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MINUTES FROM THE 18 JULY 2012 RESTORATION ADVISORY BOARD MEETING NAS  
KEY WEST FL  
7/18/2012  
TETRA TECH

# NAS KEY WEST RESTORATION ADVISORY BOARD

## 18 JULY 2012 MEETING SUMMARY

**LOCATION:** Buttonwood Room, Doubletree Grand Key Resort, Key West, FL

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### Restoration Advisory Board Members

Ron Demes	NAS Key West	
Robert Courtright	NAVFAC –NAS Key West PWD Environmental	
Tracie Bolaños	FDEP	
Shauna Stotler-Hardy	Tetra Tech NUS, Inc.	
Amy Twitty	CH2M HILL	
Bryan Syme	NAVFAC SE	
Mark Davidson	BRAC PMO South East	
Margaret Romero	RAB Community Member	
Bob Eadie	RAB Community Member	
Mark Sanger	RAB Community Member	
Mimi Stafford	RAB community member	
John Jones	RAB Community Member	

### Other Participants

Ed Barham	NAVFAC – NAS Key West PWD Environmental	
Dana Hayworth	NAVFAC SE	
Melissa Forrest	Navy and Marine Public Health Center	
Damon DeYoung	Battelle	
Dan Herlihy	Enviro Compliance Solutions	
Stephen Rosansky	Battelle	
Sarah Reed	NAVFAC SE	
Ken Bowers	NAVFAC Atlantic	
Todd Haverkost	Resolutions	
Tim Flood	Management Edge	
Ray Blazevic	Key West Resident	
Oliver Kofoid		
Trice Denny	NAS Key West PAO	
Lenny Salazar		
Mike Buckman		
Jim Scholl		
Doug Bradshaw		
Randy Hollingsworth		
Mike Buchman		
Lucille Gage		
Monica Dahl		
Marcy Dusenberry		
Lawrence		

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### Welcome and Introductions

Ron Demes brought the meeting to order at 7:05 p.m. Ron introduced the Restoration Advisory Board (RAB) members and went over meeting logistics, requesting that any questions be held until after each presentation has concluded. Four new members were introduced including Margaret Romero, Bob Eadie, Mark Sanger, and John Jones. Ron requested that the new members select a co-chair from the community side that will coordinate with Ron, the Navy chair. Ron broke the news regarding changes in the RAB. Mark Davidson, the remedial project manager (RPM) for the BRAC sites, will be retiring. In addition, Dana Hayworth will be leaving. Dana Hayworth introduced Bryan Syme, who will take over Dana's responsibilities for Environmental Restoration, Navy (ER,N) Program sites. Ron also acknowledged that Bob Courtright will be leaving and this will be his last RAB. Standing in for Bob is Ed Barham, the Environmental Director of Naval Air Station (NAS) Key West.

Next, Ron introduced the presenters, which included Amy Twitty (CH2M Hill), Shauna Stotler-Hardy (Tetra Tech, Inc.), and Dan Herlihy (ECS).

### Review of Last Meeting

Ron Demes asked for comments on the 2011 RAB meeting summary, which was provided as a handout at the beginning of the meeting. There were no comments.

### Hawk Missile Sites Update

Shauna Stotler-Hardy (Tetra Tech, Inc.) presented an update on Former Hawk Missile Sites activities (Geiger Key and Boca Chica sites). Originally called "Charlie and Delta Batteries", operations began at these sites in 1961 and continued until they were decommissioned in 1979, they were designed to use the HAWK missile system during the Cuban Missile Crisis. Activities at both of these sites consisted of missile launch and radar tower operations and maintenance of the individual components for the HAWK systems. Aboveground storage tanks (ASTs) at both sites were either closed in place or removed from the site(s).

Preliminary Assessments (PA) and Site Inspections (SI) have been conducted at each site. Soil and groundwater investigations at both sites were conducted to determine if solvents and petroleum products were present. Samples collected from each site showed: select metals, petroleum by-products, and pesticides in groundwater at concentrations greater than groundwater criteria; soil concentrations less than soil criteria; and, a petroleum product was observed in one monitoring well at the Geiger Key Hawk Missile Site.

Additional monitoring wells are being installed at the Boca Chica Hawk Missile Site. Confirmatory groundwater sampling for select contaminants will be performed at both sites. Sampling also will be performed to evaluate groundwater quality. A Site Inspection Addendum will be issued with recommendations as the next step in the remediation process for both sites.

### Questions

Mimi Stafford: Is something being done with the Geiger Key area?

Ron Demes: No plan to divest it and the Navy is open to best use for property.

Mimi Stafford: Are you hoping to maintain it as a historic site?

Ron Demes: Yes

Mimi: Will this be a museum?

Ron Demes: It could be.

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John Jones: The towers are rusting. Are you planning to take them down?

Ron Demes: There is no funding to take them down. Removal would need to be coordinated with the State Historic Preservation Officer

John Jones: Is the area secure?

Ron Demes: Yes, it has two fences surrounding it

### Petroleum Sites Update

Shauna Stotler-Hardy (Tetra Tech, Inc.) presented an update on petroleum sites. She discussed highlights on three sites including the Sigsbee Annex Marina, Trumbo Point Bachelor Officers Quarters (BOQ) Building C-2076, and the Boca Chica Tank Farm. At Sigsbee Annex Marina, a site assessment was performed 2007-2008 and defined contamination from a spill. About 1.4 cubic yards of contaminated soil was removed and 6 monitoring wells were installed. It was determined that methyl tert-butyl ether (MTBE) and acrylonitrile exceeded the FDEP standards. Additional sampling was performed in 2010. No chemicals exceeded their respective FDEP standards in groundwater collected during this event, which support the conclusion that site rehabilitation is complete. A Site Rehabilitation Complete Order (SRCO), which designates this site for No Further Action (NFA), was requested from the state.

At Trumbo Point BOQ, a free-phase petroleum plume was discovered in 1998, which was reported to have occurred from an abandoned fuel line associated with a former 100-gallon above-ground storage tank (AST). Approximately 55 cubic yards of soil were removed and 10 gallons of light non-aqueous phase liquid (LNAPL) was recovered. A site assessment report was issued in 1999, which recommended preparing a remedial action plan for the site. Additional sampling events were conducted May 2003, November 2006, and November 2008. Select petroleum contaminants exceeded cleanup levels and free product was detected. Four treatability studies were performed between 2008 and 2011. A total of 40 gallons of free product were removed during the studies. A 5<sup>th</sup> treatability study currently is being performed, the results of which will be documented in a report

The third site, Boca Chica Tank Farm, has resulted from several petroleum releases. The tank farm itself has been in operation since 1942 and has been used to store a variety of petroleum-based fuels including aviation gasoline, jet fuel, diesel fuel, and unleaded gasoline. The site was awarded an NFA Order by the FDEP in 1992; however, subsequently, jet fuel was discovered in soil and groundwater during removal of a pipeline and later during closure of an underground storage tank. Sampling performed in 2001, indicated that only one well (MW-18) had petroleum hydrocarbon concentrations exceeding FDEP allowable levels. Semi-annual sampling performed since 2006 has demonstrated that concentrations were trending lower in this well. It is noted that well MW-18 was replaced with MW-18R in May 2011. Additional sampling indicates that chemicals of concern still exceed FDEP criteria in this well. A report that documents the results of recent sampling will be submitted to the FDEP in September 2012.

### Questions

Marcy Dusenberry: Is that Sigsbee Annex water towers?

Shauna Hardy: No, it is an old tank on the marina

Marcy Dusenberry: What was spilled there?

Shauna Hardy: Fuel, JP-5

Mike Buchman: What would be lifecycle for natural attenuation at that site?

Shauna Hardy: It depends. Actually, natural attenuation does not seem to be working in one well. Active remediation may be required

Marcy Dusenberry: I don't understand how the contaminants do not move given the ocean movement

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Shauna Hardy: Our site can be tidally influenced. Groundwater rises and drops. Groundwater does not move laterally.

### Annual Performance Monitoring Update

Dan Herlihy (ECS) presented an update on the Annual Performance Monitoring (APM) program, which includes 7 sites consisting of Installation Restoration (IR) Sites 1, 7, and 8 and Solid Waste Management Units (SWMUs) 1, 2, 5, 7. These sites have been assessed, studied, and a cleanup remedy has been implemented. The APM measures progress and performance of the cleanup remedy. The monitored media include sediment, surface water, and groundwater. A wide range of contaminants of concern including various metals, volatile organic compounds, semi-volatile organic compounds, and pesticides are monitored. The Navy is in the process of reviewing the APM program, with the objective to optimize the program. Optimization includes evaluating existing data to see if the number of analytes and/or sample locations can be eliminated while ensuring that the program maintains protectiveness of human health and the environment and complies with all applicable regulatory requirements. There are a number of regulatory requirements and criteria which must be adhered to including FDEP Cleanup Target Levels for surface water and groundwater, FDEP sediment quality assessment guidelines, and NOAA screening quick reference tables. The Navy is working closely with the FDEP to select applicable criteria and evaluate data to develop trends with appropriate action levels. Recommendations for reducing the analyte list and sample locations are being developed for further consideration.

### Questions

John Jones: How do you decide which criteria to use?

Dan Herlihy: Take surface water as an example. Determine if it is a fresh or marine water body and use applicable criteria.

### Manhole 31, Saratoga Avenue Update

Amy Twitty (CH2M-Hill, Inc.) presented on Manhole 31, located on Saratoga Avenue, Boca Chica Key. An oily substance was discovered in a manhole and nearby utility vaults. Emergency response was conducted to remove waste from the underground conduit system and contaminated surface soil around the manhole. Performed confirmatory groundwater sampling in 2007 and discovered chlorinated solvents. In 2010, an additional groundwater investigation was performed. Results indicated that at least one well exceeded state standards. Groundwater impact was delineated to north, east, and west. A Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was proposed and initiated in 2011. An old Navy storage building on the site may have been a source of the chlorinated solvents. In 2011, five shallow wells and one deep well were installed at the site. Groundwater was sampled semiannually for one year (October 2011 and April 2012). Groundwater was collected and analyzed from 8 wells for volatile organic compounds (VOCs). Groundwater from select wells also was analyzed for water quality parameters to determine whether the aquifer meets the definition of Low Yield/Poor Quality (LY/PQ) and to evaluate the fate and transport of contaminants. Results indicated that LY/PQ conditions were met. Additional samples were collected during the April 2012 semi-annual event. LY/PQ criteria were exceeded in MW-2. Concentrations fluctuate in groundwater, which is why monitoring is required over an extended duration. Soil sampling also was performed around the manhole. Results were compared to commercial and residential criteria and compared to leachability criteria. No exceedences were detected. A risk assessment was performed, which noted no ecological risk from soil. However, a potential risk is present due to exposure from or future construction worker from tetrachloroethene (PCE). Future groundwater investigations will include installation of additional wells.

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Preparation of the RFI report is underway and will be submitted to the Navy and the FDEP in 2012. The report will recommend further groundwater delineation before a Corrective Measures Study can be completed.

### Questions

Mimi Stafford: What would be the possible corrective measures?

Amy Twitty: Injection of hydrogen releasing compound (HRC<sup>®</sup>) could be performed. Data indicates that a small amount of biodegradation is occurring.

Bob Eadie: How long do you have to keep monitoring?

Amy Twitty: Two consecutive events

Ray Blazevic: Stated that that the building was used to store only paper.

Ron Demes: The building did have a storage building at one end, with a regulated AST.

### Defense Reutilization Marketing Office (DRMO) Land Slivers Update

Amy Twitty gave a presentation on the Defense Reutilization and Marketing Office (DRMO) Slivers, two small parcels of Navy-owned land adjacent to the City-owned portion of the former DRMO Waste Storage Area. The southern sliver is approximately 600 feet long by 25 feet wide; the northwestern sliver is approximately 200 feet long by 30 feet. Both the City-owned and the Navy-owned land were once used to store military equipment. Over time, contaminants were released to site soils from DRMO activities and from a water tower painted with lead-based paint. According to the base master plan, the North DRMO Sliver is zoned for commercial/industrial use and the South DRMO Sliver is zoned for residential land use (military housing nearby). A Site Investigation and Non-Time Critical Removal Action have been conducted at the DRMO Slivers. Soil samples were collected at both slivers in November 2010 and June 2011 and analyzed for arsenic, lead, polycyclic aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs). Samples at the North DRMO Sliver were compared to the FDEP Direct Exposure Residential standards and the Direct Exposure Industrial standards. Samples from the North DRMO Sliver exceeded the Residential standards, but were below Industrial standards. Samples at South DRMO Sliver exceed both Residential and Industrial standards in some locations. Due to Industrial exceedances, the Navy erected a temporary fence at the South DRMO Sliver to protect visitors and workers. The Navy prepared an Engineering Evaluation/Cost Analysis (EE/CA) in May 2012 to evaluate remedial alternatives for the DRMO land slivers. The alternative selected (Alternative 2) includes Excavation of contaminated soil, offsite disposal, and backfill. The EE/CA was made available to the public for comment for 30 days on May 4, 2012. Although comments were received from the public, no changes to the EE/CA were necessary and the EE/CA was finalized in June 2012. Based on the selected remedy, an Action Memorandum was prepared in June 2012 describing the remedial alternative selection and approvals. A soil excavation will be conducted in the fall of 2012.

### Questions

Gentleman in front row: Where will the contaminated soil be disposed?

Amy: It previously went to Miami Florida, where it is landfilled.

Gentleman in White: Have any groundwater samples been collected?

Amy: Some temporary well points have been sampled at DRMO. No groundwater impacts have been identified from the DRMO slivers.

Ray Blazevic: Soil contaminated with DDT was taken to Michigan

Gentleman in White: Concerned by fact that some of the sites are stumbled upon accidentally. Overall picture only getting a glimpse of what is there.

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Ron Demes: In 1984 the Navy performed surveys of employees, reviewed historical plans, and industrial processes to identify environmental issues. Things historically acceptable may not be acceptable today. Site designations are based on best available information. New programs have arisen over the years; for instance the Navy Munitions Response Program is looking at weapons handling, range usage, etc. Other problems may arise in the future.

### Base Realignment and Closure (BRAC) Sites Update

Mark Davidson (BRAC PMO SE) provided an update on four BRAC Sites which have been transferred to the city and are currently undergoing cleanup. Sites included:

- DRMO, Truman Annex
- Parcel K (city-owned portion), Truman Annex
- UST 5, Truman Annex
- Poinciana Housing

#### DRMO, Truman Annex

The DRMO area was transferred to the City of Key West in 2002 with a land use restriction of non-residential use. Subsequent to the transfer, the Navy discovered additional soil contamination and conducted a number of soil removals from 1999 to 2009. The city-owned DRMO site was cleaned up to allow unrestricted use (meets FDEP residential use criteria). The Navy has submitted a Site Rehabilitation Completion Report, which recommended no further action without land use controls. If the FDEP concurs, they will issue a Site Rehabilitation Completion Order. The Navy will modify the deed to reflect unrestricted use for soil (no land use controls). It is estimated that the approval process will be completed by the summer of 2013. The City is planning on developing the site as a waterfront park, which requires the City to determine if the soil meets FDEP recreational-use criteria. Under CERCLA, the Navy is required to ensure the parcel meets FDEP industrial criteria. The City contacted the Navy in 2009 and the Navy re-sampled the site to delineate soil contamination.

#### Parcel K, Truman Annex

A portion of Parcel K was transferred to the City of Key West in 2002 with a land use restriction of industrial use criteria. The City collected soil samples in April 2009, constituents were detected at concentrations higher than those for FDEP industrial-use criteria. The Navy conducted a soil removal in January and February 2012. Approximately 368 tons of soil were removed and disposed of properly. The Navy will submit a Site Rehabilitation Completion Report to FDEP that recommends no further action with land use controls. The land use controls will prohibit residential use, but will allow recreational use (i.e. proposed park). The tentative submittal date for the report is August 2012. If the FDEP concurs, they will issue a Site Rehabilitation Completion Order. The Navy will modify the deed to allow recreational (park) use.

#### UST 5, Truman Annex

Truman Annex UST is on property that was transferred to the City of Key West in 2002 with no use restrictions. During installation of a fence surrounding Navy property on Truman Annex, an UST was discovered. The tank was closed in place in 2003, and limited soil and groundwater investigative work related to the tank was performed. The Navy completed additional soil and groundwater sampling in fall 2009 and discovered a second tank. Both tanks were removed in 2009. A soil investigation was conducted and the soil is clean. A groundwater investigation was also conducted and three petroleum product contaminants were detected in three monitoring wells at a concentration greater than FDEP

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groundwater cleanup goals. The Navy has been performing quarterly groundwater monitoring since February 2010. The last groundwater sampling event (April 2012) showed no exceedances of Florida's criteria. The groundwater was sampled again 11 July 2012. If no exceedances of the FDEP criteria are detected, the site will be recommended for no further action and a Site Rehabilitation Completion Report will be developed and submitted to the FDEP. If the FDEP concurs, they will prepare a Site Rehabilitation Completion Order.

In summary, the Navy will modify Truman Annex deed once the following are complete:

- FDEP submits Site Rehabilitation Completion Order for the DRMO parcel – estimated completion date August 2012
- Navy submits City owned portion of Parcel K Site Rehabilitation Completion Report to FDEP – August 2012
- FDEP submits City owned portion of Parcel K Site Rehabilitation Completion Order - February 2013
- Deed modification - approximately summer 2013

Mark Davidson presented a series of slides that depicted Truman Annex, future land use, and land use controls for soil and groundwater.

### Poinciana Housing Site

The Poinciana Housing site is located at the end of Truesdell Court. The property was transferred to the City of Key West in 2000. The site was originally investigated because of arsenic in soil and groundwater. There is a use restriction in the deed prohibiting the use of groundwater at the site. The Navy has been monitoring groundwater in the one well since 1998. The site continues to have one well with arsenic exceeding the FDEP groundwater criteria of 10 µg/L. The FDEP regulation states if groundwater is considered "low yield/poor quality" the cleanup value is increased by a factor of 10 (i.e., 100 µg/L). Navy evaluated the aquifer for "low yield/poor quality" in 2011. Results showed chloride in excess of Florida's potable water secondary standards (smell, taste). Hence, the aquifer qualifies as low yield/poor quality. The actual level of arsenic is currently 37.7 ug/L. Regulations require one year of quarterly monitoring below the low yield/poor quality criteria. The Navy currently has three sampling rounds below low criteria; hence, one additional round will be performed. The Navy will submit a Site Rehabilitation Completion to the FDEP upon completion of monitoring. If the FDEP concurs, a Site Rehabilitation Completion Order will be issued for no further action with a groundwater use restriction.

### Questions:

Mark Sanger: Will food preparation and eating be a problem at the park?

Ron Demes: No. working through issues regarding various land use restrictions. The deed will be modified to be far less restrictive. Tracie Bolaños (FDEP) is available to answer questions regarding emplacement and enforcement of land use controls.

Mark: Removal of 70 foot concrete apron.

Ron Demes: we do know a pipeline under the concrete apron/seawall was rebuilt and the apron was put in. Some excavation had occurred prior to installation of the concrete apron. Fuel lines went through the area, but no known tanks are present. There is no restriction from removing the concrete pad.

Lucille Gage: Hopefully the City would not allow a restaurant or an area where people go all the time.

Ron Demes: FDEP is chartered to protect human health and the environment.



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Ray Blazevic: When they removed the seawall, they removed a lot of material and put in a lot of infrastructure.

### Meeting Adjournment

Ron Demes thanked everyone for coming to the meeting. He noted that the RAB meetings are held once a year. Ron noted potential topics for next year's RAB meeting will include follow-on to the July 2012 topics. Ron then asked the Board and public if they had any suggested potential topics. None were suggested.

Ron adjourned the meeting at approximately 9:05 PM.