

5090 6-5-2001
Ser 095/1186

19 JUN 2001

MEMORANDUM

From: Installation Co-Chair
To: Restoration Advisory Board Members
Subj: **RESTORATION ADVISORY BOARD (RAB) MEETING**

Encl: (1) June 5, 2001 RAB Meeting Minutes

Crane Division, Naval Surface Warfare Center (NSWC Crane) conducted, on Center, a RAB meeting on June 5, 2001. Enclosure (1) is a copy of the minutes from that meeting.

The next NSWC Crane Community RAB meeting is scheduled for Tuesday, October 23, 2001. The meeting will take place on Center at the Lakeview Training and Conference Center from 1200 to 1600 hours. A reminder and an agenda will be e-mailed or sent out approximately three weeks prior to the meeting. Your ideas and input for additional topics to, or presentations for, the agenda would be especially welcome. Currently, the proposed agenda for the next meeting includes:

- Presentations concerning progress of the Full Scale contaminated soil operations for the Bioremediation Facility
- Presentations concerning Interim Measures Cleanup Projects
- Updates on all ongoing Installation Restoration Projects
- Discussion Concerning Project Funding for Fiscal Years 02

For questions, comments, or information, please contact NSWC Crane POC, Ms. Christine D. Freeman, Code 09511, telephone 812-854-4423 or e-mail at freeman_cd@crane.navy.mil.

James M. Hunsicker, Director,
Environmental Protection Department

Subj: RESTORATION ADVISORY BOARD (RAB) MEETING

Distribution:

Administrative Record

Community

Brinson

Chase

Ellis

Myers

IDEM (Griffin)

NAVSEASYSCOM (SEA 00T)

NSWC Crane (00)

NSWC Crane (01)

NSWC Crane (09)

NSWC Crane (09A)

NSWC Crane (095)

NSWC Crane (09510)

NSWC Crane (09511)

NSWC Crane (09Z4)

NSWC Crane (407)

NSWC Crane (OC)

NSWC Crane (ROICC)

NSWC Crane (PAO)

NSWC Crane (PAO)

SAIC (Hughes)

SAIC (Netherland)

SIOCN-SF (Johnson)

SOUTHNAVFACENGCOM (CODE 1864)

TOLTEST (Chevalier)

TOLTEST (Parsons)

USEPA Region V (DW-8J)

USCEWES (GG)

Restoration Advisory Board Meeting Minutes June 5, 2001

Crane Division, Naval Surface Warfare Center (NSWC Crane) conducted a Restoration Advisory Board (RAB) Meeting, Tuesday, June 5, 2001. The meeting was held on Center at the Lakeview Training and Conference Center. From 1200 to 1430 hours an informal meeting was called to order. Attachment (1) is a list of the RAB meeting attendees. Mr. James Hunsicker, NSWC Crane Environmental Protection Department (EPD) Manager and RAB Installation Co-Chair, opened the meeting and introduced CAPT (SEL) Frank Aucremanne, NSWC Crane Public Works Officer, who provided the welcome for those attending. CAPT (SEL) Aucremanne then announced that lunch would be served.

After lunch, Mr. Hunsicker introduced Mrs. Teresa Ellis the RAB Community Co-Chair. Mrs. Ellis gave an overview on the Department of the Navy RAB/TRC Training she attended in Denver Colorado May 18-20, 2001. Mrs. Ellis stated that she felt that the training was informative and she now has a better understanding of the overall Corrective Action process. Two items she clarified were that community members provide input, but the Navy makes the final decision and that site closeout doesn't necessarily mean the whole center, but the individual areas being remediated. She learned that the Crane RAB was not in the minority concerning low interest in RAB activities and because the Crane RAB has low attendance doesn't mean it isn't reliable or trustworthy. She stated that trust was most likely the major component in how successful a RAB was to be. Mrs. Ellis also stated that sometimes the acronyms used in discussion and presentations are overwhelming and that executive summaries for presentations should be provided at the RABs. Attachment (2) contains the slide presentations by each presenter; see slides 1-13.

Mr. William Gates, Remedial Project Manager, Southern Division Naval Facilities Engineering Command, gave a presentation on the Environmental Restoration, Navy (ERN) Funding Program. Mr. Gates discussed the funding process, currently funded projects, and projects funded for Fiscal Year 2002. See Attachment (2) slides 14-25.

Mr. Ralph Basinski, Project Manager, TetraTech, NUS (TtNUS), gave 5 presentations concerning ongoing projects at NSWC Crane conducted by TtNUS. Presentations included Solid Waste Management Units (SWMUs) 2, 3, 4, 5, 9, & 10, Basewide Soil Background Investigation, Landfarm (SWMU 30), Old Rifle Range (SWMU 7), and Mustard Gas Burial Ground (SWMU 1). See Attachment (2) slides 26-53. A short break was taken between Mr. Basinski's presentations.

Mr. Thomas Brent, NSWC Crane EPD, then gave an update on the Assessment of Contaminants in Macroinvertebrates in the Riparian Feeding Habitat of the Indiana Bat. Mr. Brent explained that he was researching to find comparison metals levels data, but levels observed from the results seemed a little high. If the metals levels are higher than other comparison data, then the next step would be to collect a surrogate specimen. Mr. Brent would also like to procure analytical data for the paint that covered the traps used to collect the Macroinvertebrates; this would eliminate the possibility that the metals contamination could have come from the paint. See Attachment (2) slides 54-56.

Mr. Brent then went on to discuss the Interim Measure (IM) for the Roads and Grounds Area. The project objectives are to remove any source contamination including debris and soil and to perform confirmation sampling. Mr. Brent is currently reviewing the workplan provided by ToITest. See Attachment (2) slides 57 & 58.

Ms. Christine Freeman, NSWC Crane EPD, Ms. Freeman gave an overview on the IM at the Mine Fill A (MFA) Battery Site. See Attachment (2) slides 59-62.

Ms. Freeman then led the review for the RAB web site. The RAB web site can be accessed at <http://www.crane.navy.mil/General/RAB/default.htm>. Comments included the following:

1. The Crane site map does not include the RAB as a subheading under Environmental.
2. The RAB page is shown after selecting Environmental but is called "Restoration Advisor Board" instead of "Advisory".
3. On the front page SWMU is singular, where it should be plural.
4. SWMU summary page text should be a different color.
5. The definition of a SWMU. The definition on the website is somewhat simplistic. The definition that will be in the permit is perhaps a little too complicated, but somewhere in between might be an improvement. The definition in the permit is: "Solid Waste Management Unit (SWMU)" means any discernable unit, permitted or unpermitted, existing or historical, at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released. It was decided to use the definition from the permit. To clarify, the RAB is only interested in ER'N eligible SWMUs; the 33 original SWMUs that have been identified and whose resulting contamination was prior to 17 October 1986.
6. Conflict of interest statement needs a RAB title line.
7. Membership application needs spelled out items abbreviated.
8. Administrative Record will have a statement added such that, "The Administrative Record is available for public viewing. To schedule a viewing of the documents, please contact (link to Christine Freeman)."
9. Add page for events including calendar for next meeting, invitation to next meeting, and minutes from last meeting.

Ms. Freeman also gave an update for the Full Scale Explosives Contaminated Soil Composting Operations. See Attachment (2) slides 63-74.

Mr. Hunsicker then led an open discussion session. Ms. Freeman pointed out that the Revised RAB Charter was given out as a booklet. The revisions to the charter were that the RAB will meet a minimum of two times per year or more often if needed, revised signature page to show changes in NAVFACENCOM, U.S.EPA, & IDEM representatives. Mr. Ramanauskas of the U.S. EPA Region V, relayed additional changes to his address and telephone number that need to be made to Appendix 1 of the RAB Charter; these changes will be made and require no signature approval. Time was taken to schedule the next RAB. It was decided to forgo a December meeting because of possible weather and holiday distractions. Instead the next official RAB meeting was scheduled for October 23, 2001 at 1200. This scheduling will set the RAB meetings for April and October. No additional topics were discussed during the open discussion session. The RAB meeting was adjourned at 1430.

Additional note: item from November 14, 2000 RAB meeting that was not addressed during the June 5, 2001 meeting. From November minutes, "The addition of a new RAB member Mr. Mike Chase was also discussed. Ms. Freeman stated that all the membership paper work would be sent to Mr. Chase with the minutes and a vote to add him as a member could be taken at the next RAB meeting." No membership paperwork was received from Mr. Chase prior to the June 5, 2001 meeting. The paperwork will be mailed to Mr. Chase again. This item will be discussed at the next meeting.

**RESTORATION ADVISORY BOARD
MEETING ATTENDEES LIST
FOR JUNE 5, 2001**

NAME	TELEPHONE & FAX	ORGANIZATION REPRESENTED AND MAILING OR E-MAIL ADDRESS
Christine Freeman	812/854-4423 -3981	<u>freeman_cd@crane.navy.mil</u>
Doug Griffin	317/233-2710	IDEM <u>dgriffin@dem.state.in.us</u>
Peter Ramanauskas	312/886-7890	<u>ramanauskas.peter@epa.gov</u>
Robert Brinson	812/659-3788	Greene Co. SWMD
Thomas J. Brent	812/854-6160	<u>brent_t@crane.navy.mil</u>
Mark Bault	812/854-1069	PW Zone 4
Kim Hughes	812/384-9211 x281	SAIC
Jim May	601/634-3395	U.S. Army COE-ERDEC
Jerry Hill	812/854-1331	Public Works
Jim Hunsicker	812/854/3233	PW - 095
William Gates	843/820-7360	SOUTHDIV
Pedro J. DeJesus	812/854-1130	NSWC Crane
Teresa Ellis	812/384-3087	Community
Doug Johnson	812/854-1481	<u>johnsond@crane.army.mil</u>
Hank Webster	812/854-2818	
Peter Chevalier	812/854-0941	TolTest - <u>envspec@kiva.net</u>
F.F. Aucremanne	812/854-1344	PW
Lorie Richardson	812/854-6409	PAO

DON RAB/TRC TRAINING BCP

CERCLA *Denver, Colorado*
May 18-20, 2001

Mrs. Teresa Ellis

BCT 3DWQM

EPCRA
 COMNAVFACENGCOM

Three Days of Fun with Acronym's

A2R2 CHEMTREC

BRAC DDD

High Impact Environmental Challenges

Rear Admiral Gary D. Balfour
 Director, Naval Facilities Engineering Command

Installation Restoration

- Stable Funding
- Worst First
- Stakeholder Involvement
- Innovative Technologies

Risk Communication

Risk Communication... Today's Focus

- Trust – it is importance to maintaining open and effective communication
- Addressing concerns and tough technical issues – how to do it effectively
- Spreading the word – how to provide information to large groups of people

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Risk Assessment

Risk Assessments Address "Who, What, When, Where, & How?"

starting point can move through to reach and possibly cause

source environmental media receptors effects

Hazard of Concern Soil, Ground Water, Surface Water, Air Humans, Animals, Plants Health/Health/Ecological Risks

what, how much, where? where, when, how much? Who, what, where? what could happen?

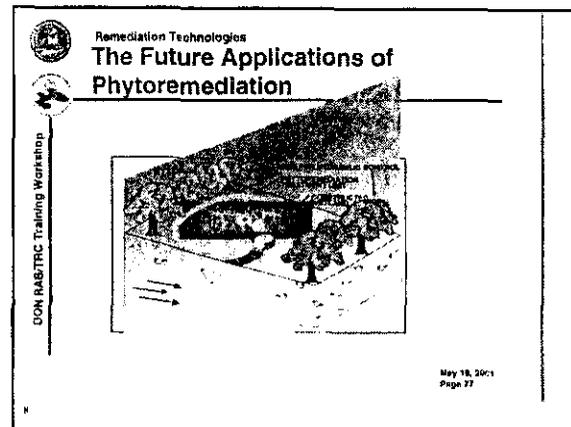
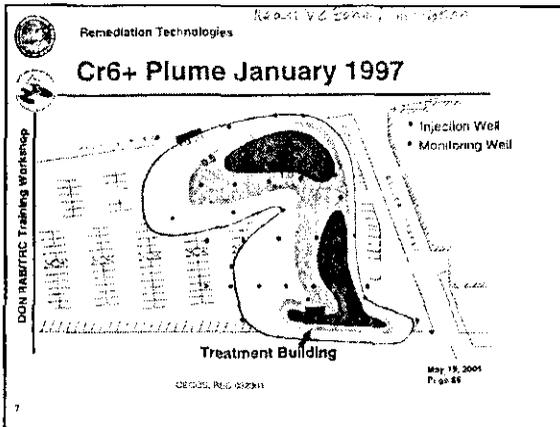
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Remediation Technologies

Mass Removal Technologies

- Vapor Extraction
- Vacuum Enhanced Recovery
- Air Sparging

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DON RAB/TRC Training Workshop

Site Closeout

Presenters:
Doug Zillmer, NFESC
Michelle Brown, Booz-Allen

- Natural Resources Injury vs. Damages
- ### What is NRI? - 43 CFR 11. 62, and 11. 14
- **Injury** refers to the actual harm or reduction in services (the biological or physical function performed by the resource) that occurs to the resource
 - This can be assessed using scientific modeling and predictive measurement techniques
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- Natural Resources Injury vs. Damages
- ### What Is NRDA vs. NRI?
- **Damages** means the amount of money sought by the trustee as compensation for the injury
 - Note: Damages are NOT paid from ER,N or BRAC funds; rather they come from the DOJ Judgment Fund
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- Understanding RABs
- ### Why?
- RAB participation ensures consistent public involvement in the cleanup process
 - RABs are based in policy, not a legal requirement
-
- May 18, 2001
Page 5

Site Investigation

Module Outline

- The CERCLA Process
- Site Investigations
 - Purpose of investigations
 - Key Components
- Data Quality Objectives (DQOs)
- Community and regulatory involvement
- Case Studies
- Q and A

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DON RAB/THC Training Workshop

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**ENVIRONMENTAL
RESTORATION, NAVY(ERN)
FUNDING PROGRAM**

for
NSWC CRANE

Mr. William Gates

June 2001

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Funding Program

- Funding Process
- Current Projects
- FY 02 Projects

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Funding Process

- NAVFACENCOM manages ERN funds for the Navy
- SOUTHDIV manages ERN funds for naval activities within its 26 state area of responsibility.
- Crane project team (Crane, SOUTHDIV, EPA, IDEM) develops a prioritized list of ERN projects each fiscal year.

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Funding Process continued

- SOUTHDIV ERN Project Validation Team scores each project using eleven criteria jointly prepared by Navy and stakeholders. Examples include:
 - Importance to the project team,
 - use of cost effective technologies,
 - potential to contain significant threats or reduce future costs,

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Funding Process continued

- comply with legal drivers,
- importance to stakeholders,
- potential to protect natural resources from future loss.
- All projects are ranked by score. Highest scoring projects receive funding first.

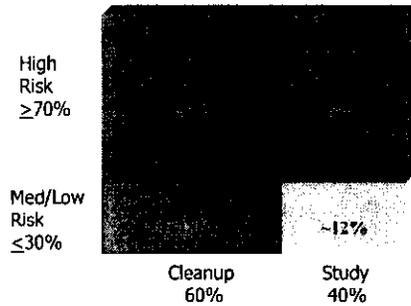
18

Funding Process *continued*

- SOUTHDIV drafts budget to match targets:
 - \$35,000,000 maximum,
 - 70% of budget for high risk sites/30% for medium and low risk sites,
 - 60% of budget for cleanup projects/40% for study projects,
 - Complete remediation at all high risk sites before the end of FY 07.

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ERN BUDGET



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Funding Process *continued*

- HQ approves and forwards funds after Congress authorizes budget.

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Current Projects

- SWMU 1 MGBG – RCRA Facility Investigation (RFI) Work Plan/ Fieldwork/ Report
- SWMU 2 DBG - RFI Work Plan/ Fieldwork/ Risk Assessment (RA)/Report/CMS
- SWMU 3 ABG - RFI (Jeep Trail/Little Sulphur Creek) Fieldwork/Report
- SWMU 3 ABG - Natural Attenuation Study
- SWMU 3 ABG - GW Monitoring (ERN portion)

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Current Projects *continued*

- SWMU 3 ABG - Insect Study
- SWMUs 4, 5, 9, 10 – RFI RA/Report
- SWMU 7 ORR - RFI Report
- SWMU 10 RK1 – Composting/Report
- SWMU 12 MFA - Interim Measure/ Report

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Current Projects *continued*

- SWMU 13 MFB – Composting/Report
- SWMU 13 MFB - Admin. Support
- SWMU 15 RGA - Interim Measure/ Report
- SWMU 30 Landfarm – RFI Report

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FY 02 Projects

- SWMU 1 MGBG – Corrective Measures Study (CMS)
- SWMU 3 ABG – CMS
- SWMU 3 ABG – GW Monitoring (ERN portion)
- SWMU 7 ORR – CMS
- SWMU 9 PCA – CMS
- SWMU 10 RKI – CMS

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TetraTech, NUS Projects

Mr. Ralph Basinski

- SWMUs 2, 3, 4, 5, 9, & 10
 - Dye Burial Grounds (SWMU 2)
 - Jeep Trail/Little Sulphur Creek (SWMU 3)
 - McComish Gorge (SWMU 4)
 - Old Burn Pit (SWMU 5)
 - Pesticide/R-150 Tank Area (SWMU 9)
 - Rockeye (SWMU 10)
- Basewide Soil Background Investigation
- Landfarm (SWMU 30)
- Old Rifle Range (SWMU 7)
- Mustard Gas Burial Ground (SWMU 1)

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DYE BURIAL GROUNDS (SWMU 2)

- Burial Grounds for dyes in trenches
- Phase III RCRA RFI fieldwork (7/01 → 9/01)
- Primary target constituents dyes and metals
- Navy developed analytical methods for dyes
- EPA Region 5 approved method

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JEEP TRAIL/LITTLE SULPHUR CREEK (SWMU 3)

- Jeep Trail Burn Pit
 - Burning of explosive-containing material
- Burn Area
 - Flashing of bomb casings
- Little Sulphur Creek
 - Receives Jeep Trail sediment and ABG groundwater

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JEEP TRAIL/LITTLE SULPHUR CREEK (SWMU 3) [continued]

- Media includes soils, ground and surface waters, and sediments
- Target constituents include A-IX VOAs, and SVOAs, explosives, and metals
- RFI Phase III investigation underway June 4, 2001

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McCOMISH GORGE (SWMU 4)

- Former garbage/trash dumpsite (5 acres)
- Phase III RFI investigation (11/00 → 2/01)
- Target constituents (A-IX VOAs, SVOAs, pesticides/PCBs, and metals)
- Soil, sediment, ground and surface water
- Sample analysis, data validation, database compilation all complete
- Risk Assessment underway

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OLD BURN PIT (SWMU 5)

- Inactive burn area
- Wood, construction materials, and industrial waste burned
- Residual material/metal buried in gully
- Phase III RCRA RFI investigation (11/00 → 2/01)
- Target constituents (A-IX VOAs, SVOAs, pesticides/PCBs, dioxins/furans, and metals)

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OLD BURN PIT (SWMU 5) [continued]

- Soil, sediment, ground and surface water
- Sample analyses, data validation, database compilations all complete
- Risk Assessment underway

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PESTICIDE CONTROL/R-150 TANK AREA (SWMU 9)

- Inactive site used for pesticide storage/management
- Phase III RFI investigation (11/00 → 2/01)
- Target constituents: A-IX VOAs, SVOAs, pesticides/PCBs, herbicides and metals
- Soil, sediment, ground and surface water
- Sample analyses, data validation, database compilation all complete
- Risk Assessment underway

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ROCKEYE (SWMU 10)

- Active munitions production facility
- Explosives-containing wastewaters discharged to creeks
- Phase III RFI investigation (11/00 → 2/01)
- Target constituents (primary explosives) and some A-IX VOAs and SVOAs

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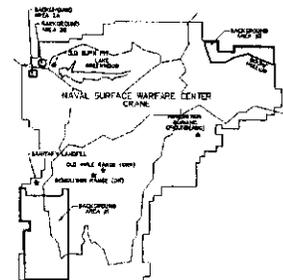
BASEWIDE SOIL BACKGROUND INVESTIGATION

- Scope of Investigation
 - background for entire facility
- Why a Background Investigation?
 - differentiate between site related and background constituents
- What is background?
 - Inorganics that are naturally occurring or anthropogenic

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BASEWIDE SOIL BACKGROUND INVESTIGATION

- Where?
 - 3 Areas
 - Numerous criteria used to define "true background"



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BASEWIDE SOIL BACKGROUND INVESTIGATION

- **Status**
 - Investigation complete
- **Benefits**
 - Basewide use
 - Immediate and long term use
 - Identification of contaminants of concern
 - Assist in remedial decision-making

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THE LANDFARM (SWMU 30)

- **LOCATION**
 - In west central part of NSWC Crane (close to Landfill)
- **OBJECTIVES AND SCOPE**
 - Determine presence or absence and extent of ground water contamination at SWMU 30
 - Conducted to meet requirements of a Phase II Ground Water (GW) RFI
 - Scope - sampling 7 GWMWs 5 times over 15 months, laboratory analysis and reporting

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HISTORY

- Crane operates a wastewater treatment plant (WWTP) that generates sludges
- Used land application for disposal of sludge
- Sludges produced from processing of domestic and process wastewater
- 12/83 - obtained sludge application permit to spray sludges (18 miles of roadside) near the western boundary of the facility
- 4/88 - issued permit to apply sludge to the Landfarm

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HISTORY (continued)

- Period of application at Landfarm - November 1988 to March 1995
- June 1994 - began applying sludges to 8 land-application-permitted sites
- 1992 - EPA concerned that the sludges should be characterized as F006 waste
- Crane implemented measures to prevent the discharge of waste from the plating shops and resulting mixing with other wastewaters

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CURRENT STATUS

- Wells are sampled October 1999 and January, April, July, and October 2000
- Quarterly Groundwater Monitoring Reports were prepared following each round
- The Internal Draft RFI Report was prepared and submitted to the Navy on 4/23/01
- Crane and Southdiv reviewed report and submitted to EPA on 5/22/01

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CONCLUSIONS

- Nature and extent of potential contamination have been defined
- Upgradient and downgradient well results show limited contamination above RBTLs for four parameters (arsenic, cadmium, nickel, and thallium)
- Volatiles and energetics in Rounds 1 and 2 were non-detected for all parameters

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CONCLUSIONS (continued)

- Statistical analysis of well data demonstrate that concentrations in all wells are similar
- Exceedances of RBTLs were noted in 1 upgradient well and were similar to the exceedances noted in downgradient wells
- Risk screening indicates no significant GW quality problems in vicinity of site

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RECOMMENDATION

- Based on results of GW monitoring, site activities have not impacted GW quality. Therefore, no remedial actions are warranted for GW and a recommendation for NFA regarding GW is requested by the Navy

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OLD RIFLE RANGE (SWMU 7)

• OBJECTIVES AND SCOPE

- Past sampling identified contaminants present at concentrations greater than proposed risk-based target levels (RBTLs)
- Extent of contamination has not been determined
- This investigation is designed to further delineate the extent of contamination for a limited number of COCs including:
 - As, Mn, Be
 - RDX, TNT, 2,6-DNT
 - B(a)A, B(a)P, B(b)F, DBA, IP
 - Heptachlor Epoxide

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OPERATIONAL HISTORY

- 1940s - used as a small caliber firing range
- 1950s to 1960s - flashing material associated with explosives
- 1970s - test firing of flares and other pyrotechnics including Yellow D
- 1980s to 1990s - open burning of bulk propellant and explosives

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HISTORY of ENVIRONMENTAL STUDIES

- Phase II Soils Investigations by USACEWES
- 1993 Risk Assessment identified need for additional soils data and 12 COCs
- Current investigation intended to fill data gaps and complete a Phase III Soils Investigation

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CURRENT STATUS

- Fieldwork (collection of soil samples and topographic survey) conducted 2/01
- Analytical data received from laboratory
- Data validation activities are in progress
- Survey data was checked for accuracy and completeness
- RFI Report will be prepared following data validation
- Proposed report review by EPA is 12/1/01

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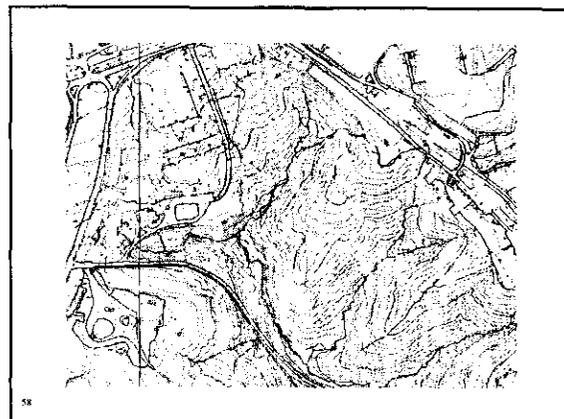
Metals Data Summary Table for Crane Bat Study Insects

DESCRIPTION	TERRESTRIAL	AQUATIC	LEPIDOPTERA	1st Comp. 2nd	3rd	4th	5th	6th	7th	8th
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Antimony mg/kg dry	0.139	0.113	0.205	0.14	0.118	0.07	0.0749			
Arsenic mg/kg dry	3.25	0.397	0.149	1.02	1.89	0.146	0.0749			
Cadmium mg/kg dry	0.974	0.89	0.238	0.352	0.597	0.5	0.0214			
Chromium mg/kg dry	19.1	209	25.8	19	38	0.121	0.23			
Copper mg/kg dry	74.9	174	36.1	32.8	48.1	16.1	17.1			
Lead mg/kg dry	14	18.9	1.16	36	18.3	9.142	0.0498			
Mercury mg/kg dry	0.083	0.071	0.048	0.046	0.055	0.04	0.040			
Nickel mg/kg dry	17.1	147	21.1	14.1	26.2	0.2	0.249			
Silver mg/kg dry	0.0015	0.00	0.0042	0.127	0.026	0.026	0.026			
Zinc mg/kg dry	592	618	214	358	53.7	140	143			
Aluminum mg/kg dry	82.8	194	10.7	21.6	18.3	0.3	7.77			
Sodium mg/kg dry	117.7	20.7	0.98	8.27	9.21	0.652	0.476			
Magnesium mg/kg dry	1819	130	1380	1120	1610	1088	1190			
Manganese mg/kg dry	74.2	77.4	28.1	32.5	44.1	25	27.2			

DESCRIPTION	AQUATIC	ORNL Data
Antimony mg/kg dry	0.113	
Arsenic mg/kg dry	0.597	0.899
Cadmium mg/kg dry	0.83	0.530
Chromium mg/kg dry	209	3.916
Copper mg/kg dry	114	16.968
Lead mg/kg dry	16.5	0.718
Mercury mg/kg dry	0.072	
Nickel mg/kg dry	147	16.496
Silver mg/kg dry	0.55	
Zinc mg/kg dry	913	107.482
Aluminum mg/kg dry	134	
Barium mg/kg dry	20.7	
Magnesium mg/kg dry	1430	
Manganese mg/kg dry	77.4	

Roads and Grounds Area

Interim Measure
for
Solid Waste Management Unit 15/06



Interim Measures

Mine Fill A
Battery Dump Site

Christine Freeman

- Background
- Area Outside MFA Fence
 - AA Batteries Were Dumped
 - Potentially Contaminated Soil Areas

Project Objectives

- Characterize Soil by Sampling
- Remove Battery Fragments
- Remove/Dispose of Potentially Contaminated Soil
- Conduct Post-excavation Confirmatory Sampling

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Current Status

- Workplan Submitted to EPA
- Comments Received from EPA
- To/ToTest Incorporating Comments into Workplan
- Renegotiate Contract based on EPA Comments
- Awaiting Final Approval from EPA

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Crane Division, Naval Surface Warfare Center

Explosive Contaminated
Soils Composting

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Background

- Site Investigations & Cleanup Activities
- NSWC Crane has 33 SWMUs
- Explosive contaminants in the soil:
 - Ammunition Burning Grounds (11 acres)
 - Rockeye Munitions (1 acre)
 - Mine Fill A (2 acres)
 - Mine Fill B (2 acres)

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Background (Cont.)

- Several treatment methods for remediation of explosives contaminated soils were evaluated.
- **Composting** is a process by which organic materials are biodegraded by microorganism, resulting in the production of organic and/or inorganic byproducts and energy in the form of heat.

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Full Scale (FS)

- Mix Used in FS
 - Mix 7B from PS
 - 15% Chicken Manure,
 - 60% Straw, &
 - 25% Soil
- Pile Size: ~ 880 Cubic Yards (270'x20'x7')

} by volume

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Current Windrow Status

- Total Windrows built = 204
 - Residential windrows = 153
 - Industrial windrows = 49
 - Pending results = 2
- Tons treated soil: 43,675 tons
- 9 Industrial windrows re-sampled after staging and determined to be Residential

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Current SWMU Status

- MFA is complete.
- MFB: excavate at screener area, backfilling, and mulching/seeding
- RKI:
 - PS complete on 4/27/01
 - FS began on 5/29/01
 - Waiting on day 0 results to collect toxicity test samples.

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Freeman Christine D CNIN

From: Freeman Christine D CNIN
Sent: Wednesday, June 20, 2001 2:30 PM
To: 'Michael Chase (E-mail)'; 'Teresa A. Ellis (E-mail)'; 'Jeffery A. Myers (E-mail)'; 'Doug Griffin (E-mail)'; Bault Mark A CNIN; Webster Henry A III CNIN; Hughes Kim CONT CNIN; 'Anita Netherland (E-mail)'; Johnson Douglas G CNIN; 'William H. Gates (E-mail)'; 'Peter Chevalier (E-mail)'; Parsons Lance CONT CNIN; 'Peter Ramanauskas (E-mail)'; 'James May (E-mail)'
Cc: George Cordilla S CNIN; Payne Jane E CNIN; Aucremanne Fernand (Frank) CAPT (SEL) CNIN; Hill Gerald (Jerry) K CNIN; Hunsicker James M CNIN; Brent Thomas J CNIN; Dejesus Pedro J CNIN; Robertson Brent L CNIN; Webster Rhonda S (Sue) CNIN; Richardson Lorie J CNIN
Subject: RAB MEETING MINUTES - 6/5/01

Attached are the minutes for the 6/5/01 RAB meeting and the announcement for the 10/23/01 RAB meeting (Please mark your calendars). A hard copy of the letter and attachments will not be mailed.



19-JUN 01 MEETING
MIN & OCT AN...