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FREE PRODUCT REMOVAL TREATABILITY STUDY REPORT FOR TRUMBO POINT  
BACHELOR OFFICER QUARTERS BUILDING C-2076 WITH TRANSMITTAL LETTER NAS  
KEY WEST FL  
09/22/2010  
TETRA TECH NUS



AIK-10-0335

September 22, 2010

Project Numbers 01552

*via FedEx*

Beverly Washington  
Building 135 Ajax Street  
Naval Air Station  
Jacksonville, FL 32212-0030

Reference: CLEAN Contract No. N62467-04-D-0055  
Contract Task Order No. 0122

Subject: Free Product Removal Treatability Study Report for The Trumbo Point Bachelor Officer Quarters, Building C-2076, Rev. 0, for Naval Air Station, Key West, Florida

Dear Ms. Washington:

I have enclosed a "Living CD" containing the PDF file for the Free Product Removal Treatability Study Report for The Trumbo Point Bachelor Officer Quarters, Building C-2076, Rev. 0, Naval Air Station, Key West, Florida. The file is being sent to you and NAS Key West personnel via FedEx to meet TtNUS's contractual obligation under CTO 0122. I am not expecting any comments on this document; however, I am expecting to send a copy of this document to FDEP after receipt of your approval.

Please call me at (803) 641-4943, if you have any questions regarding the enclosed document.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. M. Bryan', with a stylized flourish at the end.

C. M. Bryan  
Project Manager

CMB:spc

c: Ms. Debra M. Humbert (Letter Only)  
Mr. C. Pike/File  
Mr. R. Courtright, NAS Key West (Hard Copy/CD)  
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Mr. R. Demes, NAS Key West (Letter Only)  
File 01552-7.11.1

# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-04-D-0055



Rev. 0  
09/20/10

## Free Product Removal Treatability Study Report

for

**The Trumbo Point Bachelor Officer Quarters,  
Building C-2076**

**Naval Air Station Key West  
Key West, Florida**

**Contract Task Order 0122**

**September 2010**



Southeast

NAS Jacksonville

Jacksonville, Florida 32212-0030

**FREE PRODUCT REMOVAL TREATABILITY STUDY REPORT**  
**FOR**  
**THE TRUMBO POINT BACHELOR OFFICER QUARTERS, BUILDING C-2076**  
  
**NAVAL AIR STATION KEY WEST**  
**KEY WEST, FLORIDA**  
  
**COMPREHENSIVE LONG-TERM**  
**ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:**  
**Naval Facilities Engineering Command**  
**Southeast**  
**NAS Jacksonville**  
**Jacksonville, FL 32212-0030**

**Submitted by:**  
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**CONTRACT NUMBER N62467-04-D-0055**  
**CONTRACT TASK ORDER 0122**

**SEPTEMBER 2010**

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## ACRONYMS

ACOE	Army Corps of Engineers
AST	aboveground storage tank
BBL	Blasland, Bouck, & Lee, Inc.
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
DRF	Discharge Reporting Form
EPA	Environmental Protection Agency
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
ft	feet
GCTL	Groundwater Cleanup Target Level
IDW	Investigation Derived Waste
LLW	Lower Low Water
MLLW	Mean Lower Low Water
NAS	Naval Air Station
NAVFAC SE	Naval Facilities Engineering Command, Southeast
No.	Number
NOAA	National Oceanographic and Atmospheric Administration
oz	ounce
PWC	Public Works Center
RAP	Remedial Action Plan
SAR	Site Assessment Report
SCTL	Soil Cleanup Target Level
TPBOQ	Trumbo Point Bachelor Officer Quarters
TRPH	Total Recoverable Petroleum Hydrocarbons
TtNUS	Tetra Tech NUS, Inc.
UST	underground storage tank

## 1.0 INTRODUCTION

Tetra Tech NUS, Inc. (TtNUS) was contracted by the Department of the Navy, Naval Facilities Engineering Command, Southeast (NAVFAC SE) to perform this Free Product Removal Treatability Study for the Trumbo Point Bachelor Officer Quarters (TPBOQ), Building C-2076 under the Comprehensive Long-term Environmental Action Navy (CLEAN) IV Contract Number N62467-04-D-0055, Contract Task Order (CTO) 0122. The goal of this study is to evaluate the effectiveness of the PIG<sup>®</sup> Monitoring Well Skimming Sock in recovering free-phase petroleum product from the soils and groundwater beneath the TPBOQ.

### 1.1 SITE HISTORY

Trumbo Point is a 140-acre landfill area on the northern portion of the island of Key West that was created in 1908 to provide land for the tracks and warehouses needed for a major port. The TPBOQ is located on Trumbo Point in Section 32, Township 67S, Range 25E, as represented in Figure 1-1. The site encompasses much of the paved loading dock and is bounded to the north by the west wing of the TPBOQ, on the east by the south wing of the TPBOQ, on the south by Chevalier Avenue, and on the west by Ely Street extension. The site topography is level with an elevation of approximately 5 feet above mean sea level. The Gulf of Mexico is 300 yards to the north and Garrison Bight is 100 yards to the east of the center of the TPBOQ.

A 1,000-gallon JP-5 aboveground storage tank (AST) with secondary containment, used to fuel the water heaters for the TPBOQ, is located near the southwest corner of the loading dock. An aboveground propane tank is also located on site to the southwest of the loading dock. The locations of the AST and the propane tank are shown on Figure 1-2.

The underground free-phase petroleum plume was first discovered near a water line and valve pit adjacent to the current AST. The release was reported to have emanated from an abandoned fuel line associated with a 100-gallon AST, formerly located on the southern portion of the site. While this fuel line was located near a water valve pit, the exact location of the abandoned line is not known [Blasland, Bouck, and Lee, Inc. (BBL), 2000, 2002].

#### 1.1.1 History of Contaminant Discovery

The Navy discovered free petroleum product at the site on February 27, 1998, during a routine inspection of a water line valve pit [Public Works Center (PWC), 1999]. Consequently, the Public Works Department of NAS Key West submitted a Discharge Reporting Form (DRF) to the Florida Department of Environmental Protection (FDEP) on March 3, 1998. The quantity of discharged free-phase product was estimated at less than 5 gallons. A second DRF was filed for the site on March 11, 1998, after a failure

was found during a tightness test that was conducted on the underground piping from the AST. The DRF indicated that the cause of the release was corroded piping and the product discharged was JP-5 jet fuel. The failure of an active product line to pass a pressure test resulted in abandonment of the line (BBL, 2002).

Additional sources of contaminant spills have been mentioned in historical documents (BBL, 2002). According to Navy personnel, a gasoline line ran along Chevalier Avenue, branched north into the parking lot of the TPBOQ, and split to the east and to the west toward buildings. This underground gasoline line reportedly remains in place and may have fed an underground storage tank (UST) in the vicinity of the former propane tank (west of the valve pit) or underneath the TPBOQ building. Diesel fumes forced the evacuation of the TPBOQ in 1999, indicating another spill or release. The diesel fumes were reported to be associated with a diesel generator in the building. There may have also been leaks from the generator piping beneath the building (BBL, 2002).

### **1.1.2 Source Removal, Assessment and Remedial Action Measures**

As a result of petroleum releases in February and March 1998, approximately 55 cubic yards of contaminated soil and approximately 10 gallons of free product were removed from the vicinity of the valve pit, located south of the loading dock (Figure 1-2). Due to the proximity of the TPBOQ building and an active propane gas supply line to the source removal, excavation of the entire extent of impacted soils was not possible. A Source Removal Report was submitted to the FDEP by the Navy on October 14, 1998.

A site assessment was subsequently conducted by PWC Pensacola and a Site Assessment Report (SAR) was submitted to FDEP (PWC, 1999). This SAR concluded that diesel fuel free product probably remained on site, and that dissolved-phase groundwater petroleum hydrocarbon concentrations exceeded the groundwater cleanup target levels (GCTLs). Soil contamination was present in excess of the soil cleanup target levels (SCTLs) specified in Chapter 62-777, F.A.C. for both the Residential Use Direct Exposure and Commercial/Industrial Use Direct Exposure. On-site soil analyses with an organic vapor analyzer showed readings in excess of 1,000 parts per million (ppm) (PWC, 1999). FDEP approved the SAR on July 9, 1999, concurring with the recommendation to prepare a Remedial Action Plan (RAP) for the site.

The RAP prepared for the site recommended conducting several short-term multi-phase extraction events until free product was no longer present in any of the monitoring wells (BBL, 2002). Multi-phase extraction technology proved to be ineffective, however, due to the low transmissivity of the subsurface formations.

Sampling events to monitor the level of groundwater contamination at the TPBOQ were conducted in May 2003, November 2006, and November 2008. During the May 2003 sampling event, benzene, acenaphthene and naphthalene were detected in groundwater at the site in excess of GCTLs, and approximately 0.5 foot of free-phase product was observed in monitoring well TPBOQ-MW-15 (TtNUS, 2006). During the November 2006 sampling event acenaphthene, naphthalene, benzo(a)anthracene, and iron were detected in groundwater at the site in excess of GCTLs, approximately 1.56 feet of free-phase product was observed in TPBOQ-MW-15 and approximately 0.17 foot of free-phase product was observed in TPBOQ-MW-16 (TtNUS, 2007). During the November 2008 sampling event benzene, benzo(b)fluoranthene, naphthalene, 2-methylnaphthalene, and Total Recoverable Petroleum Hydrocarbons (TRPH) were detected in groundwater at the site in excess of GCTLs (TtNUS, 2009a).

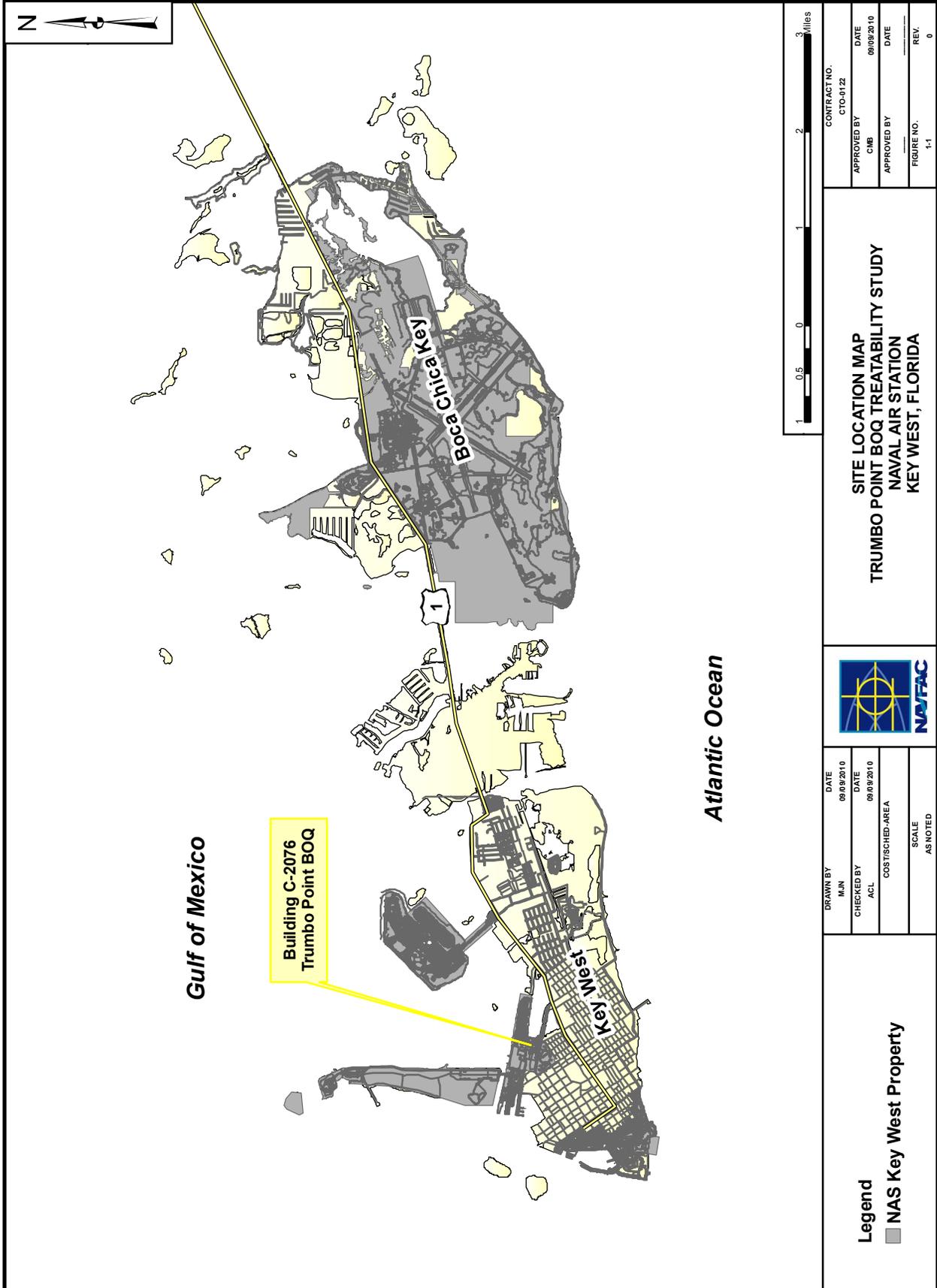
### **1.1.3 Free Product Composition Analysis**

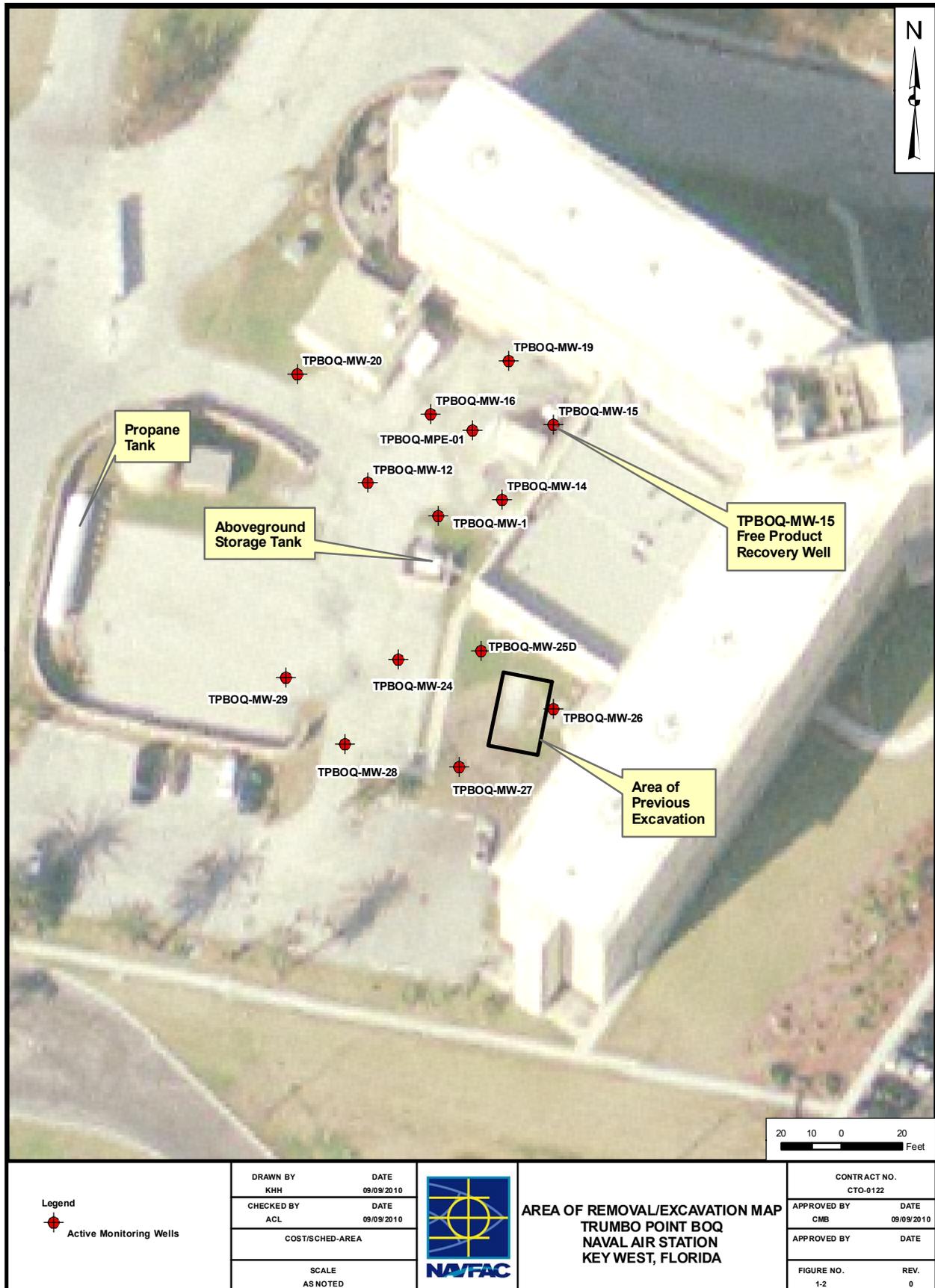
Free product composition was determined by laboratory analysis of samples (both free-phase and dissolved-phase) collected from TPBOQ-MW-15 on November 19, 2008. The samples were analyzed using the Massachusetts Department of Environmental Protection Volatile and Extractable Petroleum Hydrocarbons method, which involves the classification of hydrocarbon constituents into various carbon ranges (e.g., C9-C12 or C19-C36). The most abundant carbon range reported in the samples were the C9-C18 aliphatics, with the next most abundant being the C11-C22 aromatics range; the quantity of C19-C36 aliphatics range was about 5 percent. These results indicate that the free-phase product plume is primarily JP-5 jet fuel with a smaller quantity of diesel fuel, intermixed within the saturated soils and groundwater (TtNUS, 2009a).

### **1.1.4 Previous Free Phase Product Treatability Studies**

From July 2007 through March 2008, an initial treatability study was performed under the CLEAN IV Contract Number N62467-04-D-0055, CTO 0083 to evaluate the effectiveness of various technologies for the extraction of free product from the soils and groundwater at the TPBOQ (TtNUS 2008). The treatability study evaluated the following recovery technologies: a manual recovery and disposable tube and check-valve type bailer; a peristaltic pump; down-hole free product skimmer pump manufactured by Xitech™ Instruments; the Magnum Spill Buster™ system manufactured by Clean Earth Technology; and the Spill Buddy Pro™ system manufactured by Clean Earth Technology. During the 160 day treatability study, 35 gallons of free-phase product were removed from recovery well TPBOQ-MW-15. The study demonstrated that local tide cycles and periods of recharge between recovery events had the most significant impact on the quantity of free product recovered from the recovery well. Additional field trials using the Spill Buddy Pro™ system were recommended based on the system's ease of use, robust technological design, versatility, and selectivity of recovery medium. The free-product recovery parameters for the initial treatability study are presented in Appendix A.

A second treatability study was performed under the CLEAN IV Contract Number N62467-04-D-0055, CTO 0122 from August 9, 2008 through August 8, 2009 to further evaluate recommendations from the initial 2007-2008 treatability study for free-phase product recovery, while minimizing impacts to loading dock operations at the TPBOQ (TtNUS 2009a). The second treatability study involved the Spill Buddy Pro™ system manufactured by Clean Earth Technology and the PIG® Monitoring Well Skimming Sock. Both products generally extract free product only. During the 12-month period of the treatability study, 3.11 gallons of free-phase product were recovered from recovery well TPBOQ-MW-15. The study demonstrated that skimmer pumps have the advantage of removing larger volumes when a thicker layer of free product is present in the recovery well. However, well skimming socks have the advantage when a thinner layer exists, because they continuously remove free product from the recovery wells without the need for the daily monitoring that could impact TPBOQ operations. The study also confirmed that local tide cycles have a significant impact on the quantity of free product recovered from the recovery well. Additional field trials using the PIG® Monitoring Well Skimming Sock were recommended based on its ease of use, selectivity of recovery medium, capacity to hold more volume of free product, and minimal impact to TPBOQ operations. The free-product recovery parameters for the second treatability study are presented in Appendix B.





## **2.0 TREATABILITY STUDY ASSESSMENT AND ANALYSIS**

A RAP for the TPBOQ was drafted in 2002 based on data obtained from investigations performed by PWC Pensacola and BBL. The RAP called for free-product removal using multi-phase extraction technology. It was determined, however, that multi-phase extraction was not an effective means of free product removal at the TPBOQ site because of the unyielding condition of the subsurface materials throughout Trumbo Point and most particularly around Building C-2076. The highly-compacted sandy clay material significantly impedes the recovery of free product from the subsurface strata. Consequently, as discussed in Section 1.1.4, TtNUS was tasked in 2007 with conducting a series of Treatability Studies to evaluate free-phase product recovery rates at the TPBOQ using various technologies.

Previous investigations indicated that TPBOQ-MW-15 was most often the monitoring well with the greatest amount of free product at the TPBOQ. Consequently, TPBOQ-MW-15 was used as a recovery well for the Treatability Studies. The location of the free-product recovery well (TPBOQ-MW-15) is depicted on Figure 1-2. As shown on this figure, the recovery well is near the northwest corner of the loading dock, adjacent to the employee entrance.

### **2.1 TREATABILITY STUDY OBJECTIVE**

This treatability study was scoped to further evaluate recommendations from the 2008-2009 treatability study for free-phase product recovery while minimizing interference with loading dock operations at the TPBOQ.

### **2.2 FREE-PHASE PRODUCT RECOVERY**

The most efficient way to remove subsurface free-phase petroleum product is by direct extraction of the contaminant itself, providing that it can be recovered with a reasonable amount of effort (ACOE, 1999). Recovery rates normally depend on the ability of the subsurface formation to transmit free product and the free product volume.

This Treatability Study evaluates the PIG<sup>®</sup> Monitoring Well Skimming Sock for free-product recovery at the former monitoring well TPBOQ-MW-15 at the TPBOQ. The PIG<sup>®</sup> Monitoring Well Skimming Sock is a passive recovery technology that absorbs oils but repels water. The PIG<sup>®</sup> Monitoring Well Skimming Sock is a reusable tubular absorbent sock capable of absorbing up to 17 ounces of any free-phase petroleum product.

The Treatability Study ran from August 9, 2009 through August 24, 2010. During this 381-day period, there were 52 recovery events that recorded the presence or absence of free-phase product in the recovery well. When free product was present, recovery activities were performed at the well. A total of

1.88 gallons of free product were recovered during the treatability study. The quantity of free product removed during each recovery event and the tidal lower low water height (LLW height) as obtained by the National Oceanographic and Atmospheric Administration (NOAA) for the Key West monitoring station were recorded. The LLW height is measured in feet and is the difference between the recorded height of the water (at the NOAA tidal observation station in Key West) and the Mean Lower Low Water (MLLW) water level.

In the subsequent sections, the PIG<sup>®</sup> Monitoring Well Skimming Sock is evaluated based on the field trial. TtNUS performed this Treatability Study in coordination with the appropriate personnel from Navy (as the property owners), Morale Welfare and Recreation (a tenant organization in the TPBOQ), and Navy Gateway Inns and Suites (operators of the TPBOQ) to ensure ongoing activities at the TPBOQ were minimally affected by the field activities.

### **2.3 TREATABILITY STUDY PROCEDURE**

As noted previously, the PIG<sup>®</sup> Monitoring Well Skimming Sock was evaluated from August 9, 2009 through August 24, 2010. Daily recovery events were scheduled when field personnel were on site. During each recovery event, the Skimming Sock was removed from the well and absorbed free product was extracted from the Skimming Sock by compressing the absorption media. A Monitoring Well Skimming Sock was left in the recovery well between each free-product recovery event. Upon completion of the recovery event, used PIG<sup>®</sup> Monitoring Well Skimming Socks were removed from the site for disposal as Investigation Derived Waste (IDW).

### **2.4 INVESTIGATION-DERIVED WASTE (IDW) HANDLING**

Free product, groundwater, purge water, and decontamination water were containerized in drums and labeled, at a minimum, with the following: contents, date, source and NAS Key West generator number (FL 6170022952). All IDW was handled in accordance with the United States Environmental Protection Agency (EPA) guidance document "Management of Investigation-Derived Wastes during Site Inspections" (EPA, 1991). TtNUS managed and disposed of all IDW produced during the study.

### **2.5 TREATABILITY SYSTEM OPERATION**

The PIG<sup>®</sup> Monitoring Well Skimming Sock treatability study was implemented from August 9, 2009 to August 24, 2010. Because the PIG<sup>®</sup> Monitoring Well Skimming Sock is a passive system that absorbs up to 17 ounces of any free product in the well, the sock was left in place between each recovery event. During this field trial, a total of 1.88 gallons of free product were recovered. The results of the PIG<sup>®</sup> Monitoring Well Skimming Sock field trial are summarized in Table 2-1 where the recovered volumes of free product are compared with the lowest value of the tidal height.

## 2.6 TREATMENT STUDY DATA ANALYSIS

Data from the daily recovery events are recorded and presented in Table 2-2. Because previous treatability studies identified a correlation between tidal LLW height and recovery volumes, the daily tidal LLW height is also included. As presented in the table, there were 25 periods when free-product recovery events did not occur during the 52 visits over the course of the study. During these 25 periods, a PIG<sup>®</sup> Monitoring Well Skimming Sock was left in place and the lowest daily LLW elevation for the period was recorded. On days when free product recovery field events took place and no free product was present, the free-product recovery data for that day are reported as a 0. Recovery events were suspended when personnel were unavailable. The longest period when free product recovery events did not occur during the 52 visits was 82 days, from August 9, 2009 through October 30, 2009.

Recovery data from Table 2-2 are graphically presented on Figure 2-1 with the free product removed (in ounces) during each event represented as the vertical blue bars, and the cumulative free product recovered in gallons as the red points and line. The per-event free product recovered scale is on the left axis of the chart, while the cumulative free-product recovered scale is on the right side. Upon examination of this chart, it is apparent that while free-product persisted in the recovery well, the amount of free product recovered during each recovery event was generally small and relatively consistent over time. Recovery rates in March and April were greater than the recovery rates during the rest of the year.

### 2.6.1 Tidal Effects on Free Product Recovery

The water table on Key West is influenced by tidal cycles, particularly in areas in close proximity to the tidal waters of the Gulf of Mexico and Atlantic Ocean. As discussed in Section 1.1, the TPBOQ is within 900 feet of the Gulf of Mexico, and groundwater in the area is subject to tidal influences. One tidal parameter that is regularly referred to is the MLLW, which represents the average of the tidal LLW height of each observed tidal day at an individual station.

A graphical representation of the tidal LLW height in feet relative to the MLLW, versus volume of free product removed, is presented in Figure 2-2. In this chart, the blue bars represent the quantity of free product removed each month. The red points and line represent the tidal LLW height data. The event free product recovered scale is on the left axis of the chart, while the tidal LLW height data scale (shown in reverse order) is on the right axis. The maximum LLW measurements (highest low tides) occurred around the autumnal equinox, in September; the minimum LLW measurements (lowest low tides) occurred around the vernal equinox, in April.

For each month during the Treatability Study, the periods of greatest recoveries were preceded by the monthly minimum (LLW) tidal height. The monthly low tidal cycle influences were particularly pronounced during the months of March, April, and May when the maximum monthly recovery volumes were

preceded by the lowest monthly LLW tidal height. Consistent with the data from the two previous treatability studies, these data suggest that local tidal cycles can impact free product recovery at the site.

The data presented in Table 2-2 from the daily recovery events, however, indicate that the impact of local tidal cycles on free product recovery is variable. Free-product was sometimes found in the recovery well during periods when tidal LLW elevations were relatively high, and was sometimes not detected/observed the recovery well during periods when tidal LLW elevations were relatively low. Given the heterogeneous nature of the subsurface soils at the site, this variability suggests that free product may be discontinuous throughout the subsurface.

### **2.6.2 Free Product Recoverability**

As discussed in Section 1.1.4, an initial treatability study was conducted over a 160-day period beginning in July 2007, during which 35 gallons of free-product were recovered (TtNUS, 2008). A second treatability study was conducted over the 12-month period of August 9, 2008 to August 8, 2009, during which 3.11 gallons of free-product were recovered (TtNUS, 2009a). The free-product recovery parameters for the 2007-2008 and 2008-2009 treatability studies are presented in Appendix A and Appendix B, respectively.

The actual recovery rate for the period of July 2007 through August 2010 is presented graphically in Figure 2-3. As depicted on this chart, actual free-product recovery was relatively rapid initially, but recovery rates have decreased substantially since the 2007 treatability study. The asymptotic yield curve indicates that the quantity of recoverable free product at the site is approaching zero, with, infrequent short-term increases.

### **2.6.3 Recommendations**

The following recommendations are presented based on the Treatability Study results:

Continue to implement the PIG<sup>®</sup> Monitoring Well Skimming Sock for selective free product extraction at the recovery well until the free product is no longer present. It is recommended that the recovery events be scheduled to follow the occurrence of the monthly tidal LLW height for the area.

Because no changes to the treatability study operating procedure are needed, it is recommended that the existing Treatability Study Work Plan (TtNUS, 2009b) be used for future free product recovery activities.

**TABLE 2-1**

**TREATABILITY STUDY OPERATIONAL TECHNOLOGY SUMMARY  
TRUMBO POINT BOQ  
NAVAL AIR STATION  
KEY WEST, FLORIDA**

<b>Month</b>	<b>Free Product Recovered (Gallons)</b>	<b>Tidal LLW Height (Feet) <sup>(1)</sup></b>	<b>Recovery Technology</b>
August 2009 <sup>(2)</sup>	---	0.30	PIG <sup>®</sup> Monitoring Well Skimming Sock
September 2009 <sup>(2)</sup>	---	0.56	PIG <sup>®</sup> Monitoring Well Skimming Sock
October 2009 <sup>(2)</sup>	0.09	0.26	PIG <sup>®</sup> Monitoring Well Skimming Sock
November 2009	0.03	0.17	PIG <sup>®</sup> Monitoring Well Skimming Sock
December 2009	0.00	-0.28	PIG <sup>®</sup> Monitoring Well Skimming Sock
January 2010	0.00	-0.55	PIG <sup>®</sup> Monitoring Well Skimming Sock
February 2010 <sup>(3)</sup>	---	-0.39	PIG <sup>®</sup> Monitoring Well Skimming Sock
March 2010 <sup>(3)</sup>	0.38	-0.75	PIG <sup>®</sup> Monitoring Well Skimming Sock
April 2010	0.61	-0.97	PIG <sup>®</sup> Monitoring Well Skimming Sock
May 2010	0.09	-0.69	PIG <sup>®</sup> Monitoring Well Skimming Sock
June 2010	0.28	-0.22	PIG <sup>®</sup> Monitoring Well Skimming Sock
July 2010	0.34	-0.34	PIG <sup>®</sup> Monitoring Well Skimming Sock
August 2010	0.05	0.11	PIG <sup>®</sup> Monitoring Well Skimming Sock
<b>Treatability Study Total</b>	<b>1.88</b>		

<sup>(1)</sup> Tidal LLW height is measured relative to MLLW Tide elevation at station 8724580 Key West (Source: NOAA.GOV).

<sup>(2)</sup> No field events occurred during period of August 9 through October 30, 2009. Tidal LLW height for this period was 0.26 feet and occurred on two dates, October 8 and October 18. A PIG<sup>®</sup> Monitoring Well Skimming Sock was left in place and 12 ounces of free product were recovered on October 31, 2009.

<sup>(3)</sup> No field events occurred during period of February 1 through March 6, 2010. Tidal LLW height for this period occurred on March 4 and was -0.75 feet. A PIG<sup>®</sup> Monitoring Well Skimming Sock was left in place and 34 ounces of free product were recovered on March 7, 2010.

TABLE 2-2

**TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
TRUMBO POINT BOQ  
NAVAL AIR STATION  
KEY WEST, FLORIDA  
PAGE 1 OF 2**

Date	Free Product Recovered (oz) <sup>(1)</sup>	Tidal LLW Height (ft) <sup>(2)(3)</sup>
August 9 to October 31, 2009	12	0.26
November 1, 2009	4	0.49
November 2, 2009	0	0.54
November 3 to November 15, 2009	0	0.17
November 16 to November 17, 2009	0	0.26
November 18 to November 21, 2009	0	0.30
November 22, 2009	0	0.84
November 23, 2009	0	0.77
November 24, 2009	0	0.80
November 25 to December 12, 2009	0	-0.28
December 13, 2009 to January 3, 2010	0	-0.49
January 4 to January 11, 2010	0	-0.42
January 12 to January 17, 2010	0	-0.55
January 18, 2010	0	-0.23
January 19 to January 31, 2010	0	-0.43
February 1 to March 7, 2010	34	-0.75
March 8, 2010	15	0.02
March 9 to April 10, 2010	48	-0.97
April 11, 2010	22	0.15
April 12, 2010	8	0.04
April 13 to May 3, 2010	0	-0.69
May 4 to May 6, 2010	12	-0.26
May 7 to May 8, 2010	0	0.21
May 9 to May 10, 2010	0	0.13
May 11 to June 25, 2010	12	-0.22
June 26, 2010	10	0.04
June 27, 2010	14	0.27
June 28, 2010	0	0.23
June 29, 2010	0	0.25
June 30 to July 6, 2010	9	0.30
July 7 to July 10, 2010	12	-0.28
July 11, 2010	4	-0.34
July 12 to July 14, 2010	0	-0.29
July 15 to July 17, 2010	0	0.22
July 18 to July 19, 2010	0	0.32
July 20 to July 24, 2010	6	0.16
July 25, 2010	12	0.01
July 26, 2010	0	-0.03
July 27, 2010	0	0.11
July 28 to August 4, 2010	0	0.14
August 5, 2010	0	0.33
August 6, 2010	0	0.18
August 7, 2010	0	0.16

**TABLE 2-2**

**TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
TRUMBO POINT BOQ  
NAVAL AIR STATION  
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<b>Date</b>	<b>Free Product Recovered (oz)<sup>(1)</sup></b>	<b>Tidal LLW Height (ft)<sup>(2)(3)</sup></b>
August 8, 2010	6	0.13
August 9, 2010	0	0.11
August 10, 2010	0	0.39
August 11 to August 15, 2010	0	0.11
August 16 to August 21, 2010	0	0.29
August 22, 2010	0	0.34
August 23, 2010	0	0.44
August 24, 2010	0	0.40

Note:

- <sup>(1)</sup> 0 indicates no free-phase product was found in the recovery well.
- <sup>(2)</sup> Tidal LLW height is measured relative to MLLW Tide elevation at Station 8724580 Key West. (Source: NOAA.GOV)
- <sup>(3)</sup> Tidal LLW height is the lowest LLW Tide elevation reported for the identified period

oz = ounce

ft = feet

Figure 2-1 Event Free Product Recovery Volume and Total Volume

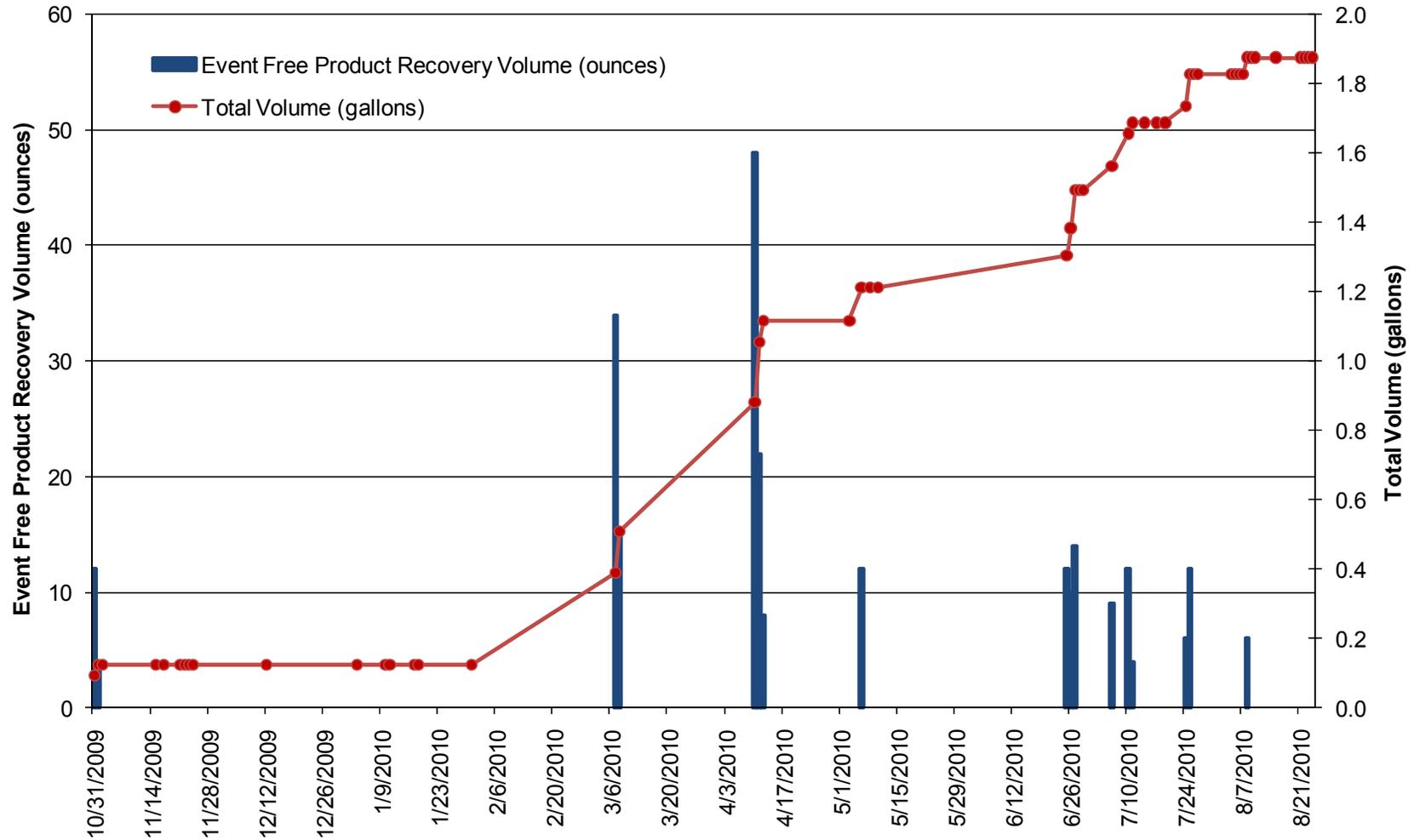


Figure 2-2 Free Product Recovery By Month

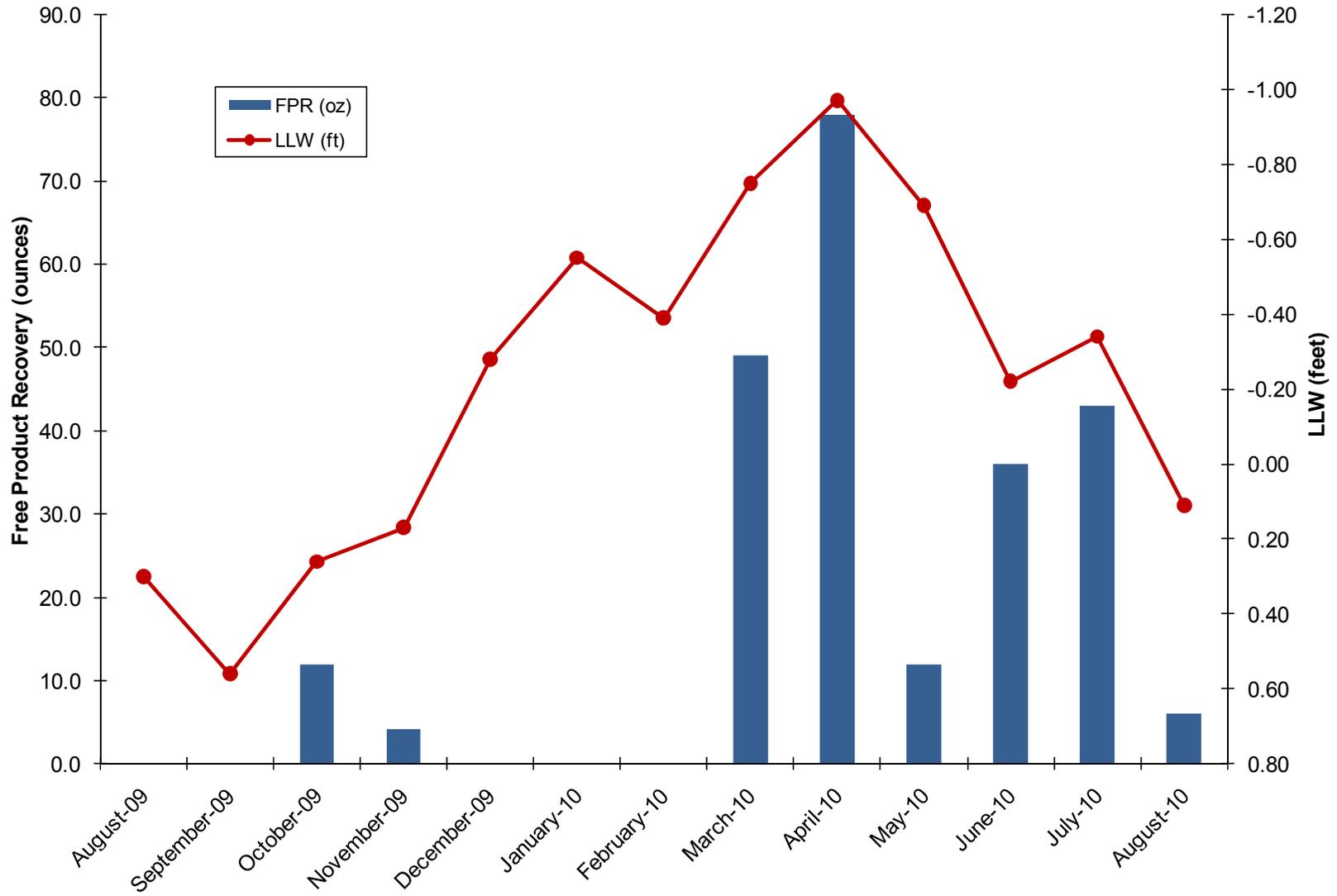
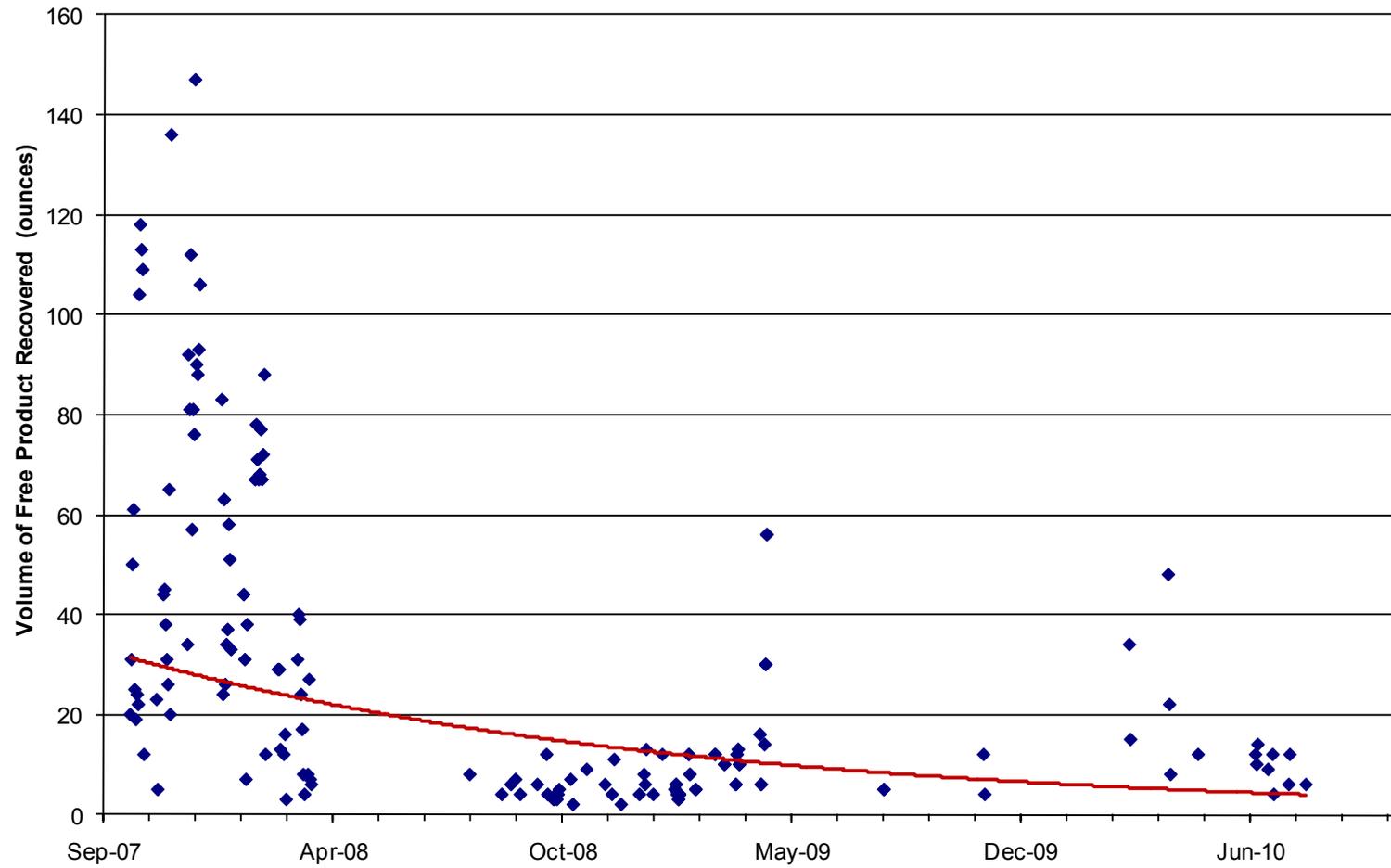


Figure 2-3 Free Product Actual Recovery Rate



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**APPENDIX A**

**2007-2008 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS**

**APPENDIX A**

**2007-2008 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
TRUMBO POINT BOQ  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>	<b>Daily Precipitation (in) <sup>(3)</sup></b>	<b>Average Precipitation (in) <sup>(4)</sup></b>
October 16, 2007	--	2.03	0.11	0.22
October 17, 2007	--	1.62	0.24	0.23
October 18, 2007	--	1.2	--	0.18
October 19, 2007	--	0.85	--	0.24
October 20, 2007	--	0.61	--	--
October 21, 2007	--	0.52	--	--
October 22, 2007	--	0.55	--	--
October 23, 2007	--	0.68	--	--
October 24, 2007	0	0.89	--	--
October 25, 2007	34	1.13	--	--
October 26, 2007	92	1.4	0.07	0.07
October 27, 2007	81	1.64	--	0.07
October 28, 2007	112	1.84	0.01	0.04
October 29, 2007	57	1.96	--	0.01
October 30, 2007	81	1.97	--	0.01
October 31, 2007	76	1.87	0.38	0.38
November 1, 2007	147	1.65	0.13	0.26
November 2, 2007	90	1.31	--	0.26
November 3, 2007	88	0.89	0.02	0.17
November 4, 2007	93	0.45	--	0.20
November 5, 2007	106	0.1	--	0.20
November 6, 2007	0	-0.02	--	--
November 7, 2007	--	0.15	--	--
November 8, 2007	--	0.59	--	--
November 9, 2007	--	1.17	--	--
November 10, 2007	--	1.72	--	--
November 11, 2007	--	2.08	--	--
November 12, 2007	--	2.19	--	--
November 13, 2007	--	2.06	--	--
November 14, 2007	--	1.76	--	--
November 15, 2007	--	1.37	0.01	--
November 16, 2007	--	0.96	--	--
November 17, 2007	--	0.6	--	--
November 18, 2007	--	0.29	--	--
November 19, 2007	--	0.15	--	--
November 20, 2007	--	0.15	--	--
November 21, 2007	--	0.26	--	--
November 22, 2007	--	0.48	--	--
November 23, 2007	0	0.76	--	--

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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>	<b>Daily Precipitation (in) <sup>(3)</sup></b>	<b>Average Precipitation (in) <sup>(4)</sup></b>
November 24, 2007	83	1.09	--	--
November 25, 2007	24	1.41	0.02	0.02
November 26, 2007	63	1.67	--	0.02
November 27, 2007	26	1.83	--	0.02
November 28, 2007	--	2.03	0.11	0.22
November 29, 2007	--	1.62	0.24	0.23
November 30, 2007	--	1.2	--	0.18
December 1, 2007	--	0.85	--	0.24
December 2, 2007	--	0.61	--	--
December 3, 2007	--	0.52	--	--
December 4, 2007	--	0.55	--	--
December 5, 2007	--	0.68	--	--
December 6, 2007	0	0.89	--	--
December 7, 2007	34	1.13	--	--
December 8, 2007	92	1.4	0.07	0.07
December 9, 2007	81	1.64	--	0.07
December 10, 2007	112	1.84	0.01	0.04
December 11, 2007	57	1.96	--	0.01
December 12, 2007	81	1.97	--	0.01
December 13, 2007	76	1.87	0.38	0.38
December 14, 2007	147	1.65	0.13	0.26
December 15, 2007	90	1.31	--	0.26
December 16, 2007	88	0.89	0.02	0.17
December 17, 2007	93	0.45	--	0.20
December 18, 2007	106	0.1	--	0.20
December 19, 2007	0	-0.02	--	--
December 20, 2007	--	0.15	--	--
December 21, 2007	--	0.59	--	--
December 22, 2007	--	1.17	--	--
December 23, 2007	--	1.72	--	--
December 24, 2007	--	2.08	--	--
December 25, 2007	--	2.19	--	--
December 26, 2007	--	2.06	--	--
December 27, 2007	--	1.76	--	--
December 28, 2007	--	1.37	0.01	--
December 29, 2007	--	0.96	--	--
December 30, 2007	--	0.6	--	--
December 31, 2007	--	0.29	--	--
January 1, 2008	--	0.15	--	--

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**2007-2008 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>	<b>Daily Precipitation (in) <sup>(3)</sup></b>	<b>Average Precipitation (in) <sup>(4)</sup></b>
January 2, 2008	--	0.15	--	--
January 3, 2008	--	0.26	--	--
January 4, 2008	--	0.48	--	--
January 5, 2008	0	0.76	--	--
January 6, 2008	83	1.09	--	--
January 7, 2008	24	1.41	0.02	0.02
January 8, 2008	63	1.67	--	0.02
January 9, 2008	26	1.83	--	0.02
January 10, 2008	34	1.83	0.1	0.10
January 11, 2008	37	1.68	0.17	0.14
January 12, 2008	58	1.38	--	0.14
January 13, 2008	551	0.97	--	0.17
January 14, 2008	33	0.5	0.01	--
January 15, 2008	0	0.06	--	--
January 16, 2008	0	-0.24	--	--
January 17, 2008	0	-0.3	--	--
January 18, 2008	0	-0.007	--	--
January 19, 2008	0	0.4	--	--
January 20, 2008	0	0.97	0.09	0.09
January 21, 2008	0	1.47	--	0.09
January 22, 2008	0	1.79	0.06	0.08
January 23, 2008	0	1.87	--	0.06
January 24, 2008	0	1.75	--	0.06
January 25, 2008	44	1.48	--	--
January 26, 2008	31	1.14	--	--
January 27, 2008	7	0.77	0.06	0.06
January 28, 2008	38	0.43	--	0.06
January 29, 2008	0	0.16	--	0.06
January 30, 2008	0	-0.01	--	--
January 31, 2008	--	-0.04	--	--
February 1, 2008	--	0.05	--	--
February 2, 2008	--	0.24	--	--
February 3, 2008	--	0.53	--	--
February 4, 2008	67	0.86	--	--
February 5, 2008	78	1.21	--	--
February 6, 2008	71	1.52	--	--
February 7, 2008	67	1.69	--	--

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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>	<b>Daily Precipitation (in) <sup>(3)</sup></b>	<b>Average Precipitation (in) <sup>(4)</sup></b>
February 8, 2008	68	1.7	--	--
February 9, 2008	77	1.51	--	--
February 12, 2008	88	0.25	0.72	0.72
February 10, 2008	67	1.16	--	--
February 11, 2008	72	0.71	--	--
February 15, 2008	0	-0.31	--	1.02
February 16, 2008	0	-0.05	--	--
February 13, 2008	12	-0.12	1.02	0.87
February 14, 2008	0	-0.33	--	0.87
February 17, 2008	0	0.39	--	--
February 18, 2008	0	0.88	--	--
February 19, 2008	0	1.3	0.07	0.07
February 20, 2008	0	1.55	--	0.07
February 21, 2008	0	1.63	0.06	0.07
February 22, 2008	0	1.54	--	0.06
February 23, 2008	0	1.34	--	0.06
February 24, 2008	29	1.06	--	--
February 25, 2008	29	0.76	--	--
February 26, 2008	13	0.46	--	--
February 27, 2008	0	0.21	0.36	0.36
February 28, 2008	0	0.04	--	0.36
February 29, 2008	12	-0.02	--	0.36
March 1, 2008	16	0.02	--	--
March 2, 2008	3	0.17	--	--
March 3, 2008	0	0.4	--	--
March 4, 2008	--	0.72	--	--
March 5, 2008	--	1.07	0.01	--
March 6, 2008	--	1.38	0.04	0.03
March 7, 2008	--	1.58	--	0.03
March 8, 2008	--	1.58	0.46	0.25
March 9, 2008	--	1.37	--	0.46
March 10, 2008	--	1.01	--	0.46
March 11, 2008	0	0.58	0.47	0.47
March 12, 2008	31	0.18	--	0.47
March 13, 2008	40	-0.1	--	0.47
March 14, 2008	39	-0.22	--	--
March 15, 2008	24	-0.15	--	--
March 16, 2008	17	0.08	--	--
March 17, 2008	8	0.43	--	--
March 18, 2008	4	0.81	--	--
March 19, 2008		1.14	--	--
March 20, 2008		1.34	--	--

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TRUMBO POINT BOQ  
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Date	Free Product Recovered (oz) <sup>(1)</sup>	Tidal LLW Height (ft) <sup>(2)</sup>	Daily Precipitation (in) <sup>(3)</sup>	Average Precipitation (in) <sup>(4)</sup>
March 21, 2008	8	1.41	--	--
March 22, 2008	27	1.37	0.46	0.46
March 23, 2008	7	1.24	0	0.23
March 24, 2008	6	1.05	0	0.15

Note:

- (1) "--" represents periods where free product recovery was not conducted and 0 indicates no free-phase product was found in the recovery well.
- (2) Tidal LLW height is measured relative to Mean Lower Low Water (MLLW) Tide elevation at Station 8724580 Key West. (Source: NOAA.GOV)
- (3) Daily precipitation is the sum of the 24-hourly precipitation values ending with hour 24, for Key West International Airport Weather-Bureau-Army-Navy (WBAN) Station number 12836. (Source: NOAA.GOV)
- (4) Average precipitation is the running average of the 3-day period ending 3 days after the reported date. Blanks represent no precipitation and these values are not included in the averaging period.

oz = ounce

ft = feet

in = inches

**APPENDIX B**

**2008-2009 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS**

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Date	Free Product Recovered (oz) <sup>(1)</sup>	Tidal LLW Height (ft) <sup>(2)</sup>
August 9, 2008	8	0.61
August 10, 2008	0	0.56
August 11, 2008	0	0.49
August 12, 2008	0	0.43
August 13, 2008	0	0.28
August 14, 2008	0	0.51
August 15, 2008	0	0.35
August 16, 2008	0	0.21
August 17, 2008	0	0.57
August 18, 2008	0	0.85
August 19, 2008	0	0.75
August 20, 2008	0	0.43
August 21, 2008	0	0.30
August 22, 2008	0	0.27
August 23, 2008	0	0.09
August 24, 2008	0	0.08
August 25, 2008	0	0.24
August 26, 2008	0	0.26
August 27, 2008	0	0.21
August 28, 2008	0	0.53
August 29, 2008	--	--
August 30, 2008	--	--
August 31, 2008	--	--
September 1, 2008	--	--
September 2, 2008	0	0.87
September 3, 2008	0	0.99
September 4, 2008	0	1.03
September 5, 2008	0	1.25
September 6, 2008	4	1.07
September 7, 2008	--	--
September 8, 2008	--	--
September 9, 2008	--	--
September 10, 2008	--	--
September 11, 2008	--	--
September 12, 2008	--	--
September 13, 2008	--	--
September 14, 2008	6	1.15
September 15, 2008	0	0.98
September 16, 2008	0	0.70
September 17, 2008	0	0.50
September 18, 2008	7	0.30
September 19, 2008	0	0.44
September 20, 2008	0	0.67

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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
September 21, 2008	0	0.70
September 22, 2008	4	0.78
September 23, 2008	--	--
September 24, 2008	--	--
September 25, 2008	--	--
September 26, 2008	--	--
September 27, 2008	--	--
September 28, 2008	--	--
September 29, 2008	--	--
September 30, 2008	--	--
October 1, 2008	--	--
October 2, 2008	--	--
October 3, 2008	--	--
October 4, 2008	--	--
October 5, 2008	--	--
October 6, 2008	--	--
October 7, 2008	6	0.90
October 8, 2008	0	1.02
October 9, 2008	0	0.99
October 10, 2008	0	0.81
October 11, 2008	0	0.96
October 12, 2008	0	0.97
October 13, 2008	0	0.60
October 14, 2008	0	0.63
October 15, 2008	12	0.42
October 16, 2008	4	0.51
October 17, 2008	0	0.34
October 18, 2008	0	0.40
October 19, 2008	0	0.48
October 20, 2008	0	0.59
October 21, 2008	3	0.88
October 22, 2008	3	0.97
October 23, 2008	4	1.15
October 24, 2008	3	1.25
October 25, 2008	4	1.17
October 26, 2008	5	0.99
October 27, 2008	--	--
October 28, 2008	--	--
October 29, 2008	--	--
October 30, 2008	--	--
October 31, 2008	--	--
November 1, 2008	--	--
November 2, 2008	--	--

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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
November 3, 2008	--	--
November 4, 2008	--	--
November 5, 2008	6	0.13
November 6, 2008	0	0.21
November 7, 2008	0	-0.14
November 8, 2008	0	-0.09
November 9, 2008	0	-0.10
November 10, 2008	0	-0.23
November 11, 2008	4	-0.56
November 12, 2008	0	-0.64
November 13, 2008	11	-0.80
November 14, 2008	0	-0.24
November 15, 2008	0	-0.29
November 16, 2008	0	-0.29
November 17, 2008	0	0.19
November 18, 2008	0	0.29
November 19, 2008	2	0.35
November 20, 2008	0	0.14
November 21, 2008	--	--
November 22, 2008	--	--
November 23, 2008	--	--
November 24, 2008	--	--
November 25, 2008	--	--
November 26, 2008	--	--
November 27, 2008	--	--
November 28, 2008	--	--
November 29, 2008	--	--
November 30, 2008	--	--
December 1, 2008	--	--
December 2, 2008	--	--
December 3, 2008	--	--
December 4, 2008	--	--
December 5, 2008	4	-0.11
December 6, 2008	0	-0.16
December 7, 2008	0	-0.24
December 8, 2008	0	-0.59
December 9, 2008	8	-0.80
December 10, 2008	6	-1.02
December 11, 2008	13	-0.90
December 12, 2008	--	--
December 13, 2008	--	--
December 14, 2008	--	--
December 15, 2008	--	--

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**2008-2009 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
December 16, 2008	--	--
December 17, 2008	4	-0.48
December 18, 2008	0	-0.33
December 19, 2008	0	-0.37
December 20, 2008	--	--
December 21, 2008	--	--
December 22, 2008	--	--
December 23, 2008	--	--
December 24, 2008	--	--
December 25, 2008	12	-0.80
December 26, 2008	0	-0.73
December 27, 2008	0	-0.72
December 28, 2008	0	-0.70
December 29, 2008	0	-0.49
December 30, 2008	0	-0.51
December 31, 2008	0	-0.67
January 1, 2009	0	-0.58
January 2, 2009	0	-0.36
January 3, 2009	0	-0.45
January 4, 2009	0	-0.10
January 5, 2009	5	-0.95
January 6, 2009	6	-0.97
January 7, 2009	4	-0.85
January 8, 2009	3	-1.01
January 9, 2009	4	-1.04
January 10, 2009	0	-0.80
January 11, 2009	0	-0.55
January 12, 2009	0	-0.44
January 13, 2009	0	-0.62
January 14, 2009	0	-0.55
January 15, 2009	0	-0.26
January 16, 2009	0	-0.24
January 17, 2009	12	-0.35
January 18, 2009	8	-0.20
January 19, 2009	--	--
January 20, 2009	--	--
January 21, 2009	--	--
January 22, 2009	--	--
January 23, 2009	5	-0.10
January 24, 2009	0	-0.49
January 25, 2009	0	0.02
January 26, 2009	0	-0.21
January 27, 2009	0	-0.16

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**2008-2009 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
January 28, 2009	0	-0.15
January 29, 2009	0	-0.19
January 30, 2009	--	--
January 31, 2009	--	--
February 1, 2009	--	--
February 2, 2009	--	--
February 3, 2009	6	0.13
February 4, 2009	0	0.21
February 5, 2009	0	-0.14
February 6, 2009	0	-0.09
February 7, 2009	0	-0.10
February 8, 2009	0	-0.23
February 9, 2009	4	-0.56
February 10, 2009	0	-0.64
February 11, 2009	11	-0.80
February 12, 2009	0	-0.24
February 13, 2009	0	-0.29
February 14, 2009	0	-0.29
February 15, 2009	0	0.19
February 16, 2009	0	0.29
February 17, 2009	2	0.35
February 18, 2009	0	0.14
February 19, 2009	--	--
February 20, 2009	--	--
February 21, 2009	--	--
February 22, 2009	--	--
February 23, 2009	--	--
February 24, 2009	--	--
February 25, 2009	--	--
February 26, 2009	--	--
February 27, 2009	--	--
February 28, 2009	--	--
March 1, 2009	0	-0.42
March 2, 2009	0	-0.36
March 3, 2009	0	-0.40
March 4, 2009	0	-0.29
March 5, 2009	0	-0.30
March 6, 2009	0	-0.29
March 7, 2009	0	0.30
March 8, 2009	0	-0.21
March 9, 2009	0	-0.20
March 10, 2009	0	-0.16
March 11, 2009	12	-0.26

**APPENDIX B**

**2008-2009 TREATABILITY STUDY FREE PRODUCT RECOVERY PARAMETERS  
TRUMBO POINT BOQ  
NAVAL AIR STATION  
KEY WEST, FLORIDA  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
March 12, 2009	--	--
March 13, 2009	--	--
March 14, 2009	--	--
March 15, 2009	--	--
March 16, 2009	--	--
March 17, 2009	--	--
March 18, 2009	--	--
March 19, 2009	10	0.08
March 20, 2009	0	0.12
March 21, 2009	0	0.28
March 22, 2009	0	0.11
March 23, 2009	0	0.48
March 24, 2009	0	0.48
March 25, 2009	0	0.33
March 26, 2009	0	0.24
March 27, 2009	0	0.17
March 28, 2009	0	-0.20
March 29, 2009	6	-0.43
March 30, 2009	12	-0.31
March 31, 2009	13	-0.10
April 1, 2009	10	0.07
April 2, 2009	0	0.17
April 3, 2009	0	-0.09
April 4, 2009	0	0.44
April 5, 2009	--	--
April 6, 2009	--	--
April 7, 2009	--	--
April 8, 2009	--	--
April 9, 2009	--	--
April 10, 2009	--	--
April 11, 2009	--	--
April 12, 2009	--	--
April 13, 2009	--	--
April 14, 2009	--	--
April 15, 2009	--	--
April 16, 2009	--	--
April 17, 2009	--	--
April 18, 2009	--	--
April 19, 2009	16	0.35
April 20, 2009	6	0.35
April 21, 2009	0	0.10
April 22, 2009	0	-0.26
April 23, 2009	14	-0.43

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TRUMBO POINT BOQ  
NAVAL AIR STATION  
KEY WEST, FLORIDA  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
April 24, 2009	30	-0.44
April 25, 2009	56	-0.57
April 26, 2009	0	-0.53
April 27, 2009	0	-0.55
April 28, 2009	--	--
April 29, 2009	--	--
April 30, 2009	--	--
May 1 to May 31, 2009	--	--
June 1 to June 30, 2009	--	--
July 1, 2009	--	--
July 2, 2009	--	--
July 3, 2009	--	--
July 4, 2009	--	--
July 5, 2009	--	--
July 6, 2009	--	--
July 7, 2009	--	--
July 8, 2009	--	--
July 9, 2009	--	--
July 10, 2009	--	--
July 11, 2009	--	--
July 12, 2009	0	0.41
July 13, 2009	0	0.55
July 14, 2009	--	--
July 15, 2009	--	--
July 16, 2009	0	0.48
July 17, 2009	0	0.24
July 18, 2009	--	--
July 19, 2009	--	--
July 20, 2009	--	--
July 21, 2009	--	--
July 22, 2009	--	--
July 23, 2009	--	--
July 24, 2009	--	--
July 25, 2009	--	--
July 26, 2009	--	--
July 27, 2009	--	--
July 28, 2009	--	--
July 29, 2009	--	--
July 30, 2009	--	--
July 31, 2009	--	--
August 1, 2009	--	--
August 2, 2009	--	--

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TRUMBO POINT BOQ  
NAVAL AIR STATION  
KEY WEST, FLORIDA  
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<b>Date</b>	<b>Free Product Recovered (oz) <sup>(1)</sup></b>	<b>Tidal LLW Height (ft) <sup>(2)</sup></b>
August 3, 2009	--	--
August 4, 2009	--	--
August 5, 2009	5	0.13
August 6, 2009	--	--
August 7, 2009	--	--
August 8, 2009	0	0.44

**Note:**

- (1) "--" represents periods when free-product recovery was not conducted and 0 indicates no free-phase product was found in the recovery well.
- (2) Tidal LLW height is measured relative to Mean Lower Low Water (MLLW) Tide elevation at Station 8724580 Key West. (Source: NOAA.GOV)

oz = ounce

ft = feet