



**DEPARTMENT OF THE NAVY
CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
CRANE, INDIANA 47522-5000**

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IN REPLY REFER TO:

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Ser 095/380/H11.9
30 SEP 1993

U.S. Environmental Protection Agency, Region V
Region V Waste Management Division
Attn: Ms. Carol Witt-Smith (HRP-8J)
77 West Jackson Blvd.
Chicago, IL 60604

Dear Ms. Witt-Smith:

Crane Division, Naval Surface Warfare Center (Crane NSWC) intends to expedite the cleanup of certain Solid Waste Management Units (SWMUs) since, as previously discussed, the Navy's budget for conducting RCRA facility investigations (RFIs) under the Installation Restoration/Corrective Action program has been significantly reduced with the funding emphasis now placed upon actual cleanup activities. To make use of available funding, Crane NSWC will implement a variety of voluntary actions including interim measures and conditional remedies at certain SWMUs. The facility's 30 SWMUs have been reviewed to determine which ones have characteristics that suggest they may be amenable to accelerated remedial actions. Enclosure (1) sets forth Crane NSWC's project plans and priorities. Actual work accomplishment is funding dependent and Crane NSWC will update the U.S.EPA as activities occur.

Crane NSWC believes that these projects are consistent with the basic operating principles of the corrective action program (57 FR 30798), by which obvious remedial solutions should not be impeded by the investigative process. The projects also advance the intent of the stabilization effort whose goal is to control or minimize threats to human health and/or the environment from releases at SWMUs and/or to prevent or reduce the further spread of contamination while pursuing long-term remedies. Thus, enacting these measures more expeditiously than what is called for in the facility's operating permit should significantly reduce the rate and extent of environmental degradation from existing releases.

In some instances, it is anticipated that the stabilization measure could be technically effective enough to serve as a final remedy for a particular release. Crane NSWC understands however, that these voluntary activities may not be the final remedy, and will not necessarily dismiss further cleanup responsibilities. Crane NSWC carefully selected provisional corrective measures that do not pose unacceptable risks to human health or the environment or interfere with attainment of the final remedy. Furthermore, as funding becomes available, RFI activities will continue since they are necessary for the ultimate cleanup of the facility. Crane NSWC hopes to receive some RFI funds for FY94. Enclosure (2) lists the project priorities for RFI funding, should some become available, and the basis of the prioritization. Enclosure (3) is the certification required by 40 CFR 270.30(k).

Crane NSWC point of contact is Mr. Thomas J. Brent, Code 09510, telephone 812-854-1132.

Sincerely,



G. K. HILL
Deputy Director, Public Works Directorate
By direction of the Commander

Encl:

- (1) Remedial Project Intentions and Priorities
- (2) RFI Project Priorities
- (3) Certification Statement

Copy to:

SOUTHNAVFACENCOM (CODE 185 ND)
USAE-WES, BILL MURPHY (GG-YH)
COMNAVSEASYSYSCOM (SEA 07E11)

REMEDIATION OPTIONS AND PRIORITY

Interim remedial projects are discussed in order of priority, from highest to lowest. Number of projects accomplished during FY94 is dependent upon funding received. Some projects obviously may extend into two or more fiscal years conditional to the complexity of the action and the number of steps involved. This applies especially to projects that require prior U.S.EPA approval, such as soil caps. For any sites at which remedial actions occur and groundwater monitoring wells exist, a list of compliance wells will be submitted to U.S. EPA. Note that this list and the work described herein is tentative and subject to modification. Crane NSWC will keep U.S.EPA apprised of activities.

1. SANITARY LANDFILL AND LITHIUM BATTERY BURIAL (#14/00)

a. STATUS - In 1981 and 82, approval was granted by the Indiana State Board of Health to bury neutralized lithium batteries in a pit in the northeast portion of the landfill. Crane NSWC submitted a final RFI Phase I Environmental Monitoring report to the U.S. EPA on December 9, 1992.

b. REMEDIAL MEASURES - Crane NSWC will perform a geophysical investigation to locate buried lithium batteries and perform a removal. Soil samples will be collected from the open pit and a background location in order to identify any soil contaminants. A groundwater monitoring system exists at the site and is sampled semi-annually as part of the State's landfill requirements. Additional monitoring wells have been proposed by the Army Corps of Engineers Waterways Experiment Station (WES) and are scheduled for installation Fall of 1993. Groundwater sampling activities have not indicated contaminants leaching from the burial. However, lithium - the primary contaminant of concern - has not been a routine analyte. Removal of the batteries will eliminate the potential for future release and provide insight to the condition of the batteries and the potential for a release to have occurred.

2. PCB CAPACITOR BURIAL AND POLE YARD (#17/04)

a. STATUS - According to the Initial Assessment Study (1983), three PCB capacitors were buried at this site in 1977. Reportedly, the capacitors were hermetically sealed prior to burial.

b. **REMEDIAL MEASURES** - Crane NSWC will perform a geophysical investigation to locate buried PCB capacitors and perform a removal. Soil samples will be collected from the open pit and a background location in order to identify any soil contaminants. The need for groundwater monitoring will be based upon the results of the soils analysis. No data is available to confirm or deny a release of hazardous material to the environment. Exhumation of the capacitors will provide insight as to whether a release might have occurred, eliminate the source if so, or remove the threat of a release if not.

3. AMMUNITION BURNING GROUNDS (ABG) (#03/10)

a. **STATUS** - A considerable amount of work has been done at the ABG as part of the RFI process. Studies showed that several wells are contaminated, as are soils, and surface waters.

b. **REMEDIAL MEASURES** - Crane NSWC hopes to begin the soils revegetation project Spring 1994. This project has been previously discussed with U.S.EPA. ABG personnel have, in the past, inspected the creek and removed debris and will continue to do so periodically. Crane NSWC will investigate the feasibility of composting soils at ABG to treat for explosives, as well as a pump and treat system for the highest contaminated wells (specifically 03C03P2, 03C20, 03C11, and 03C08AP2).

4. SLUDGE DRYING BEDS A & B (#24/00)

a. **STATUS** - No work has been conducted at these sites.

b. **REMEDIAL MEASURES** - Crane NSWC will sample the material in the beds and dispose of appropriately along with the associated concrete pads and piping. As part of the removal action Crane NSWC will also sample the underlying soil and nearby stream sediments. The site will be leveled and revegetated. Crane NSWC anticipates that the removal and associated sampling will confirm that the sites are free of contamination and will therefore allow them to be removed from the SWMU listing.

5. ROCKEYE (#10/15)

a. **STATUS** - A draft RFI Phase II Soils report was submitted to U.S. EPA on September 2, 1992. RFI Phase III groundwater field work has been completed. RFI soil and groundwater sampling confirmed the presence of explosives contaminants. Soils are probably acting as a sources of contamination to the groundwater, especially sediments in the site's drainageways.

b. **REMEDIAL MEASURES** - Crane NSWC will submit a proposal to U.S. EPA to conduct composting of contaminated soils. Crane NSWC will evaluate the need for removing potential parent contaminant sources, such as leachate collection sumps. Remediating explosives contaminated soils, along with removal of other contaminant sources should negate further contaminant migration to the groundwater. Long-term monitoring should indicate a reduction in groundwater contaminant levels.

6. **DYE BURIAL GROUNDS (#02/11)**

a. **STATUS** - A draft RFI Phase II groundwater report was submitted to U.S. EPA in January 1991. A draft Interim Measures Geophysical Survey report was submitted to U.S. EPA on June 14, 1991. Groundwater sampling indicates the presence of metals contaminants.

b. **REMEDIAL MEASURES** - Crane NSWC will submit a cap design to EPA along with a list of compliance monitoring wells. Assuming metals detected in the groundwater beneath the site originate from the burial trenches, capping would reduce or eliminate vertical contaminant mobility. Thus, long-term groundwater monitoring should indicate a reduction in groundwater contaminant levels.

7. **BATTERY SHOP (#23/00)**

a. **STATUS** - Little work has been conducted at this site. The valley to the west and north contains some debris.

b. **REMEDIAL MEASURES** - Crane NSWC will perform an interim measures cleanup. Soil sampling during cleanup will preliminarily confirm or deny the presence of contamination.

8. **HIGHWAY 58 DUMPSITES A & B (#25/07D & 25/08D)**

a. **STATUS** - Little work has been conducted at these sites. Wells were emplaced by WES in 1981. The sites are obviously debris disposal areas, but the types and amounts of material at the sites is relatively unknown.

b. **REMEDIAL MEASURES** - Crane NSWC will perform an interim measures cleanup. Soil sampling, along with examination of the debris during cleanup will confirm or deny the presence of contamination. If a complete debris removal is not possible and/or soil sampling confirms contamination, Crane NSWC may elect to submit a proposal for a site cap to the EPA. Crane NSWC anticipates that the debris removal and associated sampling will confirm that only non-hazardous materials were placed at the SWMUs and these actions will therefore allow them to be removed from the SWMU listing.

9. BUILDING 146 INCINERATOR (#16/16)

a. **STATUS** - Crane NSWC submitted a final RFI Phase I Environmental Monitoring report to the U.S. EPA on December 9, 1992. Operations at the incinerator may have released metals to nearby soils. Residues from previous ash piles are still visible at the site.

b. **REMEDIAL MEASURES** - The soils where the ash piles were located should be addressed. Obvious residues may constitute a continual release. Further work will be required to determine the optimal remediation strategy. Choices include excavating the soils and disposing off-site; excavating the soils, segregating the large debris via a screening process for disposal off-site, and replacing the soils materials; and/or capping.

10. MINE FILLS A & B (#12/14 &13/14)

a. **STATUS** - A draft RFI Phase I Environmental Monitoring report was submitted to U.S. EPA on September 4, 1992. The report confirms that releases of explosives to soils appears to have occurred.

b. **REMEDIAL MEASURES** - Site knowledge should allow for submission of a proposal to conduct composting of explosives contaminated soils. Sampling associated with the composting activities should confirm the contamination and provide enough information to begin composting without waiting for the results of a Phase II or Phase III RFI.

RFI PROJECTS AND PRIORITIES

FY94 RFI work is presented in order of priority, from highest to lowest. The number of RFI projects completed or started during FY94 is dependent upon amount of funding received. Note that this list and the work described herein is tentative and subject to modification. Crane NSWC will keep U.S.EPA apprised of activities.

1. GROUNDWATER SAMPLING AT THE SLUDGE APPLICATION SITE (#30/00)

a. STATUS - WES began installing groundwater monitoring wells at the site in September 1993.

b. PROJECT RATIONAL - U.S.EPA recently requested that this SWMU be given a higher priority for investigations than what was scheduled in the facility's operating permit. Crane NSWC, in conjunction with WES, will submit a groundwater monitoring plan. If groundwater monitoring is not initiated FY94, then the wells will sit idle until 1995. Furthermore, since four rounds of sampling will likely be required, this would mean data for the site would not be available until mid 1996.

2. MUSTARD GAS GEOPHYSICAL WORK (#01/12)

a. STATUS - Exhumation projects in 1974 and 1980 removed 16 bombs, three of which contained some mustard agent. Presumably, no chemical agent munitions remain at the site. Results of preliminary groundwater sampling conducted in the early 1980's showed the presence of 11 organic compounds.

b. PROJECT RATIONAL - The sources of the organic contaminants and their lateral extent are undefined. RFI work should proceed in the near future with groundwater and soil investigations in order to fully characterize the site. However, before work can begin, the site must be cleared. A geophysical investigation will demonstrate that no further chemical agent munitions remain buried at the site.

3. ADDITIONAL WELL AT OLD RIFLE RANGE (#07/09)

a. **STATUS** - Groundwater monitoring analysis indicates that the uppermost groundwater aquifer in the general vicinity of the flashing pit operations is probably contaminated with explosives and certain metals, and is probably transporting contaminants eastward.

b. **PROJECT RATIONAL** - WES recommends installation and monitoring of an additional well cluster east of Highway 8, downgradient of the monitoring wells currently at the site. The additional well cluster would confirm whether contaminants are migrating east of the SWMU. Ideally, if contaminants are not migrating beyond the SWMU boundaries in detectable quantities, there would be no need to clean up the aquifer. Instead, site management can be employed to eliminate the source contact.

4. AMMUNITION BURNING GROUNDS JEEP TRAIL STUDY (#03/10)

a. **STATUS** - Well 03-07 had detected levels of TCE as high as 7 mg/l. The status of the Jeep Trail area wells has not been resolved and should be investigated as an individual past operating area of the ABG.

b. **PROJECT RATIONAL** - WES recommends inventory, bailing, and surging of the 16 wells associated with the Jeep Trail so they can be sampled. If the contamination is not confined to well 03-07, further remedial measures will be necessary, including soil sampling of the suspected source area and subsequent removal of the offending soil, or pumping and treating of the groundwater. If the contamination is confined to well 03-07, the well can be pumped and treated and the contamination declared to be an anomaly.

5. MINE FILLS A&B PHASE III SAMPLING (#12/14 & 13/14)

a. **STATUS** - A draft RFI Phase I Environmental Monitoring report was submitted to U.S. EPA on September 4, 1992. The report confirms that releases of explosives to soils and PCBs appears to have occurred.

b. **PROJECT RATIONAL** - A thermol boiler (no longer in existence) is known to have released PCBs to the soils at Mine Fill A. Explosives loading and unloading operations discharged explosives to soils. Sampling of the site is needed to determine the degree and areal extent of contamination.

6. McCOMISH GORGE (MCG) & OLD BURN PIT STUDIES (OBP) (#04/02 & 05/03)

a. **STATUS** - A Draft Phase II Soils report was submitted to EPA in July 1992 for MCG and September 1991 for OBP. Chemical data from the soil samples show high metals concentrations at both sites, as well as the presence of some organic and explosive compounds at MCG. A Phase III groundwater workplan was submitted in April 1992.

b. **PROJECT RATIONAL** - Delineation of the surface debris and contaminated soils is necessary before any remedial activities can be undertaken. Furthermore, the Phase III groundwater workplan should be implemented to confirm the presence of metals detected in preliminary sampling conducted in the 1980's.

7. DEMOLITION RANGE STUDY (#06/09)

a. **STATUS** - WES conducted an RFI Phase II groundwater study between November 1989 and May 1993 (draft report pending). Three shallow wells in the vicinity of the Navy Explosive Ordnance Disposal area showed anomalously high metals in the groundwater, indicating an isolated contaminant source.

b. **PROJECT RATIONAL** - The source of the metals is probably located in the soils. The source should be characterized for future removal.