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NSY PORTSMOUTH
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DEPARTMENT OF THE NAVY
NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Ser 2495/1823/JMC
MAY 23 1995

Ms. Nancy Beardsley
Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333-0017

Subj: FEASIBILITY STUDY REPORT, PORTSMOUTH NAVAL SHIPYARD, KITTERY, ME

Dear Ms. Beardsley:

Enclosed are the responses to your comments on the Feasibility Study report faxed to me on May 4th. Please note that these responses were faxed to you on May 8th.

If you have any questions on this matter please call me at (610) 595-0567 extension 117.

Sincerely,

Jim Conroy

JAMES M. CONROY, PE
LT, CEC, USN
Remedial Project Manager
By direction of the Commanding Officer

Encl: FS Report comment responses

Copy w/enclosure:
US EPA Region 1 (M. Cassidy)
PNS (F. Endyke)
HNUS (L. Klink)

In reviewing the FS, I have encountered several instances were a contaminant was detected at the JILF at levels exceeding a MPS for the DRMO, however, an MPS was not provided for the contaminant at the JILF. For example, a concentration of 2.9 mg/kg beryllium was detected in a surface soil sample collected at test boring JSB-2 in the JILF. The beryllium MPS threshold value for DRMO surface soils is 1.57 mg/kg. No MPS was provided for beryllium for surface soils at the JILF. Other MPS exceedances of JILF surface and subsurface soils based on DRMO criteria include:

- mercury at JSB-7,
- PAHs at JSB-7, JSB-12B, and JSB-14B
- lead at JSB-13D, JSB-14B, and JSB-18

Section 3.1 (Methodology Used in Developing Media Protection Standards) indicates,

> "The methodology used to derive these standards [MPSs] includes:
>
> 1. Identification of chemicals with estimated risks exceeding U.S. EPA and MEDEP guidelines for human health risks for occupational, recreational, and residential exposures.
>
> 2. Comparison to site-specific background concentrations for contaminants in different media.
>
> 3. Determination of levels of contaminants which represent safe exposures."

Based on this criteria, the only variable which may change MPS parameters between sites would be site-specific background concentrations. Review of proposed MPSs in Table 3-1 indicates the same parameter background concentrations between the DRMO and JILF. Given the Future Residential risk scenario was used for both sites, one would expect the same MPSs would apply to each site.

The question is, why are the soil MPSs for the JILF different from those applied to the DRMO?

5/4/95

Jim - This is not a comprehensive list. Let me know what you find out. Thanks. Nancy

Post-it® Fax Note 7671	Date 5/4	# of pages ▶ 1
To Jim Conroy	From Nancy Beardsley	
Co./Dept. NORDIV	Co. MEDEP	
Phone #	Phone # 207 287 2651	
Fax # 610 595 0555	Fax # 207 287 7826	

Post-it® Fax Note 7671	Date 5/5/95	# of pages ▶ 2
To LT. CONROY	From LINDA KLINK	
Co./Dept. NORTHDIV	Co. HNUS	
Phone #	Phone #	
Fax # (610) 595-0555	Fax #	

Response to MEDEP telecopy of 05/04/95
Draft FS Report, Media Protection Standards
NSY Portsmouth, Kittery, Maine

The EPA* provided one listing of Final MPSs for soils within the CIA (future industrial use) and one set of Final MPSs for soils outside the CIA area (future residential use). Therefore, final soil MPSs for the JILF and the DRMO, both outside of the CIA, are exactly the same.
*(EPA letters of 5 Jun 94 and 5 Aug 94)
The data base exceedences and tag maps are based on the final MPSs provided by the EPA. The example exceedences provided by the MEDEP are included in the exceedence tables and tag maps (Appendix D of the FS Report) and are considered in developing and evaluating SWMU alternatives.

The problem is two-fold: First, the final MPSs provided by the EPA varied from those provid d in the McLaren/Hart Final MPS Proposal. The proposed final MPSs were different for each SWMU. Proposed final MPSs were developed for surface soils vs. subsurface soils. Also proposed final MPSs were established for residential vs. occupational use. Note that Table 3-1 of the FS Report was developed from Table 1-6 of the McLaren/Hart Final MPS Proposal. Also note that risks were not calculated for future residential use of subsurface soils. The final MPSs provided by the EPA more or less lumps things together. Second, the risk assessment considers surface soils as those collected from 0-12"; soil boring samples from 0-2' are considered subsurface soils.

It was still considered useful to include Table 3-1 of the FS Report so that the reader could readily identify the primary contaminant problem at each SWMU, and differentiate whether the problem is with surface soils or subsurface soils (or both), and whether the problem is with occupational or residential use (or both). Also, this table provides the basis for establishment of the final MPSs provided by the EPA. Table 3-7 of the FS Report is essentially a summary of Table 3-1, where analytes with maximum concentrations less than the corresponding MPS are eliminated. Perhaps Table 3-7 (and 3-8) should present exceedences for all soils at a given SWMU (i.e., a summary of exceedences presented in the data base), rather than presenting surface soils and subsurface soils separately based on risk exposure scenarios.

According to the McLaren/Hart Final MPS Proposal (Section 1.3.3), analytes were first identified with respect to risk. These analytes were then compared to background soil values. In other words, an analyte that exceeded background concentrations would not be included unless it presented a risk.

Each example of the 05/04/95 MEDEP telecopy is addressed below in detail:

JSB-2 Beryllium:

The 2.9 mg/kg concentration was from a soil boring sample collected from 0-2 feet. McLaren/Hart considered this a subsurface sample for risk assessment purposes (surface soils were from 0-12"). Table 3-1 of the FS Report for JILF surface soils includes beryllium with an MPS of 1.57 mg/kg. The maximum concentration noted in Table 3-1 for surface soils is 1.3 mg/kg which is less than the MPS. Table 3-1 for JILF subsurface soils does not include beryllium as a contaminant of concern since risks are at acceptable levels (Table C-17 of

McLaren/Hart Final MPS Proposal, Appendix C indicates a maximum combined carcinogenic risk of 8.75-06 for future residential use of surface soils, which is a potential concern. Table C-24 indicates a risk of 3.55E-07 for future occupational use of subsurface soils, which is less than the 1E-06 point of departure. Risks were not calculated on subsurface soils for future residential use.)

JSB-7 Mercury:

The 8.59 mg/kg concentration was from a soil boring sample collected from 0-2 feet. McLaren/Hart considered this a subsurface sample for risk assessment purposes (surface soils were from 0-12"). Table 3-1 of the FS Report for JILF surface soils only provided an MPS for air since the risks were 2 orders of magnitude higher. The maximum concentration noted in Table 3-1 for surface soils is 1.3 mg/kg which is less than the final MPS of 5.5 mg/kg provided by the EPA. Table 3-1 for JILF subsurface soils does not include mercury as a contaminant of concern since risks are at acceptable levels (Table C-17 of McLaren/Hart Final MPS Proposal, Appendix C indicates a maximum combined noncarcinogenic risk of 5.49 for future residential use of surface soils, which is a potential concern. Table C-24 indicates a risk of 0.0155 for future occupational use of subsurface soils, which is less than the 1.0 Hazard Quotient point of departure. Risks were not calculated on subsurface soils for future residential use.)

PAHs at JSB-7, JSB-12, and JSB-14B:

Again, the JSB-7 samples and JSB-14B samples were collected from soil borings at 0-2' and were not considered as surface soil samples. The maximum concentrations for surface soils listed in Table 3-1 of the FS Report are less than the MPS. For subsurface soils, only benzo(a)anthracene is listed in Table 3-1 of the FS Report as a risk for future occupational use. Note that for PAHs, future residential soil final MPSs provided by the EPA are much more stringent than for future industrial use. Risks were not calculated on subsurface soils for future residential use.

Lead at JSB-13D, JSB-14B, and JSB-18:

Lead was not included as a contaminant of concern for JILF subsurface soils. According to the McLaren/Hart Final MPS Proposal, Section 1.3.1, average lead concentrations were looked at and compared to 500 mg/kg for residential settings and 1000 mg/kg for occupational exposures. According to Table 1-6 of the Revised CMS Proposal, the maximum concentration of lead in surface soils at the JILF is 339 mg/kg, while the arithmetic mean is 69.2 mg/kg. For subsurface soils at the JILF, the maximum lead concentration is 3,585 mg/kg, while the arithmetic mean is 343.609 mg/kg.