CERTIFICATION REPORT FARRELL ROAD PLANT INTERIM REMEDIAL MEASURE SOILS ADJACENT TO OUTFALL 003

PREPARED FOR

LOCKHEED MARTIN

Lockheed Martin Corporation Syracuse, New York

OCTOBER 1996

PREPARED BY

PARSONS ENGINEERING SCIENCE, INC.

Syracuse, New York

PARSONS

CERTIFICATION REPORT FARRELL ROAD PLANT INTERIM REMEDIAL MEASURE SOILS ADJACENT TO OUTFALL 003

LOCKHEED MARTIN CORPORATION SYRACUSE, NEW YORK

OCTOBER 1996

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SECTION 1 INTRODUCTION

1.1 PURPOSE AND SCOPE

This Certification Report has been prepared to document activities completed as an Interim Remedial Measure (IRM) to remediate soils adjacent to Outfall 003 at the former General Electric (GE) Aerospace Farrell Road Plant located on Farrell Road in the Town of Geddes, Onondaga County, New York (the site).

This report has been prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved IRM Work Plan for the Outfall 003 Interim Remedial Measure prepared by Blasland, Bouck & Lee (BBL, July 1996) and the requirements of an Order on Consent (Index #A7-0307-93-10) entered by Martin Marietta Corporation (MMC) and the NYSDEC.

This Certification Report is organized as follows:

<u>Section 1.0 - Introduction</u>: This section presents the purpose and scope of the Certification Report, as well as pertinent background information related to the IRM.

<u>Section 2.0 - Summary of IRM Activities</u>: This section presents a summary of the activities completed as part of the IRM including soil excavation, handling and disposal activities and site restoration.

<u>Section 3.0 - Certification Statement</u>: This section presents a certification statement indicating that the IRM was completed in general accordance with the NYSDEC-approved IRM Work Plan.

1.2 BACKGROUND INFORMATION

The site is located northeast of Routes 690 and 90, and south of the Seneca River, as shown on the Site Location Map (Figure 1). The site includes four buildings: Building No. 1 was formerly used as a design center; Building No. 2 was used as a manufacturing and assembly plant; the Test Building was used to test radar products; and the Maintenance Garage was used to service and house facility-support vehicles (Figure 2).

Environmental investigations conducted at the site have determined that soil and groundwater have been impacted by past industrial activities. As a result of these findings, the site was placed on the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites in October 1992 (Site No. 734055). MMC entered into a Consent Order with the NYSDEC to implement a Remedial Investigation/Feasibility Study (RI/FS) for the G.E. Farrell Road site in December of 1993.

On March 16, 1995, MMC merged with Lockheed Corporation. As a result of that merger, Lockheed Martin Corporation (LMC) was formed as a holding company and MMC became a wholly-owned subsidiary of LMC. Effective January 29, 1996 MMC

merged into its' parent corporation LMC. LMC is the successor by merger to MMC and has assumed MMC's obligations under the RI/FS and IRM consent orders.

As part of the RI, soils adjacent to Outfall 003 were found to be impacted by low levels of volatile organic compounds (VOCs) and polychlorinated biphenyls (PCBs). Upon discovery of the impacted soil, LMC proposed to conduct an IRM to remove and dispose of the impacted soil.

The results of laboratory analysis and field screening from soils adjacent to Outfall 003 indicate that PCBs in excess of 1 part per million (ppm) existed within the shallow soil zone over approximately 1,550 square feet. Laboratory analysis confirmed PCB concentrations up to 5.9 ppm. In addition to PCBs, several VOCs including benzene, methyl-t-butyl ether and hexane have been identified at low levels (0.066 ppm, 0.360 ppm and 0.026 ppm, respectively) in the soil adjacent to Outfall 003. VOCs were not considered a contaminant of concern for this IRM.

In accordance with correspondence with the NYSDEC, the extent of remediation at Outfall 003 was defined based on the areal extent of the identified PCB-impacted soil. The approximate extent of the PCB-impacted soil is shown on Figure 3. The areal extent addressed as part of this IRM encompassed approximately 3,550 square feet.

In accordance with the requirements of the Order on Consent, an IRM Work Plan (BBL, July 1996) was prepared and submitted to the NYSDEC for review and approval. The IRM Work Plan describes the methods for the removal of soil and for site restoration. Based on comments on the IRM Work Plan by the NYSDEC, minor modifications to the scope of work were proposed in letter correspondence between LMC and the NYSDEC. NYSDEC approval of the IRM Work Plan was provided in an August 6, 1996 letter to LMC. Project related correspondence are included in Attachment 1.

The sole remedial action objective of this IRM was to remove soils to the specified depth (discussed in Section 2) within the defined area for offsite transport and disposal. In accordance with the IRM Work Plan, verification of soil removal and site restoration was based on visual observation and photographic documentation.

SECTION 2 SUMMARY OF IRM ACTIVITIES

2.1 GENERAL

LMC retained Abscope Environmental, Inc. (AEI) to conduct the soil removal and site restoration activities associated with the IRM; and Parsons Engineering Science, Inc. (Parsons ES) to provide full-time observation of the IRM with respect to conformance with the guidelines established in the NYSDEC approved IRM Work Plan (BBL, July 1996). The NYSDEC approved AEI's Work Plan and site Health and Safety Plan (HASP) in an August 23, 1996 letter to LMC. AEI's Work Plan and HASP are included in Attachment 2

Soil excavation and site restoration activities commenced on August 26, 1996 and were completed on August 30, 1996. Mr. John May and Ms. Christine Rossi of NYSDEC's Region 7 office conducted site visits during this period to observe and approve of the IRM activities. Disposal of the soils excavated during the IRM was completed on September 26, 1996. The IRM activities are summarized below.

2.2 IRM ACTIVITIES

The IRM activities described below are documented in the photographic log in Attachment 3.

2.2.1 Site Preparation

AEI constructed a soil containment area for temporary storage of excavated soils from the work zone. The containment area consisted of an earthen base with a perimeter berm approximately 1 foot high and approximately 1 foot wide and two layers of 6-mil polyethylene lining. The location of the containment area was to the east of the work area on the asphalt parking lot. An access road was constructed from the containment area to the work zone. The road consisted of two layers of 6-mil polyethylene sheets and overlapping plywood. At the conclusion of the project, this road was disposed of with the excavated soil.

AEI also constructed an equipment decontamination pad in the same manner as the soil containment area. The location of the decontamination pad was also in the parking lot, located just to the west of the soil containment area. At the conclusion of the project the decontamination pad materials were disposed of with the excavated soil.

Access to the work area was obtained by removing sections of fencing in the north west corner of the parking lot adjacent to the work area. A temporary access road to the work area was constructed by clearing existing trees, placing a non-woven geosynthetic textile fabric (Terra Tex No #4) on the ground surface and overlaying the geosynthetic fabric with crushed stone.

Erosion controls consisting of Econofence SC90 silt fence and hay bales were placed in the wetland area along the perimeter of the work zone. The silt fence fabric was 24 inches high, supported with 36 inch posts and was installed in 100-foot lengths.

AEI personnel removed necessary trees and foliage to allow for hand and machine excavation. Care was taken to remove as few trees as possible. A total of 6 living trees over one inch in diameter were removed. Removed trees were disposed of with the excavated soil.

2.2.2 Soil Removal

Prior to soil excavation, the Outfall 003 pipe was cleaned using a high pressure steam cleaner. Wash water and standing water immediately below Outfall 003 were collected for offsite disposal. The excavated soil was relatively dry, and no precipitation occurred during the IRM. Therefore, no other surface or groundwater needed to be addressed during the IRM.

The soil removal area included as part of this IRM was delineated based on the results of the previous sampling activities. The soil removal area is shown on Figure 3. With the exception of soil directly adjacent to Outfall 003 (i.e. at sample location OUT-03B), soils within the remediation area were removed to a minimum depth of 1 foot. At sample location OUT-03B, an area 3.5 feet square was excavated to a depth of 1.5 feet.

The soil excavation was accomplished using tracked excavators and manual shoveling. Soil removal was conducted in a manner to limit the disturbance of mature trees and root systems within the remediation area. Removed soils were transported from the wetland area and stockpiled in the polyethylene lined staging area using a bobcat. The excavated soil pile was covered with a polyethylene liner at the conclusion of each work day.

Remediation of the soils adjacent to Outfall 003 was deemed complete when the soil within the defined remediation area was removed to the defined depths. The extent and depth of soil removal was confirmed by Parsons ES and the NYSDEC. No confirmatory sampling was required as part of the IRM.

Non-disposable equipment (e.g. backhoe, shovels, etc.) used during this IRM, were decontaminated using a high-pressure water wash prior to site restoration activities.

2.2.3 Wetland Restoration

A permit to conduct wetland restoration as part of this IRM was not required, however, the substantive requirements of such a permit were met. Wetland restoration was completed by replacing soil and trees removed during this IRM. The bottom 8 inches of the remediation area, with the exception of sample location OUT-03B, was backfilled with an approximately 50/50 (by volume) topsoil/sand mixture. At sample location OUT-03B, the bottom 14 inches was backfilled with the topsoil/sand mixture. The top 4 inches

of the entire remediation area was backfilled with topsoil. The backfill was graded to match existing site conditions.

A total of 6 trees over one inch in diameter were removed during the IRM. During site restoration, 10 trees were replanted, consisting of a mixture of red maple (Acer rubrum) and silver maple (Acer sadcharimum).

In addition, the remediated area was mulched and seeded with Redtop (Argrostis alba) wetland grass seed. The access road was removed, and placed in the soil containment pile and the underlying area was reseeded.

As part of the IRM, soil was backfilled downstream of the Outfall 003 discharge pipe. Before the vegetative erosion control (grass seeding) could establish itself, significant stormwater runoff flows produced scouring which created a small basin approximately 9 feet wide in front of the discharge pipe. A twisting channel with small areas of "washout" and loose saturated soil formed downstream.

LMC obtained NYSDEC approval (letter dated October 17, 1996) to construct riprap outlet protection to avoid further disruption of the placed soil and seeding. This work was performed on October 14 and 15, 1996. Crushed stone fill was used to repair the scoured area back to a level approaching the pipe invert. Filter fabric was used as a liner to prevent mud infiltration from below, and a layer of rip-rap (stone diameter at least 3 inches) was installed as a trapezoidal apron approximately 10 feet long and 10 feet across at its widest point. This rip-rap outlet protection will reduce the velocity of discharged storm water from the outfall and thereby minimize further erosion.

2.2.4 Waste Characterization, Handling and Disposal

2.2.4.1 Soil

Soil disposed of as part of the IRM consisted of soil from the remediation area and soil collected during decontamination activities. Soil disposal was based on existing analytical data generated during previous investigations completed adjacent to Outfall 003 and additional sampling and analysis required by the selected disposal facility. Based on the analytical results the soil was landfilled as a non-hazardous waste material at the Seneca Meadows, NY non-hazardous waste landfill. The bill of lading for each load sent to the landfill is included in Attachment 4. Analytical results from the samples collected to determine the appropriate disposal method are included in Attachment 5.

2.2.4.2 Water

Water disposed of as part of the IRM consisted of water from outfall pipe steam cleaning and water collected from the depression below the outfall pipe. The water was containerized for temporary storage. To the extent practical, solids were allowed to settle from the water prior to placing the water in drums. At the time of this certification report, the collected water had not yet been disposed of and remained secured in the waste storage area onsite. The collected water will be sampled and analyzed to establish

appropriate transport and disposal methods and to satisfy the requirements of the selected disposal facility.

2.2.4.3 Personal Protective Equipment and Disposable Equipment

Used personal protective equipment (PPE) and disposable equipment (e.g. geotextile, silt fence, etc.) was disposed of with the excavated soil.

SECTION 3 CERTIFICATION STATEMENT

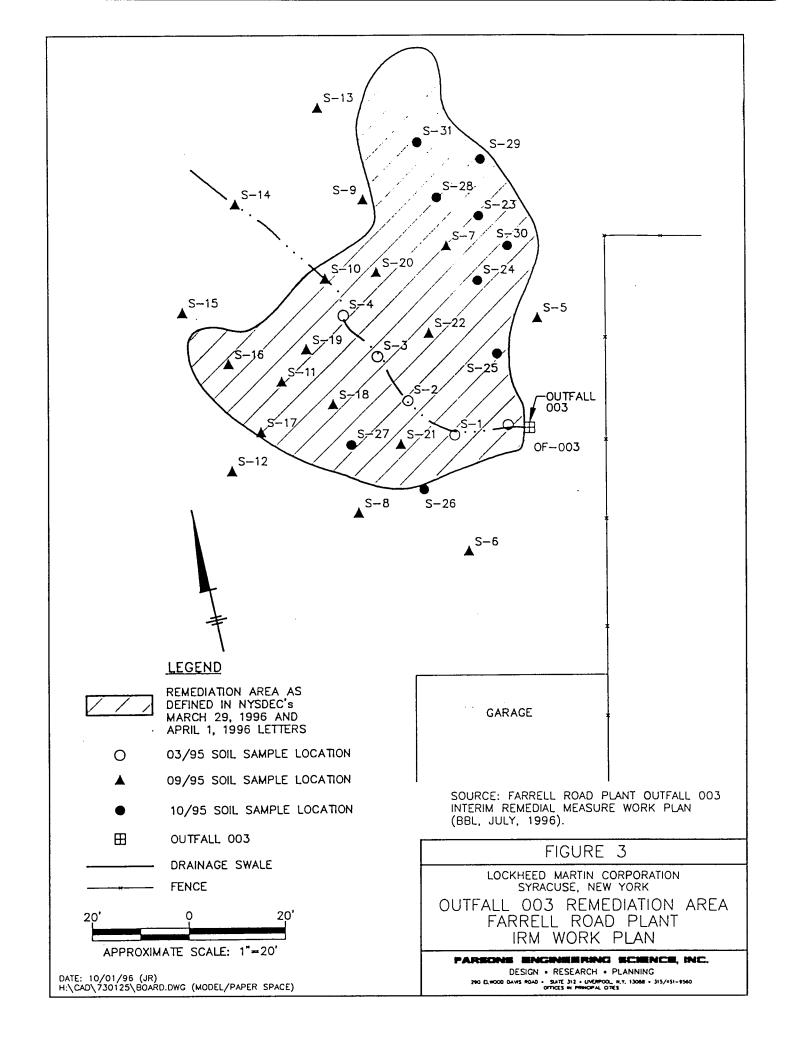
I certify, as a licensed professional engineer in the State of New York, that to the best of my knowledge, the execution of the Interim Remedial Measure to remediate soils adjacent to Outfall 003 completed at the Farrell Road Plant (Site No. 7304055) was performed in general conformance with the New York State Department of Environmental Conservation-approved work plan entitled "Farrell Road Plant Outfall 003 Interim Remedial Measure Work Plan", prepared by Blasland, Bouck & Lee, Inc. dated July 1996 and all other project plans and correspondence as contained in Attachments 1 and 2 of this IRM Certification Report.

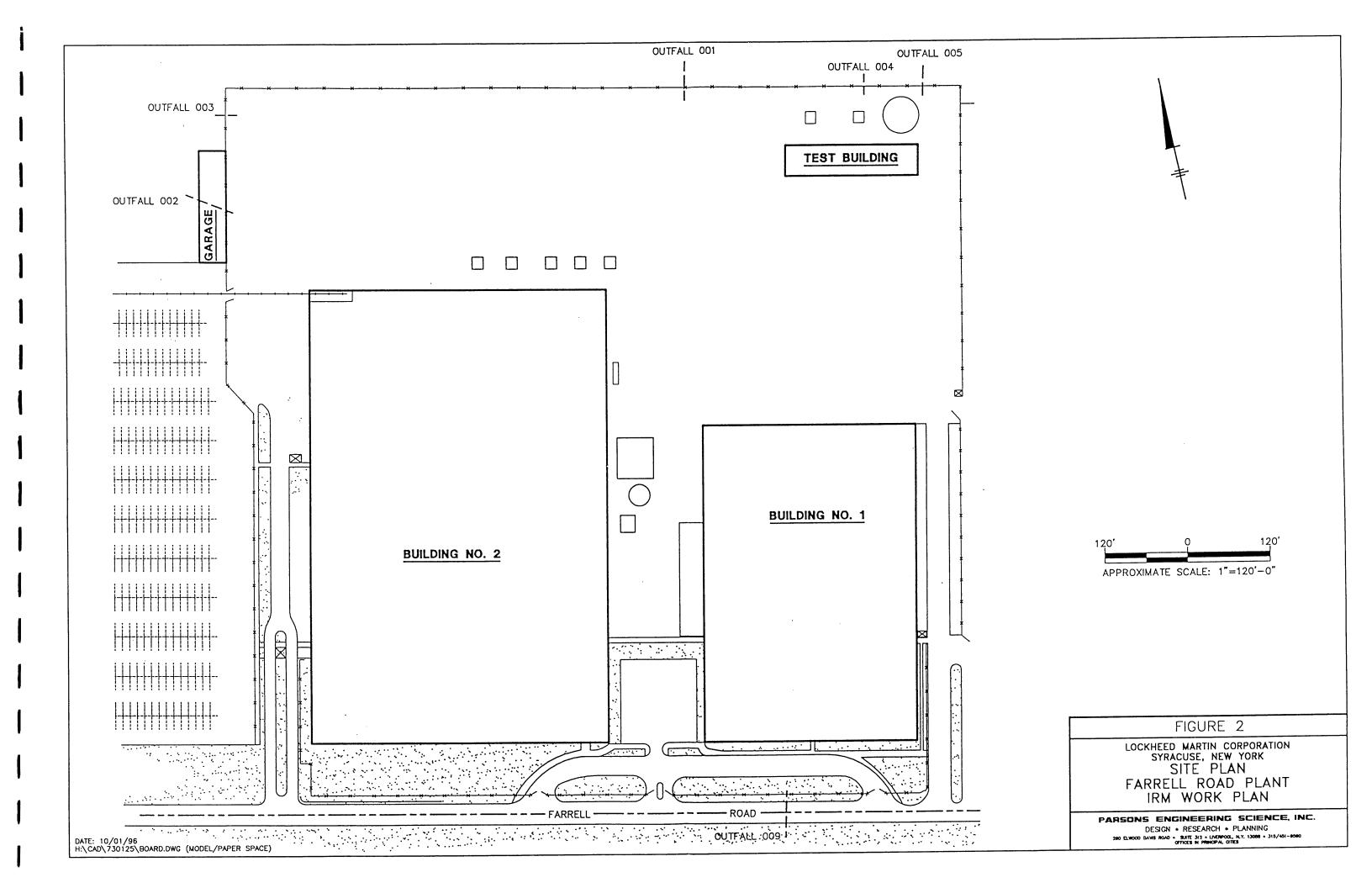


Edward C. Glaza, P.E. Project Manager NYS License No. 070909

Parsons Engineering Science, Inc. 290 Elwood Davis Road Liverpool, New York 13088

FIGURES





ATTACHMENT 1

PROJECT RELATED CORRESPONDENCE

INDEX OF PROJECT RELATED CORRESPONDENCE

Date	From	To	Subject
July 25, 1996	LMC	NYSDEC	Submittal of IRM Work Plan
August 2, 1996	NYSDEC	LMC	Comments to the IRM Work Plan
August 5, 1996	LMC	NYSDEC	Response to NYSDEC comments
August 6, 1996	NYSDEC	LMC	Approval of the IRM Work Plan
August 8, 1996	LMC	NYSDEC	Cleaning of the outfall pipe
August 16, 1996	LMC	NYSDEC	Submittal of contractor Work Plan and Health and Safety Plan
August 23, 1996	NYSDEC	LMC	Approval of the contractor Work Plan and Health and Safety Plan
October 4, 1996	LMC	NYSDEC	Addition of erosion control
October 17, 1996	NYSDEC	LMC	Approval of additional erosion control

LOCKHEED MARTIN

By: Overnight Courier

July 25, 1996

Robert W. Schick, P.E.
Section Chief, Remedial Section A
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Re: Soil Remediation Adjacent to Outfall 003; IRM Work Plan GE Farrell Road Site; Town of Geddes, Onondaga County, New York NYSDEC Site #734055

Dear Mr. Schick:

Enclosed please find four copies of the Interim Remedial Measures (IRM) Work Plan for remediating soil adjacent to Outfall 003 at the above-referenced site. This IRM Work Plan was prepared in accordance with the NYSDEC Order on Consent (Index #A7-0307-93-10), dated December 15, 1993.

This IRM has been developed based on the results of the Remedial Investigation and correspondence between NYSDEC and Lockheed Martin. We look forward to the Department's approval to proceed with implementing the proposed IRM in accordance with the enclosed Work Plan. Please contact me at (315) 456-3199 if you require additional information.

Sincerely,

Patrick D. Salvador, P.E.

Principal Engineer

Enclosure

cc: Director, Bureau of Environmental Exposure Investigation - NYSDOH Sandra Lee Fenske, Esq. - Lockheed Martin Henriette Hamel - NYSDOH Michael J. Lesser, Esq. - NYSDEC Mr. Daniel Palm, Director - NYSDEC Virginia Robbins, Esq., - Bond, Schoeneck & King, LLP

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-7010

LOCKHEED MARTIN OR & SS

AUG 0 9 1996

_nvironment Safety & Health Michael Zagata Commissioner

August 2, 1996

Mr. Patrick D. Salvador, P.E. Principal Engineer
Martin Marieta Corporation
Bldg. 5, Room H6
Electronic Park
Syracuse, New York 13221

Dear Mr. Salvador:

Re: GE Farrell Road Site, Geddes, Onondaga County, New York, Site No. 7-34-055

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have completed the review of the "Farrell Road Plant Outfall 003 Interim Remedial Measure Work Plan" dated July 1996, submitted by Lockheed Martin Corporation. Based upon this review the following comments have resulted:

- 1- Section 2.3: Provision must be included for the review of the Contractor's Work plan by the State prior to the initiation of fieldwork. This is required since the final health and safety plan and a other aspects of the final project such as the access road design and location, staging area location and design, and silt fence have been left up to the contractor to propose in their Work plan. The schedule in Section 2.11 should be modified to reflect this submittal and review.
- 2- <u>Section 2.4:</u> The sediment control should be a silt fence <u>and</u> hay bales. The approximate limits of the silt fence should be shown on Figure 3 and the figure referenced in this section.
- 3- Section 2.6: The polyethylene lined staging area should include a raised curb or other form of berm and a sump for the collection of any water generated. Provisions to cover the material or otherwise prevent dust generation as well as measures to control runoff or water entering the staging area during a rainfall event must also be included in the contractors Work plan and should be noted in this section.

- 4-<u>Section 2.6</u>: The plan should specifically state that the access road will be restored with appropriate vegetation.
- 5- <u>Section 2.11:</u> The schedule must include the State review and approval of the Contractor's Work Plan.
- 6- <u>Section 4 Health and Safety Requirements</u>: This section should include the required community health and safety aspect of the HASP, which in this case will be geared toward protection of Syroco, Inc. workers in the facility, during the implementation of the IRM.

The Work plan is generally acceptable, and is conditionally approved pending receipt of a revised version incorporating the above comments. If you have any questions relative to these comments, please contact me directly at (518) 457-4343.

Sincerely,

That Shall

Robert W. Schick, P.E.

Section Chief, Remedial Section A Bureau of Western Remedial Action

Division of Hazardous Waste Remediation

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Attachment

cc: A. Carlson - NYSDOH
Sandra Lee Fenske, Esq. - Lockheed Martin
Henriette Hamel - NYSDOH
Michael J. Lesser, Esq. - NYSDEC
Daniel Palm, Director - NYSDEC
Virginia Robbins, Esq. - Bond, Schoeneck & King, LLP

Transmitted Via Telecopy

August 5, 1996

Robert W. Schick, P.E.
Section Chief, Remedial Section A
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Re: Soil Remediation Adjacent to Outfall 003; IRM Work Plan GE Farrell Road Plant; Town of Geddes, Onondaga County, New York NYSDEC Site #734055

Dear Mr. Schick:

This is in response to the New York State Department of Environmental Conservation's (NYSDEC) and New York State Department of Health's (NYSDOH) letter dated August 2, 1996 regarding the Farrell Road Plant Outfall 003 Interim Remedial Measure Work Plan (Work Plan) dated July 1996. In the August 2, 1996 letter the NYSDEC and NYSDOH provided comments based on a review of the Work Plan. Pursuant to the requirements of the Order on Consent (Index No. A7-0307-93-10), Lockheed Martin Corporation (LMC) has prepared this letter in response to the NYSDEC's/NYSDOH's comments. Each of the NYSDEC's comments is presented below followed by LMC's responses.

NYSDEC Comment 1

Section 2.3: Provision must be included for the review of the Contractor's Work Plan by the State prior to the initiation of fieldwork. This is required since the final health and safety plan and other aspects of the final project such as the access road design and location, staging area location and design, and silt fence have been left up to the contractor to propose in their Work Plan. The schedule in Section 2.11 should be modified to reflect this submittal and review.

LMC Response

The Contractor's work plan, including the Contractor's Health and Safety Plan (HASP), will be forwarded to the NYSDEC for review prior to initiation of the field work. The project schedule in Section 2.11 of the IRM Work Plan is modified as follows to reflect this submittal and review.

•	Submit IRM Work Plan	July 26, 1996
•	NYSDEC Review and Approval of	
	IRM Work Plan	August 9, 1996
•	Submit Contractor Work Plan to NYSDEC	August 19, 1996
•	NYSDEC Review and Approval of	Ç ,
	Contractor Work Plan	August 23, 1996
•	Mobilize to the site	August 26, 1996
•	Complete Field Activities	August 30, 1996
•	Characterize and Dispose of Waste	September 27, 1996
•	Submit IRM Certification Report	October 18, 1996

NYSDEC Comment 2

<u>Section 2.4:</u> The sediment control should be a silt fence and hay bales. The approximate limits of the silt fence should be shown on Figure 3 and the figure referenced in this section.

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LMC Response

Soil migration control will include silt fence and haybales. The approximate location of the soil migration controls is shown on the attached, revised Figure 3. As stated in the IRM Work Plan the soil removal area may be extended during the execution of the IRM to simplify the delineation of the perimeter of the remediation area. If the soil removal area is extended, the location of the soil controls will be adjusted in the field to encompass, at a minimum, the soil removal area.

NYSDEC Comment 3

Section 2.6: The polyethylene lined staging area should include a raised curb or other form of berm and a sump for the collection of any water generated. Provisions to cover the material or otherwise prevent dust generation as well as measures to control runoff or water entering the staging area during a rainfall event must also be included in the contractors Work plan and should be noted in this section.

LMC Response

The Contractor will be required to construct, as part of the staging area, a raised curb or other form of berm and a sump for the collection of any water generated. The Contractor will also be required to control dust generation from the stockpiled soils and control runoff from or water entering the staging area. The control of dust and the control of water to or from the staging area during rainfall events will be provided by covering the stockpiled soil with polyethylene sheeting or other impermeable cover. In addition, the stockpiled soils will be covered whenever the Contractor is not on-site conducting the IRM (e.g., nights and weekends). The Contractor's staging area construction and dust and water controls will be provided in the Contractor's Work Plan.

NYSDEC Comment 4

<u>Section 2.6:</u> The plan should specifically state that the access road will be restored with appropriate vegetation.

Robert W. Schick, P.E. August 5, 1996 Page 3 of 3

LMC Response

Any wetland area disturbed by the installation and removal of the temporary access road or construction mats will be restored in accordance with the requirements presented in Section 2.7 - Wetland Restoration, of the IRM Work Plan.

NYSDEC Comment 5

<u>Section 2.11:</u> The schedule must include the State review and approval of the Contractor's Work Plan.

LMC Response

A modified schedule is presented in LMC's response to NYSDEC Comment 1.

NYSDEC Comment 6

<u>Section 4 Health and Safety Requirements:</u> This section should include the required community health and safety aspect of the HASP, which in this case will be geared toward protection of Syroco, Inc. workers in the facility, during the implementation of the IRM.

LMC Response

The Contractor's HASP will be required to address protection of non-Contractor personnel which utilize the site (i.e., Syroco, Inc. workers). It is anticipated that this protection will include, at a minimum, limiting access to the IRM area and provisions for dust control. The Contractor's HASP will be submitted to the NYSDEC as part of the Contractor's Work Plan.

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At this time, LMC requests that these modifications be incorporated into the IRM Work Plan and that final NYSDEC approval of the Work Plan be issued. Based on the responses contained herein and NYSDECs conditional work plan approval (provided in NYSDECs August 2, 1996 letter), LMC will continue to proceed with the proposed IRM in accordance with the modified schedule. If you have any questions, please contact me at (315) 456-3199.

Sincerely,

Patrick D. Salvador, P.E. Principal Engineer

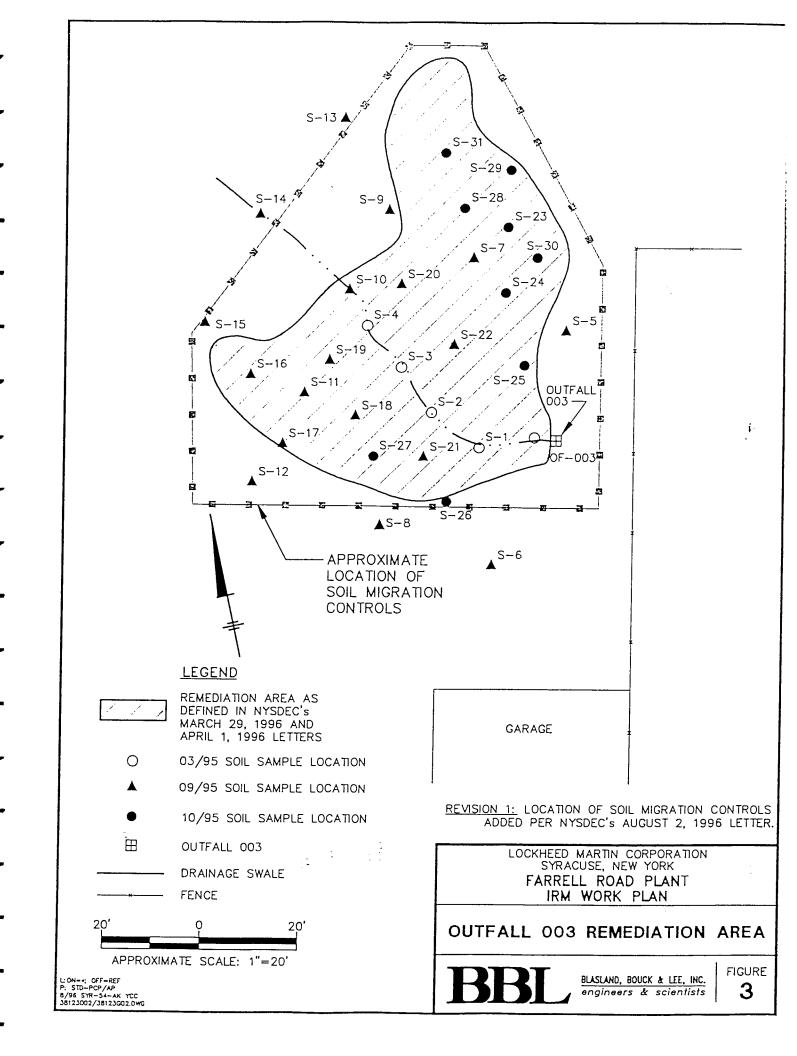
Patrick Salvador

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cc: Director, Bureau of Environmental Exposure Investigation - NYSDOH Sandra Lee Fenske, Esq. - Lockheed Martin Henriette Hamel - NYSDOH Michael J. Lesser, Esq. - NYSDEC

Daniel Palm - NYSDEC

Virginia C. Robbins, Esq. - Bond, Schoeneck & King, LLP



New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-7010



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August 6, 1996

Mr. Patrick D. Salvador, P.E. Principal Engineer
Lockheed Martin Corporation
Bldg. 5, Room H6
Electronic Park
Syracuse, New York 13221

Dear Mr. Salvador:

Re: GE Farrell Road Site, Geddes, Onondaga County, New York, Site No. 7-34-055

The New York State Department of Environmental Conservation (NYSDEC) has reviewed Lockheed Martin Corporation's (LMC) August 5, 1996 response to comments on the Farrell Road Plant Outfall 003 Interim Remedial Measure Work Plan dated July 1996. The LMC response adequately addresses the State's comments and this letter will be incorporated into the work plan. The work plan is hereby approved. The NYSDEC awaits the submittal of the contractors work plan in accordance with the approved schedule. A copy of this final work plan should be placed in the site document repository by LMC.

If you have any questions relative to this matter, please contact me directly at (518) 457-4343.

Sincerely,

Robert W. Schick, P.E.

Section Chief, Remedial Section A
Bureau of Western Remedial Action

Division of Hazardous Waste Remediation

cc: A. Carlson - NYSDOH

Sandra Lee Fenske, Esq. - Lockheed Martin

Henriette Hamel - NYSDOH

Virginia Robbins, Esq. - Bond, Schoeneck & King, LLP

LOCKHEED MARTIN OR & SS

AUG 1 2 1996

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Transmitted via Telecopy

August 8. 1996

Robert W. Schick, P.E.
Section Chief, Remedial Section A
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany. NY 12233-7010

 Re: Soil Remediation Adjacent to Outfall 003: IRM Work Plan GE Farrell Road Plant, Town of Geddes, Onondaga County, New York NYSDEC Site \$734055

Dear Mr. Schick:

In accordance with our telephone conversation on August 7, 1996. Lockheed Martin Corporation (LMC) will modify the scope of work for the Outfall 003 IRM Work Plan as follows:

"The corrugated metal outfall pipe will be cleaned by a high pressure. low volume water blaster. All water generated during this activity will be collected and containerized for characterization and off-site disposal."

LMC will continue to proceed with the IRM, based on the modified schedule provided in our August 5. 1996 letter. If you have any questions, please contact me at 315-456-3199.

Sincerely.

Patrick D. Salvador, P.E.

Patrick Salvador

Principal Engineer

cc: Director, Bureau of Environmental Exposure Investigation - NYSDOH Sandra Lee Fenske, Esq. - Lockheed Martin Henriette Hamel - NYSDOH Michael J. Lesser, Esq. - NYSDEC Daniel Palm - NYSDEC Virginia C. Robbins, Esq. - Bond, Schoeneck & King, LLP

By Overnight Courier

August 16, 1996

Robert W. Schick, P.E.
Section Chief, Remedial Section A
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Re: Soil Remediation Adjacent to Outfall 003
Contractor Work Plan and Health and Safety Plan
Farrell Road Site, Town of Geddes, Onondaga County, New York
NYSDEC Site #734055

Dear Mr. Schick:

Please find enclosed the Contractor's Work Plan and Health and Safety Plan for soil remediation activities adjacent to Outfall 003 at the Farrell Road site. The remedial activities will be conducted by Abscope Environmental, Inc., of Canastota, New York.

Upon receipt of New York State Department of Environmental Conservation (NYSDEC) approval of these Work Plans, Lockheed Martin will schedule the field activities. We anticipate commencing work on Monday, August 26, 1996 (weather permitting). Please contact me at 315-456-3199 if you have any questions or require additional information.

Sincerely,

Patrick D. Salvador, P.E.

Patrick Salvador

Principal Engineer

Enclosure

cc: Director, Bureau of Environmental Exposure Investigation - NYSDOH (with Enclosure)

Sandra Lee Fenske, Esq. - Lockheed Martin (without Enclosure)

Henriette Hamel - NYSDOH (with Enclosure)

Michael J. Lesser, Esq. - NYSDEC (with Enclosure)

Daniel Palm - NYSDEC (with Enclosure)

Virginia C. Robbins, Esq.- Bond, Schoeneck & King, LLP (without Enclosure)

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-7010



August 23, 1996

Michael Zagata Commissioner

LOCKHEED MARTIN OR & SS

AUG 27 1996

Environment Safety & Health

Lockheed Martin Corporation Bldg. 5, Room H6 Electronic Park Syracuse, New York 13221

Patrick D. Salvador, P.E. Principal Engineer

Dear Mr. Salvador:

Re:

GE Farrell Road Site, Geddes, Onondaga County, New York, Site No. 7-34-055

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) have reviewed Lockheed Martin Corporation's (LMC) August 16, 1996 submittal of the Farrell Road Plant Outfall 003 Interim Remedial Measure (IRM) Contractors Work and Health and Safety Plans dated August 1996. The Work Plan prepared by Abscope Environmental Inc. and the Health and Safety Plan prepared by O'Rourke Incorporated are A copy of these plans should be placed in the site document repository by LMC. hereby approved.

The NYSDEC anticipates the initiation of the IRM on August 26, 1996, as stated in the approved project schedule. Mr. John May and Ms Christine Rossi will be providing NYSDEC oversight of the IRM and both plan to be on site the morning of August 26 to meet with you and the LMC contractor representatives. They can both be reached at the NYSDEC Region 7 Office at 426-7551.

If you have any questions relative to this matter, please contact Ms Catherine Klatt at (518) 457-4343.

Sincerely.

Robert W. Schick, P.E.

Section Chief, Remedial Section A Bureau of Western Remedial Action Division of Hazardous Waste Remediation

cc: A. Carlson - NYSDOH

Sandra Lee Fenske, Esq. - Lockheed Martin

Henriette Hamel - NYSDOH

Virginia Robbins, Esq. - Bond, Schoeneck & King, LLP



By Telecopy (518)457-3972

October 4, 1996

Ms. Catherine A. Klatt
Project Engineer
Bureau of Western Remedial Action
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Addition of Erosion Control to Stormwater Outfall 003 GE Farrell Road Plant, Town of Geddes, Onondaga County, New York NYSDEC Site #734055

Dear Ms. Klatt:

This letter provides a description of an erosion concern that currently exists at Outfall 003 located at the Farrell Road plant and requests New York State Department of Environmental Conservation (NYSDEC) approval for additional site restoration measures to be conducted as part of the previously implemented Interim Remedial Measure (IRM). These additional measures are intended to minimize further erosion.

As part of the Outfall 003 IRM performed for the removal of affected sediments, soil was placed downstream of the Outfall 003 discharge pipe. Before the vegetative erosion control (grass seeding) could establish itself, significant stormwater runoff flows produced scouring which created a small basin approximately 9 feet wide in front of the discharge pipe. A twisting channel with small areas of "washout" and loose saturated soil has formed downstream.

To avoid further disruption of the placed soil and seeding, Lockheed Martin proposes to construct rip-rap outlet protection. This would consist of an apron, roughly triangular in shape, approximately 10 feet long and 10 feet across at its widest point. Some additional soil or crushed stone clean fill would be used to repair the scoured area back to a level approaching the general grade of the area. Filter fabric would be used as a liner for the rip-rap to prevent mud infiltration from below.

Rip-rap outlet protection, once in place, will reduce the velocity of discharged storm water from the outfall and thereby minimize further erosion. Upon NYSDEC approval, Lockheed Martin will proceed with this work. A description of the resulting activities will be included in the Outfall 003 IRM Certification Report. If you have any questions, please contact me at (315) 456-3199.

Sincerely,

Patrick D. Salvador, P.E. Principal Engineer

Patink D. Salvador

cc: Director, Bureau of Environmental Exposure Investigation - NYSDOH
Sandra Lee Fenske, Esq. - Lockheed Martin
Henriette Hamel - NYSDOH
Michael J. Lesser, Esq. - NYSDEC
Daniel Palm, Director - NYSDEC

Virginia C. Robbins, Esq. - Bond, Schoeneck & King, LLP

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 50 Wolf Road, Albany, New York 12233



October 17, 1996

Mr. Patrick D. Salvador, P.E. Principal Engineer Martin Marietta Corporation Bldg. 5, Room H6 Electronics Park Syracuse, New York 13221

LOCKHEED MARTIN OR & SS

OCT 17 1996

Environment Safety & Health

Dear Mr. Salvador:

Re: GE Farrell Road Site, Geddes, Onondaga County, New York, Site No. 7-34-055: Outfall 003

The New York State Department of Environmental Conservation (NYSDEC) has reviewed the additional site restoration measures to be conducted at Outfall 003 as part of the previously implemented IRM, as described in your letter of October 4, 1996. These include the placement of rip-rap at the outlet to minimize further erosion. These measures are approved.

If you have any questions, please contact me at 518/457-4343.

Sincerely,

Catherine A. Klatt Project Engineer

Bureau of Western Remedial Action Division of Environmental Remediation

Catherine H. Klast

cc: H. Hamel, DOH S. Lee Fenske, Esq. V. Robbins, Esq.

ATTACHMENT 2 CONTRACTOR WORK PLAN AND HEALTH AND SAFETY PLAN



P.O. Box 487 Canastota, N.Y. 13032 (315) 697-8437 FAX (315) 697-9391

WORK PLAN

FARRELL ROAD PLAN - OUTFALL 003

INTERIM REMEDIAL MEASURE

PREPARED BY:

Abscope Environmental, Inc.

August 1996



INDEX

WORK PLAN

LOCKHEED MARTIN CORPORATION

OUTFALL 0003 - INTERIM REMEDIAL MEASURE

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-	2.0	Mobilization
-	3.ወ	Clearing
_	4. Ø	Excavation
_	5. Ø	Out Fall Cleaning
-	6. Ø	Backfill
-	7.0	Restoration
-	8.0	Demobilization
-	9.0	Decontamination
-		Attachment A - Schedule

Attachment B - Figure 3

Attachment C - Decon Pad

ABSCOPE

1.0 INTRODUCTION

Abscope Environmental Inc. has prepared a work plan to address the methods to be used by AEI to complete the interim remedial measure (IRM) activities as described in the IRM work plan prepared by Blasland, Bouck and Lee, Inc July 1996 for PCB remediation at Lockheed Martin's Farrell Road plant. AEI'S work plan will address the soil removal and restoration activities associated with the remediation of outfall 003.

2.0 MOBILIZATION

Mobilization tasks associated with completing the IRM include, construction of staging areas, erection of erosion controls, access to the wetlands, control of run off water, soil removal and wetland restoration.

Upon mobilization to the site AEI will construct a soil staging containment area for staging of excavated soils from the work zone. The containment area will be approximately 30 x 30 and sufficient to handle the volume of soil generated from remediation of the area in figure 3 and collect run off water that may drain from the staged soils. Construction of the containment will consist of a 30 \times 30 earthen berm 1 foot high and approximately 1 foot wide with two layers of 6 mill poly lining the berm and asphalt pavement. location of the containment will be to the east of the work area on the asphalt parking lot, the exact location will be determined in the field. Construction of the containment will be such that water from the soil will drain and collect in a natural sump. collecting in the sump will be removed and pumped into containers provided by Lockheed Martin. At the completion of each day or during rain events, the stockpiled soil will be covered with 6 mill poly sheeting.

Access to the work area will be obtained by removing sections of fencing in the north west corner of the parking area adjacent to the work zone just south of outfall 003. A 10 foot wide 25 long area will be cleared of existing trees and a non-woven geosynthetic textile fabric (Terra Tex NO#4) will be placed between ground surface and crushed stone access road. Crushed stone will be placed on the geosynthetic filter layer and graded as necessary to allow for access to the work area.



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Care will be taken during construction of the access road to minimize destruction of the existing trees.

Erosion controls will be placed in the wetland area along the perimeter of work zone as shown on figure 3. Econofence SC90 silt fence with wooden posts and haybales will be installed along the 310 linear feet perimeter outlining the excavation area. The silt fence fabric is 24" high supported with 36" posts and is installed in 100' lengths.

To prevent surface water from entering the work area, two measures will be under taken. First, a diversion ditch will be constructed to divert water from the work area and secondly sand bags will be placed adjacent to the work area on the asphalt parking surface. Sand bags will be placed on the edge of the pavement on the northeast edge of the parking area adjacent to the work zone to prevent parking lot runoff water from entering the work area. Prior to beginning the remediation activities, the contaminated out fall area will be excavated removing the required amount of contaminated soil. Following along the natural drainage line the required soils will be excavated, first removing the contaminated layer. After removal of the contaminated soil layer, the drainage area will be further excavated 12" -18" deep to the outside of the work area. This drainage system will prevent any storm waters or runoff from entering the work area if the sand bag system fails.

3.0 CLEARING

Prior to beginning excavation of the work area, Abscope Environmental, Inc. personnel will remove necessary trees and foliage to allow for hand and machine excavation. Clearing will consist of removing trees of 1" diameter and less as necessary to allow for completion of the remedial activities. Measures will be taken to avoid removing trees that are larger than 1" diameter.

The small trees will be staged on 6 mill poly sheeting in an designated area on site. Trees will be assumed non-contaminated and handled as non-contaminated material. At the completion of the clearing operation or upon demobilization, the trees will be chipped with a brush chipper and spread on site as directed by the owner.



Page 3

4.0 EXCAVATION

The area delineated to be excavated and removed as shown in figure 3 will be accomplished by hand shoveling around tree roots and in between closely spaced trees and the use of a small excavator Kobelco SK100 or equivalent. Extreme caution will be taken to avoid removal of trees 1" diameter and greater. excavation will begin at the furthest perimeters of the north, south and west ends of the excavation area and the soil will be worked toward the center of the work area in front of the access road. A foot of cover will be removed from this area as specified in the IRM. Abscope Environmental, Inc. personnel will hand shovel around trees and root systems. Excavated soil will be removed from the work area and staged in the soil containment area. Water will be used as necessary to control dust in the work zone and soil staging area by misting water from a garden hose. The use of water will be minimized to prevent saturation of soils. It is anticipated that the soil will be moist and conditions will not require dust control methods.

5.0 OUTFALL CLEANING

Outfall 003 will be decontaminated and cleaned utilizing a high pressure steam cleaner and vac truck. The pipe will be pressure washed flushing the sediment and debris toward the end of the outfall pipe. Rinse waters and residues will be collected in a 3,200 gallon vacuum truck and transferred to containers provided by the owner.

6.0 BACKFILL

The disturbed wetland area will be backfilled with 8" of a 50/50 topsoil and sand mixture and 4" of topsoil except in the outfall area where 12" of sand/topsoil mixture and 6" of topsoil will be used. Soil will be brought to the work area utilizing the bucket of a small backhoe John Deere 310D or equivalent. Backfilling of the disturbed area will begin at the farthest outside perimeter of the work zone and placed inward to the access road. The soil will be placed and graded by hand with the assistance of a Bobcat as applicable. As during removal of the soil, care will be taken to avoid destruction of vegetation.



Page 4

7.0 RESTORATION

After backfill of the disturbed area, the vegetation destroyed will be replaced with the same species or equivalents that currently exist. Trees greater than 1" diameter will be replanted as necessary. The disturbed work area will be seeded with red top grass seed and mulched.

8.0 DEMOBILIZATION (SOIL REMOVAL)

As directed by the owner, Abscope Environmental, Inc. will return at a later date to remove the stockpiled soil from the containment area and demobilize from the site. Soil and containment structure including poly sheeting, and haybales will be loaded into permitted dump trucks provided by the owner. All erosion control materials will also be removed and disposed with the stockpiled soils. The access road and geotextile material outside the remediation area will be removed and disposed of as non-regulated materials.

9.0 DECONTAMINATION

Equipment will be decontaminated before leaving the work zone to prevent migration of contaminated materials outside of the remediation area. Decontamination will be accomplished by removal of gross contamination by physical agitation (scraping, brushing). If necessary high pressure washing with a pressure washer and detergent will be used to remove residual material. Residues and rinse waters will be collected and stored in containers provided by the owner.

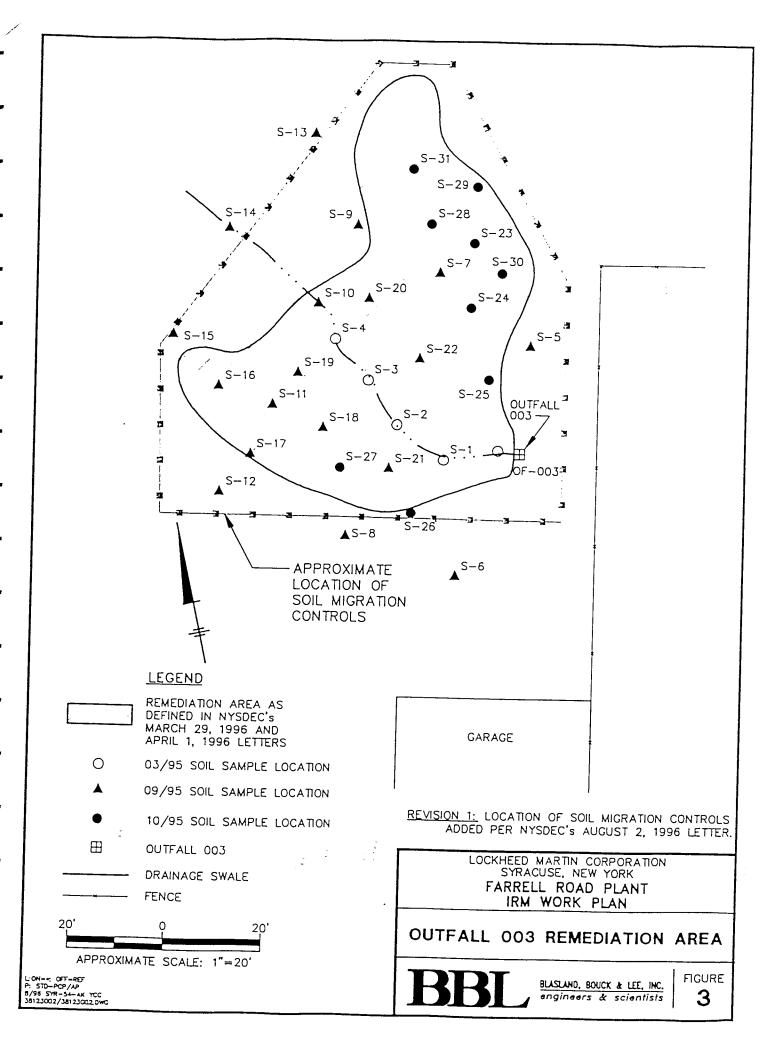
ABSCOPE

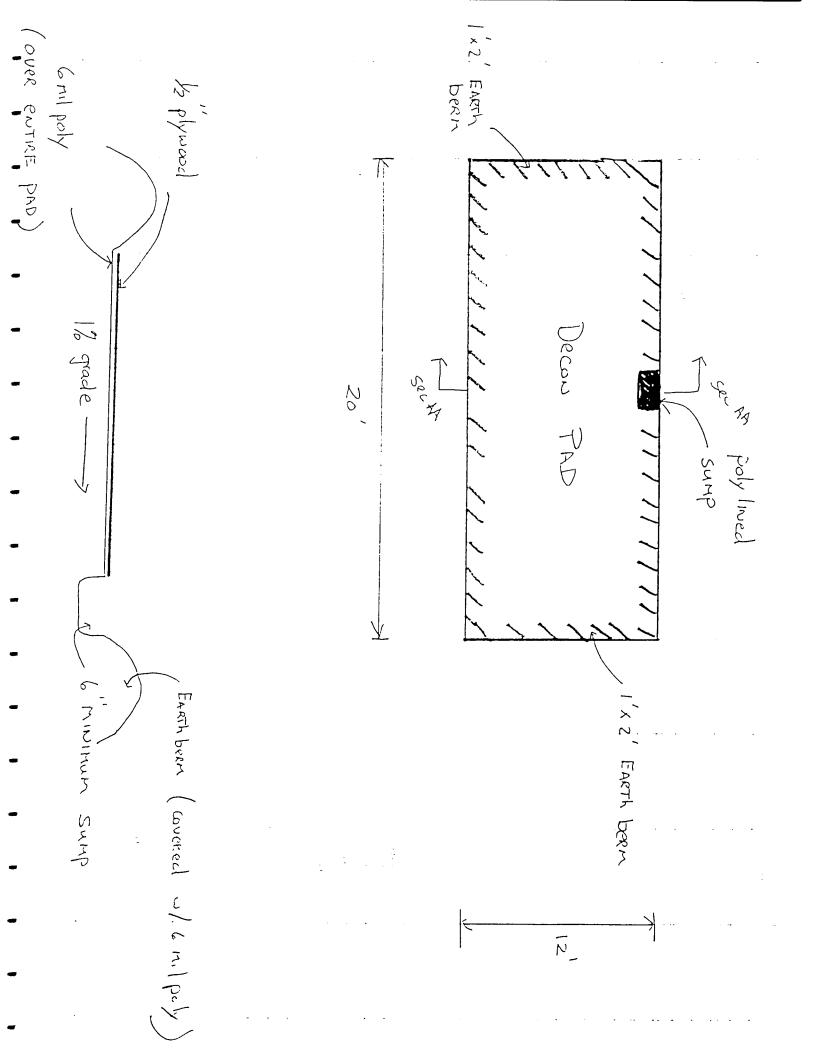
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ATTACHMENT A

PROPOSED SCHEDULE

-	Mobilization/ Erosion Controls	• • • • • •	1	day
-	Clearing/ Access Road	• • • • •	1	day
-	Staging Area/ Outfall Cleaning	••••	1	day
-	Excavation	•••••	2	days
-	Backfill	•••••	1	day
-	Restoration	• • • • • •	1	ɗay







P.O. Box 487 Canastota, N.Y. 13032

(315) 697-8437 FAX (315) 697-8436



SITE SAFETY AND HEALTH PLAN

Farrell Road Plant - Outfall 003 Interim Remedial Measure

Prepared for:

Abscope Environmental, Inc.

August 1996

O'Rourke Incorporated 374 Strong Road Tully, NY 13159 315-696-4619 <u>Certification:</u> This plan has been prepared in accordance with the Drawings and Specifications.

Timothy M. O'Rourke, CIH

Health and Safety Coordinator

Revision Summary

Revision Date	Description of Changes	Reason for Change
8/13/96	NA	NA
	(Original Health & Safety Plan)	

Preface

This document describes the anticipated protective measures necessary to ensure worker health and safety during the activities planed for this project. All employees associated with this project must read, understand and agree to follow the contents of this plan. If any activity or situation arises during the course of this project which is not covered in this plan, the employee or subcontractor responsible of that activity will inform the Abscope Environmental, Inc. Site Health And Safety Officer. An amendment covering the planed activity or situation will be added prior to completion of that activity.

The health and safety of any subcontractor's employees is solely the responsibility of that subcontractor.

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AIR MONITORING LOG PRE-ENTRY BREIFING / SAFETY COMPLIANCE ENTRY / EXIT LOG

1. Introduction

1.1 Purpose

The purpose of this Site-Specific Health and Safety Plan is to provide guidelines and establish procedures for the protection of Abscope Environmental, Inc. personnel, subcontractors and visitors while performing work related to the Interim Remedial Measure - Outfall 003, Farrell Road Plant project at Lockheed Martin Corporation (LMC). This Site-Specific Health and Safety Plan provides a description of the potential chemical and physical hazards that exist or may arise during the course of this project and the means for insuring the personnel do not incur injury or illness during the project.

Abscope Environmental, Inc. personnel and all subcontractors will comply with the applicable rules and regulations defined in the Site-Specific Health and Safety Plan. This Site-Specific Health and Safety Plan applies to all Abscope Environmental, Inc. Employees, subcontractors, visitors and the community.

Over the course of this project, it may be necessary to revise this plan in order to account for changing or unanticipated site conditions. Any revisions made the Site-Specific Health and Safety Plan must be made in writing.

1.2 Objective

The primary objective of this Site-Specific Health and Safety Plan is to ensure the well-being of all field personnel, visitors and the community surrounding the site. To assure compliance with the objective, all project staff shall acknowledge and adhere to the policies and procedures established in this Site-Specific Health and Safety Plan.

1.3 Site Description

The Lockheed Martin Corporation Farrell Road site is located Northeast 690 and south of the Seneca River. The site includes four buildings; Building Number 1 was formerly used as a design center; Building Number 2 was used as a manufacturing and assembly plant; the Test Building was used to test radar products; and the Garage was used to service and house facility-support vehicles.

Environmental investigations conducted at the site have determined that soil and ground water have been impacted by past industrial activities. As a result of these findings, the site was placed on the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites (Site No. 734055) as a Class 2 site. LMC entered into an Order on Consent with the NYSDEC on December 15, 1993 to perform a Remedial Investigation / Feasibility Study (RI/FS)at the site. During the RI/FS soils located within the wetland portion of the site adjacent to the storm sewer Outfall 003 were found to be impacted by PCBs.

Laboratory analysis has confirmed PCB concentrations up to 5.9 ppm. In addition to PCBs, several volatile organic compounds (VOCs) including, benzene, methyl-t-butyl ether and hexane have been identified at low levels.

2. Safety and Health Personnel

2.1 Health and Safety Coordinator

The Health and Safety Coordinator (HSC) shall be responsible for the development, implementation and enforcement of the Site-Specific Health and Safety Plan. The Health and Safety Coordinator is a Certified Industrial Hygienist with experience in waste site management, air monitoring techniques and development of respiratory protection programs.

The Health and Safety Coordinator for this project is Mr. Timothy M. O'Rourke, CIH.

- Specific responsibilities of the Health and Safety Coordinator include:
 - Prepare and approve the Site-Specific Health and Safety Plan,
 - Provide technical direction for decisions involving change in personal protective equipment - based on unforeseen issues and air monitoring results,
 - Be available to the Safety Officer to provide technical assistance, as necessary,

2.2 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO) shall be responsible for the implementation and enforcement of the Site-Specific Health and Safety Plan. The SSHO has the authority to stop work any time unsafe work conditions are determined. The SSHO will be responsible for onsite monitoring and record keeping. The SSHO shall keep a daily log of relevant health and safety information.

Specific responsibilities of the SSHO include:

- Evaluate weather and chemical hazard information on a daily basis and make any
 necessary recommendations about modifications to the work plan or level of personal
 protective equipment (PPE) required,
- Coordinate the upgrading or downgrading of PPE based on air monitoring results and weather conditions,
- Monitor the compliance of field personnel to the routine and proper use of PPE prescribed for each task,
- Inspect PPE to ensure that it is in good condition and that it is being stored and maintained properly,
- Stop work if site conditions threaten the health and/or safety of site workers or the public,

- Maintain an accurate entry and exit log of site personnel,
- Monitor any signs of fatigue, heat or cold stress or chemical exposures,
- Bring to the attention of the Project Manager, any actions of site personnel which may endanger themselves, co-workers or the public,
- Report any accidents and/or violations of the Site-Specific Health and Safety Plan to the Project Manager, and document the same,
- Know emergency procedures, evacuation routes and telephone numbers of ambulance, local hospital, poison control center, fire and police departments,
- Ensure all site personnel have received the required OSHA site specific training required by the Site-Specific Health and Safety Plan,
- Ensure all site workers have current medical surveillance records as required by the Site-Specific Health and Safety Plan,
- Perform all site air monitoring.

2.3 Project Supervisor

The Project Supervisor shall be the Abscope Environmental, Inc. Employee responsible for conducting the work and assuring the work is conducted according to the contract documents. The Project Supervisor shall be familiar with the management and day-to-day activities at the site.

2.4 Summary of Personnel

Table 2-1 - Site Personnel

Title	Name	Telephone
Project Manager	ROBERT GRAY	315-697-8437
Project Supervisor	JERRY POLISSE	315-697-8437
SSHO	JERRY POLISSE	315-697-8437
HSC	Timothy O'Rourke, CIH	315-696-4619

3. Training Requirements

3.1 General OSHA Training

Prior to performing on-site operations involving contact with hazardous materials (work in the exclusion or contaminate reduction zone), all workers and visitors shall receive 40 hours of health

and safety training for hazardous waste operations and a minimum of three days of actual field experience under the direct supervision of a trained, experienced supervisor. All site personnel shall receive 8 hours of refresher training annually. Certificates of successful training shall be submitted for all site personnel prior to initiation of work.

All training shall meet the requirements of 29 CFR 1910.120.

3.2 Site-Specific Training

3.2.1 Initial Training

An initial site-specific training session shall be conducted by the Safety Officer prior to commencement of work. All employees, subcontractors, visitors, regulators, owner representatives and Engineer representatives must receive this training prior to site entry. The SSHO shall be responsible for keeping a record of all training periods. During the site specific training, employees shall be instructed on the following topics:

- · Personnel Responsibilities,
- Content and implementation of the Site-Specific Health and Safety Plan,
- Site hazards and controls,
- Site-specific hazardous procedures (i.e. confined space, etc.),
- Medical and training requirements,
- Use of air monitoring equipment,
- Levels of protection,
- Action levels for upgrading PPE,
- Emergency information
- Instruction in the completion of required forms.

4. Medical Surveillance Requirements

A baseline physical examination must be conducted on all employees before they are allowed to engage in activities involving hazardous materials. A complete medical survey should be completed upon the start of employment or assignment to hazardous waste activities. Additional medical examinations will be considered in the event of a chemical overexposure or lost time accident.

Medical surveillance shall be administered by an occupational physician.

Content of the medical examinations shall be the responsibility of the physician, but must meet the requirements of 29 CFR 1910.120(f)(3). Employees shall submit a copy of the physicians written opinion about the employees' ability to perform hazardous waste site work and wear a respirator.

The content of the physical exam should include:

- Comprehensive medical and work history, with emphasis on hepatic function, skin conditions and reproductive history,
- Physical qualifications determination,
- Pulmonary function testing.

5. Site Work Zones

A three zone approach shall be used during site operations in order to contain the potential spread of contamination within the site. The zones include the exclusion zone, the contaminate reduction zone and the support zone. Work zones will be established and adjusted as necessary.

5.1 Exclusion Zone

The exclusion zone(s) is the area of known contamination. These areas should be clearly marked using orange construction fence. Only personnel involved in the work activities shall be allowed in the exclusion zone. Proper PPE shall be worn by personnel entering and working in the exclusion zone.

5.2 Contaminate Reduction Zone

The contaminate reduction zone (CRZ) is the "buffer zone" between the contaminated areas and the clean area. This zone serves as a point of decontamination for equipment and personnel, and material transfer from the clean zone to the exclusion zone. This zone may also provide first aid stations and rest areas (upwind of exclusion zone). The contaminate reduction zone will also be clearly marked with orange construction fence. PPE may be required in the CRZ.

5.3 Support Zone

The support zone includes all areas not defined by the as contaminate reduction or exclusion zones. Administrative services, bulk storage supply, job site shipping and receiving and personal vehicle parking will be located in this zone. The support zone should have negligible potential for exposure to contaminates on site. Normal work clothes may be worn in the support zone. Support facilities should be located upwind from the work zone.

5.4 Restricted Work Area Access Control

Restricted work areas (exclusion zones) will be established to control access and operations in areas where exposure to hazardous materials may occur. The exclusion zones shall be marked with physical barrier (construction fence). Access control points shall be established for each restricted area. Access control points are designed minimize personnel and equipment traffic and/or exposure to hazardous materials.

Access control points will be maintained to control all access to and egress from the restricted area. Personnel or equipment entering or leaving the site will do so through the access control point.

6. Hazard Evaluation

The following section identifies and evaluates the potential chemical and physical hazards which may be encountered on-site.

6.1 Chemical Hazards

Exposure to contaminates found at the Outfall 003, Farrell Road Plant project at Lockheed Martin Corporation may be expected primarily during excavation and soil handling activities. The following summary gives general toxicological information about the compounds found at the site.

Based on the anticipated site activities and prudent safety and hygiene practices, ingestion of site contaminates in unlikely. Hazardous skin contact or absorption through the skin is also unlikely because of the low concentrations that are anticipated onsite. The primary route of exposure is inhalation of dusts contaminated with PCBs and general nuisance dust.

6.1.1 Polychlorinated biphenyl (PCBs)

PCBs are semi-volatile compounds which do not readily evaporate. As a result of their low volatility, exposure to these compounds will result from airborne dusts contaminated with PCBs. Short-term (acute) effects of exposure to these compounds are the same as those associated with dust exposure in general and may include eye and upper respiratory irritation at high dust levels. High dust levels are characterized by emissions that typically obscure vision. The primary health effects associated with PCBs is cancer as a result of long-tern (chronic) exposure. PCBs are a suspected or potential human carcinogen. Specific compounds suspected within this job site are listed in Table 5.1-1 along with their OSHA Permissible Exposure Levels (PELs) and potential health effects.

6.1.2 Benzene, Methyl -t-Butyl Ether and Hexane

Benzene, methyl-t-butyl ether and hexane have been found in low concentrations at the site. Potential health effects of these compounds are also included in Table 5.1-1.

Health & Safety Plan

Table 6-1 - Summary of Potential Health Effects

Symptoms of Exposure & Health Effects	Eye irritation, chloroacne, liver damage, reproductive effects, carcinogen		Eye, nose and throat irritation at high concentrations	Eye, nose & Respiratory irritant, liver damage, bone marrow damage, CNS depressant	Headache, nausea, respiratory and skin irritation	Headache, nausea, muscle weakness, eye, nose & respiratory irritation
Routes of Exposure	Inhalation Absorption Ingestion		Inhalation	Inhalation	Inhalation	Inhalation
Characteristics	Colorless to light colored, viscous liquid with mild hydraulic odor.		Airborne particulate matter	Colorless to light yellow liquid with aromatic odor		Colorless liquid with gasoline type odor
PEL	Chlorodiphenyls (42% Chlorine) OSHA PEL - 1 mg/m³	Chlorodiphenyls (54% Chlorine) OSHA PEL - 0.5 mg/m³	15 mg/m³	l ppm	None	50 ppm
Chemical Location	Soils	:1-	Throughout 15 mg/m³	Soils	Soils	Soils
Chemical	PCBs		Dust	Benzene	Methyl Butyl Ether	Hexane

Notes: 1. All PELs are 8 hr Time weighted averages unless otherwise noted

6.1.3 Control of Chemical Exposures

Exposure to chemicals will be controlled by:

- 1. Monitoring air concentrations of dust and organic vapors in the breathing zone of site workers. Monitoring can reduce risks by indicating when action levels have been exceeded and when personal protective equipment is required,
- 2. Providing respiratory protection in areas known to have concentrations above the action level,
- 3. Providing protective clothing to eliminate skin exposure.

6.2 Physical Hazards

Many physical hazards may be found during site activities, including proximity to heavy equipment, slip/trip/ fall injuries, heat and cold stress, noise, confined space entry, material handling, and slope excavation failure.

6.2.1 Proximity to Heavy Equipment

Working around heavy equipment poses obvious physical hazards. Workers could easily be injured or killed if hit by heavy equipment. These hazards can be reduced by minimizing the number of workers and equipment in the same area, responding to backup alarms, maintaining a clear field of view for drivers and operating equipment at safe speeds.

6.2.2 Slip/Trip/Fall Injuries

As with any construction project, hazardous waste site work poses numerous slip, trip and fall hazards. These hazards can be reduced by avoiding work on slippery surfaces, wearing slip resistant footwear, working with a low center of gravity and making slow and deliberate movements. Personnel must be aware that the protective equipment worn may limit dexterity and visibility and may increase the difficulty of performing some tasks.

6.2.3 Heat and Cold Stress

Working in personal protective clothing can easily compound the problem of heat stress on a hazardous waste site. Heat stress may occur even in moderate temperatures and may include heat rash, heat cramps, heat exhaustion and heat stroke.

Cold stress symptoms may include fatigue, irritability, euphoria, drowsiness, uncontrolled shivering and frost bite.

6.2.4 Noise

Requirements set forth in the Hearing Conservation Regulations (29 CFR 1910.95) shall be adhered to during work on site. Hearing protection will be provided where sound pressure levels exceed 85 dB A scale. The SSHO shall identify areas of high noise that require hearing protection.

6.2.5 Confined Space

Work in confined spaces is not anticipated. Confined space entry procedures will be provided as necessary.

6.2.6 Material Handling

Proper material handling procedures shall be utilized during all material handling activities. The following general material handling rules will be followed:

- Use good back posture when lifting,
- Never walk under a suspended load,
- Always wear a hard hat and foot protection,
- Only use qualified equipment operators,
- Be aware of contaminated equipment,
- Never walk in front of moving equipment,
- Keep all loose clothing from moving and mechanical parts,
- Never add fuel to running equipment.

6.2.7 Slope Excavation Failure

OSHA requires that all employees working around excavations be protected from moving ground by a shoring system, sloping of the ground or other equivalent means. In addition, OSHA requires all trenches over 5 feet deep in either hard and compact or soft and unstable soil be sloped, shored, sheeted, braced or otherwise supported. Trenches less than 5 feet deep must also be effectively protected when hazardous ground movement may be expected.

The following requirements shall be adhered to while excavating and trenching:

- 1. Prior to all excavation, all underground utilities, if any, must be located and marked,
- 2. To reduce the risk of collapse, all trenches over 5 feet deep, and those less than 5 feet deep in unstable soil, shall be provided with adequate shoring or the trench should be sloped back to the angle of repose,
- 3. To reduce injuries from falling objects, all excavated soils and other loose material shall be kept 2 or more feet from the edge of the trench,

- 4. A stairway, ladder, ramp, or other safe means of egress must be located in trench excavations that are four feet or more in depth so as to require no more than 25 ft. of lateral travel for employees.
- 5. To prevent unauthorized traffic from entering the trenching or excavation areas, cones, flags or tape shall be used to mark the areas.
- 6. Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier;
- 7. Daily inspections of excavations, the adjacent areas, and protective systems must be made by a competent person for evidence of possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. The inspection must be conducted prior to start of work and as needed throughout the shift.
- 8. Inspections also must be made after every rainstorm or other hazard-increasing occurrence. If the competent person finds evidence of a hazardous condition after an inspection, employees must be removed from the hazardous areas until necessary precautions are taken for protection.
- 9. Employees must not work in excavations with accumulated water or in excavations in which water is accumulating, unless adequate precautions to protect employees have been taken. The precautions may vary with each situation, but may include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

6.2.8 Explosive Gases

The potential for explosive atmospheres exist when the following conditions occur:

- The levels of combustible gases accumulate to within the explosive limit range,
- The combustible gas is in the presence of oxygen,
- There is a source of heat or ignition.

Explosive atmospheres exist when the concentration of explosive gas is between the lower explosive limit, the minimum concentration of a gas or vapor that will combust or burn, and the upper explosive limit, the maximum concentration of a gas or vapor that will combust or burn.

Explosive atmospheres can be controlled as follows:

 Monitoring air concentrations for explosive gas with a combustible gas indicator (Oxygen/ LEL meter). Concentrations above 10% LEL are considered dangerous and work should be stopped,

- Using remote equipment and instrumentation to conduct tasks so that personnel are removed from the area of explosive gas,
- Using intrinsically safe equipment.

6.3 Summary Of Task Related Hazards

Table 5.3-1 provides a listing of potential hazards associated with various site activities. Table 5.3-2 lists detection and control methods for potential hazards listed in Table 5.3-1.

Table 6-2 - Hazard Identification and Control

Task / Operation	Hazard	Hazard Control
Mobilization /	1. Safety / Physical Hazards (such as)	I. Level D PPE
Demobilization	A. Noisc	A. Hearing protection, as necessary
	B. Use of heavy equipment	B.Use trained/experienced operators
	C. Overhead/buried cables	C. Stay 20 feet from buried overhead utilities
	D. Electrical	D. USE GFCIs
	E. Manual lifting	E. Follow proper lifting guides (section 5.2.6)
1.0	F. Heavcold stress	F. Review symptoms and controls for heat cold stress
	G. Exposure to poisonous plants, insects and snakes	G. Be able to identify
• •	H. Slips/trips/falls	H. Maintuin daily housekeeping
Site Preparation	1. Contact with uncontaminated soils, dust and water	1. Level D PPE
(non intrusive)	2. Safety / Physical Hazards (such as)	2. Level D PPE
Activities to include; soil	A. Noise	A. Hearing protection, as necessary
migration control, wetland	B. Use of heavy equipment	B.Use trained/experienced operators
restoration,	C. Overhead/buried cables	C. Stay 20 feet from buried overhead utilities
	D. Electrical	D. USE GFCIs
	E. Manual lifting	E. Follow proper lifting guides (section 5.2.6)
	F. Heat/cold stress	F. Review symptoms and controls for heat cold stress
	G. Exposure to poisonous plants, insects and snakes	G. Be able to identify
	H. Slips/trips/falls	H. Maintain daily housekeeping
Site Work	1. Contact, inhalation of contaminated soils	1. Level D Protection, Follow air monitoring
(intrusive)	2. Safety / Physical Hazards (such as)	procedures.
Activities to include; soil	A. Noise	Hearing protection, as necessary
excavation, handling, , waste	B. Use of heavy equipment	B.Use trained/experienced operators
characterization, staging and	C. Overhead/buried cables	C. Stay 20 feet from buried overhead utilities
disposal, equipment	D. Electrical	D. USE GFCIs
decontamination	E. Manual lifting	E. Follow proper lifting guides (section 5.2.6)
	F. Heat/cold stress	F. Review symptoms and controls for heat cold stress
	G. Exposure to poisonous plants, insects and snakes	G. Be able to identify
	H. Slips/trips/falls	H. Maintain daily housekeeping
	I. Use of hand tools	I. Inspect tools, understand their use & limitations

7. Personal Protective Equipment

The purpose of Personal Protective Equipment (PPE) is to shield or isolate individuals from the chemical and physical hazards that may be encountered during work activities. Full face respirators protect the lungs, gastrointestinal tract and eyes against airborne contaminates. Chemical resistant suits protect the skin from contact with skin destructive or absorbable materials.

7.1 Levels of Protection

Each activity conducted on-site may present different hazards and therefore require different levels of protection. The four basic levels of protection are A, B, C and D.

7.1.1 Level A

Level A is the maximum available protection for the respiratory tract, skin, eyes and includes the following personal protective apparel and equipment:

- Positive pressure, pressure demand SCBA
- Totally encapsulating chemical resistant suit
- Gloves inner and outer
- Boots chemical resistant, steel shank

Level A personal protective equipment usage is not anticipated to be required for the Farrell Road project and has been included in this plan for reference purposes.

7.1.2 Level B

Level B is for maximum respiratory protection but to a lesser degree of skin protection and includes the following apparel and equipment:

- Positive pressure, pressure demand SCBA
- Chemical resistant clothing
- Gloves outer and inner
- Boots chemical resistant, steel shank
- Hard hat

Level A personal protective equipment usage is not anticipated to be required for the Farrell Road project and has been included in this plan for reference purposes.

7.1.3 Level C

Level C will be used when toxic substances and/or concentrations are known and criteria for using air purifying respirators can be met. This level of protection includes:

- Full-face, air purifying respirator
- Chemical Resistant clothing
- Gloves outer and inner
- Boots chemical resistant, steel shank
- Hart hat

Level C protection will be required if air concentrations exceed action levels.

7.1.4 Level D

Level D is the minimal protection level when respiratory or skin protection is not required. Level D protection includes:

- Long pants and long sleeve shirt
- Hard-hat
- Eye protection
- Outer boots (optional)
- Gloves (optional)
- Level D protection will be the initial level of protection for the Farrell Road project.

Modified Level D may be required when directly handling contaminated soils. Modified Level D includes Level D equipment plus; Tyvek coveralls, outer boots and gloves.

7.2 Level of PPE Required for Lockheed Martin - Interim Remedial Measures

PPE has been selected with specific considerations to the hazards associated with the Lockheed Martin - Interim Remedial Measures. The initial level of protection and the PPE to be used for each work task Level D. Modified Level D will be worn when extensive contact with contaminated soils is reasonable expected. PPE will be upgraded should air concentrations measured at the work zone exceed action levels set forth in this Site-Specific Health and Safety Plan (see Section 7.0).

Table 6.2-1 gives a listing of the PPE requirements for both Level D and Modified Level D and the additional requirements should Level C upgrade be necessary.

Work Task	Initial Level of Protection	Protective Equipment	Level C Upgrade
Intrusive Work (when extensive contact with soils not anticipated, i.e. equip. operators, etc.)	Level D	 Hard hat Eye protection Hearing protection (as needed) Steel toed boots 	To Modified D or C
intrusive work - (when extensive contact with contaminated soils is anticipated)	Modified Level D	 Hard hat Eye protection Hearing protection (as needed) Steel toed boots Tyvek coveralls Chemical resistant gloves 	Air purifying cartridge with HEPA/Organic Vapor Cartridge.

Table 7-1 - PPE Requirements

7.3 Respiratory Protection Program

Respiratory Protection shall be provided to employees when working in atmospheres containing contaminates at concentrations above the action level. Any employee who may be required to wear a respirator shall do so in compliance with OSHA regulations, 29 CFR 1910.134, *Respiratory Protection*.

Overboots

8. Air Monitoring Plan

Inhalation hazards are caused by exposure to airborne concentrations of vapors and/or contaminated dust. In order to reduce the exposure to airborne hazards, the following Air Monitoring Plan shall be followed. The purpose of the Air Monitoring Plan is to determine the proper level of personal protective equipment, to document that the level of personal protective equipment is adequate and assess the migration of contaminates to off-site receptors as a result of site activities.

8.1 Air Monitoring Equipment

Air monitoring equipment to be used to perform air monitoring shall include a photoionization detector, dust monitor and any associated calibration equipment. All equipment will be calibrated and maintained according to manufacturer's instruction on a daily basis.

8.2 Work Area Monitoring

Real-time air monitoring for organic vapors and dust shall be conducted during all intrusive activities and activities where the potential exists to be exposed to a hazard. Work area monitoring will be performed during each new site activity involving contaminated soil, until conditions are determined safe by SSHO. Monitoring must be performed any time there is a change in site conditions or work activity. Work area monitoring shall be conducted in the breathing zone of the employee (within 3 feet).

8.3 Community Air Monitoring

Real-time air monitoring for PCBs at the perimeter of the work area will be performed when required based on site activities and work area monitoring. Perimeter monitoring will be conducted for dust when work area monitoring exceeds 100 ug/m³ sustained for one minute or when odors are detected at the fence line. If dust levels at the fence line exceed 100 ug/m³, dust suppression techniques will be initiated. If odors are detected at the fence line, VOC measurements will taken.

8.4 Action Levels

Action levels are airborne perimeter or work area concentrations of dust and organic vapor at which an upgrade in Personal Protective Equipment is required or where personnel must exit the area until other remedial or engineering controls are utilized to reduce the concentrations below the action level. When an action level is exceeded the control (upgrade of PPE or work stoppage) must continue until air monitoring results taken by the SSHO document concentrations are below the action level.

Table 7.3-1 summarizes organic vapor and dust action levels to be used.

Contaminant	Monitoring Location	Action Level	Control Action
Organic Vapor	Work Area	25ppm 50ppm	Upgrade to Level C Stop Work
Dust	Work Area Fence line	250 ug/m ³ 100 ug/m ³	Dust suppression

Table 8-1 - Action Levels

9. Decontamination

It is the responsibility of the SSHO to ensure all personnel and equipment leaving the site are properly decontaminated. Decontamination is essential to ensure contamination does not migrate off-site on employees and equipment. Proper decontamination also protects support zone and off-site personnel from exposure to hazardous materials.

9.1 Contamination Prevention

One of the most important aspects of decontamination is preventing unnecessary contamination while working on-site. Effective contamination prevention practices will eliminate unnecessary contamination and aid in the decontamination process. The following are general contamination prevention techniques and should be followed while working on-site:

- Avoid walking through areas of obvious or known contamination unless you are working directly in that area,
- Minimize contact with contaminated material,
- Minimize contact with unknown materials,
- Fasten all closures on suits, covering with tape if necessary,
- Take particular care to protect any skin injuries.

9.2 Personal Decontamination

A personal decontamination area will be established in the work zone. Decontamination procedures shall be followed by all personnel exiting the contaminate reduction zone. Under no circumstances, other than emergency response, will personnel be allowed to leave the site prior to decontamination.

All disposable PPE shall be removed before meal breaks and at the conclusion of the work day and replaced with new PPE prior to commencing work. In addition, respirator cartridges, if needed, will be changed at the beginning of each day, and at any other time breakthrough is detected. Contaminated clothing will be placed in designated containers in the contaminate reduction zone. Respiratory and other nondisposable PPE will be fully decontaminated and placed in a clean storage area.

The following details the decontamination procedure for Modified Level D PPE. Decontamination procedures for higher levels of protection will be provided if required:

- 1. Deposit equipment used on site on plastic drop cloths or in designated containers with plastic liners,
- 2. Scrub over boots and outer gloves with Decon solution (soap/detergent),
- 3. Rinse off Decon solution with clean water,
- 4. Remove over boots and outer gloves and deposit in containers with plastic liner,
- 5. Remove disposable coveralls and deposit in disposable container with plastic liner,
- 6. Remove glove and deposit in disposal container with plastic liner.

9.3 Equipment Decontamination

9.3.1 Small Equipment / Hand Tools

Small equipment and hand tools shall be protected as much as possible from contamination by draping, masking or otherwise covering as much as possible with plastic without hindering the operation of the equipment or tool. Contaminated hand tools and small equipment shall be decontaminated by:

- 1. Removing and disposed of protective coverings in approved containers,
- 2. Monitoring equipment will be wiped down with a disposable paper wipe,
- 3. Washing hand tools with Decon solution (soap/detergent) and rinsing with water.

9.3.2 Heavy Equipment

Heavy equipment will be decontaminated in the contaminate reduction zone prior to leaving the site. Decontamination will be performed on a decontamination pad capable of holding rinse water. The decontamination pad will be located in the adjacent to the work zone. All materials collected during decontamination (sediment /soil and fluids) will be placed with the contaminated soil and liquids collected during the removal. Materials collected during decontamination will be disposed of in the same manner as the contaminated materials removed from the site.

Contaminated heavy equipment shall be decontaminated by:

- 1. Cleaning all loose debris with a brush, broom or spade,
- 2. wash equipment with Decon solution (soap/detergent)
- 3. Rinsing equipment with water.

Upon completion of the project, the decontamination pad will be removed from the site.

9.4 Emergency Decontamination

Whenever possible, personnel should be decontaminated before administering first-aid. The decision to decontaminate must be weighed against the severity of the injured persons.

10. Accident Prevention Plan

A vital element of any Health and Safety Program is accident and exposure prevention. It is essential that the contents of the Health and Safety Plan are communicated to, and understood by, all who work at the Farrell Road project.. There are four elements to preventing accidents and over exposures;

- 1. Educate personnel as to the requirements of the Health and Safety Plan,
- 2. Eliminate unsafe conditions identify and correct conditions that can contribute to an accident and limit exposure to these conditions,

- 3. Reduce unsafe acts personnel must make a conscious effort to work safely. Management must enforce safety regulations,
- 4. Inspect frequently regular safety inspections of the work site, materials and equipment by qualified persons ensures early detection and correction of unsafe conditions.

The following guidelines describe those specific measures personnel shall take to minimize the occurrences of accidents on-site:

- Use the buddy system for all on-site work.
- Suspend of work and reevaluate the hazard and level of PPE required upon the discovery of any situation more hazardous than anticipated.
- Bring to the attention of the Safety Officer or SSHO immediately any potentially unsafe condition or work practice.
- Do not eat, drink, chew gum or tobacco, take medication or smoke in any work area.
- Do not wear contact lenses on-site.
- Conduct site activities only with sufficient lighting.
- Use toilcts provided on-site for personal needs.
- Do not bring drugs, alcohol or weapons on site.
- Do not fight or horseplay on-site.
- Personal visitors are not allowed on-site.
- Maintain personal property in a clean and safe manner, keep work area free of liter and obstruction.
- Wash hands and face before eating.
- Do not touch soil, water or sludge unless necessary and wearing appropriate PPE.
- Do not work in the area of odors without appropriate PPE.
- Post hazardous work and noise signs as necessary.
- Post procedure for decontamination and emergency response in the Decon trainer and office trailer, respectively.

11. Emergency Response

In the event of an accident or emergency situation, immediate action must be taken by the first person to recognize the emergency. The following emergency procedures will be used by on-site personnel. The SSHO shall be notified of any on-site emergency and be responsible for ensuring that the appropriate procedures are followed. In cases involving serious personal injury, fire or explosion, the SSHO shall notify the proper authorities (see Table 13-1 for emergency phone numbers).

If the cause of the injury, or absence of the injured person, does not effect the performance of site personnel, operations may continue. If the injury increases the risk to others the designated emergency signal, 3 long blasts on an air horn, shall be sounded and site personnel shall evacuate. Activities shall not resume until the risk is evaluated and removed.

•			
Emergency/Medical Resource	Phone Number		
Abscope Environmental, Inc.	315-698-8437		
O'Rourke Inc. (CIH)	315-696-4619		
Local Police	911		
Local Fire	911		
Ambulance	911		
Poison Control Center	1-800-336-6997		
Hospital - St. Joseph's	315-448-5111		
National Response Center	1-800-424-8802		
USEPA -8:30 -19:30 hrs EST	1-800-424-9346		
NYSDEC - Spill Response	1-800-457-7362		

Table 11-1- Emergency Phone Numbers

11.1 Contingency / Evacuation Plan

Although improbable, it is possible that site emergency could necessitate evacuating all personnel from the site. If such a situation develops, the Safety Officer shall give the evacuation signal, 3 long blasts of an air horn. Upon notification, all personnel shall evacuate the site in an orderly fashion and regroup at the site trailer. The route of evacuation will depend on the severity of the accident, wind direction (as visually determined) and proximity to the accident. Each employee shall find the safest route to the site trailer. All personnel shall wait at the site trailer for further instruction. No employee shall leave the site until the emergency is under control and approval to leave is given by the SSHO.

- In situations, when an on-site emergency results in evacuation of the site, personnel shall not reenter until:
 - 1. The condition resulting in the emergency has been corrected.
 - 2. The hazards have been reassessed.
 - 3. The Site-Specific Health and Safety Plan has been reviewed.

5. The Safety Officer has reviewed the situation that resulted in the evacuation.

11.2 Procedure for Injury

The following procedure shall be followed for site injuries:

- 1. Telephone for ambulance / medical assistance, if necessary. To the extent possible, notify the medical facility of the nature of the physical injury or chemical exposure. If employee goes to the hospital, send a copy of this Site-Specific Health and Safety Plan with him.
- 2. Evaluate the situation to determine if the hazard which injured the first employee still exists. If so, measured must be taken to eliminate the hazard prior to entering the area or administering first aid.
- 3. If the injury is minor, proceed to administer first aid.

11.3 Procedure for Chemical Exposure

If a member of the field crew demonstrates symptoms of chemical exposure, the following procedure shall be followed:

- Another team member (buddy) shall remove the individual from the immediate area of contamination. The buddy should notify the Safety Officer of the accident or emergency.
- 2. Precautions should be taken to avoid exposure to other individuals.
- 3. If the individuals clothing is contaminated, proceed with emergency decontamination procedures.
- 4. If the chemical has contacted the skin, the skin should be washed with copious amounts of soap and water.
- 5. In case of eye contact, the eyes should be washed with water for at least 15 minutes.
- 6. Telephone for ambulance / medical assistance, if necessary. To the extent possible, notify the medical facility of the nature of the physical injury or chemical exposure. If employee goes to the hospital, send a copy of this Site-Specific Health and Safety Plan with him.
- 7. Complete the accident investigation form.

11.4 Procedure for Fire or Explosion

In the case of fire or explosion the following procedure shall be followed:

- 1. Upon notification of fire or explosion, the Safety Officer shall evacuate the site, per the site evacuation plan (Section 12.1)
- 2. Notify Local fire department.
- 3. Work may not resume until:
 - The condition resulting in the emergency has been corrected.
 - The hazards have been reassessed.
 - The Site-Specific Health and Safety Plan has been reviewed.
 - Site personnel have been briefed on any changes to the Site-Specific Health and Safety Plan.

11.5 Procedure for Equipment failure

In the event of equipment failure, the Project Manager and the Safety Officer shall be notified and shall determine the effect of this failure on continuing operations at the site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the work zone until the situation is evaluated and appropriate actions are taken.

11.6 Route to Hospital

- The following are directions to St. Joseph's Hospital, located at 301 Prospect Ave, Syracuse, NY.
 - Exit site turn right on John Glenn Blvd.
 - Take 690 east to Exit 13 (81 South).
 - Take 81 South to Exit 18 (Harrison St.).
 - Take right on North Towsend St.
 - Travel approximately 3 blocks to Hospital

ATTACHMENTS

Air Monitoring Log Dust & PID Revised May 1996

Date:	Temperature	
PID Make	Serial #	
Dust Monitor	Serial #	

PID Calibration	Date	Ву	
Dust Calibration	Date	Ву	

Technician	
Work Activities	

Time (hrs)	Location	Dust (nig/m³)	PID (ppm)
			_
<u> </u>			
	<u> </u>	:	

Pre-entry Briefing / Safety Compliance

Revised May 1996

Each employee conducting field work shall sign this form after the pre-entry briefing is competed and prior to starting work on site.

Employee Sign Off

I have attended a pre-entry briefing outlining the specific health and safety provisions on this site. I have read and will comply with the provisions contained in this Site-Specific Health and Safety Plan.

Employee Name	Signature	Date

Project Name	
Project Location	
Date	

	Name	Company	Time In	Time Out	Reason
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20		1177311			

ATTACHMENT 3

PHOTOGRAPHIC LOG



PHOTOGRAPHIC LOG

PARSONS ENGINEERING SCIENCE, INC.

PROJECT:

FARRELL ROAD IRM

LOCATION: PROJECT #:

GEDDES, NY 730125.02000

CLIENT:

LOCKHEED MARTIN

Status as of: Description: AUGUST 26, 1996 Photo of the soil and

polyethylene sheeting used to construct

the soil containment area.

Photo By:

CRA



Status as of:

AUGUST 26, 1996

Description: Photo of the equipment decontamination area. Note the plywood which was placed so that vehicle wheels/

tracks would not tear plastic.

Photo By:

CRA



Status as of:

AUGUST 26, 1996

Description:

Photo of the road built

by the contractors for access to the work site. Note the fence at the top of the

ramp has been removed.

Photo By:

CRA



PARSONS ENGINEERING SCIENCE, INC.

PROJECT: FARRELL ROAD IRM GEDDES, NY

PROJECT #: 730125.02000

CLIENT: LOCKHEED MARTIN

Status as of:

Description:

Photo of the Outfall 003

pipe prior to steam cleaning. Note the
free-standing liquid in the depression in
front of the outfall pipe which was
pumped out and drummed.

Photo By: CRA



Status as of:

Description:

Photo of the site prior to the initiation of any excavation activities.

Note the yellow tape used to mark the limits of the excavation and the silt fence used for erosion control.

Photo By: CRA



Status as of:

Description:

Photo of the 3.5 foot
square area excavated at the base of
the Outfall 003 pipe. The soil in this area
was excavated to a depth of 18-inches.
Note the Outfall 003 pipe has been steam
clean and wrapped in plastic sheeting to
prevent contamination during excavation.
Photo By:

CRA



8 2 7 '3 8



PHOTOGRAPHIC LOG

PARSONS ENGINEERING SCIENCE, INC.

PROJECT: FARRELL ROAD IRM
GEDDES NY

LOCATION: GEDDES, NY 730125.02000

CLIENT: LOCKHEED MARTIN

Status as of: AUGUST 26, 1996

Description: View of the southeast corner of the work area. Excavation of the contaminated soil began in this area.

Photo By: CRA

Status as of:

Description:

Description:

AUGUST 27, 1996

Photo of the plywood and polyethylene sheeting used to construct the access road between the work area and the soil containment area.

Note the equipment decontamination area at right.

Photo By: CRA

Status as of:

Description:

Photo of the northern

tip of the work area. The picture was

taken standing outside the east boundary
of the work area, looking west. Note that
the soil in this area was removed to a
depth of 12-inches.

Photo By: CRA



PARSONS ENGINEERING SCIENCE, INC.

PROJECT:

FARRELL ROAD IRM GEDDES, NY

LOCATION: PROJECT #:

730125.02000

CLIENT: LOCKHEED MARTIN

Status as of:

AUGUST 28, 1996

Description: Photo of the continued excavation activities in the southwest

corner of the work area.

Photo By:

CRA



Status as of:

Description:

View of the center of the work area as seen from the access road/ramp. The view is looking west.

This area has been excavated to a depth

of 12-inches.

Photo By:

CRA



Status as of:

Description:

View of a crew member taking a field measurement to ensure that the proper amount of soil has been excavated from the work area. The black box representing the 12-inch mark is approximately even with the ground

in behind the tape measure.

Photo By:



PARSONS ENGINEERING SCIENCE, INC.

PROJECT: FARRELL ROAD IRM

LOCATION: GEDDES, NY 730125.02000

CLIENT: LOCKHEED MARTIN

Status as of: AUGUST 29, 1996

Description: Photo of AEI crew
member "painting" a scarred tree with
a protective material to prevent disease.

Photo By: CRA



Status as of:

Description:
Operations. Note that the tracked excavator was decontaminated prior to backfilling operations.

AUGUST 29, 1996
Photo of backfilling
operations.

Photo By: CRA



Status as of:

Description:

tip of the work zone, looking from the southwest corner of the work zone. Note that only the 8-inch 50/50 topsoil/sand fill layer has been placed at this time.

Photo By: CRA



PARSONS ENGINEERING SCIENCE, INC.

PROJECT:

FARRELL ROAD IRM GEDDES, NY

LOCATION: PROJECT #:

730125.02000

CLIENT:

LOCKHEED MARTIN

Status as of: Description:

AUGUST 30, 1996 View of the center and

northern tip of the work area after the placement of the 4-inch topsoil layer. Note that the silt fence has been removed but the hay bales which were behind the silt fence were used as mulch after the

area was seeded. Photo By:

CRA



Status as of: AUGUST 30, 1996 Description: The contractor seeded the work zone as shown and then placed loose hay over the area.

Photo By:

CRA



Status as of: AUGUST 30, 1996 Description:

Photo of the area after

backfilling, seeding and mulching.

Photo By:



PARSONS ENGINEERING SCIENCE, INC.

PROJECT: LOCATION: PROJECT #: FARRELL ROAD IRM

GEDDES, NY 730125.02000

CLIENT:

LOCKHEED MARTIN

Status as of:

AUGUST 30, 1996

Description:

Photo of one of the ten

trees replaced in the work area. The ten replacement trees were a combination of red and silver maples.

Photo By:

CRA



Status as of:

AUGUST 30, 1996

Description:

Photo of the soil

containment area at the end of the job. The pile inclued all excavated soil, a small quantity of vegetation removed during soil removal and the remnants of the equipment decontamination pad and the access road.

Photo By:

CRA



Status as of:

AUGUST 30, 1996

Description:

Alternate view of the

soil containment area.

Photo By:



PARSONS ENGINEERING SCIENCE, INC.

PROJECT:

FARRELL ROAD IRM GEDDES, NY

LOCATION: PROJECT #:

730125.02000 LOCKHEED MARTIN

Status as of:

CLIENT:

AUGUST 30, 1996

Description: Photo of the work area at the conclusion of the project. Note that the area has been swept clean by a street sweeper. Also note that the crew is repairing the fence in the background.

Photo By:

CRA



Status as of: OCTOBER 14, 1996
Description: Due to erosion of the originally backfilled material, AEI returned to the site on October 14 and 15 to backfill the eroded areas (see photo at left) and place erosion controls (filter fabric and 3 to 4.5 inch rip rap) to prevent future erosion due to precipitation.

Photo By:

CRA



Status as of: OCTOBER 14, 1996
Description: Alternate view of the area downgradient of the Outfall 003
discharge pipe. Note that the backfill material has been placed and that the accumulated water has been displaced.

Photo By:





PARSONS ENGINEERING SCIENCE, INC.

PROJECT: FARRELL ROAD IRM GEDDES, NY

PROJECT #: 730125.02000

CLIENT: LOCKHEED MARTIN

Status as of:

Description:

Photo of the area after
placement of the filter fabric. The fabric
was staked to prevent it from shifting
during placement of the rip rap.

Photo By: CRA



Status as of:

Description:

After it has been set in place and staked.

Note that the fabric was placed at least

6-inches under the pipe to prevent discharged water from flowing under the fabric and eroding the fill material.

Photo By: CRA



Status as of: OCTOBER 14, 1996
Description: Photo of an AEI crew
member spreading the first load of rip rap
on the filter fabric.

Photo By: CRA







PARSONS ENGINEERING SCIENCE, INC.

PROJECT: FARRELL ROAD IRM

LOCATION: GEDDES, NY 730125.02000

CLIENT: LOCKHEED MARTIN

Status as of:

Description:

Description:

Completion of the placement of the rip rap. Note that the rip rap was placed above the invert of the discharge pipe in an attempt to decrease the velocity of the water passing through the pipe during the next storm event.

Photo By: CRA

Status as of:

Description:

Photo of the berm that was placed behind the northwest corner of the fence surrounding the lot. This berm was necessary because recent storm events had eroded soil around the discharge pipe for the AOC 16 treatment system.

Photo By: CRA

Status as of: OCTOBER 14, 1996
Description: Alternate view of the berm placed behind the fence in the northwest corner of the parking lot.

Photo By: CRA

ATTACHMENT 4

WASTE DISPOSAL DOCUMENTS

LOCKHEED MARTIN CORP. FARRELL ROAD FACILITY SUMMARY OF SOIL DISPOSAL PROJECT OCTOBER 26, 1996

LOAD # 1 2 3 4 5	TRAILER # 1121 D-5398 D-4004 D-0521 0232	WT. TICKET # 000302844 000302860 000302933 000302934 000302936	WEI	GHT (TONS 27.31 29.19 28.69 22.34 27.77)
			TOTAL	135.30	TONS

STRAIGHT BILL OF LADING — SHORT FORM — ORIGINAL — NOT NEGOTIABLE ECEIVED, subject to the classifications and tariffs in effect on the date of issue of this Original Bill of Lading.

₹t g	FARRELL SYRACUSI	D MARTIN CORP. ROAD FACILITY E, NY 13221 IC., INC.	19 <u>96</u> BY	DESIGNATE WITH	знт 🗌 🤅		er's No. No. NYD002247377
€ onsigne	d toSI	NECA MEADOWS, INC.		·	(Ma	Ager	It'S NO
Destination	on17	786 SALOMAN ROAD, W	ATERLOO G	State of NEW YO	RK		County of SENECA
_oute		- A	·				
Delivering	Carrier_		v	ehicle or Car Initia	ERMIT	# 7A-	296 No. NY 7336LJ
Packages	НМ	KIND OF PACKAGE DESCRIPTION OF ARTICLES, SPECIA	L MARKS AND EXCEPTIONS	*Weight (Sub to Correction)	Class or Rate	Check	Subject to Section 7
					<u> </u>		conditions of applicab bill of lading, if this ship
1		NON-REGULATED MATERI	AL	EST.			ment is to be delivered to the consignee without
MP		Soil, Gravel, and po	ly	30			recourse on the consignor the consignor shall sign the
IRAILER				tons			following statement:
							The carrier shall not makedelivery of this shipmen
							without payment of freight and all other lawfu
		File # 1308					charges.
-		Approval # 96-146					
							-
-							
							Per(Signature-of Consignor)
		DATE: 9-26-96)				If charges are to be
		LOAD # /					prepaid, write or stamp here, "To be Prepaid."
							There, To be Trepaid.
-							-
		TRAILTR # 1121					
-							
			-				Received \$to apply in prepayment of
_							the charges on the prop-
							erty described hereon.
-							Agent or Cashier
_							Per
e fibre boxes used	for this shipment	conform to the specifications set forth in the box maker's certify	sate thereon, and all other requireme	nts of Rule 41, of the Consolid	lated Freight CL	assilica-	(The signature here acknowledges only the amount prepaid.)
t to certify the	hat the above na of the Departme	med articles are properly classified, described, peckaged, min of Transportation.	arkeo and labeled, and are in pro	per condition for transporta	lion, according	to the	Charges Advanced:
Where the rate	is depandent on	ins by a carrier by weter, the law requires that the bill of lading a part of Bill of Lading approved by the Department of Transport value, shippers are required to sizes appealically in writing the ag- erty is hereby specifically stated by the shipper to be not exceed.	ition.	stupper's weight."			\$
	PARECTLY DESCRI	BED This is to certify that the above named mater and great deed, peckaged, marked and lebeled and	unis are properly classified	1.1		=	Marchael Na
T WEIGHT IS		transportation according to the appricable regularity and Transportation "NOTE: Preprinted certificates of 420 (a) in effect on June 30, 1976, may be us.		Lie Light	<u> </u>	hipper	SURF COLUMN
-		Shipper, Per	Para B P No.				

000002344

Customer: 15LAI

LAIDLAW WASTE SYSTEM-SYRACUSE

4545 MORGAN PL

LIVERPOOL

NY 13090

Order No: 36-146

Cust Ref#:

96-146 LOCKHEED MARTIN SCS01 B/R-CONTAM SOIL

Truck Id: SMI525

Gross WE: Tare Wt:

38860.00 lbs 34240.00 lbs

Material: Haul Fee:

0.00 0.00 .

Net Wt:

54620.00 lbs

27.31 ths

Sales Tax:

0.00 0.00

Price/Tn:

0.00

Weigh Master: COOKSEY

Oriver:

Remarks:

Paid:

Check No:

Total Due:

Me property desirate	nd below in sposient guad orael	tariffs in affect on the date	of contents of packages unknown	Merral consumer and are	limed at indicated below which said	Server like would ca		STORE IN QUENCY (In a person of a second
	hallon and ablic back party at any is is a fail in a fail water shipment tation of this proment, and the b		rity. That every service to be perform sericalism or territor this to a motor and to by the shapper and according	ned hereunder shall be subject Childer shapmers. Shipper he I for himsert and his assigns	hother Carrier on the revie to said dest to all the terms and conditions of the U reby Carlines that he is familiar with a	netion. Hit mutuali reform Domestic Str I the serms and con	signs Bill of Later	of bill of lading, set form in me classification or tauth which dibit of lading set form in me classification or effect on dibit of lading, set form in me classification or tauth which
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onsigned to_	SENECA MEA	DOWS, INC.				(M	all or street a	L'S NO
Destination_	1786 SADOM	AN ROAD,	WATERLOO		State of NEW YO	ORK	(County of SENECA
elivering Car	rier			-	Vehicle or Car Initial	PERMIT#	7A-2	96 No 76952K A
No HI Packages HI	A KIND OF F	ACKAGE, DESCRIPTION OF AR	TICLES, SPECIAL MARKS A		• Weight (Sub	Class or	Check	
					To correction;	Rate	Culumn	conditions of applicable
1		REGULATED MA			EST.			bill of lading, if this ship ment is to be delivere to the consignee withou
<u>JMP</u>	Soil	, Gravel, an	d poly		23			recourse on the consignor the consignor shall sign the
ALLER				-	tons			following statement: The carrier shall not make delivery of this shipmen
-	File	# 1308	-,.				-	without payment of freigh and all other lawfu
		oval # 96-146					-	charges.
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-		***						Per
	DAME	: 9-260-	910		 			(Signature-of Consignor)
	DATE		ΙΨ					If charges are to be prepaid, write or stamp
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		TRAILER :	L D-539	9				
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			,					the charges on the prop-
			· · · · · · · · · · · · · · · · · · ·					erty described hereon.
	 			<u></u>				
	 							Agent or Cashier
		U		···				Per
fore boxes used for this	shicment conform to the se	secifications set forth in the box	maker's certificate thereon.	and all other requirem	ents of Rule 41, of the Consoli	dated Freight C	- 1	(The signature here acknowledges only the amount prepaid.)
is to certify that the	above named articles are Department of Transportati	properly classified, described	, peckaged, merked and I	aband and and incor	oper condition for transports	Iron, according	10 170	Charges Advanced:
#shipment moves betwe iper's imprint in lieu of si Where the rate is depe	en two ports by a carrier by emo, not a pert of Bill of La ndent on value, shippers ar	weter, the law requires that thi ding approved by the Departme a required to state specifically in	e bill of lading shall state of nt of Transportation.	nether it is cerrier's or	shipper's weight "	"•		SC. O. D. SHIPMENT
HIPMENT IS CORRECTL		"Ins is to certify that the abo	ove named majorials are none	ly classified	TE	=	<u>} </u>	C O U Ami
ECT WEIGHT IS	<u>,</u>	transportation according to the Transportation "NOTE Press.	and labeled and are in proper e applicable regulations of the D mad certificates reproduces	eperiment of	<u> </u>		Shipper	Cu-confr
		IS 430 (a) on effect on June 30,	vers, may be used through Ju-	30, 1979 Per	_		-	- man 1, har ye b

Customer: 15tAI

LAIDLAW WASTE SYSTEM-SYRACUSE

4545 MORGAN PL

LIVERPOOL NY 13090 Order Not 96-146

Cust Ref#: TR 05398 96-146 LOCKHEED MARTIN

BCS01 B/R-CONTAM SOIL

Truck Id: PAG142 Gross Wt: 91760.00 lbs Material: 0.00 0.00

33380.00 lbs Haul Fee: Tare Wt:

Sales Tax: 0.00 Net Wt: 58380.00 lbs

29.19 tns Total Due: 0.00

Price/In: 0.00

Paid: Weigh Master: \ COOKSEY Check No:

Remarks:

At Sarrier_	PARRELL YRACUSE PAGE EIV	MARTIN CORP. ROAD FACILITY , NY 13221 1996 C., INC.	BY	DESIGNATE WITH A	SI DHE	Agent	r's No. <u>NYD002247377</u> 's No
Consigne	d toSEN	ECA MEADOWS, INC.			(Mail c	or street ad	diess of consigneefor purposes of notification c
Destination	n1 /86	SALOMAN ROAD , WATER	LOO_Sta	te of <u>NEW</u>	YORK	C	ounty of SENECA
Route	 	A					
Delivering	Carrier		Vehi	cle or Car Initial_	PERMIT ;	# 7A-	-296 No. 76879K N
No Packages	нм	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTION	DAS	*Weight (Sub to Carrection)	Class or Rate	Check Culumn	Subject to Section 7 conditions of applicab
1		NON-REGULATED MATERIAL		EST.	-		bill of lading, if this ship ment is to be delivere
DUMP		Soil, Gravel, and poly		25	 		to the consignee without recourse on the consigno
RAILER		out, oraver, and por,		tons			the consignor shall sign the following statement:
				COLIS			The carrier shall not mak delivery of this shipmer
····		File # 1200					without payment of freight and all other lawfu
		File # 1308 Approval # 96-146			-		charges.
		Approval # 90-146					_
							_
		2 16 (86					Per
		DATE: 9-26-96					(Signature-of Consignar)
		LOAD # 3	_				If charges are to be prepaid, write or stamp
				····			here, "To be Prepaid."
		TRAILOR # D-4004					
							Received \$to
							apply in prepayment of
							the charges on the prop- erty described hereon.
		1					Agent or Cashier
							
							Per (The signature here
Ne fabre boxes us	ed for this shipment	conform to the specifications set forth in the box maken certificate thereon, and all oth	at teamtements	of Bule 41, of the Cook	dulated frames (Ta	11/100	acknowledges only the amount prepaid.)
			<u> </u>			}	Charges Advanced:
A COUNTY OF THE PARTY OF	is of the Departme	amed articles are properly classified, described, bechaped, marked and labeled, and ant of Transportation. Outside by a carrier by water, the law requires that the bill of lading shift state whether it is	_		tation, action hug	10 1~2	\$
TE-Where the ri	n lieu of stamp; not life is dependent on	a part of Bill of Lading approved by the Department of Transportation value, shippers are required to state specifically in writing the agreed or declared value of		Tan Lawrence	.)		C. O. D. SHIPMENY
	ORRECTLY DESCR	perty is hereby specifically stated by the shipper to be not exceeding. This is secontly that the above named materials are properly classified.				===	0.00 4m
RRECT WEIGHT I		oncor bed, pechaged, merked and lebeled and are in proper condition for It a neocration according to the applicable regulations of the Department of Transportation." NOTE Preprinted certificates compring with 48 CFR 173.			S	hipper	Total (Narges
		LBS 430 (s) in effect on June 30, 1976, may be used through June 30, 1979	7, 6,				
(M 10-51 -	e allice e se	Shipper, Per 1000h		MALILY		A	gent, Per
manent pos	t office addres	as or shipper	D ///U	un!			

INCUCTATION MOTION TO THE CHARACTORIS AND TARTIES IN CHIEFF OR HIS METE OF TABLE OF THIS OTHER OWN OF TABLETY.

Customer's 15LAI

LAIDLAW WASTE SYSTEM-SYRACUSE

4545 MORGAN PL

LIVERPOOL

NY 13090

Order No: 95-146 Cost Refa: TR 04004 / 96-146 LOCKHEED MARTIN

BCS01 BYR-CONTAM BOIL

Truck Id: PAG489 ... Gross Wt: , 91900,00 lbs Material: 0.00 Tare Wt: 34520.00 15s

Haul Fee: 0.00

Sales, Tax': 0.00 Nat Wt: 57380.00 lbs

28.69 ths Total Due: Price/In: 0.00

Weigh Master: COOKSEY Paid: \mathcal{U} Check No.:

Oriver:

0 Remarks:

0

RECEIVED, subject to the classifications and tariffs in effect on the date of issue of this Original Bill of Lading. this proports only field bridge in aborrent good order except as hered comments and condition of contents of seckages unknown matted. Development of contents of seckages unknown matted. Development of seckages unknown matted to the proportion of seckages of From LOCKHEED MARTIN CORP. FARRELL ROAD FACILITY SYRACUSE, NY 13221 19<u>96</u>BY Shipper's No. NYD002247377 TRUCK FREIGHT Carrier PAGE ETC., INC. Agent's No. insigned to SENECA MEADOWS, INC. (Mail or street address of consignee---for purposes of notification only) Destination___ 1786 SALOMAN ROAD, WATERLOO County of SENECA NEW YORK State of. Cute_ _livering Carrier Vehicle or Car Initial_PERMIT# 7A-296 No. R4587 HE KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS *Weight (Sub Packages Subject to Section 7 of conditions of applicable bill of lading, if this ship-1 NON-REGULATED MATERIAL ment is to be delivered EST. to the consignee without [MP recourse on the consignor, Soil, Gravel, and poly the consignor shall sign the 1KAILER following statement: tons The carrier shall not make delivery of this shipment without payment of freight File # 1308 and all other lawful charges. Approval # 96-146 (Signature-of Consignor) If charges are to be prepaid, write or stamp here, "To be Prepaid." LOAD Received \$___ TRAILER * D-0521 apply in prepayment of the charges on the property described hereon. Agent or Cashier (The signature here Tore bases used for this shipment conform to the specifications set forth in the box maker's certificate thereon, and all other requirements of Rule 41, of the Consolidated Freight Classifical acknowledges only the amount prepaid.) to certify that the abole named articles are properly classified, described, peckaged, marked and labeled, and are in proper condition for transportation, according to the le regulations of the Department of Transportation. Charges Advanced: poer's imprint in lieu of stamp, not a part of Bill of Lading approved by the Department of Transportation. C. O. D. SHIPMENT

E-Where the rate is depandent on value, shippers are required to state specifically in writing the agreed or declared value of the property anneed or declared value of the property is hereby specifically stated by the shipper to be not exceeding This is to carrily that the above named majorials are properly classified described, packaged, marked and labeted and are in proper condition for transportation according to the applicable regulations of the Desertment of IPMENT IS CORRECTLY DESCRIBED RECT WEIGHT IS_ Shipper

manent post office address of shipper

Shipper, Per

____ Agent, Per____

Ticket No: 000302934

Seneca Meadows, Inc. W/M#450042 1786 Salcman Road Waterloot-NY 13165

Out: 12:05:38

Customer: 15LAI

LAIDLAW WASTE SYSTEM-SYRACUSE

4545 MORGAN PL

LIVERPOOL

NY 13090

Order No: 96-146 Cust Ref#: TR D0521 96-146 LOCKHEED MARTIN

BCS01 B/R-CONTAM SOIL

Truck Id: PAG477

Gross Wt: 80940.00 lbs Tare Wt: .

36260.00 lbs.

Material: 0.00 . Haul Fee: . 0.00 Sales Tax:

Net Wt: 44660.00 lbs

22.34 Ung

Total Due:

0.00

0.00

Price/Th:

0.00

Weigh Muster: COOKSEY

Paid:

Check No:

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE PECEIVED, subject to the classifications and tariffs in effect on the date of issue of this Original Bill of Lading. The property unscribed below. If sourced good prior is scent as noted (contents and condition of contents of packages unknown), married (possible) of conditions of pink property under the content of parasite content of pink property of the content of pinks (post of the content of pinks (post of the content of pinks) of the content of pinks (post of the content of pinks) of the content of pinks (post of the content of pinks) of the content of pinks (post of the content of pinks) of the content of from LOCKHEED MARTIN CORP. FARRELL ROAD FACILITY SYRACUSE, NY 13221 DESIGNATE WITH AN IXI Shipper's No. NYD002247377 TRUCK A FREIGHT Carrier PAGE ETC., INC. Agent's No. onsigned to SENECA MEADOWS, INC. (Mail or street address of consignee--- For purposes of notification only) 1786 SALOMAN ROAD, Destination_ WATERIOO _State of __NEW_YORK ___County of SENECA oute_ Delivering Carrier 1574 Vehicle or Car Initial PERMIT # 7A-296 No. 76874K KIND OF PACKAGE, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS Packages * Weight (Sub to Correction) Subject to Section 7 of conditions of applicable bill of lading, if this ship-1 NON-REGULATED MATERIAL ment is to be delivered EST. to the consignee without _DUMP Soil, Gravel, and poly 30 recourse on the consignor, the consignor shall sign the RAILER following statement: TONS The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. File # 1308 Approval # 96-146 (Signature-of Consignor) If charges are to be prepaid, write or stamp here, "To be Prepaid." DATE: 9-26-96 LOAD # Received \$___ TRAILOR # 0232 apply in prepayment of the charges on the property described hereon. Agent or Cashier Per. (The signature here acknowledges only the amount prepaid.) is to certify that the above named articles are properly classified, described, peckaged, marked and labeled, and are in proper condition for transportation according to the Department of Transportation. Chargès Advanced: the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shyllstate whether hipper's imprint in lieu of stamp not a part of Bill of Lading approved by the Department of Transportation.

The Where the rate is depandent on value, shippers are required to state specifically in writing the agreed projections. S. C. D. SHIPMENT red or declared value of the property is hereby specifically stated by the shipper to be not exceeding. PMENT IS CORRECTLY DESCRIBED RAECT WEIGHT IS_ Shipper _ Agent, Per rmanent post office address of shipper

Ticket No: 000302936

Seneca Meadows, Inc. 1780 Saloman Road

Waterloo, NY 13165-

Date: 09926796048

Out: 12:31:04

Customer: 15LAI

LAIDLAW WASTE SYSTEM-SYRACUSE

4545 MORGAN PL

LIVERPOOL NY 13090 Order No: 96-146

Cust Ref#:

96-146 LOCKHEED MARTIN BCS01 B/R-CONTAM SOIL

Truck Id: PAG794

Weigh Master: COCKSTY

Gross Wt: Tare Wt: .

89360.00 lbs 33820.00 lbs

Material: Haul Fee:

0.00 0.00 0.00

Net Wt: 55540.00 lbs

27.77 ths

Total Due:

Sales Tax:

0.00

Price/In:

0.00

Paid:

Check No:

ATTACHMENT 5 ANALYTICAL RESULTS FROM EXCAVATED SOIL

AGRIE DITTE LE PRINCIPAL ANALYSIS

3845 ROUTE 1.1 SOUTH, CORTLAND, N.Y. 13045

P.O. BOX 5150 607-753-3403

Client:

LAIDLAW ENVIRONMENTAL SERVICES N.E.

4545 MORGAN PLACE LIVERPOOL NY 13090-

Site:

LOCKHEED - FARRELL SOIL

Laboratory Report Lab Log No: 9608452

Report Date: 09/18/96 Sampling Date: 08/29/96 Sampled By: R. AIELLO Date Received 08/29/96

Analyzed By RG

Analyzed: 09/17/96

ample ID: FARRELL	Analyzeu. 09/17/96				
Sample ID: FARRELL - WEST			S	-	
ANALYTE	CAS #	UNITS	DL		
Aroclor 1016	12074-11-2			RESULTS	
Arodor 1221		იმ/2	0.05	ND	
Arador 1232	11104-28-2	บรู/วู	0.05	ND	
· -	11141-15-5	ug/g	0.05		
Aroclor 1242	53469-21.9			ND	
Aroclor 1245		ug/g	0 05	ND	
Aroclor 1254	12672-29-6	nð\ð	0.05	0.679	
	11097-69-1	ug/g	0.05	ND	
Aroclor 1260	11096-82-5	ug/g		_	
		~9v B	0.05	0.741	

Note: Aroclors 1254 and 1280 quantitated as Aroclor 1260.

This laboratory analysis has been performed in accordance with generally accepted laboratory practices and requirements of the New York State Department of Health ELAP Program. Buck Environmental Laboratories, Inc. makes no recommendations, representations or warranties other than as specifically set forth in this report and shall not be responsible or liable for any action of the consequences of any action taken in connection with this report.

(ND => not detected above DL Indicated)
(NEG => not detected)

ROCFSAM.FRX

John H Buck, P.E. Laboratory Director ELAP ID:10795

3845 ROUTE 11 SOUTH, CORTLAND, N.Y. 13045

PO.BOX 5150 607.753.3403

HAZARDOUS WASTE VOLATILE HYDROCARBON GC/MS SCAN

Client: Laidlaw Environmental Services, Inc.

Site: Lockheed-Farnell Sci! PO #: £7050

Sample: farrel!-West

Lab Log No. Report Date: 9608452 09/15/95

Date Received: Date of Analysis:

08/29/95 09/02/95

Sampled By:

R.S. Alello

Method: Instrument tuning and column criteria conform with EPA 8240.

Calibration of Priority Pollutant compounds by EPA 8240. Other compounds identified by comparison of spectra with NBS Library, quantities estimated by peak comparison.

	77 40	a.1(1,1162 62
COMPOUND	סנ	Result
Acetone 3,6	1 10	DO ND
Benzene 4,5		סא 1 5
Bromodichloromethane 4	j	5 1 ND
Bromaform 4	i	5 AD
2-butanone (MEK) 4,6	í 10	•
n-Butyl alcohol 3	į to	
Carbon disulfide 4,6	1 10	,
Carbon tetrachioride 1,4		S I ND
Chlorobenzene 2,4		5 [ND
Chloroethane 4	:	O I ND
2.Chlorcethylvinyletner 4	11	
Chloroform 4		S I KD
[Cyclohexanone 3	1 100	1 "5
Dibromochloremethane 4		
1.2-Dichlorobenzene 4		
1,3-Dichlorobenzene 4	1 5	1
1,4-Dichlorobenzene 4	1 5	1
1,1-Dichloroothame 4	1 5	! ""
1,2-Dichloroothane 4	1 5	~
1,1-Dichloroethene 4	1 5	
trans-1,2-Dichtorcethene 4	1 5	1 10
1,2-0 chloropropane 4	, ,	NO .
cis-1,3-Dichloropropene 4	5	, KC
trans-1,3-Dichto-cpropene 6	5	1 12
Ethyl acetate 3	100	1 40
Ethyl benzene 3,4		100
Ethyl ether 3	1 100	ו מא
	100	I NO

COMPOUND	DL	Result
2-hexanone 5	50	QH I
Mathylene chloride 1,2,4	5	си І
4-Methyl-2-pentanone (MIBK) 3,6	50	
2-nitropropane 5	100	
Ortho-dich.probenzene Z	5	מא
Pyridine 5	100	מא ו
Styrene 6	5	ם או
1,1,2,2-Tetrach:ordethane 4	5	מא
Tetrachlorostnene 1,2,4	5	ם או
Toluene 4,5	5	ND ND
1,1,1-Trichtoroethane 1,2,4	5	1 ND
1,1,2.Trichtoroethane 2,4	5	ם או
Trichloroethere 1,2,4	5	1
Trichiorofluoronethane 2,4	5	I ND
1,1,2-trich.oro-1,2,2-trif.ucroethane 2]	-	לא }
Vinyl acetate 6	130) ND
o-Xylene 3,6	50	ND
m-Xylene 3,6	5	ND .
p-Xylene (coolutes with "m") 3,5	5	[HD
F Ny total (coefficient of the min) 3,5	5	ND
SCHUDGHOU SENTO	•	
ofs-1,2-dichloroethene	5 1	ND ND
vitrobenzene	100	מא

ND indicates that no amount greater than detection limit noted. All concentration reported are ug/kg. Numerals indicate compound class as follows: 1 = FOC1, 2 = =0C2, 3 = FOC3, 4 = Priority Poliutant List, 5 = FOC5 6 = Fazardous Substance List

I certify that the method used in this testing complies with generally agreeled labora

HOGZYK ELAP NO. 10795

John H. Buck, P.E. Laboratory Director LECE ENVIRONMENTAL AND VEIS

2045 ROUTE 1 1 SOUTH, CORTLAND, N.Y. 13045

P.O. BOX \$150 807-753-3403 Lab Log No: 9608452

Client:

LAIDLAW ENVIRONMENTAL SERVICES N.E.

4545 MORGAN PLACE LIVERPOOL NY 13090-

Report Date: 09/15/96 Sampling Date: 08/29/96

Sampled By. R. AIELLO Date Received: 08/29/96

Site:

LOCKHEED - FARRELL SOIL

Sample ID: FARRELL - WEST

ANALYTE	METHOD	ANALYZED	ВУ	UNITS	DL	LIMIT	REŞULTS
Arsenic, TCLP Extraction Barium, TCLP Extraction Cadmium, TCLP Extraction Chronium, TCLP Extraction Copper, TCLP Extraction Leac, TCLP Extraction Mercury, TCLP Extraction Nickel, TCLP Extraction Selenum, TCLP Extraction Silver, TCLP Extraction	200.7 (Hg245.1) 200.7 (Hg245.1) 200.7 (Hg245.1) 200.7 (Hg245.1) 200.7/5010 200.7 (Hg245.1) 200.7 (Hg245.1) 200.7/5010 200.7 (Hg245.1)	02/05/26 02/05/25 02/05/25 02/05/26 02/05/26 02/05/26 02/05/25 02/05/26	SRG SRG SRG SRG SRG SRG SRG SRG SRG	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	0.009 0.009 0.001 0.002 0.002 0.005 0.002 0.0008 0.011	5.00000 100.00000 1.00000 5.00000 5.00000 5.00000 0.20000 0.20000 5.00000	0 031 0 304 0 023 0 011 0 056 0 015 ND ND 0 0222
Thatform, TCLP Extraction Zine, TCLP Extraction	200 7 (Hq245.1) 200.7/6010 200.7/6010	09/05/96 09/05/96 09/05/98	SRG SP.G SRC	იტ√ ლჭ√ ო⊕∖Ր	C 003 C 004 C.004	5.00000 5.00000 5.00000	0.003 ND 0.231

This laboratory analysis has been performed in accordance with generally accepted laboratory practices and requirements of the New York State Department of Health ELAP Program. Suck Environmental Laboratories, Inc. makes no recommendations, representations or warranties other than as specifically set forth in this report and shall not be responsible or liable for any action or the consequences of any action teken in connection with this report.

(ND => not detected above DL indicated)

(DL => detection limit)

(mg/L => ppm in water)

(LIMIT => from EPA SW-846 Method 1311)

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John H. Buck, P.E. Laboratory Director

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ELAP ID: 10795

ACCRETILE ENVIRONMENTAL ANALYSIS

3845 ROUTE 11 SOUTH. CORTLAND, N.Y. 13015

P.O. SOX 51SO 607-753-9403

Client:

LAIDLAW ENVIRONMENTAL SERVICES N.E.

4545 MORGAN PLACE LIVERPOOL NY 13090-

Sita:

LOCKHEED - FARRELL SOIL

Laboratory Report Lab Log No: 9608452

Report Date: 09/18/95

Sampled By: R. AIELLO

Data Received 08/29/96 Analyzed By: RG

Analyzed: 09/17/96

Sample ID: FARRELL		7 1101/250. 03/17/30						
Sample ID: FARRELL	- EAST	PCB IN SOLIDS						
ANALYTE	CAS #	UNITS	DL					
Aroplor 1016	12577.44.6		UL.	RESULTS				
Arosor 1221	12674-11-2	78\8	0.05	ND				
	11104-28-2	ug/g	0.05	-				
Aroclar 1232	11141-16-5			ND				
Aroclar 1242		იმ/მ	0.05	ND				
	53469-21-9	ບ໘/໘ົ	0,05	ND				
Aroclor 1248	12872-29.6	p)g/g	0.05					
Aroclor 1254	11097-69-1			0.18				
Atoclor 1250	•	n3\ 3	0.05	ND				
7.00001 1230	11096-82-5	V3/a	0.05	0.304				

Note: Aroclors 1254 and 1260 quantitated as Aroclor 1260.

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(ND => not detected above DL indicated)

(NES ⇒ not detected)

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John H. Buck, P.E. Laboratory Director

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ELAP ID:10795

ALCHEUITED ENVIRONMENTAL

3843 ROUTE 11 SOUTH, CORTLAND, N.Y. 13045

P.O. BOX 5150 6C7-753-340G

HAZARDOUS WASTE VOLATILE HYDROCARBON GC/NS SCAN

Client: Laidlaw Environmental Services, Inc.

Site: Lockheed-Farrell Soil FO #: 87060

Sample: Farrell-East

lab Log Ha. Report Date: 9608452 09/16/95

Date Received: Date of Analysis:

(8/29/96

Sampled By:

09/02/95 R.S. Aiello

Method: Instrument tuning and column criteria conform with EPA 8240.

Calibration of Priority Pollutant compounds by EPA 824C. Other compounds identified by comparison of spectra with NBS Library, quantities estimated by peak comparison.

COMPOUND	PL	Kesult
Acetone 3,6	100	I ND
Eenzene 4,5	5	ND
Bromodichlaromethane 4	5	ND ND
Fromoform 4	5	ND ND
2-butanone (MEK) 4,6	100	ND ND
n-Butyl alcohol 3	100	סא
Carbon disulfide 4,6	100	l hD
Carbon tetrachionide 1,4	5	ND ND
Chlorobenzene 2,4	5	ND
Chloroethane 4	10	D D
2-Chloroethylvinylether 4	10	l NC
Chloroform 4	1 5	I ND
Cyclohexanone 3	1 100	ND
Dibromochloromethane 4	5	ם א
1,2-Dichlorebenzene 4	5	I NC
1,3-0:chlorobenzene 4	1 5	I NC
1,4-Dichlorobenzene 4	j 5	NO NO
1.1-Dichlorcethane 4	5	1 KD
1,2-Cichlorcethane 4	5	I ND
1,1-Dichloroethene 4	j 5	מא
trans-1,2-Dichloroethene 4	5	NO NO
1,2-Dichtoropropane 4	5	I ND
cis-1,3-Dichloropropene 4	5	ND I
trans-1,3-Dichloropropene 4	1 5	ND I
Ethyl acetate 3	100	אס ו
Ethyl benzene 3,4	5	ן כוי
Ethyl ether 3	100	Cr

COMPOUND	DL	Resul
2-hexanone 6	50	כא
Nethylene chloride 1,2,4	1 5	CN I
4-Methyl-2-pentamone (M.BK) 3,6	50	I ND
2-nitropropane 5	100	ND
Ortho-dichlorobenzere 2	5	l HD
Pyridine 5	100	I ND
Styrene 6	5	ND.
1,1,2,2-Tetrachloroethane 4	5	ND ND
Tetrachlorcethene 1,2,4	5	ND
Toluene 4,5	5	ND
1,1,1-Trichloroethane 1,2,4	5	I ND
1,1,2-Trichloroethane 2,4	5	ם או
Trichtoroethene 1,2,4	5	ם א
Trichtorofluoromethane 2,4	5	ND ND
1,1,2-trichloro-1,2,2-tr:fluoroethane 2	102	I ND
Vinyl acetate 6	50	KD KD
c-Xylene 3,6	5	ND ND
m-kylene 3,6	5 1	ND
p-Xylene (coelutes with "m") 3,6	5 1	ND
OTHER COMPOUNCS		
cis-1,2-dichloroethene	5 I	KD.
Mitrobenzane	100	ND ND

KD indicates that no amount greater than detection limit noted. All concentration reported are ug/kg. Numerals indicate compound class as follows: 1 = F001, 2 = F002, 3 = F003, 4 = Priority Pollutant List, 5 = F005 6 = Mazardous Substance List

I certify that the method used in this testing complies with generally accepted yaboratory procedures.

HOOZYM

ELAP NO. 10795

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ohn H. Buck, P.E. laboratory Director AT THE TALL ENVIRONMENTS. AND LASTS

3845 ROUTE 1.1 SOUTH, CORTLAND, N.Y. 13045

P.O. BOX 5150 607-753-3403 Laboratory Report Lab Log No: 9608452

Client:

LAIDLAW ENVIRONMENTAL SERVICES N.E.

4545 MORGAN PLACE LIVERPOOL NY 13090-

Site:

LOCKHEED - FARRELL SOIL

Report Date: 09/15/96 Sampling Date: 08/29/96

Sampled By: R. AIELLO

Date Received, 08/29/96

Sample ID: FARRELL - EAST

ANALYTE	METHOD	ANALYZED	BY	UNITS	DL	LIMIT	RESULTS
Arsenic, TCLP Extraction Bailum, TCLP Extraction	260.7 (Hg245 1)	C9/05/96	\$P.G	mg/L	0 009	5.00000	0.019
Cadmium, TCLP Extraction	200.7 (Hg245.1) 200.7 (Hg245.1)	09/05/96 05/05/96	SRG	ng/L	0.02	100.00000	0.339
Chroinium TOLP Extraction	200.7 (Hg245.1)	C2/05/98	SRG	m⊈/L mg/L	0 001 0.002	1.00000 5.00000	0.018 ND
Cooper, TCLP Extraction Lead, TCLP Extraction	200.7/5010 200.7 (Hg245 1)	CS/C5/96	SRG	mg/L	0.05	5.00000	0.075
Mercury, TCLP Extraction	200.7 (Hg245 1)	0%/05/96 0%/05/98	SRG SRG	mg/L	0.002	6.00000	0 025
Nickel, TCLP Extraction	200.7/8010	09:05/96	SRG	mg/L πg/L	0.0003 0.011	5.00000	ND ND
Scientum, TCLP Extraction Silver TCLP Extraction	200.7 (Hg245.1)	09/05/05	SRG	πς/L	0.003	1.00000	0 026
Trialitium, TCLP Extraction	200,7 (Hg245.1) 200,7/5010	09/05/95 09/05/95	SRG SRG	rrg/L	0,005	\$.00000	ND
Zing, TOLF Extraction	200.7/3010	09/05/96	SEG	mg/L mg/L	C 004 C 004	5.00000 5.00000	0 211 ND

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(ND => not detected above DL indicated)

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(mg/L => ppm in water)

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John H. Buck, P.E. Laboratory Director

ELAP ID. 10795