

N61331.AR.001800  
NSA PANAMA CITY  
5090.3a

FINAL MINUTES AND AGENDA FOR VIRTUAL PARTNERING TEAM MEETING DATED 12  
FEBRUARY 2014 CSS PANAMA CITY FL  
2/12/2014  
TETRA TECH

**MEETING AGENDA – DRAFT  
PARTNERING MEETING  
NSA PANAMA CITY  
12 FEBRUARY 2014**

**Leader:** Richard Lee  
**Timekeeper:** Tom Johnston  
**Scribe:** Libby Claggett  
**Location:** St. Andrews Park, Panama City Beach

**Attendees:**

Pat Franklin	Facilitator	Mike Clayton	NSA Panama City
Libby Claggett	Tetra Tech (Scribe)	Tom Johnston	Tetra Tech
Brian Syme	NAVFAC SE	Richard Lee	NSA Panama City
Helen Lockard	Tier II Link	John Schoolfield	NAVFAC SE
Gerry Walker	Tetra Tech	Jeff Lockwood	FDEP

**Guest:** Mellissa Foster  
 Bob Fisher

<b>DRAFT MEETING AGENDA</b>			
<b>Description</b>	<b>Presenter</b>	<b>Time (Central)</b>	<b>Category/ Expectation</b>
Check-In/Introductions/New Members/Opening Remarks/Head Count and Proxies/Guests	Leader	9:00 – 9:15	Decision
Action Items and Parking Lot Review/Minutes Approval/Agenda Changes/Team Charter Review/Ground Rules Review	Leader	9:15 – 9:30	Information
Training (Decision Tree)	Pat	9:30 - 10:00	Training
Break	All	10:00 – 10:15	Needed
Monitoring Well Inventory	Brian	10:15 – 11:15	Decision
Building 98 Update	Tom	11:15 - 11:30	Information
Building 325 Update	Tom	11:30 - 11:45	Information
Lunch	All	11:45 – 1:00	Needed
AOC 2 Update	Gerry	1:00 – 1:15	Information
South Dock Update	Gerry	1:15 – 1:30	Information
Tier II Update	Helen	1:30 – 1:45	Information
CRP and RAB Update	Brian/Melissa	1:45 – 2:00	Information
NIRIS Training	Bob Fisher	2:00 - 3:00	Information
Break	All	3:00 – 3:15	Needed
LUC Boundaries/Matrix for All Sites	Team	3:15 – 3:30	Discussion
MRP Update	Brian	3:30 – 4:30	Information
NOSC Sampling Results/Closeout	John S.	4:30 - 4:45	Information
Other Issues	Team	4:45 – 5:00	Information
Meeting Closeout; Action Item Review; Next Agenda; +/-	Team	5:00 – 5:30	Planning

<sup>1</sup> The team will complete NSA Panama City Exit Strategy and CAMP as a group with the site updates.

**PARTNERING MEETING DRAFT MINUTES  
NSA PANAMA CITY  
February 12, 2014, St. Andrew State Park**

**Leader:** Richard Lee  
**Timekeeper:** Tom Johnston

<b>Members Present:</b>	Mike Clayton Tom Johnston Richard Lee Jeff Lockwood Brian Syme Gerry Walker  Helen Lockard Pat Franklin Libby Claggett Jeff Day Melissa Forest	NSA PC Tetra Tech, Pittsburgh NSA PC FDEP NAVFAC SE RPM Tetra Tech, Tallahassee  Tier II Link TME, Facilitator Tetra Tech, Scribe J2 Engineering (via telephone)
-------------------------	---	---

**Meeting Start Time:** 9:00 a.m., CT

**1. Check-In/Introductions/New Members/Opening Remarks/Head Count and Proxies/Guests**

Team members shared events since the last meeting.

**2. Action Items and Parking Lot Review/Minutes Approval/Agenda Changes/Team Charter Review/Ground Rules Review**

The Team then reviewed consensus items, parking lot items, and updated the action item list. The ground rules were reviewed.

OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-0413-02	( <del>Charles</del> ) Brian Richard and Tom	Ongoing	4/12/2013	Charles is to finish the LUC matrix document regarding training requirements. <b>Update 10-2013:</b> Richard and Tom will finish the LUC matrix document and share with Team members. <b>Update 02-2014:</b> Tom will send the matrix to the Team upon his return to Pittsburgh from this meeting.
A-0413-04	( <del>Charles</del> ) Brian	Ongoing	3/30/2014	Charles is to prepare a public notice for the CRP/RAB. <b>Update 10-2013:</b> Melissa (Navy PR) will work with the installation in January to update information.
A-0413-06	( <del>Charles</del> ) Richard/Tom	Ongoing	5/20/2013	Charles and Tom are to develop a table with the monitoring requirements of sites with conditional SRCOs/LUCIPs (G300 and AOC 1 for example). <b>Update 08-2013:</b> Tom will take information from the Exit Strategy to develop the table. <b>Update 10-2013:</b> This will go with the LUC Matrix (A-0413-02).

OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-1013-01	Team	Ongoing	By the next meeting	Team members are to decide together which wells are to be abandoned at NSA Panama City at the next face-to-face meeting. <b>Update 02-2014:</b> Once the LTM requirements are determined, a decision can be made as to which wells can be abandoned.
A-1013-02	Tom	Done	10/31/2013	Tom is to update the Team Charter with the changes to the Roles and Responsibilities and contact information.
A-1013-03	Team	Done	10/24/2013	Team members are to review their contact and emergency contact information in the Team Charter and send any changes to Tom Johnston.
A-1013-05	Jeff	Done	10/31/2013	Jeff is to confirm the path forward for the Building 325 site (i.e., RAP Addendum with a LUCIP or a different path) to get information into the LUC Tracker.
A-1013-07	Navy	Ongoing	11/1/2013	The Navy is to discuss funding for UST 362.
A-1013-08	Brian	Ongoing	By the next meeting	Brian is to find out if Bob Fisher can provide NIRIS 2 training to the NSA Panama City Partnering Team.
A-1013-09	Helen	OBE	11/29/2013	Helen is to send the Navy Optimization Guidance to Team members. <b>Update 02-2014:</b> The guidance does not contain any information on abandoning wells.
A-1013-11	Mike	Done	11/1/2013	Mike is to send Helen information on the Gulf Guardian Award received for the shoreline restoration project and other awards the installation has recently received.
A-1013-12	Brian	Ongoing	10/25/2013	Brian is to check with Bob Fisher regarding updating the LUC Tracker for NSA Panama City.
A-1013-13	Team	Done	11/4/2013	Team members are to review the CAMP and Exit Strategy and provide any feedback to Tom.
A-1013-14	Tom	Done	11/6/2013	Tom is to set up a conference call to discuss the CAMP and Exit Strategy on Wednesday, November 6, 2013, at 2:30 pm EST.
A-1013-15	Helen	Done	10/18/2013	Helen is to provide Team members with a copy of the permit.
A-1013-16	Helen and Brian	Done	11/8/2013	Helen and Brian are to discuss continuity with the Team and getting work finished at NSA Panama City.
A-1013-17	Brian	Done	Before the next meeting	Brian is to invite Melissa Foster and Resolution Consultants to the February 2014 NSA Panama City Partnering Team meeting.
A-1113-01	Brian	OBE		Brian is to check for CAMP requirements so the Team can figure what should be covered by the CAMP. <b>Update 02-2014:</b> After the revised Exit Strategy is complete, the Team will look at reviewing the CAMP if necessary.

OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-1113-02	Brian	Done		Brian is to check with Helen Lockard regarding funding spreadsheet to determine whether there is sufficient funding to cover potential new Tetra Tech work.
A-1113-03	Tom	Done		Tom is to check the monitoring requirements for NSA Panama city site (with help from Richard Lee).
A-1113-04	Tom	Done		Tom is to send the updated CAMP and Exit Strategy to the Team after incorporating changes based on the November 21, 2013, telephone call.

**Consensus Item:** The Team reached consensus to approve the October 2013 meeting minutes as final.

**Action Item:** Brian and Richard are to get with Tetra Tech to populate the revised Exit Strategy.

### 3. AOC 1 Sampling Results

Jeff Day, J2 Engineering, provided an update on the AOC 1 sampling. Jeff asked if there was sampling conducted in August 2013; if there was sampling in August 2013, this would make the analytical comparison look different. Tom confirmed the sampling was in May 2012 not in August 2013. The November 2013 sampling was based on Tetra Tech's baseline report. Wells with the most exceedances are closer to the source area. The general trend is good; six of the monitoring wells had a decrease in COC concentrations in April 2010. Five wells have COC concentrations less than Surface Water GCTLs. In general, everything at AOC 1 is decreasing. Well MW-4 had a sheen, but no measurable free product. The draft report recommends continued LTM. Currently, AOC 1 is sampled every other year. Jeff L. needs an overall picture for AOC 1 to include the historical data. It was suggested to send Jeff L. a data map with trends. After reviewing the trend data, it will be determine whether or not to alter the sampling schedule at AOC 1. Per Tom, a Trident Probe study was performed at the site, and contaminants are not moving into the bay.

**Action Item:** Jeff Day is to provide trend data to Jeff L. for AOC 1 well 17-S.

### 4. Training

Pat provided training on Decision Trees. The training consisted of Team members taking a quiz on how they felt decisions are made at work (taken from *Improving Work Groups: A Practical Manual for Team Building* by Dave Francis and Don Young). Afterward, there was group discussion on decision making and the process for making a decision. Pat will take the information gathered and develop a decision flow chart for the next meeting.

### 5. Monitoring Well Inventory

Gerry provided a basewide figure of the installation with all of the monitoring wells and piezometers that were in Tetra Tech's database. The three basewide background wells are included on the figure. When Richard and Tom finish the LTM groundwater and LUC requirements, the information will be incorporated into a monitoring well inventory. It was agreed that it would be a good starting point to physically investigate and inventory (to include condition, type, coordinates, etc.) each monitoring well if funding is available. Funding options were discussed.

**Action Item:** Gerry is to send the pdf of the basewide monitoring well locations to Team members.

**Action Item:** Gerry is to provide Brian with a ball park estimate of a physical basewide monitoring well inventory at NSA Panama City.

**Action Item:** Helen and Brian are to find funding for a physical basewide monitoring well inventory at NSA Panama City.

## **6. Building 98 Update**

Building 98 is located about ½-way between the AOC 1 contaminant source and St. Andrew Bay. Adjacent to Building 98 is a UST that contained fuel oil. Contamination was found in the soil and was excavated. Residual contamination remains. There is one location west of the UST that has PAH contamination. The recommendation was to impose LUCs at the site or perform an excavation to obtain NFA for the site. The rest of the area would fall under AOC 1. FDEP will want groundwater monitoring to occur to verify the groundwater is clean. There not any wells in the area of the UST, but there are wells on the opposite side of Building 98 downgradient of the UST.

Soil delineation at the source and groundwater monitoring on the opposite side of Building 98 (wells PCY-13-4S and PCY-13-4I) is recommended. The water table is at 6 feet; therefore, the soil borings would be hand augured. Per FDEP, groundwater does need to be sampled at the source. Jeff L. suggested seeing the results on the UST soil sampling before making a decision on the groundwater.

Tetra Tech is currently preparing the UFP-SAP. This Partnering Team meeting will serve as the formal DQO meeting for the Tier II UFP-SAP. Since groundwater will not able to be closed out at the site (because it is in the middle of AOC 1), it was suggested that FDEP issue a “no action for soils at this time.” Jeff L. suggested the AOC 1 path forward deal with the contaminants (PAHs) in groundwater at Building 98. Per Brian, the AOC 1 UFP-SAP can be amended to include sampling of PAHs in groundwater.

The Team reached consensus that four soil samples will be taken; one permanent, small diameter well will be installed in the source area; and one groundwater sample will be taken by Tetra Tech from that well. Downgradient groundwater samples will not be taken at this time.

## **7. Building 325 Update**

Monitoring wells GW-008 and GW-023 have TRPH exceedances of Residential GCTLs, and soil borings SB-001 and SB-005 also have TRPH exceedances. The recommendation from the last report was LUCs for groundwater and soil. The FDEP agreed with the recommendation in October 2013. Tom provided figures of the proposed soil and groundwater LUC boundaries. The report did not recommend groundwater monitoring because there is sufficient evidence that the plume is stable and not moving and, thus, meets the conditions of RMO II. Discussion ensued regarding which type of report should be submitted in order to obtain closure under RMO II. Jeff L. said it should be a brief document with supporting information and a LUCIP. A Final Technical Memorandum for Site 325 Soil Contamination Delineation was issued by Tetra Tech on September 9, 2013, with the intention the document would be sufficient for site closure under RMO II.

A LUCIP (with LUCs for groundwater and soils and annual LUC inspections) needs to be added to the Technical Memorandum for Site 325 and the document reissued.

## **8. CRP and RAB Update**

Melissa Forest joined via telephone. Melissa is in the process of updating the Community Involvement Plan (CIP). When there is not a RAB, community outreach still needs to be performed. The community will be assessed to see if there is any interest in reforming the RAB. If there is no interest in a RAB, other ways of involving the community will be reviewed. The last update to the CIP was in 1992, and it does not reference a RAB. Efforts to assess interest in a RAB need to be documented.

Melissa needs an understanding of the history of the community outreach and RAB at NSA Panama City. Melissa also needs a summary of the current site status (including maps), contact information for Partnering Team members, contact information for former RAB members (former RAB mailing list), recommendations on community members to interview, and outreach recommendations. Wendy Bridges will be assisting Melissa in updating the CIP. Melissa will also be available to help with Fact Sheets and the public web site.

Per Mike, the former IR Manager and John Skaggs, CPLO, can be contacted for information regarding past RAB activities. The RAB was disbanded because the community felt confident in what the Navy was doing and lost interest.

Mike asked if anyone else needed to review the public web site. Melissa said it would need to go through the NSA Panama City PAO.

## **9. AOC 2 Update**

The draft Technical Memorandum was submitted in October 2012. There were no groundwater samples for AOC 2. Two borings had COCs exceeding SCTLs. Step-out sampling for soils was recommended for AOC 2; soil delineation needs to be completed. Tom suggested creating a figure showing all of the soil analytical results; this will help to determine if there are any other areas that need to be delineated. It was noted that the SACAL data is now in NIRIS.

The AST, associated pipeline, and the gas service area are the source of soil contamination. Brian asked about the groundwater investigation. A SAR, RAP, and excavation have been performed at the site, and groundwater was not an issue at that time.

Per Mike, the installation would like to reduce the footprint of the LUC to as small of a space as possible.

There is no current funding for this site; however, Tetra Tech will develop a soil analytical figure, history, and a short recommendation for the site to include any groundwater information with existing funds.

**Action Item:** Gerry is to review the historic data for AOC 2 soils and groundwater and complete a summary memorandum with recommendations.

## **10. South Dock Update**

The draft Technical Memorandum was submitted in October 2012. Three wells were sampled, and analytical results indicated the samples were clean. It is known that free product is under South Dock; therefore, a groundwater LUC was recommended. Gerry asked if a LUCIP needs to be completed or if additional investigation needs to be performed at the sea wall to build a case for multiple lines of evidence for the LUC. Mike said the sea wall is new and was built out from the original sea wall. Jeff L. said that he would try to get the multiple lines of evidence through his management, but could not guarantee the outcome.

**Action Item:** Gerry is to incorporate lines of evidence and history (living CD of historic documents) at South Dock into the Technical Memorandum.

## **11. Tier II Update**

The last Tier II meeting was held December 10-11, 2013, in Jacksonville, Florida. Key items of discussion included reorganization and funding updates, Tier I Team reports, project optimization, Exit Strategy update, expiring funding, Tier I Team feedback for Cecil Field, Team recognition, review FY 2013 Tier II goals, develop FY 2014 Tier II goals, NAS Pensacola OU 2 site, Team evaluation, advance questions for next Tier I Team presentation and Tier I Team presentation format, and 2014 meeting dates. The next meeting is scheduled for March 19-20, 2014, in Jacksonville, Florida, with the Whiting Field and Jacksonville Tier I Partnering Teams presenting.

Tier II meeting dates for 2014 are as follows. Tier I Teams are requested not to set their meetings on the same dates.

<u>Date</u>	<u>Team Presenting</u>	<u>Location</u>
June 19-20, 2014	Pensacola / Corry/Saufley	Atlanta
September 10-11, 2014	Mayport	Possibly virtual (one day)
December 10-11, 2014	Orlando	Jacksonville

Tier II needs to have the revised Exit Strategy sent to them by March 10, 2014.

## **12. LUC Boundaries/Matrix for All Sites**

Tom will compile the current LUC boundaries, wells, and COCs and include in the matrix that has been started. Historic information was captured in the original Exit Strategy spreadsheet. It was suggested that the reason why COCs were eliminated or reduced should be captured in the matrix (at least reference the document).

**Action Item:** Tom is to compile the current LUC boundaries, wells, and COCs and add a column to the LUC Matrix for reasoning to eliminate COCs, wells, etc. (what was changed, when, and why) and reference the document.

## **13. MRP Update**

There is a Preliminary Assessment (PA) being completed by Resolution Consultants. The PA will determine which MRP sites will go to a site investigation. There are two deep water mine sites on the NOAA map that will also need to be investigated. Helen suggested contacting the local NOAA office to see if more information can be obtained.

## **14. NOSC Sampling Results/Closeout**

The paperwork to obtain an SRCO was submitted; however, there were metal detections exceeding GCTLs, and an SRCO may not be granted. Stating the metals are naturally occurring may not be accepted by FDEP management. The path forward will be to wait for the official determination from the FDEP.

**Action Item:** Helen is to talk with John Schoolfield regarding the NOSC metal exceedances.

## **15. Other Issues**

Brian is working to obtain funding for Site 362 (DLA) (confirmation soil sampling and source well), Building 89 elevator, and Building 5 auto lift.

## **16. Meeting Closeout**

### Action and Consensus Item Review

Action and consensus items were reviewed and provided on the following page(s).

### Meeting

The next meeting is a virtual meeting scheduled for Wednesday, May 14, 2014, and Thursday, May 15, 2014, beginning at 9:00 a.m. ending by noon each day Eastern Time. Jeff Lockwood will be the Team Leader, and Richard Lee will be the time keeper. This may change to a face-to-face meeting on Friday, May 16 in Jacksonville, Florida.

<b>DRAFT MEETING AGENDA</b>			
<b>Description</b>	<b>Presenter</b>	<b>Time</b>	<b>Category/Expectation</b>
Check-In/Introductions/New Members/Opening Remarks/Head Count and Proxies/Guests	Leader	15 min	Decision
Action Items and Parking Lot Review/Minutes Approval/Agenda Changes/Team Charter Review/Ground Rules Review	Leader	15 min	Information
Training	Pat	30 min	Training
Monitoring Well Inventory	Brian	60 min	Decision
Building 98 Update	Tom	15 min	Information
Building 325 Update	Tom	15 min	Information
AOC 2 Update	Gerry	15 min	Information
South Dock Update	Gerry	15 min	Information
Tier II Update	Helen	30 min	Information
CRP and RAB Update	Brian	15 min	Information
Public Website	Tom	30 min	Information
LUC Boundaries for All Sites	Team	15 min	Discussion
MRP Update	Brian	60 min	Information
NOSC Sampling Results/Closeout	John S.	15 min	Information
NIRIS Training	Bob Fisher	60 min	Information
LTM Discussion	Brian	30 min	Discussion
Other Issues	Team	15 min	Information
Meeting Closeout; Action Item Review; Next Agenda; +/-	Team	30 min	Planning
CAMP/Exit Strategy/Milestone Schedule (to be discussed with site update)			

Tentative Meeting Dates/Location

Wednesday, August 13, 2014  
 Wednesday and Thursday, November 19-20, 2014

St. Andrew Park, Panama City Florida  
 Virtual (9:00 a.m. to noon EST)

<b>Plus</b>	<b>Delta</b>
Jeff Day's AOC 1 update and discussion	No internet connection in meeting room
Helen at meeting and great Tier II Update	Seem to be picking up dropped balls
Gerry at meeting	
Tying up loose ends	
Covered a lot of information	
Stayed on schedule	
Good to have contractor outside of the Team participating and presenting data	
Good Team dynamics	

OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-0413-02	<del>(Charles)</del> Brian Richard and Tom	Ongoing	4/12/2013	Charles is to finish the LUC matrix document regarding training requirements. <b>Update 10-2013:</b> Richard and Tom will finish the LUC matrix document and share with Team members. <b>Update 02-2014:</b> Tom will send the matrix to the Team upon his return to Pittsburgh from this meeting.
A-0413-04	<del>(Charles)</del> Brian	Ongoing	3/30/2014	Charles is to prepare a public notice for the CRP/RAB. <b>Update 10-2013:</b> Melissa (Navy PR) will work with the installation in January to update information.
A-0413-06	<del>(Charles)</del> Richard/Tom	Ongoing	5/20/2013	Charles and Tom are to develop a table with the monitoring requirements of sites with conditional SRCOs/LUCIPs (G300 and AOC 1 for example). <b>Update 08-2013:</b> Tom will take information from the Exit Strategy to develop the table. <b>Update 10-2013:</b> This will go with the LUC Matrix (A-0413-02).
A-1013-01	Team	Ongoing	By the next meeting	Team members are to decide together which wells are to be abandoned at NSA Panama City at the next face-to-face meeting. <b>Update 02-2014:</b> Once the LTM requirements are determined, a decision can be made as to which wells can be abandoned.
A-1013-02	Tom	Done	10/31/2013	Tom is to update the Team Charter with the changes to the Roles and Responsibilities and contact information.
A-1013-03	Team	Done	10/24/2013	Team members are to review their contact and emergency contact information in the Team Charter and send any changes to Tom Johnston.
A-1013-05	Jeff	Done	10/31/2013	Jeff is to confirm the path forward for the Building 325 site (i.e., RAP Addendum with a LUCIP or a different path) to get information into the LUC Tracker.
A-1013-07	Navy	Ongoing	11/1/2013	The Navy is to discuss funding for UST 362.
A-1013-08	Brian	Ongoing	By the next meeting	Brian is to find out if Bob Fisher can provide NIRIS 2 training to the NSA Panama City Partnering Team.
A-1013-09	Helen	OBE	11/29/2013	Helen is to send the Navy Optimization Guidance to Team members. <b>Update 02-2014:</b> The guidance does not contain any information on abandoning wells.
A-1013-11	Mike	Done	11/1/2013	Mike is to send Helen information on the Gulf Guardian Award received for the shoreline restoration project and other awards the installation has recently received.
A-1013-12	Brian	Ongoing	10/25/2013	Brian is to check with Bob Fisher regarding updating the LUC Tracker for NSA Panama City.

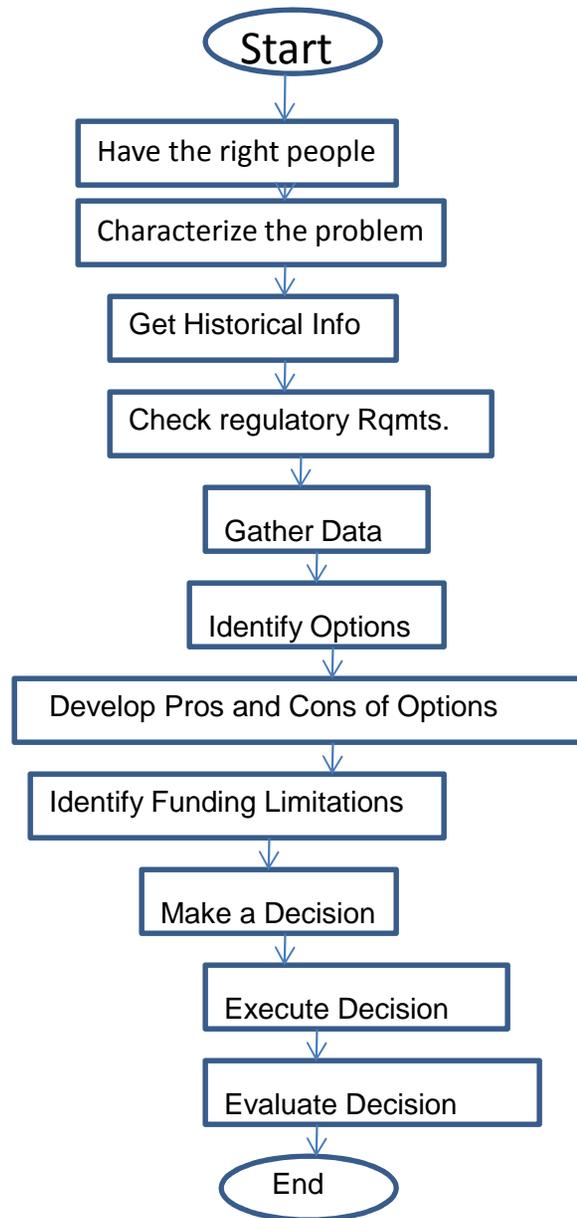
OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-1013-13	Team	Done	11/4/2013	Team members are to review the CAMP and Exit Strategy and provide any feedback to Tom.
A-1013-14	Tom	Done	11/6/2013	Tom is to set up a conference call to discuss the CAMP and Exit Strategy on Wednesday, November 6, 2013, at 2:30 pm EST.
A-1013-15	Helen	Done	10/18/2013	Helen is to provide Team members with a copy of the permit.
A-1013-16	Helen and Brian	Done	11/8/2013	Helen and Brian are to discuss continuity with the Team and getting work finished at NSA Panama City.
A-1013-17	Brian	Done	Before the next meeting	Brian is to invite Melissa Foster and Resolution Consultants to the February 2014 NSA Panama City Partnering Team meeting.
A-1113-01	Brian	OBE		Brian is to check for CAMP requirements so the Team can figure what should be covered by the CAMP. <b>Update 02-2014:</b> After the revised Exit Strategy is complete, the Team will look at reviewing the CAMP if necessary.
A-1113-02	Brian	Done		Brian is to check with Helen Lockard regarding funding spreadsheet to determine whether there is sufficient funding to cover potential new Tetra Tech work.
A-1113-03	Tom	Done		Tom is to check the monitoring requirements for NSA Panama city site (with help from Richard Lee).
A-1113-04	Tom	Done		Tom is to send the updated CAMP and Exit Strategy to the Team after incorporating changes based on the November 21, 2013, telephone call.
A-0214-01	Brian, Richard, Tetra Tech		By 2/21/14	Brian and Richard are to get with Tetra Tech to populate the revised Exit Strategy.
A-0214-02	Jeff Day			Jeff Day is to provide trend data to Jeff L. for AOC 1 well 17-S.
A-0214-03	Gerry		By 2/19/14	Gerry is to send the pdf of the basewide monitoring well locations to Team members.
A-0214-04	Gerry		By 2/21/14	Gerry is to provide Brian with a ball park estimate of a physical basewide monitoring well inventory at NSA Panama City.
A-0214-05	Helen and Brian		By 2/28/14	Helen and Brian are to find funding for a physical basewide monitoring well inventory at NSA Panama City.
A-0214-06	Gerry		By 3/31/14	Gerry is to review the historic data for AOC 2 soils and groundwater and complete a summary memorandum with recommendations.

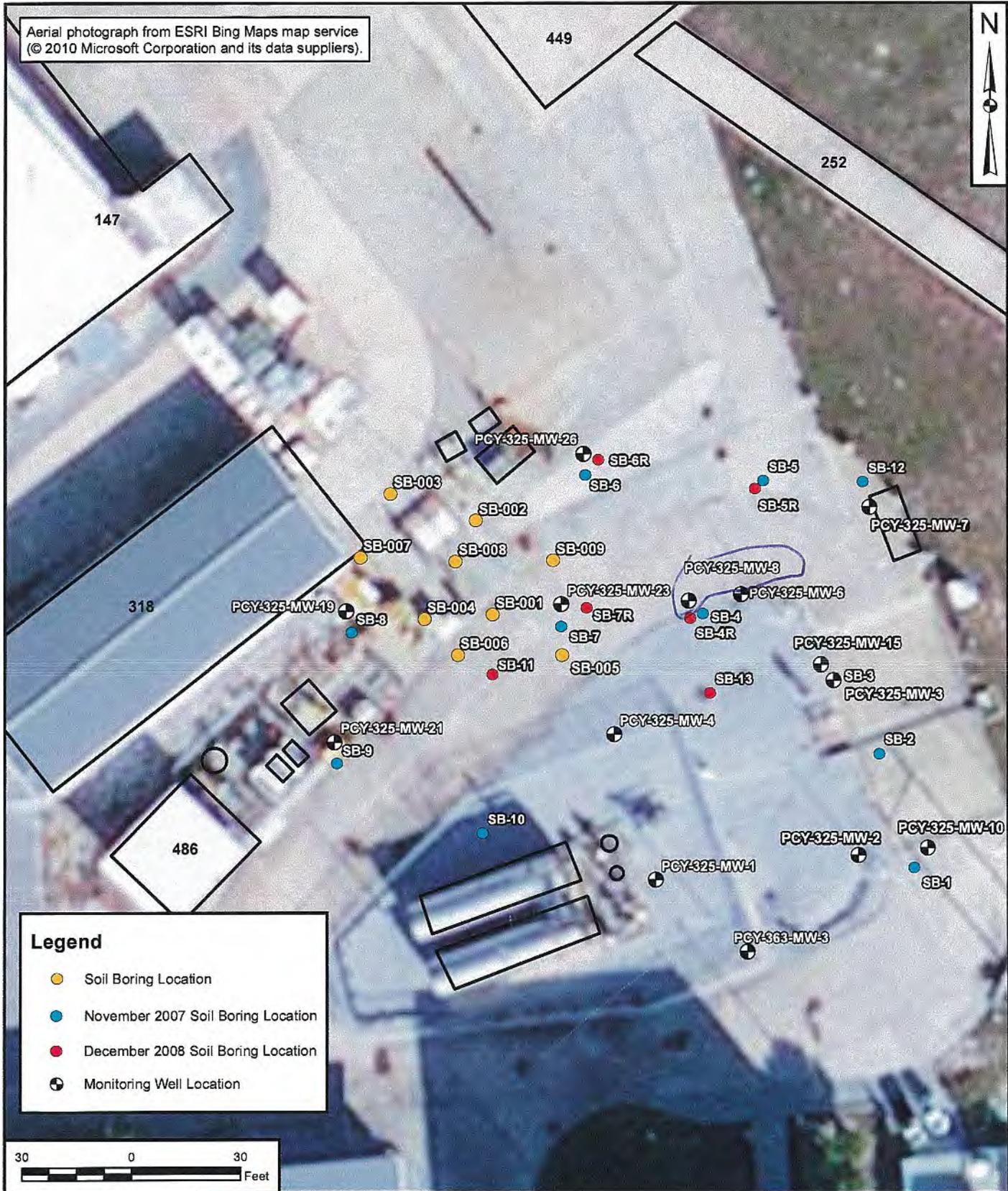
OPEN ACTION ITEMS				
Action Item #	Responsible Party	Status	Due Date	Action Item
A-0214-07	Gerry		By 3/31/14	Gerry is to incorporate lines of evidence and history (living CD of historic documents) at South Dock into the Technical Memorandum.
A-0214-08	Tom		By 2/28/14	Tom is to compile the current LUC boundaries, wells, and COCs and add a column to the LUC Matrix for reasoning to eliminate COCs, wells, etc. (what was changed, when, and why) and reference the document.
A-0214-09	Helen		By 2/28/14	Helen is to talk with John Schoolfield regarding the NOSC metal exceedances.

2012-2013 CONSENSUS ITEMS	
Consensus Item #	Consensus Item
C-0412-01	The Team reached consensus to approve the December 2011 meeting minutes as final.
C-0612-01	The Team reached consensus to approve the April 2012 meeting minutes as final.
C-0612-02	The Team reached consensus to adopt the modified Tier II Roles and Responsibilities as amended by the Team.
C-0113-01	The Team reached consensus to approve the June and September 2012 meeting minutes (with minor changes) as final.
C-0413-01	The Team reached consensus to approve the January 2013 meeting minutes as final.
C-0813-01	The Team reached consensus to approve the April 2013 meeting minutes as final.
C-1013-01	The Team reached consensus to approve the August 2013 meeting minutes as final.
C-0214-01	The Team reached consensus to approve the October 2013 meeting minutes as final.
C-0214-02	The Team reached consensus that at Building 98 four soil samples will be taken; one permanent, small diameter well will be installed in the source area; and one groundwater sample will be taken by Tetra Tech from that well. Downgradient groundwater samples will not be taken at this time.

PARKING LOT ITEMS	
Date	Parking Lot Item
08-2013-01	Site boundaries need to be established for AOC 2 and discussed with South Dock.
08-2013-02	LUC boundaries for all sites need to be reviewed to ensure they match with NIRIS.
02-2014-01	Brian to obtain funding for Site 362 (DLA), Building 89 elevator, and Building 5 auto lift.
02-2014-02	Do we need more face-to-face meetings?

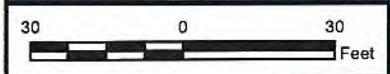
# Panama City Decision Model



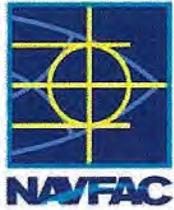


**Legend**

- Soil Boring Location
- November 2007 Soil Boring Location
- December 2008 Soil Boring Location
- ⊕ Monitoring Well Location



DRAWN BY	DATE
J.MADDEN	06/04/13
CHECKED BY	DATE
A.IGOE	06/04/13
REVISED BY	DATE
SCALE AS NOTED	



**SOIL AND MONITORING WELL LOCATIONS  
SITE 325  
NSA PANAMA CITY  
PANAMA CITY BEACH, FLORIDA**

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
3	0

Aerial photograph from ESRI Bing Maps map service  
 (© 2010 Microsoft Corporation and its data suppliers).

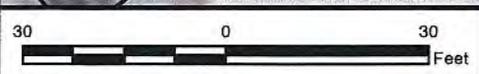


**Legend**

- Soil Boring Location
- November 2007 Soil Boring Location
- December 2008 Soil Boring Location

**Notes:**

- 1) mg/kg=milligrams per kilogram
- 2) R=State of Florida Residential Soil Cleanup Target Level
- 3) I=State of Florida Industrial Soil Cleanup Target Level
- 4) LGW=State of Florida Leachability to Groundwater Criteria
- 5) TRPH=Total Recoverable Petroleum Hydrocarbon
- 6) NV=No Value, not a health concern for this exposure scenario



Analyte	Residential	Industrial	Leachability to Groundwater
>C12-C16 TRPH	2900	21000	NV

DRAWN BY J.MADDEN	DATE 06/04/13
CHECKED BY A.IGOE	DATE 06/04/13
REVISED BY	DATE
SCALE AS NOTED	



**SOIL SAMPLE EXCEEDANCES APRIL 2012**  
**SITE 325**  
**NSA PANAMA CITY**  
**PANAMA CITY BEACH, FLORIDA**

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 4	REV 0



Analyte	CTL (ug/L)	NADC (ug/L)
TRPH	5,000	50,000

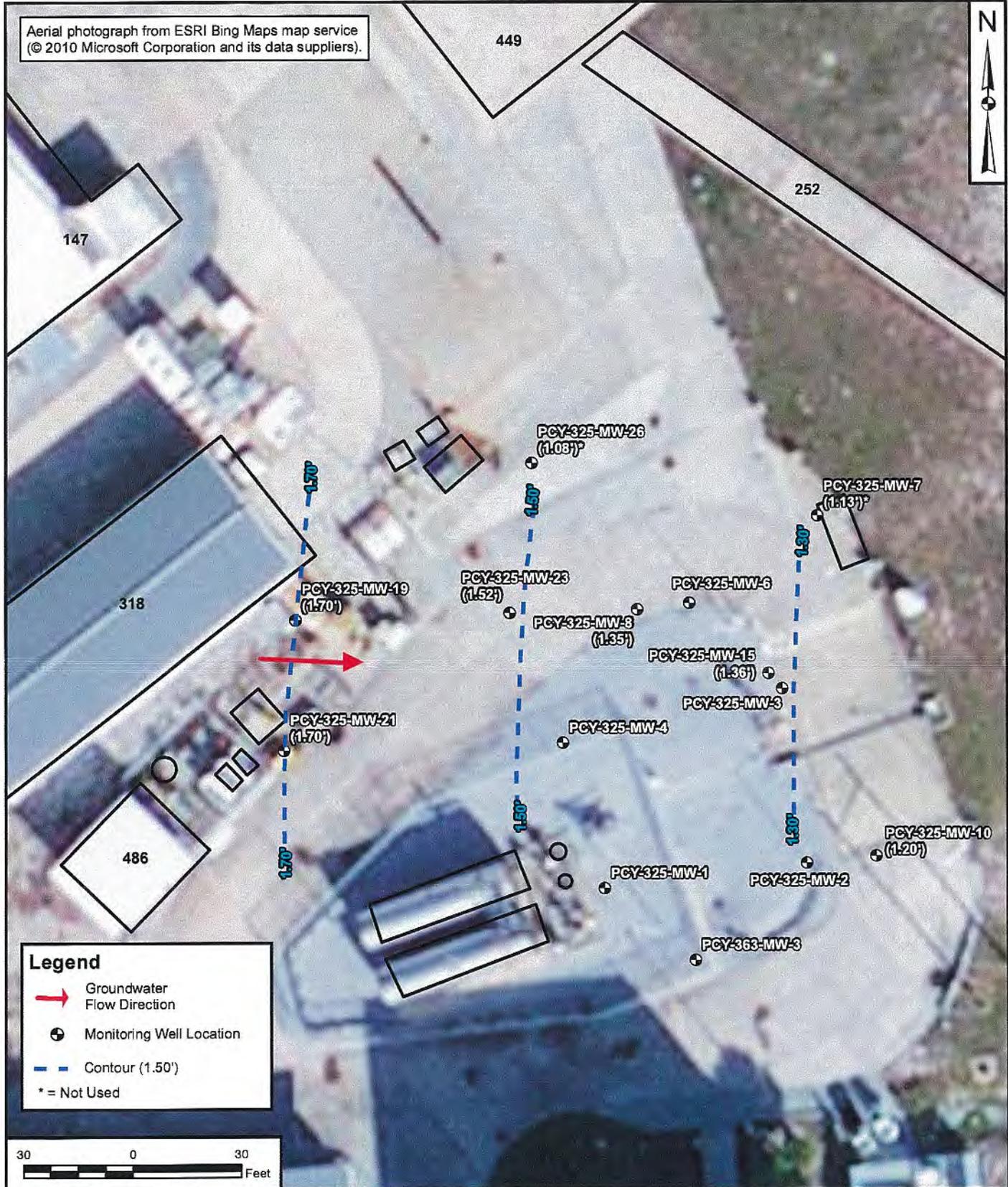
Notes:

- 1) ug/L=microgram per Liter
- 2)TRPH=Total Recoverable Petroleum Hydrocarbon
- 3)NADC=Natural Attenuation Default Criteria

DRAWN BY J.MADDEN	DATE 05/27/13	
CHECKED BY A.IGOE	DATE 05/27/13	
REVISED BY	DATE	
SCALE AS NOTED		

**GROUNDWATER EXCEEDANCES APRIL 2012**  
**SITE 325**  
**NSA PANAMA CITY**  
**PANAMA CITY BEACH ,FLORIDA**

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 5	REV 0

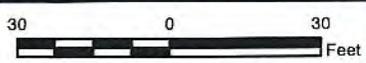


Aerial photograph from ESRI Bing Maps map service  
 © 2010 Microsoft Corporation and its data suppliers.

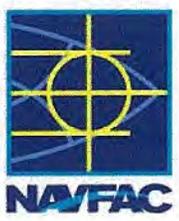


**Legend**

- Groundwater Flow Direction
- Monitoring Well Location
- Contour (1.50')
- \* = Not Used



DRAWN BY	DATE
J.MADDEN	06/04/13
CHECKED BY	DATE
A.IGOE	06/04/13
REVISED BY	DATE
SCALE AS NOTED	

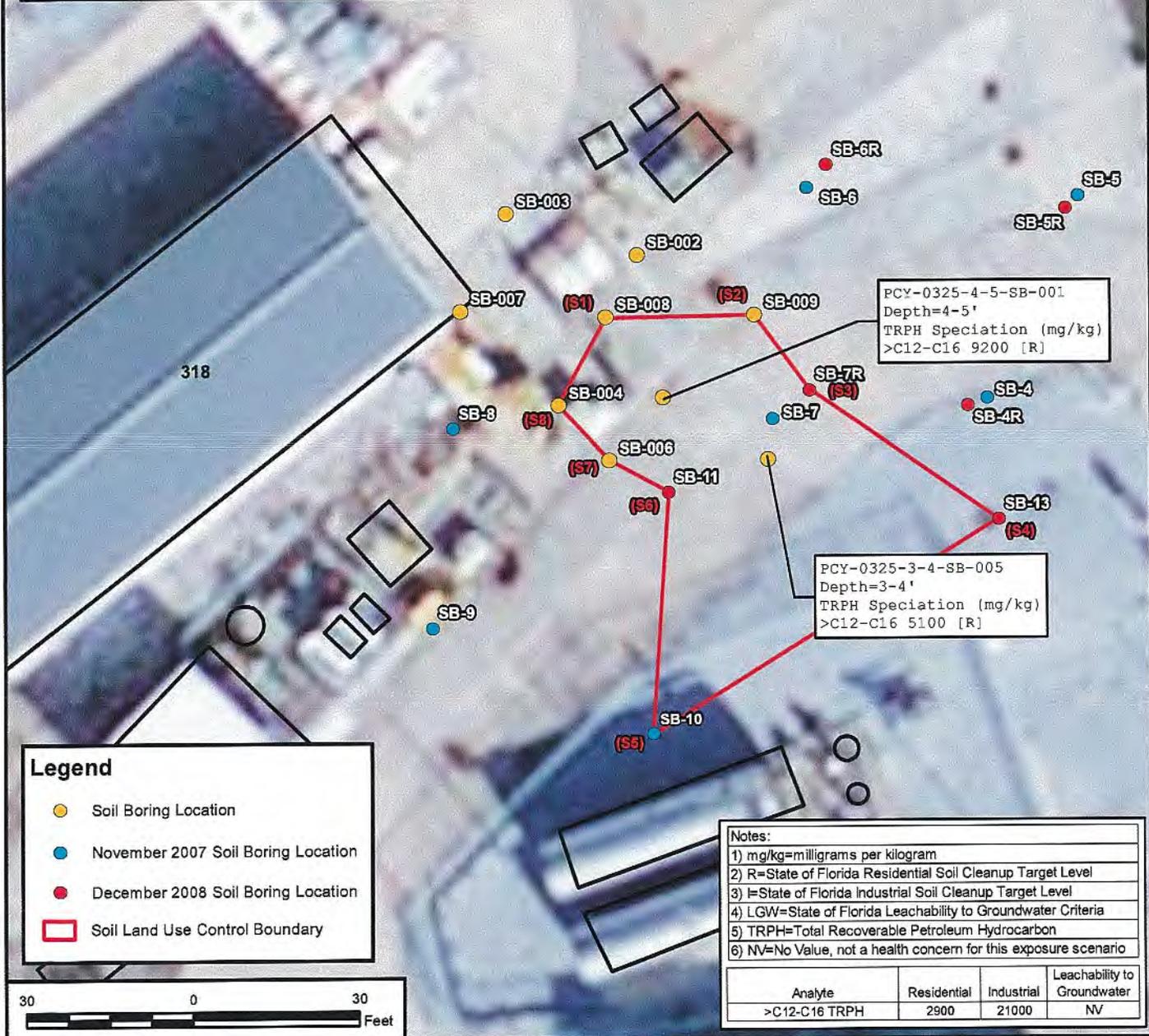


GROUNDWATER FLOW MAP APRIL 2012  
 SITE 325  
 NSA PANAMA CITY  
 PANAMA CITY BEACH, FLORIDA

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
6	0

Aerial photograph from ESRI Bing Maps map service  
 (© 2010 Microsoft Corporation and its data suppliers).

Soil LUC Node	Northing	Easting
S1	429182.1503	1572700.909
S2	429182.516	1572727.659
S3	429168.8275	1572737.742
S4	429145.3166	1572771.702
S5	429106.8633	1572709.111
S6	429150.489	1572712.037
S7	429156.2884	1572701.379
S8	429166.1629	1572692.288



**Legend**

- Soil Boring Location
- November 2007 Soil Boring Location
- December 2008 Soil Boring Location
- Soil Land Use Control Boundary

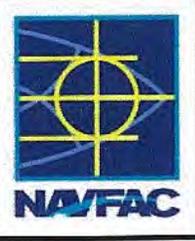
**Notes:**

- 1) mg/kg=milligrams per kilogram
- 2) R=State of Florida Residential Soil Cleanup Target Level
- 3) I=State of Florida Industrial Soil Cleanup Target Level
- 4) LGW=State of Florida Leachability to Groundwater Criteria
- 5) TRPH=Total Recoverable Petroleum Hydrocarbon
- 6) NV=No Value, not a health concern for this exposure scenario

Analyte	Residential	Industrial	Leachability to Groundwater
>C12-C16 TRPH	2900	21000	NV



DRAWN BY	DATE
J.MADDEN	09/06/13
CHECKED BY	DATE
A.IGOE	09/06/13
REVISED BY	DATE
SCALE AS NOTED	

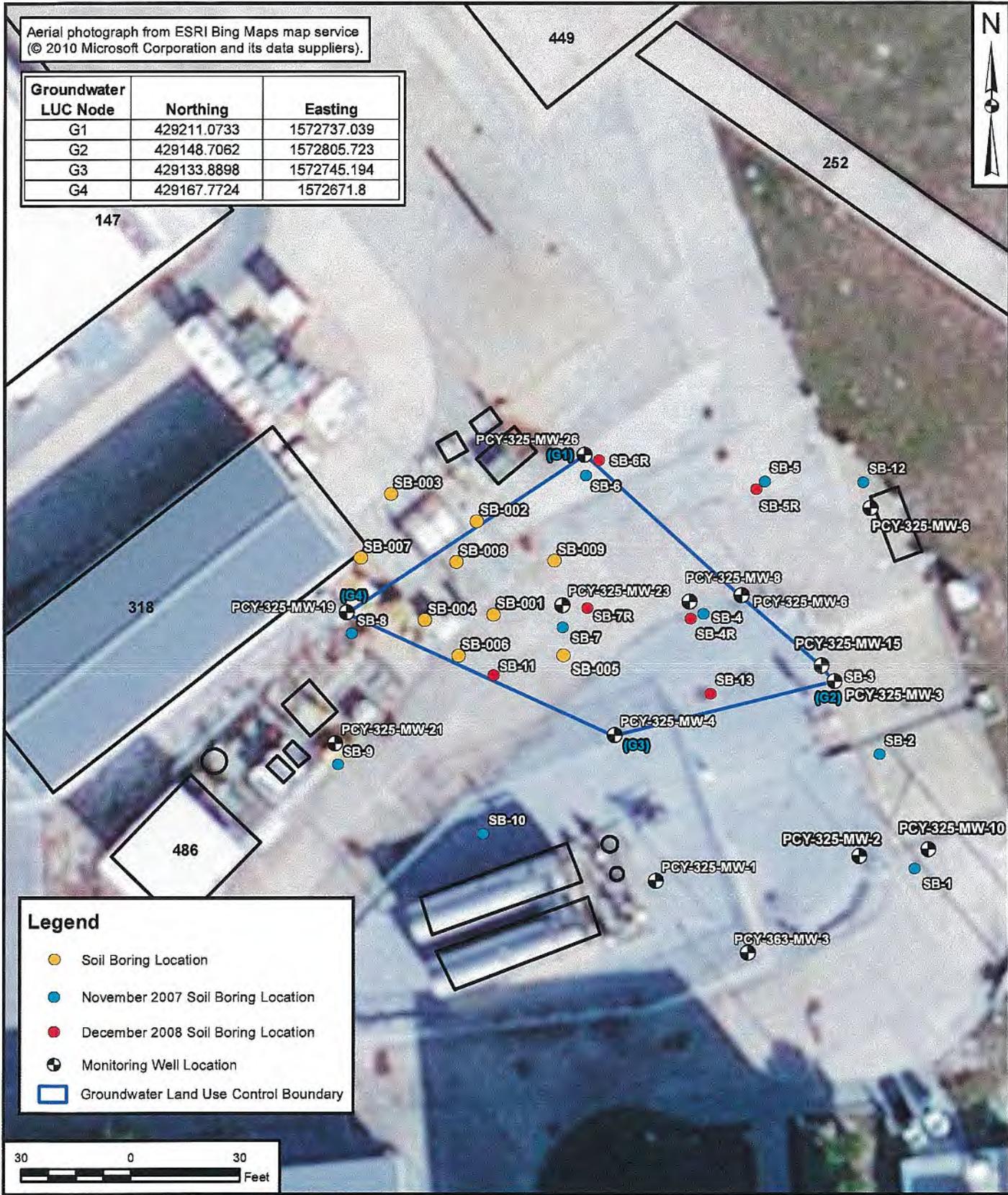


**SOIL LAND USE CONTROL BOUNDARY**  
**SITE 325**  
**NSA PANAMA CITY**  
**PANAMA CITY BEACH ,FLORIDA**

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
7	0

Aerial photograph from ESRI Bing Maps map service  
 (© 2010 Microsoft Corporation and its data suppliers).

Groundwater LUC Node	Northing	Easting
G1	429211.0733	1572737.039
G2	429148.7062	1572805.723
G3	429133.8898	1572745.194
G4	429167.7724	1572671.8

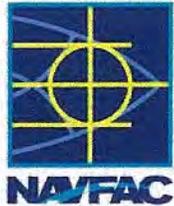


**Legend**

- Soil Boring Location
- November 2007 Soil Boring Location
- December 2008 Soil Boring Location
- Monitoring Well Location
- Groundwater Land Use Control Boundary

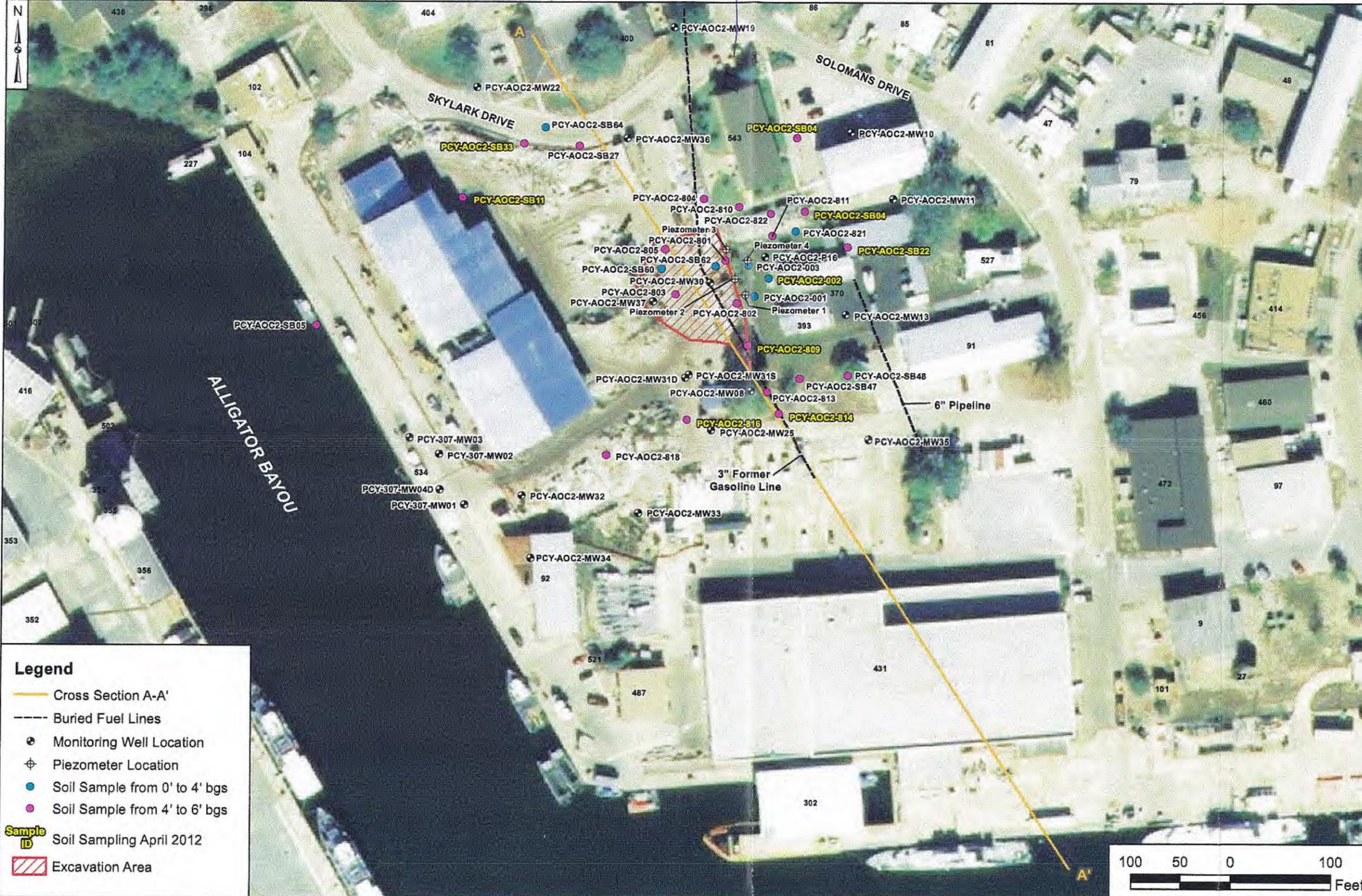


DRAWN BY J.MADDEN	DATE 09/06/13
CHECKED BY A.IGOE	DATE 09/06/13
REVISED BY	DATE
SCALE AS NOTED	



GROUNDWATER LAND USE CONTROL BOUNDARY  
 SITE 325  
 NSA PANAMA CITY  
 PANAMA CITY BEACH, FLORIDA

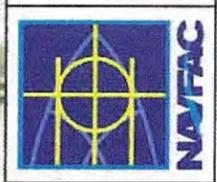
CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. 8	REV 0



*Gas Service Area*

CONTRACT NUMBER CTO 0326	DATE
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO. FIGURE 1	REV 0

SOIL SAMPLE LOCATIONS FOR SITE AOC 2  
NSA PANAMA CITY  
PANAMA CITY BEACH, FLORIDA



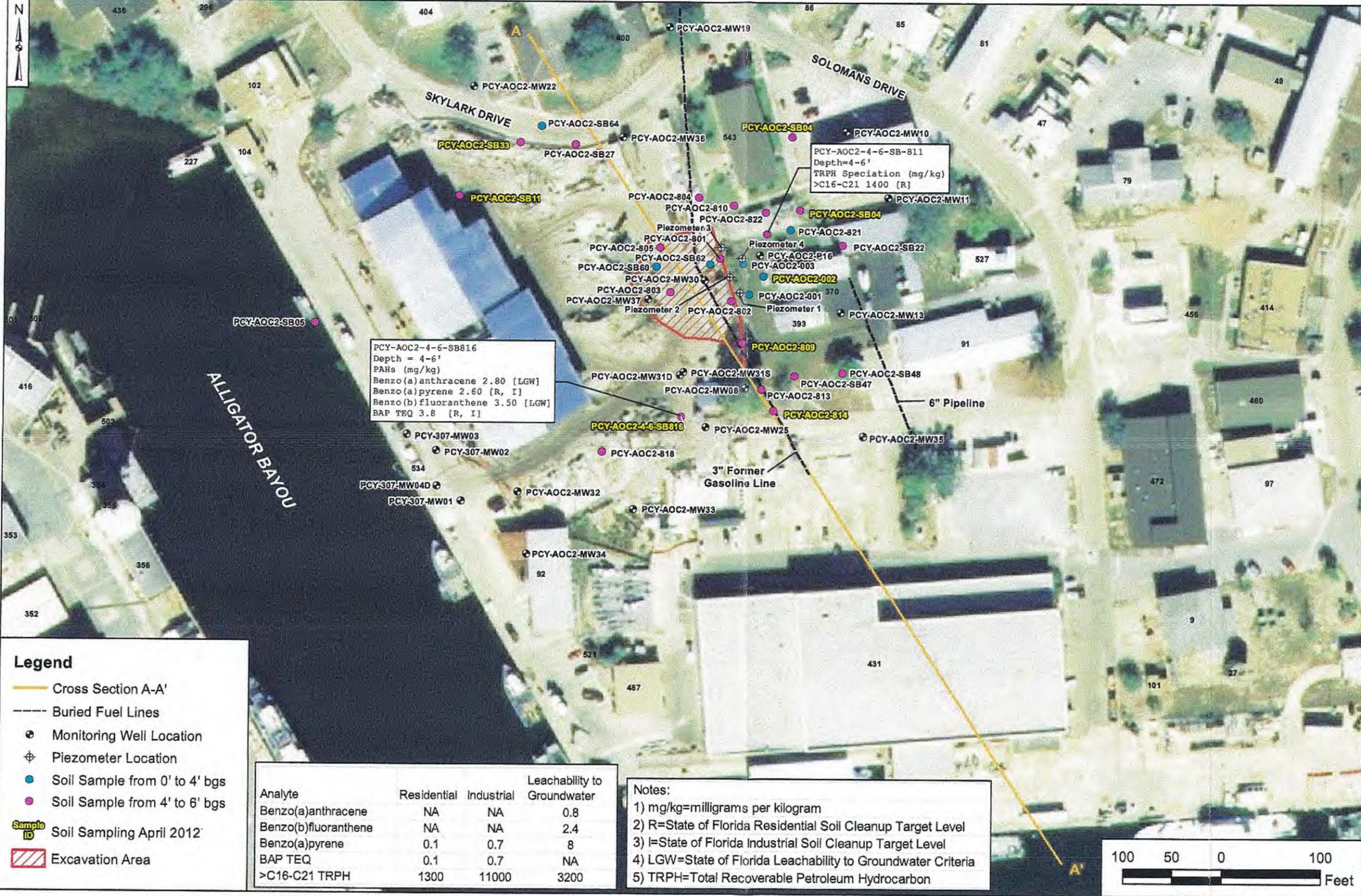
DRAWN BY J.MADDEN	DATE 05/08/13	CHECKED BY L. SMITH	DATE 06/17/11	COST/SCHEDULE-AREA	SCALE AS NOTED
----------------------	------------------	------------------------	------------------	--------------------	-------------------

**Legend**

- Cross Section A-A'
- Buried Fuel Lines
- Monitoring Well Location
- Piezometer Location
- Soil Sample from 0' to 4' bgs
- Soil Sample from 4' to 6' bgs
- Excavation Area

**Sample ID** Soil Sampling April 2012





PCY-AOC2-4-6-SB816  
 Depth = 4-6'  
 PAHs (mg/kg)  
 Benzo(a)anthracene 2.80 [LGW]  
 Benzo(a)pyrene 2.60 [R, I]  
 Benzo(b)fluoranthene 3.50 [LGW]  
 BAP TEQ 3.8 [R, I]

PCY-AOC2-4-6-SB-811  
 Depth=4-6'  
 TRPH Speciation (mg/kg)  
 >C16-C21 1400 [R]

**Legend**

- Cross Section A-A'
- Buried Fuel Lines
- ⊕ Monitoring Well Location
- ⊕ Piezometer Location
- Soil Sample from 0' to 4' bgs
- Soil Sample from 4' to 6' bgs
- Sample ID Soil Sampling April 2012
- ▨ Excavation Area

Analyte	Residential	Industrial	Leachability to Groundwater
Benzo(a)anthracene	NA	NA	0.8
Benzo(b)fluoranthene	NA	NA	2.4
Benzo(a)pyrene	0.1	0.7	8
BAP TEQ	0.1	0.7	NA
>C16-C21 TRPH	1300	11000	3200

**Notes:**

- 1) mg/kg=milligrams per kilogram
- 2) R=State of Florida Residential Soil Cleanup Target Level
- 3) I=State of Florida Industrial Soil Cleanup Target Level
- 4) LGW=State of Florida Leachability to Groundwater Criteria
- 5) TRPH=Total Recoverable Petroleum Hydrocarbon

CONTRACT NUMBER	CTO 0326
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	FIGURE 2
REV	0

SOIL SAMPLE EXCEEDANCES FOR SITE AOC 2  
 NSA PANAMA CITY  
 PANAMA CITY BEACH, FLORIDA



DRAWN BY	DATE	05/08/13
J.MADDEN		
CHECKED BY	DATE	06/17/11
L. SMITH		
COST/SCHEDULE-AREA		
SCALE	AS NOTED	

Aerial photograph from ESRI Bing Maps map service  
 © 2010 Microsoft Corporation and its data suppliers.



**Legend**  
 ● Temporary Monitoring Well Location  
 - - - LUC Boundary Extent

DRAWN BY	DATE
S. PAXTON	01/07/13
CHECKED BY	DATE
L. SMITH	01/07/13
REVISED BY	DATE
J.MADDEN	05/12/13
SCALE AS NOTED	



LAND USE CONTROL BOUNDARY  
 SOUTH DOCK  
 NSA PANAMA CITY  
 PANAMA CITY BEACH, FLORIDA

CONTRACT NUMBER	CTO NUMBER
	JM73
APPROVED BY	DATE
APPROVED BY	DATE
FIGURE NO.	REV
3	0

**TABLE 1**  
**SOIL HEADSPACE SCREENING SUMMARY 2012**  
**AOC 2**  
**NSA PANAMA CITY**  
**PANAMA CITY, FLORIDA**

SAMPLE				OVA SCREENING RESULTS			COMMENTS
BORING NO.	DATE COLLECTED	DEPTH TO WATER	SAMPLE INTERVAL (fbis)	TOTAL READING (ppm)	CARBON FILTERED (ppm)	NET READING (ppm)	
PCY-AOC2-814	4/11/2012	~6.0	0-1	<1	NA	<1	Lab sample collected @ 4'-6'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	<1	NA	<1	
			4-5	<1	NA	<1	
			5-6	<1	NA	<1	
			6-7	1.9	NA	1.9	
PCY-AOC2-816	4/11/2012	~6.0	0-1	2.0	NA	2.0	Lab sample collected @ 4'-6'
			1-2	1.2	NA	1.2	
			2-3	1.5	NA	1.5	
			3-4	1.5	NA	1.5	
			4-5	52.8	4.4	48.1	
			5-6	48.2	1.0	47.2	
PCY-AOC2-SB22	4/11/2012	~6.0	0-1	<1	NA	<1	Lab sample collected @ 2'-4' Lab sample collected @ 4'-6'
			1-2	<1	NA	<1	
			2-3	87.9	24.7	63.2	
			3-4	52.2	5.2	47.0	
			4-5	129.0	6.3	122.7	
			5-6	192.2	12.2	180.0	
PCY-AOC2-002	4/11/2012	~6.0	0-1	2.1	NA	2.1	Lab sample collected @ 4'-6'
			1-2	2.4	NA	2.4	
			2-3	3.1	NA	3.1	
			3-4	2.9	NA	2.9	
			4-5	12.4	14.0	1.6	
			5-6	52.1	23.0	29.1	
PCY-AOC2-809	4/11/2012	~6.0	0-1	2.2	NA	2.2	Lab sample collected @ 4'-6'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	<1	NA	<1	
			4-5	<1	NA	<1	
			5-6	<1	NA	<1	
PCY-AOC2-SB04	4/11/2012	~6.0	0-1	6.2	NA	6.2	Lab sample collected @ 4'-6'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	<1	NA	<1	
			4-5	<1	NA	<1	
			5-6	<1	NA	<1	

**TABLE 1**  
**SOIL HEADSPACE SCREENING SUMMARY 2012**  
**AOC 2**  
**NSA PANAMA CITY**  
**PANAMA CITY, FLORIDA**

SAMPLE			OVA SCREENING RESULTS			COMMENTS	
BORING NO.	DATE COLLECTED	DEPTH TO WATER	SAMPLE INTERVAL (fbis)	TOTAL READING (ppm)	CARBON FILTERED (ppm)		NET READING (ppm)
PCY-AOC2-811	4/11/2012	~6.0	0-1	<1	NA	<1	Lab sample collected @ 4'-6'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	7.6	NA	7.6	
			4-5	86.4	0	86.4	
			5-6	416.2	23	393.1	
PCY-AOC2-SB33	4/11/2012	~6.0	0-1	<1	NA	<1	Lab sample collected @ 4'-5'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	<1	NA	<1	
			4-5	<1	NA	<1	
PCY-AOC2-SB11	4/11/2012	~6.0	0-1	<1	NA	<1	Lab sample collected @ 4'-5'
			1-2	<1	NA	<1	
			2-3	<1	NA	<1	
			3-4	57.1	13.1	44.0	
			4-5	>1000	280.6	>719.4	

**Notes:**  
FID=Flame Ionization Detector  
fbis = feet below land surface  
NA = Not Analyzed  
ppm = parts per million

**TABLE 2  
SOIL ANALYTICAL SUMMARY  
AOC 2  
NSA PANAMA CITY  
PANAMA CITY, FLORIDA**

Site	Sample	Date	Depth	Sample	Net FID	Laboratory Analysis																				Comments					
						MTBE	Benzene	Toluene	Ethyl-	1-Methyl-	2-Methyl-	Naph-	Ace-	Acenaph-	TRPH	Benzo[a]-	Benzo[b]-	Benzo[g,h,j]-	Benzo[k]-	Dibenzo[a,h]-	Indeno[1,2,3-cd]-	BAP TEQ									
Name	Number	Collected	to	Interval	Reading	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
Residential Exposure Target Level						4400	1.2	7500	1500	130	200	210	55	2400	1800	21000	460	#	0.1	#	2500	#	#	3200	2600	#	2200	2400	0.1		
Commercial/Industrial Exposure Target Level						24000	1.7	60000	9200	700	1800	2100	300	20000	20000	300000	2700	#	0.7	#	52000	#	#	59000	33000	#	36000	45000	0.7		
Leachability Based on GW Target Level						0.09	0.007	0.5	0.6	0.2	3.1	8.5	1.2	2.1	27	2500	340	0.8	8	2.4	32000	24	77	0.7	1200	160	6.6	250	880	NA	
PCY-AOC2-	4-6-SB814	4/11/12	-6.0'	4-6	<1	0.0012 U	0.0013 U	0.0015 U	0.0012 U	0.0042 U	0.0063 U	0.0063 U	0.0054 U	0.0065 U	0.0061 U	0.0061 U	4.5 U	0.007 U	0.0047 U	0.0048 U	0.006 U	0.0075 U	0.0077 U	0.0045 U	0.0063 U	0.0062 U	0.0042 U	0.0065 U	0.0076 U	NA	
	4-6-SB816	4/11/12	-6.0'	4-6	48.1	0.0016 U	0.0017 U	0.0019 U	0.0019 U	0.0059 U	0.0079 U	0.0078 U	0.010 I	0.013	0.330	0.620	130	2.80	2.60	3.50	1.980	1.20	1.90	0.370	5.900	0.0320	1.700	0.610	4.400	3.8	
	2-4-SB-SB22	4/11/12	-6.0'	2-4	63.2	0.0015 U	0.0016 U	0.0018 U	0.0014 U	0.0050 U	0.0058 U	0.0058 U	0.0050 U	0.0059 U	0.0056 U	0.0056	6.0 I	0.0064 U	0.0043 U	0.0044 U	0.0055 U	0.0069 U	0.0071 U	0.0042 U	0.0058 U	0.0057 U	0.0039 U	0.0060 U	0.0070 U	NA	
	4-6-SB-SB22	4/11/12	-6.0'	4-6	180.0	0.0016 U	0.0017 U	0.0019 U	0.0015 U	0.0053 U	0.0064 U	0.0063 U	0.0054 U	0.0087 I	0.0061 U	0.0091	710	0.0073 U	0.0047 U	0.0048 U	0.110	0.0075 U	0.0077 U	0.0050 I	0.0063 U	0.0096	0.080	0.0066 U	0.0076 U	0.0	slight petroleum odor
	4-6-SB-002	4/11/12	-6.0'	4-6	29.1	0.003 U	0.0033 U	0.0037 U	0.0029 U	0.010 U	0.0060 U	0.0060 U	0.0051 U	0.0094 U	0.0058 U	0.022	1400	0.0067 U	0.0045 U	0.0046 U	0.0057 U	0.0071 U	0.0085	0.0043 U	0.0060 U	0.026	0.0940 U	0.0085 I	0.810	0.0	slight petroleum odor
	4-6-SB-809	4/11/12	-6.0'	4-6	<1	0.0016 U	0.0017 U	0.0020 U	0.0016 U	0.0054 U	0.0060 U	0.0059 U	0.013	0.02	0.0058 U	0.026	4.2 U	0.091	0.088	0.140	0.080	0.082	0.016	0.082	0.190	0.010	0.066	0.110	0.130	0.1	
	4-6-SB-SB04	4/11/12	-6.0'	4-6	<1	0.0017 U	0.0018 U	0.0021 U	0.0016 U	0.0057 U	0.0058 U	0.0058 U	0.0049 U	0.0059 U	0.0056 U	0.0056 U	200	0.0064 U	0.0043 U	0.0046 I	0.0055 U	0.0069 U	0.0070 U	0.0042 U	0.0059 I	0.0057 U	0.0038 U	0.0060 U	0.0069 U	0.0	
	4-6-SB-811	4/11/12	-6.0'	4-6	393.1	0.0014 U	0.0015 U	0.0017 U	0.0013 U	0.0046 U	0.0071 U	0.0071 U	0.0061 U	0.0072 U	0.0069 U	0.0069 U	13	0.0079 U	0.0053 U	0.0082 I	0.0068 U	0.0084 U	0.0086 U	0.0051 U	0.0074 I	0.0070 U	0.0047 U	0.0073 U	0.0085 U	0.0	petroleum odor
	4-6-SB-SB33	4/11/12	-6.0'	4-6	>1000	0.0012 U	0.0012 U	0.0014 U	0.0011 U	0.0039 U	0.0067 U	0.0067 U	0.0057 U	0.0069 U	0.0065 U	0.0065 U	4.7 U	0.0074 U	0.0050 U	0.0051 U	0.0064 U	0.0080 U	0.0082 U	0.0048 U	0.0067 U	0.0066 U	0.0045 U	0.0070 U	0.0081 U	NA	moderate sulfur odor

Notes:  
 #=Site concentrations for carcinogenic polycyclic aromatic hydrocarbons must be converted to Benzo(a)pyrene equivalents before comparison with the appropriate direct exposure SCTL for Benzo(a)pyrene using the approach described in the February 2005 Final Technical Report: Development of Cleanup Target Levels (CTLs) for Chapter 62-777 Florida Administrative Code  
 FID=Flame Ionization Detector  
 fbls = feet below land surface  
 BAP TEQ=Benzo(a)pyrene Toxicity Equivalent  
 mg/kg = milligrams per kilogram  
 TRPH = Total Recoverable Petroleum Hydrocarbons by Florida Petroleum Range Organics (FL-PRO)  
 I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit  
 U = Not Detected above the laboratory method detection limit stated  
 Bolded values exceed FDEP Commercial/Industrial and/or Residential Soil Cleanup Target Levels (SCTL)

**TABLE 3**  
**TRPH SPECIATION SOIL ANALYTICAL SUMMARY**  
**AOC 2**  
**NSA PANAMA CITY**  
**PANAMA CITY, FLORIDA**

Site Name	Sample Number	Date Collected	Depth to Water	Sample Interval (fbls)	Net OVA Reading (ppm)	Laboratory Analysis												
						Aromatic Hydrocarbons						Aliphatic Hydrocarbons						
						C <sub>5</sub> - C <sub>7</sub> (mg/Kg)	>C <sub>7</sub> - C <sub>8</sub> (mg/Kg)	>C <sub>8</sub> - C <sub>10</sub> (mg/Kg)	>C <sub>10</sub> - C <sub>12</sub> (mg/Kg)	>C <sub>12</sub> - C <sub>16</sub> (mg/Kg)	>C <sub>16</sub> - C <sub>21</sub> (mg/Kg)	>C <sub>21</sub> - C <sub>25</sub> (mg/Kg)	C <sub>9</sub> - C <sub>6</sub> (mg/Kg)	>C <sub>6</sub> - C <sub>8</sub> (mg/Kg)	>C <sub>8</sub> - C <sub>10</sub> (mg/Kg)	>C <sub>10</sub> - C <sub>12</sub> (mg/Kg)	>C <sub>12</sub> - C <sub>16</sub> (mg/Kg)	>C <sub>16</sub> - C <sub>25</sub> (mg/Kg)
Residential Exposure Target Level						340	490	460	900	1,500	1,300	2,300	6,200	8,700	850	1,700	2,900	42,000
Commercial/Industrial Exposure Target Level						1,800	3,700	2,700	5,900	12,000	11,000	40,000	33,000	46,000	4,800	10,000	21,000	280,000
Leachability Based on GW Target Level						34	59	340	520	1,000	3,200	25,000	470	1,300	7,000	51,000	NV	NV
PCY-AOC2-	4-6-SB-SB22	4/11/12	-6.0'	4-6	180	30 U	30 U	30 U	30 U	30 U	110 I	110 I	38 U	38 U	38 U	38 U	120 I	710
	4-6-SB-002	4/11/12	-6.0'	4-6	29.1	32 U	32 U	32 U	32 U	32 U	210	79 I	40 U	40 U	40 U	40 U	230	1200
	4-6-SB-811	4/11/12	-6.0'	4-6	393.1	30 U	30 U	30 U	30 U	290	<b>1,400</b>	340	37 U	37 U	37 U	230	2,600	6,500

**Notes:**  
fbls = feet below land surface  
mg/Kg = milligrams per kilogram  
TRPH = Total Recoverable Petroleum Hydrocarbons by Florida Residual Petroleum Organic Method (FL-PRO)  
NV = No Value, not a health concern for this exposure scenario  
I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit  
U = Not Detected above the laboratory method detection limit stated  
**Bolded values exceed FDEP Commercial/Industrial and/or Residential Soil Cleanup Target Levels (SCTL)**

**TABLE 4  
GROUNDWATER ANALYTICAL SUMMARY  
AOC 2  
NSA PANAMA CITY  
PANAMA CITY, FLORIDA**

Sample Designation	Well Designation	Date Collected	Depth to Water	Sample Interval (fbis)	Laboratory Analyses									
					Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Ethylene dibromide (µg/L)	Lead (µg/L)	1-Methylnaphthalene (µg/L)	2-Methylnaphthalene (µg/L)	Naphthalene (µg/L)	TRPH by FL-PRO (µg/L)
FDEP Groundwater Cleanup Target Level					1	40	30	20	0.02	15	28	28	14	5,000
FDEP Natural Attenuation Default Concentrations					100	400	300	200	2.0	150	280	280	140	50,000
PCY-SODO-GW-001	TMW-1	4/13/2012	5.55'	2-12	0.21 U	0.28 U	0.24 U	0.62 U	0.0062 U	0.0013 U	0.018 U	0.045 U	0.053 U	100 U
PCY-SODO-GW-003	TMW-3	4/14/2012	7.06'	3-13	0.21 U	0.28 U	0.24 U	0.62 U	0.0062 U	0.0013 U	0.018 U	0.045 U	0.053 U	100 U
PCY-SODO-GW-FD (field duplicate)	TMW-3	4/14/2012	7.06'	3-13	0.21 U	0.28 U	0.24 U	0.62 U	0.0062 U	0.0013 U	0.018 U	0.045 U	0.053 U	100 U
PCY-SODO-GW-006	TMW-6	4/13/2012	7.91'	3-13	0.21 U	0.28 U	0.24 U	0.62 U	0.0062 U	0.0013 U	0.018 U	0.045 U	0.053 U	100 U

**Notes:**

fbis = feet below land surface

µg/L = micrograms per liter

TRPH = Total Recoverable Petroleum Hydrocarbons by Florida Petroleum Range Organics (FL-PRO)

ND = Not Detected above the laboratory method detection limit

U = Undetected at laboratory method detection limit stated

FD = Field Duplicate

**Bolded values exceed FDEP Groundwater Cleanup Target Levels (GCTL)**