

October 27, 2016

Washington State Department of Ecology
PO Box 47600
Olympia, Washington 98504-7600

Attention: Arianne Fernandez

Subject: Engineering and Institutional Controls Monitoring Report – Year 2
Cap Sante Marine Site
Anacortes, Washington
Ecology Consent Decree No. 9917
GEI File No. 5147-005-10

INTRODUCTION

This report presents a summary of the second annual engineering and institutional controls monitoring activities for the Cap Sante Marine Site (Site) located in Anacortes, Washington. The Site includes portions of the Former Cap Sante Marine Lease Area and Fisherman’s Work and Parking Area. The Site is referenced in the Washington State Department of Ecology (Ecology) databases as the Cap Sante Marine Site (Ecology Facility/Site Identification No. 67532227) and is subject to a restrictive covenant recorded with the Skagit County Auditor on August 5, 2014 (Recoding No. 201408050034). Monitoring and maintenance activities are being performed by the Port of Anacortes (Port) pursuant to the Ecology-approved Engineering and Institutional Controls Monitoring Plan (EICMP; GeoEngineers, 2014) to prevent human and terrestrial wildlife exposure to residual contamination exceeding cleanup levels that remains in-place at the Site, as described in Ecology’s Cleanup Action Plan (CAP; Ecology 2013).

The location of the Site relative to surrounding physical features is shown on Figure 1. Current Site conditions and the locations of Monitoring and Maintenance Area A and B are shown on Figure 2. Site history including previous use, area redevelopment and cleanup actions implemented as well as, engineering and institutional controls established to prevent human/terrestrial wildlife exposure is summarized in the EICMP. Monitoring activities are summarized below.

MONITORING AND MAINTENANCE PROGRAM

Monitoring and maintenance of site controls consist of routine reconnaissance visits and performing corrective actions as necessary to address conditions that may compromise the integrity of the protective



barriers that are isolating residual Site contamination within Monitoring and Maintenance Areas A and B (Figure 2). Monitoring activities are being performed on an annual basis unless non-routine activities such as maintenance work that disturbs subsurface soil or other activities/events occur that could potentially compromise the integrity of the protective barriers within these areas.

The monitoring program consists of 1) reviewing as-built plans and/or base maps of the Site layout and surrounding area; 2) reviewing previous monitoring reports and maintenance records; and 3) conducting a visual reconnaissance of Monitoring and Maintenance Areas A and B by walking the perimeter of these areas and completing multiple transects on a 20-foot minimum spacing to observe signs of breaching, cracking, deformation and/or erosion of the surface areas and signs of sheen along shoreline in the eastern portion of Monitoring and Maintenance Area A as well as evidence of any other anomalies or non-routine activities that may compromise the integrity of the protective barriers or result in the release of Site contaminants. Observed Site conditions for the baseline and first annual monitoring and maintenance event are summarized below.

Summary of Observed Site Conditions

Year 2 Monitoring Event

Conditions within Monitoring and Maintenance Area A and B were evaluated during the August 2016 (Year 2) monitoring event. In accordance with the monitoring and maintenance program, visual reconnaissance along the perimeter and transects with these area was performed. The condition of the Site and visual observations are documented in the attached Engineering and Institutional Monitoring and Maintenance Report Form dated August 2, 2016 (Appendix A) and are generally similar to the baseline and Year 1 condition. Evidence of non-routine activities such as maintenance work resulting in disturbances to the soil, vegetation or paved surfaces potentially compromising the integrity of the protective barriers within these areas were not observed. In addition, evidence of significant damage or instability to the protective barriers including paved/vegetated surfaces and armored shoreline as compared to the baseline monitoring event (described above) was not observed.

FUTURE MONITORING AND MAINTENANCE ACTIVITIES

Future monitoring activities will be continued at the Site in accordance with the EICMP. Conditions at the Site requiring maintenance/corrective actions were not identified during the August 2016 monitoring event. The Port will continue to observed site conditions and perform maintenance/corrective activities on an as-needed basis to ensure the long-term integrity and performance of the protective barriers to prevent human/terrestrial wildlife exposure to residual contamination remaining in-place. Summaries of these activities will be submitted to Ecology on an annual basis.

LIMITATIONS

This report has been prepared for the exclusive use of the Port of Anacortes, their authorized agents and regulatory agencies in their evaluation of the Cap Sante Marine Site located in Anacortes, Washington. No other party may rely on the product of our services unless we agree in advance and in writing to such reliance.



Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions express or implied should be understood. Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

REFERENCES

GeoEngineers, Inc., "Engineering and Institutional Controls Plan, Cap Sante Marine Site, Anacortes, Washington, Ecology Consent Decree No. 9917," GEI File No. 5147-005-10, prepared for the Washington State Department of Ecology on behalf of Port of Anacortes, August 6, 2014.

Washington State Department of Ecology (Ecology, 2013), "Cleanup Action Plan (CAP), Cap Sante Marine Site, Anacortes, Washington," by the Washington State Department of Ecology, Toxics Cleanup Program, Lacey, Washington, December 10, 2013.

Sincerely,
GeoEngineers, Inc.

Robert Trahan

Robert S. Trahan
Senior Environmental Scientist

J. M. Herzog

John M. Herzog, PhD
Principal

RST:JMH:leh

Attachments:

List of Figures

Figure 1. Vicinity Map

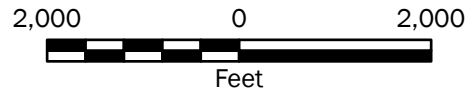
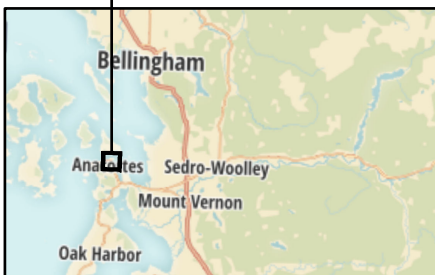
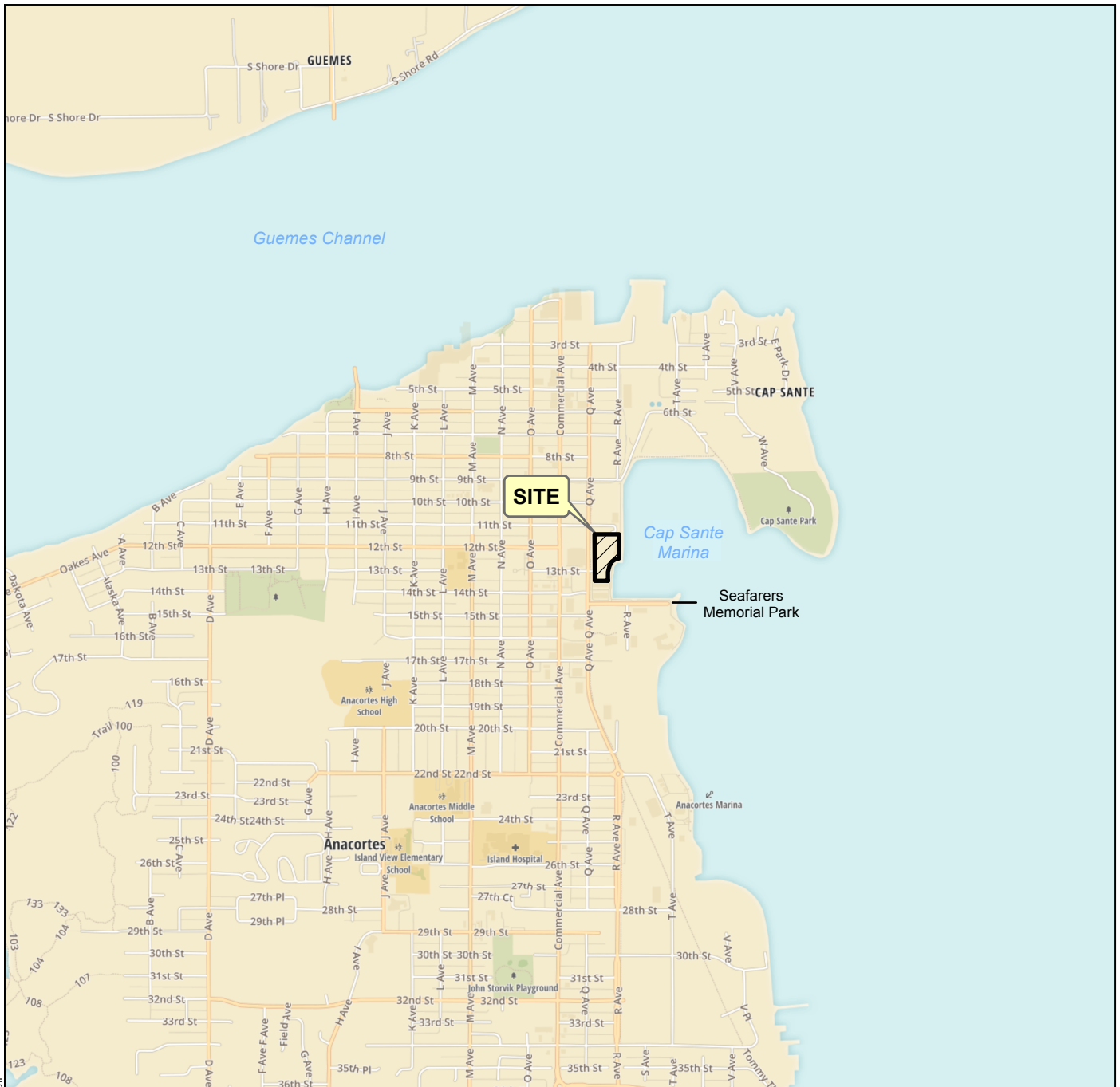
Figure 2. Site Plan

Appendices

Appendix A. Engineering and Institutional Monitoring and Maintenance Report Forms

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.





Vicinity Map

Cap Sante Marine Site
Anacortes, Washington



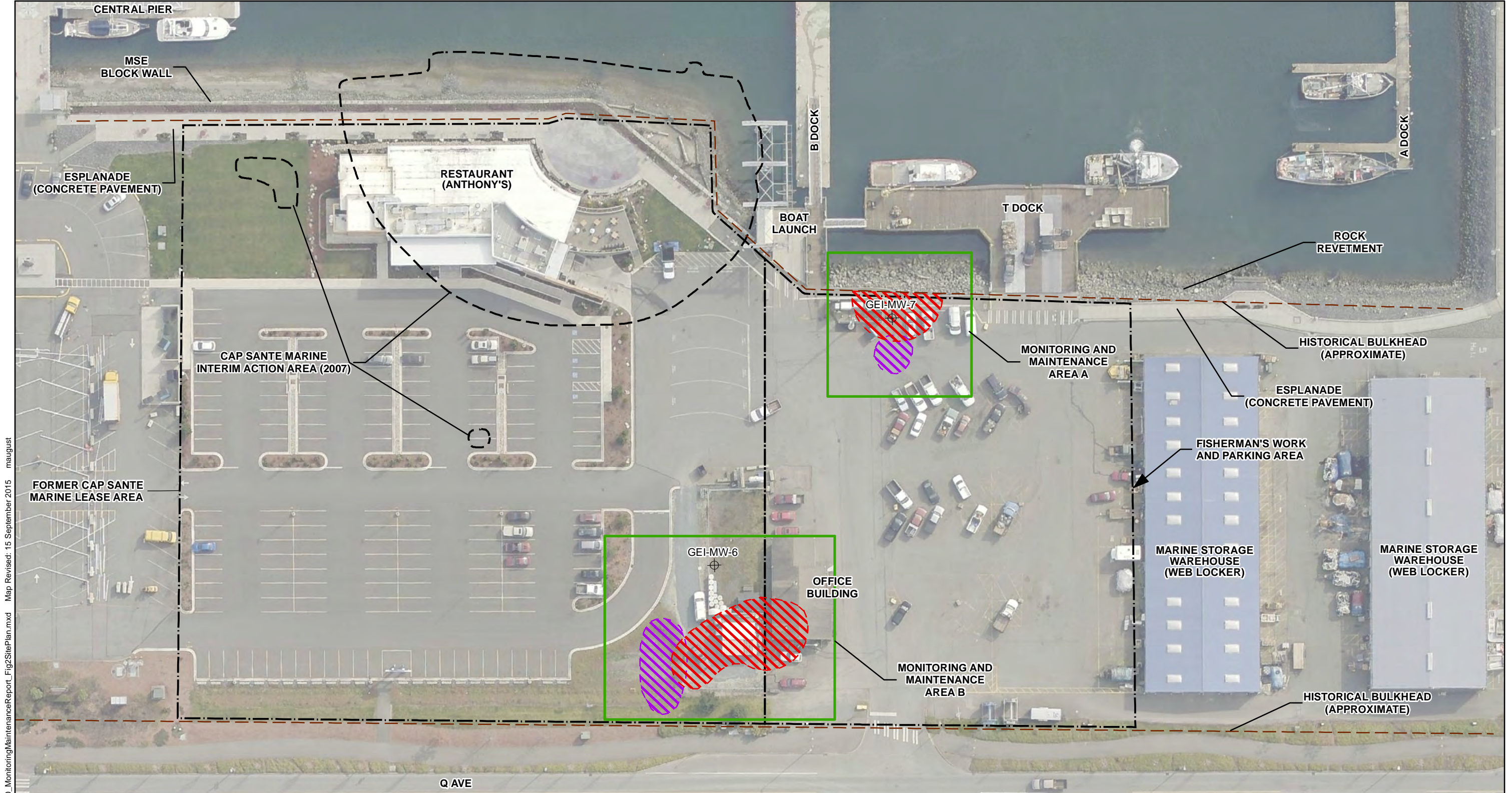
Figure 1

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 10N



Path: \\sea\projects\515147005\GIS\514700510_MonitoringMaintenanceReport_Fig2SitePlan.mxd Map Revised: 15 September 2015 maugust

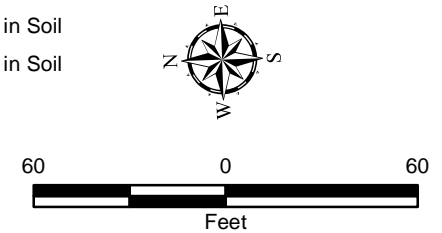
Data Source: Base aerial provided by the Port of Anacortes, March 2013. Skagit County GIS.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
 1. Sampling locations in the vicinity of the areas identified to contain COCs exceeding site cleanup levels are shown on this figure.
 2. The locations of all features shown are approximate.
 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Legend
 Monitoring Well Location

Areas With Contaminant of Concern (COCs) Exceeding Soil Cleanup Level
 Approximate Area of TPH Exceedance in Soil
 Approximate Area of PAH Exceedance in Soil
 PAH - Polycyclic Aromatic Hydrocarbons
 TPH - Petroleum Hydrocarbons (Gasoline, Diesel and/or Heavy Oil)



Site Plan	
Cap Sante Marine Site Anacortes, Washington	
	Figure 2

APPENDIX A
Engineering and Institutional Monitoring and
Maintenance Report Forms

Engineering and Institutional Controls Monitoring Report

Site Name:

Cap Sante Marine Site

Date:

08/2/2016

Monitoring Event Completed By (name, title, organization):

Robert S. Trahan, Senior Environmental Scientist, GeoEngineers

A. General Instructions

1. All checklist items must be completed and detailed comments made to document the results of the site controls evaluation.
2. The completed checklist is part of the field record of the evaluation. Additional pages should be used (as necessary) to ensure a complete record is made. Number, date, initial and attach additional pages to this checklist upon completion.
3. Any checklist line item marked in a SHADED BOX must be fully explained or an appropriate reference to previous reports provided. The explanation should include the rationale for conclusions and recommendations, if appropriate. Annotated the attached site maps as appropriate to provide additional detail.
4. An evaluation of the site controls should consist of a complete site walk including the perimeter and multiple transects across the Site no greater than 20 feet apart to fully evaluate the condition of site controls and features specifically described in this checklist.
5. Photographs of the site controls and/or site features should be taken to document the overall condition of the site. In addition, all anomalous features or new features (such as changes or damage to the existing site controls) should also be photographed. Attach any photographs of the site to this checklist upon completion of the site evaluation.

B. Preparation (to be completed prior to site visit)	YES	NO	EXPLANATION
1. Site as-built plans and/or base maps reviewed?	X		
2. Previous monitoring report reviewed?	X		
a. Were anomalies or site changes identified on the previous report?		X	
b. Was maintenance performed on areas with identified anomalies?			Not applicable - No previous maintenance/corrective actions
3. Site Maintenance and repair records reviewed?			Not applicable - No previous maintenance/corrective actions
a. Has site repair resulted in a change from as-built conditions?			Not applicable - No previous maintenance/corrective actions
b. Are revised as-built drawings available that reflect repair changes?			Not applicable - No previous maintenance/corrective actions

C. Evaluation of Controls (to be completed during site visit)	YES	NO	EXPLANATION
1. Changes in adjacent property conditions?		X	
a. Any change in adjacent property tenants?		X	
b. Any change in property use /features?		X	
c. Any utility and/or maintenance work completed?		X	
d. Any erosion of adjacent property surfaces?		X	
e. Changes in surrounding vegetation?		X	
2. Changes in property conditions?		X	
a. Any change in adjacent property ownership?		X	
b. Any change in property tenant(s)?		X	
c. Any change in property use /features?		X	
d. Any utility, repair and/or maintenance work completed?	X		Asphalt seal coat applied to portions Fisherman's Work and Parking Area including the paved surface west of Cap Sante Marina and east of Q Ave, and north of the Marina Storage Warehouse and south of the B Bock.
3. Integrity of protective soil areas threatened?		X	
a. Evidence of disturbance, excavation or grading?		X	
b. Evidence of animal burrowing?		X	
c. Evidence of erosion (wind or water)?		X	
d. Change in vegetation cover?		X	
e. Evidence of ponded water (excluding bioswale)?		X	

Site Name: Cap Sante Marine Site		Date: 8/02/2016	
C. Evaluation of Controls (continued)	YES	NO	EXPLANATION
4. Integrity of protective paved (asphalt and concrete) areas threatened?		X	
a. Evidence of disturbance, excavation, grading?		X	
b. Evidence of cracking?		X	
c. Evidence of erosion/subsidence?		X	
d. Evidence of ponded water?		X	
f. Evidence of invasive plant species (weeds)?		X	
5. Integrity of shoreline area threatened?		X	
a. Evidence of disturbance, excavation, grading?		X	
b. Evidence of erosion/subsidence?		X	
c. Evidence of ponded water?		X	
d. Evidence of staining or sheens along shoreline? If yes, is the staining or sheen emanating from the Site?		X	
g. If yes, is the staining or sheen emanating from the Site?		X	
6. Photographs taken documenting current Site conditions?	X		
D. Conclusions and Recommendations	YES	NO	EXPLANATION
1. Is there visual evidence of an imminent threat to the integrity of the soil, paved or shoreline areas?		X	
2. Are follow-up site evaluations required?		X	
3. Are existing maintenance/corrective actions satisfactory?			Not Applicable - No previous maintenance/corrective actions for the Site
4. Are other maintenance/corrective actions necessary?		X	
5. Corrective/Maintenance Action(s) Required: Required corrective and/or maintenance actions were not identified during the August 2, 2016 reconnaissance visit.			
6. Corrective/Maintenance Action Implemented:			
Date Implemented: _____			

7. Additional Comments:

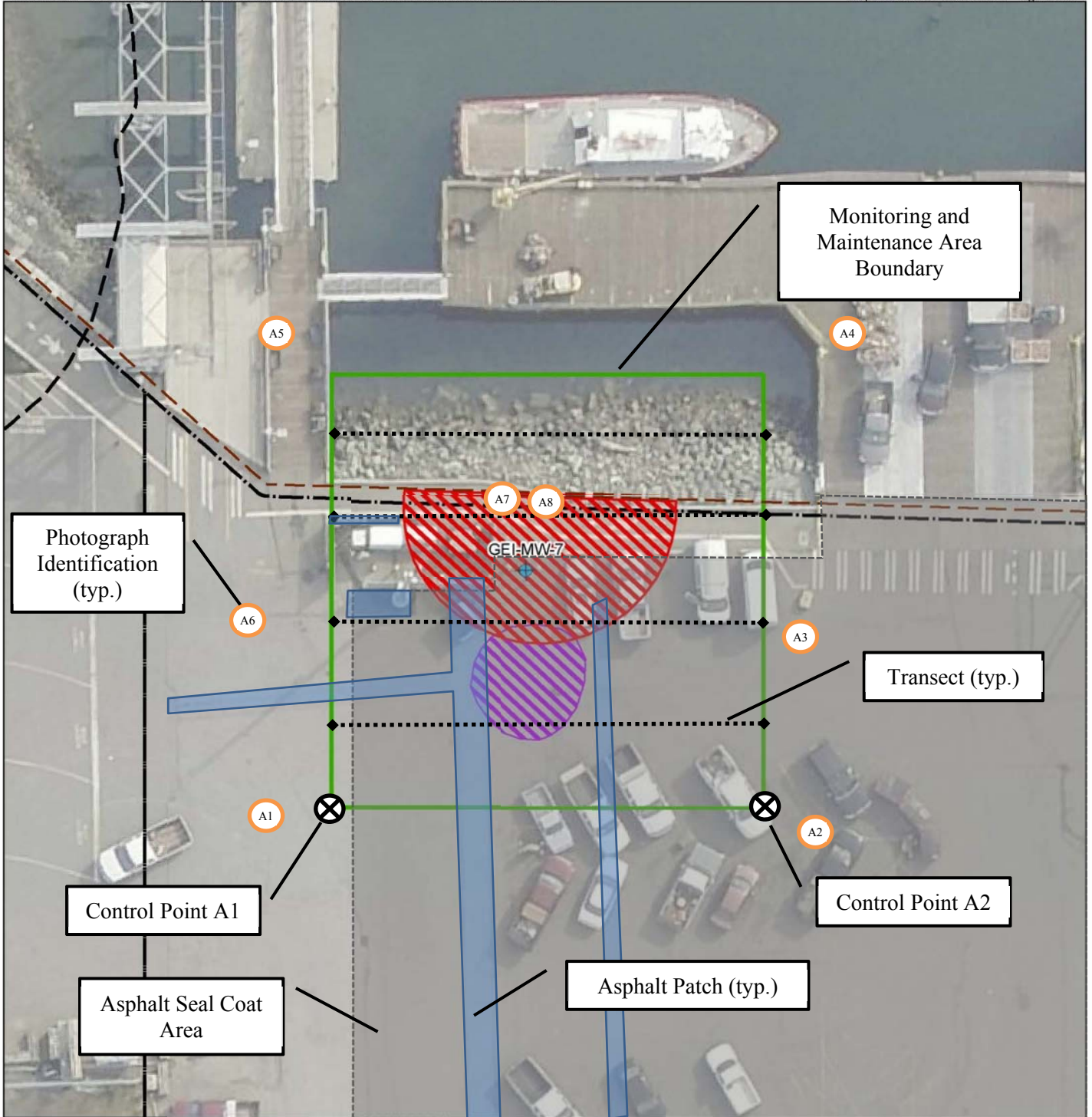
Current conditions are shown on the attached Site Plans (Figures 1 and 2). Photographs of representing the current conditions of Monitoring and Maintenance Areas A and B are attached.



Signature:

Date:

8/02/2016



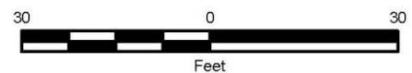
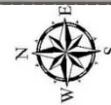
Legend

Monitoring Well Location

Areas With Contaminant of Concern (COCs)

- Approximate Area of PAH Exceedance in Soil
- Approximate Area of TPH Exceedance in Soil

PAH Polycyclic Aromatic Hydrocarbons
 Petroleum Hydrocarbons
 TPH (Gasoline, Diesel and/or Heavy Oil)



Data Source: Base aerial provided by the Port of Anacortes, March 2013. Skagit County GIS.
 Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet
 Notes:

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Monitoring and Maintenance Area A

Cap Sante Marine Site
 Anacortes, Washington

Figure 1



Photo A1: Protective asphalt barrier looking southeast from Control Point A1 (See Figure 1).



Photo A2: Protective asphalt barrier looking northeast from Control Point A2 (see Figure 1).



Photo A3: Protective asphalt barrier looking north (see Figure 1).



Photo A4: Protective stone revetment barrier looking northwest (see Figure 1).



Photo A5: Protective stone revetment barrier looking southwest (see Figure 1).



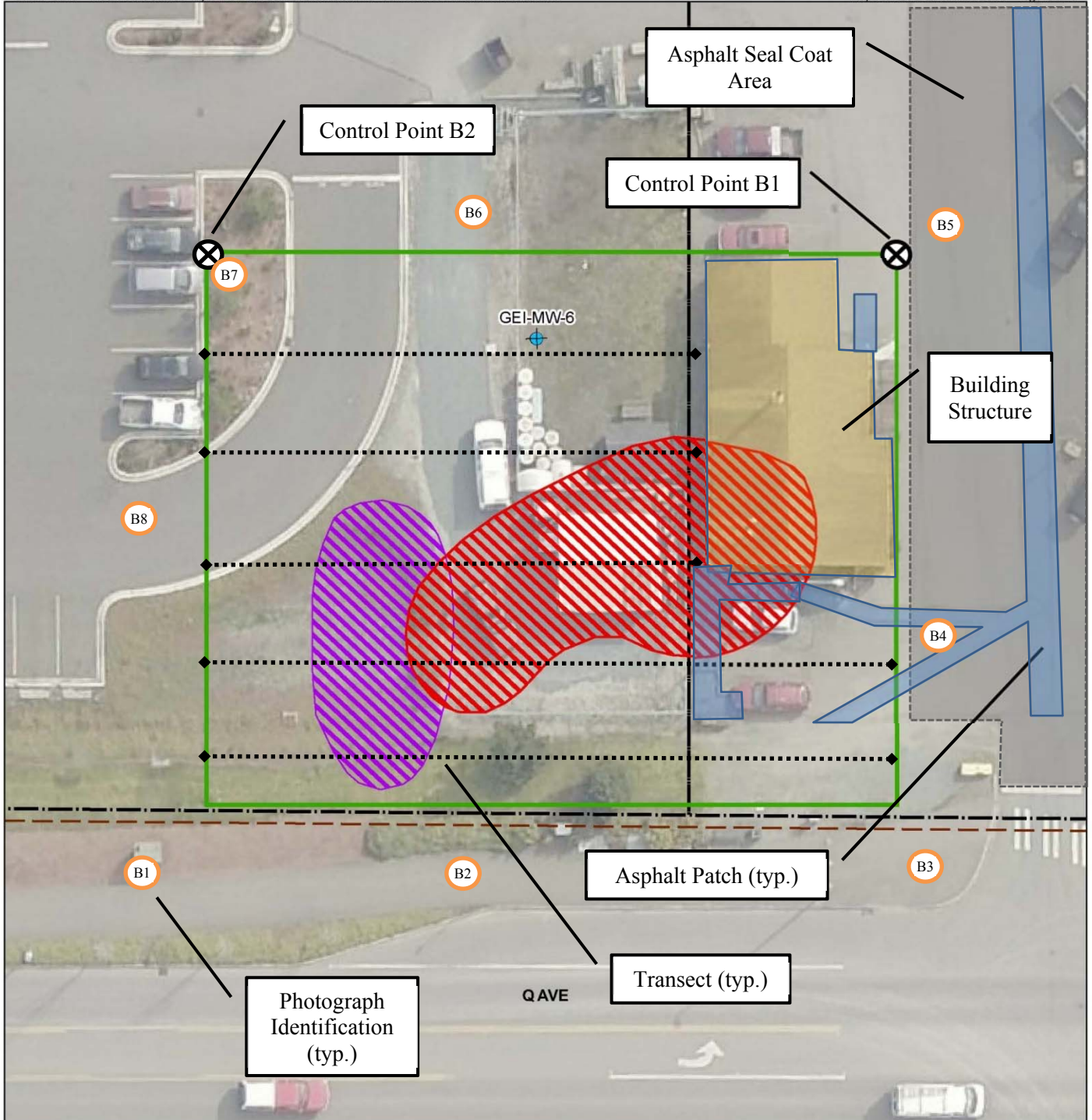
Photo A6: Protective asphalt barrier looking south (see Figure 1).



Photo A7: Protective asphalt barrier east of the utilities looking north (see Figure 1).



Photo A8: Protective asphalt barrier east of the utilities looking south (see Figure 1).



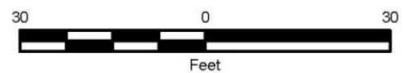
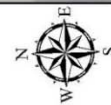
Legend

Monitoring Well Location

Areas With Contaminant of Concern (COCs)

- Approximate Area of PAH Exceedance in Soil
- Approximate Area of TPH Exceedance in Soil

PAH Polycyclic Aromatic Hydrocarbons
 Petroleum Hydrocarbons
 TPH (Gasoline, Diesel and/or Heavy Oil)



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Monitoring and Maintenance Area B

Cap Sante Marine Site
Anacortes, Washington

Figure 2



Photo B1: Protective vegetated topsoil barrier looking southeast (see Figure 2)



Photo B2: Protective vegetated topsoil and crushed gravel barriers looking north (see Figure 2)



Photo B3: Protective asphalt and crushed gravel barriers looking northeast (see Figure 2)



Photo B4: Protective asphalt barrier south of the office building (see Figure 2)



Photo B5: Protective asphalt barrier looking northwest from Control Point B1 (see Figure 2)



Photo B6: Protective crush gravel and topsoil barriers with fenced enclosure north of the office building (see Figure 2)



Photo B7: Protective crush gravel, topsoil and asphalt barriers north of the office building (see Figure 2)



Photo B8: Protective crush gravel and topsoil barriers with fenced enclosure north of the office building (see Figure 2)