Three Mile Creek is under development and will be provided under separate cover. Surface water samples will be collected annually and analyzed for SVOCs, PCBs, cadmium, lead, mercury, silver, and zinc. Fish tissue samples will be collected annually and analyzed for PCBs. This annual sampling will continue for five years to determine whether the removal action has reduced contamination in the creek, thereby lessening impacts on fish.

5.2 Off-Base Portions of Three Mile Creek

5.2.1 Base Boundary to the Downstream Edge of the Pasture

Concentrations of VOCs, SVOCs, PCBs, metals, and dioxins/furans exceed screening criteria in this portion of the creek; however, the levels of contamination and number of contaminants are generally less than the on-base portion of Three Mile Creek. The early successional field and mowed field provide limited habitat value for wildlife. This part of the stream is easily accessed and, except for the small pockets of fringing emergent wetlands, there would be little incidental damage to the habitat. Because concentrations in this portion are low, wholesale excavation of sediments is not warranted. However, because it is possible to remove sediments with only limited damage to habitat, it is recommended that contaminant hot spots be excavated.

Contaminant hot spots are identified not by sample analyses but by substrate composition. The sediment contaminants of concern adsorb more significantly to fine silty depositional deposits, and much less on sandy substrates characteristic of faster-moving sections of the stream. The portion of Three Mile Creek between the base boundary and the downstream edge of the pastureland was generally a narrow, sandy bottom, meandering stream, with mostly low flow. In the shallower, faster-moving portions, the creek bottom consisted almost entirely of sand, with a few cobbles and boulders. Fine silty sediments up to 2 feet deep were found in depositional pools and bends and behind debris dams (see Figure 5-2).

A GPS survey was performed to identify and quantify the areas of this reach of Three Mile Creek where fine, silty sediments have accumulated. The upstream and downstream ends of the silt deposits were surveyed and marked with stakes and flagging tape (Figure 5-3). The approximate width and depth of the silt deposits were measured in the field using a measuring tape and/or a rod (see Figure 5-4 and Table 5-2). A GPS receiver (ProMark-X by Magellan) was used to survey the linear morphology of the creek and the upstream and downstream edges of each silt deposit. Upon completion of the field investigation the survey data were downloaded for map generation (see Figure 5-2).

Excavation of the specific silt deposits identified on Figures 5-3 and 5-4 is recommended for this portion of Three Mile Creek. Once these areas are excavated, the majority of contamination in this portion of the creek will be removed, and the risks to human health and the environment will also be reduced while not greatly disturbing the surrounding habitat.

Based on the dimensions of the silt deposits shown on Figure 5-4, the estimated total volume of silt deposit excavations in this portion of Three Mile Creek is 80 cubic yards. The estimated cost of this removal is provided in Table 5-1.

Continued monitoring of the creek will include the collection of water quality data (temperature, dissolved oxygen, pH, conductivity, and turbidity) and environmental samples (surface water and fish tissue) for laboratory analysis. As stated earlier, a comprehensive Long-term Monitoring Plan for Three Mile Creek is under development and will be provided under separate cover. Surface water samples will be collected annually and analyzed for SVOCs, PCBs, and lead. Fish tissue samples will be collected annually and analyzed for PCBs. This annual sampling would continue for five years to determine whether the removal action has reduced contamination in the creek, thereby lessening impacts on fish.

5.2.2 Downstream Edge of Pasture to Pond

Downstream of the pasture edge to the pond, contaminant levels were considerably lower. Wetland habitat in this section is more extensive, less accessible, and more vulnerable to physical damage from remedial activities. For example, the maximum level of Aroclor 1260 in sediment was 590 μg/kg and the maximum PAH concentrations were 11,000 μg/kg (the highest PAH sample was an anomalous high sample taken immediately adjacent to the Transfer Station Access Road). The nature of the surrounding habitat in this portion of Three Mile Creek varied, but was in general of high quality. Based on the high quality of habitats, the relative inaccessibility of the creek, and the reduced concentrations of contaminants, direct remedial action is not recommended for this portion of Three Mile Creek.

5.2.3 Pond to Confluence with Barge Canal

In contrast to the areas immediately upstream from it, the pond showed elevated levels of PCBs, cadmium, and lead. This is consistent with the pond acting as a depositional area. Because of these elevated levels and the accessibility of the pond without major habitat disruption, pond sediments are recommended for removal. Based on an approximated pond area of 56,400 square feet and an estimated 3.5 feet of contamination across the entire pond, approximately 7,300 cubic yards of sediment would be excavated from the pond.

Downstream of the pond (as characterized by sample TMC SD-22), contaminant concentrations again decrease. Thus, this segment need not be addressed by the sediment removal program.

Following excavation, surface water and fish tissue would be monitored for the same contaminants and same frequency as described for the pasture segment in Section 5.2.1.

Table 5-1 Summary of Three Mile Creek Sediment Clean-up Scenarios

Scenario No.	Depth of Removal (ft below creek bottom)	Start and End Station for Removal	Estimated Volume of Removal (yds^3 in place)	Contaminants Remaining (% Volume)	Type of Contaminants Remaining Above Criteria	Estimated Cost
On-base Main Channel, North Channel, and LF5 Channel						
1	2 3 4 3 4 2 2.5 2	LF5SD-1 to LF5SD-3 LF5SD-3 to TMCSD-7 TMCSD-1 to TMCSD-5-1 TMCSD-5-1 to TMCSD-7-1 TMCSD-7-1 to TMCSD-8-2 TMCSD-8-2 to TMCSD-10 TMCSD-10 to TMCSD-10-2 TMCSD-10-2 to TMCSD-11	5950	18	SVOCs; PCBs; Pesticides; Metals; and TRPH	$2,463,500
2	4 to 2.5 2.5 4 3 4 2 4	LF5SD-1 to LF5SD-2 LF5SD-2 to TMCSD-7 TMCSD-1 to TMCSD-6 TMCSD-6 to TMCSD-8-2 TMCSD-8-2 to TMCSD-9-1 TMCSD-9-1 to TMCSD-10 TMCSD-10 to TMCSD-11	6850	Negligible	--	$2,783,300
3	2.5	Entire on-base portion of creek	5200	28	VOCs; SVOCs; PCBs; pesticides; Dioxins; Metals; and TRPH	$2,163,400
4	4 to 2.5 2.5 4 2.5 4 2.5 4	LF5SD-1 to LF5SD-2 LF5SD-2 to TMCSD-7 TMCSD-1 to TMCSD-6 TMCSD-6 to TMCSD-8-2 TMCSD-8-2 to TMCSD-9-1 TMCSD-9-1 to TMCSD-10 TMCSD-10 to TMCSD-11	6800	Negligible	--	$2,782,000
5	2 3 4 3 4 1 2	LF5SD-1 to LF5SD-3 LF5SD-3 to TMCSD-7 TMCSD-1 to TMCSD-5-1 TMCSD-5-1 to TMCSD-7-1 TMCSD-7-1 to TMCSD-8 TMCSD-8 to TMCSD-10-2 TMCSD-10-2 to TMCSD-11	4275	41	VOCs; SVOCs; PCBs; Pesticides; Dioxins; Metals; and TRPH	1,827,800
6	2.5 2.5 1 2.5	LF5SD-1 to TMCSD-7 TMCSD-1 to TMCSD-8 TMCSD-8 to TMCSD-10-2 TMCSD-10-2 to TMCSD-11	3575	51	VOCs; SVOCs; PCBs; Pesticides; Dioxins; Metals; and TRPH	1,545,300
On-Base Main Channel Berms						
1	3' above creek bank	Remove berms entirely on both creek banks along the last 1500 feet of the on-base portion of the creek	1700	Negligible	--	$702,500
Off-Base Creek Channel Silt Deposits						
1	Variable	Variable	80	Negligible	--	$80,213

Table 5-1 Summary of Three Mile Creek Sediment Clean-up Scenarios

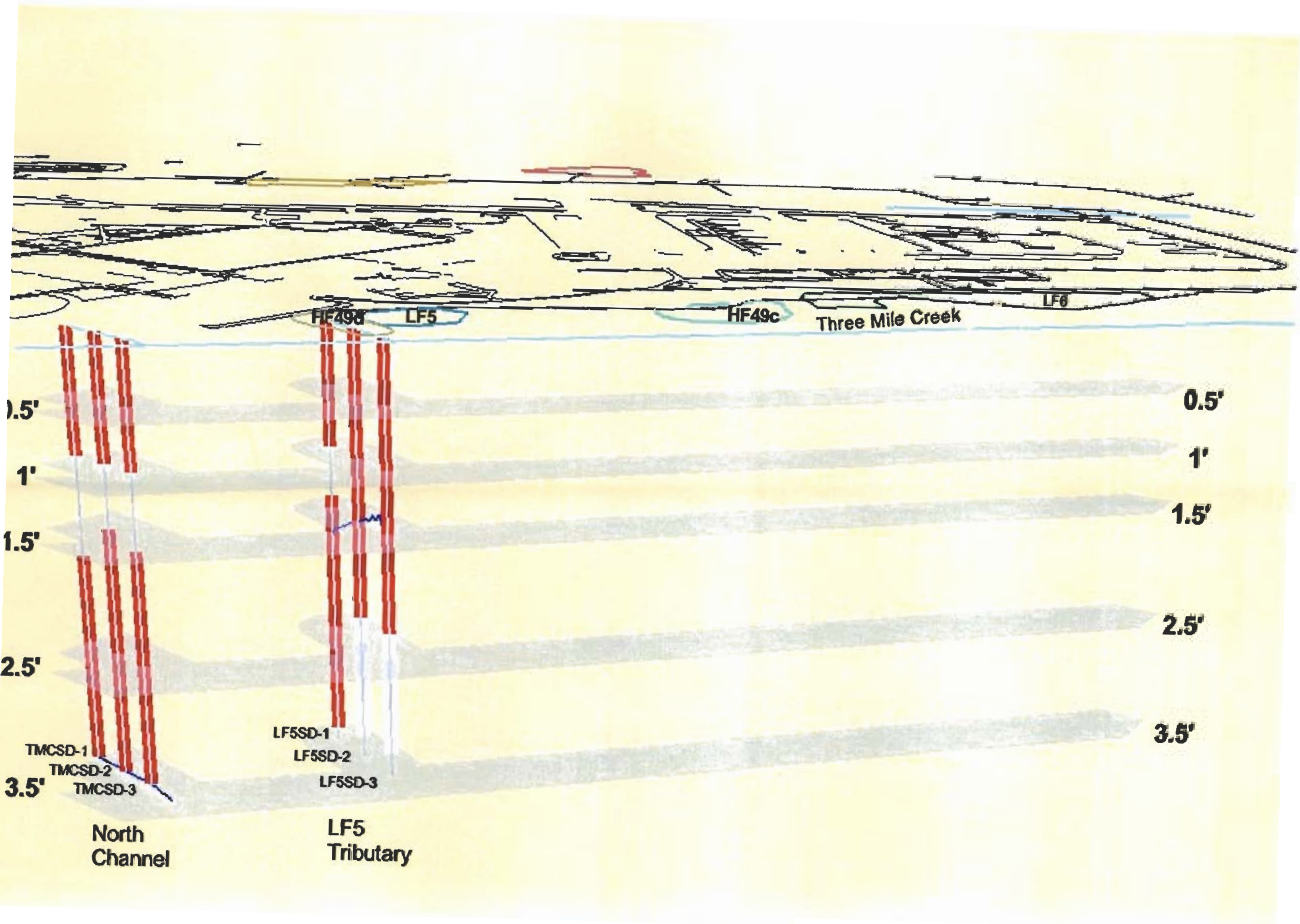
Scenario No.	Depth of Removal (ft below creek bottom)	Start and End Station for Removal	Estimated Volume of Removal (yds^3 in place)	Contaminants Remaining (% Volume)	Type of Contaminants Remaining Above Criteria	Estimated Cost
Off-Base Pond						
1	3.5	Entire Pond	7300	Negligible	--	$2,934,800

Table 5-2 Summary of the Attributes of the Silt Deposits, Former Griffiss AFB

Silt Deposit	Width (ft)	Length (ft)	Depth (ft, unless noted)
SD1	23.5	16	—
SD2	6	25	1
SD3	5.8	1	1 inch
SD4	3	8	1
SD5	2.8	14	1
SD6	1.5	9.25	0.5
SD7	3	6.58	1.5
SD8	6	11	1.5
SD9	1-3.5	19	—
SD10	9	21	1-2
SD11	12.7	25	2
SD12	1 (average) 5 (maximum)	47.4	1-2
SD13	5.3	9.4	1
SD14	2-5	12.6	4 inches
SD15	2	19.3	—
SD16	7	25.3	2

Key:

ft = Feet.
SD = Silt deposit.



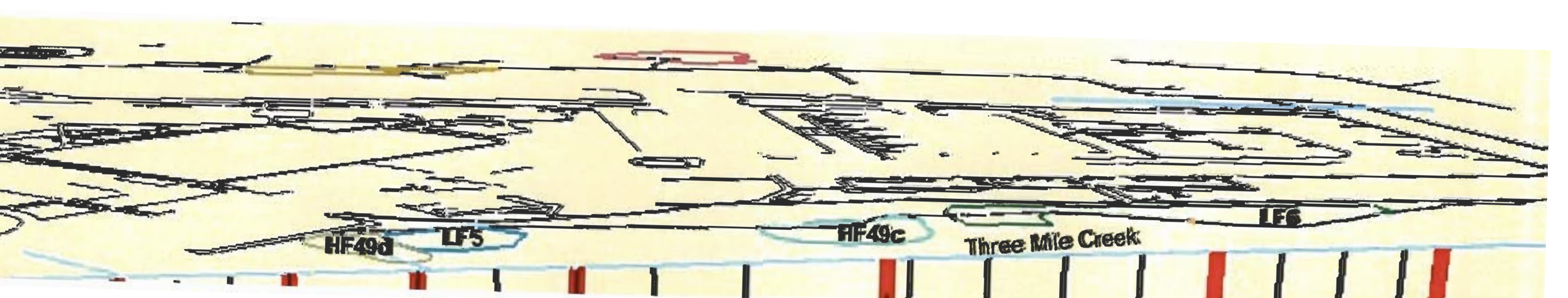
Contaminants

○ ND

● Contaminants detected above screening criteria

— Sediment/Native Soil Boundary

Depths Not to Scale



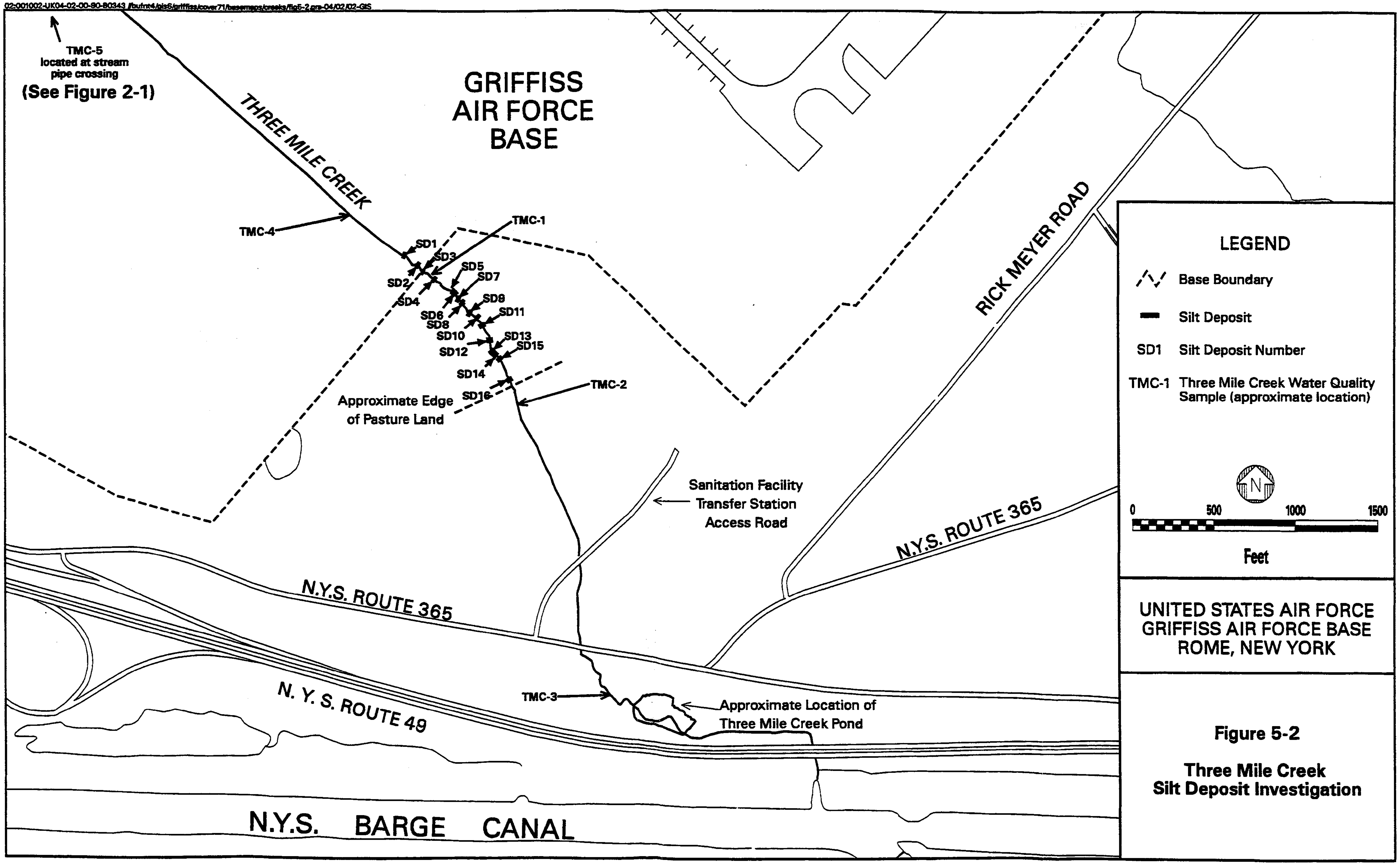


Figure 5-2

Three Mile Creek Silt Deposit Investigation

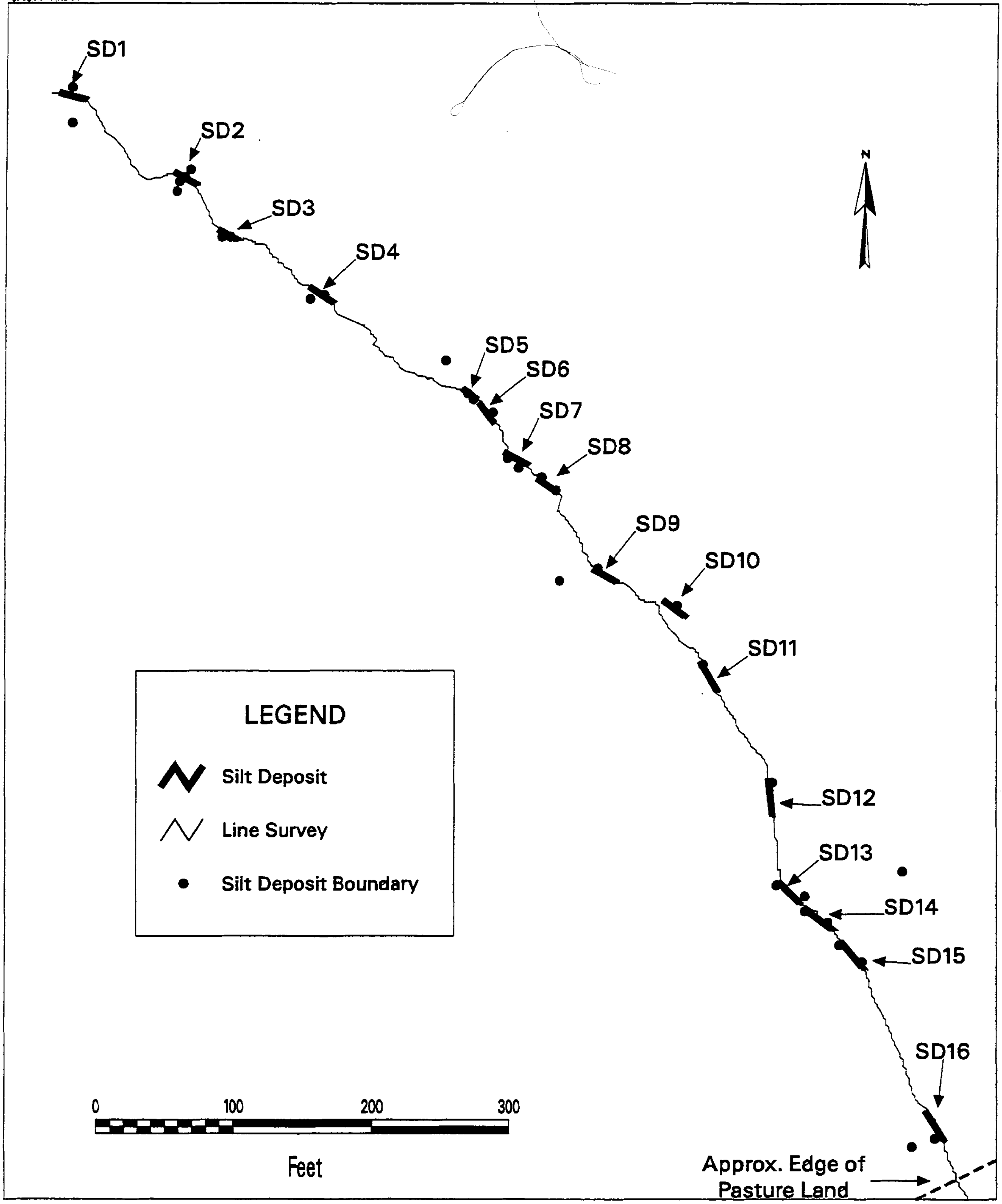


Figure 5-3: Three Mile Creek Silt Deposit Boundary

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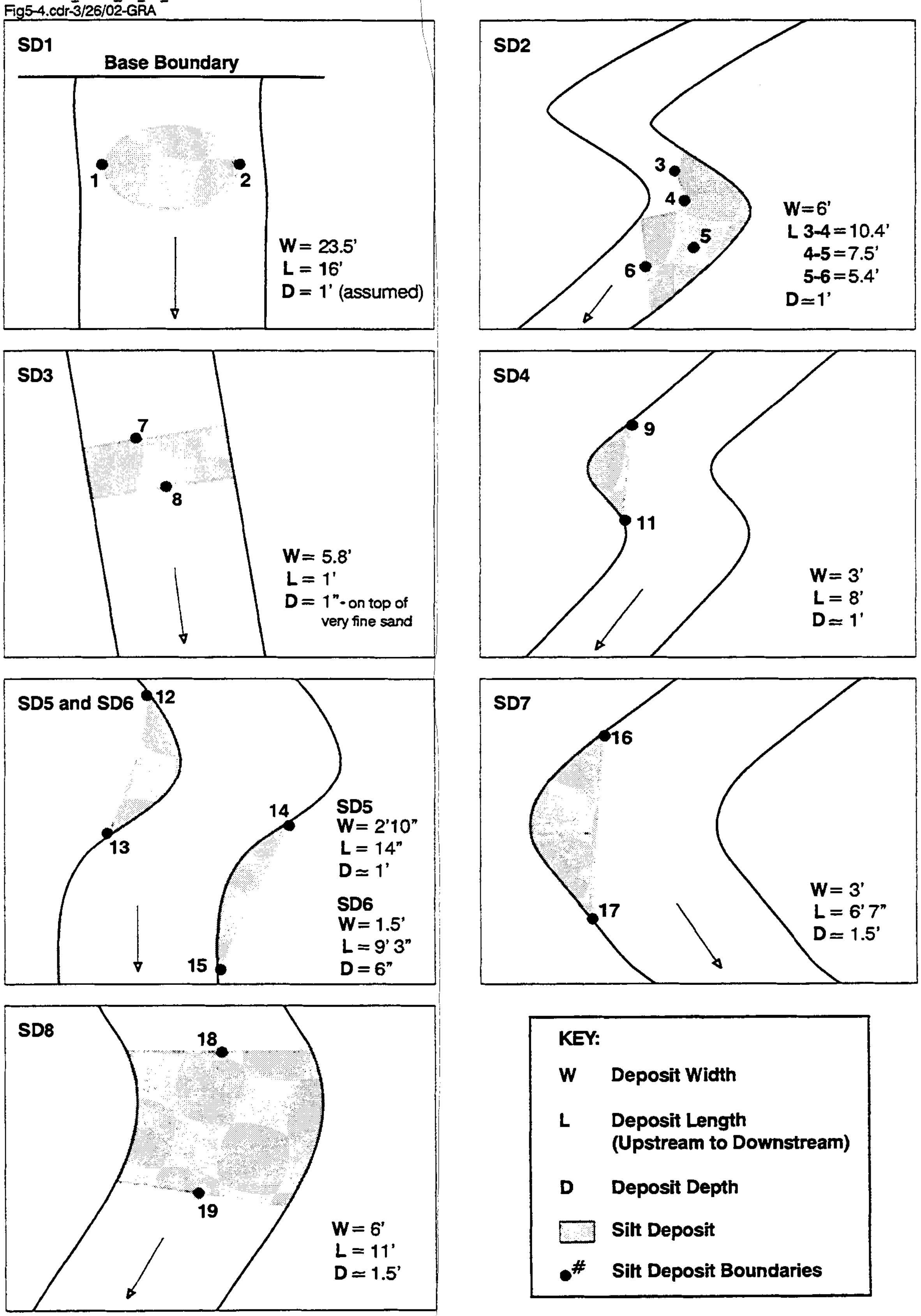

Figure 5-4 THREE MILE CREEK SILT DEPOSITS

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Fig5-4.cdr-3/26/02-GRA

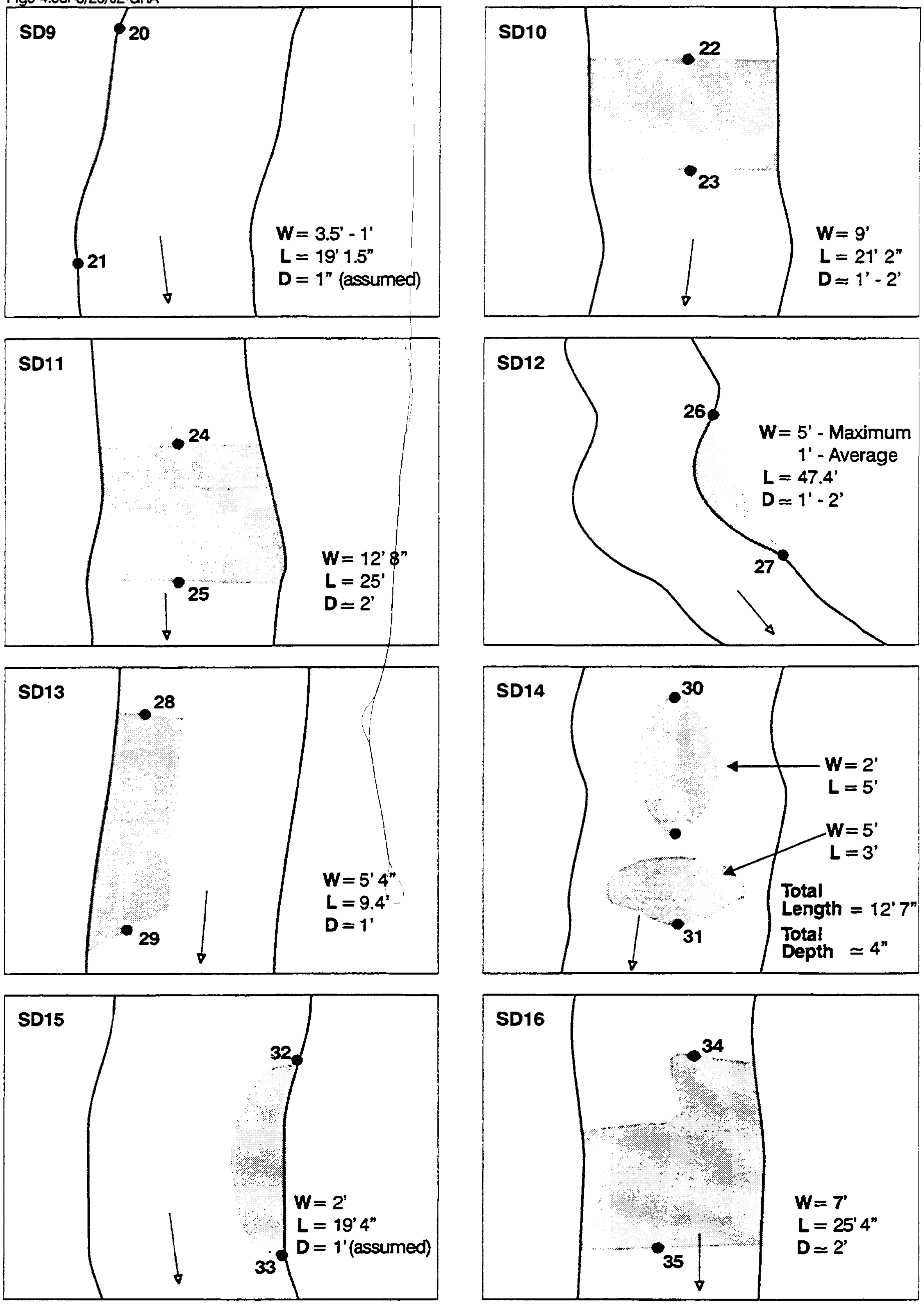

Figure 5-4 THREE MILE CREEK SILT DEPOSITS (Cont.)

6 Description of Selected Remedy

Final Recommendations

Based on the alternatives presented in Section 5, Scenario 4 is recommended for the cleanup of the on-base portion of TMC. Cleanup of the off-base portion of the creek and pond will be performed as described in Section 5. In order to implement Scenario 4, certain factors need further consideration. These factors include removal of creek bottom sediments and replacement of streambed material with suitable materials to restore the physical state of the remediated area. Under Scenario 4, TMC bottom sediments will be removed from the channel to a depth of 2.5 feet below the center of the current creek bottom and at greater depths in hot spot areas to ensure removal of the highest percentage of contaminants (see Figure 2-6). Three areas of additional hot spot removal are located in the main channel between the following points: TMCSD-4 and TMCSD-7; TMCSD-8-1 and TMCSD-9-1; and TMCSD-10 and TMCSD-11. Additional hot spot removal also will be performed along the entire north channel between TMCSD-1 and TMCSD-5 and in the LF5 channel between LF5SD-1 and LF5SD-2. The limit of excavation in these hot spot areas will be 4 feet below the current creek bottom. Table 5-1 outlines the depths of excavations under Scenario 4. Once this removal has been completed, it will be necessary to restore the conditions that existed in TMC before the removal by backfilling with clean material. Restoration of the physical state of the channel with this fill material is important for several reasons, which are described below. While the backfilling of bedding material would minimize exposure to any remaining isolated, low-level contamination, the primary function of the backfilling would be to maintain the ecological integrity of the creek and adjacent floodplain.

Functionality of the channel is vitally important for the TMC floodplain. The hydrology and ecology of the creek have already been impacted by dredging activities conducted to facilitate storm water drainage from GAFB. If bedding materials are not replaced following remediation, the remnant "creek" would be further reduced to just a deep drainage channel, offering significantly less habitat functionality. This could result in further cutting of the channel, which may alter the creek's characteristics and increase flow, which would, in turn, impact downstream areas.

In addition to restoring the functional state of the channel, it will be necessary to restore the habitat that currently exists in the channel and the surrounding floodplain area. Without replacing the streambed material, the flooding of the banks that currently support adjacent wetland communities will not occur. Increased flow resulting from elimination of the flood storage capacity of the adjacent on-site wetlands could result in impacts on downstream areas. Within the floodplain itself, reduction of the flooding regime would further alter a system that historically contained a larger extent of wetlands. The reduction in wetland extent seems to reflect existing impacts. While a conversion from wetland communities to more upland communities would still provide for wildlife habitat, the overall community structure would change, eliminating species that currently utilize the area and introducing additional species that may not currently use the area.

Other factors include adherence to wetland rules and guidelines that pertain to the surrounding floodplain area. If the excavated channel remains and no fill is added to restore its physical state, natural flooding and overflow into wetland areas in the floodplain will not occur. This would lead to an alteration in the hydrologic inputs into surrounding wetland areas and may result in a net loss of wetland area. While the remedial action falls under a Nationwide Wetland Permit, the AFBCA has undertaken a basewide wetland management plan with the intent of adhering to the substantive requirements of USACE permitting. Therefore, any impact involving a net loss of wetland area would require off-site wetland mitigation.

The backfilling of material would also eliminate any exposure to residual contamination that may be left in place in former hot spot areas. Under Scenario 4, the hot spot areas would be excavated to a depth potentially greater than 3.5 feet below the center of the creek bottom to remove the highest levels of contamination. However, it is reasonable to assume that some residual contamination may remain in the sediments; without backfilling, local wildlife could have direct exposure to this residual contamination. In order to minimize any future exposure, a minimum backfill of approximately 2 feet of bedding material would be needed.

The creek channel should be backfilled with materials that would provide quality habitat for returning aquatic species and would not be impacted by future erosive flows in the stream. These materials would include sand and gravel to restore the bottom substrate of the channel and may include a mix of small cobbles and larger rocks to provide stability to the remediated area and habitat for returning aquatic species that were displaced during the remediation.

In addition to excavation, source control is also a key factor in the restoration process for TMC and its surrounding habitats. The primary source of contamination to TMC was its headwaters. Originally TMC was a forested headwater drainage with a meandering channel. After construction of the base, the creek was straightened and deepened to accomodate storm water discharges from the central portion of the base (E & E 2002). When the base was active, this storm water contained contaminants not only from vehicular traffic but also chemicals placed in floor drains and sumps from processes conducted in buildings within the drainage area of the creek. These processes are no longer being conducted, and investigations and cleanups are currently ongoing (e.g., the plugging of various floor drains, decommissioning of various drywells, and the cleanup of the paint booth sump at OTH-305 in Building 305). In addition, the creek also receives runoff and groundwater from the surrounding watershed, including Landfills 5 and 6, Hardfills 49c and 49d, and the Electrical Power Substation. The impact of reducing or eliminating the contamination at the other sites within the TMC drainage basin (i.e., the planned capping of Landfills 5 and 6; the removal and consolidation of construction and demolition debris from Hardfills 49c and 49d; and the removal of PCB-contaminated soils in the vicinity of the Electrical Power Substation) that have acted as sources to TMC are also adding to the source control measures.

Details of the Implementation of the Selected Remedy

The selected remedial approach involves excavation of sediments, which would be transported to and disposed of in Lanfill 6 (prior to capping) or an off-base treatment, storage, and disposal (TSD) facility capable of accepting the excavated material. TCLP sediment samples will be collected from selected location within the creek, representing high, medium, and low PCB and pesticide concentrations and high metals concentrations. These samples will be collected in July 2002 to help predetermine the fate of the excavated material (i.e., whether it will be disposed of on site or off site). In addition, proper disposal characterization sampling also will be performed during the removal actions to verify the disposal methods. In the event that contaminated sediments fail toxicity characteristic leaching procedure (TCLP) tests or exceed 50 mg/kg PCBs, treatment to meet characteristic waste land disposal restrictions (LDRs) or PCB LDR treatment standards would be required prior to disposal. TCLP sediment samples will be collected from selected locations within the creek representing high, medium, and low PCB and pesticide concentrations, and high metals concentrations. These samples will be collected in July 2002 to help predetermine the fate of the excavated material (i.e., whether it will be disposed of on site or off site).

Excavation would require a site preparation program that includes implementation of the following tasks:

- Clearing and grubbing of designated areas surrounding the sediment areas to be excavated;
- Construction of a decontamination pad for decontaminating excavation equipment; and
- Construction of a staging area for dewatering and temporary storage of excavated sediments.

Clearing and grubbing of the site would involve clearing designated areas of vegetation and shrubs around the creek in order to make the excavation area accessible. A decontamination pad would be constructed on site. Liquids generated during decontamination would be captured and properly treated or disposed of.

Excavated material would be stored temporarily on-site in a designated staging area constructed of an impermeable liner, surface water controls, a leachate collection system, and a cover.

Excavation would be conducted using conventional earth-moving equipment such as backhoes, bulldozers, scrapers, and dump trucks.

Excavated material would be placed at the on-site staging area for temporary storage, dewatering, and characterization prior to disposal. Actual dewatering techniques would be evaluated during the remedial design phase, but could be as simple as allowing excess moisture to drain from the sediment placed in the temporary staging area, or removing excess water with a filter press. The effluent from the dewatering process would be transported off-base for treatment/disposal. All excavated areas would then be backfilled with clean soil and properly restored.

Based on the results of the disposal characterization sampling, the excavated sediments would be hauled to Landfill 6 or the nearest TSD facility capable of accepting the waste. The primary transport vehicle would be a 20-cubic yard, lined dump trailer with a tarpaulin cover. Weight restrictions may require that less volume be transported per trip.

Post-removal monitoring of surface water and fish tissue would be conducted in accordance with an approved Long-term Monitoring Plan that is under development and will be issued under separate cover. This monitoring would quantify the effectiveness of the removal action on water quality and environmental health.

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A Field Adjustments

2001 Three Mile Creek Sediment Sampling
Former Griffiss AFB
Field Adjustment Form No. 1

To: Mr. Douglas M. Pocze USEPA - Region 2 Federal Facilities Section 290 Broadway New York, New York 10007 Fax: (212) 637-3256 Office: (212 637-4432	Mr. Jonathan Greco NYSDEC Bureau of Eastern Remedial Action 50 Wolf Road Albany, New York 12233-7010 Fax: (518) 457-8990 Office: (518) 457-3976
From: Mr. Michael McDermott AFBCA 153 Brooks Road Rome, NY 13441-4105 Fax: (315) 330-4062 Office: (315) 330-2275	Date: 5/25/01 Time: 1200
Site: Three Mile Creek	**FSP addendum Page: 5**

Need for Field Adjustment

The first attempts at recovering core samples from the creek bottom presented poor recovery. Of the 3-foot sleeve section (which was intended to sample depths of 0.5 to 3.5 feet after excavating 0.5 feet of sediment), only 2 to 2.5 feet of sediment was recovered. The upper 0.5 to one foot of the sleeve was either found empty or consisted of primarily water and loose sediment material. This is apparently due to two factors: the upper foot of sediment is primarily water which may hinder the movement of solid material into that section during driving of the sampler; or from compression of the sediment/soil during the driving of the sampler into the ground.

This situation was discussed among E & E's field crew (Lea Angelaki and Greg Jones), E & E's quality assurance officer/chemist (Marcia Galloway), the USACE representative (Ron Johnsen), the AFBCA representative (Mike Wojnas), the EPA representative (Jennifer Flannery of EPA's contractor Gannett-Fleming), and the Fish and Wildlife representative (Charlie Merckel). It was agreed to collect the bottom-most foot of recovered sample and assign it to the 3.5-to-2.5-foot interval and to collect next foot of sediment and assign it to the 2.5-to-1.5 -foot interval. In the cases where there was little to no recovery in the upper portion of the sleeve, then no 0.5-to-1.5-foot interval sample would be collected from that location (note, this interval was only to be collected from about half the planned sample locations). If sufficient material is present in the 0.5-to-1.5-foot section, then E & E will collect a sample if so designated by the sampling plan. In order to properly analyze the samples, the sample must contain less than 30% moisture. If the laboratory receives a sample with a water layer (thus reducing the sample volume), then they will decant the water and analyze the solids using the following priority:

PCBs, Metals, Pesticides, SVOCs, Hexavalent chromium, TOC, TPRH, Cyanide, VOCs.

The above description applies for the situation where all observed core recovery is sediment material (i.e. darker, material, not lighter-color, denser, sandy soil). When there is a visual distinction between native sand/soil and sediment material, the following applies:

If the core sample shows a clear distinction between native sand/soil and sediment material, then one sample of the native sand/soil and one sample of the sediment directly above it will be collected. The precise lengths within the core sample (which would be traceable to real elevations in the field) must be recorded for the visually apparent soil and sediment segments. If more than one foot of sediment material is present above native sand/soil, and if the FSP calls for two upper (Z2 and Z3) samples (i.e. corresponding to the 0.5-1.5 and 1.5-2.5 intervals) then two sediment samples should be taken in addition to the 2.5-3.5 foot native sand/soil sample. If less than one foot of sediment ifs observed, then only one sample will be taken of the sediment regardless of the FSP designation. Likewise, if the native soil is present at a shallow depth (for example throughout the bottom two foot of the core sleeve) then E & E will not sample more than one foot of native soil and will only collect samples above and below the soil/sediment interface. In no case shall E & E mix samples of native soil and sediment.

This approach was agreed upon by all parties present at the site as listed above.

AFBCA and USACE also agreed that due to the need for slam-bar driving of the corer sample into the sediment (due to unforeseen resistance) and subsequent difficulties in removal, a third field person would be used on the project to assist in this operation.

Prepared by:	Organization:	Date:
Jon Sundquist	E & E	5/24/01
Approved by:	Organization: USACE	Date:

Table 1A
Summary of TMC On-Base Portion and Landfill 6 Wetland Sediment Sample Locations
As of 4 June 2001
Former Griffiss AFB, Rome, New York

Sample Location	Sample Depth (ft below creek bottom) 0-0.5 (Z1)	0.5-1.5 (Z2)	1.5-2.5 (Z3)	2.5-3.5 (Z4)	Notes
TMCSD-1			X	X	The sample depth intervals were adjusted. Z3 represents the 1.8-to-2.4 ft depth. Z4 represents the 2.4-to-3.5 ft depth.
TMCSD-2			X	X	The sample depth intervals were adjusted. Z3 represents the 1.5-to-2.7 ft depth. Z4 represents the 2.7-to-3.5 ft depth.
TMCSD-3			X	X	The sample depth intervals were adjusted. Z3 represents the 1.6-to-2.4 ft depth. Z4 represents the 2.4-to-3.5 ft depth.
TMCSD-4			X	X	No Z3 was recovered. Very poor recovery was obtained due to the gravel present in the creek. Exact Z4 interval sampled not determined (approximate depth 2.9-to-3.5 ft). There was not enough sample retrieved for dioxin analysis.
TMCSD-5			X	X	The Z3 sample depth interval was adjusted to the 1.6-to-2.5 ft depth.
TMCSD-5-1		X	X	X	No Z2 and Z3 were recovered. Very poor recovery was obtained due to the gravel present in the creek. Exact Z4 interval sampled not determined (approximate depth 2.8-to-3 ft). There was not enough sample retrieved for dioxin analysis.
TMCSD-5-2		X	X	X	No Z2 was recovered and the sample depth intervals were adjusted. Z3 represents the 1.4-to-2.7 ft depth. Z4 represents the 2.7-to-3.5 ft depth.
TMCSD-6			X	X	The sample depth intervals were adjusted. Z3 represents the 1.3-to-2.8 ft depth. Z4 represents the 2.8-to-3.5 ft depth.
TMCSD-7		X (Not in plan)	X	X	Refusal above 3.5 ft after several attempts, therefore, no Z4 sample. Z2 (0.5-to-1.5 ft depth) was collected because of visible staining of the Z2 sediments and difference in lithology between Z2 and Z3 (1.5-to-2.4 ft depth).
TMCSD-7-1		X	X	X	No Z4 recovery, high water content ("soupy") sample was pouring out of the sampler bottom during several attempts. Sample depth intervals were adjusted. Z2 represents the 0.5-to-1.1 ft depth. Z3 represents the 1.1-to-2.5 ft depth.
TMCSD-8			X	X	Sample was not retrieved during any of the attempts, therefore no sample collected.
TMCSD-8-1		X	X	X	No Z2 was recovered and the Z3 sample depth interval was adjusted to the 2.2-to-2.5 ft depth.

Table 1A
Summary of TMC On-Base Portion and Landfill 6 Wetland Sediment Sample Locations
As of 4 June 2001
Former Griffiss AFB, Rome, New York

Sample Location	Sample Depth (ft below creek bottom)				Notes
	0-0.5 (Z1)	0.5-1.5 (Z2)	1.5-2.5 (Z3)	2.5-3.5 (Z4)	
TMCSD-8-2		X	X	X	No Z4 recovery, refusal at 2.5 ft after several attempts, therefore, no Z4 sample. The sample depth intervals were adjusted. Z2 represents the 0.5-to-0.9 ft depth. Z3 represents the 0.9-to-2.5 ft depth.
TMCSD-9		X (Not in plan)	X	X	Stake missing. Installed Stake 85 ft upstream of SD-9-1. This location was selected because it offered access to sediment; this part of the creek bed is covered mainly by cobble and gravel. Sediment was recovered at this location along with native sediment; therefore, it was sampled even though it was not in the plan. Need to decide if we want to keep this sample. Native sand started at 1.5 ft, however, only recovered 1 ft of sand. Therefore, the recovered sand was assumed to be a combination of Z3 and Z4, but sample labeled as Z4. The sample depth intervals were adjusted. Z2 represents the 0.5-to-1.6 ft depth. No Z3 recovery. Z4 represents the 1.6-to-3.5 ft depth.
TMCSD-9-1		X	X	X	No Z3 recovery. Native sand started at 1.5 ft, however, only recovered 1 ft of sand. Therefore, the recovered sand was assumed to be a combination of Z3 and Z4, but sample labeled as Z4. Z2 represents the 0.5-to-1 ft depth. Z4 represents the 1-to-3.5 ft depth.
TMCSD-9-2		X	X	X	Soft, light, whip-cream like organic substance, high water content, in Z3 and Z4 interval. No Z3 or Z4 recovery. recovery after several attempts. Z2 depth interval was adjusted to the 0.5-to-1.1 ft depth.
TMCSD-9-3		X	X	X	Soft, light, whip-cream like organic substance, high water content, above and below a sand layer. Sampled in Z4 interval. Sample depth intervals were adjusted. Z3 represents the 0.5-to-1.1 ft depth. Z4 represents the 1.1 -to-3.5 ft depth.
TMCSD-9-4		X	X	X	No Z2 recovery Sample depth intervals were adjusted. Z3 represents the 0.5-to-1.85 ft depth. Z4 represents the 1.85 -to-3.5 ft depth.
TMCSD-10			X	X	Moved 73 ft upstream due to gravel. Sample depth intervals were adjusted. Z3 represents the 0.5-to-1.65 ft depth. Z4 represents the 1.65 -to-3.5 ft depth.

Table 1A
Summary of TMC On-Base Portion and Landfill 6 Wetland Sediment Sample Locations
As of 4 June 2001
Former Griffiss AFB, Rome, New York

Sample Location	Sample Depth (ft below creek bottom) 0-0.5 (Z1)	0.5-1.5 (Z2)	1.5-2.5 (Z3)	2.5-3.5 (Z4)	Notes
TMCSD-10-1		X	X	X	No Z2 recovery. The sample depth intervals were adjusted. Z3 represents the 1.7-to-2.2 ft depth. Z4 represents the 2.4 -to-3.5 ft depth.
TMCSD-10-2		X	X	X	No Z2 recovery. Z3 adjusted to the 1.1-to-2.1 ft depth.
TMCSD-10-3		X	X	X	No Z2 recovery.
TMCSD-11			X	X	Z3 adjusted to the 1.1-to-2.3 ft depth.
LF5SD-1			X	X	The sample depth intervals were adjusted. Z3 represents the 1.4-to-2.4 ft depth. Z4 represents the 2.4 -to-3.4 ft depth
LF5SD-2		X (Not in Plan)	X	X	No distinction between Z2 and Z3 sediment, and not enough recovery therefore only 2 samples were recovered. The bottom part was different so it was called Z4 (2.3 -to-3.3 ft depth), the top was called Z2 and it covers the 0.5-to-2.3 ft depth.
LF5SD-3		X (Not in Plan)	X	X	No distinction between Z2 and Z3 sediment, and not enough recovery therefore only 2 samples were recovered. The bottom part was different so it was called Z4 (2.3 -to-3.3 ft depth), the top was called Z2 and it covers the 0.5-to-2.3 ft depth.
LF6SD-1-1	X				
LF6SD-2-1	X				
LF6SD-3-1	X				
LF6SD-4-1	X				

Key:

X	=	Sample required.
X	=	Sample collected.
LF5	=	Landfill 5.
LF6	=	Landfill 6.
RI	=	Remedial Investigation.
TMC	=	Three Mile Creek.
SD	=	Sediment sample.

Table 2A Summary of TMC Off Site Pond Sediment Sample Locations Former Griffiss AFB, Rome, New York			
Sample Location	**Sample Depth (ft below pond bottom)**		**Notes**
	1.5-2.5 (Z3)	**2.5-3.0 (Z4)**	
TMCSD-23-IL	X	X	The sample depth intervals were adjusted. Z3 represents the 1.4-to-2.2 ft depth. Z4 represents the 2.2-to-3.0 ft depth.
TMCSD--24-NS	X	X	The sample depth intervals were adjusted. Z3 represents the 1.2-to-1.8 ft depth. Z4 represents the 1.8-to-3.0 ft depth.
TMCSD-25-MC	X	X	The sample depth intervals were adjusted. Z3 represents the 0.9-to-1.8 ft depth. Z4 represents the 1.8-to-3.0 ft depth.
TMCSD-26-NS	X	X	
TMCSD-27-MC	X	X	
TMCSD-28-OL	X	X	

Key:

X	=	Sample required.
X	=	Sample collected.

IL	=	Inlet.
MC	=	Mid-channel.
NS	=	Near shore.
TMC	=	Three Mile Creek.
SD	=	Sediment sample.

B Survey Data

ECOLOGY AND ENVIRONMENT, INC.
TEST LOCATIONS THREE MILE CREEK, GAFB ROME, NY
PREPARED BY: LAFAVE WHITE MCGIVERN LS PC
DATED MAY 24, 2001 DATA REVISED 7/19/2001

NEW YORK STATE PLAIN COORDINATES-NAD 83 FEET / VERTICAL NGVD 1929						2001
PT. NO.	***NORTHING***	***EASTING***	***ELEV.***	***DESCRIPTION***	***REMARKS***	***DATE***
4001	1171790.040	1135184.373	445.97	TMCSD-10-1	ELEV. BOTTOM CL STREAM	21-May
4002	1171648.311	1135346.714	445.27	TMCSD-10-2	*ELEV. BOTTOM CL STREAM*	21-May
4003	1171508.174	1135513.807	444.53	TMCSD-10-3	*ELEV. BOTTOM CL STREAM*	21-May
*4100	1171939.274	1135008.166	446.64	TMCSD-10	*ELEV. BOTTOM CL STREAM / MOVED TO CL STREAM*	21-May
*4101	1174654.058	1132532.647	455.21	TMCSD-1	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4102	1174458.884	1132513.247	454.46	TMCSD-2	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4103	1174283.296	1132500.601	452.95	TMCSD-3	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4104	1174307.459	1132226.773	454.79	TMCSD-4	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4105	1174109.611	1132463.280	453.17	TMCSD-5	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4106	1173808.846	1132818.828	453.15	TMCSD-6	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4107	1173567.017	1133090.874	452.79	TMCSD-7	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
*4108	1173264.783	1133443.619	450.53	TMCSD-8	*ELEV. BOTTOM CL STREAM / MOVED TO CL STREAM*	23-May
*4109	1172976.073	1133805.458	453.41	TMCSD-9	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	21-May
*4111	1171428.136	1135618.258	443.77	TMCSD-11	*ELEV. BOTTOM CL STREAM / MOVED TO CL STREAM*	21-May
*4201	1174036.056	1133256.530	456.51	LF5SD-1	ELEV. AT WATER LINE / AT BANK	23-May
*4202	1173828.005	1133191.297	459.41	LF5SD-2	ELEV. AT WATER LINE / AT BANK	23-May
*4203	1173604.175	1133142.173	453.26	LF5SD-3	ELEV. AT GRADE AT STAKE / NOT WATER EDGE	23-May
4501	1174002.014	1132584.156	451.79	TMCSD-5-1	*ELEV. BOTTOM CL STREAM*	23-May
4502	1173907.804	1132698.361	452.55	TMCSD-5-2	ELEV. AT WATER LINE / AT BANK	23-May
4601	1172525.151	1134465.741	452.73	LF6SD-1-1	ELEV. AT GRADE / BASE OF STAKE	21-May
4602	1172253.863	1134788.860	452.25	LF6SD-2-1	ELEV. AT GRADE / BASE OF STAKE	21-May

ECOLOGY AND ENVIRONMENT, INC.
TEST LOCATIONS THREE MILE CREEK, GAFB ROME, NY
PREPARED BY: LAFAVE WHITE MCGIVERN LS PC
DATED MAY 24, 2001 DATA REVISED 7/19/2001

4603	1171974.936	1135121.375	454.06	LF6SD-3-1	ELEV. AT GRADE / BASE OF STAKE	21-May
4604	1171643.050	1135499.851	450.53	LF6SD-4-1	ELEV. AT GRADE / BASE OF STAKE	21-May
4701	1173419.982	1133271.632	450.81	TMCSD-7-1	*ELEV. BOTTOM CL STREAM*	23-May
4801	1173117.718	1133623.510	452.16	TMCSD-8-1	ELEV. AT WATER LINE / AT BANK	23-May
4802	1172932.353	1133843.968	450.84	TMCSD-8-2	*ELEV. BOTTOM CL STREAM*	21-May
4901	1172596.709	1134236.810	447.67	TMCSD-9-1	*ELEV. BOTTOM CL STREAM*	21-May
4902	1172432.168	1134430.806	447.87	TMCSD-9-2	*ELEV. BOTTOM CL STREAM*	21-May
4903	1172269.386	1134626.971	446.82	TMCSD-9-3	*ELEV. BOTTOM CL STREAM*	21-May
4904	1172103.452	1134823.169	446.34	TMCSD-9-4	*ELEV. BOTTOM CL STREAM*	21-May
* - PREDETERMINED COORDINATES						

ECOLOGY AND ENVIRONMENT, INC.
TEST LOCATIONS THREE MILE CREEK, GAFB ROME, NY
PREPARED BY: LAFAVE WHITE MCGIVERN LS PC
DATED MAY 24, 2001 DATA REVISED 7/19/2001

NEW YORK STATE PLAIN COORDINATES-NAD 83 FEET / VERTICAL NGVD 1929						***2001***
PT. NO.	***NORTHING***	***EASTING***	***ELEV.***	***DESCRIPTION***	***REMARKS***	***DATE***
POINTS RELOCATED BY REQUEST, PICK CL STREAM OPPOSITE PREVIOUSLY SET STAKE						
401	1174654.984	1132524.022	453.89	TMCSD-1	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
402	1174459.682	1132508.608	451.84	TMCSD-2	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
403	1174284.497	1132496.696	451.51	TMCSD-3	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
405	1174106.666	1132456.400	451.70	TMCSD-5	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
406	1173798.856	1132812.391	450.86	TMCSD-6	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
407	1173563.671	1133086.679	451.60	TMCSD-7	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
409	1172640.978	1134168.218	448.85	TMCSD-9	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
411	1174033.881	1133261.024	456.02	LF5SD-1	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
422	1173825.172	1133201.646	454.36	LF5SD-2	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
433	1173606.475	1133138.491	452.60	LF5SD-3	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
452	1173903.486	1132692.494	451.60	TMCSD-5-2	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
481	1173111.388	1133621.370	450.03	TMCSD-8-1	ELEV BOTTOM CL STREAM / OPPOSITE SET STAKE	18-Jul
*4104	1174307.459	1132226.773	454.79	TMCSD-4	ELEV. AT GRADE AT STAKE / CL STREAM	23-May
* - PERDETERMINED COORDINATES						

C Complete Analytical Data Summaries

Table C-1

Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-1-Z3	TMCSD-1-Z4	TMCSD-2-Z3	TMCSD-2-Z3/D	TMCSD-2-Z4	TMCSD-3-Z3	TMCSD-3-Z4	TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-1-Z4
		Depth:	1.8 - 2.4	2.4 - 3.5	1.5 - 2.7	1.5 - 2.7	2.7 - 3.5	1.6 - 2.4	2.4 - 3.5	2.9 - 3.5	1.6 - 2.5	2.5 - 3.5	2.8 - 3.5
		Date:	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/01/01	06/01/01	06/01/01	06/01/01
PCBs by Method 8082 (µg/Kg)													
Aroclor 1016			7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U	22.8 U	988 U	20.6 U	499 U
Aroclor 1221			15900 U	97.4 U	2440 U	2310 U	222 U	5250 U	267 U	45.6 U	1980 U	41.3 U	997 U
Aroclor 1232			7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U	22.8 U	988 U	20.6 U	499 U
Aroclor 1242			7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U	71.4 J	988 U	20.6 U	499 U
Aroclor 1248			7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U	22.8 U	988 U	20.6 U	499 U
Aroclor 1254			7970 U	48.7 U	1220 U	1160 U	111 U	2630 U	133 U	22.8 U	988 U	20.6 U	499 U
Aroclor 1260			45300	175	7800	7390	618	12700	702	38.8 J	10700	33.8	1790
Decachlorobiphenyl	Surr		0 %	117 %	0 %	0 %	116 %	0 %	128 %	67 %	0 %	72 %	99 %
Tetrachloro-m-xylene	Surr		0 %	118 %	0 %	0 %	115 %	0 %	137 %	0 %	0 %	72 %	75 %
Pesticides by Method 8081A (µg/Kg)													
4,4´-DDD			1200 U	73.1 U	183 U	84.8 NJ	16.7 NJ	394 U	80.0 U	34.2 U	185 U	3.10 U	74.8 U
4,4´-DDE			1200 U	73.1 U	183 U	173 U	33.3 U	394 U	80.0 U	34.2 U	185 U	3.10 U	74.8 U
4,4´-DDT			1590 U	14.8 NJ	244 U	231 U	44.4 U	219 NJ	12.5 NJ	9.63 NJ	471 NJ	1.43 NJ	99.7 U
Aldrin			1590 U	540 NJ	385 NJ	410 NJ	44.4 U	1560 NJ	38.2 NJ	45.6 U	95.9 NJ	4.13 U	99.7 U
alpha-BHC			1200 U	73.1 U	183 U	173 U	33.3 U	394 U	80.0 U	34.2 U	185 U	3.10 U	74.8 U
alpha-Chlordane			398 U	24.4 U	61.1 U	57.8 U	11.1 U	131 U	26.7 U	25.0 NJ	61.7 U	5.37 NJ	24.9 U
beta-BHC			1590 U	97.4 U	244 U	231 U	44.4 U	525 U	107 U	45.6 U	247 U	4.13 U	99.7 U
delta-BHC			797 U	12.4 NJ	122 U	116 U	22.2 U	263 U	53.3 U	22.8 U	123 U	2.06 U	49.9 U
Dieldrin			1990 U	122 U	306 U	289 U	55.5 U	657 U	133 U	57.0 U	309 U	5.16 U	125 U
Endosulfan I			1040 NJ	122 U	85.6 NJ	75.9 NJ	10.1 NJ	657 U	133 U	25.0 NJ	35.0 NJ	5.37 NJ	125 U
Endosulfan II			1200 U	73.1 U	183 U	173 U	33.3 U	394 U	80.0 U	34.2 U	185 U	3.10 U	74.8 U
Endosulfan sulfate			679 NJ	146 U	98.6 NJ	80.0 NJ	66.6 U	218 NJ	160 U	68.4 U	370 U	2.60 NJ	150 U
Endrin			1590 U	97.4 U	244 U	231 U	44.4 U	525 U	107 U	45.6 U	247 U	4.13 U	99.7 U
Endrin aldehyde			3980 U	244 U	611 U	578 U	111 U	1310 U	267 U	114 U	617 U	1.43 NJ	249 U
Endrin ketone			1200 U	45.6 NJ	289 NJ	225 NJ	30.4 NJ	892 NJ	41.4 NJ	473 NJ	1540 NJ	26.3 NJ	35.2 NJ
gamma-BHC			797 U	48.7 U	122 U	116 U	22.2 U	263 U	53.3 U	22.8 U	123 U	2.06 U	49.9 U
gamma-Chlordane			797 U	25.0 NJ	122 U	116 U	22.2 U	263 U	53.3 U	22.8 U	123 U	2.06 U	49.9 U
Heptachlor			1200 U	73.1 U	183 U	173 U	3.53 NJ	394 U	80.0 U	34.2 U	185 U	3.10 U	74.8 U
Heptachlor epoxide			1990 U	122 U	306 U	289 U	55.5 U	657 U	34.7 NJ	11.2 NJ	439 NJ	4.85 NJ	168 NJ
Methoxychlor			15900 U	974 U	2440 U	2310 U	444 U	5250 U	1070 U	456 U	1760 NJ	29.0 NJ	997 U
Toxaphene			39800 U	2440 U	6110 U	5780 U	1110 U	13100 U	2670 U	1140 U	6170 U	103 U	2490 U
Decachlorobiphenyl	Surr		0 %	0 %	0 %	0 %	170 %	0 %	0 %	91 %	0 %	93 %	0 %
Tetrachloro-m-xylene	Surr		0 %	0 %	0 %	0 %	114 %	0 %	0 %	117 %	0 %	54 %	0 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-1-Z3	TMCSD-1-Z4	TMCSD-2-Z3	TMCSD-2-Z3/D	TMCSD-2-Z4	TMCSD-3-Z3	TMCSD-3-Z4	TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-1-Z4
		Depth:	1.8 - 2.4	2.4 - 3.5	1.5 - 2.7	1.5 - 2.7	2.7 - 3.5	1.8 - 2.4	2.4 - 3.5	2.9 - 3.5	1.6 - 2.5	2.5 - 3.5	2.8 - 3.5
		Date:	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/01/01	06/01/01	06/01/01	06/01/01
(µg/Kg)													
1,1,1-Trichloroethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,1,2,2-Tetrachloroethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 UJ	619 U	6.14 U
1,1,2-Trichloroethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,1-Dichloroethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,1-Dichloroethene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,2-Dichlorobenzene			9.48 U	8.71 J	5.70 U	1.39 J	2.55 J	2.14 J	8.97 J	5.85 UJ	3.12 J	415 J	6.14 U
1,2-Dichloroethane			3.08 J	1.93 J	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,2-Dichloroethene, Total			9.48 U	7.12 J	5.70 U	5.45 U	3.59 J	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,2-Dichloropropane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,3-Dichlorobenzene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 UJ	619 U	6.14 U
1,4-Dichlorobenzene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	5.70 J	4820	6.14 U
2-Butanone			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
2-Chloroethyl vinyl ether			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
2-Hexanone			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
4-Methyl-2-pentanone			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Acetone			19.0 U	12.3 UJ	9.57 J	10.9 U	15.8	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Benzene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	70.7	154 J	6.14 U
Bromodichloromethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Bromoform			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Bromomethane			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Carbon disulfide			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Carbon tetrachloride			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Chlorobenzene			9.48 U	8.32 J	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	45.1	28800	6.14 U
Chloroethane			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Chloroform			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	2.32 J	1.78 J	6.15 U	619 U	6.14 U
Chloromethane			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
cis-1,2-Dichloroethene			3.09 J	7.12 J	5.70 U	5.45 U	3.59 J	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
cis-1,3-Dichloropropene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Dibromochloromethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Ethylbenzene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
m,p-Xylene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Methylene chloride			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
o-Xylene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Styrene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Tetrachloroethene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	16.7 J	5.85 UJ	6.15 U	619 U	6.14 U
Toluene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
trans-1,2-Dichloroethene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
trans-1,3-Dichloropropene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Trichloroethene			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	205 J	22.1 J	6.15 U	619 U	6.14 U
Trichlorofluoromethane			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
Vinyl acetate			19.0 U	12.3 UJ	11.4 U	10.9 U	10.5 U	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Vinyl chloride			5.98 J	12.3 UJ	11.4 U	10.9 U	6.18 J	12.2 U	12.4 UJ	11.7 UJ	12.3 U	1200 U	12.3 U
Xylenes, Total			9.48 U	6.13 UJ	5.70 U	5.45 U	5.26 U	6.09 U	6.22 UJ	5.85 UJ	6.15 U	619 U	6.14 U
1,2-Dichloroethane-d4	Surr		72 %	164 %	98 %	101 %	102 %	101 %	192 %	98 %	100 %	98 %	99 %
4-Bromofluorobenzene	Surr		151 %	207 %	112 %	108 %	113 %	110 %	107 %	131 %	120 %	117 %	110 %
Dibromofluoromethane	Surr		107 %	194 %	109 %	109 %	111 %	111 %	231 %	109 %	111 %	100 %	104 %
Toluene-d8	Surr		144 %	170 %	104 %	103 %	109 %	103 %	185 %	119 %	108 %	97 %	101 %

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APC_Tables XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

		Sample ID:	TMCSD-1-Z3	TMCSD-1-Z4	TMCSD-2-Z3	TMCSD-2-Z3/D	TMCSD-2-Z4	TMCSD-3-Z3	TMCSD-3-Z4	TMCSD-4-Z4	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-1-Z4
		Depth:	1.8 - 2.4	2.4 - 3.5	1.5 - 2.7	1.5 - 2.7	2.7 - 3.5	1.6 - 2.4	2.4 - 3.5	2.9 - 3.5	1.6 - 2.5	2.5 - 3.5	2.8 - 3.5
Analyte	Type	Date:	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/01/01	06/01/01	06/01/01	06/01/01
Semivolatiles by Method 8270C (μg/Kg)													
1,2,4-Trichlorobenzene			587 J	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	230 J	1140 U
1,2-Dichlorobenzene			619 J	3820 U	1170 U	3570 U	85.0 J	4130 U	544	1710 U	7140 U	1410	1140 U
1,3-Dichlorobenzene			282 J	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
1,4-Dichlorobenzene			324 J	3820 U	1170 U	3570 U	344 U	4130 U	512	1710 U	7140 U	5140	1140 U
2,4,5-Trichlorophenol			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
2,4,6-Trichlorophenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2,4-Dichlorophenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2,4-Dimethylphenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2,4-Dinitrophenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2,4-Dinitrotoluene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2,6-Dinitrotoluene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2-Chloronaphthalene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2-Chlorophenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
2-Methylnaphthalene			266 J	4270	937 J	6860 J	280 J	13700	89.7 J	304 J	12200	419 J	938 J
2-Methylphenol			647 U	3820 U	1170 U	3570 U	344 U	882 J	419 U	1710 U	7140 U	953 U	1140 U
2-Nitroaniline			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
2-Nitrophenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
3,3'-Dichlorobenzidine			1290 U	7640 U	2340 U	7130 U	688 U	8250 U	838 U	3410 U	14300 U	1910 U	2290 U
3-Nitroaniline			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
4,6-Dinitro-2-methylphenol			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
4-Bromophenyl phenyl ether			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
4-Chloro-3-methylphenol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
4-Chloroaniline			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
4-Chlorophenyl phenyl ether			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
4-Methylphenol			647 U	3820 U	1170 U	1330 J	344 U	3110 J	419 U	1710 U	2390 J	953 U	1140 U
4-Nitroaniline			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
4-Nitrophenol			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
Acenaphthene			425 J	6900	2040 J	10200 J	641	20200	216 J	575 J	17000	380 J	1830
Acenaphthylene			647 U	1030 J	895 J	3930 J	205 J	4430	141 J	528 J	3010 J	773 J	791 J
Anthracene			689	12700	4900 J	20300 J	1670	37900 J	579	1130 J	36900	1080	4370
Benz(a)anthracene			1060	19400	14500 J	30600 J	2900	57300	911 J	2690	56000	1350	6520
Benzo(a)pyrene			679 J	14400 J	6340 J	22800 J	2150 J	42500	762 J	2990	34000	1470	5250 J
Benzo(b)fluoranthene			675 J	12600 J	7640 J	18900 J	1680 J	32300 J	883 J	3190	29800	1450	6090 J
Benzo(g,h,i)perylene			383 J	6970 J	1550 J	5860 J	707 J	9140 J	211 J	1150 J	24600	691 J	1590 J
Benzo(k)fluoranthene			708 J	11700 J	6330 J	15600 J	1380 J	4130 U	707 J	3160	32100	1260	3950 J
Benzoic acid			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
Benzyl alcohol			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Bis(2-chloroethoxy)methane			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Bis(2-chloroethyl)ether			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Bis(2-chloroisopropyl)ether			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Bis(2-ethylhexyl)phthalate			647 U	3820 U	1170 U	3570 U	344 U	1710 J	419 U	1710 U	7140 U	953 U	1140 U
Butyl benzyl phthalate			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Carbazole			528 J	8090	3830 J	14300 J	1010	24000 J	315 J	1160 J	32800	334 J	2600
Chrysene			1140	18700	14600 J	31200 J	2720	54600	952 J	4440	53700	1660	6470
Dibenz(a,h)anthracene			265 J	4970 J	1230 J	4900 J	491 J	7730 J	157 J	605 J	16600	436 J	1160 J
Dibenzofuran			410 J	6720	1930 J	10900 J	569	21500	169 J	541 J	21300	232 J	1730
Diethyl phthalate			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-1-Z3 1.8 - 2.4 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/04/01	TMCSD-2-Z4 2.7 - 3.5 06/04/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01	TMCSD-4-Z4 2.9 - 3.5 06/01/01	TMCSD-5-Z3 1.6 - 2.5 06/01/01	TMCSD-5-Z4 2.5 - 3.5 06/01/01	TMCSD-5-1-Z4 2.8 - 3.5 06/01/01
Dimethyl phthalate			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Di-n-butyl phthalate			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Di-n-octyl phthalate			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Fluoranthene			2940	46500	31400 J	77700 J	6040	131000	2050	3410 U	139000	3370	14900
Fluorene			451 J	8350	2290 J	12900 J	757	24800	260 J	906 J	22900	398 J	2000
Hexachlorobenzene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Hexachlorobutadiene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Hexachlorocyclopentadiene			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
Hexachloroethane			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Indeno(1,2,3-cd)pyrene			740	15300	1560 J	7540 J	1020	11100 J	262 J	1980	19500 J	1550	3530
Isophorone			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Naphthalene			828	12400	2650 J	19600 J	809	41100 J	229 J	251 J	32000	819 J	2730
Nitrobenzene			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
N-Nitrosodimethylamine			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
N-Nitrosodi-n-propylamine			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
N-Nitrosodiphenylamine			647 U	3820 U	1170 U	3570 U	344 U	4130 U	419 U	1710 U	7140 U	953 U	1140 U
Pentachlorophenol			1630 U	9610 U	2940 U	8970 U	865 U	10400 U	1050 U	4290 U	18000 U	2400 U	2880 U
Phenanthrene			3210	49900	31500 J	82100 J	5910	156000	1970	3410 U	162000	1800	15500
Phenol			647 U	3820 U	1170 U	3570 U	344 U	1360 J	419 U	1710 U	7140 U	953 U	1140 U
Pyrene			2070	23700 J	23700 J	37500 J	4740	99600	908 J	5260	101000	2110	6170
2,4,6-Tribromophenol	Surr		57 %	73 %	82 %	93 %	63 %	82 %	65 %	81 %	69 %	90 %	56 %
2-Fluorobiphenyl	Surr		81 %	81 %	88 %	95 %	78 %	91 %	73 %	85 %	80 %	80 %	92 %
2-Fluorophenol	Surr		67 %	71 %	70 %	91 %	59 %	84 %	63 %	60 %	75 %	52 %	53 %
Nitrobenzene-d5	Surr		78 %	76 %	89 %	98 %	74 %	94 %	71 %	89 %	80 %	125 %	79 %
Phenol-d5	Surr		66 %	70 %	63 %	93 %	54 %	85 %	62 %	66 %	84 %	58 %	49 %
Terphenyl-d14	Surr		63 %	60 %	47 %	56 %	39 %	50 % J	34 %	49 %	68 %	59 %	36 %
Metals by Method 6010B and 7470A/71A (mg/Kg)													
Aluminum			14300	16100	3610	4610	10500	4220	9630	5000	4860	7100	5420
Antimony			0.60 U	0.35 U	0.31 U	0.35 U	0.32 U	0.34 U	0.34 U	0.32 U	0.33 U	0.29 U	0.36 U
Arsenic			46.5	13.0	7.1	6.8	12.1	5.9	14.1	4.4	9.2	17.1	7.0
Barium			111 J	73.4 J	230 J	1530 J	65.3 J	23.7 J	60.2 J	35.3	34.6	61.7	33.3
Beryllium			1.9	0.12 U	0.10 U	0.12 U	0.36 J	0.11 U	0.43 J	0.11 U	0.24 J	0.52	0.19 J
Cadmium			6.5	9.9	2.9	3.1	0.11 U	0.64 U	0.11 U	0.11 U	1.5	27.0	0.12 U
Calcium			31600 J	93200 J	46300 J	44300 J	25400 J	28500 J	39700 J	32100	25600	8160	22300
Chromium			44.7	35.4	25.8	44.3	20.4	37.8	18.7	9.9	27.8	43.8	25.5
Cobalt			10.4	7.1	3.1	5.1	6.4	3.6	6.7	3.7	4.3	5.7	4.5
Copper			97.0	74.8	40.6	40.7	34.1	46.3	36.9	22.7	49.8	37.2	35.7
Iron			17900 J	12200 J	11600 J	12500 J	26800 J	13800 J	22700 J	13800	15300	21200	14600
Lead			56.1	56.9	81.0	110	26.7	108	36.2	55.6	181	156	92.6
Magnesium			2460 J	7980 J	3090 J	4070 J	4190 J	2990 J	7500 J	2930 J	2980 J	2380 J	3840 J
Manganese			84.1 J	1280 J	111 J	134 J	599 J	131 J	298 J	322	120	250	284
Nickel			27.4	15.5	20.8	28.7	15.2	28.2	18.2	9.3	28.5	14.4	14.0
Potassium			1260 J	2860 J	490 J	580 J	934 J	609 J	1210 J	812 J	778 J	1090 J	1070 J
Selenium			1.6 U	0.94 U	0.84 U	0.93 U	0.87 U	0.90 U	0.91 U	0.86 U	0.87 U	0.78 U	0.96 U
Silver			0.40 UR	0.23 UR	0.21 UR	0.23 UR	0.22 UR	0.22 UR	0.23 UR	0.21 UR	0.22 UR	0.19 UR	0.24 UR
Sodium			810	2060	128	137	74.6 J	127	200	140	135	181	122
Thallium			0.79 U	0.47 U	0.42 U	0.47 U	0.70 J	0.45 U	0.46 U	0.43 U	0.43 U	0.39 U	0.48 U
Vanadium			112 J	18.3 J	83.8 J	49.7 J	26.0 J	62.4 J	23.6 J	12.0	55.9	20.5	22.3[illegible]
Zinc			149	98.4	157	22[illegible]	68.8	146	68.0	112 J	144 J	111 J	82.[illegible]
Mercury			0.65 J	0.60 J	0.21 J	0.18[illegible]	0.086 J	0.22 J	0.42 J	0.028 J	0.23 J	0.10 J	0.087 J

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APC_Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-1-Z3 1.8 - 2.4 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/01/01	TMCSD-2-Z4 2.7 - 3.5 06/01/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01	TMCSD-4-Z4 2.9 - 3.5 06/01/01	TMCSD-5-Z3 1.6 - 2.5 06/01/01	TMCSD-5-Z4 2.5 - 3.5 06/01/01	TMCSD-5-1-Z4 2.8 - 3.5 06/01/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)													
Total Organic Carbon			205000	31400	8850 J	21500 J	12800	39100	53000	72000	51100	54100	6660
Hexavalent Chromium by Method 7196A (mg/Kg)													
Chromium, Hexavalent			1.4 J	0.96 J	0.80 J	0.74 J	4.9 U	7.1	0.94 J	1.6 J	1.3 J	0.89 J	5.3 UJ
Cyanide, Total by Method 9012A (mg/Kg)													
Cyanide			0.454 J	0.613 U	0.171 J	0.178 J	0.547 U	0.675 U	0.681 U	0.150 J	0.637 UJ	0.510 UJ	0.617 UJ
(mg/Kg)													
Petroleum Hydrocarbons, TR			633 J	880	687	1350	450 U	650	187 J	468 J	641	2040	209 J
Percent Moisture (wt%)													
Percent Moisture			50.6	19.3	19.1	15.7	11.2	24.4	25.8	15.0	20.7	6.54	21.3

Key:
J = Estimated value.
N = Identification tentative.
U = Not detected at the reported value.
UR = Data rejected.
mg/Kg = Micrograms per kilogram.
µg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4
		Depth:	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	#REF!	#REF!	05/31/01	05/31/01	05/31/01
PCBs by Method 8082 (µg/Kg)													
Aroclor 1016			30.2 U	23.2 U	255 U	23.3 U	24.0 U	257 U	23.4 U	841 U	22.4 U	252 U	21.7 U
Aroclor 1221			60.4 U	46.5 U	510 U	46.6 U	48.0 U	513 U	46.8 U	1680 U	44.8 U	504 U	43.3 U
Aroclor 1232			30.2 U	23.2 U	255 U	23.3 U	24.0 U	257 U	23.4 U	841 U	22.4 U	252 U	21.7 U
Aroclor 1242			30.2 U	23.2 U	255 U	23.3 U	24.0 U	257 U	23.4 U	841 U	22.4 U	252 U	21.7 U
Aroclor 1248			30.2 U	23.2 U	255 U	23.3 U	24.0 U	257 U	23.4 U	841 U	22.4 U	252 U	21.7 U
Aroclor 1254			30.2 U	23.2 U	255 U	23.3 U	24.0 U	257 U	23.4 U	841 U	22.4 U	252 U	21.7 U
Aroclor 1260			110	23.2 U	1530	24.9	33.4	1340	19.3 J	5290	22.4 U	657	21.7 U
Decachlorobiphenyl	Surr		64 %	96 %	116 %	90 %	96 %	86 %	92 %	0 %	92 %	106 %	88 %
Tetrachloro-m-xylene	Surr		56 %	90 %	108 %	89 %	92 %	77 %	90 %	0 %	86 %	91 %	86 %
Pesticides by Method 8081A (µg/Kg)													
4,4'-DDD			2.42 NJ	3.49 U	8.49 NJ	3.49 U	3.60 U	20.9 NJ	0.429 NJ	30.9 NJ	3.36 U	37.8 U	3.25 U
4,4'-DDE			4.53 U	3.49 U	38.2 U	3.49 U	3.60 U	38.5 U	3.51 U	126 U	3.36 U	37.8 U	3.25 U
4,4'-DDT			6.72 NJ	4.65 U	51.0 U	1.15 NJ	4.80 U	107 NJ	4.68 U	168 U	4.48 U	50.4 U	4.33 U
Aldrin			6.04 U	4.65 U	51.0 U	4.66 U	4.80 U	51.3 U	4.68 U	168 U	4.48 U	50.4 U	4.33 U
alpha-BHC			4.53 U	3.49 U	38.2 U	3.49 U	3.60 U	38.5 U	3.51 U	126 U	3.36 U	37.8 U	3.25 U
alpha-Chlordane			5.97 NJ	1.16 U	32.0 NJ	0.582 NJ	0.503 NJ	11.7 NJ	0.234 NJ	28.5 NJ	1.12 U	4.20 NJ	1.08 U
beta-BHC			6.04 U	4.65 U	51.0 U	4.66 U	4.80 U	51.3 U	4.68 U	168 U	4.48 U	50.4 U	4.33 U
delta-BHC			3.02 U	2.32 U	25.5 U	2.33 U	2.40 U	25.7 U	2.34 U	84.1 U	2.24 U	25.2 U	2.17 U
Dieldrin			7.55 U	5.81 U	63.7 U	5.82 U	6.00 U	33.5 NJ	5.85 U	210 U	5.60 U	62.9 U	5.41 U
Endosulfan I			5.97 NJ	5.81 U	32.0 NJ	0.582 NJ	6.00 U	64.1 U	5.85 U	210 U	5.60 U	62.9 U	5.41 U
Endosulfan II			4.53 U	3.49 U	38.2 U	3.49 U	3.60 U	38.5 U	3.51 U	126 U	3.36 U	37.8 U	3.25 U
Endosulfan sulfate			9.06 U	6.97 U	76.4 U	6.99 U	7.20 U	77.0 U	7.02 U	252 U	6.72 U	75.5 U	6.50 U
Endrin			6.04 U	4.65 U	51.0 U	4.66 U	4.80 U	51.3 U	4.68 U	168 U	4.48 U	50.4 U	4.33 U
Endrin aldehyde			15.1 U	11.6 U	127 U	11.6 U	12.0 U	128 U	11.7 U	421 U	11.2 U	40.7 NJ	10.8 U
Endrin ketone			0.597 NJ	3.49 U	38.2 U	14.1 NJ	3.60 U	38.5 U	3.51 U	126 U	3.36 U	37.8 U	3.25 U
gamma-BHC			3.02 U	2.32 U	25.5 U	2.33 U	2.40 U	25.7 U	2.34 U	84.1 U	2.24 U	25.2 U	2.17 U
gamma-Chlordane			3.02 U	2.32 U	7.33 NJ	2.33 U	2.40 U	12.1 NJ	2.34 U	33.8 NJ	2.24 U	2.66 NJ	2.17 U
Heptachlor			4.53 U	3.49 U	38.2 U	3.49 U	3.60 U	38.5 U	3.51 U	126 U	3.36 U	37.8 U	3.25 U
Heptachlor epoxide			3.87 NJ	5.81 U	12.4 NJ	5.82 U	6.00 U	64.1 U	5.85 U	210 U	5.60 U	62.9 U	5.41 U
Methoxychlor			60.4 U	46.5 U	510 U	46.6 U	48.0 U	513 U	46.8 U	1680 U	44.8 U	504 U	43.3 U
Toxaphene			151 U	116 U	1270 U	116 U	120 U	1280 U	117 U	4210 U	112 U	1260 U	108 U
Decachlorobiphenyl	Surr		82 %	103 %	110 %	93 %	90 %	76 %	96 %	0 %	97 %	52 %	82 %
Tetrachloro-m-xylene	Surr		51 %	89 %	57 %	89 %	88 %	71 %	87 %	0 %	86 %	76 %	81 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4
		Depth:	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	#REF!	#REF!	05/31/01	05/31/01	05/31/01
(µg/Kg)													
1,1,1-Trichloroethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,1,2,2-Tetrachloroethane			40.1 UJ	5.89 U	34.6 U	5.98 U	5.89 U	6.66 UJ	5.92 U	8.40 UJ	5.78 U	6.41 U	5.49 U
1,1,2-Trichloroethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,1-Dichloroethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,1-Dichloroethene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,2-Dichlorobenzene			40.1 UJ	3.85 J	34.6 U	5.98 U	5.89 U	6.66 UJ	5.92 U	8.40 UJ	5.78 U	6.41 U	5.49 U
1,2-Dichloroethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,2-Dichloroethene, Total			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,2-Dichloropropane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,3-Dichlorobenzene			40.1 UJ	5.89 U	34.6 U	5.98 U	5.89 U	6.66 UJ	5.92 U	8.40 UJ	5.78 U	6.41 U	5.49 U
1,4-Dichlorobenzene			40.1 UJ	5.89 U	34.6 U	5.98 U	5.89 U	6.66 UJ	5.92 U	8.40 UJ	5.78 U	6.41 U	5.49 U
2-Butanone			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	7.66 J	11.8 U	7.32 J	11.6 U	6.21 J	11.0 U
2-Chloroethyl vinyl ether			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
2-Hexanone			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
4-Methyl-2-pentanone			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
Acetone			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	32.5 J	10.7 J	35.3 J	10.8 J	19.9 J	7.35 J
Benzene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Bromodichloromethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Bromoform			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Bromomethane			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
Carbon disulfide			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Carbon tetrachloride			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Chlorobenzene			3430	3.24 J	178 J	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	1.78 J	5.49 U
Chloroethane			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
Chloroform			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Chloromethane			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
cis-1,2-Dichloroethene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
cis-1,3-Dichloropropene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Dibromochloromethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Ethylbenzene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
m,p-Xylene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Methylene chloride			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
o-Xylene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Styrene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Tetrachloroethene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Toluene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
trans-1,2-Dichloroethene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
trans-1,3-Dichloropropene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Trichloroethene			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Trichlorofluoromethane			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
Vinyl acetate			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
Vinyl chloride			80.2 U	11.8 U	69.2 U	12.0 U	11.8 U	13.3 U	11.8 U	16.8 U	11.6 U	12.8 U	11.0 U
Xylenes, Total			40.1 U	5.89 U	34.6 U	5.98 U	5.89 U	6.66 U	5.92 U	8.40 U	5.78 U	6.41 U	5.49 U
1,2-Dichloroethane-d4	Surr		111 %	100 %	112 %	99 %	103 %	102 %	98 %	99 %	101 %	102 %	103 %
4-Bromofluorobenzene	Surr		416 %	100 %	200 %	102 %	100 %	123 %	114 %	128 %	104 %	118 %	119 %
Dibromofluoromethane	Surr		111 %	104 %	109 %	104 %	104 %	105 %	102 %	103 %	104 %	105 %	105 %
Toluene-d8	Surr		114 %	98 %	104 %	99 %	97 %	115 %	106 %	109 %	101 %	107 %	106 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type												
		Sample ID:	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4
		Depth:	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	#REF!	#REF!	05/31/01	05/31/01	05/31/01
Semivolatiles by Method 8270C (µg/Kg)													
1,2,4-Trichlorobenzene			398 J	344 U	168 J	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
1,2-Dichlorobenzene			7500	60.3 J	955	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
1,3-Dichlorobenzene			243 J	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
1,4-Dichlorobenzene			3610	344 U	1690	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,4,5-Trichlorophenol			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
2,4,6-Trichlorophenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,4-Dichlorophenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,4-Dimethylphenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,4-Dinitrophenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,4-Dinitrotoluene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2,6-Dinitrotoluene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2-Chloronaphthalene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2-Chlorophenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2-Methylnaphthalene			185 J	344 U	275 J	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2-Methylphenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
2-Nitroaniline			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
2-Nitrophenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
3,3'-Dichlorobenzidine			922 U	689 U	783 U	718 U	723 U	862 UJ	755 U	1110 U	680 U	819 U	663 U
3-Nitroaniline			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
4,6-Dinitro-2-methylphenol			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
4-Bromophenyl phenyl ether			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
4-Chloro-3-methylphenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
4-Chloroaniline			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
4-Chlorophenyl phenyl ether			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
4-Methylphenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
4-Nitroaniline			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
4-Nitrophenol			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
Acenaphthene			291 J	344 U	550	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Acenaphthylene			693	344 U	796	359 U	361 U	129 J	378 U	206 J	340 U	410 U	332 U
Anthracene			1120	344 U	1970	359 U	361 U	141 J	378 U	330 J	340 U	78.4 J	332 U
Benz(a)anthracene			1490 J	344 U	2740	359 U	361 U	144 J	378 U	378 J	340 U	163 J	332 U
Benzo(a)pyrene			1230	344 U	2200	359 U	361 U	173 J	378 U	456 J	340 U	170 J	332 U
Benzo(b)fluoranthene			2660	344 U	1770 J	359 U	361 U	245 J	378 U	488 J	340 U	148 J	332 U
Benzo(g,h,i)perylene			376 J	344 U	601	359 U	361 U	431 UJ	378 U	185 J	340 U	156 J	332 U
Benzo(k)fluoranthene			461 U	344 U	2090	359 U	361 U	234 J	378 U	514 J	340 U	148 J	332 U
Benzoic acid			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
Benzyl alcohol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Bis(2-chloroethoxy)methane			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Bis(2-chloroethyl)ether			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Bis(2-chloroisopropyl)ether			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Bis(2-ethylhexyl)phthalate			339 J	344 U	246 J	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Butyl benzyl phthalate			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Carbazole			441 J	344 U	930	359 U	361 U	70.8 J	378 U	110 J	340 U	410 U	332 U
Chrysene			1660 J	344 U	2820	359 U	361 U	196 J	378 U	477 J	340 U	182 J	332 U
Dibenz(a,h)anthracene			293 J	344 U	455	359 U	361 U	431 UJ	378 U	102 J	340 U	77.7 J	332 U
Dibenzofuran			195 J	344 U	453	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Diethyl ph[illegible]ate			461 U	344 U	391 U	[illegible]	361 U	431 UJ	378 U	556 U	340 U	410 U	[illegible]

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4
		Depth:	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	#REF!	#REF!	05/31/01	05/31/01	05/31/01
Dimethyl phthalate			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Di-n-butyl phthalate			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Di-n-octyl phthalate			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Fluoranthene			3670	344 U	6380	359 U	361 U	540	378 U	967	340 U	259 J	332 U
Fluorene			304 J	344 U	659	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Hexachlorobenzene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Hexachlorobutadiene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Hexachlorocyclopentadiene			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
Hexachloroethane			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Indeno(1,2,3-cd)pyrene			267 J	344 U	476 J	359 U	361 U	431 UJ	378 U	225 J	340 U	348 J	332 U
Isophorone			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Naphthalene			251 J	344 U	488	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Nitrobenzene			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
N-Nitrosodimethylamine			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
N-Nitrosodi-n-propylamine			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
N-Nitrosodiphenylamine			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Pentachlorophenol			1160 U	866 U	984 U	903 U	909 U	1080 UJ	950 U	1400 U	855 U	1030 U	834 U
Phenanthrene			2440	344 U	4880	359 U	361 U	173 J	378 U	448 J	340 U	164 J	332 U
Phenol			461 U	344 U	391 U	359 U	361 U	431 UJ	378 U	556 U	340 U	410 U	332 U
Pyrene			1980 J	344 U	3940	359 U	361 U	223 J	378 U	349 J	340 U	273 J	332 U
2,4,6-Tribromophenol	Surr		97 %	52 %	104 %	76 %	60 %	99 %	67 %	50 %	64 %	39 %	71 %
2-Fluorobiphenyl	Surr		103 %	81 %	100 %	84 %	96 %	83 %	78 %	88 %	66 %	72 %	91 %
2-Fluorophenol	Surr		68 %	55 %	58 %	73 %	58 %	73 %	57 %	47 %	54 %	42 %	60 %
Nitrobenzene-d5	Surr		116 %	76 %	110 %	82 %	87 %	92 %	74 %	77 %	67 %	61 %	85 %
Phenol-d5	Surr		61 %	54 %	53 %	77 %	58 %	68 %	62 %	45 %	61 %	43 %	59 %
Terphenyl-d14	Surr		55 %	85 %	52 % J	84 %	88 %	57 %	79 %	30 %	70 %	51 %	79 %
Metals by Method 6010B and 7470A/71A (mg/Kg)													
Aluminum			8490	4670	5850	4580	4380	7930	4240	7100	6510	4980	3510
Antimony			0.39 U	0.33 U	0.39 U	0.35 U	0.34 U	0.40 U	0.31 U	0.46 U	0.33 U	0.38 U	0.30 U
Arsenic			24.2	3.5	13.2	2.5	2.6	5.8	8.8	9.2	2.4	2.9	2.5
Barium			78.4	21.1	45.2	16.9	15.1	39.1	10.5	49.1	20.5	26.6	14.3
Beryllium			0.73	0.11 U	0.13 U	0.12 U	0.11 U	0.13 U	0.10 U	0.19 J	0.19 J	0.13 U	0.10 U
Cadmium			40.4	0.11 U	11.0	0.12 U	0.11 U	0.13 U	0.10 U	0.15 U	0.11 U	0.13 U	0.10 U
Calcium			11400	18000	18900	19600	17400	4680 J	12900 J	19000 J	24000 J	20200 J	22900 J
Chromium			40.6	5.2	19.0	5.1	4.8	22.4	4.5	12.5	6.7	6.0	4.0
Cobalt			8.5	3.9	4.8	3.7	3.4	6.3	3.2	5.9	4.7	3.8	3.2
Copper			60.4	12.3	39.4	10.6	11.1	16.4	8.7	26.8	19.1	17.1	9.1
Iron			28500	11100	14800	10500	10000	14300	9730	22500	15100	10600	8480
Lead			170	3.7	84.7	3.5	3.1	19.3	3.1	61.9	4.2	12.2	2.4
Magnesium			2810 J	5950 J	3650 J	5940 J	5220 J	4540 J	4250 J	5200 J	8190 J	4630 J	4780 J
Manganese			132	327	138	260	247	143	178	339	726	441	364
Nickel			24.4	8.1	16.1	7.6	7.0	13.4	7.0	14.0	10.1	8.3	5.6
Potassium			1260 J	1110 J	618 J	1070 J	1020 J	1550 J	947 J	1340 J	1250 J	1010 J	794 J
Selenium			1.0 U	0.88 U	1.1 U	0.94 U	0.90 U	1.1 U	0.82 U	1.2 U	0.89 U	1.0 U	0.81 U
Silver			0.26 UR	0.22 UR	0.26 UR	0.24 UR	0.23 UR	0.27 U	0.21 U	0.30 U	0.22 U	0.25 U	0.20 U
Sodium			265	91.5 J	85.6 J	96.5 J	86.6 J	134 J	77.8 J	102 J	116	74.7 J	88.1 J
Thallium			0.52 U	0.44 U	0.53 U	0.47 U	0.45 U	0.54 U	0.41 U	0.61 U	0.45 U	0.51 U	0.41 U
Vanadium			45.2	9.7	27.7	9.8	9.2	24.5	8.2	21.1	11.5	11.3	7.8
Zinc			124 J	21.0 J	103 J	19.9 J	19.1 J	49.3 J	21.0 J	112 J	29.4 J	33.7 J	15.5 J
Mercury			0.40 J	0.017 UJ	0.14 J	0.020 UJ	0.019 UJ	0.11 J	0.017 U	0.20 J	0.018 U	0.21 J	0.019 U

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APC_Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4
		Depth:	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	05/31/01	#REF!	#REF!	05/31/01	05/31/01	05/31/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)													
Total Organic Carbon			78700	2300 U	49900	2320 U	2340 U	33400	2310 U	42400	2220 U	6230	2120 U
Hexavalent Chromium by Method 7196A (mg/Kg)													
Chromium, Hexavalent			7.3 UJ	4.3 UJ	4.8 UJ	4.5 UJ	5.9 UJ	1.3 J	5.5 U	1.4 J	4.2 U	5.3 U	4.9 U
Cyanide, Total by Method 9012A (mg/Kg)													
Cyanide			0.281 J	0.574 UJ	0.664 UJ	0.625 UJ	0.602 UJ	0.673 U	0.584 U	0.828 U	0.569 U	0.642 U	0.553 U
(mg/Kg)													
Petroleum Hydrocarbons, TR			2880	482 U	1470	490 U	486 U	1480	476 U	683 U	464 U	519 U	446 U
Percent Moisture (wt%)													
Percent Moisture			34.4	17.0	23.9	18.4	17.7	25.7	16.0	41.4	13.8	22.9	10.4

Key:
- J = Estimated value.
- N = Identification tentative.
- U = Not detected at the reported value.
- UR = Data rejected.
- mg/Kg = Micrograms per kilogram.
- μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-7-Z2	TMCSD-7-Z3	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-8-2-Z3	TMCSD-9-Z2	TMCSD-9-Z4
		Depth:	0.5 - 1.5	1.5 - 2.4	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5	2.5 - 3.5	0.5 - 0.9	0.9 - 2.5	0.5 - 1.6	1.6 - 3.5
		Date:	05/31/01	05/31/01	05/31/01	05/31/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01
PCBs by Method 8082 (µg/Kg)													
Aroclor 1016			544 U	282 U	178 U	23.0 U	97.8 U	74.7 U	91.6 U	29.6 U	20.9 U	28.1 U	24.4 U
Aroclor 1221			1090 U	563 U	355 U	46.0 U	196 U	149 U	183 U	59.1 U	41.7 U	56.2 U	48.8 U
Aroclor 1232			544 U	282 U	178 U	23.0 U	97.8 U	74.7 U	91.6 U	29.6 U	20.9 U	28.1 U	24.4 U
Aroclor 1242			544 U	282 U	178 U	23.0 U	97.8 U	74.7 U	91.6 U	29.6 U	20.9 U	28.1 U	24.4 U
Aroclor 1248			544 U	282 U	178 U	23.0 U	97.8 U	74.7 U	91.6 U	29.6 U	20.9 U	28.1 U	24.4 U
Aroclor 1254			544 U	282 U	178 U	23.0 U	97.8 U	74.7 U	91.6 U	29.6 U	20.9 U	28.1 U	24.4 U
Aroclor 1260			2540	997	568	30.2	107	74.7 U	91.6 U	17.7 J	17.9 J	231	64.2
Decachlorobiphenyl	Surr		0 %	130 %	107 %	81 %	98 %	102 %	88 %	105 %	105 %	103 %	94 %
Tetrachloro-m-xylene	Surr		0 %	33 %	87 %	81 %	85 %	89 %	78 %	89 %	94 %	92 %	82 %
Pesticides by Method 8081A (µg/Kg)													
4,4'-DDD			23.6 NJ	105 NJ	31.4 NJ	3.10 NJ	4.29 NJ	11.2 U	13.7 U	3.79 NJ	1.95 NJ	21.1 U	3.66 U
4,4'-DDE			81.7 U	42.3 U	33.3 U	3.45 U	14.7 U	11.2 U	13.7 U	4.43 U	3.13 U	21.1 U	3.66 U
4,4'-DDT			109 U	97.7 NJ	38.9 NJ	4.60 U	2.81 NJ	14.9 U	18.3 U	1.15 NJ	0.519 NJ	8.18 NJ	4.88 U
Aldrin			109 U	24.9 NJ	44.4 U	4.60 U	19.6 U	14.9 U	18.3 U	11.2 U	4.17 U	31.6 NJ	4.88 U
alpha-BHC			81.7 U	42.3 U	33.3 U	3.45 U	14.7 U	11.2 U	13.7 U	4.43 U	3.13 U	21.1 U	3.66 U
alpha-Chlordane			27.2 U	14.1 U	26.6 NJ	1.15 U	4.89 U	3.74 U	4.58 U	1.48 U	1.04 U	1.50 NJ	1.22 U
beta-BHC			109 U	56.3 U	44.4 U	4.60 U	19.6 U	14.9 U	18.3 U	5.91 U	4.17 U	28.1 U	4.88 U
delta-BHC			54.4 U	28.2 U	22.2 U	2.30 U	9.78 U	7.47 U	9.16 U	2.96 U	2.09 U	14.1 U	2.44 U
Dieldrin			136 U	70.4 U	55.5 U	5.75 U	24.4 U	18.7 U	22.9 U	7.39 U	5.22 U	35.1 U	6.11 U
Endosulfan I			136 U	70.4 U	55.5 U	5.75 U	24.4 U	18.7 U	22.9 U	7.39 U	5.22 U	35.1 U	6.11 U
Endosulfan II			81.7 U	42.3 U	33.3 U	3.45 U	14.7 U	3.45 J	13.7 U	4.43 U	3.13 U	21.1 U	3.66 U
Endosulfan sulfate			163 U	84.5 U	66.6 U	6.90 U	29.3 U	22.4 U	27.5 U	8.87 U	6.26 U	42.2 U	7.33 U
Endrin			109 U	56.3 U	44.4 U	4.60 U	3.82 NJ	2.89 J	4.22 J	5.91 U	4.17 U	28.1 U	1.05 NJ
Endrin aldehyde			272 U	141 U	111 U	2.11 NJ	48.9 U	37.4 U	45.8 U	14.8 U	10.4 U	70.3 U	12.2 U
Endrin ketone			160 NJ	209 NJ	33.3 U	3.45 U	14.7 U	11.2 U	13.7 U	2.24 NJ	3.13 U	15.0 NJ	3.66 U
gamma-BHC			54.4 U	28.2 U	22.2 U	2.30 U	9.78 U	7.47 U	9.16 U	2.96 U	2.09 U	14.1 U	2.44 U
gamma-Chlordane			18.0 NJ	12.9 NJ	4.47 NJ	0.705 NJ	9.78 U	7.47 U	9.16 U	2.96 U	0.330 NJ	14.1 U	2.44 U
Heptachlor			81.7 U	42.3 U	33.3 U	3.45 U	4.02 NJ	11.2 U	13.7 U	4.43 U	3.13 U	21.1 U	3.66 U
Heptachlor epoxide			75.0 NJ	131 NJ	13.6 NJ	1.25 NJ	24.4 U	18.7 U	22.9 U	7.39 U	0.730 NJ	35.1 U	1.23 NJ
Methoxychlor			1090 U	310 NJ	444 U	46.0 U	196 U	149 U	183 U	59.1 U	41.7 U	281 U	48.8 U
Toxaphene			2720 U	1410 U	1110 U	115 U	489 U	374 U	458 U	148 U	104 U	703 U	122 U
Decachlorobiphenyl	Surr		0 %	362 %	124 %	90 %	85 %	91 %	84 %	136 %	99 %	158 %	99 %
Tetrachloro-m-xylene	Surr		0 %	71 %	88 %	81 %	87 %	87 %	82 %	94 %	100 %	109 %	86 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-7-Z2 0.5 - 1.5 05/31/01	TMCSD-7-Z3 1.5 - 2.4 05/31/01	TMCSD-7-1-Z2 0.5 - 1.1 05/31/01	TMCSD-7-1-Z3 1.1 - 2.5 05/31/01	TMCSD-8-1-Z3 2.2 - 2.5 05/30/01	TMCSD-8-1-Z4 2.5 - 3.5 05/30/01	TMCSD-8-1-Z4/D 2.5 - 3.5 05/30/01	TMCSD-8-2-Z2 0.5 - 0.9 05/30/01	TMCSD-8-2-Z3 0.9 - 2.5 05/30/01	TMCSD-9-Z2 0.5 - 1.6 05/30/01	TMCSD-9-Z4 1.6 - 3.5 05/30/01
(µg/Kg)													
1,1,1-Trichloroethane			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,1,2,2-Tetrachloroethane			6.31 UJ	257 J	10.9 UJ	5.92 UJ	25.8 U	18.6 UJ	4.88 UJ	7.25 UJ	5.26 UJ	6.96 UJ	6.00 UJ
1,1,2-Trichloroethane			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
1,1-Dichloroethane			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,1-Dichloroethene			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,2-Dichlorobenzene			5.84 J	7.08 UJ	8.15 J	17.2 J	25.8 U	18.6 UJ	4.88 UJ	2.84 J	5.26 UJ	6.96 UJ	6.00 UJ
1,2-Dichloroethane			6.31 U	36.9 J	4.86 J	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,2-Dichloroethene, Total			6.31 U	7.51 J	27.9 J	5.78 J	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,2-Dichloropropane			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
1,3-Dichlorobenzene			6.31 UJ	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 UJ	4.88 UJ	7.25 UJ	5.26 UJ	6.96 UJ	6.00 UJ
1,4-Dichlorobenzene			7.02 J	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 UJ	4.88 UJ	7.25 UJ	5.26 UJ	6.96 UJ	6.00 UJ
2-Butanone			7.11 J	14.2 UJ	21.9 UJ	11.8 U	32.0 J	19.9 J	3.77 J	14.5 U	10.5 U	4.51 J	12.0 U
2-Chloroethyl vinyl ether			12.6 U	14.2 UJ	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
2-Hexanone			12.6 U	14.2 UJ	21.9 UJ	11.8 UJ	51.5 U	37.2 U	9.77 U	14.5 U	10.5 UJ	13.9 U	12.0 U
4-Methyl-2-pentanone			12.6 U	14.2 UJ	21.9 UJ	11.8 UJ	51.5 U	37.2 U	9.77 U	14.5 U	10.5 UJ	13.9 U	12.0 U
Acetone			28.6 J	19.4 J	57.3 J	17.5 J	134	88.8 J	18.0 J	14.5 U	10.5 U	22.1 J	11.0 J
Benzene			54.3 J	2980 J	9.16 J	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Bromodichloromethane			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Bromoform			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Bromomethane			12.6 U	14.2 UJ	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
Carbon disulfide			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	6.55 J	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Carbon tetrachloride			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Chlorobenzene			224 J	111000	32.1 J	5.31 J	30.6	18.6 U	4.88 U	2.22 J	5.26 UJ	5.95 J	6.00 U
Chloroethane			12.6 U	14.2 UJ	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
Chloroform			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Chloromethane			12.6 U	14.2 UJ	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
cis-1,2-Dichloroethene			6.31 U	3.24 J	27.2 J	5.63 J	13.7 J	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
cis-1,3-Dichloropropene			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Dibromochloromethane			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Ethylbenzene			6.31 U	17.2 J	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
m,p-Xylene			6.31 U	5.99 J	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Methylene chloride			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
o-Xylene			6.31 U	2.88 J	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Styrene			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Tetrachloroethene			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Toluene			3.17 J	6.50 J	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
trans-1,2-Dichloroethene			6.31 U	4.30 J	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
trans-1,3-Dichloropropene			6.31 U	7.08 UJ	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
Trichloroethene			6.31 U	7.08 UJ	10.9 UJ	2.36 J	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Trichlorofluoromethane			6.31 U	7.08 UJ	10.9 UJ	5.92 U	25.8 U	18.6 U	4.88 U	7.25 U	5.26 U	6.96 U	6.00 U
Vinyl acetate			12.6 U	14.2 UJ	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
Vinyl chloride			12.6 U	9.04 J	21.9 UJ	11.8 U	51.5 U	37.2 U	9.77 U	14.5 U	10.5 U	13.9 U	12.0 U
Xylenes, Total			6.31 U	8.87 J	10.9 UJ	5.92 UJ	25.8 U	18.6 U	4.88 U	7.25 U	5.26 UJ	6.96 U	6.00 U
1,2-Dichloroethane-d4	Surr		100 %	102 %	114 %	116 %	114 %	106 %	122 %	102 %	101 %	105 %	101 %
4-Bromofluorobenzene	Surr		132 %	189 %	120 %	137 %	108 %	143 %	124 %	144 %	165 %	131 %	129 %
Dibromofluoromethane	Surr		105 %	102 %	132 %	123 %	109 %	104 %	111 %	107 %	109 %	103 %	103 %
Toluene-d8	Surr		113 %	150 %	151 %	143 %	103 %	117 %	106 %	123 %	141 %	107 %	114 %

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APC_Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-7-Z2	TMCSD-7-Z3	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-8-2-Z3	TMCSD-9-Z2	TMCSD-9-Z4
		Depth:	0.5 - 1.5	1.5 - 2.4	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5	2.5 - 3.5	0.5 - 0.9	0.9 - 2.5	0.5 - 1.6	1.6 - 3.5
		Date:	05/31/01	05/31/01	05/31/01	05/31/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01
Semivolatiles by Method 8270C (µg/Kg)													
1,2,4-Trichlorobenzene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
1,2-Dichlorobenzene			170 J	952 J	1140	100 J	536 J	1210 U	1540 U	1010 J	356 U	448 U	394 U
1,3-Dichlorobenzene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
1,4-Dichlorobenzene			235 J	2170	370 J	372 U	1700 U	1210 U	1540 U	127 J	356 U	448 U	394 U
2,4,5-Trichlorophenol			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
2,4,6-Trichlorophenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2,4-Dichlorophenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2,4-Dimethylphenol			204 J	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2,4-Dinitrophenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2,4-Dinitrotoluene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2,6-Dinitrotoluene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2-Chloronaphthalene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2-Chlorophenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2-Methylnaphthalene			1920	614 J	350 J	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2-Methylphenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
2-Nitroaniline			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
2-Nitrophenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
3,3'-Dichlorobenzidine			826 U	2800 UJ	1450 U	744 U	3390 U	2420 U	3090 U	970 U	713 U	895 U	788 U
3-Nitroaniline			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
4,6-Dinitro-2-methylphenol			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
4-Bromophenyl phenyl ether			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
4-Chloro-3-methylphenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
4-Chloroaniline			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
4-Chlorophenyl phenyl ether			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
4-Methylphenol			250 J	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
4-Nitroaniline			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
4-Nitrophenol			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
Acenaphthene			3560 J	1080 J	458 J	372 U	1700 U	1210 U	1540 U	104 J	356 U	130 J	394 U
Acenaphthylene			949	1080 J	1480	372 U	371 J	1210 U	1540 U	144 J	356 U	82.0 J	394 U
Anthracene			7460 J	2900	2670	37.7 J	396 J	1210 U	1540 U	371 J	356 U	425 J	394 U
Benz(a)anthracene			11400 J	5750	3700 J	69.5 J	395 J	1210 U	1540 U	747	356 U	676 J	394 U
Benzo(a)pyrene			7960 J	5170 J	3300 J	57.5 J	465 J	1210 U	1540 U	704 J	356 U	607 J	394 U
Benzo(b)fluoranthene			9470 J	4500 J	3610 J	58.1 J	541 J	1210 U	1540 U	531 J	356 U	522 J	394 U
Benzo(g,h,i)perylene			1500	2580 J	995 J	372 U	1700 U	1210 U	1540 U	674 J	356 U	197 J	394 U
Benzo(k)fluoranthene			7600 J	4810 J	2810 J	67.0 J	517 J	1210 U	1540 U	603 J	356 U	644 J	394 U
Benzoic acid			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
Benzyl alcohol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Bis(2-chloroethoxy)methane			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Bis(2-chloroethyl)ether			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Bis(2-chloroisopropyl)ether			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Bis(2-ethylhexyl)phthalate			279 J	479 J	156 J	372 U	1700 U	1210 U	1540 U	485 U	356 U	87.3 J	394 U
Butyl benzyl phthalate			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Carbazole			5170 J	1450	800	372 U	1700 U	1210 U	1540 U	163 J	356 U	209 J	394 U
Chrysene			10500 J	6210	4650 J	76.1 J	495 J	1210 U	1540 U	874	356 U	711 J	394 U
Dibenz(a,h)anthracene			1250	1690 J	704 J	372 U	1700 U	1210 U	1540 U	268 J	356 U	112 J	394 U
Dibenzofuran			3940 J	839 J	294 J	372 U	1700 U	1210 U	1540 U	485 U	356 U	102 J	394 U
Diethyl phthalate			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U

Table C-1

Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-7-Z2 0.5 - 1.5 05/31/01	TMCSD-7-Z3 1.5 - 2.4 05/31/01	TMCSD-7-1-Z2 0.5 - 1.1 05/31/01	TMCSD-7-1-Z3 1.1 - 2.5 05/31/01	TMCSD-8-1-Z3 2.2 - 2.5 05/30/01	TMCSD-8-1-Z4 2.5 - 3.5 05/30/01	TMCSD-8-1-Z4/D 2.5 - 3.5 05/30/01	TMCSD-8-2-Z2 0.5 - 0.9 05/30/01	TMCSD-8-2-Z3 0.9 - 2.5 05/30/01	TMCSD-9-Z2 0.5 - 1.6 05/30/01	TMCSD-9-Z4 1.6 - 3.5 05/30/01
Dimethyl phthalate			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Di-n-butyl phthalate			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Di-n-octyl phthalate			413 U	1400 UJ	725 J	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Fluoranthene			27700	14500	8820	167 J	1270 J	1210 U	1540 U	1110	48.0 J	1430	394 U
Fluorene			4550 J	1110 J	702 J	372 U	1700 U	1210 U	1540 U	129 J	356 U	137 J	394 U
Hexachlorobenzene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Hexachlorobutadiene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Hexachlorocyclopentadiene			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
Hexachloroethane			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Indeno(1,2,3-cd)pyrene			1430 J	5860	1220 J	372 U	1700 U	1210 U	1540 U	1290	356 U	336 J	394 U
Isophorone			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Naphthalene			6360 J	1230 J	340 J	372 U	1700 U	1210 U	1540 U	126 J	356 U	136 J	394 U
Nitrobenzene			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
N-Nitrosodimethylamine			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
N-Nitrosodi-n-propylamine			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
N-Nitrosodiphenylamine			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Pentachlorophenol			1040 U	3520 UJ	1820 U	935 U	4270 U	3040 U	3880 U	1220 U	896 U	1130 U	991 U
Phenanthrene			31200	9470	4780	96.0 J	524 J	1210 U	1540 U	1100	70.4 J	1270	394 U
Phenol			413 U	1400 UJ	725 U	372 U	1700 U	1210 U	1540 U	485 U	356 U	448 U	394 U
Pyrene			20700	8010	3750 J	153 J	475 J	1210 U	1540 U	1560	52.8 J	685 J	394 U
2,4,6-Tribromophenol	Surr		89 %	78 %	56 %	66 %	95 %	101 %	88 %	34 %	42 %	51 %	38 %
2-Fluorobiphenyl	Surr		106 %	79 %	82 %	64 %	82 %	94 %	82 %	77 %	81 %	94 %	72 %
2-Fluorophenol	Surr		53 %	86 %	41 %	45 %	48 %	53 %	51 %	61 %	61 %	71 %	53 %
Nitrobenzene-d5	Surr		94 %	101 %	67 %	60 %	87 %	88 %	77 %	70 %	69 %	85 %	62 %
Phenol-d5	Surr		40 %	82 %	38 %	49 %	48 %	55 %	52 %	59 %	61 %	69 %	53 %
Terphenyl-d14	Surr		50 %	61 %	31 %	73 %	50 %	54 %	44 %	71 %	84 %	44 %	77 %
Metals by Method 6010B and 7470A/71A (mg/Kg)													
Aluminum			5300	8790	8540	6060	7270	6170	7220	10200	10500	5760	4310
Antimony			0.42 U	0.41 U	0.67 U	0.33 U	1.4 U	1.1 U	1.4 U	0.39 U	0.28 U	0.36 U	0.33 U
Arsenic			8.7	32.8	13.7	6.6	19.9	4.6	3.6 J	20.7	10.5	8.8	14.8
Barium			34.6	86.5	58.3	24.1	78.7	46.4	60.9	128	24.7	45.2	31.0
Beryllium			0.20 J	0.68 J	0.22 U	0.12 J	0.45 U	0.36 U	0.45 U	0.67	0.36 J	0.12 U	0.11 U
Cadmium			2.1 J	12.7 J	12.3 J	0.11 U	5.0	0.36 U	0.45 U	6.2	0.094 U	0.12 U	0.11 U
Calcium			22100 J	45400 J	48000 J	26400 J	12700 J	8220 J	10400 J	13600 J	29800 J	22500 J	19900 J
Chromium			18.5	35.9	37.0	8.6	17.9	7.5	9.6	28.0	11.5	11.8	4.7
Cobalt			4.3	7.2	7.5	5.8	6.0 J	5.1 J	6.1 J	8.1	7.9	5.2	3.4
Copper			43.5	72.5	69.4	15.7	32.7	20.8	24.6	58.5	33.8	61.8	24.9
Iron			14300	23200	21400	15600	16900	21900	23100	26800	27300	17400	11500
Lead			77.9	182	153	10.2	38.0	4.6	4.9	85.6	9.6	38.3	3.8
Magnesium			3400 J	3220 J	6550 J	6390 J	3180	3770	4150	5950	11700	6880	6800
Manganese			112	199	244	307	141	166	179	348	877	443	315
Nickel			17.0	23.9	27.2	11.2	12.9	10.5	13.7	21.1	18.6	14.6	7.5
Potassium			930 J	1310 J	1100 J	1200 J	939	830	1050	1300	1650	826	964
Selenium			1.1 U	1.1 U	1.8 U	0.87 U	3.6 U	2.9 U	3.6 U	1.0 U	0.75 U	0.96 U	0.88 U
Silver			0.28 UR	0.27 UR	0.45 UR	0.22 UR	0.90 UR	0.73 UR	0.90 UR	0.26 UR	0.19 UR	0.24 UR	0.22 UR
Sodium			113 J	179	138 J	115	534	385	454	363	102	139	95.1 J
Thallium			0.56 U	0.55 U	0.89 U	0.60 J	1.8 U	1.5 U	1.8 U	0.52 U	1.2	0.48 U	0.44 U
Vanadium			32.0	45.3	47.0	14.9	23.5	12.2	13.4	40.3	18.1	21.9	8.5
Zinc			113 J	173 J	176 J	31.9	87.4	60.1	66.0	103	54.5	93.5	19.4
Mercury			0.11 J	0.20 J	0.46 J	0.047	0.084 J	0.057 UJ	0.075 UJ	0.42 J	0.015 UJ	0.038 J	0.017 UJ

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APC_Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-7-Z2 0.5 - 1.5 05/31/01	TMCSD-7-Z3 1.5 - 2.4 05/31/01	TMCSD-7-1-Z2 0.5 - 1.1 05/31/01	TMCSD-7-1-Z3 1.1 - 2.5 05/31/01	TMCSD-8-1-Z3 2.2 - 2.5 05/30/01	TMCSD-8-1-Z4 2.5 - 3.5 05/30/01	TMCSD-8-1-Z4/D 2.5 - 3.5 05/30/01	TMCSD-8-2-Z2 0.5 - 0.9 05/30/01	TMCSD-8-2-Z3 0.9 - 2.5 05/30/01	TMCSD-9-Z2 0.5 - 1.6 05/30/01	TMCSD-9-Z4 1.6 - 3.5 05/30/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)													
Total Organic Carbon			25700	72100	205000	5270	211000	177000		113000	4490	43700	2680
Hexavalent Chromium by Method 7196A (mg/Kg)													
Chromium, Hexavalent			0.92 J	5.8 U	9.8 U	4.4 U	19 U	16 U	18 U	6.2 U	0.83 J	5.8 U	5.9 U
Cyanide, Total by Method 9012A (mg/Kg)													
Cyanide			0.689 U	0.280 J	0.479 J	0.590 U	2.55 U	1.90 U	2.22 U	0.394 J	0.524 U	0.723 U	0.611 U
(mg/Kg)													
Petroleum Hydrocarbons, TR			370 J	1600	1060	477 U	2060 U	1520 U	1810 U	680	436 U	250 J	494 U
Percent Moisture (wt%)													
Percent Moisture			28.2	31.0		16.1	80.6	73.7	77.9		8.27	29.4	19.0

Key:
- J = Estimated value.
- N = Identification tentative.
- U = Not detected at the reported value.
- UR = Data rejected.
- mg/Kg = Micrograms per kilogram.
- μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-9-1-Z2	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-3-Z3	TMCSD-9-3-Z4	TMCSD-9-4-Z3	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z3	TMCSD-10-Z4	TMCSD-10-1-Z3
		Depth:	0.5 - 1	1 - 3.5	0.5 - 1.1	0.5 - 1.1	1.1 - 3.5	0.5 - 1.65	1.85 - 3.5	1.85 - 3.5	0.5 - 1.65	1.65 - 3.5	1.7 - 2.2
		Date:	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01	05/29/01	05/29/01	05/29/01	05/29/01	05/24/01
PCBs by Method 8082 (µg/Kg)													
Aroclor 1016			23.3 U	23.9 U	24.8 U	38.0 U	49.9 U	28.6 U	21.4 U	23.5 U	25.5 U	21.8 U	23.3 U
Aroclor 1221			46.7 U	47.9 U	49.6 U	76.1 U	99.8 U	57.2 U	42.7 U	46.9 U	51.0 U	43.7 U	46.6 U
Aroclor 1232			23.3 U	23.9 U	24.8 U	38.0 U	49.9 U	28.6 U	21.4 U	23.5 U	25.5 U	21.8 U	23.3 U
Aroclor 1242			23.3 U	23.9 U	24.8 U	38.0 U	49.9 U	28.6 U	21.4 U	23.5 U	25.5 U	21.8 U	23.3 U
Aroclor 1248			23.3 U	23.9 U	24.8 U	38.0 U	49.9 U	28.6 U	21.4 U	23.5 U	25.5 U	21.8 U	23.3 U
Aroclor 1254			23.3 U	23.9 U	24.8 U	38.0 U	49.9 U	28.6 U	21.4 U	23.5 U	25.5 U	21.8 U	23.3 U
Aroclor 1260			259	23.9 U	116	361	49.9 U	473	21.4 U	23.5 U	256	21.8 U	106
Decachlorobiphenyl	Surr		102 %	98 %	101 %	107 %	100 %	111 %	99 %	115 %	88 %	108 %	95 %
Tetrachloro-m-xylene	Surr		61 %	93 %	91 %	90 %	93 %	83 %	87 %	97 %	78 %	97 %	88 %
Pesticides by Method 8081A (µg/Kg)													
4,4'-DDD			35.0 U	3.59 U	4.55 NJ	20.8 NJ	37.4 U	9.98 NJ	3.20 U	3.52 U	5.84 NJ	3.28 U	3.84 NJ
4,4'-DDE			35.0 U	3.59 U	3.72 U	28.5 U	37.4 U	21.5 U	3.20 U	3.52 U	19.1 U	3.28 U	0.435 NJ
4,4'-DDT			9.14 NJ	4.79 U	2.82 NJ	11.1 NJ	49.9 U	11.4 NJ	4.27 U	4.69 U	6.04 NJ	4.37 U	15.4 NJ
Aldrin			112 NJ	4.79 U	14.2 U	32.0 NJ	49.9 U	76.6 NJ	4.27 U	4.69 U	25.5 U	4.37 U	4.66 U
alpha-BHC			35.0 U	3.59 U	3.72 U	28.5 U	37.4 U	21.5 U	3.20 U	3.52 U	19.1 U	3.28 U	3.49 U
alpha-Chlordane			4.52 NJ	1.20 U	0.977 NJ	5.61 NJ	12.5 U	5.67 NJ	1.07 U	1.17 U	1.93 NJ	1.09 U	2.64 NJ
beta-BHC			46.7 U	4.79 U	4.96 U	38.0 U	49.9 U	28.6 U	4.27 U	4.69 U	25.5 U	4.37 U	4.66 U
delta-BHC			23.3 U	2.39 U	0.596 NJ	19.0 U	25.0 U	14.3 U	2.14 U	2.35 U	12.7 U	2.18 U	2.33 U
Dieldrin			58.3 U	5.98 U	2.12 NJ	17.3 NJ	62.4 U	35.8 U	5.34 U	5.86 U	31.9 U	5.46 U	5.82 U
Endosulfan I			58.3 U	5.98 U	0.715 NJ	47.6 U	62.4 U	5.72 NJ	5.34 U	5.86 U	31.9 U	5.46 U	2.64 NJ
Endosulfan II			35.0 U	3.59 U	3.72 U	28.5 U	37.4 U	21.5 U	3.20 U	3.52 U	19.1 U	3.28 U	3.49 U
Endosulfan sulfate			70.0 U	7.18 U	7.44 U	57.1 U	74.9 U	42.9 U	6.41 U	7.04 U	38.2 U	6.55 U	6.98 U
Endrin			46.7 U	4.79 U	4.96 U	38.0 U	49.9 U	28.6 U	4.27 U	4.69 U	25.5 U	4.37 U	4.66 U
Endrin aldehyde			117 U	12.0 U	12.4 U	60.2 NJ	125 U	65.3 NJ	10.7 U	11.7 U	63.7 U	10.9 U	11.6 U
Endrin ketone			23.8 NJ	3.59 U	7.49 NJ	16.0 NJ	37.4 U	20.9 NJ	3.20 U	3.52 U	14.9 NJ	3.28 U	3.49 U
gamma-BHC			23.3 U	2.39 U	2.48 U	19.0 U	25.0 U	5.98 NJ	2.14 U	2.35 U	12.7 U	2.18 U	2.33 U
gamma-Chlordane			23.3 U	2.39 U	2.48 U	8.79 NJ	25.0 U	9.01 NJ	2.14 U	2.35 U	3.56 NJ	2.18 U	1.17 NJ
Heptachlor			35.0 U	3.59 U	0.966 NJ	28.5 U	37.4 U	21.5 U	3.20 U	3.52 U	19.1 U	3.28 U	3.49 U
Heptachlor epoxide			58.3 U	5.98 U	6.20 U	9.05 NJ	62.4 U	25.1 NJ	5.34 U	5.86 U	31.9 U	5.46 U	1.56 NJ
Methoxychlor			467 U	47.9 U	49.6 U	380 U	499 U	50.6 NJ	42.7 U	46.9 U	255 U	43.7 U	46.6 U
Toxaphene			1170 U	120 U	124 U	951 U	1250 U	715 U	107 U	117 U	637 U	109 U	116 U
Decachlorobiphenyl	Surr		292 %	106 %	112 %	111 %	117 %	224 %	94 %	99 %	87 %	91 %	112 %
Tetrachloro-m-xylene	Surr		134 %	97 %	102 %	107 %	87 %	115 %	90 %	96 %	79 %	88 %	94 %

Table C-1

Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-9-1-Z2 0.5 - 1 05/30/01	TMCSD-9-1-Z4 1 - 3.5 05/30/01	TMCSD-9-2-Z2 0.5 - 1.1 05/30/01	TMCSD-9-3-Z3 0.5 - 1.1 05/29/01	TMCSD-9-3-Z4 1.1 - 3.5 05/29/01	TMCSD-9-4-Z3 0.5 - 1.85 05/29/01	TMCSD-9-4-Z4 1.85 - 3.5 05/29/01	TMCSD-9-4-Z4/D 1.85 - 3.5 05/29/01	TMCSD-10-Z3 0.5 - 1.65 05/29/01	TMCSD-10-Z4 1.65 - 3.5 05/29/01	TMCSD-10-1-Z3 1.7 - 2.2 05/24/01
(µg/Kg)													
1,1,1-Trichloroethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,1,2,2-Tetrachloroethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 UJ	5.77 U
1,1,2-Trichloroethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,1-Dichloroethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,1-Dichloroethene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,2-Dichlorobenzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 UJ	5.77 U
1,2-Dichloroethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,2-Dichloroethene, Total			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,2-Dichloropropane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,3-Dichlorobenzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 UJ	5.77 U
1,4-Dichlorobenzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 UJ	5.77 U
2-Butanone			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	8.81 J	11.0 U	11.5 U
2-Chloroethyl vinyl ether			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
2-Hexanone			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
4-Methyl-2-pentanone			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
Acetone			14.8	7.52 J	12.6 U	20.0 U	57.8	14.4 U	11.7 U	11.6 U	52.2	11.0 U	11.5 U
Benzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Bromodichloromethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Bromoform			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Bromomethane			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
Carbon disulfide			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Carbon tetrachloride			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Chlorobenzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	2.83 J	5.87 U	5.81 U	6.38 U	5.48 U	1.55 J
Chloroethane			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
Chloroform			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Chloromethane			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
cis-1,2-Dichloroethene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
cis-1,3-Dichloropropene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Dibromochloromethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Ethylbenzene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
m,p-Xylene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Methylene chloride			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
o-Xylene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Styrene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Tetrachloroethene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Toluene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
trans-1,2-Dichloroethene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
trans-1,3-Dichloropropene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Trichloroethene			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Trichlorofluoromethane			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
Vinyl acetate			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
Vinyl chloride			11.9 U	12.5 U	12.6 U	20.0 U	28.0 U	14.4 U	11.7 U	11.6 U	12.8 U	11.0 U	11.5 U
Xylenes, Total			5.97 U	6.24 U	6.29 U	10.0 U	14.0 U	7.22 U	5.87 U	5.81 U	6.38 U	5.48 U	5.77 U
1,2-Dichloroethane-d4	Surr		101 %	103 %	99 %	94 %	105 %	90 %	95 %	97 %	91 %	92 %	94 %
4-Bromofluorobenzene	Surr		105 %	106 %	110 %	106 %	108 %	113 %	102 %	101 %	114 %	150 %	122 %
Dibromofluoromethane	Surr		103 %	106 %	103 %	99 %	102 %	97 %	101 %	100 %	99 %	102 %	103 %
Toluene-d8	Surr		101 %	101 %	102 %	105 %	106 %	106 %	104 %	101 %	104 %	126 %	109 %

001002_UK02_02_00_90-B0925
APC Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-9-1-Z2 0.5 - 1 05/30/01	TMCSD-9-1-Z4 1 - 3.5 05/30/01	TMCSD-9-2-Z2 0.5 - 1.1 05/30/01	TMCSD-9-3-Z3 0.5 - 1.1 05/29/01	TMCSD-9-3-Z4 1.1 - 3.5 05/29/01	TMCSD-9-4-Z3 0.5 - 1.85 05/29/01	TMCSD-9-4-Z4 1.85 - 3.5 05/29/01	TMCSD-9-4-Z4/D 1.85 - 3.5 05/29/01	TMCSD-10-Z3 0.5 - 1.65 05/29/01	TMCSD-10-Z4 1.65 - 3.5 05/29/01	TMCSD-10-1-Z3 1.7 - 2.2 05/24/01
Semivolatiles by Method 8270C (µg/Kg)													
1,2,4-Trichlorobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
1,2-Dichlorobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
1,3-Dichlorobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
1,4-Dichlorobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,4,5-Trichlorophenol			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
2,4,6-Trichlorophenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,4-Dichlorophenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,4-Dimethylphenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,4-Dinitrophenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,4-Dinitrotoluene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2,6-Dinitrotoluene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2-Chloronaphthalene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2-Chlorophenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2-Methylnaphthalene			78.9 J	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2-Methylphenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
2-Nitroaniline			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
2-Nitrophenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
3,3'-Dichlorobenzidine			786 U	771 U	811 U	1300 U	1830 U	956 U	767 U	774 U	845 U	738 U	749 U
3-Nitroaniline			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
4,6-Dinitro-2-methylphenol			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
4-Bromophenyl phenyl ether			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
4-Chloro-3-methylphenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
4-Chloroaniline			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
4-Chlorophenyl phenyl ether			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
4-Methylphenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
4-Nitroaniline			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
4-Nitrophenol			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
Acenaphthene			221 J	385 U	405 U	390 J	915 U	267 J	383 U	387 U	64.9 J	369 U	375 U
Acenaphthylene			393 U	385 U	405 U	650 U	915 U	165 J	383 U	387 U	423 U	369 U	76.6 J
Anthracene			514	385 U	57.8 J	810	915 U	1090	383 U	387 U	153 J	369 U	83.8 J
Benz(a)anthracene			836 J	385 U	114 J	1140 J	915 U	1690	383 U	387 U	318 J	369 U	140 J
Benzo(a)pyrene			619 J	385 U	101 J	1010 J	915 U	1310 J	383 U	387 U	284 J	369 U	120 J
Benzo(b)fluoranthene			630 J	385 U	92.0 J	996 J	915 U	1130 J	383 U	387 U	249 J	369 U	88.4 J
Benzo(g,h,i)perylene			194 J	385 U	70.3 J	349 J	915 U	419 J	383 U	387 U	240 J	369 U	71.3 J
Benzo(k)fluoranthene			694 J	385 U	78.0 J	938 J	915 U	1330 J	383 U	387 U	211 J	369 U	97.8 J
Benzoic acid			1970	969 U	1020 U	4240	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
Benzyl alcohol			205 J	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Bis(2-chloroethoxy)methane			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Bis(2-chloroethyl)ether			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Bis(2-chloroisopropyl)ether			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Bis(2-ethylhexyl)phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Butyl benzyl phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Carbazole			305 J	385 U	405 U	351 J	915 U	471 J	383 U	387 U	78.9 J	369 U	375 U
Chrysene			876 J	385 U	122 J	1220 J	915 U	1710	383 U	387 U	340 J	369 U	158 J
Dibenz(a,h)anthracene			114 J	385 U	405 U	172 J	915 U	233 J	383 U	387 U	99.0 J	369 U	375 U
Dibenzofuran			166 J	385 U	405 U	179 J	915 U	211 J	383 U	387 U	423 U	369 U	375 U
Diethyl phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-9-1-Z2	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-3-Z3	TMCSD-9-3-Z4	TMCSD-9-4-Z3	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z3	TMCSD-10-Z4	TMCSD-10-1-Z3
		Depth:	0.5 - 1	1 - 3.5	0.5 - 1.1	0.5 - 1.1	1.1 - 3.5	0.5 - 1.65	1.65 - 3.5	1.65 - 3.5	0.5 - 1.65	1.65 - 3.5	1.7 - 2.2
		Date:	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01	05/29/01	05/29/01	05/28/01	05/29/01	05/24/01
Dimethyl phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Di-n-butyl phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Di-n-octyl phthalate			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Fluoranthene			1820	385 U	194 J	2470	915 U	4330	383 U	387 U	508	369 U	300 J
Fluorene			202 J	385 U	405 U	323 J	915 U	396 J	383 U	387 U	63.8 J	369 U	375 U
Hexachlorobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Hexachlorobutadiene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Hexachlorocyclopentadiene			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
Hexachloroethane			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Indeno(1,2,3-cd)pyrene			336 J	385 U	149 J	508 J	915 U	838	383 U	387 U	464	369 U	131 J
Isophorone			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Naphthalene			182 J	385 U	405 U	117 J	915 U	140 J	383 U	387 U	423 U	369 U	375 U
Nitrobenzene			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
N-Nitrosodimethylamine			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
N-Nitrosodi-n-propylamine			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
N-Nitrosodiphenylamine			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Pentachlorophenol			989 U	969 U	1020 U	1640 U	2300 U	1200 U	964 U	973 U	1060 U	928 U	942 U
Phenanthrene			1980	385 U	226 J	2640	915 U	3570	383 U	387 U	609	369 U	175 J
Phenol			393 U	385 U	405 U	650 U	915 U	478 U	383 U	387 U	423 U	369 U	375 U
Pyrene			901 J	385 U	212 J	1300 J	915 U	1600	383 U	387 U	637	369 U	237 J
2,4,6-Tribromophenol	Surr		39 %	60 %	38 %	46 %	54 %	71 %	47 %	42 %	40 %	59 %	107 %
2-Fluorobiphenyl	Surr		86 %	79 %	82 %	93 %	85 %	83 %	83 %	82 %	83 %	79 %	84 %
2-Fluorophenol	Surr		67 %	50 %	64 %	65 %	44 %	49 %	63 %	66 %	64 %	76 %	78 %
Nitrobenzene-d5	Surr		79 %	70 %	72 %	77 %	70 %	79 %	70 %	73 %	71 %	74 %	81 %
Phenol-d5	Surr		64 %	50 %	63 %	65 %	42 %	49 %	64 %	64 %	63 %	81 %	77 %
Terphenyl-d14	Surr		38 %	82 %	71 %	42 %	64 %	37 %	99 %	92 %	76 %	74 %	62 %
Metals by Method 6010B and 7470A/71A (mg/Kg)													
Aluminum			6750	4020	3860	4100	6700	4050	4070	4260	3210	4890	2910
Antimony			0.32 U	0.37 U	0.35 U	0.53 U	0.81 U	0.40 U	0.31 U	0.33 U	0.38 U	0.34 U	0.31 U
Arsenic			4.7	0.83 J	2.9	4.6	7.2	1.8	3.3	2.8	3.1	2.4	3.2
Barium			41.5	27.3	28.2	56.5	274	50.7	20.3	20.8	35.6	26.5	40.0
Beryllium			0.15 J	0.12 U	0.12 J	0.18 U	0.27 U	0.13 U	0.11 J	0.12 J	0.13 U	0.16 J	0.10 U
Cadmium			0.11 U	0.12 U	0.12 U	0.18 U	0.29 J	0.13 U	0.10 U	0.11 U	0.13 U	0.11 U	0.10 U
Calcium			13700 J	14200 J	17900 J	21500 J	238000 J	16300 J	18200 J	16500 J	7250 J	22100 J	15400 J
Chromium			5.9	4.5	5.0	41.0	9.8	240	4.3	6.3	6.6	5.5	4.7
Cobalt			4.9	3.3	3.0	3.5 J	4.9 J	3.7	3.3	3.4	2.6	3.7	2.7
Copper			12.4	7.4	9.7	12.5	13.9	12.2	9.9	14.1	12.2	13.4	12.9 U
Iron			17700	8410	10400	14300	20500	11100	10300	10500	8800	11300	8860
Lead			10.1	2.7	11.2	138	2.6	921	3.3	3.1	15.5	3.7	9.6
Magnesium			4370	5560	4310	3060	7890	4670	6070	6400	2840	6350	5090
Manganese			269	243	304	297	420	237	373	383	125	423	345
Nickel			11.2	6.9	7.5	7.6	10.2	7.3	6.8	8.0	7.9	8.4	6.1
Potassium			543	1060	730	743	1510	495	778	901	482	836	417 J
Selenium			0.85 U	0.98 U	0.93 U	1.4 U	2.2 U	1.1 U	0.84 U	0.89 U	1.0 U	0.91 U	0.83 U
Silver			0.21 UR	0.24 UR	0.23 UR	0.35 UR	0.54 UR	0.27 UR	0.21 UR	0.22 UR	0.25 UR	0.23 UR	0.21 UR
Sodium			87.3 J	81.0 J	126	334	562	222	94.0 J	83.8 J	181	111 J	30.2 U
Thallium			0.43 U	0.49 U	0.47 U	0.71 U	1.1 U	0.54 U	0.42 U	0.45 U	0.51 U	0.46 U	0.41 U
Vanadium			11.5	8.0	9.2	11.1	15.8	9.4	7.5	8.2	10.2	8.3	7.7
Zinc			46.5	17.3	44.9	57.6	41.1	66.2	19.5	18.7	56.0	23.0	31.2
Mercury			0.028 J	0.021 UJ	0.019 UJ	0.039 J	0.043 UJ	0.028 J	0.016 UJ	0.019 UJ	0.025 J	0.015 UJ	0.022 J

001002_UK02_02_00_90-B0925
APC_Tables.XLS-TMC 2001 Sampling Table C-1-3/27/02

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-9-1-Z2 / 0.5 - 1 / 05/30/01	TMCSD-9-1-Z4 / 1 - 3.5 / 05/30/01	TMCSD-9-2-Z2 / 0.5 - 1.1 / 05/30/01	TMCSD-9-3-Z3 / 0.5 - 1.1 / 05/29/01	TMCSD-9-3-Z4 / 1.1 - 3.5 / 05/29/01	TMCSD-9-4-Z3 / 0.5 - 1.85 / 05/29/01	TMCSD-9-4-Z4 / 1.85 - 3.5 / 05/29/01	TMCSD-9-4-Z4/D / 1.85 - 3.5 / 05/29/01	TMCSD-10-Z3 / 0.5 - 1.65 / 05/29/01	TMCSD-10-Z4 / 1.65 - 3.5 / 05/29/01	TMCSD-10-1-Z3 / 1.7 - 2.2 / 05/24/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)													
Total Organic Carbon			33600	2490 U	2580	25500	77000	25600	2340 U	2370 U	12400	2280	4120
Hexavalent Chromium by Method 7196A (mg/Kg)													
Chromium, Hexavalent			5.1 U	4.9 U	5.8 U	2.8 J	12 U	5.2 U	4.7 U	6.0 U	4.4 U	5.2 U	4.4 U
Cyanide, Total by Method 9012A (mg/Kg)													
Cyanide			0.601 U	0.618 U	0.633 U	0.999 U	1.34 U	0.737 U	0.584 U	0.579 U	0.615 U	0.554 U	0.578 U
(mg/Kg)													
Petroleum Hydrocarbons, TR			152 J	499 U	512 U	823 U	1120 U	590 U	477 U	482 U	517 U	457 U	481 U
Percent Moisture (wt%)													
Percent Moisture				19.9	21.8	51.4	64.4	32.2	16.1	17.0	22.6	12.4	16.8

Key:
J = Estimated value.
N = Identification tentative.
U = Not detected at the reported value.
UR = Data rejected.
mg/Kg = Micrograms per kilogram.
μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-10-1-Z4 2.4 - 3.5 05/24/01	TMCSD-10-2-Z3 1.1 - 2.1 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z3 1.5 - 2.5 05/23/01	TMCSD-10-3-Z3/D 1.5 - 2.5 05/23/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z3 1.1 - 2.3 05/24/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
PCBs by Method 8082 (µg/Kg)										
Aroclor 1016			23.8 U	27.1 U	22.0 U	352 U	357 U	24.1 U	1310 U	24.2 U
Aroclor 1221			47.6 U	54.1 U	44.0 U	704 U	713 U	48.3 U	2630 U	48.3 U
Aroclor 1232			23.8 U	27.1 U	22.0 U	352 U	357 U	24.1 U	1310 U	24.2 U
Aroclor 1242			23.8 U	27.1 U	22.0 U	352 U	357 U	24.1 U	1310 U	24.2 U
Aroclor 1248			23.8 U	27.1 U	22.0 U	352 U	357 U	24.1 U	1310 U	24.2 U
Aroclor 1254			23.8 U	27.1 U	22.0 U	352 U	357 U	24.1 U	1310 U	24.2 U
Aroclor 1260			8.58 J	216	22.0 U	1480	2120	152	11700	24.2 U
Decachlorobiphenyl	Surr		97 %	96 %	101 %	127 %	128 %	99 %	0 %	91 %
Tetrachloro-m-xylene	Surr		88 %	90 %	94 %	95 %	101 %	85 %	0 %	85 %
Pesticides by Method 8081A (µg/Kg)										
4,4´-DDD			3.57 U	5.35 NJ	3.30 U	64.4 NJ	76.1 NJ	190 NJ	149 NJ	3.63 U
4,4´-DDE			3.57 U	1.23 NJ	3.30 U	20.5 NJ	15.5 NJ	241 U	197 U	3.63 U
4,4´-DDT			0.943 NJ	13.6 NJ	4.40 U	25.0 NJ	32.5 NJ	2240 NJ	263 U	4.83 U
Aldrin			4.76 U	5.41 U	4.40 U	17.6 U	17.8 U	121 U	263 U	4.83 U
alpha-BHC			3.57 U	4.06 U	3.30 U	17.6 U	17.8 U	121 U	197 U	3.63 U
alpha-Chlordane			1.19 U	1.35 U	1.10 U	17.6 U	17.8 U	121 U	65.7 U	1.21 U
beta-BHC			4.76 U	5.41 U	4.40 U	17.6 U	17.8 U	121 U	263 U	4.83 U
delta-BHC			2.38 U	2.71 U	2.20 U	17.6 U	17.8 U	121 U	131 U	2.42 U
Dieldrin			5.95 U	3.62 NJ	5.49 U	6.10 NJ	7.64 NJ	241 U	328 U	6.04 U
Endosulfan I			5.95 U	6.77 U	5.49 U	35.2 U	35.7 U	241 U	328 U	6.04 U
Endosulfan II			3.57 U	4.06 U	3.30 U	35.2 U	35.7 U	241 U	197 U	3.63 U
Endosulfan sulfate			7.14 U	8.12 U	6.59 U	35.2 U	35.7 U	241 U	394 U	7.25 U
Endrin			4.76 U	5.41 U	4.40 U	35.2 U	35.7 U	241 U	209 NJ	4.83 U
Endrin aldehyde			11.9 U	13.5 U	11.0 U	35.2 U	35.7 U	241 U	657 U	12.1 U
Endrin ketone			3.57 U	4.06 U	3.30 U	35.2 U	35.7 U	241 U	197 U	3.63 U
gamma-BHC			2.38 U	2.71 U	2.20 U	17.6 U	17.8 U	121 U	131 U	2.42 U
gamma-Chlordane			2.38 U	1.55 NJ	2.20 U	17.8 NJ	21.2 NJ	121 U	104 NJ	2.42 U
Heptachlor			3.57 U	4.06 U	3.30 U	35.2 U	35.7 U	241 U	197 U	3.63 U
Heptachlor epoxide			5.95 U	1.44 NJ	1.41 J	35.2 U	35.7 U	241 U	328 U	3.07 J
Methoxychlor			47.6 U	54.1 U	32.3 J	176 U	178 U	1210 U	2630 U	48.3 U
Toxaphene			119 U	135 U	110 U	881 U	892 U	6030 U	6570 U	121 U
Decachlorobiphenyl	Surr		92 %	104 %	97 %	137 %	125 %	0 %	0 %	101 %
Tetrachloro-m-xylene	Surr		87 %	89 %	87 %	101 %	86 %	0 %	0 %	84 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-10-1-Z4 2.4 - 3.5 05/24/01	TMCSD-10-2-Z3 1.1 - 2.1 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z3 1.5 - 2.5 05/23/01	TMCSD-10-3-Z3/D 1.5 - 2.5 05/23/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z3 1.1 - 2.3 05/24/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
(µg/Kg)										
1,1,1-Trichloroethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,1,2,2-Tetrachloroethane			5.95 UJ	6.59 U	5.68 UJ	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,1,2-Trichloroethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,1-Dichloroethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,1-Dichloroethene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,2-Dichlorobenzene			5.95 UJ	6.59 U	5.68 UJ	8.95 U	8.90 U	1.88 J	2.54 J	5.98 U
1,2-Dichloroethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,2-Dichloroethene, Total			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,2-Dichloropropane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,3-Dichlorobenzene			5.95 UJ	6.59 U	5.68 UJ	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,4-Dichlorobenzene			5.95 UJ	6.59 U	5.68 UJ	8.95 U	8.90 U	6.39 U	2.00 J	5.98 U
2-Butanone			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
2-Chloroethyl vinyl ether			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
2-Hexanone			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
4-Methyl-2-pentanone			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
Acetone			11.9 U	13.2 U	11.4 U	21.8 J	17.8 U	28.5	13.3 U	12.0 U
Benzene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Bromodichloromethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Bromoform			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Bromomethane			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
Carbon disulfide			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Carbon tetrachloride			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Chlorobenzene			5.95 U	7.78	5.68 U	5.00 J	5.58 J	6.39 U	12.4	5.98 U
Chloroethane			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
Chloroform			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Chloromethane			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
cis-1,2-Dichloroethene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
cis-1,3-Dichloropropene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Dibromochloromethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Ethylbenzene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
m,p-Xylene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Methylene chloride			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
o-Xylene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Styrene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Tetrachloroethene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Toluene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
trans-1,2-Dichloroethene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
trans-1,3-Dichloropropene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Trichloroethene			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Trichlorofluoromethane			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
Vinyl acetate			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
Vinyl chloride			11.9 U	13.2 U	11.4 U	17.9 U	17.8 U	12.8 U	13.3 U	12.0 U
Xylenes, Total			5.95 U	6.59 U	5.68 U	8.95 U	8.90 U	6.39 U	6.65 U	5.98 U
1,2-Dichloroethane-d4	Surr		92 %	93 %	92 %	96 %	94 %	94 %	97 %	94 %
4-Bromofluorobenzene	Surr		134 %	113 %	138 %	117 %	118 %	118 %	124 %	103 %
Dibromofluoromethane	Surr		103 %	102 %	101 %	99 %	98 %	99 %	104 %	101 %
Toluene-d8	Surr		114 %	109 %	123 %	110 %	111 %	110 %	113 %	104 %

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type									
		Sample ID:	TMCSD-10-1-Z4	TMCSD-10-2-Z3	TMCSD-10-2-Z4	TMCSD-10-3-Z3	TMCSD-10-3-Z3/D	TMCSD-10-3-Z4	TMCSD-11-Z3	TMCSD-11-Z4
		Depth:	2.4 - 3.5	1.1 - 2.1	2.5 - 3.5	1.5 - 2.5	1.5 - 2.5	2.5 - 3.5	1.1 - 2.3	2.5 - 3.5
		Date:	05/24/01	05/24/01	05/24/01	05/23/01	05/23/01	05/23/01	05/24/01	05/24/01
Semivolatiles by Method 8270C (μg/Kg)										
1,2,4-Trichlorobenzene			379 U	426 U	350 U	1620 U	1120 U	415 U	174 J	378 U
1,2-Dichlorobenzene			379 U	426 U	350 U	1620 U	1120 U	141 J	131 J	378 U
1,3-Dichlorobenzene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
1,4-Dichlorobenzene			379 U	426 U	350 U	1620 U	1120 U	415 U	172 J	378 U
2,4,5-Trichlorophenol			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
2,4,6-Trichlorophenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2,4-Dichlorophenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2,4-Dimethylphenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2,4-Dinitrophenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2,4-Dinitrotoluene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2,6-Dinitrotoluene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2-Chloronaphthalene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2-Chlorophenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2-Methylnaphthalene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2-Methylphenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
2-Nitroaniline			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
2-Nitrophenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
3,3'-Dichlorobenzidine			759 U	853 U	700 U	3230 U	2240 U	831 U	867 U	757 U
3-Nitroaniline			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
4,6-Dinitro-2-methylphenol			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
4-Bromophenyl phenyl ether			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
4-Chloro-3-methylphenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
4-Chloroaniline			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
4-Chlorophenyl phenyl ether			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
4-Methylphenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
4-Nitroaniline			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
4-Nitrophenol			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
Acenaphthene			379 U	87.1 J	350 U	368 J	205 J	415 U	51.8 J	378 U
Acenaphthylene			379 U	83.2 J	350 U	519 J	415 J	90.6 J	111 J	378 U
Anthracene			379 U	257 J	350 U	1110 J	783 J	129 J	207 J	378 U
Benz(a)anthracene			379 U	449 J	350 U	2260 J	1530 J	184 J	351 J	378 U
Benzo(a)pyrene			379 U	415 J	350 U	2110	1440	189 J	334 J	378 U
Benzo(b)fluoranthene			379 U	421 J	350 U	2400	1330	160 J	392 J	378 U
Benzo(g,h,i)perylene			379 U	130 J	350 U	698 J	423 J	139 J	119 J	378 U
Benzo(k)fluoranthene			379 U	456 J	350 U	2340	2020	192 J	351 J	378 U
Benzoic acid			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
Benzyl alcohol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Bis(2-chloroethoxy)methane			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Bis(2-chloroethyl)ether			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Bis(2-chloroisopropyl)ether			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Bis(2-ethylhexyl)phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Butyl benzyl phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Carbazole			379 U	131 J	350 U	563 J	349 J	415 U	89.1 J	378 U
Chrysene			379 U	470 J	350 U	2460 J	1670 J	247 J	426 J	378 U
Dibenz(a,h)anthracene			379 U	426 U	350 U	351 J	238 J	73.1 J	434 U	378 U
Dibenzofuran			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Diethyl phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U

Table C-1

Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-10-1-Z4	TMCSD-10-2-Z3	TMCSD-10-2-Z4	TMCSD-10-3-Z3	TMCSD-10-3-Z3/D	TMCSD-10-3-Z4	TMCSD-11-Z3	TMCSD-11-Z4
		Depth:	2.4 - 3.5	1.1 - 2.1	2.5 - 3.5	1.5 - 2.5	1.5 - 2.5	2.5 - 3.5	1.1 - 2.3	2.5 - 3.5
		Date:	05/24/01	05/24/01	05/24/01	05/23/01	05/23/01	05/23/01	05/24/01	05/24/01
Dimethyl phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Di-n-butyl phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Di-n-octyl phthalate			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Fluoranthene			379 U	1340	350 U	7800	5250	476	1110	378 U
Fluorene			379 U	111 J	350 U	444 J	303 J	415 U	95.7 J	378 U
Hexachlorobenzene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Hexachlorobutadiene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Hexachlorocyclopentadiene			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
Hexachloroethane			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Indeno(1,2,3-cd)pyrene			379 U	149 J	350 U	549 J	351 J	258 J	136 J	378 U
Isophorone			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Naphthalene			379 U	68.1 J	350 U	292 J	1120 U	415 U	434 U	378 U
Nitrobenzene			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
N-Nitrosodimethylamine			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
N-Nitrosodi-n-propylamine			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
N-Nitrosodiphenylamine			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Pentachlorophenol			954 U	1070 U	880 U	4070 U	2820 U	1040 U	1090 U	952 U
Phenanthrene			379 U	831	350 U	3710	2190	240 J	548	378 U
Phenol			379 U	426 U	350 U	1620 U	1120 U	415 U	434 U	378 U
Pyrene			379 U	513 J	350 U	2940 J	1850 J	314 J	460 J	378 U
2,4,6-Tribromophenol	Surr		70 %	95 %	87 %	103 %	99 %	65 %	97 %	91 %
2-Fluorobiphenyl	Surr		85 %	73 %	66 %	78 %	79 %	79 %	75 %	83 %
2-Fluorophenol	Surr		88 %	65 %	65 %	26 %	26 %	60 %	72 %	83 %
Nitrobenzene-d5	Surr		85 %	73 %	63 %	84 %	85 %	69 %	78 %	84 %
Phenol-d5	Surr		85 %	66 %	67 %	80 %	71 %	61 %	70 %	82 %
Terphenyl-d14	Surr		84 %	39 %	62 %	52 % J	48 % J	53 %	40 %	79 %
Metals by Method 6010B and 7470A/71A (mg/Kg)										
Aluminum			3950	3820	3950	5320	5330	3380	4090	2710
Antimony			0.18 U	0.34 U	0.34 U	1.54 U	1.11 U	1.28 U	0.25 U	0.28 U
Arsenic			4.8	5.1	3.4	15.1	15.7	6.84	8.2	1.8
Barium			46.6	59.4	37.4	70.0	66.4	29.3	34.8	27.3
Beryllium			0.092 J	0.11 U	0.11 U	0.348 J	0.365 J	0.640 U	0.23 J	0.093 U
Cadmium			0.061 U	0.11 U	0.11 U	1.15	1.85	0.793 U	2.3	0.093 U
Calcium			15900 J	11600 J	21600 J	10100	11700	11000	15900 J	10800 J
Chromium			4.3	11.3	4.7	20.1	23.1	6.86	10.2	3.2
Cobalt			3.4	4.5	3.5	5.72	5.84	3.41	3.9	2.4
Copper			11.8 U	15.5 U	13.1 U	42.8 U	52.6 U	15.8 U	22.0 U	6.8
Iron			10700	12000	11500	17800	17400	10100	12000	7160
Lead			3.8	29.4	3.5	73.8	84.0	16.4	30.3	2.2 U
Magnesium			6110	3920	6770	3540	3830	4540	4460	3300
Manganese			400	247	461	262	334	256	245	190
Nickel			6.9	10.7	7.1	17.6	18.7	7.40	9.7	5.2
Potassium			490 J	456 J	608 J	747	620	529	422 J	367 J
Selenium			0.49 U	0.90 U	0.91 U	9.24 U	6.64 U	7.68 U	0.66 U	0.75 U
Silver			0.12 UR	0.22 UR	0.23 UR	1.54 UR	1.11 UR	1.28 UR	0.17 UR	0.19 UR
Sodium			26.7 J	43.1 J	33.1 U	154 U	49.6 J	128 U	24.0 U	27.1 U
Thallium			0.24 U	0.45 U	0.46 U	6.16 U	4.43 U	5.12 U	0.33 U	0.37 U
Vanadium			7.7	18.4	7.5	37.4	41.2	9.80	15.2	5.2
Zinc			21.8	74.3	22.7	[illegible]	136	29.0	57.0	16.1
Mercury			0.019 UJ	0.039 J	0.018 UJ	[illegible] J	0.242 J	0.0640 UJ	0.046 J	0.019 UJ

Table C-1
Complete Analytical Data Summary for Samples from the Three Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-10-1-Z4 2.4 - 3.5 05/24/01	TMCSD-10-2-Z3 1.1 - 2.1 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z3 1.5 - 2.5 05/23/01	TMCSD-10-3-Z3/D 1.5 - 2.5 05/23/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z3 1.1 - 2.3 05/24/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)										
Total Organic Carbon			3310	8450	2540	37700	52700	23300	24000	2450 U
Hexavalent Chromium by Method 7196A (mg/Kg)										
Chromium, Hexavalent			4.7 U	5.4 U	4.4 U	6.6 U	6.9 U	4.8 U	5.5 U	4.9 U
Cyanide, Total by Method 9012A (mg/Kg)										
Cyanide			0.595 U	0.658 U	0.558 U	0.883 U	0.920 U	0.616 U	0.659 U	0.616 U
(mg/Kg)										
Petroleum Hydrocarbons, TR			481 U	346 J	455 U	625 J	617 J	160 J	434 J	493 U
Percent Moisture (wt%)										
Percent Moisture			16.8	26.9	12.1	45.0	46.2	21.9	27.1	18.8

Key:
- J = Estimated value.
- N = Identification tentative.
- U = Not detected at the reported value.
- UR = Data rejected.
- mg/Kg = Micrograms per kilogram.
- μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-1-Z3	TMCSD-1-Z4	TMCSD-2-Z3	TMCSD-2-Z3/D	TMCSD-2-Z4	TMCSD-3-Z3	TMCSD-3-Z4
		Depth:	1.8 - 2.4	2.4 - 3.5	1.5 - 2.7	1.5 - 2.7	2.7 - 3.5	1.6 - 2.4	2.4 - 3.5
		Date:	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01	06/04/01
Dioxin and Furan by Method 1613B (ng/Kg)									
Total TCDF			122	63.3 J	30.7 J	40.0 J	12.4 J	45.7 J	32.7 J
Total TCDD			13.2	8.9	3.9 J	1.5	1.0 U	2.5	1.2
Total PeCDF			202	60.6 J	42.6	52.0	9.0 J	50.9	33.0 J
Total PeCDD			5.0 U	11.9	5.5	5.0 U	5.0 U	5.0 U	4.9 U
Total HxCDF			315	82.2	58.1	78.4	11.9	84.5	30.5
Total HxCDD			12.5	57.1	32.3	21.5	5.3	21.6	3.5
Total HpCDF			381	131	80.4	102	20.7	122	19.9
Total HpCDD			43.0	133	90.7	121	26.0	211	41.9
2,3,7,8-TCDF			7.5	1.3	1.2	1.0 U	1.0 U	1.9	0.84 J
2,3,7,8-TCDD			0.71 J	3.3	0.92	0.81 J	1.0 U	1.0 U	0.40 J
2,3,4,7,8-PeCDF			16.7	2.0 J	2.5 J	3.7 J	5.0 U	3.7 J	2.0 J
2,3,4,6,7,8-HxCDF			12.2	4.0 J	2.8 J	4.7 J	0.82 J	4.2 J	2.0 J
1,2,3,7,8-PeCDF			6.3	0.93 J	4.9 U	1.3 J	0.33 J	0.99 J	0.50 J
1,2,3,7,8-PeCDD			5.0 U	4.1 J	4.9 U	5.0 U	5.0 U	5.0 U	4.9 U
1,2,3,7,8,9-HxCDF			5.0 U	5.0 U	4.9 U	5.0 U	5.0 U	5.0 U	4.9 U
1,2,3,7,8,9-HxCDD			2.3 J	5.0 J	1.8 J	3.2 J	0.62 J	2.7 J	1.4 J
1,2,3,6,7,8-HxCDF			14.9	3.5 J	2.0 J	3.4 J	5.0 UJ	3.0 J	1.6 J
1,2,3,6,7,8-HxCDD			2.1 J	4.5 J	2.9 J	3.5 J	0.70 J	4.4 J	1.3 J
1,2,3,4,7,8-HxCDF			172	10.8	12.8 J	26.8	2.2	19.5	6.9
1,2,3,4,7,8-HxCDD			0.85 J	5.0 U	0.98 J	1.3 J	5.0 U	5.0 U	0.80 J
1,2,3,4,7,8,9-HpCDF			68.3	3.7 J	4.9 U	13.4	1.00 J	7.7	2.8 J
1,2,3,4,6,7,8-HpCDF			133	74.6	38.1	38.9	10.0	42.7	17.2
1,2,3,4,6,7,8-HpCDD			18.9	62.0	42.5	60.6	12.4 U	103	20.5
1,2,3,4,6,7,8,9-OCDF			464	78.5	61.0 J	104	12.2	129	23.8
1,2,3,4,6,7,8,9-OCDD			88.7 U	253	351	512	100	1480	163

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-1-Z3 1.8 - 2.4 06/04/01	TMCSD-1-Z4 2.4 - 3.5 06/04/01	TMCSD-2-Z3 1.5 - 2.7 06/04/01	TMCSD-2-Z3/D 1.5 - 2.7 06/04/01	TMCSD-2-Z4 2.7 - 3.5 06/04/01	TMCSD-3-Z3 1.6 - 2.4 06/04/01	TMCSD-3-Z4 2.4 - 3.5 06/04/01
13C12-2,3,7,8-TCDF	IS		92.2 %	101 %	69.4 %	85.3 %	84.7 %	82.6 %	87.2 %
13C12-2,3,7,8-TCDD	IS		81.3 %	84.3 %	84.3 %	96 %	94.1 %	91.1 %	71.8 %
13C12-2,3,4,7,8-PeCDF	IS		70.7 %	65.9 %	61.5 %	77.5 %	94.8 %	61.6 %	66.7 %
13C12-2,3,4,6,7,8-HxCDF	IS		111 %	96.2 %	58.1 %	81.8 %	103 %	78.3 %	98.3 %
13C12-1,2,3,7,8-PeCDF	IS		80.1 %	71.6 %	87.1 %	90.3 %	96 %	78.2 %	77.8 %
13C12-1,2,3,7,8-PeCDD	IS		74.6 %	64.9 %	76.4 %	82.6 %	93.5 %	66.4 %	72.1 %
13C12-1,2,3,7,8,9-HxCDF	IS		99.1 %	94.6 %	81.1 %	97.5 %	106 %	91.3 %	89.2 %
13C12-1,2,3,6,7,8-HxCDF	IS		109 %	118 %	107 %	114 %	117 %	121 %	94.2 %
13C12-1,2,3,6,7,8-HxCDD	IS		107 %	97.5 %	85.8 %	98 %	108 %	94.9 %	102 %
13C12-1,2,3,4,7,8-HxCDF	IS		109 %	120 %	109 %	119 %	120 %	125 %	94.1 %
13C12-1,2,3,4,7,8-HxCDD	IS		102 %	100 %	85.6 %	99.3 %	111 %	94.7 %	101 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		62.2 %	53.4 %	54.2 %	60.6 %	84.7 %	49.5 %	65.3 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		87.7 %	71.8 %	72.8 %	78.6 %	97.6 %	69.4 %	83.1 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		68.7 %	58.8 %	54.1 %	63.3 %	91.4 %	52 %	73.3 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		40.5 %	30.3 %	27.9 %	32.8 %	68.1 %	24.7 %	58.4 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-5-Z3	TMCSD-5-Z4	TMCSD-5-2-Z3	TMCSD-5-2-Z4	TMCSD-6-Z3	TMCSD-6-Z4	TMCSD-6-Z4/D
		Depth:	1.6 - 2.5	2.5 - 3.5	1.4 - 2.7	2.7 - 3.5	1.3 - 2.8	2.8 - 3.5	2.8 - 3.5
		Date:	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01	06/01/01
Dioxin and Furan by Method 1613B (ng/Kg)									
Total TCDF			122 J	63.0 J	276 J	2.0 J	219 J	0.86 J	1.0 U
Total TCDD			3.6	1.0 UJ	0.93 J	0.9 U	1.9	1.0 U	1.0 U
Total PeCDF			238	71.8	118 J	2.0 J	119 J	4.9 U	4.9 U
Total PeCDD			4.1 U	1.3	0.84	4.7 U	1.2	4.9 U	4.9 U
Total HxCDF			435	68.3	68.3	0.77 U	94.9	0.31 U	0.29 U
Total HxCDD			39.0	23.0	18.9	4.7 U	10.5	4.9 U	4.9 U
Total HpCDF			551	100	134	0.94 U	122	1.2 U	4.9 U
Total HpCDD			485	110	57.2	4.7 U	123	0.55 U	4.9 U
2,3,7,8-TCDF			3.8	1.0 U	0.60 J	0.9 U	1.4 J	1.0 U	1.0 U
2,3,7,8-TCDD			1.8	1.0 U	1.1 U	0.9 U	0.91	1.0 U	1.0 U
2,3,4,7,8-PeCDF			14.0	1.7 J	2.0 J	4.7 U	4.1 J	4.9 U	4.9 U
2,3,4,6,7,8-HxCDF			17.3	3.2 J	2.8 J	4.7 U	4.8 J	4.9 U	4.9 U
1,2,3,7,8-PeCDF			7.3	5.0 U	5.6 U	4.7 U	4.8 U	4.9 U	4.9 U
1,2,3,7,8-PeCDD			4.1 U	0.47 J	0.84 J	4.7 U	1.2 J	4.9 U	4.9 U
1,2,3,7,8,9-HxCDF			1.3 J	5.0 U	5.6 U	4.7 U	0.41 J	4.9 U	4.9 U
1,2,3,7,8,9-HxCDD			7.6 J	1.6 J	1.6 J	4.7 U	3.0 J	4.9 U	4.9 U
1,2,3,6,7,8-HxCDF			16.5	2.1 J	2.0 J	4.7 U	3.5 J	4.9 U	4.9 U
1,2,3,6,7,8-HxCDD			13.6	1.8 J	2.3 J	4.7 U	3.7 J	4.9 U	4.9 U
1,2,3,4,7,8-HxCDF			115	4.8 J	7.1	4.7 U	17.8 J	4.9 U	4.9 U
1,2,3,4,7,8-HxCDD			2.6 J	0.38 J	0.49 J	4.7 U	1.0 J	4.9 U	4.9 U
1,2,3,4,7,8,9-HpCDF			46.5	1.4 J	2.0 J	4.7 U	7.0 J	4.9 U	4.9 U
1,2,3,4,6,7,8-HpCDF			171	52.2	69.0	4.7 U	55.4 J	4.9 U	4.9 U
1,2,3,4,6,7,8-HpCDD			281	34.7	28.0	4.7 U	60.7	4.9 U	4.9 U
1,2,3,4,6,7,8,9-OCDF			441	41.6	57.2	9.4 U	79.0 J	9.7 U	9.7 U
1,2,3,4,6,7,8,9-OCDD			1810	215	196	9.4 U	459 J	9.7 U	9.7 U

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-5-Z3 1.6 - 2.5 06/01/01	TMCSD-5-Z4 2.5 - 3.5 06/01/01	TMCSD-5-2-Z3 1.4 - 2.7 06/01/01	TMCSD-5-2-Z4 2.7 - 3.5 06/01/01	TMCSD-6-Z3 1.3 - 2.8 06/01/01	TMCSD-6-Z4 2.8 - 3.5 06/01/01	TMCSD-6-Z4/D 2.8 - 3.5 06/01/01
13C12-2,3,7,8-TCDF	IS		93.7 %	67.5 %	107 %	75.3 %	93.5 %	76.6 %	73.4 %
13C12-2,3,7,8-TCDD	IS		96.9 %	61.7 %	103 %	75.8 %	93.5 %	77.6 %	71.5 %
13C12-2,3,4,7,8-PeCDF	IS		72.3 %	48.9 %	101 %	77.8 %	86 %	83.6 %	78.5 %
13C12-2,3,4,6,7,8-HxCDF	IS		80.9 %	69.6 %	114 %	104 %	93 %	102 %	101 %
13C12-1,2,3,7,8-PeCDF	IS		79.3 %	48.6 %	101 %	78.9 %	92.1 %	79.7 %	76.3 %
13C12-1,2,3,7,8-PeCDD	IS		78.4 %	45.6 %	106 %	79.2 %	88.4 %	84.9 %	80.6 %
13C12-1,2,3,7,8,9-HxCDF	IS		99.1 %	66.6 %	115 %	99.6 %	102 %	104 %	99.7 %
13C12-1,2,3,6,7,8-HxCDF	IS		120 %	78.6 %	120 %	109 %	104 %	103 %	105 %
13C12-1,2,3,6,7,8-HxCDD	IS		98.7 %	67.7 %	107 %	99 %	93 %	97.8 %	97.9 %
13C12-1,2,3,4,7,8-HxCDF	IS		124 %	82.9 %	127 %	109 %	111 %	107 %	106 %
13C12-1,2,3,4,7,8-HxCDD	IS		113 %	70.2 %	116 %	111 %	101 %	105 %	110 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		56.1 %	40.5 %	94.4 %	87.8 %	87 %	99.1 %	99.2 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		76 %	54.8 %	114 %	103 %	101 %	109 %	109 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		57.1 %	45.5 %	99.4 %	97.7 %	90.7 %	105 %	105 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		23.7 %	21.8 %	70.2 %	70 %	69.8 %	90.2 %	104 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4	TMCSD-7-Z2	TMCSD-7-Z3
		Depth:	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3	0.5 - 1.5	1.5 - 2.4
		Date:	05/31/01	05/31/01	05/31/01	05/31/01	#REF!	05/31/01	05/31/01	05/31/01
Dioxin and Furan by Method 1613B (ng/Kg)										
Total TCDF			20.9 J	0.9 U	1.3 U	0.90 U	10.3 J	1.2 U	87.5 J	1040 J
Total TCDD			1.0 U	0.9 U	1.3 U	1.0 U	0.62	1.0 U	1.0 U	30.9
Total PeCDF			26.1 J	4.5 U	6.3 U	5.2 U	5.4	4.8 U	72.7 J	875 J
Total PeCDD			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	5.1 U	12.8
Total HxCDF			19.4 U	4.5 U	6.3 U	5.2 U	8.3	4.8 U	49.5 J	448 J
Total HxCDD			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	2.3 U	33.3
Total HpCDF			13.5	4.5 U	6.3 U	5.2 U	7.1	4.8 U	44.0	605
Total HpCDD			50.5	4.5 U	6.3 U	5.2 U	23.0 U	4.8 U	79.4	658
2,3,7,8-TCDF			1.00	0.9 U	1.3 U	1.0 U	0.70 J	1.0 U	0.91	17.5
2,3,7,8-TCDD			1.0 U	0.9 U	1.3 U	1.0 U	0.62 J	1.0 U	1.0 UJ	20.1
2,3,4,7,8-PeCDF			1.8 J	4.5 U	6.3 U	5.2 U	0.76 J	4.8 U	1.8 J	16.3
2,3,4,6,7,8-HxCDF			1.7 J	4.5 U	6.3 U	5.2 U	0.71 J	4.8 U	2.6 J	26.2
1,2,3,7,8-PeCDF			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	5.1 U	4.9 U
1,2,3,7,8-PeCDD			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	5.1 U	4.9 U
1,2,3,7,8,9-HxCDF			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	5.1 U	5.5 J
1,2,3,7,8,9-HxCDD			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	5.1 UJ	14.7
1,2,3,6,7,8-HxCDF			5.1 UJ	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	1.5 J	16.1
1,2,3,6,7,8-HxCDD			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	2.3 J	18.6
1,2,3,4,7,8-HxCDF			3.0 J	4.5 U	6.3 U	5.2 U	1.4 J	4.8 U	5.8 J	35.7
1,2,3,4,7,8-HxCDD			5.1 U	4.5 U	6.3 UJ	5.2 U	4.2 U	4.8 U	5.1 U	4.9 U
1,2,3,4,7,8,9-HpCDF			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	3.2 J	4.9 U
1,2,3,4,6,7,8-HpCDF			5.1 U	4.5 U	6.3 U	5.2 U	4.2 U	4.8 U	17.6	245
1,2,3,4,6,7,8-HpCDD			23.1	4.5 U	6.3 U	5.2 U	9.7 U	4.8 U	37.6	304
1,2,3,4,6,7,8,9-OCDF			10.2 U	9.0 U	12.6 U	10.4 U	8.7	9.7 U	37.4	616
1,2,3,4,6,7,8,9-OCDD			152	9.0 U	12.6 U	10.4 U	70.8 U	9.7 U	312	2240

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	LF5SD-1-Z3	LF5SD-1-Z4	LF5SD-2-Z2	LF5SD-2-Z4	LF5SD-3-Z2	LF5SD-3-Z4	TMCSD-7-Z2	TMCSD-7-Z3
		Depth:	1.4 - 2.4	2.4 - 3.4	0.5 - 2.3	2.3 - 3.3	0.5 - 2.3	2.3 - 3.3	0.5 - 1.5	1.5 - 2.4
		Date:	05/31/01	05/31/01	05/31/01	05/31/01	#REF!	05/31/01	05/31/01	05/31/01
13C12-2,3,7,8-TCDF	IS		95.2 %	71.9 %	82.3 %	77.5 %	82.7 %	74 %	62.3 %	65.9 %
13C12-2,3,7,8-TCDD	IS		88.7 %	75 %	82.6 %	73.9 %	78.8 %	71.9 %	69.3 %	65.5 %
13C12-2,3,4,7,8-PeCDF	IS		54.6 %	59.6 %	59.7 %	69.3 %	64 %	65.6 %	51.4 %	32.3 %
13C12-2,3,4,6,7,8-HxCDF	IS		111 %	90.1 %	102 %	95.1 %	91.8 %	91.2 %	52 %	57.9 %
13C12-1,2,3,7,8-PeCDF	IS		59.3 %	61.1 %	64.2 %	71.2 %	65.6 %	68.1 %	65.7 %	40.3 %
13C12-1,2,3,7,8-PeCDD	IS		50.9 %	60.8 %	60.5 %	67.7 %	61 %	67.5 %	60.2 %	36.1 %
13C12-1,2,3,7,8,9-HxCDF	IS		104 %	79.9 %	89.2 %	91.1 %	88.8 %	87.2 %	69.3 %	71.5 %
13C12-1,2,3,6,7,8-HxCDF	IS		120 %	99.6 %	111 %	100 %	97.2 %	98.8 %	84.5 %	92.1 %
13C12-1,2,3,6,7,8-HxCDD	IS		105 %	97.3 %	106 %	94.4 %	88 %	91.8 %	71.4 %	78.4 %
13C12-1,2,3,4,7,8-HxCDF	IS		123 %	94.2 %	104 %	102 %	99.6 %	99.2 %	87.9 %	97.8 %
13C12-1,2,3,4,7,8-HxCDD	IS		108 %	108 %	117 %	100 %	96.8 %	101 %	76.5 %	81.7 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		60.7 %	59.9 %	59.7 %	70.8 %	63.4 %	67.4 %	47.8 %	48.7 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		73.9 %	73.3 %	74.4 %	83.8 %	73.8 %	80.2 %	63.6 %	56.9 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		62.1 %	75.9 %	78.4 %	78.7 %	70.9 %	75.2 %	49 %	51.4 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		35.4 %	50.4 %	53.2 %	55.4 %	49.4 %	53 %	25.4 %	31.3 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-9-Z2
		Depth:	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5	2.5 - 3.5	0.5 - 0.9	0.5 - 1.6
		Date:	05/31/01	05/31/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01
Dioxin and Furan by Method 1613B (ng/Kg)									
Total TCDF			895 J	31.4 J	63.8 J	1.6 U	2.0 U	790 J	28.2 J
Total TCDD			46.2	1.0 U	2.8 U	1.6 U	2.0 U	5.5	0.25
Total PeCDF			788 J	17.3 J	45.4 J	7.9 U	10.0 U	584 J	16.9 J
Total PeCDD			4.8 U	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
Total HxCDF			422 J	6.0 U	29.2	7.9 U	0.25	210	13.8 J
Total HxCDD			45.4	5.0 U	1.3	7.9 U	10.0 U	26.3	0.83 U
Total HpCDF			434	5.0 U	38.4	7.9 U	10.0 U	164	16.8
Total HpCDD			645	5.0 U	35.0	7.9 U	10.0 U	115	50.4
2,3,7,8-TCDF			6.9	1.0 UJ	2.8 U	1.6 U	2.0 U	2.2	0.49 J
2,3,7,8-TCDD			23.5	1.0 U	2.8 U	1.6 U	2.0 U	1.0 U	1.0 U
2,3,4,7,8-PeCDF			13.2	5.0 UJ	1.1 J	7.9 U	10.0 U	6.6	5.2 U
2,3,4,6,7,8-HxCDF			22.7	5.0 U	2.0 J	7.9 U	10.0 U	13.4	5.2 U
1,2,3,7,8-PeCDF			4.8 U	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	0.30 J
1,2,3,7,8-PeCDD			4.8 U	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
1,2,3,7,8,9-HxCDF			4.8 U	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
1,2,3,7,8,9-HxCDD			16.4	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
1,2,3,6,7,8-HxCDF			13.5	5.0 U	13.9 UJ	7.9 U	10.0 U	7.9	5.2 U
1,2,3,6,7,8-HxCDD			18.9	5.0 U	1.3 J	7.9 U	10.0 U	4.9 J	5.2 U
1,2,3,4,7,8-HxCDF			32.0	5.0 UJ	2.4 J	7.9 U	0.25 J	14.3	5.2 U
1,2,3,4,7,8-HxCDD			4.8 U	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
1,2,3,4,7,8,9-HpCDF			17.1	5.0 U	13.9 U	7.9 U	10.0 U	5.0 U	5.2 U
1,2,3,4,6,7,8-HpCDF			189	5.0 UJ	20.2	7.9 U	10.0 U	91.0	5.9
1,2,3,4,6,7,8-HpCDD			295	5.0 U	16.1	7.9 U	10.0 U	51.1	16.0
1,2,3,4,6,7,8,9-OCDF			348	10.0 U	19.8 J	15.8 U	20.0 U	110	18.1
1,2,3,4,6,7,8,9-OCDD			2270 J	30.4 U	132	15.8 UJ	20.0 U	333	111

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-7-1-Z2	TMCSD-7-1-Z3	TMCSD-8-1-Z3	TMCSD-8-1-Z4	TMCSD-8-1-Z4/D	TMCSD-8-2-Z2	TMCSD-9-Z2
		Depth:	0.5 - 1.1	1.1 - 2.5	2.2 - 2.5	2.5 - 3.5	2.5 - 3.5	0.5 - 0.9	0.5 - 1.6
		Date:	05/31/01	05/31/01	05/30/01	05/30/01	05/30/01	05/30/01	05/30/01
13C12-2,3,7,8-TCDF	IS		83.2 %	89.9 %	99.4 %	86.1 %	78.6 %	73.1 %	84.7 %
13C12-2,3,7,8-TCDD	IS		76.9 %	86.5 %	91.7 %	81.7 %	74.2 %	76.5 %	83.1 %
13C12-2,3,4,7,8-PeCDF	IS		44.6 %	81.3 %	80.1 %	72.6 %	67.1 %	51.1 %	72.9 %
13C12-2,3,4,6,7,8-HxCDF	IS		81.1 %	92.6 %	102 %	113 %	114 %	86 %	85 %
13C12-1,2,3,7,8-PeCDF	IS		51.3 %	82.4 %	79 %	77.5 %	73.2 %	56.3 %	78 %
13C12-1,2,3,7,8-PeCDD	IS		46.8 %	81.9 %	78 %	74.2 %	67.2 %	53.3 %	78.4 %
13C12-1,2,3,7,8,9-HxCDF	IS		87.5 %	95.4 %	99.8 %	109 %	102 %	87.7 %	91.8 %
13C12-1,2,3,6,7,8-HxCDF	IS		107 %	101 %	108 %	120 %	117 %	103 %	102 %
13C12-1,2,3,6,7,8-HxCDD	IS		93 %	95.6 %	101 %	111 %	106 %	89.6 %	89 %
13C12-1,2,3,4,7,8-HxCDF	IS		111 %	104 %	105 %	113 %	107 %	109 %	106 %
13C12-1,2,3,4,7,8-HxCDD	IS		96.2 %	101 %	103 %	110 %	113 %	97.7 %	98.9 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		59.6 %	83.5 %	77.4 %	91.3 %	89.4 %	51.2 %	67.5 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		68.4 %	92.7 %	96.2 %	108 %	97.9 %	67.6 %	85 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		61.6 %	87.7 %	77.6 %	91.5 %	82.3 %	55.4 %	71.6 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		39.9 %	72.8 %	49.1 %	64.5 %	55.7 %	32.5 %	45.9 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

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APC_Tables.XLS-TMC 2001 Sampling Table C-1A-3/27/02

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-9-Z4	TMCSD-9-1-Z2	TMCSD-9-1-Z4	TMCSD-9-2-Z2	TMCSD-9-3-Z3	TMCSD-9-3-Z4	TMCSD-9-4-Z3
		Depth:	1.6 - 3.5	0.5 - 1	1 - 3.5	0.5 - 1.1	0.5 - 1.1	1.1 - 3.5	0.5 - 1.85
		Date:	05/30/01	05/30/01	05/30/01	05/30/01	05/29/01	05/29/01	05/29/01
Dioxin and Furan by Method 1613B (ng/Kg)									
Total TCDF			1.0 U	123 J	1.0 U	3.3 J	21.7 J	1.2 U	25.5 J
Total TCDD			1.0 U	2.8	1.0 U	0.8 U	0.74	1.2 U	0.68
Total PeCDF			5.2 U	93.4 J	5.2 U	2.4	13.7 J	5.8 U	13.8 J
Total PeCDD			5.2 U	5.1 U	5.2 U	4.2 U	0.27	5.8 U	2.8 U
Total HxCDF			5.2 U	51.4 J	0.22	3.2	12.7	0.20	14.1
Total HxCDD			5.2 U	8.4	5.2 U	1.0	5.5	5.8 U	3.2
Total HpCDF			5.2 U	46.0	5.2 U	4.4	5.1	0.25 U	11.0
Total HpCDD			5.2 U	85.2	5.2 U	9.9 U	26.8	5.8 U	34.0
2,3,7,8-TCDF			1.0 U	1.8	1.0 U	0.8 UJ	0.40 J	1.2 U	0.40 J
2,3,7,8-TCDD			1.0 U	1.3	1.0 U	0.8 UJ	0.22 J	1.2 U	0.25 J
2,3,4,7,8-PeCDF			5.2 U	5.1 U	5.2 U	0.46 J	0.71 J	2.8 U	2.8 UJ
2,3,4,6,7,8-HxCDF			5.2 U	3.1 J	5.2 U	0.42 J	1.1 J	5.8 U	1.3 J
1,2,3,7,8-PeCDF			5.2 U	1.1 J	5.2 U	4.2 U	2.8 UJ	5.8 U	2.8 U
1,2,3,7,8-PeCDD			5.2 U	5.1 U	5.2 U	4.2 U	0.27 J	5.8 U	2.8 U
1,2,3,7,8,9-HxCDF			5.2 U	5.1 U	5.2 U	4.2 U	2.8 U	5.8 U	2.8 U
1,2,3,7,8,9-HxCDD			5.2 U	3.0 J	5.2 U	4.2 U	2.8 UJ	5.8 U	1.2 J
1,2,3,6,7,8-HxCDF			5.2 U	2.2 J	5.2 U	4.2 U	0.60 J	5.8 U	0.72 J
1,2,3,6,7,8-HxCDD			5.2 U	3.0 J	5.2 U	4.2 U	0.83 J	5.8 U	1.0 J
1,2,3,4,7,8-HxCDF			5.2 U	5.0 J	0.22 J	0.75 J	1.6 J	0.20 J	2.4 J
1,2,3,4,7,8-HxCDD			5.2 U	5.1 U	5.2 U	4.2 U	0.41 J	5.8 U	2.8 U
1,2,3,4,7,8,9-HpCDF			5.2 U	2.0 J	5.2 U	4.2 U	0.47 J	5.8 U	2.8 U
1,2,3,4,6,7,8-HpCDF			5.2 U	21.7	5.2 U	4.2 U	4.6 J	5.8 U	5.6
1,2,3,4,6,7,8-HpCDD			5.2 U	41.0	5.2 U	5.1 U	13.3 U	5.8 U	17.0
1,2,3,4,6,7,8,9-OCDF			10.3 U	34.8	10.4 U	8.5 U	6.8 U	11.6 U	9.1
1,2,3,4,6,7,8,9-OCDD			10.3 U	322	10.4 U	36.5 U	80.1 U	11.6 UJ	95.3

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-9-Z4 1.6 - 3.5 05/30/01	TMCSD-9-1-Z2 0.5 - 1 05/30/01	TMCSD-9-1-Z4 1 - 3.5 05/30/01	TMCSD-9-2-Z2 0.5 - 1.1 05/30/01	TMCSD-9-3-Z3 0.5 - 1.1 05/29/01	TMCSD-9-3-Z4 1.1 - 3.5 05/29/01	TMCSD-9-4-Z3 0.5 - 1.85 05/29/01
13C12-2,3,7,8-TCDF	IS		98.8 %	73 %	90.9 %	103 %	96 %	76.5 %	104 %
13C12-2,3,7,8-TCDD	IS		96.8 %	65.3 %	90.7 %	101 %	86.2 %	74.4 %	108 %
13C12-2,3,4,7,8-PeCDF	IS		82.3 %	61.6 %	83.7 %	89 %	88.2 %	85.6 %	101 %
13C12-2,3,4,6,7,8-HxCDF	IS		112 %	72.2 %	108 %	97.7 %	89.2 %	84.4 %	93.3 %
13C12-1,2,3,7,8-PeCDF	IS		76.8 %	63.4 %	80.8 %	89.3 %	93.5 %	82.6 %	109 %
13C12-1,2,3,7,8-PeCDD	IS		81.2 %	66 %	89.4 %	91.5 %	83.3 %	81.7 %	94 %
13C12-1,2,3,7,8,9-HxCDF	IS		104 %	82.1 %	101 %	107 %	106 %	95.8 %	113 %
13C12-1,2,3,6,7,8-HxCDF	IS		89.8 %	90.4 %	111 %	103 %	111 %	94.3 %	122 %
13C12-1,2,3,6,7,8-HxCDD	IS		103 %	86.2 %	105 %	101 %	91.1 %	85.5 %	104 %
13C12-1,2,3,4,7,8-HxCDF	IS		85.7 %	95.3 %	108 %	101 %	118 %	96.8 %	129 %
13C12-1,2,3,4,7,8-HxCDD	IS		105 %	90.7 %	109 %	104 %	95.8 %	90.7 %	101 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		76.9 %	53.9 %	89.6 %	88.8 %	66.1 %	65 %	65.4 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		79.5 %	66.6 %	102 %	96.5 %	74.4 %	70.6 %	77.2 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		84.1 %	58 %	92.5 %	87.7 %	65.1 %	68.8 %	66.4 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		55 %	32.1 %	68 %	60.3 %	34.9 %	40.4 %	33.6 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-9-4-Z4	TMCSD-9-4-Z4/D	TMCSD-10-Z3	TMCSD-10-Z4	TMCSD-10-1-Z3	TMCSD-10-1-Z4
		Depth:	1.85 - 3.5	1.85 - 3.5	0.5 - 1.65	1.65 - 3.5	1.7 - 2.2	2.4 - 3.5
		Date:	05/29/01	05/29/01	05/29/01	05/29/01	05/24/01	05/24/01
Dioxin and Furan by Method 1613B (ng/Kg)								
Total TCDF			0.12	0.6 U	14.8 J	0.10	2.4 J	1.0 U
Total TCDD			0.14	0.12	0.38	0.07	1.0 U	1.0 U
Total PeCDF			2.9 U	3.0 U	10.2 J	0.16	1.7	4.9 U
Total PeCDD			0.39	3.0 U	3.0 U	2.8 U	4.9 U	4.9 U
Total HxCDF			2.9 U	3.0 U	9.3 J	0.54	1.1 U	4.9 U
Total HxCDD			2.9 U	3.0 U	2.0	2.8 U	0.81	4.9 U
Total HpCDF			2.9 U	3.0 U	9.4	0.29 U	2.2 U	4.9 U
Total HpCDD			2.9 U	3.0 U	17.0 U	2.8 U	10.5 U	0.79 U
2,3,7,8-TCDF			0.6 UJ	0.6 U	0.65	0.10 J	1.0 U	1.0 U
2,3,7,8-TCDD			0.6 U	0.6 U	0.25 J	0.07 J	1.0 U	1.0 U
2,3,4,7,8-PeCDF			2.9 U	3.0 U	0.53 J	0.07 J	4.9 U	4.9 U
2,3,4,6,7,8-HxCDF			2.9 U	3.0 U	0.71 J	0.09 J	4.9 U	4.9 U
1,2,3,7,8-PeCDF			2.9 U	3.0 U	3.0 UJ	0.09 J	4.9 U	4.9 U
1,2,3,7,8-PeCDD			2.9 U	3.0 U	3.0 UJ	2.8 U	4.9 U	4.9 U
1,2,3,7,8,9-HxCDF			2.9 U	3.0 U	3.0 U	0.07 J	4.9 U	4.9 U
1,2,3,7,8,9-HxCDD			2.9 U	3.0 U	0.51 J	2.8 U	4.9 U	4.9 U
1,2,3,6,7,8-HxCDF			2.9 U	3.0 U	0.37 J	0.11 J	4.9 U	4.9 U
1,2,3,6,7,8-HxCDD			2.9 U	3.0 U	0.63 J	2.8 U	4.9 U	4.9 U
1,2,3,4,7,8-HxCDF			2.9 UJ	3.0 U	1.3 J	0.16 J	4.9 U	4.9 U
1,2,3,4,7,8-HxCDD			2.9 U	3.0 U	0.23 J	2.8 U	4.9 U	4.9 U
1,2,3,4,7,8,9-HpCDF			2.9 U	3.0 U	0.63 J	2.8 U	4.9 U	4.9 U
1,2,3,4,6,7,8-HpCDF			2.9 U	3.0 U	4.2 J	2.8 U	4.9 U	4.9 U
1,2,3,4,6,7,8-HpCDD			2.9 U	3.0 U	8.5 U	2.8 UJ	5.3 U	4.9 U
1,2,3,4,6,7,8,9-OCDF			5.8 U	6.0 U	5.7 U	5.6 U	9.8 U	9.8 U
1,2,3,4,6,7,8,9-OCDD			5.8 U	6.0 U	57.0 U	5.6 U	31.4 U	9.8 U

Table C-1A
Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	TMCSD-9-4-Z4 1.85 - 3.5 05/29/01	TMCSD-9-4-Z4/D 1.85 - 3.5 05/29/01	TMCSD-10-Z3 0.5 - 1.65 05/29/01	TMCSD-10-Z4 1.65 - 3.5 05/29/01	TMCSD-10-1-Z3 1.7 - 2.2 05/24/01	TMCSD-10-1-Z4 2.4 - 3.5 05/24/01
13C12-2,3,7,8-TCDF	IS		80.1 %	89.5 %	92.8 %	79.4 %	83.7 %	74.5 %
13C12-2,3,7,8-TCDD	IS		81 %	90.5 %	98.5 %	83.5 %	82.5 %	71.6 %
13C12-2,3,4,7,8-PeCDF	IS		86.7 %	102 %	107 %	103 %	78.1 %	68.6 %
13C12-2,3,4,6,7,8-HxCDF	IS		80 %	90.5 %	82.8 %	82.4 %	99.5 %	88.2 %
13C12-1,2,3,7,8-PeCDF	IS		93.3 %	108 %	115 %	114 %	74.6 %	65.8 %
13C12-1,2,3,7,8-PeCDD	IS		89.5 %	102 %	106 %	102 %	80.7 %	70 %
13C12-1,2,3,7,8,9-HxCDF	IS		89.3 %	106 %	113 %	99.8 %	96.4 %	87.5 %
13C12-1,2,3,6,7,8-HxCDF	IS		96.1 %	109 %	109 %	94.3 %	103 %	88.1 %
13C12-1,2,3,6,7,8-HxCDD	IS		85.7 %	98.3 %	101 %	91.8 %	98 %	84.9 %
13C12-1,2,3,4,7,8-HxCDF	IS		93.8 %	109 %	114 %	94.8 %	94.9 %	84.9 %
13C12-1,2,3,4,7,8-HxCDD	IS		84.3 %	97.2 %	98.6 %	96.2 %	99.7 %	87 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		65 %	80.1 %	87.3 %	86.7 %	96.2 %	82.4 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		69.1 %	82.5 %	88.9 %	83.3 %	99.5 %	86.3 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		73.9 %	87.1 %	85.2 %	92.9 %	93.3 %	77.5 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		45.7 %	56.4 %	56.5 %	70.2 %	83.3 %	66.5 %

Key:
J = Estimated value.
N = Identification tentative.
U = Not detected at the reported value.
ng/Kg = nanograms per kilogram.

Note:
"IS" indicates a internal standard with a unit of percent recovery.

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-10-2-Z3	TMCSD-10-2-Z4	TMCSD-10-3-Z3	TMCSD-10-3-Z3/D	TMCSD-10-3-Z4	TMCSD-11-Z3	TMCSD-11-Z4
		Depth:	1.1 - 2.1	2.5 - 3.5	1.5 - 2.5	1.5 - 2.5	2.5 - 3.5	1.1 - 2.3	2.5 - 3.5
		Date:	05/24/01	05/24/01	05/23/01	05/23/01	05/23/01	05/24/01	05/24/01
Dioxin and Furan by Method 1613B (ng/Kg)									
Total TCDF			14.9 J	1.0 U	111 J	70.1 J	83.4 J	57.2 J	1.0 U
Total TCDD			1.0 U	1.0 U	5.9 J	3.2	1.0	0.85	1.0 U
Total PeCDF			14.8 J	4.9 U	113 J	70.4	53.5 J	22.4 J	4.9 U
Total PeCDD			5.0 U	4.9 U	5.5 J	2.1	5.0 U	1.2	4.9 U
Total HxCDF			7.7 U	4.9 U	94.1	56.9	25.2	25.2	4.9 U
Total HxCDD			5.0 U	4.9 U	43.8	29.9	5.7	64.6	4.9 U
Total HpCDF			6.5	4.9 U	132 J	71.4	27.8	35.0	4.9 U
Total HpCDD			19.4 U	4.9 U	199	124	30.8	94.3	4.9 U
2,3,7,8-TCDF			1.0 U	1.0 U	1.0 U	1.6	1.0 U	1.0 U	1.0 U
2,3,7,8-TCDD			1.0 U	1.0 U	2.0	1.7	0.38 J	0.85 J	1.0 U
2,3,4,7,8-PeCDF			5.0 U	4.9 U	6.0	3.7 J	5.0 UJ	2.0 J	4.9 U
2,3,4,6,7,8-HxCDF			5.0 U	4.9 U	7.0	4.3 J	5.0 U	2.0 J	4.9 U
1,2,3,7,8-PeCDF			5.0 U	4.9 U	1.9 J	0.92 J	5.0 U	1.9 J	4.9 U
1,2,3,7,8-PeCDD			5.0 U	4.9 U	1.4 J	0.90 J	5.0 U	1.2 J	4.9 U
1,2,3,7,8,9-HxCDF			5.0 U	4.9 U	0.56 J	0.46 J	5.0 U	4.9 U	4.9 U
1,2,3,7,8,9-HxCDD			5.0 U	4.9 U	4.1 J	2.9 J	0.97 J	2.8 J	4.9 U
1,2,3,6,7,8-HxCDF			5.0 U	4.9 U	3.8 J	5.0 UJ	1.1 J	1.8 J	4.9 U
1,2,3,6,7,8-HxCDD			5.0 U	4.9 U	5.1	3.5 J	0.86 J	8.8	4.9 U
1,2,3,4,7,8-HxCDF			5.0 U	4.9 U	13.1	8.6	2.3 J	9.0	4.9 U
1,2,3,4,7,8-HxCDD			5.0 U	4.9 U	5.0 UJ	1.3 J	5.0 U	0.64 J	4.9 U
1,2,3,4,7,8,9-HpCDF			5.0 U	4.9 U	5.2	3.2 J	5.0 U	4.3 J	4.9 U
1,2,3,4,6,7,8-HpCDF			3.1 J	4.9 U	59.0 J	29.5	14.8	13.6	4.9 U
1,2,3,4,6,7,8-HpCDD			9.8 U	4.9 U	98.7	61.8	13.4 U	45.8	4.9 U
1,2,3,4,6,7,8,9-OCDF			9.9 U	9.8 U	74.2	45.2	15.8	38.3	9.7 U
1,2,3,4,6,7,8,9-OCDD			79.7 U	9.8 U	788	495	92.6	184	9.7 U

Table C-1A

Complete Analytical Data for Dioxins/Furans for Samples from theThree Mile Creek Channel and Landfill 5 Tributary, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-10-2-Z3 1.1 - 2.1 05/24/01	TMCSD-10-2-Z4 2.5 - 3.5 05/24/01	TMCSD-10-3-Z3 1.5 - 2.5 05/23/01	TMCSD-10-3-Z3/D 1.5 - 2.5 05/23/01	TMCSD-10-3-Z4 2.5 - 3.5 05/23/01	TMCSD-11-Z3 1.1 - 2.3 05/24/01	TMCSD-11-Z4 2.5 - 3.5 05/24/01
13C12-2,3,7,8-TCDF	IS		59.9 %	68.1 %	99.2 %	109 %	96.6 %	69.9 %	70.5 %
13C12-2,3,7,8-TCDD	IS		68.9 %	67.5 %	88.1 %	94.2 %	83.9 %	75.5 %	68.2 %
13C12-2,3,4,7,8-PeCDF	IS		54.1 %	63.2 %	83.7 %	99.1 %	79.7 %	58.4 %	66.5 %
13C12-2,3,4,6,7,8-HxCDF	IS		48.7 %	80.3 %	93.3 %	103 %	80.8 %	64.3 %	86.4 %
13C12-1,2,3,7,8-PeCDF	IS		62.6 %	59.7 %	93.9 %	100 %	79.6 %	65.2 %	61.8 %
13C12-1,2,3,7,8-PeCDD	IS		64.1 %	62.7 %	87.2 %	99.7 %	78.1 %	64 %	67.4 %
13C12-1,2,3,7,8,9-HxCDF	IS		70.6 %	77.1 %	105 %	108 %	96.6 %	74.3 %	79.9 %
13C12-1,2,3,6,7,8-HxCDF	IS		83.1 %	72.8 %	114 %	114 %	100 %	89.3 %	81.1 %
13C12-1,2,3,6,7,8-HxCDD	IS		76.1 %	78 %	107 %	110 %	85.5 %	79.9 %	82.6 %
13C12-1,2,3,4,7,8-HxCDF	IS		75.8 %	69.1 %	114 %	117 %	101 %	84.6 %	77.7 %
13C12-1,2,3,4,7,8-HxCDD	IS		77.9 %	77.3 %	100 %	107 %	81 %	80 %	80.7 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		76.6 %	72.7 %	92.6 %	101 %	59.3 %	74.3 %	74 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		84.7 %	77.1 %	102 %	108 %	71.6 %	81.7 %	80.2 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		69.7 %	72.7 %	96.1 %	108 %	57.6 %	67.2 %	71.8 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		55.7 %	64.5 %	83.2 %	96.7 %	29.5 %	50.4 %	57.9 %

Key:

J = Estimated value.

N = Identification tentative.

U = Not detected at the reported value.

ng/Kg = nanograms per kilogram.

Note:

"IS" indicates a internal standard with a unit of percent recovery.

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 0 - 0.5 05/24/01	LF6SD-1-1-Z1/D 0 - 0.5 05/24/01	LF6SD-2-1-Z1 0 - 0.5 05/24/01	LF6SD-3-1-Z1 0 - 0.5 05/23/01	LF6SD-4-1-Z1 0 - 0.5 05/23/01
PCBs by Method 8082 (μg/Kg)							
Aroclor 1016			51.5 U	49.4 U	59.9 U	30.7 U	205 U
Aroclor 1221			103 U	98.9 U	120 U	61.4 U	409 U
Aroclor 1232			51.5 U	49.4 U	59.9 U	30.7 U	205 U
Aroclor 1242			51.5 U	49.4 U	59.9 U	30.7 U	205 U
Aroclor 1248			51.5 U	49.4 U	59.9 U	30.7 U	205 U
Aroclor 1254			51.5 U	49.4 U	59.9 U	30.7 U	205 U
Aroclor 1260			92.6	49.4 U	102	30.7 U	964
Decachlorobiphenyl	Surr		111 %	87 %	98 %	94 %	140 %
Tetrachloro-m-xylene	Surr		84 %	91 %	81 %	83 %	119 %
Pesticides by Method 8081A (μg/Kg)							
4,4′-DDD			7.73 U	7.42 U	14.3 NJ	3.07 U	81.8 U
4,4′-DDE			19.1 NJ	17.6 J	6.35 NJ	4.59	114 NJ
4,4′-DDT			16.2 NJ	13.9 J	16.5 NJ	3.07 U	172 NJ
Aldrin			10.3 U	9.89 U	12.0 U	1.54 U	40.9 U
alpha-BHC			1.81 NJ	2.65 J	8.98 U	0.154 J	40.9 U
alpha-Chlordane			2.58 U	2.47 U	2.99 U	1.54 U	40.9 U
beta-BHC			10.3 U	9.89 U	12.0 U	1.54 U	40.9 U
delta-BHC			0.932 NJ	1.17 J	5.99 U	1.54 U	40.9 U
Dieldrin			12.9 U	12.4 U	15.0 U	3.07 U	81.8 U
Endosulfan I			12.9 U	12.4 U	8.88 NJ	3.07 U	81.8 U
Endosulfan II			4.72 NJ	7.42 U	8.98 U	3.07 U	81.8 U
Endosulfan sulfate			3.00 NJ	14.8 U	2.79 NJ	3.07 U	81.8 U
Endrin			10.3 U	9.89 U	12.0 U	3.07 U	81.8 U
Endrin aldehyde			16.2 NJ	24.7 U	16.6 NJ	0.398 J	81.8 U
Endrin ketone			7.73 U	7.42 U	2.23 NJ	3.07 U	81.8 U
gamma-BHC			5.15 U	4.94 U	5.99 U	1.54 U	40.9 U
gamma-Chlordane			5.15 U	4.94 U	5.99 U	1.54 U	40.9 U
Heptachlor			7.73 U	7.42 U	8.98 U	3.07 U	81.8 U
Heptachlor epoxide			12.9 U	12.4 U	8.68 NJ	1.07 J	111 NJ
Methoxychlor			103 U	98.9 U	120 U	10.3 J	409 U
Toxaphene			258 U	247 U	299 U	76.8 U	2050 U

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 0 - 0.5 05/24/01	LF6SD-1-1-Z1/D 0 - 0.5 05/24/01	LF6SD-2-1-Z1 0 - 0.5 05/24/01	LF6SD-3-1-Z1 0 - 0.5 05/23/01	LF6SD-4-1-Z1 0 - 0.5 05/23/01
Decachlorobiphenyl	Surr		118 %	176 %	115 %	581 %	0 %
Tetrachloro-m-xylene	Surr		74 %	84 %	75 %	88 %	0 %
Volatile Organic Compounds by Method 8260B (µg/Kg)							
1,1,1-Trichloroethane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,1,2,2-Tetrachloroethane			13.2 UJ	12.8 UJ	15.3 UJ	7.81 UJ	10.4 UJ
1,1,2-Trichloroethane			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
1,1-Dichloroethane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,1-Dichloroethene			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,2-Dichlorobenzene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 UJ	7.04 J
1,2-Dichloroethane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,2-Dichloroethene, Total			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,2-Dichloropropane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
1,3-Dichlorobenzene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 UJ	10.4 UJ
1,4-Dichlorobenzene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 UJ	10.4 UJ
2-Butanone			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
2-Chloroethyl vinyl ether			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
2-Hexanone			26.5 UJ	25.6 UJ	30.6 UJ	15.6 U	20.8 UJ
4-Methyl-2-pentanone			26.5 UJ	25.6 UJ	30.6 UJ	15.6 U	20.8 UJ
Acetone			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
Benzene			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Bromodichloromethane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Bromoform			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Bromomethane			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
Carbon disulfide			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Carbon tetrachloride			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Chlorobenzene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Chloroethane			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
Chloroform			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Chloromethane			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
cis-1,2-Dichloroethene			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
cis-1,3-Dichloropropene			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Dibromochloromethane			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 0 - 0.5 05/24/01	LF6SD-1-1-Z1/D 0 - 0.5 05/24/01	LF6SD-2-1-Z1 0 - 0.5 05/24/01	LF6SD-3-1-Z1 0 - 0.5 05/23/01	LF6SD-4-1-Z1 0 - 0.5 05/23/01
Ethylbenzene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
m,p-Xylene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Methylene chloride			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
o-Xylene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Styrene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Tetrachloroethene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Toluene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
trans-1,2-Dichloroethene			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
trans-1,3-Dichloropropene			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
Trichloroethene			13.2 U	12.8 U	15.3 U	7.81 U	5.44 J
Trichlorofluoromethane			13.2 U	12.8 U	15.3 U	7.81 U	10.4 U
Vinyl acetate			26.5 UJ	25.6 UJ	30.6 UJ	15.6 UJ	20.8 UJ
Vinyl chloride			26.5 U	25.6 U	30.6 U	15.6 U	20.8 U
Xylenes, Total			13.2 UJ	12.8 UJ	15.3 UJ	7.81 U	10.4 UJ
1,2-Dichloroethane-d4	Surr		94 %	108 %	91 %	99 %	113 %
4-Bromofluorobenzene	Surr		134 %	140 %	135 %	135 %	116 %
Dibromofluoromethane	Surr		106 %	113 %	103 %	104 %	122 %
Toluene-d8	Surr		144 %	145 %	139 %	125 %	145 %
Semivolatiles by Method 8270C (µg/Kg)							
1,2,4-Trichlorobenzene			2560 U	2450 U	984 U	483 U	2010 U
1,2-Dichlorobenzene			2560 U	2450 U	984 U	483 U	2010 U
1,3-Dichlorobenzene			2560 U	2450 U	984 U	483 U	2010 U
1,4-Dichlorobenzene			2560 U	2450 U	984 U	483 U	2010 U
2,4,5-Trichlorophenol			6440 U	6170 U	2470 U	1210 U	5050 U
2,4,6-Trichlorophenol			2560 U	2450 U	984 U	483 U	2010 U
2,4-Dichlorophenol			2560 U	2450 U	984 U	483 U	2010 U
2,4-Dimethylphenol			2560 U	2450 U	984 U	483 U	2010 U
2,4-Dinitrophenol			2560 U	2450 U	984 U	483 U	2010 U
2,4-Dinitrotoluene			2560 U	2450 U	984 U	483 U	2010 U
2,6-Dinitrotoluene			2560 U	2450 U	984 U	483 U	2010 U
2-Chloronaphthalene			2560 U	2450 U	984 U	483 U	2010 U
2-Chlorophenol			2560 U	2450 U	984 U	483 U	2010 U

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	LF6SD-1-1-Z1 0 - 0.5 05/24/01	LF6SD-1-1-Z1/D 0 - 0.5 05/24/01	LF6SD-2-1-Z1 0 - 0.5 05/24/01	LF6SD-3-1-Z1 0 - 0.5 05/23/01	LF6SD-4-1-Z1 0 - 0.5 05/23/01
2-Methylnaphthalene			2560 U	2450 U	984 U	483 U	2010 U
2-Methylphenol			2560 U	2450 U	984 U	483 U	2010 U
2-Nitroaniline			6440 U	6170 U	2470 U	1210 U	5050 U
2-Nitrophenol			2560 U	2450 U	984 U	483 U	2010 U
3,3´-Dichlorobenzidine			5120 U	4910 U	1970 U	965 U	4010 U
3-Nitroaniline			6440 U	6170 U	2470 U	1210 U	5050 U
4,6-Dinitro-2-methylphenol			6440 U	6170 U	2470 U	1210 U	5050 U
4-Bromophenyl phenyl ether			2560 U	2450 U	984 U	483 U	2010 U
4-Chloro-3-methylphenol			2560 U	2450 U	984 U	483 U	2010 U
4-Chloroaniline			2560 U	2450 U	984 U	483 U	2010 U
4-Chlorophenyl phenyl ether			2560 U	2450 U	984 U	483 U	2010 U
4-Methylphenol			2560 U	2450 U	984 U	483 U	2010 U
4-Nitroaniline			6440 U	6170 U	2470 U	1210 U	5050 U
4-Nitrophenol			6440 U	6170 U	2470 U	1210 U	5050 U
Acenaphthene			2560 U	2450 U	984 U	483 U	2010 U
Acenaphthylene			2560 U	2450 U	299 J	483 U	1130 J
Anthracene			2560 U	2450 U	233 J	483 U	1260 J
Benz(a)anthracene			2560 U	2450 U	387 J	483 U	2140
Benzo(a)pyrene			2560 U	2450 U	481 J	61.1 J	2460
Benzo(b)fluoranthene			2560 U	2450 U	763 J	75.9 J	2580
Benzo(g,h,i)perylene			2560 U	2450 U	165 J	483 U	1010 J
Benzo(k)fluoranthene			2560 U	2450 U	496 J	483 U	2700
Benzoic acid			8120	6020 J	2970	33600	5050 U
Benzyl alcohol			2560 U	2450 U	984 U	561	2010 U
Bis(2-chloroethoxy)methane			2560 U	2450 U	984 U	483 U	2010 U
Bis(2-chloroethyl)ether			2560 U	2450 U	984 U	483 U	2010 U
Bis(2-chloroisopropyl)ether			2560 U	2450 U	984 U	483 U	2010 U
Bis(2-ethylhexyl)phthalate			2560 U	2450 U	984 U	483 U	2010 U
Butyl benzyl phthalate			2560 U	2450 U	984 U	483 U	2010 U
Carbazole			2560 U	2450 U	984 U	483 U	390 J
Chrysene			341 J	348 J	578 J	78.3 J	2960
Dibenz(a,h)anthracene			2560 U	2450 U	984 U	483 U	577 J
Dibenzofuran			2560 U	2450 U	984 U	483 U	2010 U

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	LF6SD-1-1-Z1	LF6SD-1-1-Z1/D	LF6SD-2-1-Z1	LF6SD-3-1-Z1	LF6SD-4-1-Z1
		Depth:	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
		Date:	05/24/01	05/24/01	05/24/01	05/23/01	05/23/01
Diethyl phthalate			2560 U	2450 U	984 U	483 U	2010 U
Dimethyl phthalate			2560 U	2450 U	984 U	483 U	2010 U
Di-n-butyl phthalate			2560 U	2450 U	984 U	483 U	2010 U
Di-n-octyl phthalate			2560 U	2450 U	984 U	483 U	2010 U
Fluoranthene			741 J	764 J	1430	179 J	5920
Fluorene			2560 U	2450 U	984 U	483 U	2010 U
Hexachlorobenzene			2560 U	2450 U	984 U	483 U	2010 U
Hexachlorobutadiene			2560 U	2450 U	984 U	483 U	2010 U
Hexachlorocyclopentadiene			6440 U	6170 U	2470 U	1210 U	5050 U
Hexachloroethane			2560 U	2450 U	984 U	483 U	2010 U
Indeno(1,2,3-cd)pyrene			2560 U	2450 U	984 U	483 U	1220 J
Isophorone			2560 U	2450 U	984 U	483 U	2010 U
Naphthalene			2560 U	2450 U	984 U	483 U	2010 U
Nitrobenzene			2560 U	2450 U	984 U	483 U	2010 U
N-Nitrosodimethylamine			2560 U	2450 U	984 U	483 U	2010 U
N-Nitrosodi-n-propylamine			2560 U	2450 U	984 U	483 U	2010 U
N-Nitrosodiphenylamine			2560 U	2450 U	984 U	483 U	2010 U
Pentachlorophenol			6440 U	6170 U	2470 U	1210 U	5050 U
Phenanthrene			337 J	350 J	521 J	90.3 J	2670
Phenol			2560 U	2450 U	984 U	483 U	2010 U
Pyrene			347 J	352 J	735 J	65.3 J	2660
2,4,6-Tribromophenol	Surr		95 %	102 %	121 %	72 %	89 %
2-Fluorobiphenyl	Surr		62 %	68 %	71 %	88 %	78 %
2-Fluorophenol	Surr		61 %	65 %	70 %	66 %	65 %
Nitrobenzene-d5	Surr		63 %	68 %	80 %	83 %	69 %
Phenol-d5	Surr		68 %	70 %	73 %	66 %	73 %
Terphenyl-d14	Surr		40 %	40 %	56 %	40 %	46 %

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands,
Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-1-1-Z1/D / 0 - 0.5 / 05/24/01	LF6SD-2-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-3-1-Z1 / 0 - 0.5 / 05/23/01	LF6SD-4-1-Z1 / 0 - 0.5 / 05/23/01
Metals by Method 6010B and 7470A/71A (mg/Kg)							
Aluminum			9990	10600	16800	12100	8780
Antimony			0.71 U	0.77 U	0.86 U	1.34 U	2.11 U
Arsenic			11.1	12.5	18.5	10.6	53.8
Barium			1250	1400	1080	124	144
Beryllium			0.27 J	0.26 J	0.79 J	0.455 J	0.876 J
Cadmium			3.8	2.5	4.6	0.672 U	22.2
Calcium			20700 J	22900 J	23400 J	1180	4440
Chromium			12.5	12.8	20.6	13.4	37.8
Cobalt			3.6 J	3.8 J	6.1	13.3	9.90
Copper			142	134	118	51.2	93.0
Iron			8500	8870	12700	15900	24400
Lead			116	108	116	54.3	188
Magnesium			1130	1200	2050	2590	1750
Manganese			567	596	626	403	678
Nickel			15.0	15.0	17.8	13.6	23.7
Potassium			584 J	518 J	696 J	830	1060
Selenium			1.9 U	2.1 U	2.3 U	8.06 U	12.6 U
Silver			0.47 U	0.51 U	0.58 U	1.34 U	0.810 J
Sodium			68.7 U	74.8 U	83.7 U	134 U	211 U
Thallium			0.94 U	1.0 U	1.2 U	5.37 U	8.42 U
Vanadium			34.1	35.5	41.3	34.6	38.9
Zinc			303	285	226	97.8	211
Mercury			0.68 J	0.48 J	0.72 J	0.381	0.804

Table C-2
Complete Analytical Data Summary for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: Depth: Date:	LF6SD-1-1-Z1 0 - 0.5 05/24/01	LF6SD-1-1-Z1/D 0 - 0.5 05/24/01	LF6SD-2-1-Z1 0 - 0.5 05/24/01	LF6SD-3-1-Z1 0 - 0.5 05/23/01	LF6SD-4-1-Z1 0 - 0.5 05/23/01
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)							
Total Organic Carbon			372000	403000	363000	47700	125000
Hexavalent Chromium by Method 7196A (mg/Kg)							
Chromium, Hexavalent			11 U	9.7 U	12 U	5.9 U	8.4 U
Cyanide, Total by Method 9012A (mg/Kg)							
Cyanide			1.38 J	1.07 J	0.750 J	0.598 J	0.747 J
Petroleum Hydrocarbons, TR by Method 418.1M (mg/Kg)							
Petroleum Hydrocarbons, TR			1060 U	1030 U	1240 U	634 U	842 U
Percent Moisture (wt%)							
Percent Moisture			62.2	61.1	67.8	36.9	52.5

Key:
J = Estimated value.
N = Identification tentative.
U = Not detected at the reported value.
mg/Kg = Micrograms per kilogram.
µg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-2A

Complete Analytical Data for Dioxin/Furans for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-1-1-Z1/D / 0 - 0.5 / 05/24/01	LF6SD-2-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-3-1-Z1 / 0 - 0.5 / 05/23/01	LF6SD-4-1-Z1 / 0 - 0.5 / 05/23/01
Dioxin and Furan by Method 1613B (ng/Kg)							
Total TCDF			138 J	147 J	53.3 J	64.8 J	345 J
Total TCDD			17.3	16.7	5.6	11.5	27.4
Total PeCDF			90.2 J	79.2	56.8 J	55.3	348 J
Total PeCDD			11.0	16.6	7.3	14.4	60.3
Total HxCDF			80.1	77.4	42.1	81.5	276
Total HxCDD			56.7	61.2	31.4	88.0	149
Total HpCDF			70.6	66.1	42.8	84.1	327
Total HpCDD			116	123	71.0	162	399
2,3,7,8-TCDF			6.2	5.9	2.1	2.5	5.1
2,3,7,8-TCDD			1.3	1.3	0.72 J	1.0 UJ	4.9
2,3,4,7,8-PeCDF			7.0	7.4	3.7 J	5.0	11.8
2,3,4,6,7,8-HxCDF			10.0	10.9	5.9 J	16.6	27.7
1,2,3,7,8-PeCDF			3.5 J	4.2 J	1.8 J	3.0 J	12.4 J
1,2,3,7,8-PeCDD			2.3 J	2.5 J	1.1 J	2.1 J	4.5
1,2,3,7,8,9-HxCDF			5.9 U	5.7 U	5.0 U	0.83 J	0.78 J
1,2,3,7,8,9-HxCDD			5.7 J	6.0 J	3.0 J	8.8 J	17.1
1,2,3,6,7,8-HxCDF			6.2 J	6.3 J	3.4 J	7.7	13.6
1,2,3,6,7,8-HxCDD			5.0 J	5.1 J	3.2 J	7.4	15.0
1,2,3,4,7,8-HxCDF			14.2	15.0	7.6	18.6	28.9
1,2,3,4,7,8-HxCDD			2.4 J	2.3 J	1.2 J	3.3 J	8.1
1,2,3,4,7,8,9-HpCDF			3.4 J	4.6 J	5.0 U	5.6	12.7
1,2,3,4,6,7,8-HpCDF			41.8	37.7	22.8	53.3	172
1,2,3,4,6,7,8-HpCDD			57.6	60.2	34.5	78.7	192
1,2,3,4,6,7,8,9-OCDF			41.4	46.0	26.1	40.7	195
1,2,3,4,6,7,8,9-OCDD			273	280	178	293	1230 J
13C12-2,3,7,8-TCDF	IS		65.1 %	90.4 %	69.4 %	94.4 %	86.1 %
13C12-2,3,7,8-TCDD	IS		67.5 %	82 %	72 %	94.8 %	89.6 %
13C12-2,3,4,7,8-PeCDF	IS		56.1 %	68.6 %	65.3 %	96 %	87.9 %
13C12-2,3,4,6,7,8-HxCDF	IS		75.7 %	89.9 %	82 %	89.8 %	78.5 %
13C12-1,2,3,7,8-PeCDF	IS		59.2 %	70.2 %	62.6 %	94.9 %	90.4 %
13C12-1,2,3,7,8-PeCDD	IS		59.5 %	71 %	67.3 %	95.4 %	96.6 %

Table C-2A
Complete Analytical Data for Dioxin/Furans for Sediment Samples from the Landfill 6 Wetlands, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	LF6SD-1-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-1-1-Z1/D / 0 - 0.5 / 05/24/01	LF6SD-2-1-Z1 / 0 - 0.5 / 05/24/01	LF6SD-3-1-Z1 / 0 - 0.5 / 05/23/01	LF6SD-4-1-Z1 / 0 - 0.5 / 05/23/01
13C12-1,2,3,7,8,9-HxCDF	IS		79.4 %	93.4 %	86.8 %	111 %	96.6 %
13C12-1,2,3,6,7,8-HxCDF	IS		91.8 %	104 %	87 %	105 %	84.7 %
13C12-1,2,3,6,7,8-HxCDD	IS		80.3 %	91 %	83.1 %	86.8 %	86.5 %
13C12-1,2,3,4,7,8-HxCDF	IS		86.4 %	98 %	82.4 %	91.6 %	85.5 %
13C12-1,2,3,4,7,8-HxCDD	IS		85.9 %	95 %	87.7 %	84.4 %	89.3 %
13C12-1,2,3,4,7,8,9-HpCDF	IS		74.4 %	88 %	78.7 %	90.5 %	74.6 %
13C12-1,2,3,4,6,7,8-HpCDF	IS		84.1 %	98.7 %	84.4 %	78.2 %	72.2 %
13C12-1,2,3,4,6,7,8-HpCDD	IS		69 %	79.5 %	73.3 %	81.5 %	82.1 %
13C12-1,2,3,4,6,7,8,9-OCDD	IS		54.8 %	60.3 %	58.6 %	60.1 %	75.7 %

Key:
J = Estimated value.
N = Identification tentative.
U = Not detected at the reported value.
ng/Kg = nanograms per kilogram.

Note:
"IS" indicates a internal standard with a unit of percent recovery.

Table C-3
Complete Analytical Data Summary for Sediment Samples from the Three Mile Creek Off-Base Pond, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID: / Depth: / Date:	TMCSD-23-IL-Z3 / 1.4 - 2.2 / 06/05/01	TMCSD-23-IL-Z3/D / 1.4 - 2.2 / 06/05/01	TMCSD-23-IL-Z4 / 2.2 - 3 / 06/05/01	TMCSD-24-NS-Z3 / 1.2 - 1.8 / 06/05/01	TMCSD-24-NS-Z4 / 1.8 - 3 / 06/05/01	TMCSD-25-MC-Z3 / 0.9 - 1.8 / 06/05/01
PCBs by Method 8082 (μg/Kg)								
Aroclor 1260			184	403	145	142	618	489
Aroclor 1254			49.8 U	49.9 U	27.2 U	62.9 U	181 U	76.9 U
Aroclor 1248			49.8 U	49.9 U	27.2 U	62.9 U	181 U	76.9 U
Aroclor 1242			49.8 U	49.9 U	27.2 U	62.9 U	181 U	76.9 U
Aroclor 1232			49.8 U	49.9 U	27.2 U	62.9 U	181 U	76.9 U
Aroclor 1221			99.7 U	99.9 U	54.4 U	126 U	361 U	154 U
Aroclor 1016			49.8 U	49.9 U	27.2 U	62.9 U	181 U	76.9 U
Tetrachloro-m-xylene	Surr		98 %	98 %	105 %	95 %	103 %	97 %
Decachlorobiphenyl	Surr		99 %	89 %	100 %	83 %	97 %	88 %
Metals by Method 6010B and 7470A/71A (μg/L)								
Lead			91.7	82.2	30.4	172	170	175
Cadmium			7.0 J	4.8 J	1.9 J	8.1 J	11.9 J	8.5 J
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)								
Total Organic Carbon			33500 J	75100 J	12600	104000	65200	133000
Percent Moisture (wt%)								
Percent Moisture			60.2	61.0	27.4	68.7	45.1	74.5

Key:
J = Estimated value.
U = Not detected at the reported value.
mg/Kg = Micrograms per kilogram.
μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-3

Complete Analytical Data Summary for Sediment Samples from the Three Mile Creek Off-Base Pond, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type	Sample ID:	TMCSD-25-MC-Z4	TMCSD-26-NS-Z3	TMCSD-26-NS-Z4	TMCSD-27-MC-Z3	TMCSD-27-MC-Z4	TMCSD-28-OL-Z3
		Depth:	2.4 - 3	1.5 - 2.5	2.5 - 3	1.5 - 2.5	2.5 - 3	1.5 - 2.5
		Date:	06/05/01	05/25/01	05/25/01	05/25/01	05/25/01	05/25/01
PCBs by Method 8082 (μg/Kg)								
Aroclor 1260			123	12.0 J	25.3 U	549	253	379
Aroclor 1254			28.7 U	27.1 U	25.3 U	73.4 U	29.3 U	37.1 U
Aroclor 1248			28.7 U	27.1 U	25.3 U	73.4 U	29.3 U	37.1 U
Aroclor 1242			28.7 U	27.1 U	25.3 U	73.4 U	29.3 U	37.1 U
Aroclor 1232			28.7 U	27.1 U	25.3 U	73.4 U	29.3 U	37.1 U
Aroclor 1221			57.4 U	54.1 U	50.5 U	147 U	58.6 U	74.3 U
Aroclor 1016			28.7 U	27.1 U	25.3 U	73.4 U	29.3 U	37.1 U
Tetrachloro-m-xylene	Surr		93 %	86 %	90 %	93 %	85 %	95 %
Decachlorobiphenyl	Surr		92 %	88 %	95 %	98 %	92 %	102 %
Metals by Method 6010B and 7470A/71A (μg/L)								
Lead			15.7	15.9	2.6	189	51.1	155
Cadmium			0.92 U	1.1 U	0.082 U	9.9	2.4	5.7
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)								
Total Organic Carbon			6990	25100	13100	124000	14800	56800
Percent Moisture (wt%)								
Percent Moisture			31.0	27.5	21.5	72.2	35.8	48.7

Key:

J = Estimated value.

U = Not detected at the reported value.

mg/Kg = Micrograms per kilogram.

μg/Kg = Micrograms per kilogram.

Note:

"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-3
Complete Analytical Data Summary for Sediment Samples from the Three Mile Creek Off-Base Pond, Three Mile Creek 2001 Sampling, Former Griffiss Air Force Base, Rome, New York

Analyte	Type		TMCSD-28-OL-Z3/D	TMCSD-28-OL-Z4
		Sample ID:	TMCSD-28-OL-Z3/D	TMCSD-28-OL-Z4
		Depth:	1.5 - 2.5	2.5 - 3
		Date:	05/25/01	05/25/01
PCBs by Method 8082 (μg/Kg)				
Aroclor 1260			437	1370
Aroclor 1254			36.8 U	343 U
Aroclor 1248			36.8 U	343 U
Aroclor 1242			36.8 U	343 U
Aroclor 1232			36.8 U	343 U
Aroclor 1221			73.6 U	685 U
Aroclor 1016			36.8 U	343 U
Tetrachloro-m-xylene	Surr		91 %	94 %
Decachlorobiphenyl	Surr		97 %	114 %
Metals by Method 6010B and 7470A/71A (μg/L)				
Lead			155	133
Cadmium			6.3	11.0
Total Organic Carbon by Method Lloyd Kahn (mg/Kg)				
Total Organic Carbon			56300	64500
Percent Moisture (wt%)				
Percent Moisture			46.3	42.5

Key:
J = Estimated value.
U = Not detected at the reported value.
mg/Kg = Micrograms per kilogram.
μg/Kg = Micrograms per kilogram.

Note:
"Surr" indicates a surrogate compound with a unit of percent recovery. Zero % indicates surrogate may have been diluted out.

Table C-4

Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: / Depth: / Date:	RB-1 / - / 05/23/01	RB-2 / - / 05/29/01	RB-3 / - / 05/30/01	RB-4 / - / 06/04/01	RB-5 / - / 06/05/01
PCBs by Method 8082 (µg/L)							
Aroclor 1260			0.500 U	0.500 U	0.500 U	0.325 U	0.325 U
Aroclor 1254			0.500 U	0.500 U	0.500 U	0.140 U	0.140 U
Aroclor 1248			0.500 U	0.500 U	0.500 U	0.476 U	0.476 U
Aroclor 1242			0.500 U	0.500 U	0.500 U	0.0900 U	0.0900 U
Aroclor 1232			0.500 U	0.500 U	0.500 U	0.170 U	0.170 U
Aroclor 1221			1.00 U	1.00 U	1.00 U	0.975 U	0.975 U
Aroclor 1016			0.500 U	0.500 U	0.500 U	0.0997 U	0.0997 U
Tetrachloro-m-xylene	Surr		84 %	54 %	62 %	93 %	74 %
Decachlorobiphenyl	Surr		83 %	40 %	44 %	88 %	80 %
Pesticides by Method 8081A (µg/L)							
Toxaphene			1.00 U	1.00 U	1.00 U	3.00 U	NS
Methoxychlor			0.250 U	0.250 U	0.250 U	1.00 U	NS
Heptachlor epoxide			0.0250 U	0.0250 U	0.0250 U	0.100 U	NS
Heptachlor			0.0250 U	0.0250 U	0.0250 U	0.100 U	NS
gamma-Chlordane			0.0250 U	0.0250 U	0.0250 U	0.0500 U	NS
gamma-BHC			0.0250 U	0.0250 U	0.0250 U	0.0400 U	NS
Endrin ketone			0.0500 U	0.0500 U	0.0500 U	0.200 U	NS
Endrin aldehyde			0.0500 U	0.0500 U	0.0500 U	0.300 U	NS
Endrin			0.0500 U	0.0500 U	0.0500 U	0.100 U	NS
Endosulfan sulfate			0.0500 U	0.0500 U	0.0500 U	0.400 U	NS
Endosulfan II			0.0500 U	0.0500 U	0.0500 U	0.180 U	NS
Endosulfan I			0.0500 U	0.0500 U	0.0500 U	0.0500 U	NS
Dieldrin			0.0500 U	0.0500 U	0.0500 U	0.100 U	NS
delta-BHC			0.0250 U	0.0250 U	0.0250 U	0.0600 U	NS
beta-BHC			0.0250 U	0.0250 U	0.0250 U	0.0500 U	NS
alpha-Chlordane			0.0250 U	0.0250 U	0.0250 U	0.0600 U	NS
alpha-BHC			0.0250 U	0.0250 U	0.0250 U	0.0400 U	NS
Aldrin			0.0250 U	0.0488	0.0910	0.0700 U	NS
4,4´-DDT			0.0500 U	0.0500 U	0.0500 U	0.100 U	NS
4,4´-DDE			0.0500 U	0.0500 U	0.0500 U	0.100 U	NS
4,4´-DDD			0.0500 U	0.0500 U	0.0500 U	0.0900 U	NS
Tetrachloro-m-xylene	Surr		80 %	65 %	81 %	90 %	NS
Decachlorobiphenyl	Surr		77 %	47 %	53 %	88 %	NS

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: / Depth: / Date:	RB-1 / - / 05/23/01	RB-2 / - / 05/29/01	RB-3 / - / 05/30/01	RB-4 / - / 06/04/01	RB-5 / - / 06/05/01
Volatile Organic Compounds by Method 8260B (μg/L)							
Xylenes, Total			5.00 U	5.00 U	5.00 U	0.868 U	NS
Vinyl chloride			10.0 U	10.0 U	10.0 U	0.351 U	NS
Vinyl acetate			10.0 U	10.0 U	10.0 U	0.486 U	NS
Trichlorofluoromethane			5.00 U	5.00 U	5.00 U	0.373 U	NS
Trichloroethene			5.00 U	5.00 U	5.00 U	0.781 U	NS
trans-1,3-Dichloropropene			5.00 U	5.00 U	5.00 U	0.428 U	NS
trans-1,2-Dichloroethene			5.00 U	5.00 U	5.00 U	0.478 U	NS
Toluene			5.00 U	5.00 U	5.00 U	0.487 U	NS
Tetrachloroethene			5.00 U	5.00 U	5.00 U	0.646 U	NS
Styrene			5.00 U	5.00 U	5.00 U	0.276 U	NS
o-Xylene			5.00 U	5.00 U	5.00 U	0.302 U	NS
Methylene chloride			5.00 U	5.00 U	5.00 U	0.543 U	NS
m,p-Xylene			5.00 U	5.00 U	5.00 U	0.651 U	NS
Ethylbenzene			5.00 U	5.00 U	5.00 U	0.349 U	NS
Dibromochloromethane			5.00 U	5.00 U	5.00 U	0.244 U	NS
cis-1,3-Dichloropropene			5.00 U	5.00 U	5.00 U	0.394 U	NS
cis-1,2-Dichloroethene			5.00 U	5.00 U	5.00 U	0.427 U	NS
Chloromethane			10.0 U	10.0 U	10.0 U	0.326 U	NS
Chloroform			5.00 U	5.00 U	5.00 U	0.273 U	NS
Chloroethane			10.0 U	10.0 U	10.0 U	3.65 U	NS
Chlorobenzene			5.00 U	5.00 U	5.00 U	0.866 U	NS
Carbon tetrachloride			5.00 U	5.00 U	5.00 U	1.04 U	NS
Carbon disulfide			5.00 U	5.00 U	5.00 U	0.255 U	NS
Bromomethane			10.0 U	10.0 U	10.0 U	1.06 U	NS
Bromoform			5.00 U	5.00 U	5.00 U	0.516 U	NS
Bromodichloromethane			5.00 U	5.00 U	5.00 U	0.309 U	NS
Benzene			5.00 U	5.00 U	5.00 U	0.316 U	NS
Acetone			10.0 U	10.0 U	10.0 U	1.17 U	NS
4-Methyl-2-pentanone			10.0 U	10.0 U	10.0 U	0.361 U	NS
2-Hexanone			10.0 U	10.0 U	10.0 U	0.458 U	NS
2-Chloroethyl vinyl ether			10.0 U	10.0 U	10.0 U	0.454 U	NS
2-Butanone			10.0 U	10.0 U	10.0 U	0.985 U	NS
1,4-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.304 U	NS

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: / Depth: / Date:	RB-1 / - / 05/23/01	RB-2 / - / 05/29/01	RB-3 / - / 05/30/01	RB-4 / - / 06/04/01	RB-5 / - / 06/05/01
1,3-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.263 U	NS
1,2-Dichloropropane			5.00 U	5.00 U	5.00 U	0.289 U	NS
1,2-Dichloroethene, Total			5.00 U	5.00 U	5.00 U	0.888 U	NS
1,2-Dichloroethane			5.00 U	5.00 U	5.00 U	0.283 U	NS
1,2-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.400 U	NS
1,1-Dichloroethene			5.00 U	5.00 U	5.00 U	0.287 U	NS
1,1-Dichloroethane			5.00 U	5.00 U	5.00 U	0.635 U	NS
1,1,2-Trichloroethane			5.00 U	5.00 U	5.00 U	0.378 U	NS
1,1,2,2-Tetrachloroethane			5.00 U	5.00 U	5.00 U	0.409 U	NS
1,1,1-Trichloroethane			5.00 U	5.00 U	5.00 U	0.355 U	NS
Toluene-d8	Surr		101 %	100 %	100 %	100 %	NS
Dibromofluoromethane	Surr		98 %	99 %	98 %	107 %	NS
4-Bromofluorobenzene	Surr		96 %	93 %	94 %	97 %	NS
1,2-Dichloroethane-d4	Surr		96 %	95 %	94 %	107 %	NS
Semivolatiles by Method 8270C (μg/L)							
Pyrene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Phenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
Phenanthrene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Pentachlorophenol			50.0 U	50.0 U	50.0 U	50.0 U	NS
N-Nitrosodiphenylamine			10.0 U	10.0 U	10.0 U	10.0 U	NS
N-Nitrosodi-n-propylamine			10.0 U	10.0 U	10.0 U	10.0 U	NS
N-Nitrosodimethylamine			10.0 U	10.0 U	10.0 U	10.0 U	NS
Nitrobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Naphthalene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Isophorone			10.0 U	10.0 U	10.0 U	10.0 U	NS
Indeno(1,2,3-cd)pyrene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Hexachloroethane			10.0 U	10.0 U	10.0 U	10.0 U	NS
Hexachlorocyclopentadiene			50.0 U	50.0 U	50.0 U	50.0 U	NS
Hexachlorobutadiene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Hexachlorobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Fluorene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Fluoranthene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Di-n-octyl phthalate			10.0 U	10.0 U	10.0 U	10.0 U	NS
Di-n-butyl phthalate			10.0 U	10.0 U	10.0 U	10.0 U	NS
Dimeth[illegible]thalate			10.0 U	10.0 [illegible]	10.0 U	10.0 U	NS

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID:	RB-1	RB-2	RB-3	RB-4	RB-5
		Depth:	-	-	-	-	-
		Date:	05/23/01	05/29/01	05/30/01	06/04/01	06/05/01
Diethyl phthalate			10.0 U	10.0 U	10.0 U	10.0 U	NS
Dibenzofuran			10.0 U	10.0 U	10.0 U	10.0 U	NS
Dibenz(a,h)anthracene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Chrysene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Carbazole			10.0 U	10.0 U	10.0 U	10.0 U	NS
Butyl benzyl phthalate			10.0 U	10.0 U	10.0 U	10.0 U	NS
Bis(2-ethylhexyl)phthalate			10.0 U	10.0 U	10.0 U	10.0 U	NS
Bis(2-chloroisopropyl)ether			10.0 U	10.0 U	10.0 U	10.0 U	NS
Bis(2-chloroethyl)ether			10.0 U	10.0 U	10.0 U	10.0 U	NS
Bis(2-chloroethoxy)methane			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benzyl alcohol			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benzoic acid			150 U	150 U	150 U	150 U	NS
Benzo(k)fluoranthene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benzo(g,h,i)perylene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benzo(b)fluoranthene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benzo(a)pyrene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Benz(a)anthracene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Anthracene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Acenaphthylene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Acenaphthene			10.0 U	10.0 U	10.0 U	10.0 U	NS
4-Nitrophenol			50.0 U	50.0 U	50.0 U	50.0 U	NS
4-Nitroaniline			50.0 U	50.0 U	50.0 U	50.0 U	NS
4-Methylphenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
4-Chlorophenyl phenyl ether			10.0 U	10.0 U	10.0 U	10.0 U	NS
4-Chloroaniline			10.0 U	10.0 U	10.0 U	10.0 U	NS
4-Chloro-3-methylphenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
4-Bromophenyl phenyl ether			10.0 U	10.0 U	10.0 U	10.0 U	NS
4,6-Dinitro-2-methylphenol			50.0 U	50.0 U	50.0 U	50.0 U	NS
3-Nitroaniline			50.0 U	50.0 U	50.0 U	50.0 U	NS
3,3′-Dichlorobenzidine			20.0 U	20.0 U	20.0 U	20.0 U	NS
2-Nitrophenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
2-Nitroaniline			50.0 U	50.0 U	50.0 U	50.0 U	NS
2-Methylphenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
2-Methylnaphthalene			10.0 U	10.0 U	10.0 U	10.0 U	NS
2-Chlorophenol			10.0 U	10.0 U	10.0 U	10.0 U	NS

Table C-4

Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: Depth: Date:	RB-1 - 05/23/01	RB-2 - 05/29/01	RB-3 - 05/30/01	RB-4 - 06/04/01	RB-5 - 06/05/01
2-Chloronaphthalene			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,6-Dinitrotoluene			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,4-Dinitrotoluene			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,4-Dinitrophenol			50.0 U	50.0 U	50.0 U	50.0 U	NS
2,4-Dimethylphenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,4-Dichlorophenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,4,6-Trichlorophenol			10.0 U	10.0 U	10.0 U	10.0 U	NS
2,4,5-Trichlorophenol			50.0 U	50.0 U	50.0 U	50.0 U	NS
1,4-Dichlorobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
1,3-Dichlorobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
1,2-Dichlorobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
1,2,4-Trichlorobenzene			10.0 U	10.0 U	10.0 U	10.0 U	NS
Terphenyl-d14	Surr		90 %	93 %	89 %	87 %	NS
Phenol-d5	Surr		82 %	62 %	61 %	70 %	NS
Nitrobenzene-d5	Surr		88 %	70 %	67 %	80 %	NS
2-Fluorophenol	Surr		81 %	59 %	58 %	62 %	NS
2-Fluorobiphenyl	Surr		84 %	84 %	83 %	84 %	NS
2,4,6-Tribromophenol	Surr		89 %	58 %	58 %	78 %	NS

Table C-4

Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID:	RB-1	RB-2	RB-3	RB-4	RB-5
		Depth:	-	-	-	-	-
		Date:	05/23/01	05/29/01	05/30/01	06/04/01	06/05/01
Metals by Method 6010B and 7470A/71A (µg/L)							
Zinc			22.0	15.4	5.6 J	4.7 J	NS
Vanadium			1.0 U	1.0 U	1.0 U	1.0 U	NS
Thallium			4.3 U	4.3 U	4.3 U	4.3 U	NS
Sodium			391 U	391 U	391 U	391 U	NS
Silver			0.90 U	1.7 U	2.3 U	3.2 U	NS
Selenium			9.9 U	9.9 U	9.9 U	9.9 U	NS
Potassium			17.9 U	17.9 U	17.9 U	17.9 U	NS
Nickel			2.7 U	2.7 U	2.7 U	2.7 U	NS
Manganese			0.93 J	1.7 J	0.60 U	0.60 U	NS
Magnesium			21.1 U	21.1 U	21.1 U	21.1 U	NS
Lead			2.1 J	5.7	2.1 U	2.1 U	2.0 U
Iron			14.9 J	11.1 U	11.1 U	11.1 U	NS
Copper			108	7.9 U	3.9 U	6.8 U	NS
Cobalt			0.60 U	0.60 U	0.60 U	0.60 U	NS
Chromium			0.80 U	2.2 J	1.5 J	2.2 J	NS
Calcium			71.2 U	608 U	130 U	57.2 U	NS
Cadmium			4.4 U	0.40 U	0.40 U	0.40 U	0.20 U
Beryllium			0.10 U	0.10 U	0.10 U	0.10 U	NS
Barium			1.8 J	1.5 U	1.6 U	2.3 U	NS
Arsenic			4.4 U	12.3 U	5.2 U	4.4 U	NS
Antimony			4.1 U	4.1 U	4.1 U	4.1 U	NS
Aluminum			8.5 U	20.6 J	8.5 U	8.5 U	NS
Mercury			0.10 U	0.10 U	0.10 U	0.10 U	NS

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples,

Analyte	Type	Sample ID: Depth: Date:	RB-1 - 05/23/01	RB-2 - 05/29/01	RB-3 - 05/30/01	RB-4 - 06/04/01	RB-5 - 06/05/01
Hexavalent Chromium by Method 7196A (mg/L)							
Chromium, Hexavalent			0.01 U	0.01 U	0.01 U	0.01 U	NS
Cyanide, Total by Method 9012A (mg/L)							
Cyanide			0.01 U	0.01 U	0.01 U	0.01 U	NS
Petroleum Hydrocarbons, TR by Method 418.1M (mg/L)							
Petroleum Hydrocarbons, TR			2.0 U	2.0 U	2.0 U	2.0 U	NS
Dioxin and Furan by Method 1613B (pg/L)							
Total TCDF			10.2 UJ	10.3 U	10.0 U	10.0 U	NS
Total TCDD			10.2 UJ	10.3 U	10.0 U	10.0 U	NS
Total PeCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
Total PeCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
Total HxCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
Total HxCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
Total HpCDF			51.0 UJ	3.6	50.0 U	6.0	NS
Total HpCDD			51.0 UJ	51.5 U	50.0 U	52.0	NS
2,3,7,8-TCDF			10.2 UJ	10.3 U	10.0 U	10.0 U	NS
2,3,7,8-TCDD			10.2 UJ	10.3 U	10.0 U	10.0 U	NS
2,3,4,7,8-PeCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
2,3,4,6,7,8-HxCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,7,8-PeCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,7,8-PeCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,7,8,9-HxCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,7,8,9-HxCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,6,7,8-HxCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: / Depth: / Date:	RB-1 / - / 05/23/01	RB-2 / - / 05/29/01	RB-3 / - / 05/30/01	RB-4 / - / 06/04/01	RB-5 / - / 06/05/01
1,2,3,6,7,8-HxCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,4,7,8-HxCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,4,7,8-HxCDD			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,4,7,8,9-HpCDF			51.0 UJ	51.5 U	50.0 U	50.0 U	NS
1,2,3,4,6,7,8-HpCDF			51.0 UJ	51.5 U	50.0 U	6.0 J	NS
1,2,3,4,6,7,8-HpCDD			51.0 UJ	51.5 U	50.0 U	31.8 J	NS
1,2,3,4,6,7,8,9-OCDF			102 UJ	103 U	100 U	16.9 J	NS
1,2,3,4,6,7,8,9-OCDD			7.3 J	17.2 J	100 U	181 J	NS
13C12-2,3,7,8-TCDF	IS		103 %	42.7 %	54.9 %	57.6 %	NS
13C12-2,3,7,8-TCDD	IS		103 %	59.5 %	53.3 %	55.8 %	NS
13C12-2,3,4,7,8-PeCDF	IS		120 %	73 %	47.6 %	53.2 %	NS
13C12-2,3,4,6,7,8-HxCDF	IS		110 %	50.2 %	72.1 %	68.6 %	NS
13C12-1,2,3,7,8-PeCDF	IS		108 %	81.5 %	46.2 %	51 %	NS
13C12-1,2,3,7,8-PeCDD	IS		112 %	78.6 %	48.1 %	57.3 %	NS
13C12-1,2,3,7,8,9-HxCDF	IS		120 %	63.8 %	63.3 %	66.6 %	NS
13C12-1,2,3,6,7,8-HxCDF	IS		106 %	86.6 %	68.9 %	63.3 %	NS
13C12-1,2,3,6,7,8-HxCDD	IS		107 %	74 %	70.1 %	67.5 %	NS
13C12-1,2,3,4,7,8-HxCDF	IS		102 %	84 %	65.3 %	62.3 %	NS
13C12-1,2,3,4,7,8-HxCDD	IS		106 %	73.6 %	68.6 %	67.5 %	NS
13C12-1,2,3,4,7,8,9-HpCDF	IS		133 %	94.3 %	56.7 %	65.9 %	NS

Key:

J = Estimated value.

NS = Not sampled for the method.

U = Not detected at the reported value.

mg/L = Milligrams per liter.

pg/L = Picrograms per liter.

Note:
"Surr" indicates a surrogate compound and "IS" indicates a internal standard. These compounds have a unit of percent recovery.

Table C-4

Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID:	TB-1	TB-2	TB-3	TB-4
		Depth:	-	-	-	-
		Date:	05/23/01	05/29/01	05/30/01	06/04/01
Volatile Organic Compounds by Method 8260B (μg/L)						
Xylenes, Total			5.00 U	5.00 U	5.00 U	0.868 U
Vinyl chloride			10.0 U	10.0 U	10.0 U	0.351 U
Vinyl acetate			10.0 U	10.0 U	10.0 U	0.486 U
Trichlorofluoromethane			5.00 U	5.00 U	5.00 U	0.373 U
Trichloroethene			5.00 U	5.00 U	5.00 U	0.781 U
trans-1,3-Dichloropropene			5.00 U	5.00 U	5.00 U	0.428 U
trans-1,2-Dichloroethene			5.00 U	5.00 U	5.00 U	0.478 U
Toluene			5.00 U	5.00 U	5.00 U	0.487 U
Tetrachloroethene			5.00 U	5.00 U	5.00 U	0.646 U
Styrene			5.00 U	5.00 U	5.00 U	0.276 U
o-Xylene			5.00 U	5.00 U	5.00 U	0.302 U
Methylene chloride			5.00 U	5.00 U	5.00 U	0.543 U
m,p-Xylene			5.00 U	5.00 U	5.00 U	0.651 U
Ethylbenzene			5.00 U	5.00 U	5.00 U	0.349 U
Dibromochloromethane			5.00 U	5.00 U	5.00 U	0.244 U
cis-1,3-Dichloropropene			5.00 U	5.00 U	5.00 U	0.394 U
cis-1,2-Dichloroethene			5.00 U	5.00 U	5.00 U	0.427 U
Chloromethane			10.0 U	10.0 U	10.0 U	0.326 U
Chloroform			5.00 U	5.00 U	5.00 U	0.273 U
Chloroethane			10.0 U	10.0 U	10.0 U	3.65 U
Chlorobenzene			5.00 U	5.00 U	5.00 U	0.866 U
Carbon tetrachloride			5.00 U	5.00 U	5.00 U	1.04 U
Carbon disulfide			5.00 U	5.00 U	5.00 U	0.255 U
Bromomethane			10.0 U	10.0 U	10.0 U	1.06 U
Bromoform			5.00 U	5.00 U	5.00 U	0.516 U
Bromodichloromethane			5.00 U	5.00 U	5.00 U	0.309 U
Benzene			5.00 U	5.00 U	5.00 U	0.316 U
Acetone			10.0 U	10.0 U	10.0 U	1.17 U
4-Methyl-2-pentanone			10.0 U	10.0 U	10.0 U	0.361 U
2-Hexanone			10.0 U	10.0 U	10.0 U	0.458 U
2-Chloroethyl vinyl ether			10.0 U	10.0 U	10.0 U	0.454 U
2-Butanone			10.0 U	10.0 U	10.0 U	0.985 U
1,4-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.304 U

001002_UK02_02_00_90-B0925
APC_Tables.XLS-TMC 2001 Sampling Table C-4-3/27/02

Table C-4
Complete Analytical Data Summary for Field Quality Control Samples.

Analyte	Type	Sample ID: Depth: Date:	TB-1 - 05/23/01	TB-2 - 05/29/01	TB-3 - 05/30/01	TB-4 - 06/04/01
1,3-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.263 U
1,2-Dichloropropane			5.00 U	5.00 U	5.00 U	0.289 U
1,2-Dichloroethene, Total			5.00 U	5.00 U	5.00 U	0.888 U
1,2-Dichloroethane			5.00 U	5.00 U	5.00 U	0.283 U
1,2-Dichlorobenzene			5.00 U	5.00 U	5.00 U	0.400 U
1,1-Dichloroethene			5.00 U	5.00 U	5.00 U	0.287 U
1,1-Dichloroethane			5.00 U	5.00 U	5.00 U	0.635 U
1,1,2-Trichloroethane			5.00 U	5.00 U	5.00 U	0.378 U
1,1,2,2-Tetrachloroethane			5.00 U	5.00 U	5.00 U	0.409 U
1,1,1-Trichloroethane			5.00 U	5.00 U	5.00 U	0.355 U
Toluene-d8	Surr		100 %	100 %	101 %	101 %
Dibromofluoromethane	Surr		99 %	99 %	98 %	109 %
4-Bromofluorobenzene	Surr		96 %	96 %	94 %	95 %
1,2-Dichloroethane-d4	Surr		95 %	95 %	95 %	109 %

D Remedial Investigation Sample Results (Source: Law 1996)

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-1	TMC-SW-1	TMCSW-1	TMCSW-2	TMC-SW-2	TMCSW-2	TMCSW-3	TMC-SW-3	TMCSW-3	TMCSW-4	TMCSW-01 (1)
Sample Date	05-13-94	07-12-94	11-04-94	05-13-94	07-12-94	11-06-94	05-13-94	07-12-94	11-06-94	05-12-94	05-12-94
METHOD: EPA 524.2											
VOLATILES: (µg/L)											
1,1,1-Trichloroethane	0.2 J	--	--	0.17 J	--	--	0.045 J	--	--	0.5 U	0.5 U
1,3-Dichlorobenzene	0.5 U	--	--	0.19 J	--	--	0.5 U	--	--	0.5 U	0.5 U
1,4-Dichlorobenzene	0.5 U	--	--	0.16 J	--	--	0.5 U	--	--	0.5 U	0.5 U
Benzene	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	0.5 U
Chlorobenzene	0.5 U	--	--	0.5 U	--	--	0.5 U	--	--	0.5 U	0.5 U
cis-1,2-Dichloroethene	0.18 J	--	--	0.19 J	--	--	0.12 J	--	--	0.5 U	0.5 U
p-Cymene	0.5 U	--	--	0.39 J	--	--	0.5 U	--	--	0.5 U	0.5 U
tetrachloroethylene (PCE)	0.5 U	--	--	0.07 J	--	--	0.055 J	--	--	0.12 J	0.12 J
Trichloroethylene (TCE)	1.4	--	--	1.2	--	--	0.95	--	--	0.5 U	0.5 U
METHOD: EPA 525.1											
SEMI-VOLATILES: (µg/L)											
1,2-Diphenylhydrazine	--	0.024 J	--	--	0.6 U	--	--	0.59 U	--	--	--
2,2',3,3',4,4',6-Heptachlorobiphenyl	--	0.018 J	--	--	8.1 U	--	--	8 U	--	--	--
2,2',3',4,6-Pentachlorobiphenyl	--	0.028 J	--	--	8.1 U	--	--	8 U	--	--	--
2,2',4,4',5,6'-Hexachlorobiphenyl	--	0.019 J	--	--	8.1 U	--	--	8 U	--	--	--
2,2',4,4'-Tetrachlorobiphenyl	--	0.024 J	--	--	8.1 U	--	--	8 U	--	--	--
2,3-Dichlorobiphenyl	--	0.022 J	--	--	8.1 U	--	--	8 U	--	--	--
2,4,5-Trichlorophenol	--	0.0099 J	--	--	5 U	--	--	5 U	--	--	--
2,4,6-Trichlorophenol	--	0.013 J	--	--	1.2 U	--	--	1.2 U	--	--	--
2,4-Dichlorophenol	--	0.039 J	--	--	1 UJ	--	--	1 UJ	--	--	--
2-Chlorobiphenyl	--	0.02 J	--	--	8.1 U	--	--	8 U	--	--	--
3,3'-Dichlorobenzidine	--	0.0009 J	--	--	5 U	--	--	5 U	--	--	--
Acenaphthylene	--	0.015 J	--	--	5 U	--	--	5 U	--	--	--
alpha-Chlordane	--	0.012 J	--	--	5 U	--	--	5 U	--	--	--
Anthracene	--	0.028 J	--	--	0.005 J	--	--	0.007 J	--	--	--
Benzo(a)anthracene	--	0.03 J	--	--	0.19 U	--	--	0.19 U	--	--	--
Benzo(a)pyrene	--	0.023 J	--	--	0.6 U	--	--	0.003 J	--	--	--
Benzo(b)fluoranthene	--	0.011 J	--	--	0.67 U	--	--	0.007 J	--	--	--
Benzo(g,h,i)perylene	--	5 U	--	--	5 U	--	--	5 U	--	--	--
Benzo(k)fluoranthene	--	0.028 J	--	--	0.4 U	--	--	0.4 U	--	--	--
Butylbenzylphthalate	--	5 U	--	--	5 U	--	--	5 U	--	--	--
bis(2-Ethylhexyl)adipate	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	--	3.4 U	--	--	3.4 U	--	--	3.4 U	--	--	--
Chrysene	--	0.028 J	--	--	0.21 U	--	--	0.008 J	--	--	--
Dibenz(a,h)anthracene	--	0.99 U	--	--	1 U	--	--	1 U	--	--	--
Diethylphthalate	--	2 U	--	--	2 U	--	--	2 U	--	--	--
Dimethylphthalate	--	0.07 J	--	--	0.047 J	--	--	0.03 J	--	--	--
Di-n-butylphthalate	--	5 U	--	--	5 U	--	--	5 U	--	--	--
Fluorene	--	5 U	--	--	5 U	--	--	5 U	--	--	--
gamma-Chlordane	--	0.014 J	--	--	5 U	--	--	5 U	--	--	--
Hexachlorobenzene	--	0.032 J	--	--	0.71 U	--	--	0.7 U	--	--	--
Hexachlorocyclopentadiene	--	0.013 J	--	--	0.89 U	--	--	0.88 U	--	--	--
Indeno(1,2,3-cd)pyrene	--	1.2 UJ	--	--	1.2 UJ	--	--	1.2 UJ	--	--	--
Methoxychlor	--	0.011 J	--	--	0.5 U	--	--	0.5 U	--	--	--
N-Nitrosodiphenylamine (1)	--	0.016 J	--	--	4 U	--	--	4 U	--	--	--
Pentachlorophenol	--	0.024 J	--	--	1.9 UJ	--	--	1.9 U	--	--	--
Phenanthrene	--	0.11 J	--	--	0.13 J	--	--	0.11 J	--	--	--
Pyrene	--	0.038 J	--	--	0.017 J	--	--	0.014 J	--	--	--
METHOD: EPA 515.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Dicamba	2 U	--	--	2 U	--	--	2 U	--	--	2 U	2 U
METHOD: EPA 507											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Prometon	4.9 UR	--	0.4 U	5 UR	--	0.4 U	0.1 J	--	0.4 U	5.6 UR	--

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-1	TMC-SW-1	TMCSW-1	TMCSW-2	TMC-SW-2	TMCSW-2	TMCSW-3	TMC-SW-3	TMCSW-3	TMCSW-4	TMCSW-01 (1)
Sample Date	05-13-94	07-12-94	11-04-94	05-13-94	07-12-94	11-06-94	05-13-94	07-12-94	11-06-94	05-12-94	05-12-94
METHOD: EPA 508											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Malathion	0.18 UJ	--	--	0.18 UJ	--	--	0.17 UJ	--	--	0.2 UJ	0.2 UJ
p,p'-DDT	0.045 U	--	--	0.046 U	--	--	0.045 U	--	--	0.094	0.078
METHOD: EPA 531.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Aldicarb sulfoxide	0.4 UJ	--	--	0.4 UJ	--	--	0.4 UJ	--	--	0.69 J	0.29 J
METALS: (mg/L)											
Aluminum (3005/6010)	0.09 U	--	--	0.09 U	--	--	0.13	--	--	0.09 U	0.09 U
Antimony (3005/7041)	0.006 U	--	--	0.006 U	--	--	0.006 U	--	--	0.017	0.006 U
Arsenic (3020/7060)	0.003 U	--	--	0.003 UJ	--	--	0.003 U	--	--	0.003 U	0.003 U
Barium (3005/6010)	0.02 U	--	--	0.02 J	--	--	0.023	--	--	0.02 U	0.02 U
Calcium (3005/6010)	69.8	--	--	70.5	--	--	84.1	--	--	55.1	55.7
Iron (3005/6010)	0.04 U	--	--	0.076	--	--	0.058	--	--	0.04 U	0.066
Lead (3020/7060)	0.002 U	--	--	0.002 UJ	--	--	0.002 U	--	--	0.002 U	0.002
Magnesium (3005/6010)	7.6	--	--	7.7	--	--	10.1	--	--	6.4	6.4
Manganese (3005/6010)	0.005 U	--	--	0.008	--	--	0.01	--	--	0.005 U	0.005 U
Molybdenum (3005/6010)	0.08	--	--	0.16	--	--	0.16	--	--	0.05 U	0.05
Potassium (3005/6010)	1.3	--	--	1.3	--	--	1.4	--	--	2.2	2.1
Selenium (3020/7740)	0.005	--	--	0.003 U	--	--	0.003 U	--	--	0.003 U	0.003 U
Sodium (3005/6010)	26	--	--	26	--	--	31.5	--	--	14.4	14.5
Strontium (3005/6010)	0.13	--	--	0.14	--	--	0.16	--	--	0.11	0.12
Zinc (3005/6010)	0.01	--	--	0.01 U	--	--	0.023	--	--	0.014	0.023
WET CHEMISTRY: (mg/L)											
Total Hardness	199	--	--	203	--	--	242	--	--	169	169
MBAS - Surfactants	0.028	--	--	0.025 U	--	--	0.025 U	--	--	0.028	0.025 U
Ammonia Nitrogen	0.05 U	--	--	0.05 U	--	--	0.05 U	--	--	0.14	0.054
Nitrite Nitrogen	0.02 U	--	--	0.02 U	--	--	0.02 U	--	--	0.02 U	0.02 U
Total Recoverable Petroleum Hydrocarbons (418.1)	0.49	--	--	0.48 UJ	--	--	0.58	--	--	0.25 UJ	1
Non-Filterable Residue (103°C)	4 U	--	--	4 U	--	--	4 U	--	--	4 U	4 U
Filterable Residue (180°C)	263	--	--	176	--	--	356	--	--	183	178
METHOD: NYSDOH APC-44											
TOTAL GLYCOLS: (mg/L)											
Initial Analysis	0.05 U	--	--	0.05 U	--	--	0.05 U	--	--	0.05 U	0.05 U
Confirmatory Analysis	--	--	--	--	--	--	--	--	--	--	--
RADIONUCLIDES: (pCi/L)											
Strontium 90	1 U	--	--	1 U	--	--	1 U	--	--	1 U	1 U
Total Uranium	1 U	--	--	1 U	--	--	6+/-3	--	--	1 UJ	4+/-2

(1) = Duplicate of TMCSW-4 (05-12-94)
(2) = Duplicate of TMCSW-4 (06-26-94)
(3) = Duplicate of TMCSW-4 (07-12-94)
(4) = Duplicate of TMCSW-4 (11-07-94)
(5) = Duplicate of TMCSW-11 (05-10-94)
(6) = Duplicate of TMCSW-11 (06-26-94)
(7) = Duplicate of TMCSW-11 (07-12-94)
(8) = Duplicate of TMCSW-11 (07-22-94)
(9) = Duplicate of TMCSW-11 (11-04-94)

µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picocuries per liter
J = Estimated
R = Rejected
U = Analyte not detected
UJ = Estimated concentration possibly biased low
-- = Analyte not analyzed

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-4	(2) TMCSW-4 01	TMC-SW-4	(3) TMC-SW-4-02	TMCSW-4	(4) TMCSW-01	TMCSW-5	TMC-SW-5	TMCSW-5	TMCSW-6	TMC-SW-6
Sample Date	06-26-94	06-26-94	07-12-94	07-12-94	11-07-94	11-07-94	05-12-94	07-12-94	11-06-94	05-12-94	07-12-94
METHOD: EPA 524.2											
VOLATILES: (μg/L)											
1,1,1-Trichloroethane	--	--	--	--	--	--	0.075 J	--	--	0.085 J	--
1,3-Dichlorobenzene	--	--	--	--	--	--	0.5 U	--	--	0.5 U	--
1,4-Dichlorobenzene	--	--	--	--	--	--	0.5 U	--	--	0.5 U	--
Benzene	--	--	--	--	--	--	0.5 U	--	--	0.049 J	--
Chlorobenzene	--	--	--	--	--	--	0.06 J	--	--	0.15 J	--
cis-1,2-Dichloroethene	--	--	--	--	--	--	0.5 U	--	--	0.5 U	--
p-Cymene	--	--	--	--	--	--	0.5 U	--	--	0.5 U	--
tetrachloroethylene (PCE)	--	--	--	--	--	--	0.5 U	--	--	0.5 U	--
Trichloroethylene (TCE)	--	--	--	--	--	--	0.66	--	--	0.47 J	--
METHOD: EPA 525.1											
SEMI-VOLATILES: (μg/L)											
1,2-Diphenylhydrazine	--	--	0.58 U	0.58 U	--	--	--	0.61 U	--	--	0.58 U
2,2',3,3',4,4',6-Heptachlorobiphenyl	--	--	7.9 U	7.9 UR	--	--	--	8.2 R	--	--	7.8 R
2,2',3',4,6-Pentachlorobiphenyl	--	--	7.9 U	7.9 U	--	--	--	8.2 U	--	--	7.8 U
2,2',4,4',5,6'-Hexachlorobiphenyl	--	--	7.9 U	7.9 U	--	--	--	8.2 U	--	--	7.8 U
2,2',4,4'-Tetrachlorobiphenyl	--	--	7.9 U	7.9 U	--	--	--	8.2 U	--	--	7.8 U
2,3-Dichlorobiphenyl	--	--	7.9 U	7.9 U	--	--	--	8.2 U	--	--	7.8 U
2,4,5-Trichlorophenol	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
2,4,6-Trichlorophenol	--	--	1.2 U	1.2 U	--	--	--	1.2 U	--	--	1.2 U
2,4-Dichlorophenol	--	--	0.015 J	0.99 UJ	--	--	--	1 UJ	--	--	0.98 UJ
2-Chlorobiphenyl	--	--	7.9 U	7.9 U	--	--	--	8.2 U	--	--	7.8 U
3,3'-Dichlorobenzidine	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
Acenaphthylene	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
alpha-Chlordane	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
Anthracene	--	--	0.004 J	2 U	--	--	--	2.1 U	--	--	0.038 J
Benzo(a)anthracene	--	--	0.19 U	0.19 U	--	--	--	0.2 U	--	--	0.19 U
Benzo(a)pyrene	--	--	0.58 U	0.58 U	--	--	--	0.61 U	--	--	0.12 J
Benzo(b)fluoranthene	--	--	0.65 U	0.65 U	--	--	--	0.68 U	--	--	0.19 J
Benzo(g,h,i)perylene	--	--	5 U	5 U	--	--	--	5.2 U	--	--	0.031 J
Benzo(k)fluoranthene	--	--	0.4 U	0.4 U	--	--	--	0.41 U	--	--	0.078 J
Butylbenzylphthalate	--	--	5 U	5 U	--	--	--	5 U	--	--	5 U
bis(2-Ethylhexyl)adipate	--	--	--	--	--	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	--	--	3.4 U	3.4 U	--	--	--	3.4 U	--	--	3.4 U
Chrysene	--	--	0.0079 J	0.21 U	--	--	--	0.22 U	--	--	0.12 J
Dibenz(a,h)anthracene	--	--	0.99 U	0.99 U	--	--	--	1 U	--	--	0.98 U
Diethylphthalate	--	--	2 U	2 U	--	--	--	0.025 J	--	--	0.024 J
Dimethylphthalate	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
Di-n-butylphthalate	--	--	5 U	5 U	--	--	--	5 U	--	--	5 U
Fluorene	--	--	5 U	5 U	--	--	--	5.2 U	--	--	0.024 J
gamma-Chlordane	--	--	5 U	5 U	--	--	--	5.2 U	--	--	4.9 U
Hexachlorobenzene	--	--	0.69 U	0.69 U	--	--	--	0.72 U	--	--	0.69 U
Hexachlorocyclopentadiene	--	--	0.87 U	0.87 U	--	--	--	0.91 U	--	--	0.86 U
Indeno(1,2,3-cd)pyrene	--	--	1.2 UJ	1.2 UJ	--	--	--	1.2 UJ	--	--	0.091 J
Methoxychlor	--	--	0.5 U	0.5 U	--	--	--	0.52 U	--	--	0.49 U
N-Nitrosodiphenylamine (1)	--	--	4 U	4 U	--	--	--	4.1 U	--	--	3.9 U
Pentachlorophenol	--	--	1.9 U	1.9 U	--	--	--	2 U	--	--	1.9 U
Phenanthrene	--	--	0.12 J	0.12 J	--	--	--	0.12 J	--	--	0.26 J
Pyrene	--	--	0.031 J	5 U	--	--	--	0.028 J	--	--	0.3 J
METHOD: EPA 515.1											
PESTICIDES/PCB COMPOUNDS: (μg/L)											
Dicamba	--	--	--	--	--	--	1.9 J	--	--	2 U	--
METHOD: EPA 507											
PESTICIDES/PCB COMPOUNDS: (μg/L)											
Prometon	4.9 UR	5 UR	--	--	0.5	0.5	5.6 UR	--	0.4 U	5.6 UR	--

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-4	(2) TMCSW-4 01	TMC-SW-4	(3) TMC-SW-4-02	TMCSW-4	(4) TMCSW-01	TMCSW-5	TMC-SW-5	TMCSW-5	TMCSW-6	TMC-SW-6
Sample Date	06-26-94	06-26-94	07-12-94	07-12-94	11-07-94	11-07-94	05-12-94	07-12-94	11-06-94	05-12-94	07-12-94
METHOD: EPA 508											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Malathion	--	--	--	--	--	--	0.2 UJ	--	--	0.21 J	--
p,p'-DDT	--	--	--	--	--	--	0.089	--	--	0.1	--
METHOD: EPA 531.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Aldicarb sulfoxide	--	--	--	--	--	--	0.29 J	--	--	0.4 UJ	--
METALS: (mg/L)											
Aluminum (3005/6010)	--	--	--	--	--	--	0.095	--	--	0.37	--
Antimony (3005/7041)	--	--	--	--	--	--	0.006 U	--	--	0.006 U	--
Arsenic (3020/7060)	--	--	--	--	--	--	0.003 U	--	--	0.003 U	--
Barium (3005/6010)	--	--	--	--	--	--	0.028	--	--	0.028	--
Calcium (3005/6010)	--	--	--	--	--	--	87.2	--	--	67.4	--
Iron (3005/6010)	--	--	--	--	--	--	0.086	--	--	0.59	--
Lead (3020/7060)	--	--	--	--	--	--	0.002 U	--	--	0.01	--
Magnesium (3005/6010)	--	--	--	--	--	--	11.3	--	--	9.1	--
Manganese (3005/6010)	--	--	--	--	--	--	0.02	--	--	0.091	--
Molybdenum (3005/6010)	--	--	--	--	--	--	0.05 U	--	--	0.09	--
Potassium (3005/6010)	--	--	--	--	--	--	1.8	--	--	1.6	--
Selenium (3020/7740)	--	--	--	--	--	--	0.003 U	--	--	0.003 U	--
Sodium (3005/6010)	--	--	--	--	--	--	36.8	--	--	30.8	--
Strontium (3005/6010)	--	--	--	--	--	--	0.16	--	--	0.14	--
Zinc (3005/6010)	--	--	--	--	--	--	0.14	--	--	0.063	--
WET CHEMISTRY: (mg/L)											
Total Hardness	--	--	--	--	--	--	246	--	--	201	--
MBAS - Surfactants	--	--	--	--	--	--	0.026	--	--	0.079	--
Ammonia Nitrogen	--	--	--	--	--	--	0.21	--	--	1.6	--
Nitrite Nitrogen	--	--	--	--	--	--	0.02 U	--	--	0.029	--
Total Recoverable Petroleum Hydrocarbons (418.1)	--	--	--	--	--	--	0.25 U	--	--	0.42	--
Non-Filterable Residue (103°C)	--	--	--	--	--	--	4 U	--	--	11	--
Filterable Residue (180°C)	--	--	--	--	--	--	113	--	--	251	--
METHOD: NYSDOH APC-44											
TOTAL GLYCOLS: (mg/L)											
Initial Analysis	--	--	--	--	--	--	0.05 U	--	--	0.17	--
Confirmatory Analysis	--	--	--	--	--	--	--	--	--	0.08	--
RADIONUCLIDES: (pCi/L)											
Strontium 90	--	--	--	--	--	--	1 U	--	--	1 U	--
Total Uranium	--	--	--	--	--	--	7+/-3	--	--	4+/-2	--

(1) = Duplicate of TMCSW-4 (05-12-94)
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(3) = Duplicate of TMCSW-4 (07-12-94)
(4) = Duplicate of TMCSW-4 (11-07-94)
(5) = Duplicate of TMCSW-11 (05-10-94)
(6) = Duplicate of TMCSW-11 (06-26-94)
(7) = Duplicate of TMCSW-11 (07-12-94)
(8) = Duplicate of TMCSW-11 (07-22-94)
(9) = Duplicate of TMCSW-11 (11-04-94)

µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picocuries per liter
J = Estimated
R = Rejected
U = Analyte not detected
UJ = Estimated concentration possibly biased low
-- = Analyte not analyzed

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-6	TMCSW-7	TMC-SW-7	TMCSW-7	TMCSW-8	TMCSW-8	TMCSW-8	TMCSW-8	TMCSW-9	TMCSW-9	TMCSW-9
Sample Date	11-06-94	05-12-94	07-12-94	11-05-94	05-11-94	06-26-94	07-22-94	11-05-94	05-11-94	06-26-94	07-22-94
METHOD: EPA 524.2											
VOLATILES: (µg/L)											
1,1,1-Trichloroethane	--	0.096 J	--	--	0.5 U	--	--	--	0.045 J	--	--
1,3-Dichlorobenzene	--	0.5 U	--	--	0.5 U	--	--	--	0.5 U	--	--
1,4-Dichlorobenzene	--	0.5 U	--	--	0.057 J	--	--	--	0.05 J	--	--
Benzene	--	0.45 J	--	--	0.49 J	--	--	--	0.44 J	--	--
Chlorobenzene	--	0.72	--	--	0.79	--	--	--	0.73	--	--
cis-1,2-Dichloroethene	--	0.5 U	--	--	0.5 U	--	--	--	0.5 U	--	--
p-Cymene	--	0.5 U	--	--	0.5 U	--	--	--	0.5 U	--	--
tetrachloroethylene (PCE)	--	0.058 J	--	--	0.5 U	--	--	--	0.5 U	--	--
Trichloroethylene (TCE)	--	0.49 J	--	--	0.44 J	--	--	--	0.37 J	--	--
METHOD: EPA 525.1											
SEMI-VOLATILES: (µg/L)											
1,2-Diphenylhydrazine	--	--	0.59 U	--	0.69 UR	--	--	10 U	0.66 UR	--	--
2,2',3,3',4,4',6-Heptachlorobiphenyl	--	--	8 R	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
2,2',3',4,6-Pentachlorobiphenyl	--	--	8 U	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
2,2',4,4',5,6'-Hexachlorobiphenyl	--	--	8 U	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
2,2',4,4'-Tetrachlorobiphenyl	--	--	8 U	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
2,3-Dichlorobiphenyl	--	--	8 U	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
2,4,5-Trichlorophenol	--	--	5 U	--	5.9 UR	--	--	50 U	5.6 UR	--	--
2,4,6-Trichlorophenol	--	--	1.2 U	--	1.4 UR	--	--	50 U	1.3 UR	--	--
2,4-Dichlorophenol	--	--	1 UJ	--	1.2 UR	--	--	10 UJ	1.1 UR	--	--
2-Chlorobiphenyl	--	--	8 U	--	9.4 UR	--	--	0.1 U	8.9 UR	--	--
3,3'-Dichlorobenzidine	--	--	5 U	--	5.9 UR	--	--	5 U	5.6 UR	--	--
Acenaphthylene	--	--	5 U	--	5.9 UR	--	--	0.5 U	5.6 UR	--	--
alpha-Chlordane	--	--	5 U	--	5.9 UR	--	--	0.2 U	5.6 UR	--	--
Anthracene	--	--	2 U	--	2.4 UR	--	--	0.04 J	2.2 UR	--	--
Benzo(a)anthracene	--	--	0.19 U	--	0.22 UR	--	--	0.1	0.21 UR	--	--
Benzo(a)pyrene	--	--	0.59 U	--	0.69 UR	--	--	0.1 J	0.66 UR	--	--
Benzo(b)fluoranthene	--	--	0.66 U	--	0.78 UR	--	--	0.2 J	0.73 UR	--	--
Benzo(g,h,i)perylene	--	--	5 U	--	5.9 UR	--	--	0.1 J	5.6 UR	--	--
Benzo(k)fluoranthene	--	--	0.4 U	--	0.47 UR	--	--	0.07 J	0.44 UR	--	--
Butylbenzylphthalate	--	--	5 U	--	0.15 R	--	--	0.2 J	0.066 R	--	--
bis(2-Ethylhexyl)adipate	--	--	--	--	--	--	--	0.06 J	--	--	--
bis(2-Ethylhexyl)phthalate	--	--	3.4 U	--	0.46 R	--	--	0.8 J	0.68 R	--	--
Chrysene	--	--	0.21 U	--	0.25 UR	--	--	0.2 J	0.23 UR	--	--
Dibenz(a,h)anthracene	--	--	1 U	--	1.2 UR	--	--	0.03 J	1.1 UR	--	--
Diethylphthalate	--	--	0.027 J	--	0.025 R	--	--	0.1 J	0.027 R	--	--
Dimethylphthalate	--	--	5 U	--	5.9 UR	--	--	0.05 J	5.6 UR	--	--
Di-n-butylphthalate	--	--	5 U	--	0.48 R	--	--	0.1 J	0.29 R	--	--
Fluorene	--	--	0.011 J	--	5.9 UR	--	--	0.04 J	5.6 UR	--	--
gamma-Chlordane	--	--	5 U	--	5.9 UR	--	--	0.2 U	5.6 UR	--	--
Hexachlorobenzene	--	--	0.7 U	--	0.82 UR	--	--	0.5 U	0.78 UR	--	--
Hexachlorocyclopentadiene	--	--	0.88 U	--	1 UR	--	--	0.5 U	0.98 UR	--	--
Indeno(1,2,3-cd)pyrene	--	--	1.2 UJ	--	1.4 UR	--	--	0.1 J	1.3 UR	--	--
Methoxychlor	--	--	0.5 U	--	0.59 UR	--	--	0.5 U	0.56 UR	--	--
N-Nitrosodiphenylamine (1)	--	--	4 U	--	4.7 UR	--	--	10 U	4.4 UR	--	--
Pentachlorophenol	--	--	1.9 U	--	2.2 UR	--	--	0.04 J	2.1 UR	--	--
Phenanthrene	--	--	0.12 J	--	0.02 R	--	--	0.2 J	0.026 R	--	--
Pyrene	--	--	0.018 J	--	0.01 R	--	--	0.3 J	0.016 R	--	--
METHOD: EPA 515.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Dicamba	--	2 U	--	--	--	--	2 U	--	--	--	2 U
METHOD: EPA 507											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Prometon	0.4 U	5.6 UR	--	0.14 J	--	4.9 UR	--	0.4 U	5.9 UR	5.1 UR	--

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-6	TMCSW-7	TMC-SW-7	TMCSW-7	TMCSW-8	TMCSW-8	TMCSW-8	TMCSW-8	TMCSW-9	TMCSW-9	TMCSW-9
Sample Date	11-06-94	05-12-94	07-12-94	11-05-94	05-11-94	06-26-94	07-22-94	11-05-94	05-11-94	06-26-94	07-22-94
METHOD: EPA 508											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Malathion	--	0.2 UJ	--	--	0.18 UJ	--	--	--	0.18 UJ	--	--
p,p'-DDT	--	0.051 U	--	--	0.046 U	--	--	--	0.046 U	--	--
METHOD: EPA 531.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Aldicarb sulfoxide	--	0.4 UJ	--	--	0.13 J	--	--	--	0.4 UJ	--	--
METALS: (mg/L)											
Aluminum (3005/6010)	--	0.09 U	--	--	0.09 U	--	--	--	0.09 U	--	--
Antimony (3005/7041)	--	0.006 U	--	--	0.006 U	--	--	--	0.006 U	--	--
Arsenic (3020/7060)	--	0.003	--	--	0.003 U	--	--	--	0.003 U	--	--
Barium (3005/6010)	--	0.03	--	--	0.032	--	--	--	0.034	--	--
Calcium (3005/6010)	--	82.6	--	--	81.8	--	--	--	87	--	--
Iron (3005/6010)	--	0.2	--	--	0.076	--	--	--	0.14	--	--
Lead (3020/7060)	--	0.002	--	--	0.002 U	--	--	--	0.002	--	--
Magnesium (3005/6010)	--	12.3	--	--	12.9	--	--	--	13.3	--	--
Manganese (3005/6010)	--	0.035	--	--	0.041	--	--	--	0.049	--	--
Molybdenum (3005/6010)	--	0.05 U	--	--	0.06	--	--	--	0.05 U	--	--
Potassium (3005/6010)	--	1.7	--	--	1.6	--	--	--	1.7	--	--
Selenium (3020/7740)	--	0.003 U	--	--	0.003 U	--	--	--	0.003 U	--	--
Sodium (3005/6010)	--	37.6	--	--	37.2	--	--	--	37.2	--	--
Strontium (3005/6010)	--	0.17	--	--	0.18	--	--	--	0.18	--	--
Zinc (3005/6010)	--	0.01 U	--	--	0.01 U	--	--	--	0.1	--	--
WET CHEMISTRY: (mg/L)											
Total Hardness	--	254	--	--	259	--	--	--	257	--	--
MBAS - Surfactants	--	0.025 U	--	--	0.025 U	--	--	--	0.025 U	--	--
Ammonia Nitrogen	--	2	--	--	1.5	--	--	--	0.29	--	--
Nitrite Nitrogen	--	0.02 U	--	--	0.02 U	--	--	--	0.02 U	--	--
Total Recoverable Petroleum Hydrocarbons (418.1)	--	0.25 U	--	--	0.25 U	--	--	--	0.25 U	--	--
Non-Filterable Residue (103°C)	--	4 U	--	--	4 U	--	--	--	4 U	--	--
Filterable Residue (180°C)	--	141	--	--	349	--	--	--	288	--	--
METHOD: NYSDOH APC-44											
TOTAL GLYCOLS: (mg/L)											
Initial Analysis	--	0.05 U	--	--	0.05 U	--	--	--	0.05 U	--	--
Confirmatory Analysis	--	--	--	--	--	--	--	--	--	--	--
RADIONUCLIDES: (pCi/L)											
Strontium 90	--	1 U	--	--	1 U	--	--	--	1 U	--	--
Total Uranium	--	1 U	--	--	1 U	--	--	--	3+/-2	--	--

(1) = Duplicate of TMCSW-4 (05-12-94)
(2) = Duplicate of TMCSW-4 (06-26-94)
(3) = Duplicate of TMCSW-4 (07-12-94)
(4) = Duplicate of TMCSW-4 (11-07-94)
(5) = Duplicate of TMCSW-11 (05-10-94)
(6) = Duplicate of TMCSW-11 (06-26-94)
(7) = Duplicate of TMCSW-11 (07-12-94)
(8) = Duplicate of TMCSW-11 (07-22-94)
(9) = Duplicate of TMCSW-11 (11-04-94)

µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picocuries per liter
J = Estimated
R = Rejected
U = Analyte not detected
UJ = Estimated concentration possibly biased low
-- = Analyte not analyzed

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.:	TMCSW-9	TMCSW-10	TMCSW-10	TMCSW-10	TMCSW-10	TMCSW-11	TMCSW-01 (5)	TMCSW-11	TMCSW-11 01 (6)	TMC-SW-11	TMC-SW-01 (7)
Sample Date	11-05-94	05-11-94	06-26-94	07-22-94	11-05-94	05-10-94	05-10-94	06-26-94	06-26-94	07-12-94	07-12-94
METHOD: EPA 524.2											
VOLATILES: (µg/L)											
1,1,1-Trichloroethane	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
1,3-Dichlorobenzene	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
1,4-Dichlorobenzene	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
Benzene	--	0.23 J	--	--	--	0.5 U	0.5 U	--	--	--	--
Chlorobenzene	--	0.38 J	--	--	--	0.5 U	0.5 U	--	--	--	--
cis-1,2-Dichloroethene	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
p-Cymene	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
tetrachloroethylene (PCE)	--	0.5 U	--	--	--	0.5 U	0.5 U	--	--	--	--
Trichloroethylene (TCE)	--	0.41 J	--	--	--	0.5 U	0.5 U	--	--	--	--
METHOD: EPA 525.1											
SEMI-VOLATILES: (µg/L)											
1,2-Diphenylhydrazine	10 U	0.66 UR	--	--	10 UJ	--	--	--	--	--	--
2,2',3,3',4,4',6-Heptachlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
2,2',3',4,6-Pentachlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
2,2',4,4',5,6'-Hexachlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
2,2',4,4'-Tetrachlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
2,3-Dichlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
2,4,5-Trichlorophenol	50 U	5.6 UR	--	--	50 UJ	--	--	--	--	--	--
2,4,6-Trichlorophenol	50 U	1.3 UR	--	--	50 UJ	--	--	--	--	--	--
2,4-Dichlorophenol	10 UJ	1.1 UR	--	--	10 UJ	--	--	--	--	--	--
2-Chlorobiphenyl	0.1 U	8.9 UR	--	--	0.1 UJ	--	--	--	--	--	--
3,3'-Dichlorobenzidine	5 U	5.6 UR	--	--	5 UJ	--	--	--	--	--	--
Acenaphthylene	0.5 U	5.6 UR	--	--	0.5 UJ	--	--	--	--	--	--
alpha-Chlordane	0.2 U	5.6 UR	--	--	0.2 UJ	--	--	--	--	--	--
Anthracene	0.5 U	2.2 UR	--	--	0.5 UJ	--	--	--	--	--	--
Benzo(a)anthracene	0.08 J	0.21 UR	--	--	0.1 UJ	--	--	--	--	--	--
Benzo(a)pyrene	0.06 J	0.66 UR	--	--	0.2 UJ	--	--	--	--	--	--
Benzo(b)fluoranthene	0.08 J	0.73 UR	--	--	0.04 J	--	--	--	--	--	--
Benzo(g,h,i)perylene	0.06 J	5.6 UR	--	--	0.5 UJ	--	--	--	--	--	--
Benzo(k)fluoranthene	0.06 J	0.44 UR	--	--	0.2 UJ	--	--	--	--	--	--
Butylbenzylphthalate	0.2 J	0.029 R	--	--	0.04 J	--	--	--	--	--	--
bis(2-Ethylhexyl)adipate	2 U	--	--	--	2 UJ	--	--	--	--	--	--
bis(2-Ethylhexyl)phthalate	1 U	0.35 R	--	--	1 U	--	--	--	--	--	--
Chrysene	0.09 J	0.23 UR	--	--	0.2 UJ	--	--	--	--	--	--
Dibenz(a,h)anthracene	0.3 U	1.1 UR	--	--	0.3 UJ	--	--	--	--	--	--
Diethylphthalate	0.1 J	0.018 R	--	--	0.5 UJ	--	--	--	--	--	--
Dimethylphthalate	0.5 U	5.6 UR	--	--	0.5 UJ	--	--	--	--	--	--
Di-n-butylphthalate	0.07 J	0.15 R	--	--	0.04 J	--	--	--	--	--	--
Fluorene	0.5 U	5.6 UR	--	--	0.5 UJ	--	--	--	--	--	--
gamma-Chlordane	0.2 U	5.6 UR	--	--	0.2 UJ	--	--	--	--	--	--
Hexachlorobenzene	0.5 U	0.78 UR	--	--	0.5 UJ	--	--	--	--	--	--
Hexachlorocyclopentadiene	0.5 U	0.98 UR	--	--	0.5 UJ	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	0.05 J	1.3 UR	--	--	0.4 UJ	--	--	--	--	--	--
Methoxychlor	0.5 U	0.56 UR	--	--	0.5 UJ	--	--	--	--	--	--
N-Nitrosodiphenylamine (1)	10 U	4.4 UR	--	--	10 UJ	--	--	--	--	--	--
Pentachlorophenol	0.4 U	2.1 UR	--	--	0.4 UJ	--	--	--	--	--	--
Phenanthrene	0.09 J	0.018 R	--	--	0.5 UJ	--	--	--	--	--	--
Pyrene	0.2 J	5.6 UR	--	--	0.04 J	--	--	--	--	--	--
METHOD: EPA 515.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Dicamba	--	--	--	2 U	--	--	--	--	--	--	--
METHOD: EPA 507											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Prometon	0.4 U	--	5 UR	--	0.4 U	--	5.6 UR	4.8 UR	5 UR	--	--

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-9	TMCSW-10	TMCSW-10	TMCSW-10	TMCSW-10	TMCSW-11	TMCSW-01 (5)	TMCSW-11	TMCSW-11 01 (6)	TMC-SW-11	TMC-SW-01 (7)
Sample Date	11-05-94	05-11-94	06-26-94	07-22-94	11-05-94	05-10-94	05-10-94	06-26-94	06-26-94	07-12-94	07-12-94
METHOD: EPA 508											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Malathion	--	0.18 UJ	--	--	--	0.18 UJ	0.18 UJ	--	--	--	--
p,p'-DDT	--	0.046 U	--	--	--	0.046 U	0.046 UJ	--	--	--	--
METHOD: EPA 531.1											
PESTICIDES/PCB COMPOUNDS: (µg/L)											
Aldicarb sulfoxide	--	0.4 UJ	--	--	--	0.4 UJ	0.4 UJ	--	--	--	--
METALS: (mg/L)											
Aluminum (3005/6010)	--	0.09 U	--	--	--	0.09 U	0.09 U	--	--	--	--
Antimony (3005/7041)	--	0.006 U	--	--	--	0.006 U	0.006 U	--	--	--	--
Arsenic (3020/7060)	--	0.003	--	--	--	0.003 U	0.003 U	--	--	--	--
Barium (3005/6010)	--	0.095	--	--	--	0.11	0.11	--	--	--	--
Calcium (3005/6010)	--	83	--	--	--	75.2 J	78.6	--	--	--	--
Iron (3005/6010)	--	0.19	--	--	--	0.5	0.22	--	--	--	--
Lead (3020/7060)	--	0.002 U	--	--	--	0.002 U	0.002 U	--	--	--	--
Magnesium (3005/6010)	--	15.4	--	--	--	15.4	15.7	--	--	--	--
Manganese (3005/6010)	--	0.086	--	--	--	0.071	0.074	--	--	--	--
Molybdenum (3005/6010)	--	0.05 U	--	--	--	0.07	0.05 U	--	--	--	--
Potassium (3005/6010)	--	1.7	--	--	--	1.6	1.6	--	--	--	--
Selenium (3020/7740)	--	0.003 U	--	--	--	0.003 U	0.003 U	--	--	--	--
Sodium (3005/6010)	--	40.6	--	--	--	39.6	39.9	--	--	--	--
Strontium (3005/6010)	--	0.38	--	--	--	0.41	0.43	--	--	--	--
Zinc (3005/6010)	--	0.016	--	--	--	0.011	0.038	--	--	--	--
WET CHEMISTRY: (mg/L)											
Total Hardness	--	265	--	--	--	251	253	--	--	--	--
MBAS - Surfactants	--	0.025 U	--	--	--	0.025 U	0.025 U	--	--	--	--
Ammonia Nitrogen	--	1.6	--	--	--	1.8	0.05 U	--	--	--	--
Nitrite Nitrogen	--	0.02 U	--	--	--	0.02 U	0.02 U	--	--	--	--
Total Recoverable Petroleum Hydrocarbons (418.1)	--	0.25 U	--	--	--	0.25 U	0.58	--	--	--	--
Non-Filterable Residue (103°C)	--	4 U	--	--	--	4 U	4 U	--	--	--	--
Filterable Residue (180°C)	--	336	--	--	--	345	350	--	--	--	--
METHOD: NYSDOH APC-44											
TOTAL GLYCOLS: (mg/L)											
Initial Analysis	--	0.05 U	--	--	--	0.05 U	0.05 U	--	--	--	--
Confirmatory Analysis	--	--	--	--	--	--	--	--	--	--	--
RADIONUCLIDES: (pCi/L)											
Strontium 90	--	1 U	--	--	--	1 U	1 U	--	--	--	--
Total Uranium	--	1 U	--	--	--	3 U	3 U	--	--	--	--

(1) = Duplicate of TMCSW-4 (05-12-94)
(2) = Duplicate of TMCSW-4 (06-26-94)
(3) = Duplicate of TMCSW-4 (07-12-94)
(4) = Duplicate of TMCSW-4 (11-07-94)
(5) = Duplicate of TMCSW-11 (05-10-94)
(6) = Duplicate of TMCSW-11 (06-26-94)
(7) = Duplicate of TMCSW-11 (07-12-94)
(8) = Duplicate of TMCSW-11 (07-22-94)
(9) = Duplicate of TMCSW-11 (11-04-94)

µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picocuries per liter
J = Estimated
R = Rejected
U = Analyte not detected
UJ = Estimated concentration possibly biased low
-- = Analyte not analyzed

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-11	TMCSW-01 (8)	TMCSW-11	TMCSW-02 (9)	TMCSW-12	TMC-SW-12	TMC-SW-12	TMCSW-12	TMCSW-12
Sample Date	07-22-94	07-22-94	11-04-94	11-04-94	05-10-94	06-26-94	07-12-94	07-22-94	11-04-94
METHOD: EPA 524.2									
VOLATILES: (µg/L)									
1,1,1-Trichloroethane	--	--	--	--	0.5 U	--	--	--	--
1,3-Dichlorobenzene	--	--	--	--	0.5 U	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	0.5 U	--	--	--	--
Benzene	--	--	--	--	0.5 U	--	--	--	--
Chlorobenzene	--	--	--	--	0.5 U	--	--	--	--
cis-1,2-Dichloroethene	--	--	--	--	0.5 U	--	--	--	--
p-Cymene	--	--	--	--	0.5 U	--	--	--	--
tetrachloroethylene (PCE)	--	--	--	--	0.5 U	--	--	--	--
Trichloroethylene (TCE)	--	--	--	--	0.5 U	--	--	--	--
METHOD: EPA 525.1									
SEMI-VOLATILES: (µg/L)									
1,2-Diphenylhydrazine	--	--	10 UJ	10 UJ	--	--	--	--	10 UJ
2,2',3,3',4,4',6-Heptachlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
2,2',3',4,6-Pentachlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
2,2',4,4',5,6'-Hexachlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
2,2',4,4'-Tetrachlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
2,3-Dichlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
2,4,5-Trichlorophenol	--	--	50 UJ	50 UJ	--	--	--	--	50 UJ
2,4,6-Trichlorophenol	--	--	50 UJ	50 UJ	--	--	--	--	50 UJ
2,4-Dichlorophenol	--	--	10 UJ	10 UJ	--	--	--	--	10 UJ
2-Chlorobiphenyl	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
3,3'-Dichlorobenzidine	--	--	5 UJ	5 UJ	--	--	--	--	5 UJ
Acenaphthylene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
alpha-Chlordane	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Anthracene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
Benzo(a)anthracene	--	--	0.1 UJ	0.1 UJ	--	--	--	--	0.1 UJ
Benzo(a)pyrene	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Benzo(b)fluoranthene	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Benzo(g,h,i)perylene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
Benzo(k)fluoranthene	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Butylbenzylphthalate	--	--	0.04 J	0.04 J	--	--	--	--	0.5 UJ
bis(2-Ethylhexyl)adipate	--	--	2 UJ	2 UJ	--	--	--	--	2 UJ
bis(2-Ethylhexyl)phthalate	--	--	0.6 J	0.4 J	--	--	--	--	1 U
Chrysene	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Dibenz(a,h)anthracene	--	--	0.3 UJ	0.3 UJ	--	--	--	--	0.3 UJ
Diethylphthalate	--	--	0.1 J	0.07 J	--	--	--	--	0.5 UJ
Dimethylphthalate	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
Di-n-butylphthalate	--	--	0.05 J	0.04 J	--	--	--	--	0.5 UJ
Fluorene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
gamma-Chlordane	--	--	0.2 UJ	0.2 UJ	--	--	--	--	0.2 UJ
Hexachlorobenzene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
Hexachlorocyclopentadiene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
Indeno(1,2,3-cd)pyrene	--	--	0.4 UJ	0.4 UJ	--	--	--	--	0.4 UJ
Methoxychlor	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
N-Nitrosodiphenylamine (1)	--	--	10 UJ	10 UR	--	--	--	--	10 UJ
Pentachlorophenol	--	--	0.4 UJ	0.4 UJ	--	--	--	--	0.4 UJ
Phenanthrene	--	--	0.5 UJ	0.5 UR	--	--	--	--	0.5 UJ
Pyrene	--	--	0.5 UJ	0.5 UJ	--	--	--	--	0.5 UJ
METHOD: EPA 515.1									
PESTICIDES/PCB COMPOUNDS: (µg/L)									
Dicamba	2 U	2 U	--	--	--	--	--	2 U	--
METHOD: EPA 507									
PESTICIDES/PCB COMPOUNDS: (µg/L)									
Prometon	--	--	0.4 U	0.4 U	--	4.9 UR	--	--	0.4 U

Table 5.1: Detection of Analytes in Surface Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-11	TMCSW-01 (8)	TMCSW-11	TMCSW-02 (9)	TMCSW-12	TMC-SW-12	TMC-SW-12	TMCSW-12	TMCSW-12
Sample Date	07-22-94	07-22-94	11-04-94	11-04-94	05-10-94	06-26-94	07-12-94	07-22-94	11-04-94
METHOD: EPA 508									
PESTICIDES/PCB COMPOUNDS: (µg/L)									
Malathion	--	--	--	--	0.18 UJ	--	--	--	--
p,p'-DDT	--	--	--	--	0.046 UJ	--	--	--	--
METHOD: EPA 531.1									
PESTICIDES/PCB COMPOUNDS: (µg/L)									
Aldicarb sulfoxide	--	--	--	--	0.25 J	--	--	--	--
METALS: (mg/L)									
Aluminum (3005/6010)	--	--	--	--	0.09 U	--	--	--	--
Antimony (3005/7041)	--	--	--	--	0.006 U	--	--	--	--
Arsenic (3020/7060)	--	--	--	--	0.003 U	--	--	--	--
Barium (3005/6010)	--	--	--	--	0.088	--	--	--	--
Calcium (3005/6010)	--	--	--	--	67.4	--	--	--	--
Iron (3005/6010)	--	--	--	--	0.24	--	--	--	--
Lead (3020/7060)	--	--	--	--	0.002	--	--	--	--
Magnesium (3005/6010)	--	--	--	--	13.8	--	--	--	--
Manganese (3005/6010)	--	--	--	--	0.099	--	--	--	--
Molybdenum (3005/6010)	--	--	--	--	0.06	--	--	--	--
Potassium (3005/6010)	--	--	--	--	1.5	--	--	--	--
Selenium (3020/7740)	--	--	--	--	0.003 U	--	--	--	--
Sodium (3005/6010)	--	--	--	--	33.9	--	--	--	--
Strontium (3005/6010)	--	--	--	--	0.38	--	--	--	--
Zinc (3005/6010)	--	--	--	--	0.018	--	--	--	--
WET CHEMISTRY: (mg/L)									
Total Hardness	--	--	--	--	226	--	--	--	--
MBAS - Surfactants	--	--	--	--	0.025 U	--	--	--	--
Ammonia Nitrogen	--	--	--	--	0.05 U	--	--	--	--
Nitrite Nitrogen	--	--	--	--	0.02 U	--	--	--	--
Total Recoverable Petroleum Hydrocarbons (418.1)	--	--	--	--	0.25 U	--	--	--	--
Non-Filterable Residue (103°C)	--	--	--	--	4 U	--	--	--	--
Filterable Residue (180°C)	--	--	--	--	329	--	--	--	--
METHOD: NYSDOH APC-44									
TOTAL GLYCOLS: (mg/L)									
Initial Analysis	--	--	--	--	0.05 U	--	--	--	--
Confirmatory Analysis	--	--	--	--	--	--	--	--	--
RADIONUCLIDES: (pCi/L)									
Strontium 90	--	--	--	--	1.2+/-0.7	--	--	--	--
Total Uranium	--	--	--	--	3 U	--	--	--	--

(1) = Duplicate of TMCSW-4 (05-12-94)
(2) = Duplicate of TMCSW-4 (06-26-94)
(3) = Duplicate of TMCSW-4 (07-12-94)
(4) = Duplicate of TMCSW-4 (11-07-94)
(5) = Duplicate of TMCSW-11 (05-10-94)
(6) = Duplicate of TMCSW-11 (06-26-94)
(7) = Duplicate of TMCSW-11 (07-12-94)
(8) = Duplicate of TMCSW-11 (07-22-94)
(9) = Duplicate of TMCSW-11 (11-04-94)

µg/L = micrograms per liter
mg/L = milligrams per liter
pCi/L = picocuries per liter
J = Estimated
R = Rejected
U = Analyte not detected
UJ = Estimated concentration possibly biased low
-- = Analyte not analyzed

PREPARED/DATE: CLC 8/14/95
CHECKED/DATE: KLA 8/16/95

Table 5.2: Detection of Analytes in Surface-Water Samples - Spring 1995
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSW-3	(1) TMCSW-3-01	TMCSW-11	(2) TMCSW-11-01	TMCSW-12
Sample Date	04-08-95	04-08-95	04-08-95	04-08-95	04-08-95
WET CHEMISTRY (mg/L):					
Fluoride (340.2)	0.062 J	0.067 J	0.053 J	0.06 J	--

(1) = Duplicate of TMCSW-3
(2) = Duplicate of TMCSW-11

(L) = Lancaster Laboratories, Inc.
mg/L = milligrams per Liter
J = Estimated concentration
-- = Analyte not analyzed

PREPARED/DATE: CLC 8/14/95
CHECKED/DATE: KLA 8/16/94

Table 5.3: Frequency of Detection and Exceedance of Potential ARARs or TBCs for Surface-Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, New York

Parameter	Frequency of Detection	Range of Detected Concentrations	Comparison to ARARs and TBCs: Frequency of Detection Above Most Stringent	Most Stringent Criterion	Comparison to Background: Frequency of Detection Above Background	Background Screening Concentration
Volatiles (µg/L)						
1,1,1 - Trichloroethane	7/12	0.045 J - 0.2 J	0	18,000	--	NA
1,3 - Dichlorobenzene	1/12	0.19 J	0	5	--	NA
1,4 - Dichlorobenzene	3/12	0.05 J - 0.16 J	0	5	--	NA
Benzene	5/12	0.049 J - 0.49 J	0	0.66	--	NA
Chlorobenzene	6/12	0.06 J - 0.79	0	5	--	NA
p-Cymene (p-Isopropyltoluene)	1/12	0.39 J	--	NA	--	NA
Tetrachloroethylene (PCE)	4/12	0.055 J - 0.12 J	0	0.8	--	NA
Trichloroethylene (TCE)	9/12	0.37 J - 1.4	0	2.7	--	NA
cis-1,2-Dichloroethylene	3/12	0.12 J - 0.19 J	3	0.033	--	NA
Semi-Volatiles (µg/L)						
1,2 - Diphenylhydrazine	1/12	0.024 J	0	0.042	--	NA
2,2,3,3,4,4,6-Heptachlorobiphenyl	1/9	0.018 J	1	0.0000006	--	NA
2,2,3,4,6-Pentachlorobiphenyl	1/12	0.028 J	1	0.0000006	--	NA
2,2,4,4,5,6-Hexachlorobiphenyl	1/12	0.019 J	1	0.0000006	--	NA
2,2,4,4-Tetrachlorobiphenyl	1/12	0.024 J	1	0.0000006	--	NA
2,3-Dichlorobiphenyl	1/12	0.022 J	1	0.0000006	--	NA
2,4,5-Trichlorophenol	1/12	0.0099 J	0	1.0	--	NA
2,4,6-Trichlorophenol	1/12	0.013 J	0	1.0	--	NA
2,4 - Dichlorophenol	2/12	0.015 J - 0.039 J	0	1.0	--	NA
2-Chlorobiphenyl	1/12	0.02 J	--	NA	--	NA
3,3'-Dichlorobenzidine	1/12	0.00099 J	--	NA	--	NA
Acenaphthylene	1/12	0.015 J	1	0.0028	--	NA
Anthracene	6/12	0.004 J - 0.04 J	6	0.0028	--	NA
Benzo(a)anthracene	3/12	0.03 J - 0.1	3	0.0028	--	NA
Benzo(a)pyrene	5/12	0.003 J - 0.12 J	5	0.0028	--	NA
Benzo(b)fluoranthene	6/12	0.007 J - 0.2 J	6	0.0028	--	NA
Benzo(ghi)perylene	3/12	0.031 J - 0.1 J	3	0.0028	--	NA
Benzo(k)fluoranthene	4/12	0.028 J - 0.078 J	4	0.0028	--	NA
Benzyl butyl phthalate	4/12	0.04 J - 0.2 J	--	NA	--	NA
Bis(2-ethylhexyl)phthalate	2/12	0.6 J - 0.8 J	2	0.6	--	NA
Chrysene	6/12	0.0079 J - 0.2 J	6	0.0028	--	NA
Di-n-butyl phthalate	4/12	0.04 J - 0.1 J	--	NA	--	NA
Dibenzo(a,h)anthracene	1/12	0.03 J	--	NA	--	NA
Diethyl phthalate	6/12	0.024 J - 0.1 J	0	350,000	--	NA
Dimethyl phthalate	4/12	0.03 J - 0.07 J	0	313,000	--	NA
Dioctyl adipate	1/12	0.06 J	--	NA	--	NA
Fluorene	3/12	0.011 J - 0.04 J	3	0.003	--	NA
Hexachlorobenzene	1/12	0.032 J	1	0.00072	--	NA
Hexachlorocyclopentadiene	1/12	0.013 J	0	0.45	--	NA
Indeno(1,2,3-cd)pyrene	3/12	0.05 J - 0.1 J	3	0.0028	--	NA
N-Nitrosodiphenylamine	1/12	0.016 J	0	4.9	--	NA
Pentachlorophenol	2/12	0.024 J - 0.04 J	0	0.4	--	NA
Phenanthrene	9/12	0.09 J - 0.26 J	9	0.0028	--	NA
Pyrene	10/12	0.014 J - 0.3 J	10	0.0028	--	NA
Pesticides/Herbicides/PCBs (µg/L)						
Aldicarb Sulfoxide	4/12	0.13 J - 0.69 J	--	NA	--	NA
alpha - Chlordane	1/12	0.012 J	1	0.002	--	NA
gamma - Chlordane	1/12	0.014 J	1	0.002	--	NA
p,p' - DDT	3/12	0.089 - 0.1	3	0.001	--	NA
Dicamba	1/12	1.9 J	--	NA	--	NA
Malathion	1/12	0.21 J	1	0.1	--	NA
Methoxychlor	1/12	0.011 J	0	0.03	--	NA
Prometon	3/13	0.1 J - 0.5	--	NA	--	NA
Metals (mg/L)						
Aluminum	3/12	0.095 - 0.37	2	0.1	--	NA
Antimony	1/12	0.017	0	0.146	--	NA
Arsenic	2/12	0.003	2	0.0000022	--	NA
Barium	10/12	0.02 J - 0.11	0	1,000	--	NA
Calcium	12/12	55.7 - 87.2	--	NA	--	NA
Iron	11/12	0.058 - 0.59	2	0.3	--	NA
Lead	6/12	0.002 - 0.01	6	0.001	--	NA
Magnesium	12/12	6.4 - 15.7	--	NA	--	NA
Manganese	10/12	0.008 - 0.099	5	0.05	--	NA
Molybdenum	8/12	0.05 - 0.16	--	NA	--	NA

Table 5.3: Frequency of Detection and Exceedance of Potential ARARs or TBCs for Surface-Water Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, New York

Parameter	Frequency of Detection	Range of Detected Concentrations	Comparison to ARARs and TBCs: Frequency of Detection Above Most Stringent	Comparison to ARARs and TBCs: Most Stringent Criterion	Comparison to Background: Frequency of Detection Above Background	Comparison to Background: Background Screening Concentration
Potassium	12/12	1.3 – 2.2	--	NA	--	NA
Selenium	1/12	0.005	1	0.001	--	NA
Sodium	12/12	14.5 – 40.6	--	NA	--	NA
Strontium	12/12	0.12 – 0.43	--	NA	--	NA
Zinc	9/12	0.01 – 0.18	3	0.045	--	NA
Glycols (mg/L)						
Total Glycols	1/12	0.17	0	500	--	NA
Radionuclides (pCi/L)						
Strontium-90	1/12	1.2	--	NA	--	NA
Uranium, Total	5/12	3 – 7	--	NA	--	NA
Wet Chemistry (mg/L)						
Fluoride	2/14	0.06 J – 0.067 J	0	1.099	--	NA
Hardness (as CaCO3)	12/12	169 – 265	--	NA	--	NA
Methylene Blue Active Substance	4/12	0.026 – 0.079	--	NA	--	NA
Nitrogen, Ammonia (as N)	8/12	0.14 – 2	--	NA	--	NA
Nitrogen, Nitrite	1/12	0.029	0	0.1	--	NA
Petroleum Hydrocarbons	5/12	0.42 – 1	--	NA	--	NA
Suspended Solids	13/24	11 – 356	--	NA	--	NA

ARAR = Applicable or Relevant and Appropriate Requirement
TBC = To Be Considered Criteria
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
µg/L = micrograms per liter
µg/kg = micrograms per kilogram
NA – Not available or not applicable
J – Estimated concentration

PREPARED/DATE: KLA 8/1/95
CHECKED/DATE: LAS 8/10/95

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-1a	TMCSD-1b	TMCSD-1b	TMCSD-2a	TMCSD-2a	TMCSD-2b	TMCSD-2b	TMCSD-3a	TMCSD-3a	TMCSD-3b	TMCSD-3b
Sample Date	05-13-94	05-13-94	11-04-94	05-13-94	11-06-94	05-13-94	11-07-94	05-13-94	11-07-94	05-13-94	11-07-94
Sample Depth	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')
METHOD: SW-846 8240											
VOLATILES: (µg/kg)											
1,1,2,2-Tetrachloroethane	6 U	6 U	--	6 U	--	7 U	--	6 U	--	7 U	--
Benzene	6 U	6 U	--	6 U	--	7 U	--	6 U	--	7 U	--
Chlorobenzene	6 U	6 U	--	6 U	--	7 U	--	6 U	--	7 U	--
Ethylbenzene	6 U	6 U	--	6 U	--	7 U	--	6 U	--	7 U	--
Toluene	6 U	6 U	--	6 U	--	7 U	--	0.7 J	--	7 U	--
1,2-Dichloroethane (Total)	6 U	6 U	--	6 U	--	7 U	--	6 U	--	7 U	--
Trichloroethylene (TCE)	6 U	6 U	--	6 U	--	7 U	--	1 J	--	3 J	--
Vinyl chloride	12 U	12 U	--	13 U	--	13 U	--	13 U	--	15 U	--
METHOD: SW-846 8270											
SEMI-VOLATILES: (µg/kg)											
1,2-Dichlorobenzene	2000 U	390 U	--	4400 U	--	4300 U	--	2200 U	--	2500 U	--
1,2-Diphenylhydrazine	10000 U	1900 U	--	21000 U	--	21000 U	--	10000 U	--	12000 U	--
1,2,4-Trichlorobenzene	2000 U	390 U	--	18000 U **	--	4300 U	--	2200 U	--	2500 U	--
1,4-Dichlorobenzene	2000 U	390 U	--	18000 U **	--	4300 U	--	2200 U	--	2500 U	--
2,4-Dimethylphenol	2000 U	390 U	--	4400 U	--	4300 U	--	1300 J	--	2500 U	--
2-Methylnaphthalene	2000 U	390 U	--	5100 J **	--	8100 J **	--	20000 J **	--	12000 J **	--
2-Methylphenol	2000 U	390 U	--	4400 U	--	4300 U	--	22000 U **	--	2500 U	--
4-Methylphenol	2000 U	390 U	--	4400 U	--	4300 U	--	2700	--	1300 J	--
Acenaphthene	84 J	390 U	--	11000 J **	--	19000 **	--	31000 **	--	18000 **	--
Acenaphthylene	2000 U	27 J	--	18000 U **	--	17000 U **	--	22000 U **	--	810 J	--
Anthracene	240 J	29 J	--	19000 **	--	28000 **	--	40000 **	--	27000 **	--
Benzoic acid	10000 U	1900 U	--	21000 U	--	21000 U	--	10000 U	--	12000 U	--
Benzo(a)anthracene	750 J	130 J	--	51000 **	--	63000 **	--	89000 **	--	51000 **	--
Benzo(a)pyrene	570 J	150 J	--	35000 **	--	44000 **	--	62000 **	--	37000 **	--
Benzo(b)fluoranthene	690 J	250 J	--	41000 **	--	48000 **	--	73000 **	--	50000 **	--
Benzo(ghi)perylene	2000 U	390 U	--	19000 **	--	20000 **	--	29000 **	--	9900 J **	--
Benzo(k)fluoranthene	560 J	150 J	--	28000 **	--	39000 **	--	49000 **	--	28000 **	--
Benzyl butyl phthalate	2000 U	390 U	--	4400 U	--	4300 U	--	2200 U	--	2500 U	--
Bis(2-chloroethyl) ether	2000 U	390 U	--	4400 U	--	4300 U	--	2200 U	--	2500 U	--
Bis(2-ethylhexyl) phthalate	860 J	220 J	--	900 J	--	600 J	--	800 J	--	2500 U	--
Chrysene	680 J	180 J	--	43000 **	--	55000 **	--	77000 **	--	42000 **	--
Dibenzofuran	2000 U	390 U	--	10000 J **	--	16000 J **	--	32000 **	--	21000 **	--
Dibenzo(a,h)anthracene	2000 U	390 U	--	8700 J **	--	12000 J **	--	16000 J **	--	6300 J **	--
Fluoranthene	1300 J	240 J	--	84000 **	--	120000 **	--	160000 **	--	99000 **	--
Fluorene	2000 U	390 U	--	12000 J **	--	20000 **	--	34000 **	--	25000 **	--
Indeno(1,2,3-cd)pyrene	2000 U	390 U	--	22000 **	--	29000 **	--	40000 **	--	16000 **	--
Naphthalene	2000 U	390 U	--	15000 J **	--	23000 **	--	56000 **	--	36000 **	--
N-nitrosodiphenylamine	2000 U	390 U	--	4400 U	--	4300 U	--	2200 U	--	2500 U	--
Phenanthrene	1100 J	140 J	--	91000 **	--	120000 **	--	190000 **	--	120000 **	--
Phenol	2000 U	390 U	--	4400 U	--	370 J	--	550 J **	--	660 J	--
Pyrene	1200 J	230 J	--	89000 **	--	100000 **	--	140000 **	--	78000 **	--
METHOD: SW-846 8080											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
4,4'-DDD	16 U	9.8 J	--	220 R	41 U	220 R	40 U	430 R	40 U	500 R	170
4,4'-DDE	10 J	8.8 J	--	200 R	41 U	220 R	40 U	430 R	40 U	500 R	48.2 J
4,4'-DDT	16 U	16 U	--	220 R	41 U	220 R	40 U	430 R	40 U	500 R	51 U
Aldrin	8.4 U	8 U	--	320 R	15.8 J	150 R	8 J	200 R	12.6 J	250 R	6.5 J
alpha-Chlordane	8.4 U	8 U	--	120 R	7.7 J	110 R	11.4 J	220 R	6.9 J	260 R	15.9 J
gamma-Chlordane	8.4 U	8 U	--	120 R	37	110 R	20 U	220 R	26	260 R	26 U
Dieldrin	12 J	16 U	--	220 R	41 U	220 R	40 U	430 R	40 U	500 R	51 U
alpha-Endosulfan	8.4 U	8 U	--	120 R	21 U	110 R	20 U	220 R	21 U	260 R	26 U
Endosulfan sulfate	16 U	16 U	--	220 R	41 U	220 R	40 U	430 R	40 U	500 R	51 U
Endrin	16 U	16 U	--	220 R	41 U	220 R	40 U	430 R	40 U	500 R	51 U
Heptachlor epoxide	8.4 U	8 U	--	120 R	21 U	110 R	20 U	220 R	21 U	260 R	26 U
BHC (Hexachlorocyclohexane) Isomers	8.4 U	8 U	--	120 R	--	110 R	--	220 R	--	260 R	--
delta-BHC	8.4 U	8 U	--	120 R	21 U	110 R	20 U	220 R	21 U	260 R	26 U
beta-BHC	8.4 U	8 U	--	120 R	21 U	110 R	4.1 J	220 R	7.5 J	260 R	4.5 J

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-1a	TMCSD-1b	TMCSD-1b	TMCSD-2a	TMCSD-2a	TMCSD-2b	TMCSD-2b	TMCSD-3a	TMCSD-3a	TMCSD-3b	TMCSD-3b
Sample Date	05-13-94	05-13-94	11-04-94	05-13-94	11-06-94	05-13-94	11-07-94	05-13-94	11-07-94	05-13-94	11-07-94
Sample Depth	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')
Mirex	8.4 U	8 U	--	120 R	--	110 R	--	220 R	--	260 R	--
Ethyl parathion	16 U	16 U	--	220 R	--	220 R	--	430 R	--	500 R	--
Methyl parathion	16 U	16 U	--	220 R	--	220 R	--	430 R	--	500 R	--
Propachlor	160 U	160 U	--	2200 R	--	2200 R	--	4300 R	--	5000 R	--
PCB-1254	160 U	160 U	--	2200 R	410 U	2200 R	1230	4300 R	1500	5000 R	510 U
PCB-1260	520	350	--	21000 R	5660	14000 R	2430	36000 R	2320	29000 R	8260
METHOD: SW-846 8140											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
Azinphos-methyl (Guthion)	250 UJ	240 R	70 U	79 J	--	260 UJ	--	230 J	--	110 J	--
Coumaphos	250 UJ	240 R	600 U	270 UJ	--	25 J	--	8.8 J	--	310 UJ	--
Fensulfothion	410 UJ	390 R	200 U	16 J	--	26 J	--	13 J	--	17 J	--
Fenthion	200 UJ	190 R	50 U	8.7 J	--	4.3 J	--	6.7 J	--	1.5 J	--
Mevinphos	280 UJ	270 R	40 U	320 UJ	--	300 UJ	--	300 UJ	--	350 UJ	--
Phorate	410 UJ	390 R	100 U	450 UJ	--	3.3 J	--	3.3 J	--	1 J	--
Ronnel	160 UJ	150 R	100 U	180 UJ	--	170 UJ	--	170 UJ	--	200 UJ	--
Stirophos	160 UJ	150 R	100 U	13 J	--	170 UJ	--	170 UJ	--	200 UJ	--
Trichloronate	330 UJ	320 R	100 U	370 UJ	--	17 J	--	9.7 J	--	5 J	--
METHOD: SW-846 8150											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
2,4,5-TP (Silvex)	4.5 U	4.3 U	--	4.7 J	--	8.4 J	--	5.8 J	--	7.4	--
2,4-D	50 U	48 U	--	54 U	--	51 UJ	--	53 U	--	4.8 J	--
Dalapon	76 U	4.6 J	--	8.6 J	--	16 J	--	9.1 J	--	94 U	--
DCPA (Dacthal)	25 U	24 U	--	24 J	--	40 J	--	26 U	--	31 U	--
Dicamba	4.5 U	4.3 U	--	4.9 UJ	--	4.7 UJ	--	4.8 U	--	5.6 U	--
Dichloroprop	25 U	24 U	--	27 U	--	26 UJ	--	26 U	--	31 U	--
METHOD: EPA 1613A											
DIOXINS: (ng/kg)											
2,3,7,8-TCDD	0.81 U	0.76 U	--	1.8 U	1.5	1.1 U	0.77 J	1.8 UJ	--	17 U	--
METALS: (mg/kg)											
Aluminum (3050/6010)	2440	1570		1930		2920 J		2750		2910	
Arsenic (3050/7060)	1.4	1.1	--	5 J	--	9.9	--	10.4 J	--	11.2 U	--
Barium (3050/6010)	7.8	49.4	--	23.8	--	104	--	19.7	--	43.3	--
Beryllium (3050/6010)	0.37 U	0.37 U	--	0.39 U	--	0.4 U	--	0.38 U	--	0.44 U	--
Cadmium (3050/6010)	3.2	1.2 U	--	1.7	--	3.8	--	1.3 U	--	1.4 U	--
Calcium (3050/6010)	42800	48200	--	20100	--	35400	--	41500	--	17900	--
Chromium (3050/6010)	23.5	6.6	--	21.2	--	28.4	--	37	--	46.9	--
Cobalt (3050/6010)	2.6	2.1	--	2.7	--	3.8	--	3.7	--	5.1	--
Copper (3050/6010)	21.8	11.1	--	52.5	--	74.3	--	61.4	--	75.2	--
Chromium, Hexavalent (7195)	0.6	0.91	--	0.91	--	0.6	--	2 J	--	2.4	--
Iron (3050/6010)	9550	9690	--	11400	--	13100	--	12100	--	14300	--
Lead (3050/7421)	92.8	40.2	--	94.6 J	--	203	--	141	--	164	--
Magnesium (3050/6010)	2390	2350	--	1970	--	3230	--	2470	--	1860	--
Manganese (3050/6010)	165	146	--	77.9	--	90.4	--	107	--	86.6	--
Mercury (7471)	0.1 U	0.11 U	--	0.11 U	--	0.11 U	--	0.23	--	0.14 U	--
Molybdenum (3050/7480)	6.2 U	6.1 U	--	9.1	--	6.8 U	--	10.2 J	--	7.3 U	--
Nickel (3050/6010)	16.7	13.4	--	33.9	--	41.3	--	43.3	--	32.5	--
Potassium (3050/6010)	263	225	--	233	--	354	--	327	--	313	--
Silver (3050/6010)	1.2 U	1.2 U	--	1.3 U	--	2.2	--	2.9	--	7.6	--
Sodium (3050/6010)	194	206	--	206	--	251	--	245	--	337	--
Strontium (3050/7780)	54.3	59.8	--	42.5 J	--	72.8	--	65.1	--	57.2	--
Thallium (3050/7841)	0.36 U	0.36 U	--	0.38 UJ	--	0.41 U	--	0.39 UJ	--	0.45 U	--
Vanadium (3050/6010)	44.6	35.9	--	97	--	85.5	--	72.8	--	84.5	--
Zinc (3050/6010)	121	98.3	--	153 J	--	207	--	145 J	--	117	--

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-1a	TMCSD-1b	TMCSD-1b	TMCSD-2a	TMCSD-2a	TMCSD-2b	TMCSD-2b	TMCSD-3a	TMCSD-3a	TMCSD-3b	TMCSD-3b
Sample Date	05-13-94	05-13-94	11-04-94	05-13-94	11-06-94	05-13-94	11-07-94	05-13-94	11-07-94	05-13-94	11-07-94
Sample Depth	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')
WET CHEMISTRY: (mg/kg)											
% Moisture (160.3)	19	18	18	25	19.5	26	16.5	24	17.8	32	35.1
Leachable Total Organic Carbon (9060)	200 U	200 U	--	200 U	--	200 U	--	200 U	--	200 U	--
Petroleum Hydrocarbons (418.1)	1330	1390	--	9450	--	3090	--	5890	--	3840	--
RADIONUCLIDES: (pCi/g)											
Strontium 89	0.1 U	0.15+/-0.08	--	0.11+/-0.07	--	0.09+/-0.07	--	0.09+/-0.07	--	0.10+/-0.07	--
Strontium 90	5.47+/-0.2	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
Total Uranium	0.18+/-0.04	0.21+/-0.04	--	0.16+/-0.04	--	0.20+/-0.04	--	0.05+/-0.03	--	0.09+/-0.03	--

(1) Duplicate of TMCSD-4a (05-12-94)
(2) Duplicate of TMCSD-4a (11-07-94)
(3) Duplicate of TMCSD-9a (05-11-94)
(4) Duplicate of TMCSD-9a (11-07-94)
(5) Duplicate of TMCSD-11a
(6) CrVI Sample fraction re-collected on 5/27/94

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ng/kg = nanograms per kilogram
pCi/g = picocuries per gram
D = Diluted
J = Estimated
R = Rejected
U = Analyte not detected at listed concentration
UJ = Estimated concentration possibly biased low
W = Compound not detected by comparing extracted ion profile against NIST library
-- = Analyte not analyzed
** = Results presented are from a diluted sample
*** = Results presented are from a reinjection and reanalysis

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Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-4a	(1) TMCSD-01	TMCSD-4a	(2) TMCSD-01	TMCSD-4b	TMCSD-4b	TMCSD-5a	TMCSD-5a	TMCSD-5b	TMCSD-5b	TMCSD-6a	TMCSD-6a
Sample Date	05-12-94	05-12-94	11-07-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94
Sample Depth	(0-.5')	(0-.5')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
METHOD: SW-846 8240												
VOLATILES: (µg/kg)												
1,1,2,2-Tetrachloroethane	6 U	10 U	--	--	6 U	--	6 U	--	7 U	--	9 U	--
Benzene	6 U	10 U	--	--	6 U	--	6 U	--	7 U	--	9 U	--
Chlorobenzene	6 U	10 U	--	--	6 U	--	72	--	17	--	16	--
Ethylbenzene	6 U	10 U	--	--	6 U	--	6 U	--	7 U	--	9 U	--
Toluene	6 U	10 U	--	--	6 U	--	6 U	--	7 U	--	9 U	--
1,2-Dichloroethane (Total)	6 U	10 U	--	--	6 U	--	6 U	--	7 U	--	9 U	--
Trichloroethylene (TCE)	6 U	10 U	--	--	2 J	--	6 U	--	7 U	--	9 U	--
Vinyl chloride	13 U	20 U	--	--	13 U	--	13 U	--	13 U	--	18 U	--
METHOD: SW-846 8270												
SEMI-VOLATILES: (µg/kg)												
1,2-Dichlorobenzene	410 U ***	990	--	--	400 U ***	--	1200 J **	--	42 J	--	490 R	--
1,2-Diphenylhydrazine	2000 U ***	2000 U	--	--	2000 UJ ***	--	2300 U	--	2100 U	--	2400 R	--
1,2,4-Trichlorobenzene	410 U ***	410 U	--	--	400 U ***	--	480 U	--	440 U	--	490 R	--
1,4-Dichlorobenzene	410 U ***	800 J **	--	--	400 U ***	--	1600 J **	--	36 J	--	490 R	--
2,4-Dimethylphenol	410 U ***	140 J	--	--	400 U ***	--	210 J	--	190 J	--	490 R	--
2-Methylnaphthalene	410 U ***	490 J **	--	--	400 U ***	--	640 J **	--	750 J **	--	380 R	--
2-Methylphenol	410 U ***	410 U	--	--	400 U ***	--	480 U	--	100 J	--	490 R	--
4-Methylphenol	410 U ***	410 U	--	--	400 U ***	--	480 U	--	440 U	--	490 R	--
Acenaphthene	15 J ***	1100 J **	--	--	12 J ***	--	2100 J **	--	2500 J **	--	930 R	--
Acenaphthylene	9 J ***	320 J **	--	--	400 U ***	--	580 J **	--	280 J	--	490 R	--
Anthracene	60 J ***	2200 **	--	--	41 J ***	--	3400 J **	--	4000 J **	--	1300 R	--
Benzoic acid	5 J ***	2000 U	--	--	10 J ***	--	2300 U	--	2100 U	--	2400 R	--
Benzo(a)anthracene	410 UJ ***	6800 **	--	--	200 UJ ***	--	15000 **	--	15000 E	--	3100 R	--
Benzo(a)pyrene	160 J ***	6400 **	--	--	120 J ***	--	2200 J **	--	2200 J **	--	500 R	--
Benzo(b)fluoranthene	190 J ***	8600 **	--	--	140 J ***	--	14000 **	--	9700 **	--	2300 R	--
Benzo(ghi)perylene	140 J ***	2500 **	--	--	400 J ***	--	4100 J **	--	2700 J **	--	770 R	--
Benzo(k)fluoranthene	99 J ***	5800 **	--	--	71 J ***	--	8500 **	--	7900 **	--	1700 R	--
Benzyl butyl phthalate	540 J ***	410 U	--	--	20 J ***	--	480 U	--	440 U	--	490 R	--
Bis(2-chloroethyl) ether	410 U ***	410 U	--	--	400 U ***	--	100 J	--	440 U	--	490 R	--
Bis(2-ethylhexyl) phthalate	540 J ***	620 J **	--	--	1700 J ***	--	1300 J **	--	1100 J **	--	64 J	--
Chrysene	180 J ***	7800 **	--	--	400 UJ ***	--	14000 **	--	9700 E	--	2200 R	--
Dibenzofuran	410 U ***	790 J **	--	--	400 U ***	--	1700 J **	--	2200 J **	--	970 R	--
Dibenzo(a,h)anthracene	410 U ***	970 J **	--	--	400 UJ ***	--	2100 J **	--	1700 J **	--	450 J	--
Fluoranthene	350 J ***	11000 **	--	--	250 J ***	--	21000 **	--	14000 **	--	4600 R	--
Fluorene	410 U ***	1600 J **	--	--	400 UJ ***	--	3600 J **	--	3400 J **	--	1300 R	--
Indeno(1,2,3-cd)pyrene	410 U ***	2700 **	--	--	400 UJ ***	--	4100 J **	--	3200 J **	--	860 R	--
Naphthalene	410 U ***	960 J **	--	--	400 U ***	--	870 J **	--	2100 J **	--	1000 R	--
N-nitrosodiphenylamine	410 U ***	220 J	--	--	400 UJ ***	--	220 J	--	440 U	--	490 R	--
Phenanthrene	260 J ***	9400 **	--	--	210 J ***	--	15000 **	--	20000 **	--	7400 R	--
Phenol	410 U ***	410 U	--	--	400 U ***	--	390 J	--	440 U	--	490 R	--
Pyrene	430 J ***	9400 **	--	--	260 J ***	--	28000 **	--	19000 **	--	6400 R	--
METHOD: SW-846 8080												
PESTICIDES/PCBS COMPOUNDS: (µg/kg)												
4,4'-DDD	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
4,4'-DDE	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
4,4'-DDT	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
Aldrin	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	3.8 J	25 R	21.4 J
alpha-Chlordane	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	7.7 J	25 R	4.6 J
gamma-Chlordane	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	21 U	25 R	28 U
Dieldrin	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
alpha-Endosulfan	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	21 U	25 R	22 U
Endosulfan sulfate	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
Endrin	41 U	12 U	--	--	40 U	--	47 U	--	43 R	41 U	49 R	42 U
Heptachlor epoxide	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	21 U	25 R	22 U
BHC (Hexachlorocyclohexane) Isomers	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	--	25 R	--
delta-BHC	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	21 U	25 R	22 U
beta-BHC	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	21 U	25 R	22 U

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Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-4a	(1) TMCSD-01	TMCSD-4a	(2) TMCSD-01	TMCSD-4b	TMCSD-4b	TMCSD-5a	TMCSD-5a	TMCSD-5b	TMCSD-5b	TMCSD-6a	TMCSD-6a
Sample Date	05-12-94	05-12-94	11-07-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94
Sample Depth	(0-.5')	(0-.5')	(0-5')	(0-5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-5')	(0-5')
Mirex	21 U	6.1 U	--	--	21 U	--	24 U	--	22 R	--	25 R	--
Ethyl parathion	41 U	12 U	--	--	40 U	--	47 U	--	43 R	--	49 R	--
Methyl parathion	41 U	12 U	--	--	40 U	--	47 U	--	43 R	--	49 R	--
Propachlor	410 U	120 U	--	--	400 U	--	470 U	--	430 R	--	490 R	--
PCB-1254	410 U	120 U	--	--	400 U	--	470 U	--	430 R	410 U	490 R	650 U
PCB-1260	410 U	2600	--	--	400 U	--	8600	--	26000 R	6010	5400 R	2820
METHOD: SW-846 8140												
PESTICIDES/PCBS COMPOUNDS: (µg/kg)												
Azinphos-methyl (Guthion)	250 R	5.8 R	80 U	100 U	250 R	100 U	290 R	70 U	260 R	70 U	90 R	80 U
Coumaphos	250 R	18 R	600 U	1000 U	250 R	900 U	290 R	600 U	260 R	600 U	32 R	600 U
Fensulfothion	410 R	590 R	300 U	400 U	400 R	300 U	470 R	200 U	430 R	200 U	490 R	300 U
Fenthion	200 R	280 R	50 U	90 U	200 R	70 U	230 R	50 U	210 R	50 U	18 R	50 U
Mevinphos	280 R	410 R	40 U	70 U	280 R	50 U	330 R	30 U	300 R	40 U	340 R	90 U
Phorate	410 R	590 R	100 U	200 U	400 R	200 U	470 R	100 U	430 R	100 U	1.5 R	100 U
Ronnel	160 R	230 R	100 U	200 U	160 R	200 U	190 R	100 U	170 R	100 U	190 R	110 J
Stirophos	160 R	230 R	100 U	200 U	160 R	200 U	190 R	100 U	170 R	100 U	190 R	100 U
Trichloronate	330 R	480 R	100 U	200 U	330 R	200 U	390 R	100 U	350 R	100 U	400 UJ	100 U
METHOD: SW-846 8150												
PESTICIDES/PCBS COMPOUNDS: (µg/kg)												
2,4,5-TP (Silvex)	4.5 U	6.6 U	--	--	5	--	5.2 U	--	4.7 U	--	22 J	--
2,4-D	49 U	72 U	--	--	48 U	--	57 U	--	52 U	--	59 UJ	--
Dalapon	75 U	110 U	--	--	73 U	--	86 U	--	78 U	--	89 UJ	--
DCPA (Dacthal)	25 U	36 U	--	--	24 U	--	27 J	--	26 U	--	6.7 J	--
Dicamba	4.5 U	3.8 J	--	--	4.4 U	--	5.2 U	--	4.7 U	--	5.4 UJ	--
Dichloroprop	25 U	35 J	--	--	24 U	--	28 U	--	7.6 J	--	30 UJ	--
METHOD: EPA 1613A												
DIOXINS: (ng/kg)												
2,3,7,8-TCDD	0.24 U	0.71 U	--	--	3.3 U	--	0.78 U	--	1.1 U	--	1.9	--
METALS: (mg/kg)												
Aluminum (3050/6010)	1960 J	6070			2010		2630		2750		3390	
Arsenic (3050/7060)	1 J	19.8	--	--	1	--	4.6	--	4.4	--	5	--
Barium (3050/6010)	61.8	91.5	--	--	101	--	19.4	--	32.4	--	38.2	--
Beryllium (3050/6010)	0.39 U	0.58 U	--	--	0.38 U	--	0.38 U	--	0.4 U	--	0.52 U	--
Cadmium (3050/6010)	1.3 UJ	9.5	--	--	1.3 U	--	1.2 U	--	1.3 U	--	1.7 U	--
Calcium (3050/6010)	27400 J	9870	--	--	28300	--	20600	--	20700	--	24800	--
Chromium (3050/6010)	9	40.7	--	--	5.8	--	24.6	--	23.4	--	55.4	--
Cobalt (3050/6010)	2.3	4.4	--	--	3.4	--	2.8	--	3.1	--	3.4	--
Copper (3050/6010)	11.7 J	61.2	--	--	10.5	--	34.5	--	36.3	--	40.8	--
Chromium, Hexavalent (7195)	2.8	1	--	--	2.1	--	0.68	--	3	--	1	--
Iron (3050/6010)	7720	16000	--	--	8710	--	10200	--	9590	--	11800	--
Lead (3050/7421)	59.8 J	166	--	--	60.2	--	76.1	--	110	--	121	--
Magnesium (3050/6010)	1720	2600	--	--	1710	--	2140	--	2220	--	3170	--
Manganese (3050/6010)	118	158	--	--	135	--	101	--	94.7	--	94.7	--
Mercury (7471)	0.13 U	0.36	--	--	0.12 U	--	0.22	--	0.2	--	0.16 U	--
Molybdenum (3050/7480)	6.5 U	9.7 U	--	--	6.3	--	6.2 U	--	6.7 U	--	8.6 U	--
Nickel (3050/6010)	4.8 J	20.9	--	--	5.5	--	22	--	20.4	--	22.6	--
Potassium (3050/6010)	265 J	704	--	--	245	--	334	--	344	--	400	--
Silver (3050/6010)	1.3 U	2.7	--	--	1.3 U	--	1.2	--	1.3	--	1.7 U	--
Sodium (3050/6010)	209	471	--	--	213	--	223	--	240	--	287	--
Strontium (3050/7780)	45.6	58.2	--	--	46	--	40.3	--	36.5	--	43.4	--
Thallium (3050/7841)	0.39 U	0.6 U	--	--	0.39 U	--	0.39 U	--	0.39 U	--	0.52 U	--
Vanadium (3050/6010)	6.1 J	63.4	--	--	7.3	--	42.4	--	38.7	--	43.6	--
Zinc (3050/6010)	82.9	152	--	--	73.1	--	155	--	170	--	184	--

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Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-4a	(1) TMCSD-01	TMCSD-4a	(2) TMCSD-01	TMCSD-4b	TMCSD-4b	TMCSD-5a	TMCSD-5a	TMCSD-5b	TMCSD-5b	TMCSD-6a	TMCSD-6a
Sample Date	05-12-94	05-12-94	11-07-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94	05-12-94	11-07-94
Sample Depth	(0-.5')	(0-.5')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
WET CHEMISTRY: (mg/kg)												
% Moisture (160.3)	24	50	21.5	54.6	22	41.7	23	13.8	26	18.7	44	21.2
Leachable Total Organic Carbon (9060)	739	643	--	--	200 U	--	200 U	--	200 U	--	680	--
Petroleum Hydrocarbons (418.1)	1110 J	2650	--	--	647	--	5980	--	3810	--	4330	--
RADIONUCLIDES: (pCi/g)												
Strontium 89	0.1+/-0.08	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
Strontium 90	0.13+/-0.10	0.23+/-0.14	--	--	0.1 U	--	0.18+/-0.10	--	0.1 U	--	0.1 U	--
Total Uranium	0.09+/-0.05	0.10+/-0.05	--	--	0.12+/-0.04	--	0.05+/-0.03	--	0.06+/-0.05	--	0.06+/-0.03	--

(1) Duplicate of TMCSD-4a (05-12-94)
(2) Duplicate of TMCSD-4a (11-07-94)
(3) Duplicate of TMCSD-9a (05-11-94)
(4) Duplicate of TMCSD-9a (11-07-94)
(5) Duplicate of TMCSD-11a
(6) CrVI Sample fraction re-collected on 5/27/94

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ng/kg = nanograms per kilogram
pCi/g = picocuries per gram
D = Diluted
J = Estimated
R = Rejected
U = Analyte not detected at listed concentration
UJ = Estimated concentration possibly biased low
W = Compound not detected by comparing extracted
ion profile against NIST library
-- = Analyte not analyzed
** = Results presented are from a diluted sample
*** = Results presented are from a reinjection and reanalysis

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-6b	TMCSD-6b	Low Level TMCSD-7a	Low Level TMCSD-7b	TMCSD-7b	TMCSD-8a	TMCSD-8a	TMCSD-8b	TMCSD-8b	TMCSD-9a	(3) TMCSD-01
Sample Date	05-12-94	11-07-94	05-12-94	05-12-94	11-05-94	05-11-94	11-05-94	05-11-94	11-05-94	05-11-94	05-11-94
Sample Depth	(.5-1')	(.5-1')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
METHOD: SW-846 8240											
VOLATILES: (µg/kg)											
1,1,2,2-Tetrachloroethane	8 U	--	4 J	5200 U **	--	11 U	--	10 U	--	12 U	6 U
Benzene	4 J	--	10000 D **	2200 J **	--	10 J	--	12	--	12 U	6 U
Chlorobenzene	68	--	160000 D **	130000 **	--	32	--	10	--	5 J	6 U
Ethylbenzene	8 U	--	9 J	5200 U **	--	11 U	--	10 U	--	12 U	6 U
Toluene	8 U	--	10 U	5200 U **	--	11 U	--	10 U	--	12 U	6 U
1,2-Dichloroethane (Total)	8 U	--	10 U	5200 U **	--	11 U	--	5 J	--	12 U	6 U
Trichloroethylene (TCE)	8 U	--	10 U	5200 U **	--	11 U	--	10 U	--	12 U	2 J
Vinyl chloride	16 U	--	3 J	10000 U **	--	22 U	--	20 U	--	23 U	12 U
METHOD: SW-846 8270											
SEMI-VOLATILES: (µg/kg)											
1,2-Dichlorobenzene	600 U ***	--	1600	540 U***	--	220 J **	--	610 J **	--	570 J ***	420 J ***
1,2-Diphenylhydrazine	2900 UJ ***	--	3000 U	5 J ***	--	3000 U	--	3400 U	--	2900 U ***	2800 U ***
1,2,4-Trichlorobenzene	600 U ***	--	180 J	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
1,4-Dichlorobenzene	600 U ***	--	1600	5600 ***	--	200 J	--	700 U	--	600 U ***	120 J ***
2,4-Dimethylphenol	600 U ***	--	190 J	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
2-Methylnaphthalene	600 U ***	--	770 J **	540 U***	--	360 J **	--	440 J **	--	240 J ***	590 U ***
2-Methylphenol	600 U ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
4-Methylphenol	600 U ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
Acenaphthene	16 J ***	--	1800 J **	660 J ***	--	810 J **	--	580 J **	--	300 J ***	260 J ***
Acenaphthylene	13 J ***	--	490 J **	540 UJ ***	--	230 J **	--	640 J **	--	300 J ***	210 J ***
Anthracene	56 J ***	--	3600 **	1300 ***	--	1600 **	--	960 J **	--	1100 ***	550 J ***
Benzoic acid	2900 U ***	--	3000 U	2600 U***	--	3000 U	--	3400 U	--	2900 U ***	2800 U ***
Benzo(a)anthracene	220 UJ ***	--	620 U	3700 ***	--	6300 **	--	7200 **	--	3200 ***	2400 ***
Benzo(a)pyrene	190 UJ ***	--	10000 **	2400 J ***	--	4600 **	--	6100 **	--	3000 J ***	590 U ***
Benzo(b)fluoranthene	230 J ***	--	15000 **	3900 J ***	--	5400 **	--	8100 **	--	5400 ***	3400 ***
Benzo(ghi)perylene	600 UJ ***	--	4000 **	1400 J ***	--	1700 **	--	1600 **	--	120 J ***	280 J ***
Benzo(k)fluoranthene	130 J ***	--	7200 **	1300 J ***	--	4700 **	--	5600 **	--	3300 ***	1600 ***
Benzyl butyl phthalate	600 UJ ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
Bis(2-chloroethyl) ether	600 U ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
Bis(2-ethylhexyl) phthalate	1400 J ***	--	3100 U **	1300 ***	--	1000 J **	--	700 U	--	3800 J ***	590 U ***
Chrysene	230 J ***	--	3100 U **	3100 ***	--	5300 **	--	7100 **	--	4300 ***	2600 ***
Dibenzofuran	600 U ***	--	1200 J **	540 UJ ***	--	660 J **	--	230 J	--	300 J ***	590 U ***
Dibenzo(a,h)anthracene	600 UJ ***	--	1800 J **	540 UJ ***	--	970 J **	--	700 U	--	600 U ***	590 U ***
Fluoranthene	390 J ***	--	17000 **	6400 ***	--	11000 **	--	8800 **	--	11000 ***	4700 ***
Fluorene	600 U ***	--	2700 J **	810 J ***	--	1000 J **	--	830 J **	--	500 J ***	350 J ***
Indeno(1,2,3-cd)pyrene	600 UJ ***	--	4000 **	1400 J ***	--	2300 **	--	2400 **	--	250 J ***	590 U ***
Naphthalene	600 U ***	--	1400 J **	540 U***	--	860 J **	--	510 J **	--	320 J ***	220 J ***
N-nitrosodiphenylamine	600 UJ ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
Phenanthrene	320 J ***	--	15000 **	5200 ***	--	8500 **	--	7200 **	--	4000 ***	2900 ***
Phenol	600 U ***	--	620 U	540 U***	--	610 U	--	700 U	--	600 U ***	590 U ***
Pyrene	390 J ***	--	16000 **	5200 J ***	--	10000 **	--	8400 **	--	5600 ***	3500 ***
METHOD: SW-846 8080											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
4,4'-DDD	990	--	150	950	--	12 U	--	14 U	--	12 U	39 U
4,4'-DDE	59 U	--	63 U	870	--	12 U	--	14 U	--	12 U	39 U
4,4'-DDT	59 U	--	63 U	310	--	12 U	--	14 U	--	12 U	39 U
Aldrin	30 U	--	32 U	21 U	--	6.3 U	--	7.3 U	--	6.2 U	20 U
alpha-Chlordane	240	--	45	21 U	--	6.3 U	--	7.3 U	--	6.2 U	20 U
gamma-Chlordane	30 U	--	32 U	10 J	--	6.3 U	--	7.3 U	--	6.2 U	20 U
Dieldrin	59 U	--	63 U	62	--	12 U	--	14 U	--	12 U	39 U
alpha-Endosulfan	30 U	--	32 U	21 U	--	6.3 U	--	7.3 U	--	6.2 U	20 U
Endosulfan sulfate	59 U	--	63 U	120	--	12 U	--	14 U	--	12 U	39 U
Endrin	59 U	--	63 U	540	--	12 U	--	14 U	--	12 U	39 U
Heptachlor epoxide	30 U	--	32 U	70	--	6.3 U	--	7.3 U	--	6.2 U	20 U
BHC (Hexachlorocyclohexane) Isomers	30 U	--	32 U	160	--	6.3 U	--	7.3 U	--	6.2 U	20 U
delta-BHC	30 U	--	32 U	21 U	--	6.3 U	--	7.3 U	--	6.2 U	20 U
beta-BHC	30 U	--	32 U	21 U	--	6.3 U	--	7.3 U	--	6.2 U	20 U

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-6b	TMCSD-6b	Low Level TMCSD-7a	Low Level TMCSD-7b	TMCSD-7b	TMCSD-8a	TMCSD-8a	TMCSD-8b	TMCSD-8b	TMCSD-9a	(3) TMCSD-01
Sample Date	05-12-94	11-07-94	05-12-94	05-12-94	11-05-94	05-11-94	11-05-94	05-11-94	11-05-94	05-11-94	05-11-94
Sample Depth	(.5-1')	(.5-1')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
Mirex	30 U	--	32 U	170	--	6.3 U	--	7.3 U	--	6.2 U	20 U
Ethyl parathion	59 U	--	63 U	45	--	12 U	--	14 U	--	12 U	39 U
Methyl parathion	59 U	--	63 U	120	--	12 U	--	14 U	--	12 U	39 U
Propachlor	590 U	--	630 U	58 J	--	120 U	--	140 U	--	120 U	390 U
PCB-1254	590 U	--	630 U	410 U	--	120 U	--	140 U	--	120 U	390 U
PCB-1260	9600	--	11000	410 U	--	6600	--	5600	--	2400 J	390 U
METHOD: SW-846 8140											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
Azinphos-methyl (Guthion)	160 R	70 U	380 UJ	330 R	80 U	8.3 R	80 U	32 R	80 U	360 R	250 R
Coumaphos	86 R	600 U	91 J	74 J	600 U	15 R	600 U	23 R	600 U	360 R	13 R
Fensulfothion	590 R	200 U	630 UJ	540 R	300 U	610 R	300 U	700 R	300 U	600 R	410 R
Fenthion	290 R	50 U	300 UJ	260 R	50 U	300 R	50 U	340 R	50 U	290 R	200 R
Mevinphos	410 R	40 U	440 UJ	380 R	40 U	430 R	19 J	490 R	40 U	420 R	290 R
Phorate	590 R	100 U	630 UJ	540 R	100 U	610 R	100 U	700 R	100 U	600 R	410 R
Ronnel	230 R	100 U	250 UJ	210 R	100 U	240 R	100 U	280 R	100 U	240 R	160 R
Stirophos	230 R	100 U	250 UJ	210 R	100 U	240 R	100 U	280 R	100 U	240 R	160 R
Trichloronate	6.8 J	100 U	6.7 J	440 R	100 U	500 R	100 U	580 R	100 U	490 R	340 R
METHOD: SW-846 8150											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
2,4,5-TP (Silvex)	57 J	0.06 U	6.9 U	10	--	6.8 U	--	16 J	--	6.6 UJ	4.5 U
2,4-D	72 R	0.2 U	76 U	67 U	--	5 J	--	85 U	--	72 UJ	50 U
Dalapon	110 R	1 U	120 U	14 J	--	21 J	--	130 U	--	110 UJ	76 U
DCPA (Dacthal)	36 R	0.02 U	38 U	33 U	--	37 U	--	42 U	--	36 UJ	25 U
Dicamba	6.5 R	0.06 U	6.9 U	6.1 U	--	6.8 U	--	7.7 U	--	6.6 UJ	4.5 U
Dichloroprop	36 R	0.2 U	29 J	17 J	--	10 J	--	27 J	--	36 UJ	25 U
METHOD: EPA 1613A											
DIOXINS: (ng/kg)											
2,3,7,8-TCDD	30	--	6.6	2.4	--	8	--	33	--	9.1	7.6
METALS: (mg/kg)											
Aluminum (3050/6010)	5170		4010	6690		5430		9560		6850 J	1840
Arsenic (3050/7060)	17.5	--	27.9	21.2	--	26.7	--	50.2	--	17.7 J	1.1
Barium (3050/6010)	38.7	--	73.7	95.8	--	95.7	--	165	--	108	58.3
Beryllium (3050/6010)	0.48	--	0.55 U	0.52	--	0.68 U	--	1.2	--	0.7 U	0.36 U
Cadmium (3050/6010)	7.2	--	7.2	29.4	--	7.7	--	23.8	--	13.3 J	1.2 U
Calcium (3050/6010)	13900	--	15900	13000	--	14600	--	20000	--	21700	37900
Chromium (3050/6010)	42.1	--	47.2	37.2	--	65.8	--	58.8	--	44.7 J	6
Cobalt (3050/6010)	4.7	--	7	6.7	--	6.8	--	11.7	--	6.3 J	1.7
Copper (3050/6010)	60.8	--	73.1	51.4	--	67.6	--	126	--	75.3 J	11.4
Chromium, Hexavalent (7195)	1.2	--	1.9	0.94	--	2.4	--	0.41 U	--	0.68	0.78
Iron (3050/6010)	17900	--	15500	22100	--	19100	--	31000	--	18000 J	7000
Lead (3050/7421)	196	--	195	206	--	206	--	316	--	211 J	46.9
Magnesium (3050/6010)	1970	--	1980	1990	--	1870	--	2700	--	3110	1630
Manganese (3050/6010)	70.8	--	80.7	222	--	119	--	238	--	167	126
Mercury (7471)	0.34	--	0.78	0.5	--	0.4	--	0.3	--	0.42	0.3
Molybdenum (3050/7480)	8 U	--	9.2 U	8.6 U	--	11.3 U	--	10.1 U	--	11.7 U	6 U
Nickel (3050/6010)	14.3	--	27.8	20.4	--	22.9	--	27.5	--	24.6 J	6.1
Potassium (3050/6010)	483	--	350	792	--	519	--	1100	--	768 J	267
Silver (3050/6010)	1.6 U	--	5.9	1.7 U	--	6.8	--	4.4	--	4	1.2 U
Sodium (3050/6010)	325	--	322	366	--	448	--	411	--	558 J	199
Strontium (3050/7780)	39.2	--	61	74	--	87.1	--	119	--	83.2	44.6
Thallium (3050/7841)	0.49 U	--	0.58 U	0.53 U	--	0.69 U	--	0.8	--	0.71 U	0.36 U
Vanadium (3050/6010)	35.1	--	82.3	51	--	77.3	--	62.8	--	72 J	5.8
Zinc (3050/6010)	154	--	172	145	--	184	--	278	--	184 J	69.5

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-6b	TMCSD-6b	Low Level TMCSD-7a	Low Level TMCSD-7b	TMCSD-7b	TMCSD-8a	TMCSD-8a	TMCSD-8b	TMCSD-8b	TMCSD-9a	(3) TMCSD-01
Sample Date	05-12-94	11-07-94	05-12-94	05-12-94	11-05-94	05-11-94	11-05-94	05-11-94	11-05-94	05-11-94	05-11-94
Sample Depth	(.5-1')	(.5-1')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
WET CHEMISTRY: (mg/kg)											
% Moisture (160.3)	39	17.8	48	43	21.4	56	22.7	52	21.1	59	7
Leachable Total Organic Carbon (9060)	954	--	1220	1060	--	1370	--	2530	--	665	200 U
Petroleum Hydrocarbons (418.1)	10700	--	8610	10600	--	1570	--	691	--	2650 J	930
RADIONUCLIDES: (pCi/g)											
Strontium 89	0.1 U	--	0.1 U	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	0.1 U
Strontium 90	0.1 U	--	0.1 U	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	0.1 U
Total Uranium	0.08+/-0.05	--	0.05 U	0.08+/-0.05	--	0.06+/-0.03	--	0.23+/-0.04	--	0.05 U	0.08+/-0.03

(1) Duplicate of TMCSD-4a (05-12-94)
(2) Duplicate of TMCSD-4a (11-07-94)
(3) Duplicate of TMCSD-9a (05-11-94)
(4) Duplicate of TMCSD-9a (11-07-94)
(5) Duplicate of TMCSD-11a
(6) CrVI Sample fraction re-collected on 5/27/94

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ng/kg = nanograms per kilogram
pCi/g = picocuries per gram
D = Diluted
J = Estimated
R = Rejected
U = Analyte not detected at listed concentration
UJ = Estimated concentration possibly biased low
W = Compound not detected by comparing extracted ion profile against NIST library
-- = Analyte not analyzed
** = Results presented are from a diluted sample
*** = Results presented are from a reinjection and reanalysis

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-9a	TMCSD-02 (4)	TMCSD-9b	TMCSD-9b	TMCSD-10a	TMCSD-10a	TMCSD-10b	TMCSD-10b	TMCSD-11a	TMCSD-01 (5)	TMCSD-11b
Sample Date	11-08-94	11-07-94	05-11-9	11-08-94	05-11-94	11-05-94	05-11-94	11-05-94	05-10-94	05-10-94	05-10-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')
METHOD: SW-846 8240											
VOLATILES: (μg/kg)											
1,1,2,2-Tetrachloroethane	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
Benzene	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
Chlorobenzene	--	--	6 U	--	2 J	--	10 J	--	5 J	7 U	4 J
Ethylbenzene	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
Toluene	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
1,2-Dichloroethane (Total)	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
Trichloroethylene (TCE)	--	--	6 U	--	6 U	--	12 U	--	9 U	7 U	8 U
Vinyl chloride	--	--	12 U	--	13 U	--	24 U	--	19 U	15 U	16 U
METHOD: SW-846 8270											
SEMI-VOLATILES: (μg/kg)											
1,2-Dichlorobenzene	--	--	390 UR	--	97 J	--	720 U ***	--	630 U	510 U	520 U
1,2-Diphenylhydrazine	--	--	1900 UR	--	2700 U	--	3500 U ***	--	3100 U	2500 U	2500 U
1,2,4-Trichlorobenzene	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
1,4-Dichlorobenzene	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
2,4-Dimethylphenol	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
2-Methylnaphthalene	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	140 J	520 U
2-Methylphenol	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
4-Methylphenol	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
Acenaphthene	--	--	390 UR	--	120 J	--	720 U ***	--	210 J	210 J	520 U
Acenaphthylene	--	--	390 UR	--	82 J	--	720 U ***	--	630 U	55 J	520 U
Anthracene	--	--	390 UR	--	340 J	--	120 J ***	--	440 J	380 J	130 J
Benzoic acid	--	--	1900 UR	--	2700 U	--	3500 U ***	--	3100 U	2500 U	2500 U
Benzo(a)anthracene	--	--	390 UR	--	1700	--	460 J ***	--	2000	1500	530
Benzo(a)pyrene	--	--	390 UR	--	1200	--	310 J ***	--	1400	1300	430 J
Benzo(b)fluoranthene	--	--	360 R	--	1700	--	320 J ***	--	1900	1600	580
Benzo(ghi)perylene	--	--	390 UR	--	370 J	--	190 J ***	--	520 J	270 J	520 U
Benzo(k)fluoranthene	--	--	380 R	--	920	--	230 J ***	--	1300	1200	360 J
Benzyl butyl phthalate	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
Bis(2-chloroethyl) ether	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
Bis(2-ethylhexyl) phthalate	--	--	410 UR	--	560 U	--	750 ***	--	720 U	790 U	520 U
Chrysene	--	--	390 UR	--	1500	--	340 J ***	--	1400	1300	470 J
Dibenzofuran	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	190 J	520 U
Dibenzo(a,h)anthracene	--	--	390 UR	--	560 U	--	70 J ***	--	320 J	510 U	520 U
Fluoranthene	--	--	390 UR	--	2800	--	690 J ***	--	3300	3100	1100
Fluorene	--	--	390 UR	--	200 J	--	720 U ***	--	630 U	510 U	520 U
Indeno(1,2,3-cd)pyrene	--	--	390 UR	--	440 J	--	220 J ***	--	800	440 J	520 U
Naphthalene	--	--	390 UR	--	87 J	--	720 U ***	--	180 J	340 J	520 U
N-nitrosodiphenylamine	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
Phenanthrene	--	--	390 UR	--	1700	--	560 J ***	--	2500	2300	740
Phenol	--	--	390 UR	--	560 U	--	720 U ***	--	630 U	510 U	520 U
Pyrene	--	--	390 UR	--	2400	--	680 J ***	--	2800	2200	860
METHOD: SW-846 8080											
PESTICIDES/PCBS COMPOUNDS: (μg/kg)											
4,4'-DDD	--	--	140	--	11 U	--	14 U	--	30 J	28	20
4,4'-DDE	--	--	8 U	--	11 U	--	14 U	--	9.5 U	8.3 J	5.7 J
4,4'-DDT	--	--	480	--	11 U	--	14 U	--	9.5 U	9.3 U	9 U
Aldrin	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U
alpha-Chlordane	--	--	4.1 U	--	5.7 U	--	7.5 U	--	6 J	5.9	2.2 J
gamma-Chlordane	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U
Dieldrin	--	--	8 U	--	11 U	--	14 U	--	9.5 UJ	65	9 U
alpha-Endosulfan	--	--	4.1 U	--	5.7 U	--	7.5 U	--	2.4 J	2.6 J	4.6 U
Endosulfan sulfate	--	--	8 U	--	11 U	--	14 U	--	9.5 U	9.3 U	9 U
Endrin	--	--	8 U	--	11 U	--	14 U	--	9.5 UJ	36	9 U
Heptachlor epoxide	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U
BHC (Hexachlorocyclohexane) Isomers	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U
delta-BHC	--	--	4.1 U	--	5.7 U	--	7.5 U	--	3.4 J	4.8 U	4.6 U
beta-BHC	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-9a	(4) TMCSD-02	TMCSD-9b	TMCSD-9b	TMCSD-10a	TMCSD-10a	TMCSD-10b	TMCSD-10b	TMCSD-11a	(5) TMCSD-01	TMCSD-11b
Sample Date	11-08-94	11-07-94	05-11-9	11-08-94	05-11-94	11-05-94	05-11-94	11-05-94	05-10-94	05-10-94	05-10-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')
Mirex	--	--	4.1 U	--	5.7 U	--	7.5 U	--	4.9 U	4.8 U	4.6 U
Ethyl parathion	--	--	8 U	--	11 U	--	14 U	--	9.5 U	9.3 U	9 U
Methyl parathion	--	--	8 U	--	11 U	--	14 U	--	9.5 U	9.3 U	9 U
Propachlor	--	--	80 U	--	110 U	--	140 U	--	95 U	93 U	90 U
PCB-1254	--	--	80 U	--	110 U	--	140 U	--	95 U	93 U	90 U
PCB-1260	--	--	330	--	3400	--	1600	--	1500 J	1500	1100
METHOD: SW-846 8140											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
Azinphos-methyl (Guthion)	70 U	100 U	240 R	80 U	330 R	80 U	440 R	70 U	290 UJ	390 R	270 UJ
Coumaphos	600 U	1000 U	240 R	600 U	4 R	700 U	1.5 R	600 U	290 UJ	540 R	270 UJ
Fensulfothion	200 U	500 U	400 R	300 U	550 R	300 U	730 R	200 U	480 UJ	8.5 R	450 UJ
Fenthion	50 U	90 U	190 R	50 U	270 R	50 U	350 R	50 U	230 UJ	220 R	220 UJ
Mevinphos	40 U	70 U	280 R	40 U	380 R	40 U	510 R	40 U	330 UJ	320 R	310 UJ
Phorate	100 U	200 U	400 R	100 U	550 R	100 U	730 R	100 U	480 UJ	460 R	450 UJ
Ronnel	100 U	200 U	160 R	100 U	220 R	100 U	290 R	100 U	190 UJ	180 R	180 UJ
Stirophos	100 U	200 U	160 R	100 U	220 R	100 U	290 R	100 U	190 UJ	180 R	180 UJ
Trichloronate	100 U	200 U	330 R	100 U	450 R	100 U	590 R	100 U	390 UJ	380 R	370 UJ
METHOD: SW-846 8150											
PESTICIDES/PCBS COMPOUNDS: (µg/kg)											
2,4,5-TP (Silvex)	--	--	4.8 J	--	3.1 J	--	7.9 U	--	5.2 U	5 U	4.9 U
2,4-D	--	--	48 U	--	67 U	--	87 U	--	58 U	56 U	54 U
Dalapon	--	--	31 J	--	10 J	--	19 J	--	87 U	84 U	82 U
DCPA (Dacthal)	--	--	24 U	--	34 U	--	43 U	--	29 U	28 U	27 U
Dicamba	--	--	4.4 U	--	6.1 U	--	7.9 U	--	5.2 U	5 U	4.9 U
Dichloroprop	--	--	24 U	--	34 U	--	43 U	--	29 U	28 U	27 U
METHOD: EPA 1613A											
DIOXINS: (ng/kg)											
2,3,7,8-TCDD	--	--	1.4 U	--	1.2 U	--	1.1 U	--	0.65 U	0.71 U	0.41 U
METALS: (mg/kg)											
Aluminum (3050/6010)			7440		3030		3510		3030	2880	2070
Arsenic (3050/7060)	--	--	8.9	--	6.2	--	6.6	--	3.3	3.5	3.5
Barium (3050/6010)	--	--	69.1	--	48.2	--	168	--	33.6	27.6	38.1
Beryllium (3050/6010)	--	--	0.36	--	0.54	--	0.75 U	--	0.57 U	0.46 U	0.48 U
Cadmium (3050/6010)	--	--	6	--	1.6	--	2.5 U	--	1.9 U	1.5 U	1.6 U
Calcium (3050/6010)	--	--	17300	--	19400	--	117000	--	9530	8560	8870
Chromium (3050/6010)	--	--	24.9	--	25.2	--	64.6	--	10.7	8.8	25.2
Cobalt (3050/6010)	--	--	7.2	--	3.9	--	3.5	--	3.4	3.1	1.8
Copper (3050/6010)	--	--	42	--	11	--	14.6	--	16	13	10.4
Chromium, Hexavalent (7195)	--	--	0.24 U	--	0.73	--	1.9	--	1.8	1.2	2.7
Iron (3050/6010)	--	--	19100	--	9330	--	11500	--	8400	8220	5810
Lead (3050/7421)	--	--	91.2	--	36.5	--	40.7	--	42.2	33.5	68
Magnesium (3050/6010)	--	--	5400	--	2390	--	4150	--	2960	3000	1800
Manganese (3050/6010)	--	--	461	--	135	--	293	--	181	193	141
Mercury (7471)	--	--	0.29	--	0.12 U	--	0.22 U	--	0.18 U	0.13 U	0.15 U
Molybdenum (3050/7480)	--	--	6 U	--	6.7 U	--	12.6 U	--	9.5 U	7.7 U	8 U
Nickel (3050/6010)	--	--	17.5	--	8.6	--	9.8	--	10.7	8.3	27.8
Potassium (3050/6010)	--	--	950	--	408	--	492	--	530	459	285
Silver (3050/6010)	--	--	1.2 U	--	1.8	--	2.5 U	--	1.9 U	1.5 U	3190
Sodium (3050/6010)	--	--	298	--	260	--	462	--	309	248	283
Strontium (3050/7780)	--	--	51.2	--	67.8	--	237	--	25.4	21	28.2
Thallium (3050/7841)	--	--	0.36 U	--	0.41 U	--	0.71 U	--	0.59 U	0.46 U	0.48 U
Vanadium (3050/6010)	--	--	31	--	14.3	--	15.1	--	17.4	14	44.3
Zinc (3050/6010)	--	--	99.2	--	63.6	--	67.7	--	104	66.7	63.8

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-9a	(4) TMCSD-02	TMCSD-9b	TMCSD-9b	TMCSD-10a	TMCSD-10a	TMCSD-10b	TMCSD-10b	TMCSD-11a	(5) TMCSD-01	TMCSD-11b
Sample Date	11-08-94	11-07-94	05-11-9	11-08-94	05-11-94	11-05-94	05-11-94	11-05-94	05-10-94	05-10-94	05-10-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')	(.5-1')
WET CHEMISTRY: (mg/kg)											
% Moisture (160.3)	19.3	57.2	20	20.9	25	23.7	60	17.7	48.4	35.2	37.7
Leachable Total Organic Carbon (9060)	--	--	798	--	651	--	559	--	1010	788	1090
Petroleum Hydrocarbons (418.1)	--	--	1820	--	531	--	349	--	649	602	754
RADIONUCLIDES: (pCi/g)											
Strontium 89	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.15+/-0.10	0.1 U	0.1 U
Strontium 90	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	0.1 U	0.1 U
Total Uranium	--	--	0.05+/-0.03	--	0.07+/-0.03	--	0.48+/-0.06	--	0.23+/-0.11	0.14 +/-0.10	0.18+/-0.10

(1) Duplicate of TMCSD-4a (05-12-94)
(2) Duplicate of TMCSD-4a (11-07-94)
(3) Duplicate of TMCSD-9a (05-11-94)
(4) Duplicate of TMCSD-9a (11-07-94)
(5) Duplicate of TMCSD-11a
(6) CrVI Sample fraction re-collected on 5/27/94

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ng/kg = nanograms per kilogram
pCi/g = picocuries per gram
D = Diluted
J = Estimated
R = Rejected
U = Analyte not detected at listed concentration
UJ = Estimated concentration possibly biased low
W = Compound not detected by comparing extracted ion profile against NIST library
-- = Analyte not analyzed
** = Results presented are from a diluted sample
*** = Results presented are from a reinjection and reanalysis

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-12a	TMCSD-12a	TMCSD-12b	(6) TMCSD-12b	TMCSD-12b
Sample Date	05-10-94	11-04-94	05-10-94	05-27-94	11-04-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(.5-1')
METHOD: SW-846 8240					
VOLATILES: (µg/kg)					
1,1,2,2-Tetrachloroethane	7 U	--	6 U	--	--
Benzene	7 U	--	6 U	--	--
Chlorobenzene	7 U	--	6 U	--	--
Ethylbenzene	7 U	--	6 U	--	--
Toluene	7 U	--	6 U	--	--
1,2-Dichloroethane (Total)	7 U	--	6 U	--	--
Trichloroethylene (TCE)	7 U	--	6 U	--	--
Vinyl chloride	14 U	--	12 U	--	--
METHOD: SW-846 8270					
SEMI-VOLATILES: (µg/kg)					
1,2-Dichlorobenzene	480 U	--	400 U	--	--
1,2-Diphenylhydrazine	2300 U	--	2000 U	--	--
1,2,4-Trichlorobenzene	480 U	--	400 U	--	--
1,4-Dichlorobenzene	480 U	--	400 U	--	--
2,4-Dimethylphenol	480 U	--	400 U	--	--
2-Methylnaphthalene	480 U	--	400 U	--	--
2-Methylphenol	480 U	--	400 U	--	--
4-Methylphenol	350 U	--	400 U	--	--
Acenaphthene	480 U	--	400 U	--	--
Acenaphthylene	480 U	--	400 U	--	--
Anthracene	480 U	--	400 U	--	--
Benzoic acid	2300 U	--	2000 U	--	--
Benzo(a)anthracene	81 U	--	400 U	--	--
Benzo(a)pyrene	480 U	--	400 U	--	--
Benzo(b)fluoranthene	100 U	--	400 U	--	--
Benzo(ghi)perylene	480 U	--	400 U	--	--
Benzo(k)fluoranthene	73 U	--	400 U	--	--
Benzyl butyl phthalate	480 U	--	400 U	--	--
Bis(2-chloroethyl) ether	480 U	--	400 U	--	--
Bis(2-ethylhexyl) phthalate	480 U	--	400 U	--	--
Chrysene	92 U	--	400 U	--	--
Dibenzofuran	480 U	--	400 U	--	--
Dibenzo(a,h)anthracene	480 U	--	400 U	--	--
Fluoranthene	160 U	--	400 U	--	--
Fluorene	480 U	--	400 U	--	--
Indeno(1,2,3-cd)pyrene	480 U	--	400 U	--	--
Naphthalene	480 U	--	400 U	--	--
N-nitrosodiphenylamine	480 U	--	400 U	--	--
Phenanthrene	89 U	--	400 U	--	--
Phenol	480 U	--	400 U	--	--
Pyrene	480 U	--	400 U	--	--
METHOD: SW-846 8080					
PESTICIDES/PCBS COMPOUNDS: (µg/kg)					
4,4'-DDD	8.2 U	--	7.6 U	--	--
4,4'-DDE	8.2 U	--	7.6 U	--	--
4,4'-DDT	8.2 U	--	7.6 U	--	--
Aldrin	4.2 U	--	3.9 U	--	--
alpha-Chlordane	4.2 U	--	3.9 U	--	--
gamma-Chlordane	4.2 U	--	3.9 U	--	--
Dieldrin	8.2 U	--	7.6 U	--	--
alpha-Endosulfan	4.2 U	--	3.9 U	--	--
Endosulfan sulfate	8.2 U	--	7.6 U	--	--
Endrin	8.2 U	--	7.6 U	--	--
Heptachlor epoxide	4.2 U	--	3.9 U	--	--
BHC (Hexachlorocyclohexane) Isomers	4.2 U	--	3.9 U	--	--
delta-BHC	4.2 U	--	3.9 U	--	--
beta-BHC	4.2 U	--	3.9 U	--	--

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Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-12a	TMCSD-12a	TMCSD-12b	(6) TMCSD-12b	TMCSD-12b
Sample Date	05-10-94	11-04-94	05-10-94	05-27-94	11-04-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(.5-1')
Mirex	4.2 U	--	3.9 U	--	--
Ethyl parathion	8.2 U	--	7.6 U	--	--
Methyl parathion	8.2 U	--	7.6 U	--	--
Propachlor	82 U	--	76 U	--	--
PCB-1254	82 U	--	76 U	--	--
PCB-1260	82 U	--	76 U	--	--
METHOD: SW-846 8140					
PESTICIDES/PCBS COMPOUNDS: (µg/kg)					
Azinphos-methyl (Guthion)	250 U	--	230 U	--	--
Coumaphos	250 U	--	230 U	--	--
Fensulfothion	410 U	--	380 U	--	--
Fenthion	200 U	--	180 U	--	--
Mevinphos	280 U	--	260 U	--	--
Phorate	410 U	--	380 U	--	--
Ronnel	160 U	--	150 U	--	--
Stirophos	160 U	--	150 U	--	--
Trichloronate	330 U	--	310 U	--	--
METHOD: SW-846 8150					
PESTICIDES/PCBS COMPOUNDS: (µg/kg)					
2,4,5-TP (Silvex)	4.4 R	0.07 U	4.2 R	--	0.06 U
2,4-D	48 R	0.3 U	46 R	--	0.3 U
Dalapon	74 R	1 U	70 R	--	1 U
DCPA (Dacthal)	24 R	0.03 U	23 R	--	0.03 U
Dicamba	4.4 R	0.07 U	4.2 R	--	0.06 U
Dichloroprop	24 R	0.3 U	23 R	--	0.3 U
METHOD: EPA 1613A					
DIOXINS: (ng/kg)					
2,3,7,8-TCDD	0.33 U	--	0.19 U	--	--
METALS: (mg/kg)					
Aluminum (3050/6010)	5250		4020	3990	
Arsenic (3050/7060)	3.7	--	3.6	1.9	--
Barium (3050/6010)	52.7	--	30.1	29.4	--
Beryllium (3050/6010)	0.43 U	--	0.38 U	0.36 U	--
Cadmium (3050/6010)	1.4 U	--	1.2 U	1.2 U	--
Calcium (3050/6010)	3260	--	6230	1430	--
Chromium (3050/6010)	9.7	--	7.8	7.3	--
Cobalt (3050/6010)	4.6	--	3.6	3.8	--
Copper (3050/6010)	14.2	--	8.4	11.1	--
Chromium, Hexavalent (7195)	0.56 U	--	0.25 U	0.38	--
Iron (3050/6010)	13300	--	10400	9720	--
Lead (3050/7421)	31.6	--	19.8	17.3	--
Magnesium (3050/6010)	2300	--	1660	1830	--
Manganese (3050/6010)	885	--	204	225	--
Mercury (7471)	0.14 U	--	0.11 U	0.11 U	--
Molybdenum (3050/7480)	7.2 U	--	6.3 U	6.1 U	--
Nickel (3050/6010)	19.4	--	17.7	13.8	--
Potassium (3050/6010)	548	--	394	260	--
Silver (3050/6010)	1.4 U	--	1.2 U	1.2 U	--
Sodium (3050/6010)	236	--	217	181	--
Strontium (3050/7780)	14.2	--	16.8	6	--
Thallium (3050/7841)	0.44 U	--	0.36 U	0.36 U	--
Vanadium (3050/6010)	18.4	--	18.4	13.8	--
Zinc (3050/6010)	115	--	69.6	66.7	--

Table 5.4: Detection of Analytes in Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-12a	TMCSD-12a	TMCSD-12b	(6) TMCSD-12b	TMCSD-12b
Sample Date	05-10-94	11-04-94	05-10-94	05-27-94	11-04-94
Sample Depth	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(.5-1')
WET CHEMISTRY: (mg/kg)					
% Moisture (160.3)	32.7	24.7	20.3	18.2	20.5
Leachable Total Organic Carbon (9060)	379	--	200 U	--	--
Petroleum Hydrocarbons (418.1)	208	--	87.8	--	--
RADIONUCLIDES: (pCi/g)					
Strontium 89	0.1 U	--	0.1 U	--	--
Strontium 90	0.1 U	--	0.1 U	--	--
Total Uranium	0.05	--	0.19+/-0.11	--	--

(1) Duplicate of TMCSD-4a (05-12-94)
(2) Duplicate of TMCSD-4a (11-07-94)
(3) Duplicate of TMCSD-9a (05-11-94)
(4) Duplicate of TMCSD-9a (11-07-94)
(5) Duplicate of TMCSD-11a
(6) CrVI Sample fraction re-collected on 5/27/94

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
ng/kg = nanograms per kilogram
pCi/g = picocuries per gram
D = Diluted
J = Estimated
R = Rejected
U = Analyte not detected at listed concentration
UJ = Estimated concentration possibly biased low
W = Compound not detected by comparing extracted ion profile against NIST library
-- = Analyte not analyzed
** = Results presented are from a diluted sample
*** = Results presented are from a reinjection and reanalysis

PREPARED/DATE: CLC 8/14/95
CHECKED/DATE: KLA 8/16/95

Table 5.5: Detection of Analytes in Sediment Samples – Spring 1995
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

Sample I.D.	TMCSD-3a	TMCSD-6a	TMCSD-9a	(1) TMCSD-9a-01	TMCSD-9b	TMCSD-10b	TMCSD-11a	(2) TMCSD-11a-01
Sample Date	04-09-95	04-09-95	04-09-95	04-09-95	04-09-95	04-09-95	04-09-95	04-09-95
Sample Depth	(0-.5')	(0-.5')	(0-.5')	(0-.5')	(.5-1')	(.5-1')	(0-.5')	(0-.5')
METHOD: SW-846 8270								
SEMI-VOLATILES: (µg/kg)								
1,2,4-Trichlorobenzene	400 U	130 J	490 U	480 U	470 U	410 U	440 U	450 U
1,2-Dichlorobenzene	400 U	340 J	79 J	58 J	1700	410 U	440 U	56 J
1,4-Dichlorobenzene	400 U	160 J	77 J	58 J	310 J	410 U	440 U	57 J
2,4-Dimethylphenol	98 J	100 J	490 U	480 U	470 U	410 U	440 U	450 U
2-Methylnaphthalene	1300	1500	63 J	56 J	120 J	410 U	440 U	450 U
2-Methylphenol	59 J	520 U	490 U	480 U	470 U	410 U	440 U	450 U
4-Methylphenol	220 J	240 J	490 U	480 U	470 U	410 U	440 U	450 U
Acenaphthene	1900	2700	130 J	100 J	100 J	410 U	94 J	79 J
Acenaphthylene	59 J	130 J	490 U	480 U	470 U	410 U	440 U	450 U
Anthracene	4400	5800	330 J	240 J	170 J	410 U	210 J	190 J
Benzo (a) anthracene	5900	12000 J	1000	670	490	64 J	590	590
Benzo (a) pyrene	4500	10000 J	890	590	330 J	63 J	530	540
Benzo (b) fluoranthene	5700	14000 J	1300	800	600	410 U	760	710
Benzo (ghi) perylene	2400	4800 J	420 J	300 J	190 J	410 U	270 J	290 J
Benzo (k) fluoranthene	2200	4900 J	480 J	290 J	190 J	410 U	290 J	240 J
Benzoic acid	2100 U	2700 U	2500 U	2500 U	2400 U	2100 U	2300 U	66 J
bis (2-ethylhexyl) phthalate	290 J	810 J	210 J	130 J	130 J	150 J	350 J	250 J
Butyl benzyl phthalate	400 U	240 J	490 U	480 U	470 U	410 U	440 U	450 U
Carbazole	3000	3600	190 J	150 J	140 J	410 U	120 J	110 J
Chrysene	5800	13000 J	1100	750	670	71 J	650	660
di-n-butyl phthalate	400 U	71 J	490 U	480 U	470 U	410 U	440 U	450 U
di-n-octyl phthalate	400 U	72 J	490 U	480 U	470 U	410 U	440 U	450 U
Dibenz (a,h) anthracene	820	1600 J	130 J	90 J	59 J	410 U	440 U	100 J
Dibenzofuran	2200	2800	120 J	97 J	81 J	410 U	80 J	69 J
Fluoranthene	14000	29000	2100	1600	1600	150 J	1200	1300
Fluorene	2900	3300	200 J	150 J	170 J	410 U	130 J	120 J
Indeno (1,2,3-cd) pyrene	2800	5900	530	360 J	180 J	410 U	330 J	340 J
Naphthalene	3500	3800	130 J	110 J	140 J	410 U	74 J	65 J
Phenanthrene	15000	26000	1500	1100	1100	100 J	940	870
Pyrene	8400	19000	1800	1200	1300	110 J	1200	1000
WET CHEMISTRY: (mg/kg)								
% Moisture (160.3)	18.3	36.9	32.2	31.7	29.3	18.7	24.8	26.3

(1) = Duplicate for TMCSA-9a
(2) = Duplicate for TMCSA-11a

Note: Results reported on a dry weight basis
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
J = Estimated concentration
U = Analyte not detected

PREPARED/DATE: CLC 8/14/95
CHECKED/DATE: KLA 8/16/95

Table 5.6: Detection of Dioxins and Furans in Sediment Samples – Spring 1995
Threemile Creek Remedial Investigation
Griffiss Air Force Base, Rome, New York

SAMPLE I.D.	TMCSD–2a	TMCSD–2b	TMCSD–6a	TMCSD–6b	TMCSD–7a	TMCSD–7b	TMCSD–8a	TMCSD–8b	TMCSD–9a	(1) TMCSD–9a–01
Sample Date	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95	04–18–95
Sample Depth	(0–.5')	(.5–1')	(0–.5')	(.5–1')	(0–.5')	(.5–1')	(0–.5')	(.5–1')	(0–.5')	(0–.5')
METHOD: EPA 1613a										
DIOXINS AND FURANS: (ng/kg)										
2,3,7,8–TCDD	0.9 U	0.97	1.3	1	1.2 U	0.99 U	2.2	1.3	0.98 U	2.4
1,2,3,4,7,8–HxCDD	1.8 U	4.9 U	4.9 U	5 U	2 U	4.9 U	1.5	5 U	4.9 UJ	5 U
1,2,3,6,7,8–HxCDD	3.9	4.9 U	4.9 U	5 U	2.8	4.9 U	8.1	5 U	4.9 U	5 U
1,2,3,7,8,9–HxCDD	1.8 J	4.9 U	4.9 U	5 U	2 J	4.9 U	4.2 J	5 U	4.9 U	5 U
1,2,3,4,6,7,8–HpCDD	67.2 UJ	54.7	23.4	24.7	35.5 UJ	43.7	102 UJ	57.6	17.8 J	55 J
OCDD	799 UJ	776	227	263	383 UJ	493	774 UJ	449	119 J	428 J
2,3,7,8–TCDF	4.9 U	4.8	2.1	2.3	3.5 UJ	2.9	8.1 UJ	4.9	1.8	6
1,2,3,7,8–PeCDF	1.6	4.9 U	4.9 U	5 U	1.1 U	4.9 U	2.4	5 U	4.9 UJ	5 U
1,2,3,4,7,8–HxCDF	16.7	13	4.9	5 U	5.3 U	4.9	15	8.8	4.9 U	10.6
1,2,3,6,7,8–HxCDF	2.5	4.9 U	4.9 U	5 U	1.4 U	4.9 U	3.2	5 U	4.9 UJ	5 U
2,3,4,6,7,8–HxCDF	4.7 UJ	4.9 U	4.9 U	5 U	5.5 U	4.9 U	7.3 UJ	5 U	4.9 U	5.5
1,2,3,4,6,7,8–HpCDF	25.1 UJ	23.5	834	9.8	12.1 UJ	10.4	35.7 UJ	21.6	7.8 J	30.1 J
1,2,3,4,7,8,9–HpCDF	6.3	4.9 U	4.9 U	5 U	1.9 U	4.9 U	4.2	5 U	4.9 UJ	5 U
OCDF	67.7 UJ	55.3	1931	21	20.5 UJ	23.3	82.2 UJ	49.4	20.2 J	74 J
TOTAL TCDD	1.4	2.5	2.1	1.5	1.9	2	3.9	4.3	1.2	3.8
TOTAL PeCDD	1.3 U	4.9	4.9 U	5 U	1.5 U	4.9 U	2.2	5 U	9.6 E	6
TOTAL HxCDD	24.6	17.1	14.5	14.3	13.7	19.6	56.3	30.1	7.7 J	32.8 J
TOTAL HpCDD	135	118	48.9	53.2	74.6	95.6	197	117	35.9 J	119 J
TOTAL TCDF	9.9	29.5	10.6	14.1	9.6	19.8	49.9	43.8	15.4 J	55.1 J
TOTAL PeCDF	26	46.4	14.4	21.3	33.1 J	23.2	62.1	41.3	17.1 J	72.4 J
TOTAL HxCDF	53.9	43	20.6	22.5	14.8	26.7	79.5	52.6	15.4 J	68 J
TOTAL HpCDF	65.4	62.6	21.1	25.8	27.7	28.5	86.2	54.2	19.9 J	79.8 J

(1) = Duplicate of TMCSD–9a

Note: Results reported on a dry weight basis
E = Triangle's EMPC flag – all PCDF peaks that are significantly influenced by the presence of DPE peaks are quantitated with EMPC values, regardless of the isotopic abundance ratio. These EMPC values are most likely overestimated due to the DPE vcontribution to the peak area.
J = Estimated concentration
UJ = Estimated concentrations possibly biased low
U = Analyte not detected

PREPARED/DATE: CLC 8/14/95
CHECKED/DATE: KLA 8/16/95

Table 5.7: Frequency of Detection and Exceedance of Potential TBCs for Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, New York

Parameter	Frequency of Detection	Range of Detected Concentrations	Comparison to ARARs and TBCs: Frequency of Detection Above Most Stringent	Comparison to ARARs and TBCs: Most Stringent Criterion	Comparison to Background: Frequency of Detection Above Background	Comparison to Background: Background Screening Concentration
Volatiles (µg/kg)						
Benzene	5/24	4 J – 10,000 D	5	0.6*	--	NA
Chlorobenzene	13/24	2 J – 160,000 D	12	3.5*	--	NA
Ethylbenzene	1/24	9 J	--	NA	--	NA
Toluene	1/24	0.7 J	--	NA	--	NA
1,2-Dichloroethene (Total)	1/24	5 J	--	NA	--	NA
Trichloroethylene (TCE)	4/24	1 J – 3 J	0	2.0*	--	NA
Vinyl chloride	1/24	3 J	1	0.07*	--	NA
Semi-Volatiles (µg/kg)						
1,2 – Dichlorobenzene	12/28	42 J – 1,700	8	12*	--	NA
1,2 – Diphenylhydrazine	1/22	5 J	0	0.58*	--	NA
1,2,4 – Trichlorobenzene	2/28	130 J – 180 J	0	91*	--	NA
1,4 – Dichlorobenzene	11/28	36 J – 5,600	7	12*	--	NA
2 – Methylnaphthalene	16/28	63 J – 20,000 J	15	70	--	NA
2 – Methylphenol (o-Cresol)	2/28	59 J – 100 J	--	NA	--	NA
2,4 – Dimethylphenol	7/28	98 J – 1,300 J	--	NA	--	NA
4 – Methylphenol (p-Cresol)	4/28	220 J – 2,700	--	NA	--	NA
Acenaphthene	22/28	12 J – 31,000	16	16	--	NA
Acenaphthylene	14/28	13 J – 810 J	12	44	--	NA
Anthracene	25/28	29 J – 40,000	22	85	--	NA
Benzo(a)anthracene	22/28	64 J – 89,000	22	1.3*	--	NA
Benzo(a)pyrene	25/28	63 J – 62,000	25	1.3*	--	NA
Benzo(b)fluoranthene	25/28	140 J – 73,000	25	1.3*	--	NA
Benzo(ghi)perylene	21/28	190 J – 29,000	--	NA	--	NA
Benzo(k)fluoranthene	25/28	71 J – 49,000	25	1.3*	--	NA
Benzoic acid	3/28	5 J – 66 J	--	NA	--	NA
Benzyl butyl phthalate	3/28	20 J – 540 J	--	NA	--	NA
Bis(2-chloroethyl) ether	1/28	100 J	1	0.03*	--	NA
Bis(2-ethylhexyl) phthalate	21/29	64 J – 3,800 J	18	199.5*	--	NA
Carbazole	5/6	120 J – 3,600	--	NA	--	NA
Chrysene	24/28	71 J – 77,000	24	1.3*	--	NA
Di-n-butyl phthalate	1/28	71 J	--	NA	--	NA
Di-n-octylphthalate	1/28	72 J	--	NA	--	NA
Dibenzo(a,h)anthracene	17/29	59 J – 16,000 J	16	63.4	--	NA
Dibenzofuran	16/28	80 J – 32,000	--	NA	--	NA
Fluoranthene	26/28	150 J – 160,000	22	600	--	NA
Fluorene	18/28	130 J – 34,000	18	19	--	NA
Indeno(1,2,3-cd)pyrene	20/28	180 J – 40,000	20	1.3*	--	NA
N – Nitrosodiphenylamine	2/28	220 J	--	NA	--	NA
Naphthalene	18/28	74 J – 56,000	14	160	--	NA
Pentachlorophenol	1/28	260,000	1	400	--	NA
Phenanthrene	26/28	100 J – 190,000	23	240	--	NA
Phenol	4/28	370 J – 660 J	4	0.5*	--	NA
Pyrene	26/28	110 J – 140,000	22	66	--	NA
Pesticides/Herbicides/PCBs (µg/kg)						
2,4 – D (Dichlorophenoxyacetic acid)	2/24	4.8 J – 5 J	--	NA	--	NA
2,4,5 – T (Silvex)	11/25	3.1 J – 57 J	--	NA	--	NA
4,4 – DDD	8/24	9.8 J – 990	8	0.01*	--	NA
4,4 – DDE	5/24	5.7 J – 870	5	0.01*	--	NA
4,4 – DDT	2/24	310 – 480	2	0.01*	--	NA
Aldrin	6/24	3.8 J – 21.4 J	6	0.1*	--	NA
alpha – Chlordane	10/24	2.2 J – 240	10	0.001*	--	NA
gamma – Chlordane	3/24	10 J – 37	3	0.001*	--	NA
Coumaphos	4/26	8.8 J – 91 J	--	NA	--	NA
Dalapon	9/24	4.6 J – 31 J	--	NA	--	NA
DCPA (Dacthal)	4/24	6.7 J – 40 J	--	NA	--	NA
Dicamba	1/24	3.8 J	--	NA	--	NA
Dichloroprop	6/24	7.6 J – 35 J	--	NA	--	NA
Dieldrin	2/24	12 J – 62	2	0.1*	--	NA
alpha – Endosulfan	1/24	2.4 J	1	0.03*	--	NA
Endosulfan sulfate	1/24	120	--	NA	--	NA
Endrin	2/24	36 – 540	2	0.8*	--	NA
Fensulfothion	4/25	13 J – 26 J	--	NA	--	NA
Fenthion	4/25	1.5 J – 8.7 J	--	NA	--	NA
Guthion (Azinphos-methyl)	3/25	79 J – 230 J	3	0.001*	--	NA
Heptachlor epoxide	1/24	70	1	0.0008*	--	NA

Table 5.7: Frequency of Detection and Exceedance of Potential TBCs for Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, New York

Parameter	Frequency of Detection	Range of Detected Concentrations	Comparison to ARARs and TBCs: Frequency of Detection Above Most Stringent	Comparison to ARARs and TBCs: Most Stringent Criterion	Comparison to Background: Frequency of Detection Above Background	Comparison to Background: Background Screening Concentration
BHC (Hexachlorocyclohexane) Isomers	1/18	160	1	0.06*	--	NA
beta - BHC	3/24	4.1 J - 7.5 J	1	0.06*	--	NA
delta - BHC	1/24	3.4 J	1	0.06*	--	NA
Mevinphos	1/25	19 J	--	NA	--	NA
Mirex	1/18	170	1	0.07*	--	NA
ethyl - Parathion	1/18	45	1	0.003*	--	NA
methyl - Parathion	1/24	120	1	0.003*	--	NA
PCB-1254 (Arochlor 1254)	2/24	1,230 - 1,500	2	0.0008*	--	NA
PCB-1260 (Arochlor 1260)	19/24	330 - 11,000	19	0.0008*	--	NA
Phorate	3/25	1 J - 3.3 J	--	NA	--	NA
Propachlor	1/18	58 J	--	NA	--	NA
Ronnel	1/24	110 J	--	NA	--	NA
Stirofos, (Tetrachlorvinphos)	1/24	13 J	--	NA	--	NA
Trichloronate	5/26	5 J - 17 J	--	NA	--	NA
Metals (mg/kg)						
Aluminum	25/25	1,570 - 9,560	--	NA	--	NA
Arsenic	24/25	1 - 50.2	12	6	--	NA
Barium	25/25	7.8 - 168	--	NA	--	NA
Beryllium	5/25	0.36 - 1.2	--	NA	--	NA
Cadmium	12/25	1.6 - 29.4	12	0.6	--	NA
Calcium	25/25	1,430 - 117,000	--	NA	--	NA
Chromium, Hexavalent	21/25	0.38 - 3	--	NA	--	NA
Chromium, Total	25/25	5.8 - 65.8	12	26	--	NA
Cobalt	25/25	1.8 - 11.7	--	NA	--	NA
Copper	25/25	8.4 - 126	16	16	--	NA
Iron	25/25	5,810 - 31,000	--	NA	--	NA
Lead	25/25	17.3 - 316	23	31	--	NA
Magnesium	25/25	1,660 - 5,400	--	NA	--	NA
Manganese	25/25	70.8 - 885	2	460	--	NA
Mercury	11/25	0.2 - 0.78	11	0.15	--	NA
Molybdenum	3/25	6.3 - 10.2 J	--	NA	--	NA
Nickel	25/25	5.5 - 43.3	18	16	--	NA
Potassium	25/25	225 - 1,100	--	NA	--	NA
Silver	12/25	1.2 - 3,190	12	1	--	NA
Sodium	25/25	181 - 558 J	--	NA	--	NA
Strontium	25/25	6 - 237	--	NA	--	NA
Thallium	1/25	0.8	--	NA	--	NA
Vanadium	25/25	7.3 - 97	--	NA	--	NA
Zinc	25/25	63.6 - 278	14	120	--	NA
Dioxins (ng/kg)						
2,3,7,8 - TCDD	9/26	0.77 J - 33	9	0.0002*	--	NA
Dioxins and Furans (ng/kg) (Spring, 1995, Resampling)						
1,2,3,4,6,7,8 - HpCDD	6/9	23.4 - 57.6	--	NA	--	NA
1,2,3,4,6,7,8 - HpCDF	6/9	9.8 - 834	--	NA	--	NA
1,2,3,4,7,8,9 - HpCDF	2/9	4.2 - 6.3	--	NA	--	NA
1,2,3,4,7,8 - HxCDD	1/9	1.5	--	NA	--	NA
1,2,3,4,7,8 - HxCDF	7/9	4.9 - 16.7	--	NA	--	NA
1,2,3,6,7,8 - HxCDD	3/9	2.8 - 8.1	--	NA	--	NA
1,2,3,6,7,8 - HxCDF	2/9	2.5 - 3.2	--	NA	--	NA
1,2,3,7,8,9 - HxCDD	3/9	1.8 J - 4.2 J	--	NA	--	NA
1,2,3,7,8 - PeCDF	2/9	1.6 - 2.4	--	NA	--	NA
2,3,4,6,7,8 - HxCDF	1/9	5.5	--	NA	--	NA
2,3,7,8 - TCDD	6/8	0.97 - 2.4	6	0.0002*	--	NA
2,3,7,8 - TCDF	6/9	2.1 - 6	--	NA	--	NA
TOTAL HpCDD	9/9	48.9 - 197	--	NA	--	NA
TOTAL HpCDF	9/9	21.1 - 86.2	--	NA	--	NA
TOTAL HxCDD	9/9	13.7 - 56.3	--	NA	--	NA
TOTAL HxCDF	9/9	14.8 - 79.5	--	NA	--	NA
TOTAL OCDD	6/9	227 - 776	--	NA	--	NA
TOTAL OCDF	6/9	21 - 1,931	--	NA	--	NA
TOTAL PeCDD	3/9	2.2 - 9.6 E	--	NA	--	NA
TOTAL PeCDF	9/9	14.4 - 72.4 J	--	NA	--	NA
TOTAL TCDD	9/9	1.4 - 4.3	--	NA	--	NA
TOTAL TCDF	9/9	9.6 - 55.1 J	--	NA	--	NA

Table 5.7: Frequency of Detection and Exceedance of Potential TBCs for Sediment Samples
Threemile Creek Remedial Investigation
Griffiss Air Force Base, New York

Parameter	Frequency of Detection	Range of Detected Concentrations	Comparison to ARARs and TBCs: Frequency of Detection Above Most Stringent	Comparison to ARARs and TBCs: Most Stringent Criterion	Comparison to Background: Frequency of Detection Above Background	Comparison to Background: Background Screening Concentration
Radionuclides (pCi/kg)						
Strontium-89	7/24	0.09 - 0.15	--	NA	--	NA
Strontium-90	3/24	0.18 - 5.47	--	NA	--	NA
Uranium, Total	23/24	0.05 - 0.5	--	NA	--	NA
Wet Chemistry (mg/kg)						
Moisture, Percent	52/52	7 - 60	--	NA	--	NA
Petroleum Hydrocarbons	24/24	87.8 - 10,700	--	NA	--	NA
Total Organic Carbon	14/24	379 - 2,530	--	NA	--	NA

* Criterion expressed as µg per g organic carbon (µg/g oc); results normalized using sample-specific total organic carbon results prior to comparison.
ARAR = Applicable or Relevant and Appropriate Requirement
TBC = To Be Considered Criteria
mg/L = milligrams per liter
mg/kg = milligrams per kilogram
µg/L = micrograms per liter
µg/kg = micrograms per kilogram
NA - Not available or not applicable
J - Estimated concentration

PREPARED/DATE: KLA 8/1/95
CHECKED/DATE: LAS 8/10/95

E PCB Sampling Results at Patrick Square and Drainage Swale Adjacent to Hardfill 49D

(Source: Parsons 1997)

FORMER GRIFFISS AFB		SAMPLE ID:	SSPS01-1	SSPS02-1	SDPS07-1	SDPS01-1	SDPS02-1	SDPS03-1	SDPS04-1	SDPS05-1	SDPS06-1	SDPS08-1
PATRICK SQUARE		DEPTH:	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'
SOIL BORING ANALYTICAL DATA		LAB ID:	D96-9417-8	D96-9417-9	D96-9417-3	D96-9417-4	D96-9417-5	D96-9417-6	D96-9417-7	D96-9417-1	D96-9417-2	D96-9417-10
		SOURCE:	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR
		SDG:	9417	9417	9417	9417	9417	9417	9417	9417	9417	9417
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	8/22/96	8/22/96	8/22/96	8/22/96	8/22/96	8/22/96	8/22/96	8/22/96	8/22/96	8/23/96
CAS NO.	COMPOUND	UNITS:	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
	PESTICIDES / PCBs											
12674-11-2	PCB 1016		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.31 U	0.02 U	0.02 U	0.02 U
11104-28-2	PCB 1221		0.03 U	0.03 U	0.03 U	0.03 U	0.04 U	0.03 U	0.47 U	0.03 U	0.04 U	0.04 U
11141-16-5	PCB 1232		0.06 U	0.06 U	0.07 U	0.07 U	0.07 U	0.06 U	0.93 U	0.07 U	0.08 U	0.07 U
53469-21-9	PCB 1242		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.31 U	0.02 U	0.02 U	0.07 F
12672-29-6	PCB 1248		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.31 U	0.02 U	0.02 U	0.02 U
11097-69-1	PCB 1254		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.31 U	0.02 U	0.02 U	0.02 U
11096-82-5	PCB 1260		0.03 F	0.01 U	0.06 F	0.08 F	0.34 F	0.02 F	4.52	0.04 F	0.11 F	0.08 F
	PESTICIDE / PCB SURROGATES											
DECACHLORO	Decachlorobiphenyl		26 %	67 %	57 %	41 %	25* %	70 %	58 %	30 %	%	41 %
877-09-8	2,4,5,6-Tetrachloro-meta-xylene		58 %	95 %	90 %	66 %	62 %	80 %	89 %	47 %	%	69 %
	CONVENTIONAL PARAMETERS											
PCTMOIST	Moisture, percent		95.6 %	93.1 %	90.3 %	88.8 %	83.1 %	91.8 %	64.2 %	88.8 %	79 %	81.7 %

FORMER GRIFFISS AFB		SAMPLE ID:	SDPS08-1MS1	SDPS08-1MSD1	SDPS08-1MS2	SDPS08-1MSD2	SDPS08-1MS3	SDPS08-1MSD3	SDPS08-1MS4	SDPS08-1MSD4	SDPS08-1DUP	SDPS08-2
PATRICK SQUARE		DEPTH:	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-.5'	0-0'	1-1.5'
SOIL BORING ANALYTICAL DATA		LAB ID:	D96-9417-21	D96-9417-22	D96-9417-24	D96-9417-25	D96-9417-27	D96-9417-28	D96-9417-30	D96-9417-31	D96-9417-12	D96-9417-11
		SOURCE:	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR
		SDG:	9417	9417	9417	9417	9417	9417	9417	9417	9417	9417
		MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		SAMPLED:	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96	8/23/96
CAS NO.	COMPOUND	UNITS:	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	% Recovery	mg/Kg	mg/Kg
	PESTICIDES / PCBs											
12674-11-2	PCB 1016		62 %	83 %							0.02 U	0.02 U
11104-28-2	PCB 1221						52 %	44 %			0.04 U	0.04 U
11141-16-5	PCB 1232								24 %	48 %	0.07 U	0.08 U
53469-21-9	PCB 1242				88 %	64 %					0.13 F	0.02 U
12672-29-6	PCB 1248						58 %	50 %			0.02 U	0.02 U
11097-69-1	PCB 1254				80 %	83 %					0.02 U	0.02 U
11096-82-5	PCB 1260		42 %	59 %							0.1 F	0.39 F
	PESTICIDE / PCB SURROGATES											
DECACHLORO	Decachlorobiphenyl		40 %	44 %	46 %	50 %	42 %	25* %	57 %	34 %	45 %	57 %
877-09-8	2,4,5,6-Tetrachloro-meta-xylene		52 %	62 %	69 %	72 %	55 %	45 %	79 %	67 %	75 %	75 %
	CONVENTIONAL PARAMETERS											
PCTMOIST	Moisture, percent										84.3 %	79.3 %

* - Values outside of contract required QC limits.
D - Surrogate compound diluted out.

E-3

FORMER GRIFFISS AFB PATRICK SQUARE SOIL BORING ANALYTICAL DATA		SAMPLE ID: DEPTH: LAB ID: SOURCE: SDG: MATRIX: SAMPLED: UNITS:	SDPS09-1 0-.5' D96-9417-13 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS09-2 1-1.5' D96-9417-14 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS10-1 0-.5' D96-9417-15 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS10-2 1-1.5' D96-9417-16 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS11-1 0-.5' D96-9417-17 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS11-2 1-1.5' D96-9417-18 INCR 9417 SOIL 8/23/96 mg/Kg	SDPS12-1 0-.5' D96-9420-2 INCR 9420 SOIL 8/23/96 mg/Kg	SDPS12-1MS1 0-.5' D96-9420-10 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MSD1 0-.5' D96-9420-11 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MS2 0-.5' D96-9420-13 INCR 9420 SOIL 8/23/96 % Recovery
CAS NO.	COMPOUND											
	PESTICIDES / PCBs											
12674-11-2	PCB 1016		0.03 U	0.06 U	0.03 U	0.65 U	0.9 U	0.02 U	0.05 U	0* %	0* %	
11104-28-2	PCB 1221		0.04 U	0.1 U	0.04 U	0.97 U	1.35 U	0.03 U	0.07 U			
11141-16-5	PCB 1232		0.09 U	0.2 U	0.08 U	1.94 U	2.7 U	0.07 U	0.15 U			
53469-21-9	PCB 1242		0.03 U	0.06 U	0.03 U	0.65 U	0.9 U	0.02 U	0.05 U			0* %
12672-29-6	PCB 1248		0.03 U	0.06 U	0.03 U	0.65 U	0.9 U	0.02 U	0.05 U			
11097-69-1	PCB 1254		0.03 U	0.06 U	0.03 U	0.65 U	0.9 U	0.02 U	0.05 U			0* %
11096-82-5	PCB 1260		0.23 F	0.16 F	0.15 F	6.94 F	8.94 F	0.08 F	65.07 F	510 %	580 %	
	PESTICIDE / PCB SURROGATES											
DECACHLORO	Decachlorobiphenyl		51 %	79 %	63 %	106 %	68 %	88 %	D	D	D	D
877-09-8	2,4,5,6-Tetrachloro-meta-xylene		76 %	94 %	88 %	112 %	95 %	96 %	D	D	D	D
	CONVENTIONAL PARAMETERS											
PCTMOIST	Moisture, percent		66.4 %	30.4 %	71.1 %	61.8 %	44.5 %	86.8 %	40.6 %			

FORMER GRIFFISS AFB PATRICK SQUARE SOIL BORING ANALYTICAL DATA		SAMPLE ID: DEPTH: LAB ID: SOURCE: SDG: MATRIX: SAMPLED: UNITS:	SDPS12-1MSD2 0-.5' D96-9420-14 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MS3 0-.5' D96-9420-16 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MSD3 0-.5' D96-9420-17 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MS4 0-.5' D96-9420-19 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1MSD4 0-.5' D96-9420-20 INCR 9420 SOIL 8/23/96 % Recovery	SDPS12-1DUP 0-0' D96-9420-1 INCR 9420 SOIL 8/23/96 mg/Kg	SDPS12-2 1-1.5' D96-9420-3 INCR 9420 SOIL 8/23/96 mg/Kg	SDPS13-1 0-.5' D96-9420-4 INCR 9420 SOIL 8/23/96 mg/Kg	SDPS13-2 1-1.5' D96-9420-5 INCR 9420 SOIL 8/23/96 mg/Kg	SDPS14-1 0-.5' D96-9420-6 INCR 9420 SOIL 8/23/96 mg/Kg
CAS NO.	COMPOUND											
	PESTICIDES / PCBs											
12674-11-2	PCB 1016							0.04 U	0.02 U	0.06 U	0.04 U	0.07 U
11104-28-2	PCB 1221			0* %	0* %			0.06 U	0.03 U	0.09 U	0.06 U	0.1 U
11141-16-5	PCB 1232					0* %	0* %	0.11 U	0.07 U	0.19 U	0.12 U	0.21 U
53469-21-9	PCB 1242		0* %					0.04 U	0.02 U	0.06 U	0.04 U	0.07 U
12672-29-6	PCB 1248			0* %	0* %			0.04 U	0.02 U	0.06 U	0.04 U	0.07 U
11097-69-1	PCB 1254		0* %					0.04 U	0.02 U	0.06 U	0.04 U	0.07 U
11096-82-5	PCB 1260							51.58 F	0.05 F	2.61 F	0.02	0.23
	PESTICIDE / PCB SURROGATES											
DECACHLORO	Decachlorobiphenyl		D	D	D	D	D	D	94 %	78 %	81 %	94 %
877-09-8	2,4,5,6-Tetrachloro-meta-xylene		D	D	D	D	D	D	93 %	92 %	91 %	106 %
	CONVENTIONAL PARAMETERS											
PCTMOIST	Moisture, percent							52.3 %	87.1 %	31.6 %	52.1 %	28.9 %

* – Values outside of contract required QC limits.
D – Surrogate compound diluted out.

FORM[illegible]FFISS AFB PATRICK SQUARE SOIL BORING ANALYTICAL DATA											
	SAMPLE ID:	SDPS14-2	BLK	BLK1660LCS	B[illegible]2148LCS	BLK4254LCS	BLK1232LCS	BLK	BLK1660LCS	BLK4254LCS	BLK2148LCS
	DEPTH:	1-1.5'	0-0'	0-0'	0-0'	0-0'	0-0'	0-0'	0-0'	0-0'	0-0'
	LAB ID:	D96-9420-7	D96-9417-19	D96-9417-20	D96-9417-26	D96-9417-23	D96-9417-29	D96-9420-8	D96-9420-9	D96-9420-12	D96-9420-15
	SOURCE:	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR	INCR
	SDG:	9420	9417	9417	9417	9417	9417	9420	9420	9420	9420
	MATRIX:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	SAMPLED:	8/23/96	8/28/96	8/28/96	8/28/96	8/28/96	8/28/96	8/28/96	8/28/96	8/28/96	8/28/96
CAS NO.	COMPOUND / UNITS:	mg/Kg	mg/Kg	% Recovery	% Recovery	% Recovery	% Recovery	mg/Kg	% Recovery	% Recovery	% Recovery
	PESTICIDES / PCBs										
12674-11-2	PCB 1016	0.02 U	0.02 U	81 %				0.02 U	93 %		
11104-28-2	PCB 1221	0.04 U	0.03 U		74 %			0.03 U			82 %
11141-16-5	PCB 1232	0.07 U	0.06 U				41 %	0.06 U			
53469-21-9	PCB 1242	0.02 U	0.02 U			88 %		0.02 U		89 %	
12672-29-6	PCB 1248	0.02 U	0.02 U		76 %			0.02 U			86 %
11097-69-1	PCB 1254	0.02 U	0.02 U			86 %		0.02 U		88 %	
11096-82-5	PCB 1260	0.01 U	0.01 U	85 %				0.01 U	99 %		
	PESTICIDE / PCB SURROGATES										
DECACHLORO	Decachlorobiphenyl	89 %	93 %	91 %	91 %	95 %	93 %	88 %	100 %	76 %	93 %
877-09-8	2,4,5,6-Tetrachloro-meta-xylene	100 %	71 %	83 %	83 %	89 %	83 %	98 %	104 %	97 %	95 %
	CONVENTIONAL PARAMETERS										
PCTMOIST	Moisture, percent	81.8 %									

FORMER GRIFFISS AFB PATRICK SQUARE SOIL BORING ANALYTICAL DATA					
	SAMPLE ID:	BLK1232LCS	BLK	LCS	BLK
	DEPTH:	0-0'	0-0'	0-0'	0-0'
	LAB ID:	D96-9420-18	D96-9417-32	D96-9417-33	D96-9420-21
	SOURCE:	INCR	INCR	INCR	INCR
	SDG:	9420	9417	9417	9420
	MATRIX:	SOIL	SOIL	SOIL	SOIL
	SAMPLED:	8/28/96	8/30/96	8/30/96	8/30/96
CAS NO.	COMPOUND / UNITS:	% Recovery	%	%	%
	PESTICIDES / PCBs				
12674-11-2	PCB 1016				
11104-28-2	PCB 1221				
11141-16-5	PCB 1232	44 %			
53469-21-9	PCB 1242				
12672-29-6	PCB 1248				
11097-69-1	PCB 1254				
11096-82-5	PCB 1260				
	PESTICIDE / PCB SURROGATES				
DECACHLORO	Decachlorobiphenyl	81 %			
877-09-8	2,4,5,6-Tetrachloro-meta-xylene	94 %			
	CONVENTIONAL PARAMETERS				
PCTMOIST	Moisture, percent		95.3 %	87.3 %	81.4 %

* – Values outside of contract required QC limits.
D – Surrogate compound diluted out.

E-5

F Cost Estimates Based on FS Addendum Scenario Development

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 29-Mar

Scenario 1: Excavate to native soils along the entire length of the on-base portion of the creek and backfill with clean soils to original grade;

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				77,900	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	5950	CY	1.97	11,700	
Material Handling and Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	7700	CY	3.14	24,200	
Transportation	Dump truck <200 mi	800	EA	715	572,000	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	800	CY	154	123,200	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	7000	CY	102.85	720,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	5950	CY	5.89	35,000	
Backfill	Spread dumped mat'l - no compaction	5950	CY	1.54	9,200	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				77,900	
Subtotal					1,713,800	
Contingency (15%)					257,070	
Subtotal					1,970,870	
Engineering, Legal, and Administrative (25%)					492,718	
Total					2,463,588	
Overall Cost in $ / in-place CY removed					414	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: Revised 7/3/02

Scenario 2: Excavate to native soils along the entire length of the on-base portion of the creek, and excavate localized areas of contaminated native soils, and backfill with clean soils to original grade;

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				88000	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	6850	CY	1.97	13,500	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	8900	CY	3.14	27,900	
Transportation	Dump truck <200 mi	900	EA	715	643,500	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	900	CY	154	138,600	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	8000	CY	102.85	823,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	6850	CY	5.89	40,300	
Backfill	Spread dumped mat'l - no compaction	6850	CY	1.54	10,500	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				88,000	
Subtotal					1,936,000	
Contingency (15%)					290,400	
Subtotal					2,226,400	
Engineering, Legal, and Administrative (25%)					556,600	
Total					2,783,000	
Overall Cost in $ / CY removed					406	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 29-Mar

Scenario 3: Excavate to a uniform depth of 2.5 feet below creek bottom, and backfill with clean soils to original grade;

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				68400	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	5200	CY	1.97	10,200	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	6800	CY	3.14	21,400	
Transportation	Dump truck <200 mi	700	EA	715	500,500	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	700	CY	154	107,800	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	6100	CY	102.85	627,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	5200	CY	5.89	30,600	
Backfill	Spread dumped mat'l - no compaction	5200	CY	1.54	8,000	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				68,400	
Subtotal					1,505,000	
Contingency (15%)					225,750	
Subtotal					1,730,750	
Engineering, Legal, and Administrative (25%)					432,688	
Total					2,163,438	
Overall Cost in $ / CY removed					416	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: Revised 7/3/02

Scenario 4: Excavate to a uniform depth of 2.5 feet below creek bottom, and excavate localized areas of remaining contaminated sediments/native soils, and backfill with clean soils to original grade;

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				88000	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	6800	CY	1.97	13,400	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	8800	CY	3.14	27,600	
Transportation	Dump truck <200 mi	900	EA	715	643,500	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	900	CY	154	138,600	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	8000	CY	102.85	823,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	6800	CY	5.89	40,100	
Backfill	Spread dumped mat'l - no compaction	6800	CY	1.54	10,500	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				88,000	
Subtotal					1,935,400	
Contingency (15%)					290,310	
Subtotal					2,225,710	
Engineering, Legal, and Administrative (25%)					556,428	
Total					2,782,138	
Overall Cost in $ / CY removed					409	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 29-Mar

Scenario 5: Same as Scenario 1 (Excavate to native soils along the entire length of the on-base portion of the creek and backfill with clean soils to original grade), except remove only 1-foot of sediment between TMCSD-8 and TMCSD-10-2 due to the addition of 2- to 3-feet of clean soil to be placed over the entire area to raise the original elevation as part of the wetland mitigation program;

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				57800	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	4275	CY	1.97	8,400	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	5600	CY	3.14	17,600	
Transportation	Dump truck <200 mi	600	EA	715	429,000	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	600	CY	154	92,400	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	5000	CY	102.85	514,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	4275	CY	5.89	25,200	
Backfill	Spread dumped mat'l - no compaction	4275	CY	1.54	6,600	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				57,800	
Subtotal					1,271,500	
Contingency (15%)					190,725	
Subtotal					1,462,225	
Engineering, Legal, and Administrative (25%)					365,556	
Total					1,827,781	
Overall Cost in $ / CY removed					428	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 29-Mar

Scenario 6: Same as Scenario 3 (excavate to a uniform depth of 2.5 feet below creek bottom, and backfill with clean soils to original grade), except remove only 1-foot of sediment between TMCSD-8 and TMCSD-10-2 due to the addition of 2- to 3-feet of clean soil to be placed over the entire area to raise the original elevation as part of the wetland mitigation program

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				48900	Includes bonding and equip. mob.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	3575	CY	1.97	7,000	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	4600	CY	3.14	14,400	
Transportation	Dump truck <200 mi	500	EA	715	357,500	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	500	CY	154	77,000	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	4200	CY	102.85	432,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	3575	CY	5.89	21,100	
Backfill	Spread dumped mat'l - no compaction	3575	CY	1.54	5,500	
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	
Demobilization	estimated at 5%				48,900	
Subtotal					1,075,000	
Contingency (15%)					161,250	
Subtotal					1,236,250	
Engineering, Legal, and Administrative (25%)					309,063	
Total					1,545,313	
Overall Cost in $ / CY removed					432	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 1-Apr

Dredge Deposits - Berms

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				22700	
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	Added area to clear on the opposite side of creek
Excavation	Backhoe 1 1/2 yd	1700	CY	1.97	3,300	
Material Staging	Includes dewatering	1	LS	20000	20,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	2200	CY	3.14	6,900	
Transportation	Dump truck <200 mi	220	EA	715	157,300	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	220	CY	154	33,900	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	2000	CY	102.85	206,000	Assume 90% will be non-hazardous
Grading	Clay mat'l 300' haul, no compaction	1500	CY	2.83	4,200	Assume top 1' of clay on site will be graded
Seeding	utility mix hydroseed	150	MSF	56.65	8,500	Included in cost for one of scenarios 1-6
Demobilization	estimated at 5%				22,700	
Subtotal					499,700	
Contingency (15%)					74,955	
Subtotal					574,655	
Engineering, Legal, and Administrative (25%)					143,664	
Total					718,319	
Overall Cost in $ / CY removed					423	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By:
Date:

Off-Base portion of Creek: Excavate select portions of creek to specified depths from the base property line to the pond.

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				2500	Assume work is completed in same contract as one of scenarios 1-6. If not, will be significantly higher.
Clearing and Grubbing	(30' wide, length of creek)	3	Acre	4730	14,200	
Excavation	Backhoe 1 1/2 yd	80	CY	1.97	200	
Material Staging	Includes dewatering	1	LS	10000	10,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	100	CY	3.14	300	
Transportation	Dump truck <200 mi	10	EA	715	7,200	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	10	CY	154	1,500	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	100	CY	102.85	10,000	Assume 90% will be non-hazardous
Fill mat'l	Clay or till - material	80	CY	5.89	500	
Backfill	Spread dumped mat'l - no compaction	80	CY	1.54	100	
Seeding	utility mix hydroseed	120	MSF	56.65	6,800	
Demobilization	estimated at 5%				2,500	
Subtotal					55,800	
Contingency (15%)					8,370	
Subtotal					64,170	
Engineering, Legal, and Administrative (25%)					16,043	
Total					80,213	
Overall Cost in $ / CY removed					1003	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 1-Apr

Downstream edge of pasture to Pond: Excavate 3.5 feet of sediment throughout pond.

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Mobilization	estimated at 5%				92100	
Clearing and Grubbing	(30' wide, length of creek)	1	Acre	4730	4,700	
Excavation	Backhoe 1 1/2 yd	7300	CY	1.97	14,400	
Material Staging	Includes dewatering	1	LS	40000	40,000	Temporary pads, gravity draining and possibly bulking
Loading	Backhoe 1 1/2 yd	9500	CY	3.14	29,800	
Transportation	Dump truck <200 mi	950	EA	715	679,300	(assume 30% swell - R022-250, 10 CY dump truck))
Disposal	Landfill Haz Bulk	950	CY	154	146,300	Assume 10% will be hazardous
Disposal	Landfill Non-Haz Bulk	8500	CY	102.85	874,000	Assume 90% will be non-hazardous
Fill mat'l	common earth - material	7300	CY	5.56	40,600	
Backfill	Spread dumped mat'l - no compaction	7300	CY	1.54	11,200	
Seeding	utility mix hydroseed	30	MSF	56.65	1,700	
Pond Dewatering	Includes stream diversion and continual dewatering/holding/ treatment	1	LS	15400	15,400	Assumes one day excavtaor for stream diversion and 30 gpm of air stripper/filtration treatment for pond for one month
Demobilization	estimated at 5%				92,100	
Subtotal					2,041,600	
Contingency (15%)					306,240	
Subtotal					2,347,840	
Engineering, Legal, and Administrative (25%)					586,960	
Total					2,934,800	
Overall Cost in $ / CY removed					402	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Est By: J. Fazzolari
Date: 1-Apr

Annual Cost of monitoring stream for water quality and fish tissue for a five year period.

Task Name		Qty	Unit	Unit Cost	Total Cost	Assumptions
Surface Water Samples analyzed for VOCs	22 sampling locations per year for five years	22	EA	120	2,700	Assumed same locationas as in FS
Surface Water Samples analyzed for SVOCs	same sampling locations	22	EA	220	4,900	
Surface Water Samples analyzed for PCBs	same sampling locations	22	CY	75	1,700	
Surface Water Samples analyzed for Dioxin and Furans	same sampling locations	22	LS	580	12,800	
Surface Water Samples analyzed for Metals	same sampling locations	22	CY	105	2,400	includes Cd, Pb, Hg, Ag, Zn
Fish tissue samples analyzed for PCBs	3 sample locations	22	EA	75	1,700	Assumed same locations as in FS
Fish tissue samples analyzed for pesticides	same fish sampling locations	22	EA	120	2,700	
Fish tissue sample prep, homogenizing, lipid determination	same fish sampling locations	22	EA	45	1,000	
Sample collection	Five sample collection events	5	days	1200	6,000	Assume 2 person crew for five days each year, including field parameters
Sample shipping	Five sample collection events	2	EA	100	200	Assume two coolers shipped each year of sampling
Subtotal					36,100	
Contingency (15%)					5,415	
Subtotal					41,515	
Engineering, Legal, and Administrative (25%)					10,379	
Total Annual cost					51,894	
Total Present Year Cost					$275,794	

Former Griffis AFB - Three Mile Creek Feasibility Study
Cost Estimate based on FS addendum scenario development, 3/2002

Summary Scenario	1	2	3	4	5	6
Volume of Sediment on base in channel	5,950	7,250	5,200	7,225	4,275	3,575
Estimated Cost	$ 2,463,588	$ 2,872,269	$ 2,163,438	$ 2,871,838	$ 1,827,781	$ 1,545,313
Berms	$ 718,319	$ 718,319	$ 718,319	$ 718,319	$ 718,319	$ 718,319
Off-Base portion	$ 80,213	$ 80,213	$ 80,213	$ 80,213	$ 80,213	$ 80,213
pond	$ 2,934,800	$ 2,934,800	$ 2,934,800	$ 2,934,800	$ 2,934,800	$ 2,934,800
	$ 275,794	$ 275,794	$ 275,794	$ 275,794	$ 275,794	$ 275,794
Total	$ 6,472,712	$ 6,881,394	$ 6,172,562	$ 6,880,962	$ 5,836,906	$ 5,554,437
Total Volume Excavated (including berms, off base, and pond)	15,030	16,330	14,280	16,305	13,355	12,655
Cost per YD	$ 431	$ 421	$ 432	$ 422	$ 437	$ 439

Assumptions:
1. Assume 3.5 feet of excavation depth throughout pond area
2. Assume sediment processing consists of draining on temporary staging area.
3. Assume 10% of dredged material will be considered hazardous, 90% non-hazardous
4. Assume 30% swell of in-place material due to dredging
5. Assume staging area will be temporary cover over unexcavated area for draining soil
6. Volumes for dredging scenarios1-6 based on memo dated 3/25/02 from G. Florentino
7. Volumes for dredging of off-base stream and pond based on FS addendum dated 3/2000
8. Assume haul road will be 30' wide cleared and grubbed area beside creek
9. Assume all work will be completed under one project