

APPENDIX E

Citizen Concern Response Memorandum W2A-10
February 2, 2006



GeoInsight, Inc.
25 Sundial Avenue, Suite 515 West
Manchester, NH 03103
TEL 603-314-0820
FAX 603-314-0821
www.geoinsightinc.com

GeoInsight, Inc.
5 Lan Drive, Suite 200
Westford, MA 01886
TEL 978-692-1114
FAX 978-692-1115

GeoInsight, Inc.
Corporate Ten Center
1781 Highland Avenue, Suite 207
Cheshire, CT 06410
TEL 203-271-8036
FAX 203-271-8038

March 9, 2006

GeoInsight Project 3871-002

Cathryn F. Brower
P.O. Box 4091
New Bedford, MA 02741

Re: Bouchard Barge B120 Oil Release
Buzzards Bay, Massachusetts

Dear Ms. Brower,

GeoInsight, Inc. (GeoInsight) prepared this letter to describe the results of an evaluation of shoreline erosion at the beach in the vicinity of your property located at plat 42, lots 77 and 21 on Goulart Memorial Drive in Fairhaven, Massachusetts. This evaluation was conducted in response to your concerns that cleanup operations to remove oil from the April 23, 2003 Bouchard Barge B-120 (B120) oil spill may have affected the shoreline in this area and caused shoreline erosion.

1.0 BACKGROUND

During the June 2, 2005 public meeting at the New Bedford Whaling Museum hosted by GeoInsight, you indicated that some of the sand that was formerly present on a portion of the shoreline had eroded away, and that you believed that the cause of the erosion was from the cleanup activities conducted to remove oil from the B120 oil spill. The area of concern was located to the north of Goulart Memorial Drive (the road on the causeway that connects Sconticut Neck to Long Island), in the vicinity of your property.

2.0 DATA COLLECTION

On June 21, 2005, representatives from GeoInsight, ENTRIX, Inc. (ENTRIX), and the Massachusetts Department of Environmental Protection (MADEP) met with you to copy photographs you had taken of this area, record your specific concerns, photograph the area, and conduct an initial baseline beach profile. The area is primarily a south-southeast-facing shoreline that becomes more eastward-facing to the west. A beach house constructed on poles is located near the western side of the south-southeast-facing portion of the beach. A wood platform and utility pole are present on the eastern portion of the beach in an area that you reported is seasonally used in the summertime to park a camper. Several sandbags and some fencing components were also observed in the vicinity of the platform, and the function of these items was presumably to reduce shoreline erosion.

You indicated that the beach was used as an access point and staging area for equipment (e.g. front end loader) to collect bags of oil and oiled debris during the cleanup operations. You expressed the following concerns to the field team:

- during high tide, the water currently extends to the grass at the dune line, and that before the cleanup the water during high tide was reportedly approximately 50 feet seaward of the grass at the dune line;
- erosion at the dune line has reportedly produced a two- to three-foot high scarp;
- vehicle traffic on the beach during cleanup operations reportedly compacted the sand, causing erosion;
- the cleanup operations reportedly removed cobbles in front of a platform on a property near your property and the cobbles were not replaced; and
- grass is currently growing among the cobbles in the lower intertidal zone, and this grass was reportedly not present in that area before the spill.

During this initial visit, GeoInsight was not able to copy your photographs, and a representative from GeoInsight returned on July 7, 2005 to scan your photographs. On this visit, our representative walked a portion of the shoreline with you and took additional photographs of the area.

On October 17, representatives from GeoInsight and ENTRIX met with you and downloaded additional photographs collected by you and conducted another beach profile survey. You provided additional photographs to GeoInsight in an e-mail dated October 22, 2005.

An aerial photograph of the area taken in April 2001 prior to the B120 oil spill, and available at the Massachusetts Geographic Information System (MassGIS) online map viewer at <http://www.mass.gov/mgis/mapping.htm>, is attached as Figure 1. Selected photographs of the area are also attached to this letter. The shoreline profile data are shown on Figures 2 through 4, and the approximate locations of the profiles are shown on Figure 5.

3.0 DATA EVALUATION

Comparison of photographs show that some shoreline erosion has occurred between the summer 2003 and summer 2005, in particular in the area near the platform and utility pole. Based on the photographs, approximately 2 feet of horizontal erosion occurred between the summer of 2003 and June 2005, based upon the approximate position of the beach grass line relative to the utility pole.

The H2 and H3 shoreline profiles (Figures 3 and 4, respectively) do not show large changes in shoreline profiles. The H1 profile (Figure 2) shows some changes in shoreline elevation, with some sand accretion near the start of the survey at the dune line and some sand erosion seaward of the dune line. However, the overall profile of the beach is generally consistent between the two survey events.

For comparison purposes, natural shoreline changes in this general area were evaluated using publicly-available information from the Shoreline Change Project completed by the

Massachusetts Coastal Zone Management (MACZM). A total of seven shoreline transects, identified as transect numbers 21003 to 21009, are present in the general area and the locations of these transects are shown on Figure 6. Transects 21003, 21004, and 21005 are located in the primary area of concern. The published annual shoreline change rates at the individual transect locations are summarized below:

Annual Shoreline Change Rate (feet per year)

Transect Number	1845 to 1895	1895 to 1978	1978 to 1994	Long Term
21003	+0.1968	-0.8858	-2.9856	-0.75
21004	-0.2625	-0.853	-2.5262	-0.82
21005	-0.2625	-0.9842	-2.0997	-0.85
21006	-0.2297	-1.0171	-1.5748	-0.85
21007	-0.164	-0.9514	-2.1982	-0.82
21008	-0.2953	-0.9186	-0.164	-0.69
21009	-0.3937	-0.9514	+1.6732	-0.59

Note: Negative values indicate erosion (i.e., landward movement of the shoreline) and positive numbers indicate accretion (i.e., seaward movement of the shoreline).

The data from the MACZM Shoreline Change Project indicate that natural shoreline changes in this general area are resulting in long-term net erosion, ranging from a long-term net average of 0.59 to 0.85 feet per year, at all the transect locations. It is important to note that at the three transects located in the primary area of concern (transects 21003, 21004, and 21005), the MACZM Shoreline Change Project indicates that the annual rate of erosion between 1978 to 1994 has accelerated from previous rates to between 2 and 3 feet per year, which is greater than the annual rate of erosion that occurred between summer 2003 and summer 2005 (i.e., one foot per year) in the area at issue.

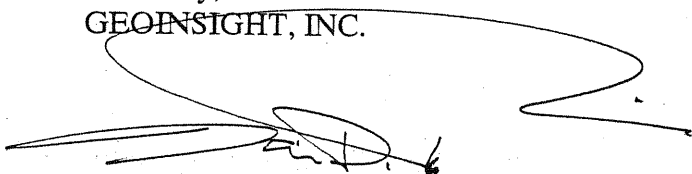
4.0 SUMMARY AND CONCLUSIONS

Comparison of photographs taken in 2003 and 2005 from the area of concern indicates that shoreline erosion has occurred. In particular, approximately 2 feet of horizontal erosion have occurred in the area near the platform and the utility pole. However, information from the MACZM Shoreline Change Project indicates that this rate of erosion is within the natural range of shoreline erosion, and well below the recent (i.e., from 1978 to 1994) erosion rates that range from 2 feet to 3 feet per year. It is important to note that the presence of the platform, utility pole, sandbags, and fence components observed in this area may also have contributed to local accelerated erosion due to turbulence around the structures and associated scouring during high tide.

In summary, the erosion that was identified in this area appears to be well within the range of natural erosion for this area as documented by MACZM, and the presence of structures in the area where the erosion was primarily observed may have had an effect on local erosion rates. Based upon the data identified above, increased erosion in this area from the B120 oil spill cleanup operations was not identified.

Feel free to contact Kevin Trainer of GeoInsight at 978-692-1114 if you have any questions or if you would like to discuss the information in this letter.

Sincerely,
GEOINSIGHT, INC.



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

Attachments: Figure 1 – Aerial Photograph
Figure 2 – W2A-10 (Brower Beach) Transect H1
Figure 3 – W2A-10 (Brower Beach) Transect H2
Figure 4 – W2A-10 (Brower Beach) Transect H3
Figure 5 – Approximate Profile Locations
Figure 6 – Coastal Zone Management Shoreline Change Transects
Shoreline Photographs


cc: Austin P. Olney, LeBoeuf, Lamb, Greene & MacRae LLP
Andrew N. Davis, LeBoeuf, Lamb, Greene & MacRae LLP



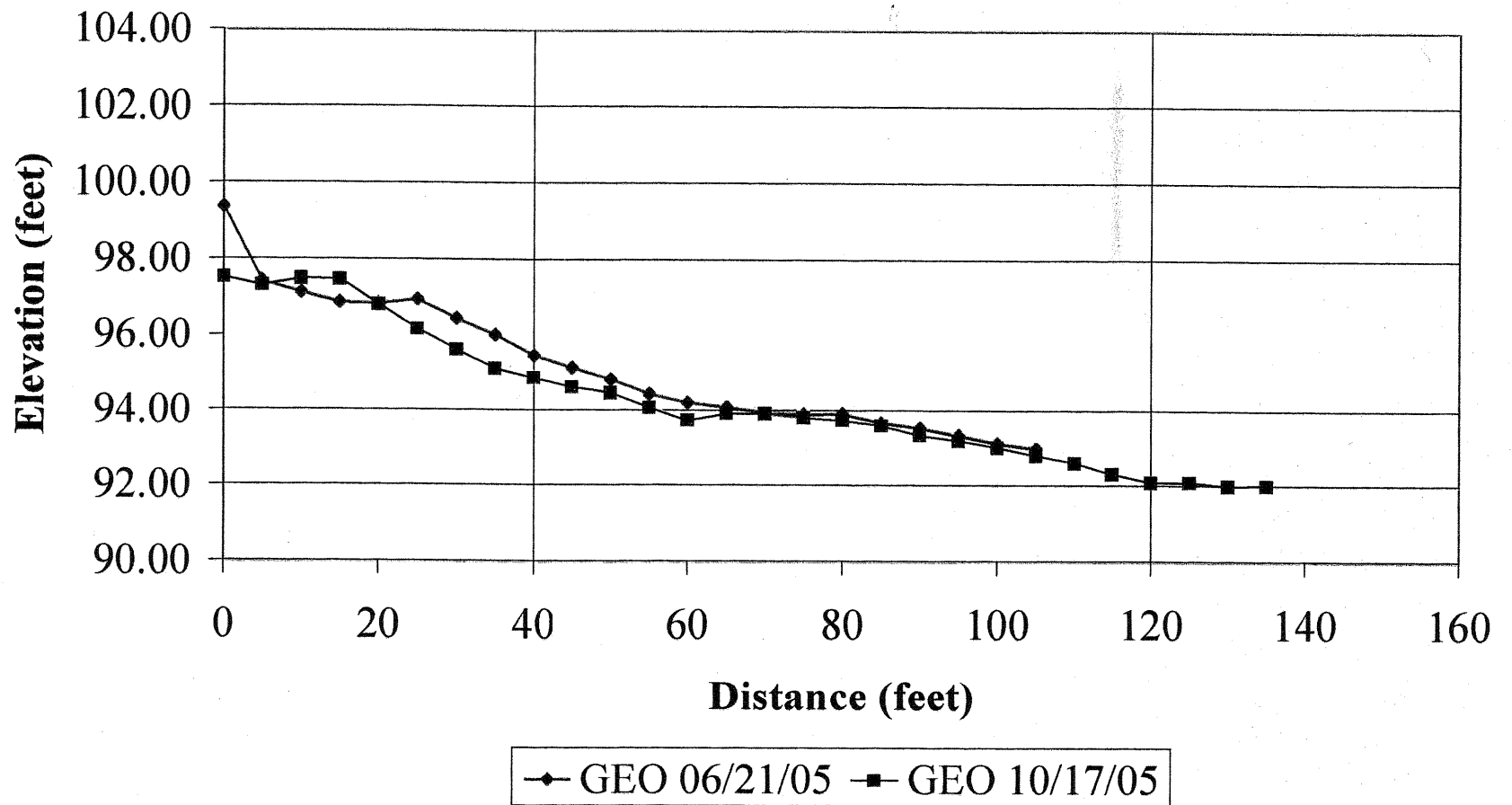
APPROXIMATE LOCATION OF
PLATFORM AND UTILITY POLE

GOLIART MEMORIAL DRIVE

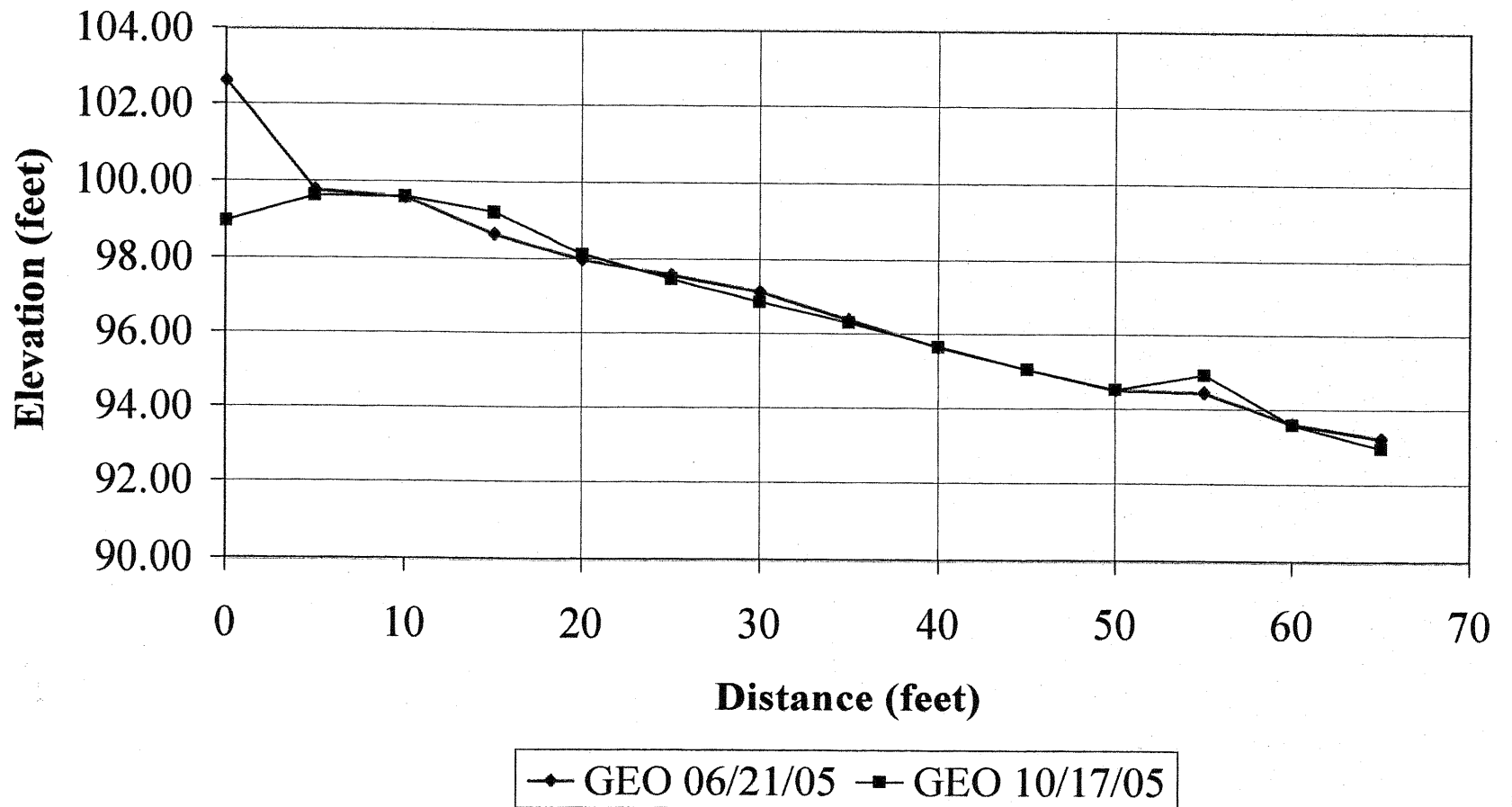


		PROJECT:		
		B120 OIL SPILL		
		LOCATION:		
		W2A-09 FAIRHAVEN, MASSACHUSETTS		
TITLE:				
AERIAL PHOTOGRAPH				
DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE #:
KDT	KDT/LMR	KDT	KDT	
SCALE:	DATE:	FILE:	PROJECT #:	
AS SHOWN	2/13/06	387IFIG1	3871-002	

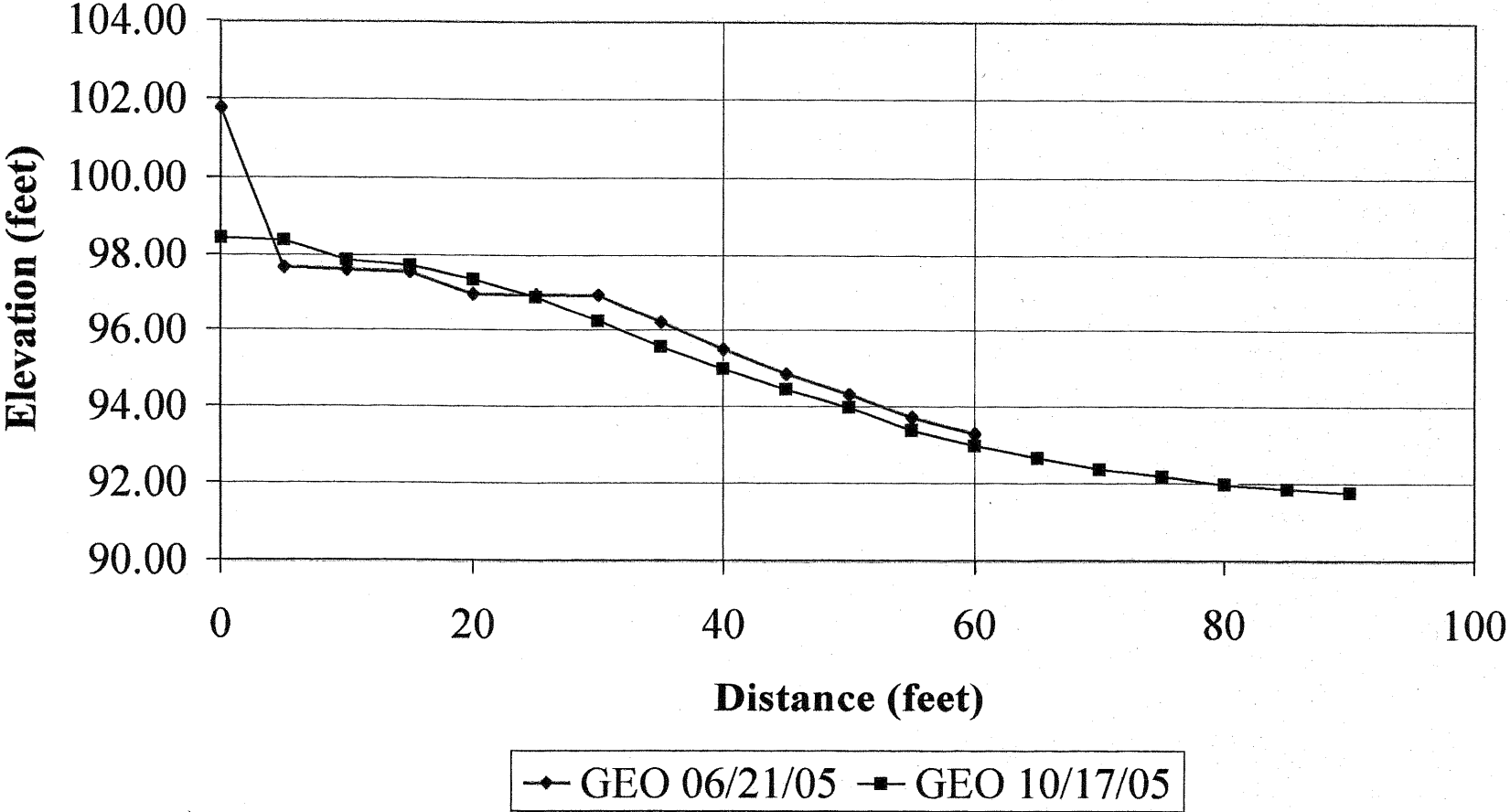
**Figure 2 - W2A-10 (Brower Beach)
Transect H1**

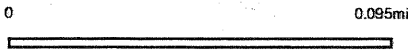



**Figure 3 - W2A-10 (Brower Beach)
Transect H2**

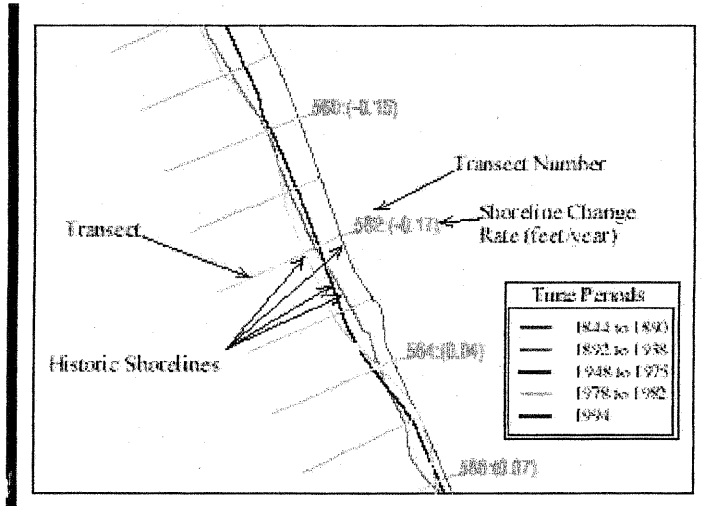
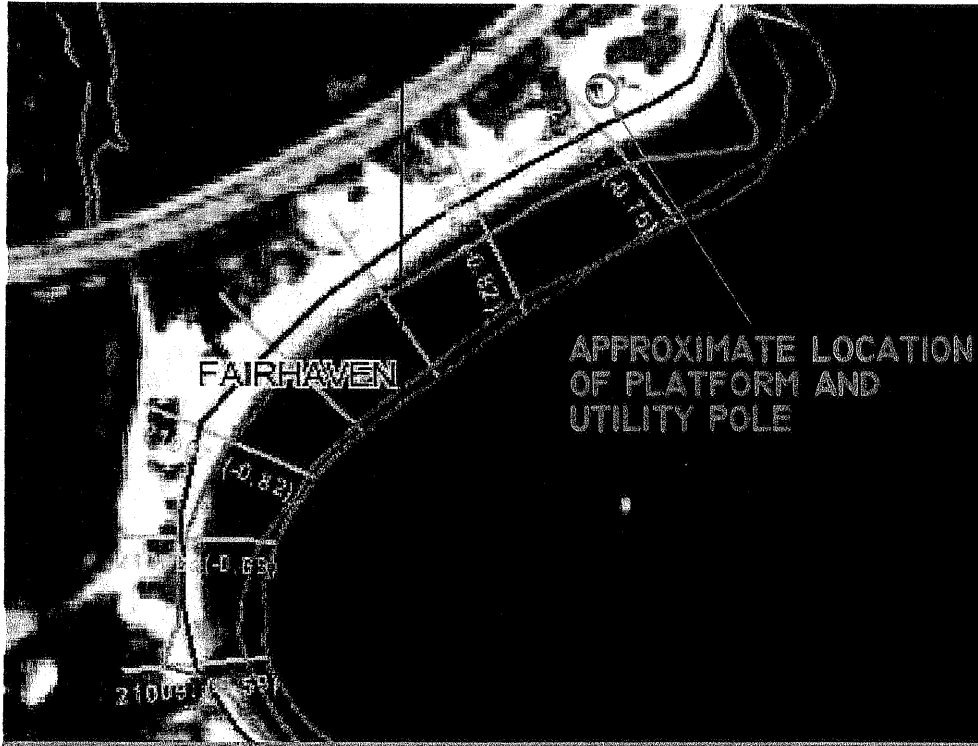



**Figure 4 - W2A-10 (Brower Beach)
Transect H3**





		PROJECT:			B120 OIL SPILL
		LOCATION:			W2A-09 FAIRHAVEN, MASSACHUSETTS
TITLE: APPROXIMATE PROFILE LOCATIONS JUNE AND AUGUST 2005					
DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE #:	
LAC	KEZ	KDT	KDT	5	
SCALE: AS SHOWN	DATE: 1/31/06	FILE: 3871	PROJECT #: 3871-002		



		PROJECT:			B120 OIL SPILL
		LOCATION:			W2A-10 FAIRHAVEN, MASSACHUSETTS
TITLE: COASTAL ZONE MANAGEMENT SHORELINE CHANGE TRANSECTS					
DESIGNED:	DRAWN:	CHECKED:	APPROVED:	FIGURE #:	
KDT	KDT/LMR	KDT	KDT	6	
SCALE:	DATE:	FILE:	PROJECT #:		
AS SHOWN	2/13/06	3871FIG6	3871-002		