

NAVAL STATION TREASURE ISLAND
ENVIRONMENTAL RESTORATION ADVISORY BOARD MEETING
Tuesday, 21 August 2012
7:00 PM.
Casa de la Vista Building 271
Treasure Island
MEETING NO. 161

- 7:00 – 7:05 **Welcome Remarks and Introductions**
Lead: James Sullivan, Navy Co-Chair
- 7:05 – 7:10 **Public Comment and Announcements**
Lead: James Sullivan, Navy Co-Chair
- 7:10 – 7:15 **Treasure Island/Yerba Buena Island Property Transfer Update**
Lead: James Sullivan, Navy Co-Chair
- 7:15 – 7:25 **Field Activities and Access Update (Sites 12, 21, 24, 31, 33 and Building 233)**
Lead: Shaw Environmental
- 7:25 – 7:35 **Site 21 Draft Soil Gas Human Health Risk Assessment Addendum**
Lead: Danielle Janda, Navy Remedial Project Manager
- 7:35 – 7:45 **Update on Sites 21, 24 and 32 Groundwater Monitoring**
Lead: Danielle Janda, Navy Remedial Project Manager
- 7:45 – 8:15 **Treasure Island Draft Historical Radiological Assessment Technical Memorandum**
Lead: David Clark, Navy Lead Remedial Project Manager
- 8:15 – 8:20 **Upcoming Documents and Field Schedule**
Lead: Jessica Beck, Tetra Tech EMI
- 8:20 – 8:25 **Co-Chair Announcements**
Lead: Alice Pilram, Community Co-Chair
- 8:25 – 8:30 **RAB Meeting Minutes**
Lead: James Sullivan, Navy Co-Chair
- 8:30 – 8:35 **BRAC Cleanup Team Update**
Lead: James Sullivan, Navy Co-Chair
- 8:35 – 8:40 **Other Public Comment and Announcements**
Lead: James Sullivan, Navy Co-Chair

8:40 – 8:45 **Future Meeting Agenda Items**
Lead: Navy and Community Co-Chairs

8:45 **Closing Remarks/End of Meeting**
Break/Informal Discussion for 30 minutes after the meeting
This is an opportunity to informally discuss issues

Next Regular Meeting: No September 2012 Meeting

7:00 pm Tuesday, 16 October 2012
Casa de la Vista, Treasure Island

Next Treasure Island Citizen’s Advisory Board (CAB) Meeting: See the web site for latest dates and times for future meetings: <http://www.sfgov.org/treasureisland>

Next Interim RAB Community Member Conference Call:

7:00 pm. Tuesday, 25 September 2012

Call-In Number: 1- 866-822-0121

Participant Code: 1122026

(Note: This same number will be used for future conference calls)

Navy BRAC Web Site: <http://www.bracpmo.navy.mil> (click on map for Treasure Island)

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BRAC Program Management Office



Naval Station Treasure Island Supplemental Historical Radiological Assessment Update

Dave Clark
Navy Lead Remedial Project Manager

August 21, 2012

1



Treasure Island HRA Tech Memo



Background

- The previous comprehensive basewide evaluation for radiological issues was conducted in 2006
- Since then significant remediation of contaminated areas has taken place
 - Providing a comprehensive data set
 - Nature and extent of contamination better understood
- State requested re-evaluation and documentation of radiological issues due to active property transfer plans
- New lines of historical evidence available

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Treasure Island HRA Tech Memo



Purpose

- Re-confirm property suitable for transfer relative to radiological issues
- Identify new areas that have a potential for contamination based on:
 - Site history
 - Known contamination detected during previous surveys
- Such areas with the *potential* for contamination or are known to be contaminated are classified as "impacted"
- Impacted sites are then investigated to confirm conceptual site models

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Treasure Island HRA Tech Memo



Process

- Review 2006 Historical Radiological Assessment (HRA) references
- Review new documentation
 - National Archives
 - Navy Radiological Affairs Support Office Records (RASO)
 - Treasure Island (TI) Records
- Document being developed in consultation with:
RASO – CDPH – DTSC – EPA – RWQCB – TIDA – City of SF – RAB

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Treasure Island HRA Tech Memo



General Findings

- No additional evidence of new waste disposal areas or releases
- USS Pandemonium sites (both locations) warrant surveys
- One specific conclusion in the 2006 HRA was updated regarding Building 342 based on new information
- Salvage yards and Building 3 warrant further investigation based on new information regarding WWII salvage/repair operations
- Two areas involved with current remediation efforts warrant further investigation
- Other findings of the 2006 HRA remain valid based on review of historic references



USS Pandemonium Training Facility



USS Pandemonium Site I (NW)

- Existing data set (subsurface scan) does not show evidence of release
- No evidence of surface contamination
- Demolition of associated concrete tank to be confirmed (2013)
- Scoping survey to be conducted of holding tanks and ground surface (2013)

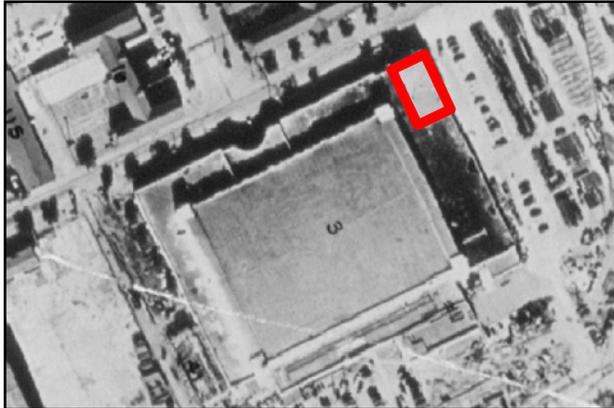


USS Pandemonium Site II (NE)

- Majority of site removed as part of a removal action
- No evidence of release
- Existing tank to be sampled (2013)
- Conduct scoping survey of holding tanks and ground surface (2013)



Areas Based on New Information



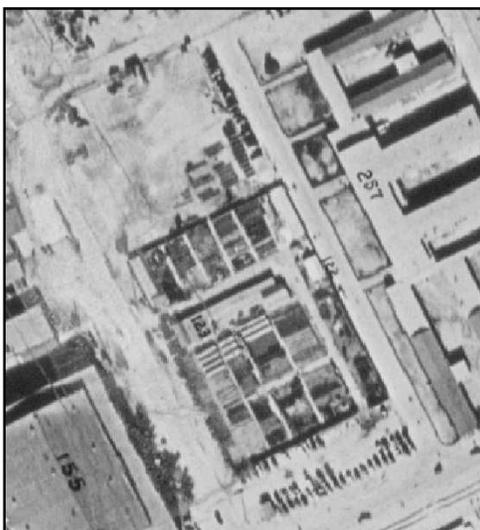
Optical Shop

- Shop built on roof of Building 3 in 1944
- Demolished in 1969
- *No evidence of releases found*
- *Scoping survey to be conducted of building and drain lines (2013)*

7



Areas Based on New Information (Cont.)



Site 31/30 Area Storage Yard

- Used from WWII until the 1970s
- *Current information collected from Site 31 has not definitively yielded non-naturally occurring radioisotopes*
- *No evidence of releases found*
- *No commodities found at Site 31*
- *No evidence of impacts to surrounding environment from site or ongoing remedial action*
- *Path forward: Issue Site 31 Removal Action Summary Report and Final Status Survey (2012/13)*
- *Conduct scoping survey for other areas of the site, including Site 30 (2013)*

8



Areas Based on New Information (Cont.)



Building 342

- Building is not occupied
- Used for training and instrument calibration
- *No evidence of contamination*
- *Path forward: Conduct scoping survey and Final Status Survey of the building and associated sanitary sewer lines (2013)*

9



Areas Based on New Information (Cont.)



Sewage Treatment Plant Area

- Former salvage yard area during WWII associated with ship repair activities
- *No evidence of releases found*
- *Conduct scoping survey of the ground surface in the sewage plant area (2013)*

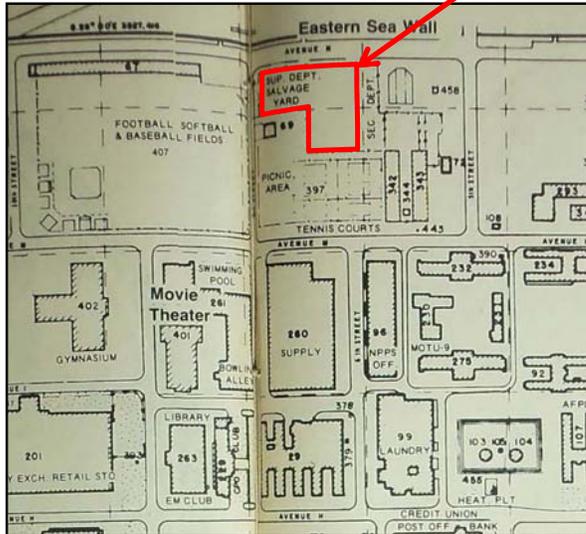
10



Areas Based on New Information (Cont.)



Salvage Yard Lot 69



Supply Depot Salvage Yard/ Lot 69

- Used for various storage uses from 1969 to present.
- *No evidence of contamination*
- *No residential or offices present*
- *Complete scoping survey of salvage yard footprint (2013)*



Newly Impacted Areas Associated with Remedial Activities



Building 570 Area and Location

- Soil samples and commodities stored in secure areas as part of field operations
- *No known contamination at the site*
- *Final Status Survey to be conducted following use*
- *Regular scanning of perimeter shows no contamination*



Site 6

- Currently being used for bin storage as part of removal actions
- Minor impacts known from soil storage activities
- Conduct Final Status Survey of the ground surface after use
- *Conduct scanning of roads (2013)*
- *Regular scanning of perimeter shows no contamination*



Path Forward For Tech Memo



- **State comments on draft document due:** September 5, 2012
- **Response to Comments:** October 3, 2012
- **Final Document:** November 26, 2012

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Summary



- Tech Memo has not identified any new information confirming any additional radiological contamination.
- The Navy is committed to conducting investigations of impacted sites.
- The Navy will continue to conduct investigations in close collaboration with the State, City of SF, public, and other stakeholders in order to maintain a safe environment to live and work.

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BRAC Program Management Office



Naval Station Treasure Island Property Transfer Update

Restoration Advisory Board Meeting
August 21, 2012



Property Transfer Update



- Property transfer (conveyance) of FOSTed property to the Treasure Island Development Authority (TIDA) has not yet occurred, but is expected to occur in phases beginning in 2012.
- Portions of former Naval Station property have been previously transferred to the U.S. Department of Labor for the Job Corps Center on TI, to the U.S. Coast Guard on YBI, and by the Federal Highway Administration (FHWA) to Caltrans. FHWA will also be transferring an additional area adjacent to the Bay Bridge to Caltrans. The remaining Navy property is to be transferred to TIDA.
- The Navy currently leases large portions of the remaining Navy property on TI and YBI to TIDA, and TIDA subleases property for housing, recreation, businesses, special events and other uses.



Property Transfer Update



- Major environmental milestones required for initial property conveyance from Navy to TIDA:
 - Complete Building 233 Radiological Final Status Survey Report
 - Complete CERCLA Site 21 Final Record of Decision (ROD)
 - Conduct Remedial Action at Site 33 and complete Remedial Action Completion Report (RACR)
- The Navy will complete a Historical Radiological Supplemental Technical Memorandum (HRASTM) for Treasure Island to assess current information and make findings and recommendations
- Property Conveyance will consist of:
 - 2012: Pre-closing conveyance of Yerba Buena Island property to support improvements to the Bay Bridge.
 - 2013: Initial conveyance of Treasure Island property upon meeting the environmental milestones and the Radiological Technical Memorandum

3



Property Transfer Update



- Major milestones required for pre-closing property conveyance on YBI from Navy to TIDA in 2012:
 - CDPH (EMB) Letter to close out radiological questions at Yerba Buena Island (YBI) – Completed December 23 2011
 - Complete Revised FOST 3 for YBI – Final Issued January 17 2012
 - Covenant to Restrict Use of Property (CRUP) – 2012
- No Early Transfers planned at this time.
- Future property conveyances will occur as necessary environmental response actions are completed and property is found suitable for transfer. The specific schedules for the necessary environmental actions are reflected in the Site Management Plan (SMP).

4



Naval Station Treasure Island



Building 233

Restoration Advisory Board (RAB) Meeting
August 21, 2012

1



Building 233



- Removal of the first sewer line was completed June 19th. The sewer line was removed to the manhole, surveyed, and placed in LLRW bins for disposal.
- Characterization and removal of two additional utility lines will begin this week. This includes a second sewer line and a steel pipe presumed to be a former storm drain.
- A steam-line utility vault at north end of building is within footprint; recommended approaches for removal are currently being reviewed by the Navy.
- Final Status Survey on hold pending characterization of the second sewer line and steel pipe presumed to be a former storm drain.

2



Building 233



View to south of the sewer line trench with severed end of the pipe visible. Note the bricks in the end wall of the trench just above the sewer line (arrow). The bricks are part of the side wall of the manhole.

3



Building 233



Sewer line trench is currently secured with poly sheeting and sand bags until work resumes.

4



Building 233



Steam-line utility vault at north end of Building 233 footprint. Note steam lines protruding from the surface just beyond the vault.

5



Building 233 - Path Forward



- Upcoming activities at Building 233 footprint include:
 - Characterize and remove the sewer and steel lines.
 - Design, approve and implement the remediation work for the utility vault.
 - Conduct the Final Status Survey when other actions are completed.

6



Naval Station Treasure Island



Site 12

Restoration Advisory Board (RAB) Meeting
August 21, 2012

1



SWDA A&B



- In preparation for demolition of unoccupied buildings:
 - Trash and debris were removed from inside buildings in July
 - Mold control was performed with bleach spray in July
 - Radiological surveys of the buildings will begin in August
- Additional excavation at SWDA A&B is on hold and will likely be conducted under a new contract. As a safety precaution, open excavation areas containing groundwater will be backfilled above the groundwater table.

2



Site 12 Building Cleanup



Debris inside unoccupied Building 1321.

3



Site 12 Building Cleanup



Mold on the walls inside unoccupied Building 1321.

4



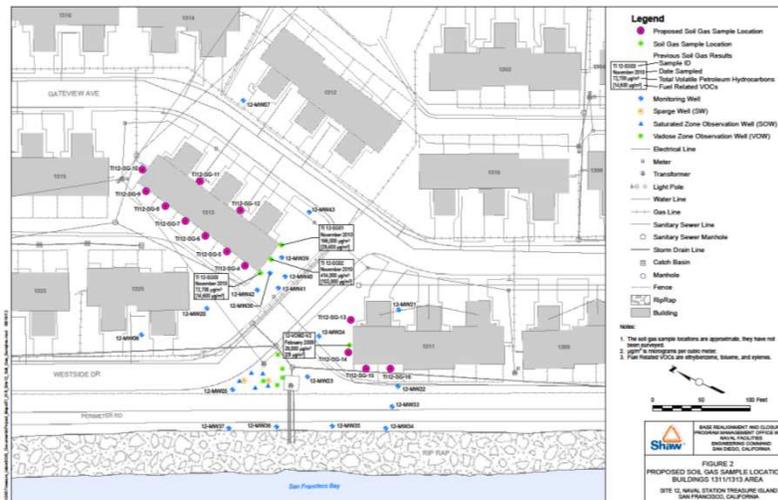
Soil Gas Investigation, Bldg 1311 & 1313



- The soil gas sampling was performed between July 18 and July 24.
- Four soil gas samples were collected around the northwestern end of Building 1311. Eight of nine planned soil gas samples were collected from the front, back, and north sides of Building 1313; one sample (SG-6, Unit C backyard) could not be collected.
- Some wells were located in the backyards of occupied units of Buildings 1311 and 1313. The residents received a notification the week of July 2.
- Well demolition is planned for September.
- A brief report will be generated summarizing the field work and results.



Soil Gas Investigation, Bldg 1311 & 1313





Soil Gas Investigation, Bldg 1311 & 1313



Installing sample point SG-14 at north end of Building 1311. All sample points were installed using the hand auger. Soil cuttings placed on plastic, then staged at Building 96 for sampling and disposal.

7



Soil Gas Investigation, Bldg 1311 & 1313



View of soil gas sampling apparatus; note well cap to the left of the tub. The plastic tub was sealed during sampling to provide a stabilization of the helium concentration at 20% per DTSC soil gas sampling guidelines.

8



Soil Gas Investigation, Bldg 1311 & 1313



Soil gas sample collection in progress. Tub is sealed with clear plastic sheeting (shroud method). Cylinder is the helium supply. This method identifies leaks in real time, to allow correction to fittings or seals prior to sample collection.

9



Bigelow Court Look Ahead

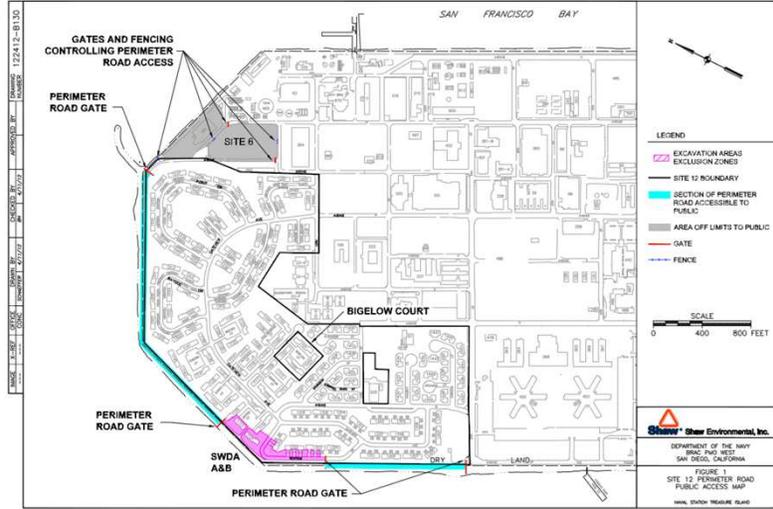


- Work Plan
 - The Draft Work Plan is in progress. Expedited review will be requested due to non-time-critical removal action status of the project.
- Field Mobilization
 - Field activities are anticipated to begin this fall.

10



Perimeter Road Access





Naval Station Treasure Island



Sites 31 and 33

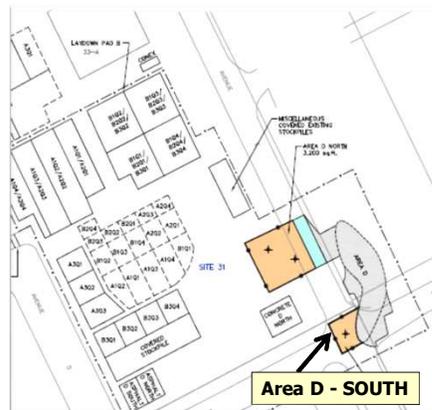
Restoration Advisory Board (RAB) Meeting
August 21, 2012



Site 31 – Stockpile and Area D-South



- June 20-21st - The final layer of the preexisting stockpile was loaded onto Laydown Pad B for Gamma Walkover Survey (GWS) and sampling.
- July 9th, excavation of **Area D-South** initiated.
 - Debris was observed within the excavation including demolished metal piping, porcelain, burned wood, and broken glass bottles.
 - Work stopped at a depth of ~3 feet bgs when the active main water line became visible. Prior to continuing work, authorization from the City of San Francisco was obtained to shut off the water main.
- Excavation continued this week to complete Area D-South.

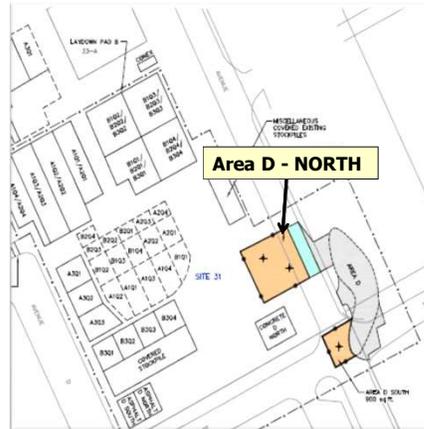




Site 31 – Area D-North



- July 17-19th **Area D-North** area preparation and asphalt paving was removed.
- July 19th, a GWS of the soil surface was performed following removal of the asphalt paving.
- Work activities, July 24th
 - Gamma static measurements were collected at areas above the gamma scanning instrument-specific investigation level.
 - Began excavation following the collection of gamma static readings. Soil from initial excavation was removed and placed on Laydown Pad B for radiological characterization.



3



Site 31 – Area D-North



- July 25th, a location with an elevated gamma count rate reading (~100,000 cpm) was observed on the western end of **Area D-North**. This portion of soil (~5 gallons) was removed for proper disposal. A sample of this soil was collected for characterization.
- Completed the excavation to the planned area and depth on August 2nd.
- August 3rd, collected excavation floor and sidewall samples.
- All analytical results for lead were below criteria. Analytical results for PAHs, dioxins, and rad are pending.



Westward excavation of Area D-North.

4



Site 31



Partial excavation of Area D-South.

5



Site 31



Soil from excavated from Area D-South is deposited on Laydown Pad A for radiological characterization.

6



Site 31



Removal of sidewalk from Area D-North.

7



Site 31



Westward excavation of Area D-North.

8



Site 31



Chemical sample collected from the excavation floor of Area D-North from an excavator bucket.

9



Site 33



- Collected radiological confirmation samples from excavation floors and sidewalls between June 19th and July 2nd.
- Began preparing for Laydown Pad removal on August 6th.
- Initiated removal of the Laydown Pad on August 7th.
- Collected chemical waste characterization samples from soil storage stockpiles on August 7th.
- Assembled a storage cell for Laydown Pad soil on August 8th and began mobilizing soil.
- Completed removal of Laydown Pad on August 9th with the exception of hay bales and miscellaneous minor tasks.

10



Site 33



Deconstruction of the Laydown Pad at Site 33.

11



Site 33



Sample collection from a storage stockpile for chemical waste characterization.

12



Site 33



Soil from Laydown Pad is placed in designated soil storage stockpile.



Site 33



Table 1
Installation Restoration Site 33 Chemical Confirmation Analytical Results

Excavation Area	Sample ID		Date Collected	Lead (Remediation Goal 400 mg/kg)	Arsenic (mg/kg)	Dioxin (ng/kg)
	ID	Step Out Sample ID				
AREA 1						
AREA 1	A1-EF-01		5/3/2012	1410		
AREA 1 STEP OUT		A1-EF-05 Bottom step down EF-01	5/17/2012	8.8 J	1.4	<1.0
AREA 1 STEP OUT		A1-SW-06 Side wall step out EF-01	5/17/2012	3.0 J	1.9	
AREA 1 STEP OUT		A1-SW-07 Side wall step out EF-01	5/17/2012	8.7 J	1.3	
AREA 1 STEP OUT		A1-SW-08 Side wall step out EF-01	5/17/2012	53.6 J	3.6	
AREA 1 STEP OUT		A1-SW-09 Side wall step out EF-01	5/17/2012	93.2 J	2.4	
AREA 1	A1-SW-02		5/3/2012	15.4 J	3.3	
AREA 1	A1-SW-03		5/3/2012	182	5.5	
AREA 1	A1-SW-04		5/3/2012	252	4.6	
AREA 1	A1-DUP-001 (SW-02)		5/3/2012	133	3.0	
AREA 1 STEP OUT	A1-DUP-003 (EF-05)		5/17/2012	13.4 J		
AREA 2						
AREA 2	A2-EF-01 (Bottom)		5/3/2012	55.1	16.3	<1.9
AREA 2	A2-SW-02		5/3/2012	1.9 J	3.2	
AREA 2	A2-SW-03		5/3/2012	115	3.7	
AREA 2	A2-SW-04		5/3/2012	67.2	3.3	
AREA 2	A2-SW-05		5/3/2012	27.7	3.1	
AREA 3						
AREA 3	A3-EF-01 (Bottom)		5/17/2012	102 J	4.7	<1.2
AREA 3	A3-SW-02		5/17/2012	801 J		
AREA 3 STEP OUT		A3-SW-06 Side wall step out SW-02	5/23/2012	888 J		
AREA 3 STEP OUT		A3-SW-07 Side wall step out SW-02	5/23/2012	4.1 J	1.9	
AREA 3 STEP OUT		A3-SW-08 Side wall step out SW-02	5/23/2012	40.6 J	2.9	
AREA 3 STEP OUT		A3-SW-12 Side wall step out SW-06	5/31/2012	171 J	4.2	
AREA 3	A3-SW-03		5/17/2012	51.1 J	1.5	
AREA 3	A3-SW-04		5/17/2012	834 J		
AREA 3 STEP OUT		A3-SW-09 Side wall step out SW-04	5/23/2012	217 J	9.8	

Chemical confirmation analytical results for Site 33.



Site 33



Table 1 (continued)
Installation Restoration Site 33 Chemical Confirmation Analytical Results

Excavation Area	Sample ID		Date Collected	Lead (Remediation Goal 400 mg/kg)	Arsenic (mg/kg)	Dioxin (ng/kg)
	ID	Step Out Sample ID				
AREA 3 STEP OUT		A3-SW-10 Side wall step out SW-04	5/23/2012	673 J		
AREA 3 STEP OUT		A3-SW-11 Side wall step out SW-04	5/23/2012	213 J	3.4	
AREA 3 STEP OUT		A3-SW-13 Side wall step out SW-10	5/31/2012	31.4 J	5.4	
AREA 3	A3-SW-05		5/17/2012	62 J	3.0	
AREA 4						
AREA 4	A4-EF-01 (Bottom)		5/9/2012	73.8	3.2	<1.3
AREA 4	A4-SW-02		5/9/2012	12.4 J	2.5	
AREA 4	A4-SW-03		5/9/2012	3.2 J	2.9	
AREA 4	A4-SW-04		5/9/2012	20.1 J	6.2	
AREA 4	A4-SW-05		5/9/2012	9.3 J	2.8	
AREA 5						
AREA 5	A5-EF-01 (Bottom)		5/9/2012	1.6 J	1.7	<1.0
AREA 5	A5-SW-02		5/9/2012	2.5 J	1.7	
AREA 5	A5-SW-03		5/9/2012	3.8 J	1.7	
AREA 5	A5-SW-04		5/9/2012	2.1 J	1.9	
AREA 5	A5-SW-05		5/9/2012	1.7 J	1.3	
AREA 5	A5-DUP-002 (SW-02)		5/9/2012	1.9 J		

Notes:
 Bolded cells denotes greater than remediation goal.
 DUP denotes duplicate.
 EF denotes excavation floor.
 J denotes estimated.
 mg/kg denotes milligram(s) per kilogram.
 ng/kg denotes nanogram(s) per kilogram.
 SW denotes side wall.

Chemical confirmation analytical results for Site 33 (cont'd).



Site 33 - Radiological Data



Excavated Soil Area 1

GWS Measurements \geq IL (18,049 cpm) Instrument ID #: 282982	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (17,050 cpm) Instrument ID #: 282982	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ²²⁸ Ra Soil)
0	17,504	1	19,326	5	²²⁸ Ra 0.61 pCi/g ¹³⁷ Cs U ⁹⁰ Sr U	Yes NA NA

Excavation Area 1 – Floor

GWS Measurements \geq IL (20,698 cpm) Instrument ID #: 268642	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ²²⁸ Ra Soil)
3	21,883	3	21,315	11	²²⁸ Ra 0.66 pCi/g ¹³⁷ Cs U ⁹⁰ Sr U	Yes NA NA

Excavation Area 1 – Sidewalls

Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ²²⁸ Ra Soil)
1	20,461	15	²²⁸ Ra 0.64 pCi/g ¹³⁷ Cs U ⁹⁰ Sr U	Yes NA NA

Radiological data for Excavation Area 1 - Site 33.



Site 33 - Radiological Data



Excavated Soil Area 2						
GWS Measurements \geq IL (18,049 cpm) Instrument ID #: 282982	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (17,050 cpm) Instrument ID #: 282982	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
12	19,404	0	16,741	4	^{226}Ra 0.66 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA
Excavation Area 2 – Floor						
GWS Measurements \geq IL (20,698 cpm) Instrument ID #: 268642	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
3	30,366	16	31,644	13	^{226}Ra 0.98 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA
Excavation Area 2 – Sidewalls						
Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)		
43	30,644	15	^{226}Ra 1.01 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA		

Radiological data for Excavation Area 2 - Site 33.



Site 33 - Radiological Data



Excavated Soil Area 3						
GWS Measurements \geq IL (18,049 cpm) Instrument ID #: 282982	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (17,050 cpm) Instrument ID #: 282982	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
206	20,520	4	17,338	5	^{226}Ra 0.99 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA
Excavation Area 3 – Floor						
GWS Measurements \geq IL (20,698 cpm) Instrument ID #: 268642	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
1063	35,596	16	36,185	19	^{226}Ra 0.91 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA
Excavation Area 3 – Sidewalls						
Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)		
96	32,440	18	^{226}Ra 1.06 pCi/g ^{137}Cs U ^{90}Sr U	Yes NA NA		

Radiological data for Excavation Area 3 - Site 33.



Site 33 - Radiological Data



Excavated Soil Area 4						
GWS Measurements \geq IL (18,049 cpm) Instrument ID #: 282982	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
1,229	24,221	15	21,346	17	^{226}Ra 1.14 pCi/g	Yes
					^{137}Cs U	NA
					^{90}Sr U	NA
Excavation Area 4 – Floor						
GWS Measurements \geq IL (20,698 cpm) Instrument ID #: 268642	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
1,005	41,013	32	43,120	24	^{226}Ra 1.39 pCi/g	Yes
					^{137}Cs U	NA
					^{90}Sr U	NA
Excavation Area 4 – Sidewalls						
Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)		
48	37,233	15	^{226}Ra 1.00 pCi/g	Yes		
			^{137}Cs U	NA		
			^{90}Sr U	NA		

Radiological data for Excavation Area 4 - Site 33.



Site 33 - Radiological Data

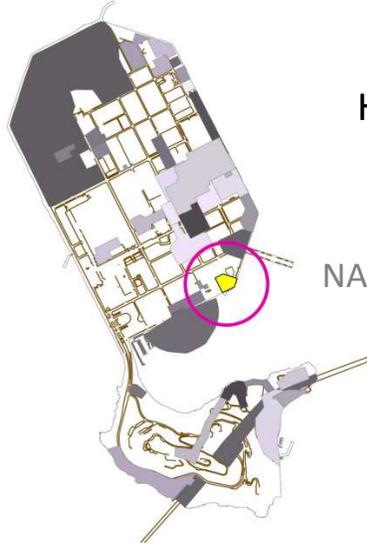


Excavated Soil Area 5						
GWS Measurements \geq IL (18,049 cpm) Instrument ID #: 282982	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (17,050 cpm) Instrument ID #: 268982	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
0	18,199	0	15,101	4	^{226}Ra 0.66 pCi/g	Yes
					^{137}Cs U	NA
					^{90}Sr U	NA
Excavation Area 5 – Floor						
GWS Measurements \geq IL (20,698 cpm) Instrument ID #: 268642	Highest GWS Reading (cpm)	Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)
83	22,750	11	21,078	20	^{226}Ra 0.63 pCi/g	Yes
					^{137}Cs U	NA
					^{90}Sr U	NA
Excavation Area 5 – Sidewalls						
Gamma Static Measurements \geq IL (19,001 cpm) Instrument ID #: 268642	Highest Gamma Static Reading (cpm)	Soil Samples Analyzed	Highest Soil Sample Result	< Release Criterion (1.69 pCi/g ^{226}Ra Soil)		
9	20,067	15	^{226}Ra 0.56 pCi/g	Yes		
			^{137}Cs U	NA		
			^{90}Sr U	NA		

Radiological data for Excavation Area 5 - Site 33.



Site 21



DRAFT SOIL GAS HUMAN HEALTH RISK ASSESSMENT ADDENDUM

NAVAL STATION TREASURE ISLAND

August 21, 2012
Presented by Danielle Janda



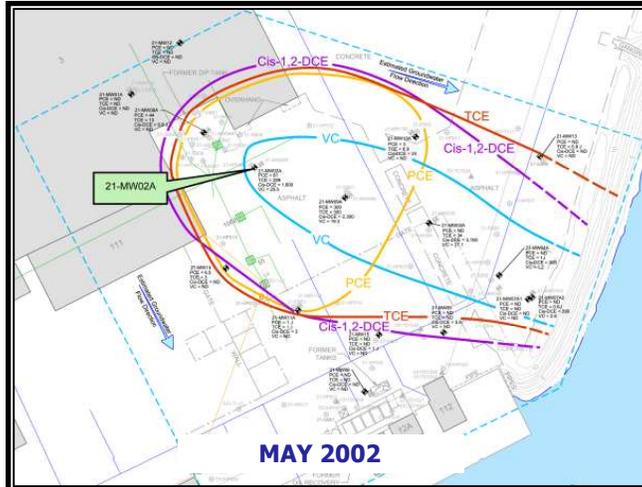
SITE OVERVIEW



Chlorinated Solvents were used to clean Aircraft Parts and Motors



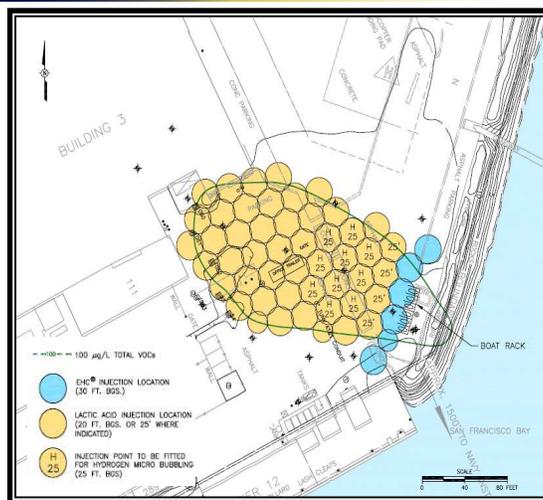
SITE OVERVIEW



Solvents leaked from the dip tank into the groundwater



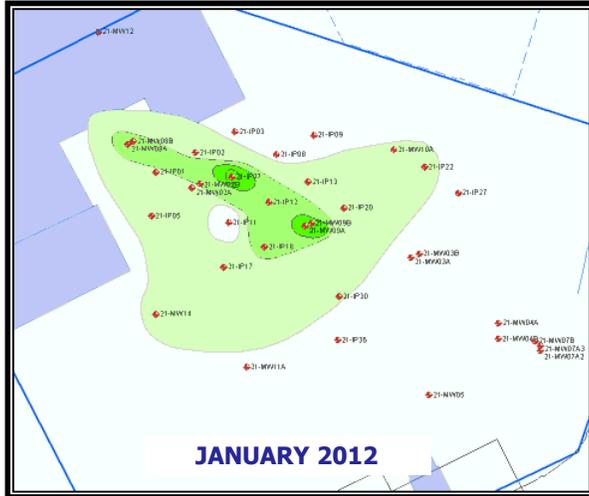
SITE OVERVIEW



Two phases of treatment were performed in 2006 and 2009



SITE OVERVIEW



Contaminants are present near the source area



CERCLA PROCESS AT SITE 21





RISK ASSESSMENT



A Risk Assessment estimates the probability of adverse health effects in humans who may be exposed to chemicals in contaminated media.

Toxic
Chemical



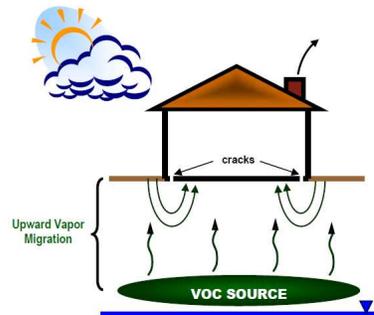
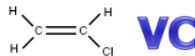
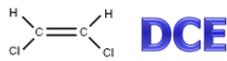
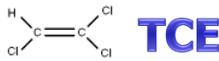
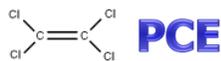
Exposure
Pathway



Health
Risk



RISK ASSESSMENT



Toxic
Chemical



Exposure
Pathway



Health
Risk



Why Are We Doing a Soil Gas Investigation?

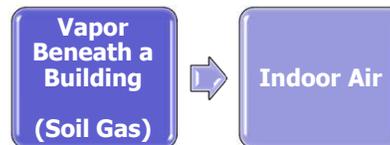


Two Ways to Estimate Indoor Air Concentrations

1) Calculate Using Groundwater Concentrations



2) Calculate Using Soil Gas Concentrations



Why Are We Doing a Soil Gas Investigation?



Provide Support to the HHRA (2007)

Support Risk Management Decisions for Site 21



Major Differences



HHRA

- **Based Exposure Concentration on Groundwater Data**
- **More Reasonable**
 - Used Average Concentration

HHRA Addendum

- **Based Exposure Concentration on Soil Gas Data**
- **More Conservative**
 - Used Maximum Concentration

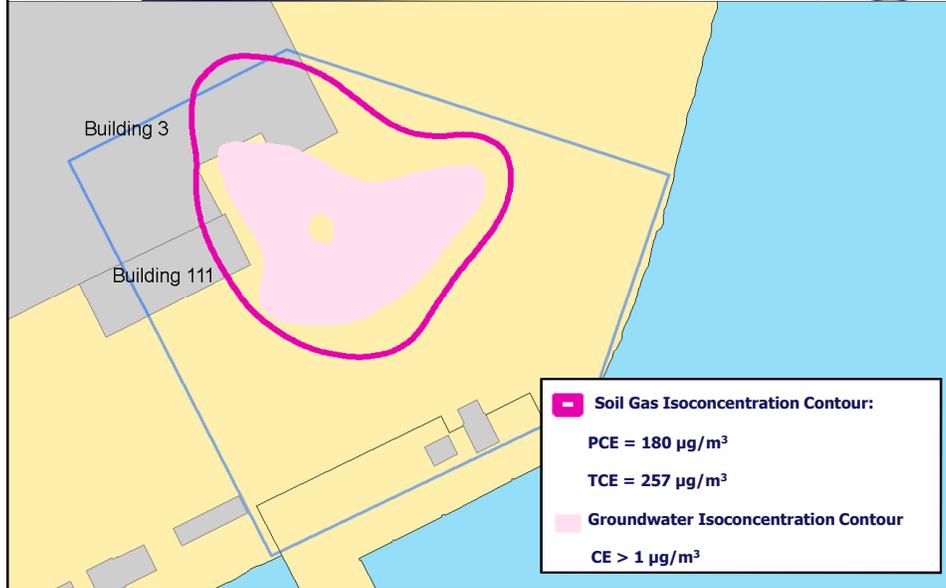


Soil Gas Investigation





Soil Gas Results



Conclusions



COMMERCIAL USE

- Acceptable Risk
 - Screening Level Risk is Within the Risk Management Range

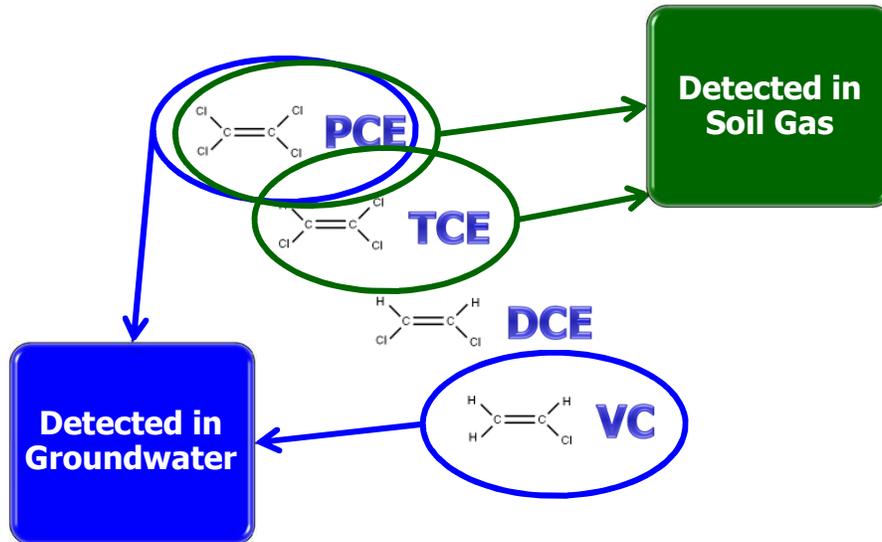


RESIDENTIAL USE

- Unacceptable Risk
 - Further Assessment may prove the site is acceptable for residential use
 - Engineering Controls would eliminate health risks



Current Contaminants in the Environment



Land Use Control



- Prevent Residential Reuse Unless
 - Further Assessment Shows that the Site is safe for Residential Use
 - Engineering Controls are Installed
- Restricted Area Defined by
 - Soil Gas Concentrations
 - Groundwater Concentrations





Important Document Dates



- **HHRA ADDENDUM**
 - **July 26:** Draft was Submitted to the Agencies
 - **August 27:** Agencies to Submit Comments
- **RECORD OF DECISION**
 - **September:** Signing of the ROD
- **LAND USE CONTROL REMEDIAL DESIGN**
 - **September:** Draft to be Submitted to the Agencies



Questions?





Site 21



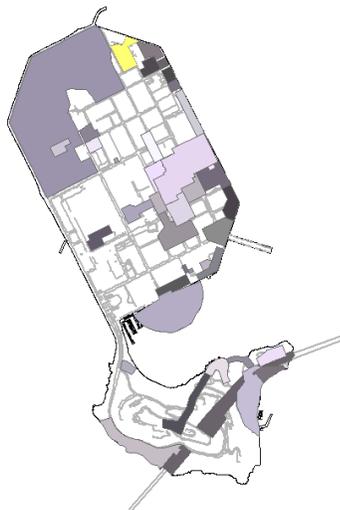
UPDATE ON SITES 6, 12, 21, 24 AND 32 GROUNDWATER MONITORING

NAVAL STATION TREASURE ISLAND

August 21, 2012
Presented by Danielle Janda



SITE 6



PETROLEUM AREA



SITE 6



- Training Activities Resulted in Petroleum Contamination
- Sampling at One Monitoring Well Conducted to Examine Petroleum Contamination Trends



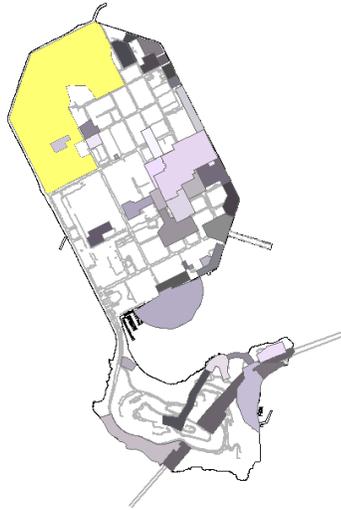
SITE 6 CONCLUSIONS



- Petroleum Contaminants Detected During All Monitoring Events
- Quarterly Monitoring Continues
- Area subject to Corrective Action for UST 240, Fall 2012



SITE 12



OLD BUNKER AREA

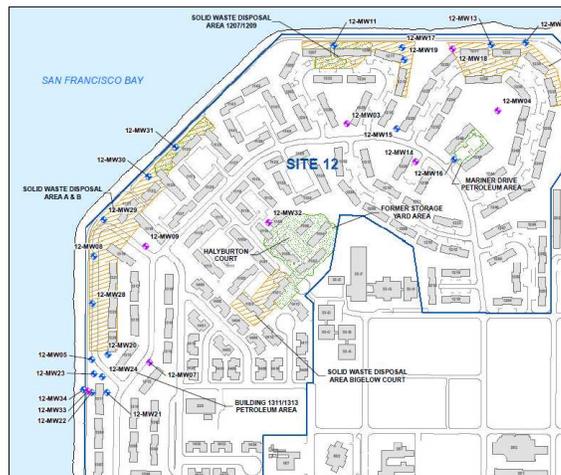


SITE 12



- Various Contaminants of Concern at Site 12 From

- Former Solid Waste Disposal
- Petroleum Releases from Storage Tanks
- Past Site Activities

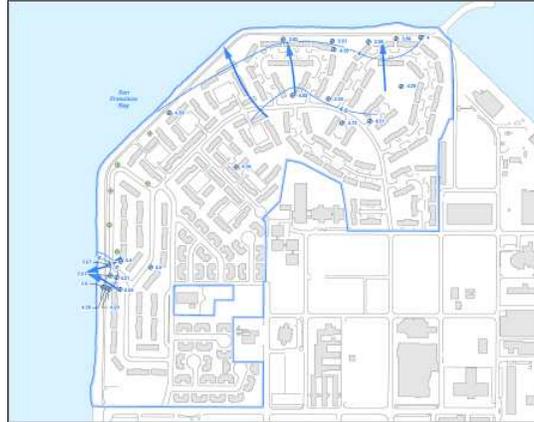




SITE 12



- Various Contaminants Monitored:
 - Petroleum Compounds
 - Metals
 - Radium-226



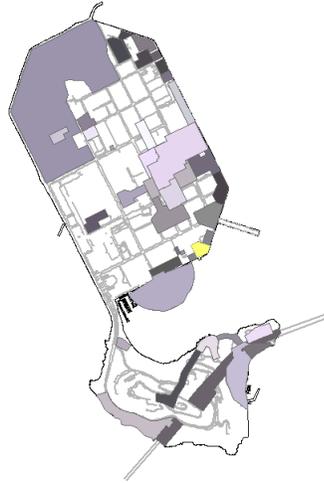
SITE 12 CONCLUSIONS



- Some Areas Have Continued Detections of Dissolved Metals
- Includes Nickel, Copper and Arsenic
- One Area with High Petroleum Concentrations
- Building 1311/1313 Area
- Radium-226 is Below Drinking Water Levels in All Wells
- Monitoring Activities Continue



SITE 21



VESSEL WASTE OIL RECOVERY AREA



SITE 21



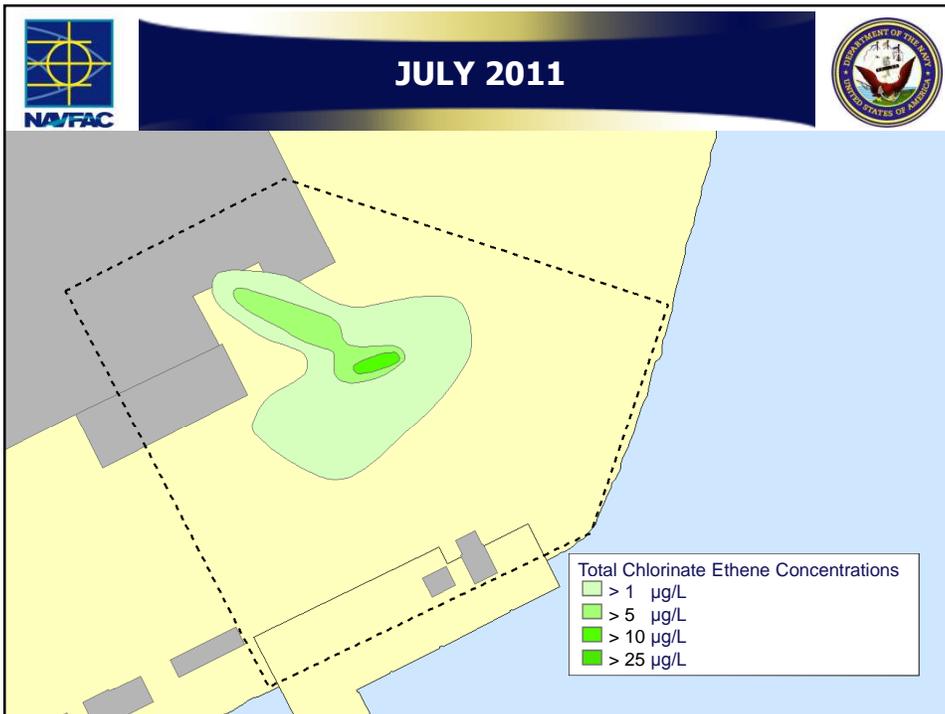
- Chlorinate Solvents Released From Aircraft Cleaning Operations
- Treatment Conducted in 2006 and 2009



MARCH 2011



JULY 2011





OCTOBER 2011



JANUARY 2012





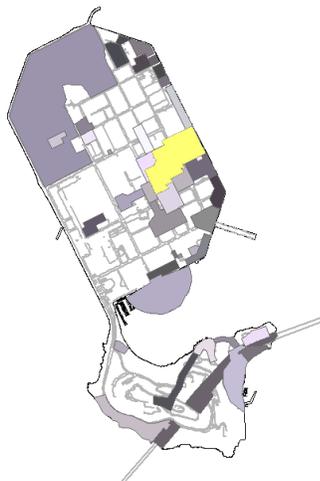
SITE 21 CONCLUSIONS



- Attenuation of Contaminants Continues Through Bioactivity
- A Continuing Source of PCE and TCE May Exist in the Soil
- Four Additional Quarters of Monitoring is Underway



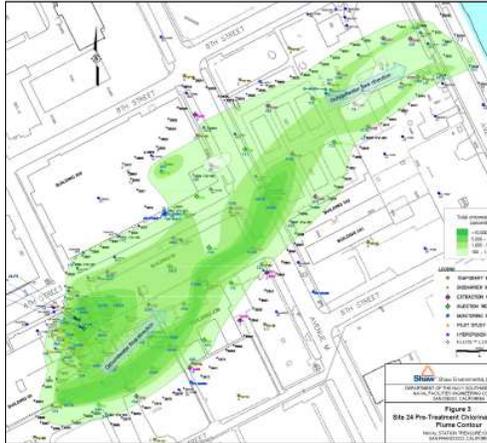
SITE 24



DRY CLEANING
FACILITY



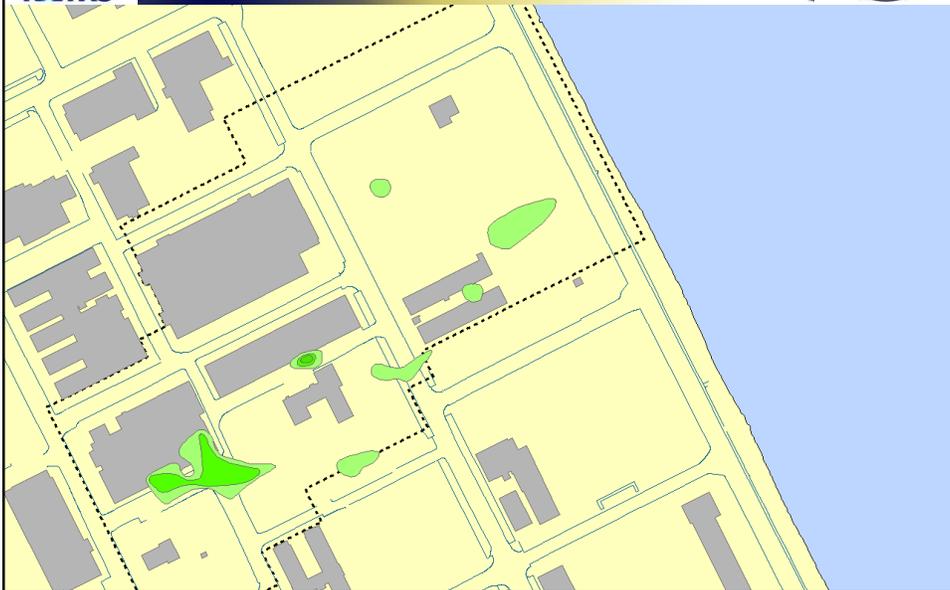
SITE 24



- Chlorinate Solvents Released From Dry Cleaning Operations
- Past Treatment Conducted in 2006 and 2009

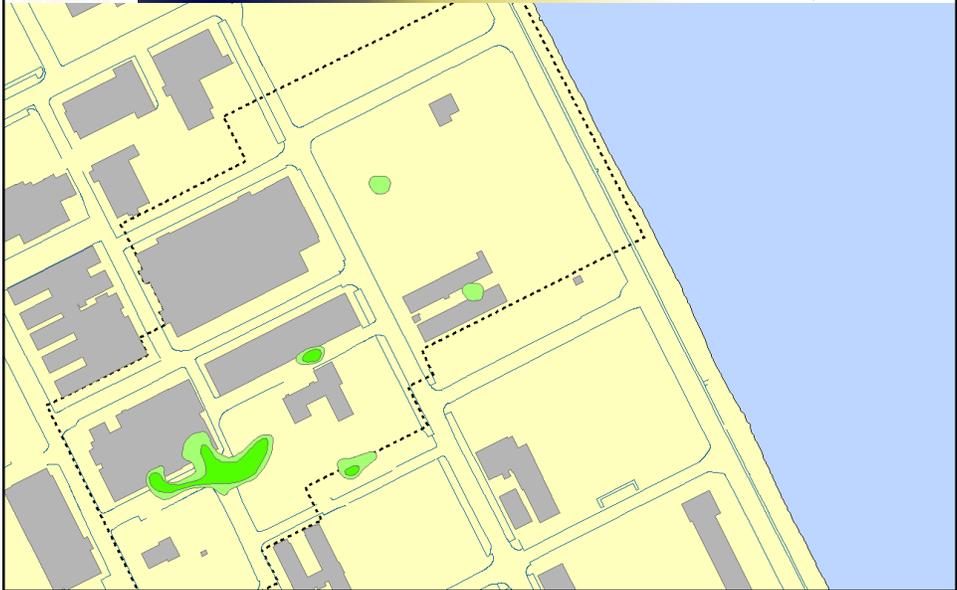


MARCH 2011

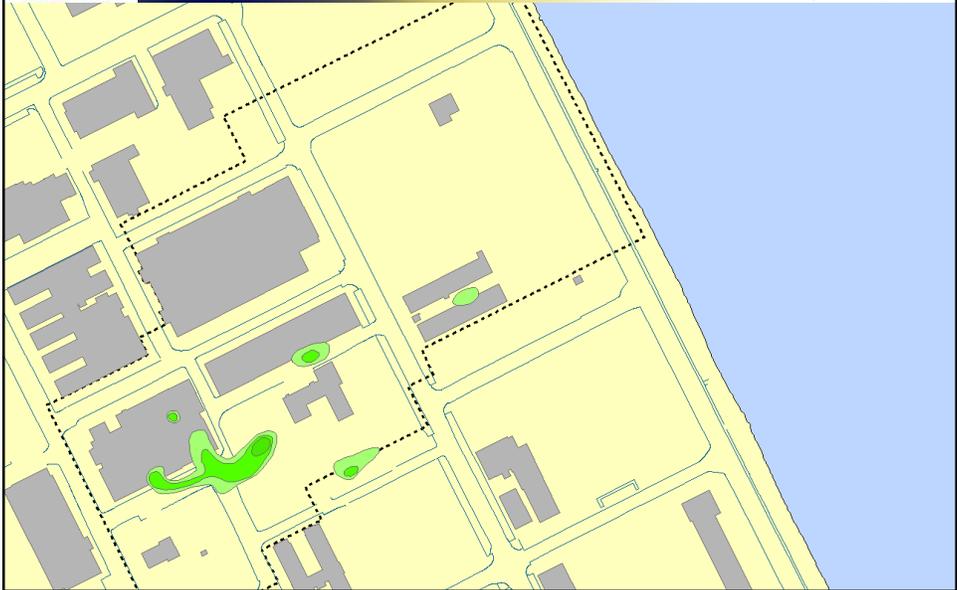




JULY 2011



OCTOBER 2011





JANUARY 2011



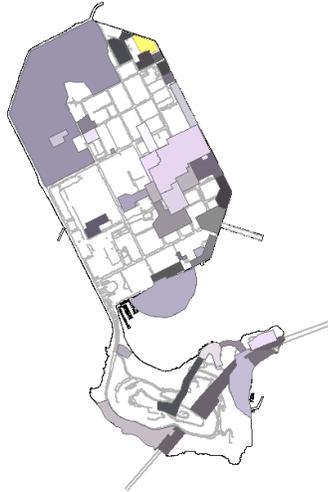
SITE 24 CONCLUSIONS



- High Contaminant Concentrations in the Source Area
- Some High Contaminant Concentrations Remain in the Dissolved Plume Area
- Bioactivity Continues
- Active Treatment Completed in May
- Regular Monitoring Continues



SITE 32



TRAINING AND STORAGE AREA



SITE 32



- Petroleum Found in Groundwater During 2010 Excavation
- Groundwater Treated with Magnesium Peroxide
- Monitoring Completed to Evaluate Success of Treatment





SITE 32 CONCLUSIONS



- No High Detections of TPH
- No Further Action Required for Groundwater at Site 32

25



FOR MORE INFORMATION



- **Final Groundwater Sampling Annual Status Report, Installation Restoration Site 21, Site 24, and Site 32**
 - Distributed in July
- **Draft 2011 Annual Groundwater Monitoring Report for IR Sites 6 and 12**
 - Final to be Distributed in September



**Naval Station Treasure Island
Environmental Cleanup Program
Document Tracking Sheet
August 2012 - January 2013**

Item	Document Title & Information	CTO/DO	INTERNAL DRAFT		DRAFT							RTC		INTERNAL FINAL		FINAL	Comments
			Internal Draft Due to Navy	Navy Comments Due	Draft to Agencies	Agency Comments					Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due	Final to Agencies		
						Date Due	DISC	WATER BOARD	EPA	TIDA/TICD						RAB	
Shaw Group																	
1	Site 12 Bigelow Court NTCRA Work Plan	0010	11/22/10, ✓	12/14/10, ✓	09/14/12	09/21/12						10/05/12	10/10/12	10/12/12	10/15/12	10/22/12	
	RPM: Anthony Konzen		12/23/10, ✓	04/30/11, ✓													
	PM: Pete Couffts		01/24/11, ✓	08/01/11, ✓													
2	Building 233 Final Status Survey (FSS)	0010	11/20/12	12/04/12	12/18/12	TBD						TBD	TBD	TBD	TBD	01/30/13	
	RPM: Anthony Konzen																
	PM: Pete Couffts																
3	Site 21 Soil Gas HHRA Addendum	FZO1	06/29/12 ✓	07/06/12 ✓	07/27/12 ✓	08/27/12						09/20/12	09/27/12	10/03/12	10/05/12	10/09/12	
	RPM: Danielle Janda																
	PM: Neil Hey																
4	Bayside/North Point Post-Construction Report	0010	10/18/11 ✓	02/27/12 ✓	08/24/12	09/14/12						09/21/12	09/28/12	10/05/12	10/12/12	10/19/12	
	RPM: Anthony Konzen		07/03/12 ✓	08/03/12 ✓													
	PM: Pete Couffts																
5	Site 31 Remedial Action Completion Report (RACR)	0002	10/17/12	11/14/12	11/28/12	12/26/12						01/09/13	01/16/13	01/30/13	02/06/13	02/13/13	
	RPM: Lora Battaglia																
	PM: Tony Searls																
6	Site 33 Remedial Action Completion Report (RACR)	FZN9	07/31/12 ✓	08/15/12	08/27/12	09/24/12						09/26/12	10/03/12	10/12/12	10/19/12	10/26/12	
	RPM: Lora Battaglia																
	PM: Tony Searls																
2011 Sites 21, 24, 32 Groundwater Report		0002	04/11/12 ✓	04/30/12 ✓	06/12/12 ✓	07/10/12 ✓	✓	✓	X	✓		07/23/12 ✓	07/27/12 ✓	07/27/12 ✓	07/27/12 ✓	07/30/12 ✓	TIDA (7/9), EPA (7/12), WB (7/17), DTSC (7/18)
	RPM: Danielle Janda																
	PM: John Baur																
Tetra Tech EM Inc.																	
Island Times Newsletter #18		0000	01/12/12 ✓	02/01/12 ✓	02/09/12 ✓	02/23/12 ✓	✓	✓	X	✓		NA	NA	06/29/12 ✓	07/20/12 ✓	07/31/12 ✓	
	RPM: Jim Sullivan																
	PM: Marcie Rash																
Chadux Tetra Tech																	
7	Site 21 ROD/RAP	0083	11/30/11 ✓	12/19/11 ✓	02/07/12 ✓	03/06/12 ✓	✓	✓	✓	✓		04/16/12 ✓	04/29/12 ✓	05/06/12 ✓	05/17/12 ✓	TBD	ROD sent to BCT on 5/17 with redline
	RPM: Danielle Janda																
	PM: Jean Michaels																
TriEco Tetra Tech																	
8	Historical Radiological Assessment Tech Memo	0003	05/30/12 ✓	06/29/12 ✓	08/06/12 ✓	09/05/12						10/03/12	TBD	11/02/12	11/12/12	11/26/12	
	RPM: David Clark																
	PM: Marcie Rash																
9	2012 Site Management Plan	0003	03/26/12 ✓	04/30/12 ✓	05/21/12 ✓	06/22/12 ✓	✓	✓	X	✓		07/26/12 ✓	08/10/12 ✓	08/22/12	09/05/12	09/10/12	DTSC (6/20), TIDA/TICD (6/22), WB (7/11)
	RPM: David Clark																
	PM: Marcie Rash																
10	Site 27 Remedial Design	0009	05/31/12* ✓	06/20/12* ✓	07/16/12* ✓	08/16/12* ✓	✓		✓	✓		09/13/12* ✓	TBD	01/29/13	02/13/13	02/22/13	* 30% design ** 90% design TIDA (8/16), DTSC (8/20), Anchor (8/6)
	RPM: Lora Battaglia		10/17/12**	10/31/12**			11/17/12**	12/17/12**									
	PM: Katie Henry																

**Naval Station Treasure Island
Environmental Cleanup Program
Document Tracking Sheet
August 2012 - January 2013**

Item	Document Title & Information	CTO/DO	INTERNAL DRAFT		DRAFT							RTC		INTERNAL FINAL		FINAL	Comments						
			Internal Draft Due to Navy	Navy Comments Due	Draft to Agencies	Date Due	Agency Comments						Preliminary RTCs to Agencies	Resolve and Concur on RTCs	Internal Final to Navy	Navy Comments Due		Final to Agencies					
							DTSC	WATER BOARD	EPA	TIDA/TICD	RAB	OTHER							Priority Review				
Trevet																							
11	2011 Sites 6 & 12 Annual Groundwater Report	9002	02/24/12	✓	03/25/12	✓	04/24/12	✓	05/24/12	✓	✓	X	✓			08/21/12	✓	09/16/12	09/30/12	10/04/12	10/11/12	DTSC (5/18), TIDA (5/25), EPA (5/30), WB (6/5)	
	RPM: Tony Konzen																						
	PM: Greg Alyanakian																						
ERRG																							
12	Site 6 RI/FS Report	0002	09/23/11	✓	11/21/11	✓	12/22/11	✓	02/06/12	✓	✓	✓	✓			06/05/12	✓	06/21/12	✓	10/01/12	10/11/12	10/25/12	DTSC (2/6), EPA (2/6), TIDA (2/6), WB (2/23)
	RPM: Tony Konzen																						
	PM: Phil Skorge																						
13	UST 240 Corrective Action Plan Work Plan	0002	10/21/11	✓	11/30/11	✓	02/09/12	✓	03/11/12	X	✓	✓				06/28/12	✓	07/27/12	09/01/12	09/08/12	09/13/12	TIDA (3/9), WB (4/14)	
	RPM: Tony Konzen																						
	PM: Phil Skorge																						
14	UST 240 Post-Construction Summary Report	0002	01/17/13		01/31/13		02/07/13		03/09/13							03/16/13		TBD	04/11/13	04/25/13	05/09/13		
	RPM: Tony Konzen																						
	PM: Phil Skorge																						
Kleinfelder and CH2M Hill																							
15	YF3 Field Activity Report	026	06/08/12	✓	07/01/12	✓	07/30/12	✓	08/29/12							09/19/12		TBD	09/19/12	09/24/12	09/28/12		
	RPM: Danielle Janda																						
	PM: Holly Carter																						

- ✓ Production or review of document is complete.
- X Received notification of no comments or comments deferred to other agency.

Abbreviations:

Bldg = Building
 CTO/DO = Contract task order/delivery order
 DTSC = Department of Toxic Substances Control
 EPA = U.S. Environmental Protection Agency
 FS = Feasibility study
 HHRA = Human health risk assessment
 LUC = Land use covenant
 NA = Not applicable

PCB = Polychlorinated biphenyls
 PM = Project manager
 PP = Proposed plan
 RAP = Remedial action plan
 RASO = Radiological Affairs Support Office
 RI = Remedial investigation
 ROD = Record of decision

RPM = Remedial project manager
 SAP = Sampling and analysis plan
 TBD = To be determined
 TICD = Treasure Island Community Developers
 TIDA = Treasure Island Development Authority
 UST = Underground storage tank
 Water Board (WB) = Regional Water Quality Control Board

Grey shading indicates the document is finalized.

Blue shading indicates agency review comments are due within the next 60 days or are outstanding.

Yellow shading indicates documents that will be issued draft or final within the next 60 days.

**Naval Station Treasure Island
Navy Field Schedule
August 2012 - January 2013**

Item	Activity and Investigation Area	DTS #	Field Dates	Navy RPM	CTO/DO	Complete
Shaw						
1	Non-Time Critical Removal Action Site 12	Doc --	Start: 02/26/07 Finish: TBD	Tony Konzen (619) 532-0924	010	
2	Sites 31/33 Remedial Action Sites 31 and 33	Doc --	Start: 02/02/12 Finish: 08/31/12	Lora Battaglia (619) 532-0968	FZN9	
3	Building 233 Debris Screening / Final Status Survey Building 233	Doc --	Start: 01/30/12 Finish: 09/24/12	Tony Konzen (619) 532-0924	010	
4	Site 24 Phase 3 Site 24	Doc --	Start: 11/13/11 Finish: TBD	Danielle Janda (619) 532-0796	FZ01	
5	Bigelow Court Non-Time Critical Removal Action Site 12	Doc 1	Start: 10/22/12 Finish: 12/19/12	Tony Konzen (619) 532-0924	010	
6	Soil Gas Investigation, Building 1311/1313 Area Site 12	Doc --	Start: 07/10/12 Finish: 08/23/12	Danielle Janda (619) 532-0796	FZN1	
7	Demolition of Buildings 1123, 1319, 1321 Site 12	Doc --	Start: 06/18/12 Finish: TBD	Tony Konzen (619) 532-0924	010	
Trevet						
	Sites 21, 24 - 1st Quarter Groundwater Sampling Sites 21 and 24	Doc --	Start: 06/22/12 Finish: 07/03/12	Danielle Janda (619) 532-0796	5011	✓
8	Sites 21, 24 - 2nd Quarter Groundwater Sampling Sites 21 and 24	Doc --	Start: 09/17/12 Finish: 09/28/12	Danielle Janda (619) 532-0796	5011	
9	Site 6 - 3rd Quarter Groundwater Sampling Site 6	Doc --	Start: 09/25/12 Finish: 09/25/12	Danielle Janda (619) 532-0796	5011	
ERRG						
10	Site 6 / UST 240 Corrective Action Site 6	Doc 13	Start: 10/08/12 Finish: 12/07/12	Tony Konzen (619) 532-0924	2608	

Abbreviations:

- Not applicable, there is no associated documentation listed on the DTS.
- CTO/DO Contract task order/delivery order
- DTS # The number listed corresponds to the associated documentation listed on the Document Tracking Sheet.
- RPM Remedial project manager
- TBD To be determined
- UST Underground storage tank

✓ Field work is complete.

Yellow shading indicates field activities that will start or finish within the next 60 days.

Grey shading indicates field activities are complete.