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**DEPARTMENT OF THE NAVY**  
NAVAL SUBMARINE BASE NEW LONDON  
GROTON, CONNECTICUT 06349-5000

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14 FEB 2001

From: Commanding Officer, Naval Submarine Base New London  
To: Distribution

SUBJ: RESTORATION ADVISORY BOARD (RAB) MINUTES FOR NAVAL  
SUBMARINE BASE NEW LONDON

Encl: (1) Minutes from the 1 Nov 00 and 7 Feb 01 RAB Meetings

1. Approved minutes from the 1 Nov 00 RAB meeting are attached for your records. Draft minutes from the 7 Feb 01 RAB meeting are attached for review.
2. Please contact Mr. Richard Conant at (860) 694-5176 if you have any comments or questions concerning this matter.

A handwritten signature in black ink, appearing to read "Andrew J. Stackpole".

ANDREW J. STACKPOLE  
Environmental Director  
By direction of the  
Commanding Officer

Enclosure

Copy to: RAB Distribution List

## Meeting Minutes

### Restoration Advisory Board Installation Restoration Program Naval Submarine Base New London, Groton, Connecticut

1 November 2000

#### Attendees:

Sue Orrill (RAB Co-chair)  
Larry Gibson (RAB Member)  
Noah Levin (RAB Member)  
Felix Prokop (RAB Member)  
Kymberlee Keckler (EPA Region I)  
Mark Lewis (CT DEP)  
Mark Evans (Northern Division)  
Mike Fohner (Northern Division)  
Andy Stackpole (NLSB)  
Dick Conant (NLSB)  
Dan Sullivan. (Foster Wheeler)  
Bryan Conley. (Foster Wheeler)

The RAB meeting began with a trip to Goss Cove. The RAB members went to an overlook above Goss Cove at the flagpole. Dan Sullivan began the meeting by giving a construction overview. He described the successful construction of the culvert under the rail bed during the previous weekend. The work was completed on schedule and with no interruptions to the railroad. The remaining 20' culvert sections continue to be installed at the site. Dan Sullivan explained that pile caps were installed due to the instability of the silty soil under the culverts. The drilling / pile driver subcontractor was on-site during the meeting. He described the process to be done when bedrock was encountered in the pathway of the box culvert. The scheduled construction would also involve the removal and re-installation of the static display submarines in front of the museum.

Kymberlee Keckler asked if blasting would be used to remove the bedrock. Dan Sullivan stated that chipping would be the preferred method of bedrock removal.

Sue Orrill asked Dan Sullivan about the final grade of the cap, and if the parking lot would be sloped towards the river. Dan Sullivan said the general sloping would be towards the Thames, and proceeded with a thorough description of the storm drainage system. Sue Orrill followed-up her question with asking how the cap will be finished off at the riverside. Dan Sullivan stated that the general construction practice of installing these caps would be utilized and that the cap would terminate in a trench along the riverside.

Larry Gibson asked if any excavation would be conducted on the south side of the museum. In describing the excavation plan, Dan Sullivan stated that there would not be excavation done on the south side of the museum.

Sue Orrill inquired about the current museum access situation. Dick Conant replied that access has been strained with the recent threat level condition being elevated, and with the limited parking available on base.

The group then headed to the Area A Downstream location, where Foster Wheeler had recently completed the site remediation and restoration. Dick Conant stated during the site walk that the Navy is monitoring the vegetation and will continue to re-vegetate where necessary and also remove unwanted vegetation, such as phragmites.

Kymerlee Keckler asked when the mature vegetation is scheduled to be planted. Dick Conant replied that this would be accomplished as early as practical during the spring growing season.

Dick Conant wrapped up the site visit by saying that the next RAB meeting would be tentatively scheduled for February 7, 2001.

## Meeting Minutes

### Restoration Advisory Board Installation Restoration Program Naval Submarine Base New London, Groton, Connecticut

7 February 2001

#### Attendees:

Sue Orrill (RAB Co-chair)  
Larry Gibson (RAB Member)  
Felix Prokop (RAB Member)  
Kymberlee Keckler (EPA Region I)  
Mark Lewis (CT DEP)  
Mark Evans (Northern Division)  
Dick Conant (NLSB)  
Dan Sullivan. (Foster Wheeler)  
Bryan Conley. (Foster Wheeler)  
Shana Hooth. (Foster Wheeler)  
Corey Rich. (TetraTech NUS)  
Deborah Downy (RAB Member)  
Doug McClure (EA Engineering)

1. Mr. Dick Conant opened the RAB meeting at 6:40 PM. The meeting began with a review of the minutes from the last meeting held on 1 November 00 at SUBASE. Hearing no objections or changes, the 1 Nov 00 minutes were accepted.

2. Mr. Dan Sullivan and Mr. Brian Conley of the Foster Wheeler Corporation presented an update on the Goss Cove Remedial Project. Mr. Sullivan noted that the box culvert had been completed and that the former storm sewer system had been abandoned in place onsite. The geomembrane could not be completed this winter due to inclement weather, but the project remains on schedule and work should resume, weather permitting, in March 2001. Currently, only a skeleton crew is working at the site on the storm sewer installation and other prep work required prior to placement of the liner. Project completion is still projected for mid-May with final turn over of the site to the Navy scheduled for sometime before Memorial Day weekend. Remaining tasks on-site are; final site regrading; placement of the liner; placement of the remaining fill layers above the liner; site paving; and installation of the final architectural features.

Dick Conant inquired as to how the last box culvert section was tied into the junction box. Mr. Sullivan replied that the culvert section was saw-cut to provide a custom fit, then the sections were drilled and pinned together before a final concrete sleeve was cast in place around the joint. Sue Orrill inquired as to how much bedrock had to be removed for placement of the box culvert sections. Mr. Sullivan replied that extensive bedrock in the eastern portion of the site had to be blasted out for the culvert. Bart Pearson inquired if the project had encountered many unexpected conditions and difficulties to date. Mr. Sullivan replied that with the exception of the blasting necessitated by the shallow

bedrock there had been few surprises to date and that the actual landfill material had been easy to work through with few obstructions.

3. Mr. Corey Rich from Tetratech NUS presented the preliminary results from the Basewide Groundwater Operable Unit (OU) Remedial Investigation. The investigation was broken into three regions on the base, northern, central and southern based on hydrogeology and groundwater flows. Field sampling was completed between May and August of 2000 and a draft report is scheduled to be released to the regulators for review by the end of February 2001. The report concluded that based on observed Contaminates of Potential Concern (COPCs) and the attending risk analysis that unacceptable risks from contaminated groundwater exists at the Site 15 - Spent Acid Storage facility and the Site 7- Torpedo Shops site. All other sites investigated during this study, e.g., Site 3- Area A Downstream and OBDA, Site 14-ODDANE, Site 20- Weapons Center, Site 16-Hospital Incinerator, Site 8-Goss Cove Landfill, Site 18- Solvent Storage Area, and Site 23-Tank Farm were determined to have acceptable risks (See the attached summary for detailed site-specific information). All sites determined to have unacceptable levels of risk are recommended for a Feasibility Study.

Sue Orrill inquired if the "hit" of TCE in the Tank Farm site was related to TCE noted in the vicinity of the SUBASE Main Gate. Mr. Rich replied that the TCE hit was located in the eastern Tank Farm area and appears to be spatially unrelated to the TCE near the Main Gate. Mr. Rich indicated that the TCE hit in the Tank Farm site was at a low level and could not be ascribed to any particular source.

4. Mark Evans, the Remedial Project Manager from Northern Division, gave a presentation on the planned remedial projects to be initiated at SUBASE in 2001. Site 14-OBDA is scheduled for excavation of debris and contaminated soil in spring, 2001. Once remedial goals are met, the site will be restored in accordance with the site restoration plan implemented at Area A Downstream. A work plan for this project is scheduled to be finalized during the next month. Site 20-Weapons Complex is scheduled for the excavation of approximately 80 cubic yards of PAH and metal contaminated soils and sediments in spring, 2001. Excavation spoils will be disposed of at an off-site asphalt batching plant. A work plan for this site is scheduled to be finalized in March, 2001. See attached presentation documents for details.

5. The next RAB was scheduled for noon on 2 May 2001. This meeting will occur at SUBASE and involve a walking tour of the Goss Cove Remedial project site and the Area A Downstream wetland restoration area. Having no further business, Dick Conant closed the RAB meeting at 8:05 PM.

**BASEWIDE GROUNDWATER OPERABLE UNIT  
REMEDIAL INVESTIGATION  
NSB-NLON, GROTON, CT**

**RESTORATION ADVISORY BOARD MEETING  
FEBRUARY 7, 2001**

**PREPARED BY TETRA TECH NUS  
PITTSBURGH, PENNSYLVANIA**

## **NORTHERN REGION SITES**

- **SITE 2 - AREA A LANDFILL AND WETLAND**
- **SITE 3 - AREA A DOWNSTREAM AND OBDA**
- **SITE 7 - TORPEDO SHOPS**
- **SITE 14 - OBDANE**
- **SITE 20 - AREA A WEAPONS CENTER**

## **CENTRAL REGION SITES**

- **SITE 16 - HOSPITAL INCINERATOR**

## **SOUTHERN REGION SITES**

- **SITE 8 - GOSS COVE LANDFILL**
- **SITE 15 - SPENT ACID STORAGE AND DISPOSAL AREA**
- **SITE 18 - SOLVENT STORAGE AREA (BLDG 33)**
- **SITE 23 - TANK FARM**

## **SITE 2 - AREA A LANDFILL AND WETLAND**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 1 VOC and 3 Metals**
- **MIGRATION COPCs - 2 Metals**
- **RISKS - Acceptable (ICRs < 10<sup>-6</sup> and HIs <1)**
- **RISK DRIVERS - None**

## **SITE 3 - AREA A DOWNSTREAM AND OBDA AND SITE 14 - OBDANE**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 4 VOCs, 1 SVOC, and 2 Metals**
- **MIGRATION COPCs - 1 VOC and 1 Metal**
- **RISKS - Acceptable (ICRs < 10<sup>-6</sup> and HIs <1)**
- **RISK DRIVERS - None**

## **SITE 7 - TORPEDO SHOPS**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Soil and Groundwater**
- **DIRECT CONTACT COPCs- Soil: 5 SVOCs, 1 PCB, and 7 Metals;  
Groundwater: 5 VOCs, 2 SVOCs, 5 Metals**
- **MIGRATION COPCs - Soil: 1 VOC, 6 SVOCs, 1 PCB, and 3 Metals;  
Groundwater: 3 SVOCs and 4 Metals**
- **RISKS - Unacceptable (ICRs > 10<sup>-4</sup> and HIs > 1)**
- **RISK DRIVERS - Hexachlorobenzene, Arsenic, and Chromium**

## **SITE 20 - AREA A WEAPONS CENTER**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 1 VOC, 1 SVOC, and 5 Metals**
- **MIGRATION COPCs - 3 Metals**
- **RISKS - Acceptable (ICRs < 10<sup>-6</sup> and HIs <1)**
- **RISK DRIVERS - None**

## **SITE 16 - HOSPITAL INCINERATOR**

- **RATIONALE - Initial Investigation**
- **MEDIA INVESTIGATED - Soil**
- **DIRECT CONTACT COPCs - 1 SVOC and 3 Metals**
- **MIGRATION COPCs - 5 Dioxins/Furans, 1 PCB, and 5 Metals**
- **RISKS - Within Acceptable Range ( $10^{-6} < \text{ICRs} < 10^{-5}$  and  $\text{HIs} < 1$ )**
- **RISK DRIVERS - Arsenic and Benzo(a)pyrene**

## **SITE 8 - GOSS COVE LANDFILL**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 6 VOCs, 11 SVOCs, and 5 Metals**
- **MIGRATION COPCs - 1 VOC, 6 SVOCs, and 3 Metals**
- **RISKS - Within Acceptable Range ( $10^{-6} < \text{ICRs} < 10^{-5}$  and  $\text{HIs} < 1$ )**
- **RISK DRIVERS - Benzo(a)pyrene, Benzo(b)fluoranthene, and Dibenzo(a,h)anthracene**

## **SITE 15 - SPENT ACID STORAGE AND DISPOSAL AREA**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 1 VOC and 5 Metals**
- **MIGRATION COPCs - 3 Metals**
- **RISKS - Unacceptable ( $10^{-6} < \text{ICRs} < 10^{-5}$  but  $\text{HIs} > 1$ )**
- **RISK DRIVERS - Trichloroethene, Chromium, and Silver**

## **SITE 18 - SOLVENT STORAGE AREA (BLDG 33)**

- **RATIONALE - Initial Investigation**
- **MEDIA INVESTIGATED - Soil and Groundwater**
- **DIRECT CONTACT COPCs - Soil: 4 Metals; Groundwater: None**
- **MIGRATION COPCs - Soil: 1 VOC and 2 Metals;  
Groundwater: None**
- **RISKS - Within Acceptable Range ( $10^{-6} < \text{ICRs} < 10^{-5}$  and  $\text{HIs} < 1$ )**
- **RISK DRIVER - Arsenic**

## **SITE 23 - TANK FARM**

- **RATIONALE - Supplemental Investigation**
- **MEDIA INVESTIGATED - Groundwater**
- **DIRECT CONTACT COPCs - 1 VOC, 1 SVOC, and 1 Metal**
- **MIGRATION COPCs - 2 Metals**
- **RISKS - Within Acceptable Range ( $10^{-6} < \text{ICRs} < 10^{-5}$  and  $\text{HIs} < 1$ )**
- **RISK DRIVER - Tetrachloroethene**

## **PROJECT SCHEDULE**

- **DRAFT RI REPORT SUBMITTED - February 23, 2001**
- **REGULATORY REVIEW COMPLETED - April 23, 2001**
- **COMMENT RESOLUTION COMPLETED - May 22, 2001**
- **DRAFT FINAL RI REPORT SUBMITTED - June 21, 2001**
- **FINAL REPORT SUBMITTED - TBD**



# Remedial Actions FY 2001

Naval Submarine Base - New London

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# Over Bank Disposal Area North East

- Located adjacent to Area A Downstream (Upper pond)
- Debris and soil removal and disposal off-site
- Confirmation sampling
- Restore site in accordance with Area A Downstream restoration plan

# Over Bank Disposal Area North East

## *SCHEDULE*

- Final Removal Action Work plan

- February 2001

- Construction

- Start March 2001

- Final report

- May 2001

# Site 20 - Weapons Center

- Record of Decision signed in June 2000
- COC's - PAH's and arsenic
- Approximately 80 cy of soil/sediment
- Soil will be transferred to an asphalt batching plant

# Site 20 - Weapons Center

## ***SCHEDULE***

### ■ Work Plan

– March 2001

### ■ Construction

– Start April 2001

### ■ Final Report

– July 2001