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LETTER AND COMMENTS FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REGARDING DRAFT RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION FOR GROUP 3 SOLID WASTE MANAGEMENT UNITS VOLUMES 1 AND 2 NS MAYPORT FL
6/24/1996
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 24, 1996

Mr. David Driggers
Department of the Navy
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive, PO Box 190010
North Charleston, SC 29419-9010

file: g3rfi_d.doc

RE: Draft RFI for Group III SWMUs, Volumes I and II, Naval Station Mayport

Dear David:

I have reviewed the subject document dated March 1996 (received March 19, 1996). The following comments and those of Ms. Jane Fugler regarding human health and ecological assessment (attached) should be adequately addressed in the final draft:

The Shipyard Area: SWMUs 1, 23, 24, 25, 44 and 45

1. I agree that, considering the present distribution of contaminants, interim measures should be accomplished for the surface soil and the sludge to eliminate those areas where "hot spots" exist that exceed FDEP industrial soil cleanup guidance. Following the successful remediation of those particular locations, I also agree that the shipyard area should be restricted for industrial land use and that surficial ground water production from this area for potable purposes be prohibited. As pointed out by Ms. Jane Fugler, the child trespasser scenario, which was not assessed for this area, should also be accomplished and presented in the report.

2. The proposition that dilution will decrease the ecological risk is not valid. I agree that fish and other mobile riverine fauna will likely be exposed to diluted ground water; however, as previously stated at the partnering meetings, macroinvertebrate infauna and other attached or sessile organisms at the land/water interface will likely be subjected to, and be at risk from, relatively undiluted ground water before it discharges to the surface water. This risk should at least be acknowledged by the Navy.

3. One of the Navy's justifications for not recommending additional investigation at this time or to not conduct corrective measures at the area was that the ground water was similar to that in a Class G-III aquifer. I realize that we have discussed this before but, for the record, the aquifer is a G-II aquifer and even though I tend to agree that limited quantities

of potable water may be produced from it, this does not seem to be a reasonable justification as stated in the report.

4. In this document (and other Mayport documents), it is stated that the presence of certain contaminants (such as arsenic and beryllium) cannot be determined to be from a release from a SWMU or if it may be due to the ubiquitous dredge spoil emplacement throughout the base. At some point, a data analysis or a rational assessment of the presence of the contaminants allegedly resulting from this practice should be presented, along with appropriate references or other justification for those conclusions.

5. Page 4-112: the statement is made concerning the increasing salinity of the ground water with depth which seemingly justifies the observed arsenic and other metal concentrations. This statement should be better explained and properly referenced since (to me at least) the facts of the implied justification are not obvious.

6. Table 4-25: there seems to be an inconsistency in the current and future land use scenarios for subsurface soil; under future land use, the statement is made that excavation workers exposure were evaluated under the current land use category, yet in that category it states that no HHCPCs were identified and were not selected for evaluation. Please clarify this apparent inconsistency.

7. Section 4.3.2.3, page 131 and Section 4.3.5, page 143 discussed the remediation of the sludge material. On page 131 it states that exposure to the sludge was not evaluated because removal was planned in the near future; then on page 143 it is stated that "it is possible that....sludge at SWMU 45 will not be remediated in the near future." It is strongly suggested that the Navy complete the evaluation of the sludge at SWMU 45 and include the evaluation in a formal manner in the next draft document for this group.

8. Page 4-125: the statement is made concerning the concentrations of arsenic "that tend to be present in the area surrounding NAVSTA Mayport are high enough...." to contribute to a significant cancer risk. Did the author mean the area *of* NAVSTA Mayport rather than the area *surrounding* NAVSTA Mayport? Please correct this apparent inconsistency or explain it more fully. The same comment applies to the evaluation of SWMU 17, page 5-53.

9. Section 4.3.6.3, page 4-151: the statement is made that "there appears to be a numerical pattern for the distribution of inorganic analytes collected from the surficial aquifer (Subsection 4.2.5)." This statement is apparently not documented or elaborated in Subsection 4.2.5; please state the nature of the numerical distribution in Section 4.3.6.3.

SWMU 17: The Carbonaceous Fuel Boiler

10. No comment other than that in comment 8, above, regarding the relationship of the cancer risk from arsenic and the concentrations of arsenic at NAVSTA Mayport.

SWMUs 14 and 18

11. Page 6-34: similar to comment 4 (above), the placement of dredge material is used to question the determination of a release from the SWMU. This is a generalized statement that is applied to an area that possibly did not receive dredge material. Has this area, in fact, been an area for dredge spoil emplacement? If not, has a release to the environment occurred?

12. Table 6-10 contains a number of incorrect values for the Florida Soil Cleanup Goals; xylene, pyrene, tin, vanadium and zinc are incorrect. All such tables should be checked and corrected where applicable. Copper is listed in Table 6-10 but it is actually not included in the Department's September 29, 1995 Soil Cleanup Goals.

13. I agree with the recommended interim measure for removal of SVOCs in the drainage culverts north of SWMU 14. In the future, the Navy should consider the removal of these materials within the context of a storm water management program which includes an active discharge prevention component for these materials in addition to their physical removal.

14. In our general discussions we have characterized some of the soil contaminants as being distributed as "hot spots." In reviewing the data, I wonder if they may be better characterized as being more evenly distributed with the "hot spots" resulting from those areas that exceed FDEP industrial soil cleanup goals?

Finally, I note that the document utilized recommendations for the restriction of land use coupled with the restriction of potable water production from the shallow aquifer as alternatives to the cleanup of contaminants . I agree that these are reasonable approaches to risk mitigation and management at NAVSTA Mayport and I am encouraged that the partnering team has begun actively formulating a land/water restriction model for the base. This component of our activities is integral if we are to be able to fully realize the benefits of our partnering efforts and continue to progress in the cleanup of NAVSTA Mayport. I will continue to pursue the formulation of the restriction model and I appreciate your continued support in this regard.

Thank you for the opportunity to review this document. If you have any questions or require further clarification, please feel free to contact me at (904) 921-4230.

Sincerely,

James H. Cason, P.G.
Remedial Project Manager

Attachment (1)

cc: Cheryl Mitchell, NAVSTA Mayport
Martha Berry, EPA Region IV, Atlanta
Terry Hansen, ABB Environmental Services, Tallahassee
Satish Kastury, FDEP, Tallahassee
Brian Cheary, FDEP Northeast District, Jacksonville

TB TB JJC JJC ESN ESN

Florida Department of

Memorandum **Environmental Protection**

TO: James Cason, DOD Facilities Technical Review

THROUGH: Jim Crane, Bureau of Waste Cleanup JJC

FROM: Jane Fugler, Hazardous Waste Sites Technical Review JF

DATE: May 30, 1996

SUBJECT: Review of Risk Assessments for Group III SWMUs 1, 14, 17, 18, 23, 24, 25, 44, and 45 at Mayport Naval Station

I have reviewed the human and ecological risk assessment portions for the Group III SWMUs in the March, 1996 draft document 'RCRA RFI Draft for Mayport Naval Station, Volume 1'. Most of the issues in this document pertain to risk management decisions. The units were assessed for current and future land use in the industrial scenario and limited residential use when considering human health risk. Final recommendations are that the future land uses be designated as industrial use for most units. Items of concern are discussed below.

1. The Shipyard Area, SWMUs 1, 23, 24, 25, 44 and 45, was assessed for current industrial use and considered adolescent and adult trespassers. Please note, that the current land use for surface soil to trespassers cancer risk of 2 x 10-6 (Table 4-29, page 4-140) does not include children, which are expected to have a higher risk. The occupational worker scenario also had an unacceptable risk.

The future residential exposure to the dried sludge was not evaluated because it is expected to be remediated or removed (4.3.2.3, page 4-131). However, it is stated later, that remediation may not occur for the sludge and at some future time the future risks should be evaluated (first bullet, 4.3.5, page 4-143). As a risk assessor, it is necessary to evaluate all possible scenarios. Human health risk analyses should be conducted for the future residential scenario and the exposure to the sludge.

2. Laboratory analysis of the Shipyard Area groundwater indicates that the concentrations discharging into the St. John's River exceed state surface water quality standards. For example: groundwater iron concentrations were 9,040 ug/l and 1,149 ug/l, the state standard is 300 ug/l, maximum background concentration was 3,540 ug/l. The consultant's argument for no expected risk is because of dilution of the discharge upon entering a waterbody that is already polluted. They have listed a LOAEL of 100 ug/l, levels above this concentration of the potential to cause harm to aquatic species. These additional discharges may be sufficient to cause serious harm to an already stressed environment. Cyanide groundwater concentrations also exceeded surface water quality standards (Table 4-35, page 4-159).

3. At the Carbonaceous Fuel Boiler, SWMU 17, the arsenic soil concentration, 1,200 ug/kg medium value, exceeded FDEP soil cleanup goal, 700 ug/kg. Arsenic was also detected in the groundwater, but not above standards. It has been suggested that the arsenic, iron and manganese may be from dredging spoils deposited in this area and not due to site operations. The human health risk assessment has determined these levels to be acceptable, but the exceedance of the soil goals causes concern. Also, the remedial goal option calculation for arsenic is 380 ug/kg for a 10-6 risk; the suggested option would not require remediation. The residential use of groundwater risk is unacceptable due to vaious contaminants; it is proposed that a restriction be put upon the groundwater.

4. Soil samples were collected from around the helicopter and plane mockup areas in the Fleet Training Center, SWMUs 18 and 18, but not from underneath. This area may be closed this year, but no soil data from under mockup areas is available to assess human health risk to the exposure of these soils.

No explanation was provided as to why only adults and adolescents and not children were considered for current surface soil exposure. The risk to these two receptors was only 1x10-6. The children receptor would be expected to have a higher risk.

The excavation worker was not included in the future land use scenario, but residential and maintenance personnel were.

In the ecological risk portion, terrestrial receptor species were listed, but not aquatic species (6.4.2.1, page 6-121). Also, only dermal exposure to surface water was considered for the aquatic receptor species and not ingestion. All these issues should be addressed.

The department does not accept the premise that only the dissolved phase of metals in water is biologically available; dissolved and nondissolved should be considered in future assessments.

The presence of many of the contaminants detected at these sites may possibly be due to current land uses, such as pesticide applications and vehicular traffic. A stormwater management plan that includes collection and primary treatment before discharging into a state waterbody would reduce surface water impacts.

cc: Ligia Mora-Applegate