



DEPARTMENT OF THE NAVY
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
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CRANE INDIANA 47522-5001

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NSWC CRANE
5090.3a

IN REPLY REFER TO

5090/S5.0
Ser RP3/4327

- 1 NOV 2004

MEMORANDUM

From: Installation Co-Chair
To: Restoration Advisory Board Members

Subj: **RESTORATION ADVISORY BOARD (RAB) MEETING**

Encl: (1) October 19, 2004 RAB Meeting Minutes

1. Crane Division, Naval Surface Warfare Center (NSWC Crane) conducted a RAB meeting on October 19, 2004. Enclosure (1) is a copy of the minutes from that meeting.

2. For questions, comments, or information, please telephone 812/854-6160 or e-mail at RAB@crane.navy.mil. The NSWC Crane RAB web site can also be accessed for additional information at www.crane.navy.mil/newscommunity/Envir_RAB_default.asp?bhcp=1.


JAMES M. HUNSICKER

Subj: **RESTORATION ADVISORY BOARD (RAB) MEETING**

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Restoration Advisory Board Meeting Minutes

Crane Division, Naval Surface Warfare Center (NSWC Crane) conducted a Restoration Advisory Board (RAB) Meeting on Tuesday, October 19, 2004. The meeting was held at the NSWC Crane Café (Building 121) Conference Room from 1100 hours to 1315 hours. Table (1) is a list of the RAB meeting attendees. The slides presented at the meeting have been included at the end of the minutes. The RAB Co-chair [NSWC Crane Resource Protection Environmental Protection (RP3) Manager], opened the meeting and welcomed those attending.

Table 1 – Restoration Advisory Board Meeting Attendees List for April 20, 2004

ORGANIZATION REPRESENTED
RAB Co-chair
Indiana Department of Environmental Management
NSWC Crane RP3 (2)
SOUTHDIV
CAAA
Tetra Tech NUS
TolTest

The RAB Co-chair requested that the meeting start with the General Business Session. A proposal was made to convert the RAB to a web-based format. The RAB has been active since converting from the Technical Review Committee in February 1995. Twenty-seven RAB meetings have been held with an average attendance of two community representatives. The maximum number of community attendees (five) occurred during the February 1995 RAB. Only one community representative has been present for two out of the last five RAB meetings.

The mission of the RAB, as stated in the charter, is to, “facilitate communications and coordination between the community and governmental agencies in the environmental restoration of Crane Division, Naval Surface Warfare Center (NSWC Crane).” In other words, the purpose of the RAB is to make information available to and receive input from interested local citizens on the environmental cleanup activities at NSWC Crane.

The general consensus of those present was that the meeting format is not the proper vehicle for interacting with area residents. Hence, the suggestion was made to focus efforts on creating an electronic RAB that can be accessed via the NSWC Crane internet website (www.crane.navy.mil). NSWC Crane is currently investing in the implementation of a web-based Environmental Management System (EMS) and information pertaining to the RAB will likely be incorporated into the EMS. It is hoped that this new RAB format will preclude the need to meet on a regular basis. Public notices will be published periodically to inform the general public of the availability of the information on the internet.

Other general business included a discussion of the status of the Ammunition Burning Grounds (ABG). A Navy contractor (Tetra Tech NUS) has collected additional soil and ground water samples from the ABG main treatment area and is currently preparing a conceptual site model (CSM). The purpose of the CSM is to present a textual and graphical representation on the movement of contaminants, particularly RDX and TCE.

Finally, Mr. Tom Johnston, Phd, of Tetra Tech NUS presented a synopsis of on-going projects at NSWC Crane. Tetra Tech NUS has been tasked with the responsibility for investigating and providing clean-up alternatives at 15 solid waste management units.

NSWC Crane TtNUS Site Status Fall 2004

Presented to:
Restoration Advisory Board Meeting
October 2004

Purpose

- Present status of sites being investigated by TtNUS
- Describe significant recent activities at select SWMUs
- Describe plans for future for select SWMUs

Status of TtNUS Active Projects

SWMU No.	Name	RFI (and EI)			CMS		
		Plan	Field Work	Rep.	Field Work	Rep.	Rep.
1	Mustard Gas Burial Ground						
2	Dye Burial Grounds						
3	Ammunition Burning Grounds/Old Jeep Trains at Sulfur Creek						
4	McCormish Gorge						
5	Old Burn Pit						
7	Old Rifle Range/Old Postal Range						

IP = In Progress, NA = Not Applicable, S = Work Scheduled

Site List (Cont'd)

SWMU No.	SWMU Name	RFI (and EI)			CMS		
		Plan	Field Work	Rep.	Field Work	Rep.	Rep.
8	Lead and Fill Area/Building 106 Pond (RFI)						
9	Pesticide Control Area/R-150 Tank						
10	Rockeye						
12	Mine Fill A						
13	Mine Fill B						
15	Roads and Grounds Area (RFI)						
16	Cast High Exp FAB/B146 Incinerator						

IP = In Progress, NA = Not Applicable, S = Work Scheduled

Site List (Cont'd)

SWMU No.	SWMU Name	RFI (and EI)			CMS		
		Plan	Field Work	Rep.	Field Work	Rep.	Rep.
17	PCB Burial/Pole Yard (RFI completed)						
18	Lead and Fill Area Buildings (EI only)						
19	Pyrotechnic Test Area (Annex/Rocket Range/Impact Area) (RFI QAP, EI only)						
20	CSAA QAP/QC Test Area (EI only)						
20	Land Farm (EPA Preparing SB)						
QASSTL	Old Gun Tub Storage Lot (EI only)						

IP = In Progress, NA = Not Applicable, S = Work Scheduled

Recent Activities

- Ecological risk assessment methodology revisions
 - Affected Sites
 - Mustard Gas Burial Ground (SWMU 1)
 - Dye Burial Grounds (SWMU 2)
 - Ammunition Burning Grounds (SWMU 3)
 - McCormish Gorge (SWMU 4)
 - Old Burn Pit (SWMU 5)
 - Pesticide Control Area/R-150 Tank (SWMU 9)
 - Rockeye (SWMU 10)
 - All future work

Mustard Gas (SWMU 1)

- Background
 - Chemical burial ground
 - Mustard gas/radioactive thorium released
 - GW VOCs detected in 1980s
 - GW, SW, SD, Soil investigations completed
 - RFI and CMS reports submitted



Recent Fieldwork, SWMU 1

- Objective (CMS Data Collection)
 - Further delineate contamination (especially VOC source) to support CMS
- Approach
 - DQOs/Focused field campaign
 - Soil (test pits) with gamma and VOC field screening; VOC laboratory analyses
 - GW sampling (comprehensive with 2 new wells) for VOC analysis



Future Fieldwork/Status of SWMU 1 RFI/CMS Process

- No more fieldwork anticipated
 - Draft CMS report submitted to EPA
 - Recommendation: Periodic GW monitoring for VOCs with Land Use Controls



Typical Test Pit – MGBG (SMWU 1)



- Typical dimensions: 7' deep, 1.5' wide and 10' to 12' long
- One of 8 pits had some (2 gallons?) of pooled water



Ammunition Burning Grounds (SWMU 03)

- Background
 - Two areas of concern Main Treatment Area (MTA) and Old Jeep Trail (OJT)
 - RFIs completed for MTA and OJT
 - Chlorinated solvent (TCE) and explosive (RDX) releases MTA and OJT
 - Soil and groundwater both contaminated
 - CMS preparation started
 - Existing RFI data inadequate to determine location of TCE and RDX sources



Recent Field Work, SWMU 3

- Objectives (CMS Data Collection)
 - Obtain site data necessary to locate TCE & RDX sources in soils
 - Sample soils and perched groundwater
- Approach
 - DQOs/Focused field campaign
 - Soil and GW (explosives and VOCs) laboratory analyses



Future Fieldwork/Status of SWMU 3 RFI/CMS Process

- Field work
 - Completed in April 2004
 - No more field work planned
- Status
 - Conceptual Site Model under review by Navy
 - Technology evaluation has begun



Mine Fill A (SWMU 12)

- Background
 - Extensive explosives (primarily RDX) contamination in soil at MFA proper
 - Interim remedial action (soil bioremediation) completed (source removal)
 - No invest. of ground water (GW), surface water (SW), or sediment (SD) before RFI
 - Remedial action at Battery Disposal Site



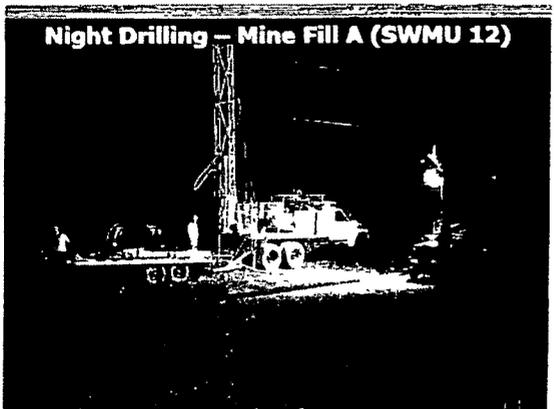
Current Fieldwork, SWMU 12

- Objectives
 - Obtain data to develop human/eco risk assessments and RFI report
 - Delineate extent of contamination (especially explosives)
- Approach
 - Sample GW, SW, and SD
 - Using dynamic approach (existing concentrations, site model drive additional sampling/analyses)



Current Field Work, SWMU 12 (Cont'd)

- Complications
 - Active explosives operations on site
 - Daytime access restrictions/Night drilling
 - Terrain affects:
 - Drilling locations/contamination delineation
 - Railroad corridor access/well installation
 - Railway safety plan developed for drilling in RR corridor
 - Industrial area requiring utility clearance (underground utilities)
 - Power line safety requires lockout/tagout

Current Fieldwork, SWMU 12 (Cont'd)

- +
 - Status
 - 42 wells installed and sampled
 - Soil, SW, SD samples collected
 - Preliminary data show explosives (RDX/HMX/2,4-DNT) in GW
 - Aquifer tests and surveying in progress



Future Fieldwork, SWMU 12

- +
 - Install more wells to delineate GW explosives contamination
 - Periodically sample selected wells to determine whether explosives are degrading naturally



General Status of SWMU 12 RFI Process

- +
 - Samples being analyzed
 - Data being validated
 - RFI report preparation starts in first quarter of CY05
 - ERA/HHRA report preparation starts in first quarter of CY05



Mine Fill B (SWMU 13)

- +
 - Background
 - Extensive explosives (especially RDX) contamination in soil at MFB proper
 - Interim remedial action (soil bioremediation) completed
 - 2 rounds of GW, SW, SD, soil samples collected, primarily for explosives (GW) and PCBs (soil)



Current Fieldwork, SWMU 13

- +
 - Objectives
 - Obtain data to develop human/eco risk assessments and RFI report
 - Delineate extent of contamination
 - Approach
 - Sample GW, SW, and SD for explosives and metals
 - Using dynamic approach (existing concentrations, site model drive additional sampling/analyses)
 - Sample soil in Therminol boiler area for PCBs



Facing Upstream (SE) of Location 13SWSD22

PHOTOGRAPH BY: [unreadable]

DATE: [unreadable]

LOCATION: [unreadable]

DESCRIPTION: [unreadable]

REMARKS: [unreadable]

STATUS: [unreadable]

APPROVED BY: [unreadable]

DATE: [unreadable]

SCALE: [unreadable]

PROJECT: [unreadable]

CLIENT: [unreadable]

CONTRACT: [unreadable]

REVISION: [unreadable]

DATE: [unreadable]

BY: [unreadable]

FOR: [unreadable]

Facing Upstream (NE) of Location 13SWSD35



Current Fieldwork, SWMU 13 (Cont'd)

- Status
 - 51 wells installed
 - Anticipate that explosives (especially RDX) contamination is adequately delineated in GW
 - Anticipate that PCB contamination is adequately delineated in soil



Future Fieldwork, SWMU 13

- +
 - Periodically sample selected wells to determine whether explosives are degrading naturally



General Status of SWMU 13 RFI/CMS Process

- Samples being analyzed
- Data being validated
- RFI report preparation starting in late October, this year
- ERA/HHRA report preparation starting in November, this year



Cast High Explosives Fill/ B-146 Incinerator (SWMU 16)

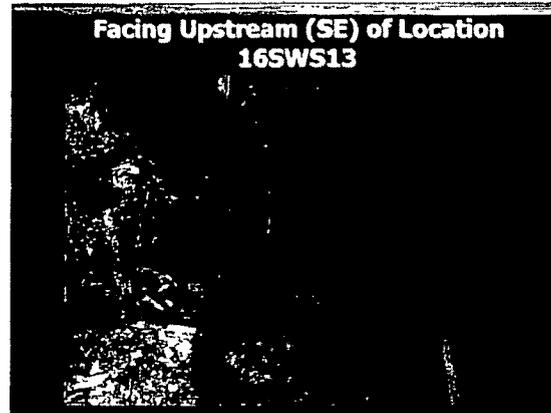
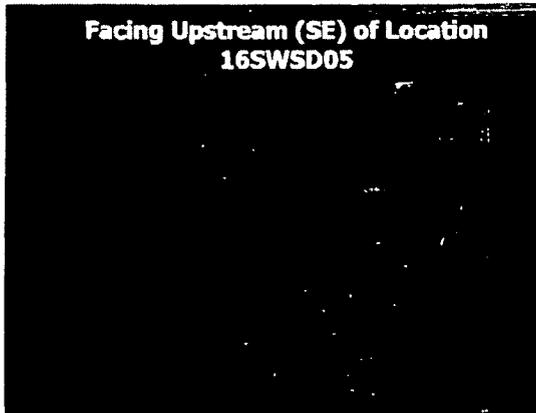
- +
 - Background
 - Chlorinated solvent releases to sumps
 - Remedial action to address solvent releases to sumps completed
 - Former location of incinerators
 - Incinerator ash stored in former pile
 - 2 rounds of GW, SW, SD, and soil samples collected



Current Fieldwork, SWMU 16

- +
 - Objectives
 - Obtain data to develop human/eco risk assessments and RFI report
 - Delineate extent of contamination, especially RDX and TCE (GW) and metals (soil)
 - Determine whether TCE in soil is serving as a GW TCE source
 - Approach
 - Sample GW, SW, and SD for solvents, explosives, and metals
 - Using dynamic approach (existing concentrations, site model drive additional sampling/analyses)





- Current Field Work, SWMU 16 (Cont'd)**
- **Complications**
 - Active explosives operations
 - Daytime access restrictions
 - Utility clearance (lots of underground utilities)
 - Terrain affects:
 - Drilling locations/contamination delineation
 - Drilling inside Bldg-146

- Current Fieldwork, SWMU 16 (Cont'd)**
- **Status**
 - Third round of sampling almost complete
 - 21 new wells installed/sampled
 - Anticipate adequate delineation of:
 - TCE and RDX in GW
 - Metals in soil
 - TCE sources (location, extent)

- Future fieldwork, SWMU 16**
- Periodically sample selected wells to determine whether TCE and explosives are degrading naturally.

- General Status of SWMU 16 RFI/CMS Process**
- Samples being analyzed
 - Data being validated
 - RFI report preparation starting in late October, this year
 - ERA/HRA report preparation starting in November, this year