



PHASE IV REMEDY IMPLEMENTATION PLAN

**HOPPY'S LANDING (LONG ISLAND)
PORTION OF SHORELINE SEGMENT W2A-10
FAIRHAVEN, MASSACHUSETTS**

**BARGE B120 SPILL, BUZZARDS BAY, MASSACHUSETTS
RTN 4-17786**

Prepared For:

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November 29, 2006

GeoInsight Project 3871-002

File:3871-002/Phase IV RIP - Hoppy's



TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION.....	1
2.0 BACKGROUND.....	3
3.0 REMEDY IMPLEMENTATION PLAN	5
3.1 BACKGROUND	5
3.2 RESPONSE ACTION GOALS	5
3.3 DESCRIPTION OF THE SELECTED REMEDIAL ACTION ALTERNATIVE.....	6
3.4 RELEVANT DESIGN AND OPERATIONAL PARAMETERS.....	6
3.4.1 Waste Management	6
3.4.2 Identification of Site-Specific Characteristics Affecting Design	6
3.4.3 Environmental Impact Mitigation Measures	7
3.4.4 Remedial Action Monitoring.....	7
3.4.5 Remedial Action Schedule	7
3.4.6 Health and Safety Plan	8
3.4.7 Federal, State, and Local Permits and Approvals Required.....	8
4.0 PUBLIC INVOLVEMENT.....	9

FIGURES

- FIGURE 1 Site Locus
FIGURE 2 Residual Oiling – W2A-10

APPENDICES

- APPENDIX A Copy of BWSC108
APPENDIX B Health and Safety Plan
APPENDIX C Notice of Document Availability



PHASE IV REMEDY IMPLEMENTATION PLAN

HOPPY'S LANDING (LONG ISLAND) PORTION OF SHORELINE SEGMENT W2A-10 FAIRHAVEN, MASSACHUSETTS

BARGE B120 SPILL BUZZARDS BAY, MASSACHUSETTS RTN 4-17786

1.0 INTRODUCTION

GeoInsight, Inc. (GeoInsight) prepared this Phase IV Remedy Implementation Plan (RIP) on behalf of Bouchard Transportation Company, Inc. (Bouchard) as part of response actions conducted under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000, associated with a release of No. 6 fuel oil from Bouchard Barge B120 that occurred on April 27, 2003 in Buzzards Bay, Massachusetts (the "Site"). This Phase IV RIP was prepared under the direction of Richard J. Wozmak, P.E., P.H. of EnviroLogic, LLC, the Licensed Site Professional (LSP)-of-record for this release.

This Phase IV RIP is based upon the August 2006 Phase II Comprehensive Site Assessment (CSA) report and Phase III Remedial Action Plan (RAP). Assessment data collected during Phase II field activities were used to evaluate potential risks to human health, public welfare, safety, and the environment as part of a Method 3 Risk Characterization included in the Phase II CSA report. The Risk Characterization concluded that a condition of No Significant Risk to human health, public welfare, safety, and the environment was achieved at 61 of the 63 remaining shoreline segments and the subtidal zone. These 61 segments and the subtidal zone were included in the July 27, 2006 Partial Class A-2 Response Action Outcome (RAO) Statement. The Phase III RAP identified potential response actions to be undertaken at the portions of the remaining two shoreline segments (i.e., W1F-02-Brandt Island West and W2A-10-Long Island and Causeway South) where limited amounts of residual oil are present and a condition of No Significant Risk to public welfare and/or the environment could not be concluded at that time. The Phase II CSA and Phase III RAP reports were approved by the



Massachusetts Department of Environmental Protection (MADEP) in a letter dated October 19, 2006. This Phase IV RIP describes response actions to be conducted at a portion of the southern tip of Hoppy's Landing on Long Island, which is a portion of shoreline segment W2A-10 in Fairhaven, Massachusetts. Refer to Figure 1 for the location of Hoppy's Landing. Response actions for the portion of shoreline segment W1F-02 will be described in a separate report.

This Phase IV RIP was prepared in accordance with the MCP. A copy of Bureau of Waste Site (BWSC) Transmittal Form 108 is included in Appendix A.



2.0 BACKGROUND

On or about April 27, 2003, an unknown volume (estimated to range between 22,000 gallons and 98,000 gallons) of No. 6 fuel oil was released from Bouchard Barge B120 after entering the western approach of Buzzards Bay, Massachusetts. Oil from the release primarily floated on the water surface and was driven by waves, tides, and currents to strand in the intertidal zone. The heaviest oiling occurred on exposed, southwest facing shorelines, such as Barney's Joy or West Island.

The shoreline was initially divided into 149 shoreline segments. Of those 149 segments, 29 segments were found to be unoiled and not part of the Site. The Site was, therefore, considered to be the 120 shoreline segments that were oiled to varying degrees by the release. A Phase I Initial Site Investigation (ISI) and Conceptual Site Model (CSM) report, Tier Classification, and Conceptual Phase II Scope of Work (SOW) were filed for the Site on May 3, 2004. On May 21, 2004, a Partial Class A-2 Response Action Outcome (RAO) statement was filed for 57 out of the 120 shoreline segments. These 57 shoreline segments were those segments where the maximum degree of initial oiling was characterized as "light" or "very light," as well as three sandy beach segments where the maximum degree of initial oiling was characterized as "moderate."

A Tier IA Permit was issued by MADEP as part of a July 27, 2004 Decision to Grant Permit letter. A Phase II Comprehensive Site Assessment (CSA) SOW and Updated CSM were submitted to MADEP on August 24, 2005. MADEP approved portions of the proposed Phase II CSA SOW and requested additional information (primarily regarding the proposed ecological risk characterization) in a letter dated January 18, 2006. Additional information was provided to MADEP in a letter dated March 31, 2006, and MADEP issued final approval of the Phase II CSA SOW in a letter dated June 27, 2006.

A Phase II CSA was completed in August 2006 to characterize the remaining 63 shoreline segments and the subtidal zone in Buzzards Bay. The Phase II CSA included a Method 3 Risk Characterization (Method 3) that concluded that a condition of No Significant Risk to human



health, public welfare, safety, and the environment was present at 61 of the remaining 63 shoreline segments and the subtidal zone in Buzzards Bay. A Partial Class A-2 RAO was submitted for these 61 segments and the subtidal zone in August 2006. At the remaining two shoreline segments (segment W2A-10-Long Island and Causeway North and segment W1F-02-Brandt Island West), the Method 3 concluded that a condition of No Significant Risk exists for human health and safety. However, portions of these two segments have localized residual oil and a condition of No Significant Risk to public welfare and/or the environment could not be concluded at that time. The August 2006 Phase III RAP identified potential response actions to be conducted at the portions of these two shoreline segments where a condition of No Significant Risk could not be concluded.



3.0 REMEDY IMPLEMENTATION PLAN

3.1 BACKGROUND

Hoppy's Landing is primarily a sandy gravel, cobble, and boulder beach with fringing marshes. Residual oil at the southern tip of Hoppy's Landing is present primarily in two general locations (shown on Figure 2) and consists primarily of splatter, small areas of pavement, and limited tar mats that are weathered and hardened on the outer surface. The pavement patches and tar mats are generally 1 to 2 inches in diameter located on the surface of some of the fringing marshes. The small amount of residual splatter is present on rock surfaces and is typically less than one inch in diameter. Oil was also encountered beneath cobbles in some of the areas. Although the exposed surface of the residual oil is weathered and hard, the interior may be tacky below the weathered layer. Residual oil in sheltered locations (e.g., under rocks) can also be tacky to the touch when exposed and could produce a sheen during warm weather. Small sheens, generally less than six inches in diameter, can also be present on the water surface in tide pools adjacent to locations where pavement is present.

Note that the two locations where residual oil is present are small in area, measuring approximately 10 feet by 40 feet (400 square feet) at the northern location and approximately 10 feet by 20 feet (200 square feet) at the southern location. The total cleanup area of approximately 600 square feet is small in comparison to the total shoreline area at Hoppy's Landing, which is approximately 2.02 acres (approximately 87,990 square feet). The cleanup area therefore amounts to less than one percent of the total shoreline area at Hoppy's Landing.

3.2 RESPONSE ACTION GOALS

The objective of the proposed response actions at Hoppy's Landing is to remove residual oil to reach a condition of No Significant Risk to public welfare and the environment to achieve a Permanent Solution (if a condition of No Significant Risk is achieved) or Temporary Solution (if



a condition of No Significant Risk is not achieved but substantial hazards are not present), whichever is more feasible pursuant to 310 CMR 40.0852 (2) of the MCP.

3.3 DESCRIPTION OF THE SELECTED REMEDIAL ACTION ALTERNATIVE

The proposed remedial action alternative consists of excavating residual pavement in oil-impacted portions of the fringing marsh using hand tools (e.g., gardening trowels). Rocks with residual oil splatter will be either cleaned in-place using hand tools (e.g., wire brushes) or transported in a wheel barrow to a localized containment area to remove the splatter with a pressure washer. The containment area will be surrounded with oil absorbent boom to prevent liquid oil (if present) from migrating outside the containment area, and absorbent pads will be used to remove liquid oil. The cleaned rocks will be returned to the approximate original locations.

3.4 RELEVANT DESIGN AND OPERATIONAL PARAMETERS

3.4.1 Waste Management

Remediation waste will consist of residual oil pavement, oiled sediment, and oiled absorbent material. Recovered remediation waste will be temporarily stored on-site in polyethylene bags during cleanup operations. At the completion of response actions, the remediation waste will be transported off-site under a Bill of Lading for proper disposal. Less than one ton of remediation waste is expected to be generated during cleanup operations.

3.4.2 Identification of Site-Specific Characteristics Affecting Design

The residual oil is located in the upper intertidal zone, and the field work will be conducted during low tide to maximize the area of exposed intertidal shoreline. The proposed field work will be conducted during a cold-weather period (December 2006) when the dormant marsh grass



allows easier visual identification of residual oil, and the oil is harder in texture due to the cold weather. The cold weather will also facilitate removal of oiled sediment.

3.4.3 Environmental Impact Mitigation Measures

Field work will be conducted using hand tools to minimize disruption to areas of fringing marsh where oil is present. Work will also be conducted in December, when the *Spartina* grass is seasonally dormant, to reduce damage from the removal activities. The field work is not expected to cause noticeable damage to the marsh areas. Oiled rocks will be either cleaned in place, or temporarily moved to a containment area for cleaning. The containment area will limit potential environmental impacts from the rock cleaning operations.

3.4.4 Remedial Action Monitoring

The LSP and field personnel from GeoInsight will be present to oversee and supervise the Phase IV field activities. Visual monitoring of the cleanup areas will be used to evaluate the removal effectiveness during the cleanup operations. A post-cleanup inspection will also be conducted approximately one week after the Phase IV field activities are completed.

3.4.5 Remedial Action Schedule

It is anticipated that the proposed field activities will require between three and five days to achieve the target remedial goals. Field activities are scheduled to be conducted between Monday, December 4, 2006 and Friday, December 8, 2006. On each day, field activities will begin approximately three hours before low tide and will continue to approximately three hours after low tide, weather and daylight permitting.



3.4.6 Health and Safety Plan

A Health and Safety Plan (HASP) is attached as Appendix B, and this HASP will be used during the implementation of the Phase IV RIP.

3.4.7 Federal, State, and Local Permits and Approvals Required

Because of the small scale of the remedial project, the use of hand tools and power washers, and the minimal disruption to the shoreline, federal, state, and local permits are not expected to be required. On October 30, 2006, representatives from GeoInsight and EnviroLogic met with the Fairhaven Conservation Commission to provide information regarding the proposed cleanup activities and anticipated schedule. The Conservation Commission did not impose restrictions or conditions on the proposed cleanup activities. Hoppy's Landing is owned by the Town of Fairhaven, and access will be obtained from the Town of Fairhaven prior to conducting the cleanup activities.

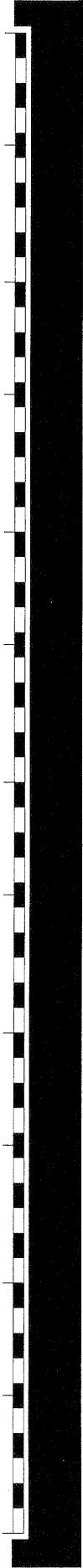


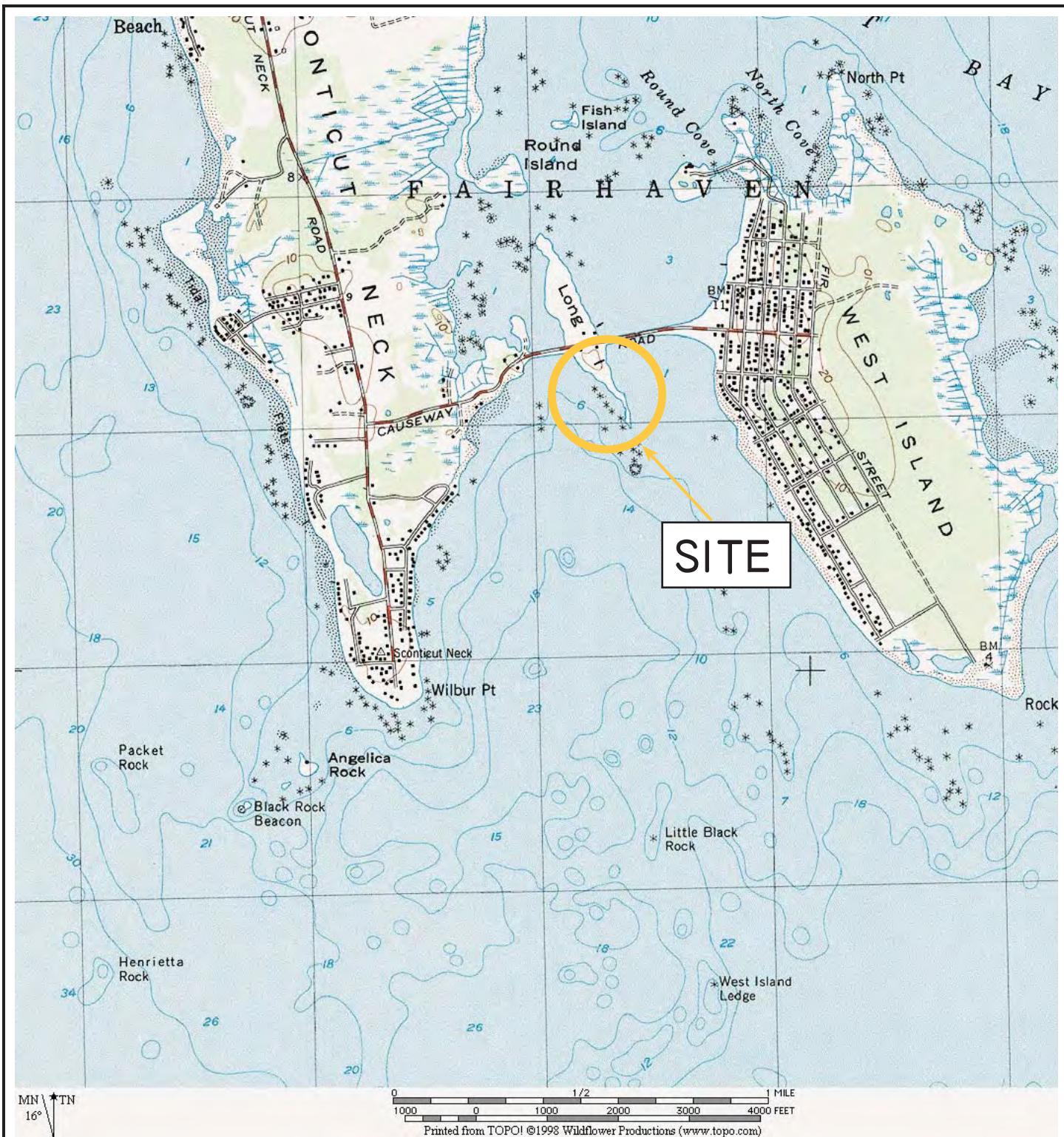
4.0 PUBLIC INVOLVEMENT

To fulfill the requirements of 310 CMR 40.1403 (3)(f) of the MCP, notice will be provided to the Chief Municipal Officer and the Board of Health concurrently with the submittal of this report to the MADEP. Copies of the notification letters are provided as Appendix C.



FIGURES





MN \ TN
16°

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SOURCE:

USGS SCONTICUT NECK QUADRANGLE (1978)



PROJECT:
B120 OIL SPILL
BUZZARDS BAY, MASSACHUSETTS

LOCATION:
LONG ISLAND (HOPPY'S LANDING)
FAIRHAVEN, MASSACHUSETTS

TITLE:

SITE LOCUS

DESIGNED:	DRAWN:	CHECKED:	APPROVED:
KDT	KDT	KDT	MJW

SCALE:	DATE:	FILE NO.:	PROJECT NO.:
AS SHOWN	10/18/06	387I-LOCUS	387I-002


GeoInsight®
Environmental Strategy & Engineering
Practical in Nature

FIGURE NO.:



SOURCE:

MASSACHUSETTS GEOGRAPHIC
INFORMATION SYSTEMS (MASSGIS)

2001 AERIAL PHOTOGRAPH

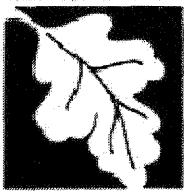


PROJECT: B120 OIL SPILL BUZZARDS BAY, MASSACHUSETTS			
LOCATION: LONG ISLAND (HOPPY'S LANDING) FAIRHAVEN, MASSACHUSETTS			
TITLE: RESIDUAL OILING - W2A-I0			
DESIGNED: KDT	DRAWN: KDT	CHECKED: KDT	APPROVED: MJW
SCALE: AS SHOWN	DATE: 10/18/06	FILE NO.: 387I-OILING	PROJECT NO.: 387I-002



APPENDIX A

Copy of BWSC108



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number

4 - 17786

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

Barge B120 Spill

1. Site Name: _____
2. Street Address: _____ N/A
3. City/Town: Buzzards Bay _____ 4. ZIP Code: N/A
5. UTM Coordinates: a. UTM N: _____ b. UTM E: _____
6. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
 a. Tier IA b. Tier IB c. Tier IC d. Tier II
W050019
7. If applicable, provide the Permit Number: _____

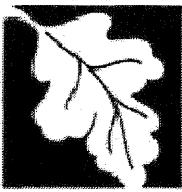
B. THIS FORM IS BEING USED TO: (check all that apply)

1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

- a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.
- b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number

4

- 17786

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

- 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
- 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
- 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
 - a. Type of Report: (check one) i. Initial Report ii. Interim Report iii. Final Report
 - b. Frequency of Submittal: (check all that apply)
 - i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
 - ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
 - iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.
 - c. Status of Site: (check one) i. Phase V ii. Remedy Operation Status iii. Class C RAO
 - d. Number of Remedial Systems and/or Monitoring Programs: _____

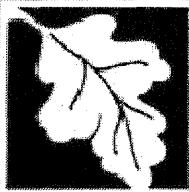
A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

- 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
- 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
- 19. Submit a **Modification of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(5).
- 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).
- 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

- a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.
 - b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
 - c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
 - 23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

(All sections of this transmittal form must be filled out unless otherwise noted above)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number

4 - 17786

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: a. change in contact name b. change of address c. change in the person undertaking response actions

2. Name of Organization: Bouchard Transportation Co., Inc.

3. Contact First Name: W. Lawrence

4. Last Name: Lopez

5. Street: 58 South Service Road, Suite 150

6. Title: Risk Manager

7. City/Town: Melville

8. State: NY

9. ZIP Code: 11747

10. Telephone: (516) 681-4900

11. Ext.: _____

12. FAX: _____

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. RP or PRP a. Owner b. Operator c. Generator d. Transporter

e. Other RP or PRP Specify: _____

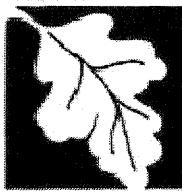
2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

4. Any Other Person Undertaking Response Actions Specify Relationship: _____

F. REQUIRED ATTACHMENT AND SUBMITTALS:

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.
3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.
4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.
5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.
6. If submitting a Modification of a Remedy Operation Status, check here to certify that a statement detailing the compliance history, as per 310 CMR 40.0893(5), for the person making this submittal is attached.
7. If submitting a Modification of a Remedy Operation Status, check here to certify that written consent of the person who submitted the Remedy Operation Status submittal, as per 310 CMR 40.0893(5), is attached.
8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to the DEP Regional Office.
9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

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**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that a **Phase II Scope of Work or a Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report, a Remedy Operation Status, a Phase IV, Phase V or Post-Class C RAO Status Report, a Status Report to Maintain a Remedy Operation Status and/or a Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5463

2. First Name: Richard

3. Last Name: Wozmak

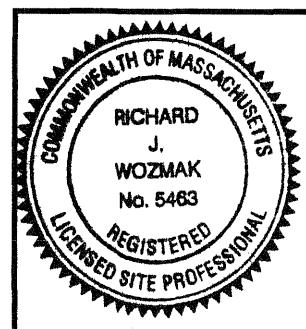
4. Telephone: (603) 421-2777

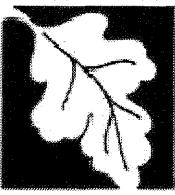
5. Ext: _____ 6. FAX: (603) 421-9880

7. Signature: RJ Wozmak

8. Date: 11/22/2006
(mm/dd/yyyy)

9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

Release Tracking Number

4 - 17786

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, Richard Wozmak,

attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: R.Wozmak

Signature

3. Title: Licensed Site Professional

4. For: Agent for Bouchard Transportation Co., Inc.

(Name of person or entity recorded in Section D)

5. Date: 11/22/2006
(mm/dd/yyyy)

6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY):

Supplement to BWSC108, Section F
Barge B120 Release
Buzzards Bay, Massachusetts
4-17786

Section F – Required Attachments and Submittals

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

Massachusetts Department of Environmental Protection Orders, Permits, and/or Approvals:

- September 8, 2003 Request for IRA with Interim Deadlines;
- July 27, 2004 Decision to Grant Permit;
- January 18, 2006 Phase II Scope of Work Conditional Approval/Interim Deadline;
- June 27, 2006 Phase II SOW Addendum Approval; and
- October 19, 2006 Phase II - Comprehensive Site Assessment Report and Phase III - Remedial Action Plan Approval.

Bouchard Transportation Co., Inc.

ATLANTIC COAST • LONG ISLAND SOUND
GREAT LAKES • GULF COAST

58 South Service Road, Suite 150
Melville, New York 11747
Tel.: (631) 390-4900
Fax: (631) 390-4905

January 29, 2004

Richard J. Wozmak
GeoInsight, Inc.
319 Littleton Road, Suite 105
Westford, MA 01886

RE: B120 Oil Release
RTN 4-17786
Buzzards Bay, Massachusetts

Dear Mr. Wozmak:

In accordance with 310 CMR 40.0009 (2), this letter is to serve as written authorization for you to act as an agent for Bouchard Transportation Company, Inc. for the purposes of making written declarations required under 301 CMR 40.0000. This authorization applies to written declarations for the release of oil from Bouchard Barge B120 on April 27, 2003 (release tracking number 4-17786).

Sincerely,



Victor P. Corso, Esq.
Risk Manager



APPENDIX B

Health and Safety Plan

SITE-SPECIFIC HEALTH & SAFETY PLAN

for

Project Name:
Bouchard B120 Oil Spill
Buzzards Bay, Massachusetts

Project Location:
Long Island (Hoppy's Landing)
Fairhaven, Massachusetts

Project Number: 3871-002

Prepared by:

GeoInsight, Inc.
5 Lan Drive, Suite 200
Westford, MA 01886

Reviewed by:

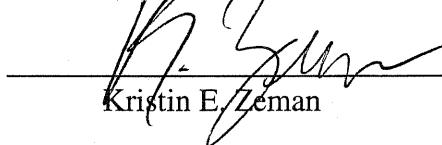
Health &
Safety Officer:


Christene A. Binger Date: 11/28/06

Project Manager:


Kevin D. Trainer Date: 11/28/06

Field Team Leader/
On-Site Safety Officer:


Kristin E. Zeman Date: 11/28/06

Field Personnel:

- | | | |
|-----|-------|-------------|
| (1) | _____ | Date: _____ |
| (2) | _____ | Date: _____ |
| (3) | _____ | Date: _____ |
| (4) | _____ | Date: _____ |
| (5) | _____ | Date: _____ |

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
2.0 BACKGROUND INFORMATION	2
2.1General Site Information	2
2.2Historical Information.....	2
2.3Anticipated Activities	2
3.0 POTENTIAL ON-SITE HAZARDS.....	4
3.1Overall Hazard.....	4
3.2Hazard Types	4
3.3Waste Types	4
4.0 MONITORING PROTOCOL/INSTRUMENTATION.....	6
5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)	7
5.1Levels of Protection	7
5.2PPE for Specified Protection Levels.....	7
6.0 PERSONAL DECONTAMINATION	8
7.0 WORK ZONE DELINEATION	9
7.1General.....	9
7.2Description of Work Zones	9
8.0 ON-SITE ORGANIZATION AND CONTROL.....	10
8.1Organization.....	10
8.2Site Security.....	10
8.3Communication.....	10
8.4Medical Monitoring Requirements	10
8.5Training Requirements	11
9.0 GENERAL HEALTH AND SAFETY REQUIREMENTS	12
9.1Standing Orders.....	12
9.2Incident Reporting.....	12
10.0 APPENDED INFORMATION	13
11.0 EMERGENCY INFORMATION/REFERENCES	14

FIGURES

- FIGURE 1 Site Locus
FIGURE 2 Site Map

APPENDICES

- APPENDIX A Daily Safety Meeting and Employee Injury Report Forms
APPENDIX B Guidelines and Additional Information for Site-Specific Activities

SITE-SPECIFIC HEALTH & SAFETY PLAN

1.0 INTRODUCTION

The purpose of this Site Health & Safety Plan (HASP) is to define personal protection and monitoring protocols to be followed during remedial activities at the Hoppy's Landing portion of Long Island located in Fairhaven, Massachusetts (the site). This HASP was prepared according to the requirements of 29 CFR 1910.120. These requirements and protocols are applicable to GeoInsight, Inc. (GeoInsight) employees and visitors. GeoInsight personnel, contractors, subcontractors, and visitors will be informed of the site emergency procedures and potential safety hazards involved with the anticipated activities. Subcontractors will be solely responsible for the health and safety of their personnel and will prepare and enforce their own HASP, which will be, at a minimum, consistent with the provisions of this HASP. This HASP summarizes those hazards and identifies personal protective measures required for this site. This plan must be reviewed by personnel prior to entering the site, and an agreement to comply with the requirements specified in the plan must be signed.

GeoInsight does not guarantee the health and safety of any person entering this site. Due to the hazardous nature of this site, and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards that may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not entirely eliminate, the potential for injury at this site. The health and safety guidelines in this plan were prepared specifically for GeoInsight and this site, and should not be used on any other site without prior review and evaluation by trained health and safety personnel.

2.0 BACKGROUND INFORMATION

2.1 GENERAL SITE INFORMATION

The site is located at Hoppy's Landing on the southern portion of Long Island in Fairhaven, Massachusetts. Refer to Figure 1 for the location of the site. The site is owned by the Town of Fairhaven and is used as a boat launch. The site is bordered to the north by Causeway Road, and to the south, east, and west by Buzzards Bay. The site consists of mostly open land with a small building on the north side of Hoppy's Landing, near Causeway Road. Figure 2 shows the proposed work area, which is located in the intertidal zone in the southern portion of Hoppy's Landing.

2.2 HISTORICAL INFORMATION

Portions of the intertidal zone at Hoppy's Landing were impacted by Number 6 (No. 6) fuel oil released from Bouchard Barge B120 on April 23, 2003. Cleanup operations removed most of the No. 6 fuel oil stranded in the shoreline, but small amounts of No. 6 fuel oil were not removed due to concerns regarding potential ecological damage that could be caused by the cleanup operations. The residual oil consists primarily of hardened splatter, small areas of pavement, and limited tar mats that are weathered and hardened on the outer surface. The small areas of pavement and splatter are located mostly on the surface of the fringing marsh areas, or adjacent to cobbles. Oil was also encountered beneath cobbles in some of the areas. Although the exposed surface of the residual oil is weathered and hard, the interior may be tacky below the weathered layer. Residual oil in sheltered locations (e.g., under rocks) can also be tacky to the touch when exposed and could produce a sheen during warm weather. Small sheens can also be present on the water surface in tide pools adjacent to locations where pavement is present.

2.3 ANTICIPATED ACTIVITIES

The proposed field activities consist of cleanup activities using hand tools and visual inspections to evaluate the cleanup effectiveness. During the cleanup activities, residual pavement will be removed from oil-impacted portions of the fringing marsh using hand tools (e.g., gardening trowels). Rocks with residual oil splatter will be either cleaned in-place using hand tools (e.g., wire brushes) or transported in a wheel barrow to a localized containment area to remove the splatter with a pressure washer. It is anticipated that the cleanup activities will be initiated on December 4, 2006 and will be completed by December 8, 2006. At least one post-cleanup inspection will be conducted approximately one week after cleanup activities are complete.

A subcontractor (Trident Environmental Services) will assist GeoInsight during cleanup activities. A representative from ENTRIX, Inc., the environmental consulting firm assisting with the Natural Resource Damage Assessment process, will be present during the cleanup and post-cleanup inspection activities.

The proposed field activities will be conducted in December, and daytime temperatures in the area typically range between 20 and 40 degrees Fahrenheit ($^{\circ}$ F). The field area is located in the

intertidal zone and is exposed to wind. Work will be conducted during the low tide "window" (i.e., approximately three hours before and after low tide).

3.0 POTENTIAL ON-SITE HAZARDS

3.1 OVERALL HAZARD

() High () Moderate
(X) Low () Unknown

3.2 HAZARD TYPES

1) Physical Hazards (check all that apply):

- | | | | |
|-------------------------------------|----------------------|-------------------------------------|-------------------------|
| <input checked="" type="checkbox"/> | Slips, Trips, Falls | <input checked="" type="checkbox"/> | Direct Sunlight |
| <input type="checkbox"/> | Electrical Equipment | <input type="checkbox"/> | Poisonous Plants |
| <input type="checkbox"/> | Traffic | <input type="checkbox"/> | Insects |
| <input type="checkbox"/> | Open Excavations | <input type="checkbox"/> | Poisonous Animals |
| <input type="checkbox"/> | Heavy Equipment | <input type="checkbox"/> | Noise Exposures |
| <input type="checkbox"/> | Sharps | <input type="checkbox"/> | Underground Utilities |
| <input checked="" type="checkbox"/> | Cold/Heat Stress | <input type="checkbox"/> | Overhead Electric Lines |
| <input type="checkbox"/> | Flammable Liquids | <input type="checkbox"/> | Other: |
| <input type="checkbox"/> | Corrosive Liquids | <input type="checkbox"/> | Other: |
| <input checked="" type="checkbox"/> | Manual Lifting | <input type="checkbox"/> | Other: |

2) Chemical Hazards

Potential chemical hazards identified based upon historical operations at the site resulted from a release of No. 6 fuel oil. Specific compounds of concern in media at the site are polynuclear aromatic hydrocarbons (PAH) that were likely derived from this source. Because the residual oil at this site is weathered and not volatile, the expected exposure pathway for these compounds is dermal exposure.

3) Biological Hazards (check all that apply):

- | | | | |
|--------------------------|--------------------------|--------------------------|-------------------------|
| <input type="checkbox"/> | Raw Sewage/Septic Wastes | <input type="checkbox"/> | Viruses |
| <input type="checkbox"/> | Medical Waste | <input type="checkbox"/> | Bacteria |
| <input type="checkbox"/> | Bloodborne Pathogens | <input type="checkbox"/> | Biting/Stinging Insects |

3.3 WASTE TYPES

Petroleum Hydrocarbons

Health Hazard: Causes eye irritation, skin irritation including redness, and a burning sensation. Prolonged or repeated contact can cause drying and cracking of the skin leading to dermatitis (inflammation). Harmful effects from skin adsorption are not expected.

First Aid:

Eye – if irritation or redness develops, immediately flush eyes with clean water for 5 minutes.
Skin – wipe material from skin, remove contaminated clothing, wash affected area with mild soap and water.

For all other issues or if symptoms persist, seek medical attention.

Polynuclear Aromatic Hydrocarbons (PAHs)

Health Hazard: Causes eye, skin, and respiratory tract irritation, other symptoms include headache, nausea, confusion, and excitement. Chronic ingestion may result in gastrointestinal and kidney pain. Some PAHs are carcinogenic.

First Aid:

Eye – if irritation or redness develops, immediately flush eyes with clean water for 5 minutes.
Skin – wipe material from skin, remove contaminated clothing, wash affected area with mild soap and water.

For all other issues or if symptoms persist, seek medical attention.

4.0 MONITORING PROTOCOL/INSTRUMENTATION

Because residual oil exists as hardened pavement exposed in the intertidal zone, and this oil does not contain sufficient volatiles to adversely affect ambient air, field monitoring of VOCs in ambient air will not be conducted.

Ambient air temperature will be monitored periodically and work periods will be adjusted to provide adequate rest and warm up periods for personnel. Personnel will be checked periodically for symptoms of cold-related problems. If low temperatures and/or wind conditions cause personnel to exhibit signs of incipient hypothermia or frostbite, then field activities will be immediately halted and personnel will seek warmth and shelter immediately.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

5.1 LEVELS OF PROTECTION

Level D

Tasks: *Cleanup oversight and post-cleanup inspection*

Modified Level D (based upon potential for dermal contact)

Tasks: *Cleanup activities.*

Level C

Tasks: *None*

5.2 PPE FOR SPECIFIED PROTECTION LEVELS

LEVEL D:

Work clothes

Steel toe workboots

Safety glasses with side shields

List Other Equipment:

MODIFIED LEVEL D:

Level D PPE and;

Tyvek outer suit (spun olefin)

Chemical resistant boots or disposable, protective boot covers

Nitrile gloves

6.0 PERSONAL DECONTAMINATION

On-site personnel will employ some measure of decontamination when leaving the work zone. PPE to be decontaminated may include boots, chemical resistant gloves, and other reusable equipment or materials that may have contacted affected media. Actual decontamination procedures will ultimately depend upon the level of protection, field screening results, and the results of ambient air monitoring. Typical decontamination procedures for the anticipated work levels are summarized below.

Level D:

Wash hands prior to eating and remove or clean work boots before returning to office.

Modified Level D:

Segregated equipment drop, boot and glove wash/rinse, boot removal, Tyvek suit removal, outer glove removal, field wash. Disposable items that become contaminated will be segregated and disposed.

Cleaning Solution:

Mixture of "Alconox" and potable water.

Rinse: potable water.

Field personnel can use alcohol-based or detergent "hand wipes" to remove oil adhered to fingers.

7.0 WORK ZONE DELINEATION

7.1 GENERAL

Work areas at the facility will vary with the type of work or task being conducted. The Site Health and Safety Officer (SHSO) will delineate the work zones prior to the start of work and document them in the project field logbook. The SHSO will use the following descriptions to determine the work zones.

7.2 DESCRIPTION OF WORK ZONES

Support Zone

Support activities, such as equipment deliveries, preparation for site activities, and meetings with personnel unauthorized to enter work zones will be performed within the designated Support Zone. The Support Zone is located a safe distance away from work activities at the site. The exact location of this zone will vary depending on where the work is being performed at the site, but should remain at least 20 feet away from the Work Zone.

Decontamination Zone

The Decontamination Zone will be adjacent to, but separate from, the Support Zone. Final decontamination of personnel and equipment will take place within the Decontamination Zone, as necessary, to minimize relocation or spreading of impacted materials. Certain initial decontamination activities, such as removal of large quantities of debris from equipment, will be performed within exclusion zones to the extent practicable to minimize the amount of material brought into the Decontamination Zone.

Work Zone

The Work Zone (exclusion area) will depend on the type of work being performed. Localized Work Zones will include the immediate vicinity of drilling and excavation activities, remote monitoring wells, and surface water sampling locations. Persons not directly involved in the site activities will be required to remain at least 20 feet away from the perimeter of an established Work Zone.

8.0 ON-SITE ORGANIZATION AND CONTROL

8.1 ORGANIZATION

Project Manager (*Kevin Trainer*):

Responsible for allocation of resources for the implementation of the HASP; assignment of personnel who meet the medical and training requirements of the HASP; and allocation of resources to resolve health and safety issues identified during the performance of project tasks.

GeoInsight Corporate Health and Safety Officer (CHSO: *Michael Redding*):

The CHSO is responsible for the overall coordination of the GeoInsight Corporate Health and Safety Program. The CHSO should be informed of any exceedence of a PEL, injuries, near misses, and general health and safety concerns.

GeoInsight Office Health and Safety Officer (OHSO: *Christene Binger*):

The OHSO is responsible to the CHSO in matters related to health and safety, including investigation of health and safety related incidents at a site.

Site Health and Safety Officer (*Kristin Zeman*):

Responsible to the GeoInsight CHSO in matters related to health and safety the on site, including development and implementation of the site-specific HASP; conducting site safety meetings and site-specific training of site personnel; investigation of health and safety related incidents at the site; accompanying authorized visitors on site tours; and updating and modifying this HASP, as necessary, if site or environmental conditions change. GeoInsight is not responsible for public present at the site, municipal employees, or contractors.

8.2 SITE SECURITY

The field team leader will control access to the site during GeoInsight site activities. GeoInsight personnel present at the site will be recorded in the field log of daily activities. The site HSO or field team leader will be responsible for enforcing adherence to work zone delineations described above.

8.3 COMMUNICATION

Because of the relatively small size of the site and the level of protection typically used, voice and hand signals will likely be sufficient for the anticipated work activities.

8.4 MEDICAL MONITORING REQUIREMENTS

GeoInsight personnel who perform on-site activities where there is potential for exposure to hazardous substances must have completed a medical monitoring examination no earlier than 12 months prior to commencing these site activities. The examination must comply with requirements specified by 29 CFR 1910.120 (f). A certification, signed by a medical doctor, must indicate work limitations, if any, placed on the individual. The certification must also

specify that the individual is capable of working while wearing respiratory protection equipment. The certification must be in the corporate health and safety file before the individual may begin on-site activities.

8.5 TRAINING REQUIREMENTS

Personnel who perform activities where there is potential for exposure to hazardous substances must have completed an initial Hazardous Waste Operations and Emergency Response (HAZWOPER) course or an annual refresher course of the initial training, within 12 months prior to the beginning of site activities. The HAZWOPER training must comply with requirements outlined in 29 CFR 1910.120 (e). A certificate indicating successful completion of this training must be in GeoInsight's project file for GeoInsight personnel.

Subcontractors performing excavation and trenching work are required to have a "competent person," as defined by OSHA and requiring OSHA-specified training, on-site while this type of work is in progress.

The site HSO will hold daily meetings with field personnel before work commences to discuss safety issues. During the meeting, personnel working on-site will be provided access to this HASP. The HASP will be reviewed and discussed and questions answered. Personnel who will work on-site will sign this HASP (or, in the case of subcontractor personnel, the subcontractor's HASP) to indicate that they have reviewed and understand site conditions and agree to comply with HASP requirements. The site HSO will record the daily meetings on the form titled "Daily Safety Meeting Form," a copy of which is attached in Appendix A.

9.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

9.1 STANDING ORDERS

The following standing orders apply to the activities anticipated to be performed at the site during the project:

1. No eating, drinking, chewing tobacco or toothpicks, application of cosmetics, storing food or food containers or open flames permitted within the Work Zone.
2. No smoking within the perimeter of the site.
3. Wear the appropriate level of protection as defined in this HASP.
4. Wear latex or nitrile surgical gloves and use a physical barrier when providing emergency first aid or CPR.
5. Work must be restricted to daylight hours only.
6. Maintain close contact with your work partner while in the Exclusion Zone.
7. Persons with beards and mustaches that interfere with respirator fit and seal will not be allowed to work at activities requiring Level C or Level B protection.
8. Report any unusual conditions to the field team leader immediately.

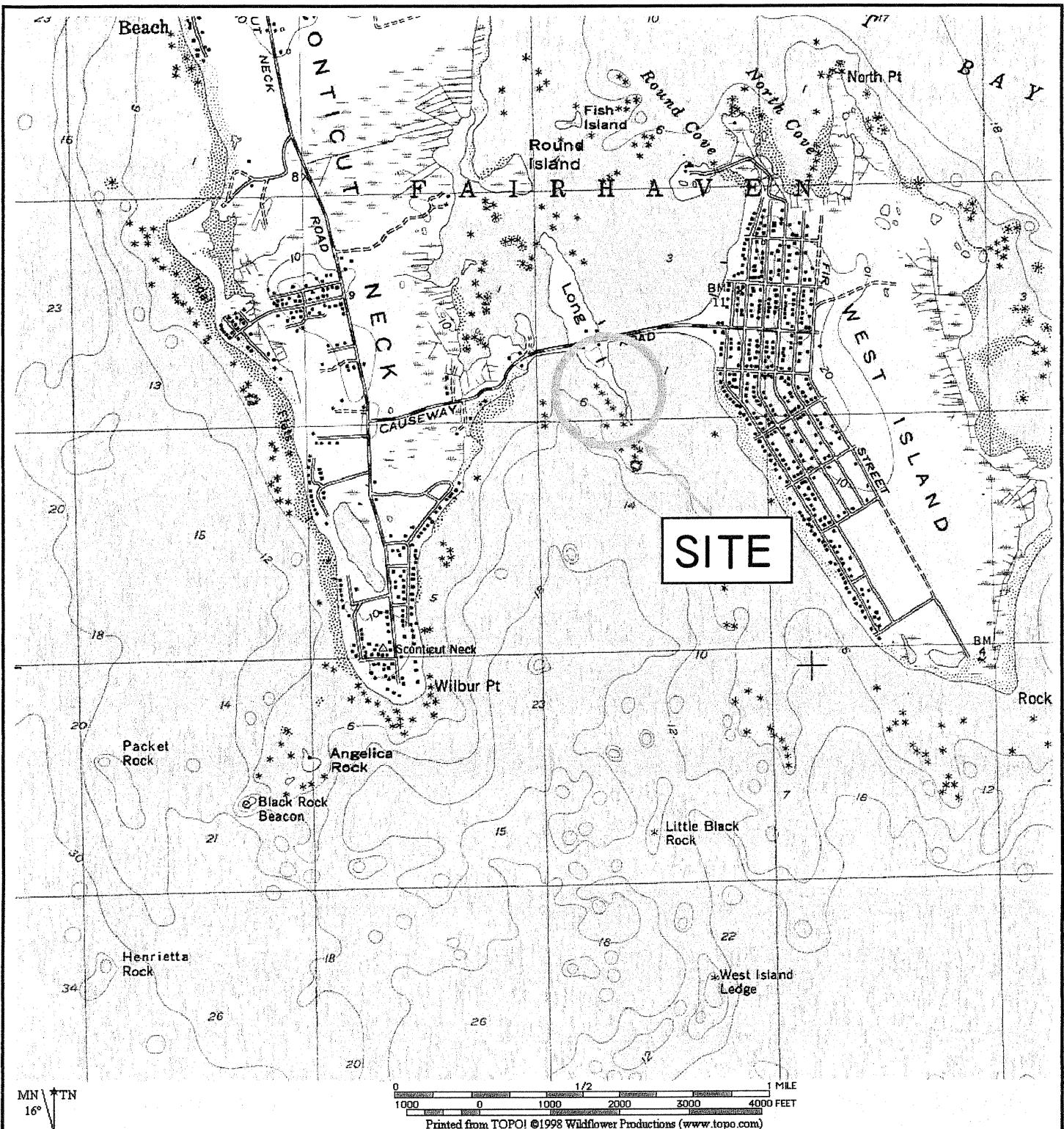
9.2 INCIDENT REPORTING

Any incident or accident involving field personnel must be documented. Situations covered by this requirement include, but are not limited to, fires, explosions, exposures above the Permissible Exposure Limit (PEL) or Short Term Exposure Limit (STEL), illness and injuries, however minor. The site HSO or field team leader must be notified immediately so that first aid requirements can be assessed and transportation to the nearest medical treatment facility provided, if required. Reports of the incident must be provided to the GeoInsight Corporate HSO within 24 hours of the incident and includes completion of the accident reporting form in Appendix B.

10.0 APPENDED INFORMATION

The following documents (attached in Appendix B) provide additional information regarding issues that are considered applicable to anticipated site activities:

1. PPE Checklist
2. Cold Exposure Prevention Guidelines
3. Emergency First Aid
4. Daily Safety Meeting Form



SOURCE:

USGS SCONTICUT NECK
QUADRANGLE (1978)



Printed from TOPO! ©1998 Wildflower Productions (www.topo.com)

PROJECT:
B120 OIL SPILL
BUZZARDS BAY, MASSACHUSETTS

LOCATION:
LONG ISLAND (HOPPY'S LANDING)
FAIRHAVEN, MASSACHUSETTS

TITLE:

SITE LOCUS

DESIGNED:	DRAWN:	CHECKED:	APPROVED:
KDT	KDT	KDT	MJW

SCALE:	DATE:	FILE NO.:	PROJECT NO.:
AS SHOWN	10/18/06	387I-LOCUS	387I-002


GeoInsight®
Environmental Strategy & Engineering
Practical in Nature

FIGURE NO.: |



APPROXIMATE AREAS
OF RESIDUAL OILING

NORTH

SOURCE:

MASSACHUSETTS GEOGRAPHIC
INFORMATION SYSTEMS (MASSGIS)

2001 AERIAL PHOTOGRAPH



PROJECT:
B120 OIL SPILL
BUZZARDS BAY, MASSACHUSETTS

LOCATION:
LONG ISLAND (HOPPY'S LANDING)
FAIRHAVEN, MASSACHUSETTS

TITLE:

RESIDUAL OILING - W2A-10

DESIGNED:	DRAWN:	CHECKED:	APPROVED:
KDT	KDT	KDT	MJW

SCALE:	DATE:	FILE NO.:	PROJECT NO.:	FIGURE NO.:
AS SHOWN	10/18/06	387I-OILING	387I-002	2


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Environmental Strategy & Engineering
Practical in Nature

11.0 EMERGENCY INFORMATION/REFERENCES

EMERGENCY PHONE NUMBERS (for the Town of Fairhaven)

AMBULANCE: 911
POLICE: 911
FIRE: 911

POISON CONTROL CENTER: 1-800-562-8236

HOSPITAL *St Luke's Hospital*
101 Page Street
New Bedford, MA
508-997-1515

HOSPITAL ROUTE: (*Refer to attached map and directions*)

OTHER CONTACTS	PHONE NUMBERS
GeoInsight Inc.	978-692-1114
Christene Binger – OHSO (cell)	617-803-8108
Kevin Trainer – Project Manager (cell)	978-790-5294



Sorry! To see all the details that are visible on the screen, use the "Printer Friendly" link above the map.

MAPQUEST®

START [169-189] Goulart Memorial Dr
Fairhaven, MA 02719, US

END St Luke's Hospital: 508-997-1515
101 Page St, New Bedford, MA
02740, US

Total Est. Time:
24 minutes

Total Est. Distance:
8.42 miles

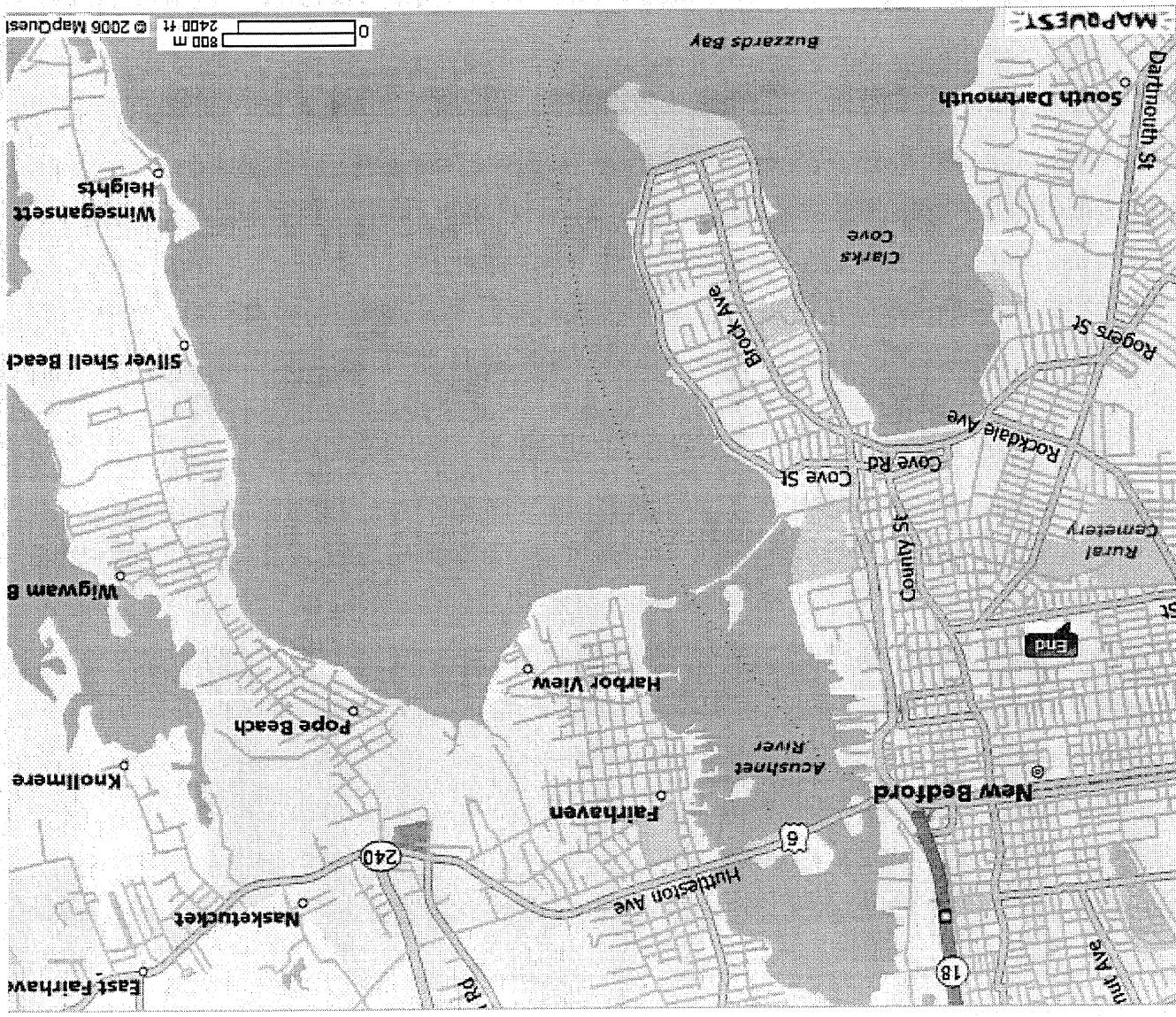
Maneuvers

Distance

- | Maneuver | Description | Distance |
|----------|---|------------|
| | 1: Start out going WEST on GOULART MEMORIAL DR toward ALCOBIA DR. | 0.6 miles |
| | 2: Turn RIGHT onto SCONTICUT NECK RD. | 3.6 miles |
| | 3: Turn LEFT onto US-6 / HUTTLESTON AVE. Continue to follow US-6 W. | 2.7 miles |
| | 4: Turn LEFT onto COUNTY ST. | 0.7 miles |
| | 5: Turn RIGHT onto ALLEN ST. | 0.4 miles |
| | 6: Turn RIGHT onto PAGE ST. | <0.1 miles |
| | 7: End at St Luke's Hospital:
101 Page St, New Bedford, MA 02740, US | |

Total Est. Time: 24 minutes

Total Est. Distance: 8.42 miles



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These directions are informational only. No representation is made or warranty given as to their content, road conditions or route usability or expediency. User assumes all risk of use. MapQuest and its suppliers assume no responsibility for any loss or delay resulting from such use.

APPENDIX A

DAILY SAFETY MEETING AND EMPLOYEE INJURY REPORT FORMS



Daily Safety Meeting Form

Weather Conditions: _____ Site Location: _____

Site Conditions: _____ GeoInsight Proj. #: _____

Date: _____

TOPICS DISCUSSED (Please Check Ones That Apply)

- | | |
|--|--|
| <input type="checkbox"/> Health & Safety Emergency Numbers | <input type="checkbox"/> Bonding & Grounding |
| <input type="checkbox"/> Hospital Locations | <input type="checkbox"/> Heavy Equipment |
| <input type="checkbox"/> Work Areas Posted | <input type="checkbox"/> Traffic Hazards |
| <input type="checkbox"/> Designated Smoking Areas | <input type="checkbox"/> Heat or Cold Stress |
| <input type="checkbox"/> Confined Space Entry | <input type="checkbox"/> Air Compressor |
| <input type="checkbox"/> Slip, Trip, & Fall | <input type="checkbox"/> Lock Out/Tag Out |
| <input type="checkbox"/> Manual Lifting | <input type="checkbox"/> Excavation Hazards |
| <input type="checkbox"/> Utility Locations | <input type="checkbox"/> Venting/Inerting |
| <input type="checkbox"/> Mechanical Hazards | |

PERSONAL PROTECTIVE EQUIPMENT

- | | |
|---|--|
| <input type="checkbox"/> Eye Protection | <input type="checkbox"/> Hard Hat |
| <input type="checkbox"/> Hearing Protection | <input type="checkbox"/> Protective Clothing |
| <input type="checkbox"/> Gloves | <input type="checkbox"/> Retrieval System |
| <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> Backup System |
| <input type="checkbox"/> Engineering Controls | |

ADDITIONAL COMMENTS: _____

MEETING ATTENDED BY THE FOLLOWING:

This meeting was conducted by: _____ on _____.



Daily Safety Meeting Form

Weather Conditions: _____

Site Location: _____

Site Conditions: _____

GeoInsight Proj. #: _____

Date: _____

TOPICS DISCUSSED (Please Check Ones That Apply)

- | | |
|--|--|
| <input type="checkbox"/> Health & Safety Emergency Numbers | <input type="checkbox"/> Bonding & Grounding |
| <input type="checkbox"/> Hospital Locations | <input type="checkbox"/> Heavy Equipment |
| <input type="checkbox"/> Work Areas Posted | <input type="checkbox"/> Traffic Hazards |
| <input type="checkbox"/> Designated Smoking Areas | <input type="checkbox"/> Heat or Cold Stress |
| <input type="checkbox"/> Confined Space Entry | <input type="checkbox"/> Air Compressor |
| <input type="checkbox"/> Slip, Trip, & Fall | <input type="checkbox"/> Lock Out/Tag Out |
| <input type="checkbox"/> Manual Lifting | <input type="checkbox"/> Excavation Hazards |
| <input type="checkbox"/> Utility Locations | <input type="checkbox"/> Venting/Inerting |
| <input type="checkbox"/> Mechanical Hazards | |

PERSONAL PROTECTIVE EQUIPMENT

- | | |
|---|--|
| <input type="checkbox"/> Eye Protection | <input type="checkbox"/> Hard Hat |
| <input type="checkbox"/> Hearing Protection | <input type="checkbox"/> Protective Clothing |
| <input type="checkbox"/> Gloves | <input type="checkbox"/> Retrieval System |
| <input type="checkbox"/> Respiratory Protection | <input type="checkbox"/> Backup System |
| <input type="checkbox"/> Engineering Controls | |

ADDITIONAL COMMENTS: _____

MEETING ATTENDED BY THE FOLLOWING:

This meeting was conducted by: _____ on _____.

EMPLOYEE INJURY REPORT

Please answer all questions completely. This report must be forwarded to the Corporate Health and Safety Officer within 24 hours of the injury.

Injured's Name _____ Sex _____ S.S.# _____ Birth date _____

Home Address _____

City _____ State _____ Zip _____ Phone _____

Job Title _____ Hire Date _____ Hourly wage _____

Number of days worked per week: _____

Date of Incident _____ Time _____ Time reported _____ To whom? _____

Project Name _____ Project # _____ Time work began _____

Has employee returned to work? Yes No When? _____ Did the employee miss scheduled work? _____

At what position? _____

Medical attention: None First aid on-site Doctor's office Hospital ER Hospitalized

Doctor/Hospital name _____ Address _____

Witness name(s) _____ Statement attached? Yes No

Nature of injury or Illness _____ Exact body part _____

Job assignment at time of incident _____

Was this his/her regular occupation? If not, state regular occupation. _____

Describe incident _____

Physical address where injury occurred. _____

What was the employee doing just before the incident occurred? _____

What object or substance directly harmed the employee? _____

What unsafe physical condition or unsafe act caused the incident? _____

What corrective action has been taken to prevent recurrence? _____

Group Manager _____ Print _____ Signature _____ Date _____

Project Manager _____ Print _____ Signature _____ Date _____

Site Safety Officer _____ Print _____ Signature _____ Date _____

Comments on incident and corrective action _____

Manager's name _____ Print _____ Signature _____ Date _____

Concur with action taken? Yes No Remarks _____

Reviewed by Corporate H&S Officer _____

Name _____ Print _____ Signature _____ Date _____

Completed by _____ Title _____ Phone _____ Date _____

APPENDIX B

GUIDELINES AND ADDITIONAL INFORMATION FOR SITE-SPECIFIC ACTIVITIES

PPE INSPECTION CHECKLIST

Before using personal protective clothing (PPE), inspect each article for defects, according to the checklist below.

Determine that appropriate clothing material is compatible with the anticipated chemical and exposure conditions of the project and its required tasks.

Visually inspect for:

- imperfect seams;
- non-uniform coatings;
- tears; and
- defective zippers and other closures.

Hold up to the light and check for pinholes.

- Flex the product and inspect it for:

- cracks; and
- any defects which indicate that the product=s shelf life has been exceeded.
- If the product has been used previously, inspect it inside and out for signs of chemical attack.

For example:

- discoloration;
- swelling; or
- stiffness.

Before using gloves, pressurize each one with air to make sure that it has no holes. Also, visually inspect the gloves for the following defects:

- imperfect seams;
- tears; and
- non-uniform coating.

While performing work, be alert for evidence of PPE failure, breakthrough, or excessive wear-and-tear, as described below.

- Evidence of chemical attack such as discoloration, swelling, stiffening and softening.
Keep in mind, however, that chemical permeation can occur without any visible effects.
- Closure failure.
- Tears.
- Punctures.
- Seam discontinuities.

COLD EXPOSURE PREVENTION GUIDELINES

Personnel working outdoors in temperatures at or below freezing may be injured by the cold. Extreme cold for a short time may injure the surface of the body (frostbite) to varying degrees of severity. Areas of the body that have high surface area-to volume ratios, such as fingers, toes, and ears, are the most susceptible to frostbite. Cold temperatures also may profoundly lower body temperature (hypothermia), a potentially life-threatening condition.

1.0 EFFECTS OF COLD EXPOSURE

In addition to low ambient temperature, wind chill increases the likelihood of cold casualties. Wind chill describes the chilling effect of moving air in combination with low temperature. For instance, an ambient temperature of 10°F, in combination with a wind speed of 15 miles per hour, has the same chilling effect of still air with an ambient temperature of 18°F below zero. As a general rule, the greatest incremental increase in wind chill occurs when a wind of 5 miles per hour increases to 10 miles per hour.

Water conducts heat 240 times more readily than air. Thus, the body will cool very rapidly if clothing is damp. For example, PPE is used, the clothing underneath often becomes soaked with perspiration, even cold weather.

Unless urgent, field activities should be curtailed if combined air temperature and wind chill are below zero degrees Fahrenheit. The TLV for wind chill is -20°F. The Site HSO ultimately is responsible for delaying field activities because of inclement weather.

1.1 Symptoms of Injuries from Cold Exposure

There are two general categories of injuries from cold exposure: Local injuries, or frostbite; and systemic injury, or hypothermia, as described below.

- X **Frost nip of incipient frostbite** is characterized by sudden blanching or whitening of the skin.
- X **Superficial frostbite** is characterized by skin which appears waxy or white and which is firm to the touch. Deeper tissue, however, is resilient.
- X **Deep frostbite** is a serious injury, characterized by cold, pale, and hard tissue.

X Systemic hypothermia may be life threatening. It is caused by exposure to freezing or rapidly dropping temperature, symptoms usually appear in five stages:

- X shivering;
- X apathy, listlessness, sleepiness, and (occasionally) rapidly cooling of the body less than 95°F;
- X unconsciousness, glassy stare, slow pulse, and slow respiratory rate;
- X freezing of the extremities; and
- X imminent death, unless victim receives prompt medical treatment.

1.2 First Aid for Frostbite and Hypothermia

Frostbite -

To administer first aid for frostbite, bring the victim indoors and re-warm affected areas **quickly**, in water between 102 and 105°F (30 and 41°C). Give the victim a warm drink, but not coffee, tea or alcohol. The victim should not smoke. Keep the affected parts in warm water or covered with warm clothes for at least 30 minutes. Be aware that the injured tissue will be very painful as it thaws, but do not let the victim rub it. After completely thawing the frozen tissue, elevate the injured area and protect it from further injury. Do not allow blisters to be broken. Use sterile, soft, dry material to cover the injured tissue. After the frozen tissue thaws, the victim should try to move the affected areas a little, but no more than he/she can without help. Finally, keep the victim warm and get medical care.

General considerations when administering first aid for frostbite are listed below.

- X Do not rub frostbitten tissue.
- X Do not place ice, snow gasoline, or anything cold on frostbitten tissue.
- X Do not use heat lamps or hot water bottles to re-warm frostbitten tissue.
- X Do not place frostbitten tissue near a hot stove, fireplace, or radiator.

Hypothermia -

Because hypothermia may be life threatening, the victim must receive attention as soon as possible. Move the victim to a warm place in the Contamination Reduction Zone. Remove wet clothes and cover the victim with dry clothing or blankets. Warm the body slowly. Do not administer anything by mouth, unless the victim is fully conscious. Monitor the victim's airway, breathing, and level of consciousness often. Finally, keep the victim warm and get immediate medical care.

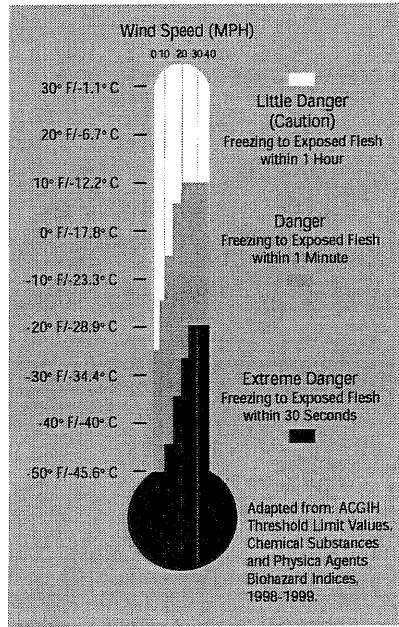
THE COLD STRESS EQUATION



LOW TEMPERATURE + WIND SPEED + WETNESS
= INJURIES & ILLNESS

When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result.

Hypothermia can occur when *land temperatures* are **above** freezing or *water temperatures* are below 98.6°F/37°C. Cold-related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds, or wet clothing.



FROST BITE

What Happens to the Body:

FREEZING IN DEEP LAYERS OF SKIN AND TISSUE; PALE, WAXY-WHITE SKIN COLOR; SKIN BECOMES HARD and NUMB; USUALLY AFFECTS THE FINGERS, HANDS, TOES, FEET, EARS, and NOSE.

What Should Be Done: (land temperatures)

- Move the person to a warm dry area. Don't leave the person alone.
- Remove any wet or tight clothing that may cut off blood flow to the affected area.
- **DO NOT** rub the affected area, because rubbing causes damage to the skin and tissue.
- **Gently** place the affected area in a warm (105°F) water bath and monitor the water temperature to **slowly** warm the tissue. Don't pour warm water directly on the affected area because it will warm the tissue too fast causing tissue damage. Warming takes about 25-40 minutes.
- After the affected area has been warmed, it may become puffy and blister. The affected area may have a burning feeling or numbness. When normal feeling, movement, and skin color have returned, the affected area should be dried and wrapped to keep it warm. **Note:** If there is a chance the affected area may get cold again, do not warm the skin. If the skin is warmed and then becomes cold again, it will cause severe tissue damage.
- Seek medical attention as soon as possible.

HYPOTHERMIA - (Medical Emergency)

What Happens to the Body:

NORMAL BODY TEMPERATURE (98.6° F/37°C) DROPS TO OR BELOW 95°F (35°C); FATIGUE OR DROWSINESS; UNCONTROLLED SHIVERING; COOL BLUISH SKIN; SLURRED SPEECH; CLUMSY MOVEMENTS; IRRITABLE, IRRATIONAL OR CONFUSED BEHAVIOR.

What Should Be Done: (land temperatures)

- Call for emergency help (i.e., Ambulance or Call 911).
- Move the person to a warm, dry area. Don't leave the person alone. Remove any wet clothing and replace with warm, dry clothing or wrap the person in blankets.
- Have the person drink warm, sweet drinks (sugar water or sports-type drinks), if they are alert. **Avoid drinks with caffeine** (coffee, tea, or hot chocolate) or alcohol.
- Have the person move their arms and legs to create muscle heat. If they are unable to do this, place warm bottles or hot packs in the arm pits, groin, neck, and head areas. **DO NOT** rub the person's body or place them in warm water bath. This may stop their heart.

What Should Be Done: (water temperatures)

- Call for emergency help (Ambulance or Call 911). Body heat is lost up to 25 times faster in water.
- **DO NOT** remove any clothing. Button, buckle, zip, and tighten any collars, cuffs, shoes, and hoods because the layer of trapped water closest to the body provides a layer of insulation that slows the loss of heat. Keep the head out of the water and put on a hat or hood.
- Get out of the water as quickly as possible or climb on anything floating. **DO NOT** attempt to swim unless a floating object or another person can be reached because swimming or other physical activity uses the body's heat and reduces survival time by about 50 percent.
- If getting out of the water is not possible, wait quietly and conserve body heat by folding arms across the chest, keeping thighs together, bending knees, and crossing ankles. If another person is in the water, huddle together with chests held closely.

How to Protect Workers

- Recognize the environmental and workplace conditions that lead to potential cold-induced illnesses and injuries.
- Learn the signs and symptoms of cold-induced illnesses/injuries and what to do to help the worker.
- Train the workforce about cold-induced illnesses and injuries.
- Select proper clothing for cold, wet, and windy conditions. Layer clothing to adjust to changing environmental temperatures. Wear a hat and gloves, in addition to underwear that will keep water away from the skin (polypropylene).
- Take frequent short breaks in warm dry shelters to allow the body to warm up.
- Perform work during the warmest part of the day.
- Avoid exhaustion or fatigue because energy is needed to keep muscles warm.
- Use the buddy system (work in pairs).
- Drink warm, sweet beverages (sugar water, sports-type drinks). Avoid drinks with caffeine (coffee, tea, or hot chocolate) or alcohol.
- Eat warm, high-calorie foods like hot pasta dishes.

Workers Are at Increased Risk When...

- They have predisposing health conditions such as cardiovascular disease, diabetes, and hypertension.
- They take certain medication (check with your doctor, nurse, or pharmacy and ask if any medicines you are taking affect you while working in cold environments).
- They are in poor physical condition, have a poor diet, or are older.

EMERGENCY FIRST AID PROCEDURES

Red Cross first aid procedures should be used to treat personnel who are injured while working in both contaminated and uncontaminated areas. If the injured person can be moved, he/she should be taken outside of the work area or the Contamination Reduction Zone, as appropriate. Any contaminated clothing should be removed, if possible, and first aid should be administered. Depending on the nature and severity of the injury, first aid should continue during transport to a medical facility and until treatment is obtained.

For most injuries, the earliest measures, described below, will be among the most important to effectively administer first aid.

- X First, survey the scene. Is the injured person in imminent danger or further injury if left in place until his/her injuries can be assessed? Are others in the area in danger of injury?
- X Perform a primary survey of injuries to determine if emergency first aid measures are needed (e.g., as in the case of severe bleeding, etc.) before moving the victim outside the work area or to the Contamination Reduction Zone. Determine if it is safe for those other than emergency medical personnel to move the victim and, if so, which methods are appropriate to avoid compounding his/her injuries. Request emergency medical services (EMS) if the primary survey indicates that this is necessary because of the nature or severity of the injuries.
- X Perform a secondary survey of the victim's injuries. Determine if there are signs and symptoms of internal bleeding, imminent shock, or other potentially life-threatening conditions. If such symptoms are suspected, request EMS if this has not already been done, then immediately administer appropriate first aid until medical treatment is obtained.
- X Control any external bleeding using direct pressure. Elevate injured or bleeding areas, unless a fracture is suspected. Monitor the victim's airway, breathing, and level of consciousness frequently. Reassure the victim and keep him/her warm and as comfortable as possible. Even if symptoms of shock are not apparent, keep in mind that onset of shock may be sudden. Take measures to avoid shock immediately should it occur. If the victim vomits, place him/her on his/her side, and clear the airway if it becomes obstructed.
- X To reduce the risk of being infected by the victim when attempting to control bleeding, the caregiver should use some sort of barrier (e.g., several dressings, latex gloves, or a piece of plastic wrap). Hands should always be washed thoroughly after first aid is given. If there is more than one victim, a caregiver should always change gloves or wash his/her hands after touching one victim and before touching another (or any other individual) to prevent crossing-contamination.



APPENDIX C
Notice of Document Availability



November 29, 2006

GeoInsight Project 3871-002
delivered by Certified Mail

Jeffrey Osuch
Fairhaven Board of Selectmen
Town Hall
40 Center Street
Fairhaven, Massachusetts 02719

RE: Notice of Document Availability
Phase IV Remedy Implementation Plan
Barge B120 Spill
Buzzards Bay, Massachusetts
Release Tracking Number (RTN) 4-17786

Dear Mr. Osuch:

In accordance with Public Notification requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403), please accept this letter as notification that a Phase IV Remedy Implementation Plan to remediate a small amount of hardened residual oil located at a portion of Hoppy's Landing on Long Island will be filed with and available for your review after November 30, 2006 at:

Massachusetts Department of Environmental Protection
Southeast Regional Office, Bureau of Waste Site Cleanup
20 Riverside Drive
Lakeville, Massachusetts 02347
Service Center: 508-946-2718
Fax: 508-946-2865
<http://www.mass.gov/dep/about/region/serofile.htm>

File reviews are conducted Tuesdays and Wednesdays from 9:00 a.m. to 11:30 a.m. and 2:00 p.m. to 4:30 p.m. (except state holidays). An electronic copy of this report will also be posted at www.buzzardsbay.org. Field activities are scheduled to start on Monday, December 4, 2006 and are expected to be completed by Friday, December 8, 2006.



We trust this information is sufficient for your files. Please contact me at (978) 692-1114 if you have questions regarding the Phase IV Remedy Implementation Plan.

Sincerely,

GEOINSIGHT, INC.

Kevin D. Trainer, C.P.G., P.G., L.S.P.
Senior Project Geologist

cc: MADEP, SERO – Lakeville, Massachusetts
Fairhaven Board of Health – Patricia Fowle
Richard J. Wozmak, P.E., P.H., L.S.P. – EnviroLogic LLC.