



Brown & Root Environmental

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C-49-12-5-153

**MINUTES OF RESTORATION ADVISORY BOARD (RAB)
MEETING
NOVEMBER 8, 1995**

To: NSB-NLON Public Meeting Attendees and RAB Members (See attached Distribution list)

From: Matt Cochran of Brown and Root Environmental (formerly Halliburton NUS Corporation) *M.C.*

Subject: RAB and Public Meeting Minutes-November 8, 1995
Installation Restoration Program
Naval Subbase - New London (NSB-NLON)
Groton, Connecticut

Attendees of the meeting

Andy Stackpole	NSB-NLON
Dick Conant	NSB-NLON
Mark Evans	NORTHDIV
Robert Jones	COMSUBGRUTWO
Kymerlee Keckler	USEPA
Mark Lewis	CTDEP
Susan Orrill	RAB Co-Chair Member
Felix Prokop III	RAB Member Designee
Norman Richards	RAB Member
Gene Cioffi	RAB Member
Bart Pearson	Groton Resident
Matt Cochran	B&R

The attendance sheet is included as Attachment 1.

Agenda

The agenda for the meeting was as follows.

1. Welcome and Introduction
2. Review of August 16, 1995 Meeting Minutes
3. Area A Landfill Update
4. Phase II RI Report Update
5. Community Participation



Welcome and Introduction

Andy Stackpole opened the meeting at 7:11 and welcomed all attendees.

Review of August 16, 1995, Meeting Minutes

The August Meeting minutes were reviewed and accepted with no comments or revisions.

Area Landfill Update

Andy provided an update of the Area A Landfill activities. The Record of Decision (ROD) has been signed. Andy indicated that a study is presently being conducted to determine if a leachate collection system will be required along the interface between the Area A Landfill and the Area A Wetland. Andy provided an overview of the study including the proposed field activities and the modeling effort planned after the field activities are completed. The fieldwork is scheduled for completion in several weeks and the report will be prepared approximately 1 1/2 months after the fieldwork is completed. The proposed models for use were developed by the USGS and will include both MODFLOW and MODPATH. Andy also indicated that the Navy is looking at reclassification of groundwater at the Subase.

Question from Gene Cioffi: What type of compounds will be evaluated as indicator parameters during the modeling effort?

Response from Andy Stackpole and Kymberlee Keckler: The exact indicator parameters are presently unknown however, metals would be the most likely parameters. Samples have been collected for full TCL and TAL analyses and a review of that data will be used to determine appropriate indicator parameters.

Question from Norm Richards: Will the new CTDEP standards be used as comparison?

Response from Andy Stackpole and Kymberlee Keckler: Yes

Phase II RI report update

Andy provided an update of the Phase II RI Report. The Draft Final version is scheduled for submittal in late January.

Andy had indicated that ATSDR performed a health consultation regarding potential impacts that the Goss Cove Landfill would have on the Town of Groton sewage pumping station, which is located adjacent to the Landfill. The consultation concluded that there were no adverse impacts on the pumping station. The Navy has agreed to perform follow up real-time air monitoring to detect the presence of organic vapors within the building.

Question from Felix Prokop: When was the air sampling activity conducted in the Nauticus museum, how many samples were collected, where were the sample locations, and how long was the sampling duration?

Response from Matt Cochran: The sampling was conducted in 1 day. The exact date is unknown but the sampling was conducted several months ago. A total of 4 samples were collected, two of which were located in the basement of the Museum.



NOTE: To provide more clarification regarding the above questions, the details of the Nautilus Museum sampling activity have been researched and are summarized as follows:

A total of four air samples were collected at the Nautilus Museum on July 18, 1995. Three samples were collected inside the museum and one of the samples was collected from outside of the museum to measure outdoor ambient air quality. Two of the indoor samples were collected in the basement of the museum and the third was collected from the museum floor. The sampling duration was approximately 8 hours per sample. The findings of the investigation concluded that there were no significant human health risks for museum employees and visitors. Further details regarding the Goss Cove Landfill and Nautilus Museum sampling activities can be found in "Draft Letter Report for Sampling Activities at the Goss Cove Landfill and Nautilus Museum, October 20, 1995." This document can be found in the Information Repositories.

Question from Felix Prokop: Were there also soil samples collected at the Goss Cove Landfill?

Response from Andy Stackpole: Yes, a total of three surface soil samples were collected from the picnic area and near the exhibits.

NOTE: The results of the soil sampling activity concluded that no adverse health effects are anticipated for adult and child visitors as well as site employees. Further details of the soil sampling activity are also included in the above mentioned reference document.

Andy also indicated that additional activities that are planned for 1996 include a Lower Subbase RI, as well as a FS for the Goss Cove Landfill and Downstream/OBDA. A Fuel Farm investigation is also being conducted including the installation of wells along a fuel product distribution line which runs from the Fuel Farm to the Lower Subbase.

Andy indicated that an environmental assessment for the installation of a stormwater line which would extend from the Ballfields to the Thames River is anticipated for next year. Funding for the activity is anticipated for Thanksgiving, the final report should be completed by next year.

Matt Cochran indicated that a round of water level measurements in monitoring wells as well as private wells along Route 12 and Long Cove Road is planned for collection before Thanksgiving.

Question from Sue Orrill: How many private wells will be measured?

Response From Matt Cochran: Approximately 15

Question from Felix Prokop: Could you explain the intended use of the water level measurement activity and how the groundwater contour maps will be prepared?

Response from Matt Cochran: Only water level data from bedrock wells will be used for the preparation of a bedrock groundwater contour map. The water level in wells will be converted to elevations and plotted on a map. Groundwater will flow from areas of higher potentiometric head to areas of lower potentiometric head.

NOTE: Additional information regarding the use of the water level data is included in Attachment 2.



Written Question received from Robert Jones: Can the Nautilus Museum parking lot being used (after site preparation using an approved Health and Safety Plan) for placing a submarine conning tower and missile exhibit?

Written Response from Andy Stackpole: Static exhibits may be allowed to be installed if the design of the exhibit foundation incorporates design restrictions dictated by any remedial action at the site, such as impermeable cap interference or depth considerations.

Future Meeting Date/Time

The date for the next RAB meeting was scheduled for February 21, 1996 at 7:00 in the Shepard of the Sea Chapel. The preliminary agenda for the next meeting will include:

Co-chair election

Meeting Adjourned

The meeting was adjourned at 7:50.

ATTACHMENT 1

Naval Submarine Base New London

Restoration Advisory Board

Sign-In Sheet

Name	Organization	Address
Mark Evans	Navy	
Kimberlee Jekler	USEPA	
ROBERT JONES	COMUSNAV TWO	
BART M. PEARSON	President	
Felix Prokop	LEDGE LIGHT HEALTH	
Susan Orrill	Wedgwood Resident	
MATT COCHRAN	BROWN AND ROOT	
Dick Conant	Subbase Environ. Dept	
Gene Cuffi	CSL, Inc.	
Norman Richards	Mohegan Tribe	
Mark Lewis	Conn DEP/Water Management Bureau	

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ATTACHMENT 2

11/13/2014
11/13/2014

Figure 1 illustrates a cross section of the general ground surface and bedrock groundwater flow scenario for the NSB-NLON facility and surrounding areas. There are ground surface high and low areas. The bedrock surface generally corresponds to the ground surface (except in lower areas where there tends to be more soil material on top of the bedrock). A groundwater elevation, an indication of groundwater pressure or head, is measured as the elevation of water in a well. A groundwater elevation (C) is calculated by the difference between a surveyed ground surface elevation (A) and the depth to water (B): $C = A - B$. During the Phase II RI, the depth to water was measured with an electronic probe at on-site bedrock monitoring wells and a limited number of off-site bedrock private water wells by B&R personnel. The data show that groundwater elevations (pressures) are higher in areas where the ground surface and bedrock surface are higher, and that groundwater elevations (pressures) are lower where the ground surface and bedrock surface are lower. Groundwater will flow from high pressure to low pressure areas.

Figure 2 illustrates how groundwater flow directions are determined from measured groundwater elevations (pressures). Contour lines are drawn between data points according to linear interpolation. Groundwater flows from the highest groundwater contour toward the lowest groundwater contour. Groundwater contours generally parallel the ground surface contours, therefore groundwater flow directions generally follow the slope of the ground surface (refer to Figures 1 and 2). This suggests that fractures in the bedrock are numerous and connected, and groundwater flow directions are not restricted by regional structural trends in the bedrock. Finally, groundwater elevations (pressures) are higher where the bedrock elevation is higher, because the higher bedrock (which has a larger rock mass) can store more water from rain infiltration, and higher pressures can develop (refer to Figure 1).

During the Phase II RI, B&R measured bedrock groundwater levels at on-site wells and a limited number of off-site wells. A groundwater contour map was generated for the NSB-NLON facility. Because the number of off-site wells was limited, a new round of groundwater level measurements was collected on November 20, 1995 that includes a substantial number of off-site wells. A similar analysis of groundwater flow directions will be performed based on the new round of data. The revised ground water contour map will be forwarded to the RAB distribution list when completed.

FIGURES

Figure 1

C	=	A	-	B
Groundwater Elevation	=	Ground Surface Elevation	-	Depth To Water
80	=	100	-	20

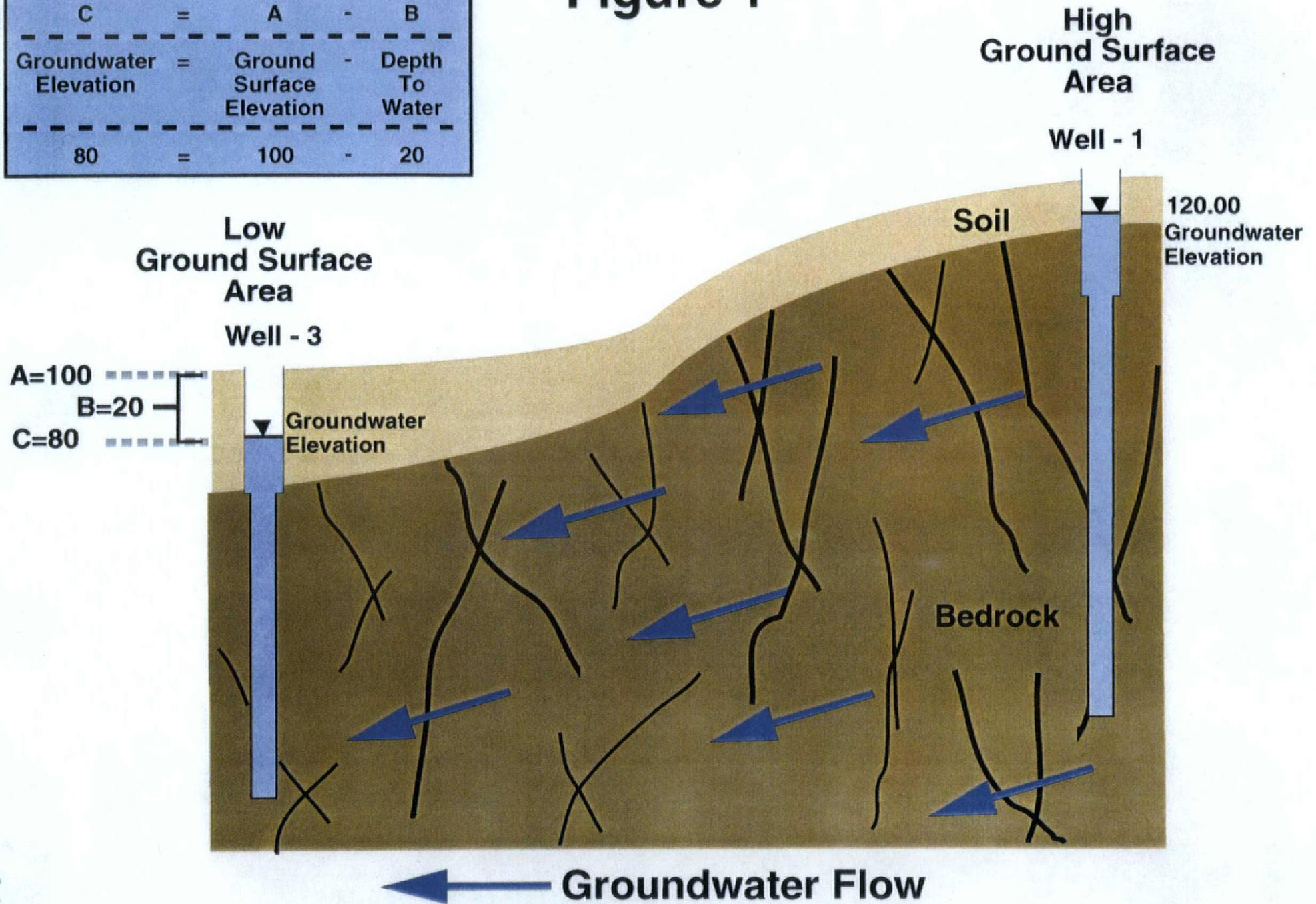
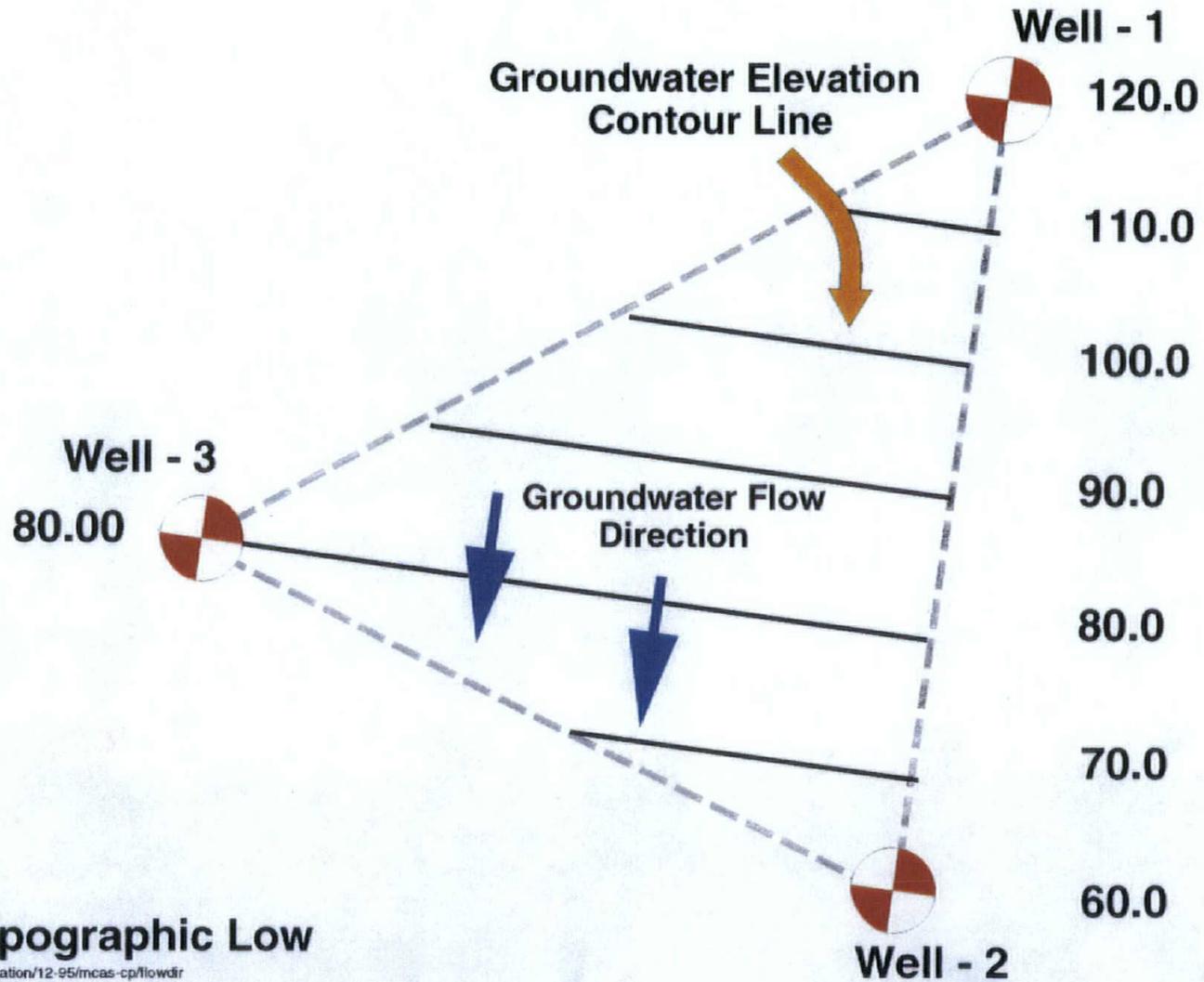


Figure 2

Topographic High



Topographic Low

Presentation/12-95/mcas-cp/lowdir

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