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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, S.W.
ATLANTA, GEORGIA 303933104

N00204.AR.001569
NAS PENSACOLA
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November 26, 1997

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

commanding Officer,
Southern Division, NAVFACENGCOM
Attn: Mr. Bill Hill (code 1851)
P.O. Box 190010
North Charleston, South Carolina 29419-9010

SUBJ: Focused Feasibility Study
Sites 38
Naval Air Station Pensacola
EPA Site ID No.: FL9170024567

Dear Mr. Hill:

The U. S. Environmental Protection Agency (EPA), has completed the review of the above subject document, dated September 8, 1997. Risk comments are enclosed.

If you have any questions please contact me at (404) 562-8538.

Sincerely,

Gena D. Townsend
Senior Project Manager
Federal Facilities Branch

Enclosure

cc: Ron Joyner, NAS Pensacola
Henry Beiro/Brian Caldwell, Ensafe, Pensacola
Allison Dennon, Ensafe, Memphis
John Mitchell, FDEP

1.0 GENERAL COMMENTS

This comment is intended to be an overall *summary* of Sections 1 and 2 of the FS. It is apparent that the results of the risk assessment were incompletely used in the assessment of media and contaminants to be considered for remediation. For example, there are discussions of COCs with concentrations below background Reference Concentrations (RCs). However, if concentrations of a chemical were all below RCs, the chemical should not have been selected as a COPC in the first place. In addition, there is apparently no use for the RGOs calculated in the risk assessment. It should be noted that the risk assessment identified chemicals which are COCs because the risk or HI due to these chemicals were above target values. Therefore, stating if these COCs were within one order of magnitude of the MCL or PRG, there was no contribution to "risk" is inappropriate.

The report should be revised to formally develop Remedial Goals prior to the discussion of areas to be remediated.

1. Section 1.3.2.1, Page 1-15 presents a summary of the soil contamination at Site 38 using exceedances of PRGs derived from RBCs and FDEP guidance as a method of describing contamination. However, this method dots not adequately describe the extent of contamination. The extent of contamination is that there are chemicals exceeding the screening criteria in at least one location instead of counting the number of exceedances. In addition, using only the human health criteria to describe the exceedances ignores any potential ecological effect. Therefore, this section and the groundwater section (1.3.2.2) should be re-written describing the nature and extent of contamination without a comparison to the PRGs.

2. Section 1.3.3.1 is a *summary* of the human health risk assessment. However, this summary could be improved with a *summary* table of the risks and HIs. In addition, a table of the Chemicals of Concern (COCs) by media should also be added to the presentation. Once a chemical has been identified as a COC by the risk assessment, it should be referred to as a COC and not as chemicals detected or as *site* contaminants exceeding PRGs. This section should be revised to include these points. This comment regarding COC also *applies* to the remaining parts of the FS.

3. Section 2.1.1.1, Page 2-2, Paragraph 2 discusses surface soil screening criteria. However, since the screening should have been completed in the RI/BRA, the discussion of screening criteria should not be at this point of the FS. The COCs (not con*taminants* exceeding PRGs) concentrations should be compared to the RGOs for the determination of the areas which need to be considered in the FS. This Section should be revised to be consistent with this concept

2.0 SPECIFIC COMMENTS

1. **Section 1.3.3.1, Page 1-19, Paragraph 2, Sentence 4.**
This sentence states that the risk assessment quantified a risk/hazard criterion (RHC) for 10 compounds. However, the RHC is not usually used in risk assessments. It is assumed from the context of the sentence that the RHC may be equivalent to the RGO. If so, the term RGO should be used and the text should be revised accordingly.

2. **Section 1.3.3.1, Page 1-20, Paragraph 2, Sentence 2**
This sentence states that both arsenic and beryllium are considered to be naturally occurring compounds because they were below their respective MCLs. However, if these compounds are present above the background levels, then they are considered potential site contaminants. Whether or not their levels are below MCLs has no bearing on the risk assessment. This sentence should be removed.

3. **Section 1.3.3.1, Page 1-20, Paragraph 2, Sentence 3**
This sentence states that USEPA has analyzed arsenic risks separately for groundwater due to uncertainties in toxicological assumptions and has used a 1×10^{-3} remedial goal for arsenic. However, this statement is not entirely correct. It is to be noted that when the MCL for arsenic is calculated in terms of risk, the resulting risk level is 1×10^{-3}. The basis of the arsenic MCL is not risk but rather technological considerations and the fact that arsenic is naturally occurring in many locations at a level up to 100 ug/L. According to a discussion with Dr. Ted Simon of the Region 4 Risk Assessment Group, this does not mean that EPA has accepted a risk level of 1×10^{-3} for arsenic. The arsenic MCL should be considered as part of the ARARs when developing the remedial goals as part of the risk management decisions. This sentence should be removed.

4. **Section 2.1.1.2, Page 2-7, Paragraph 4. First Bullet, Sentence 1.**
This sentence states that concentrations exceeding the PRG by more than one order of magnitude define "risk". However, this does not define "risk". The risk was defined by the risk assessment and the RGOs define the concentrations for a given risk and HI. This approach does not take into account the fact that there are multiple COCs present. What should be done is to define the risk level and HI level for screening which is conservative enough to account for the multiple COCs. It is also EPA policy that once remediation becomes necessary, then the target risk level for remediation is 1×10^{-6} (EPA, 1992). Using a RGO for a Carcinogenic COC of 1x lob or a RGO of 0.1 for a non-carcinogenic compound ensures that the overall risk will be below 1×10^{-5} or the HI will be below 1.0. The screening criteria should be revised to include this concept.
This comment applies to all areas and media.

5. **Section 2.1.1.3, Page 2-9, Paragraph 1, Sentence 3.**
This sentence states that the criteria to define "risk" is defined below. However, this statement appears to ignore that a risk assessment has already been performed and the risk has been defined. Therefore, the term "risk" in this context should not be used. This sentence should be re-phrased.

6. **Table 2-4, Page 2-10,.**
This table displays the PRG and M U for COCs in groundwater. However, the groundwater concentrations to which these values will be compared are not displayed. The magnitude of the contaminant concentration is just as important as the number of exceedances. The range of the contaminant concentrations should be added to this table. This comment also applies to Tables 2-5 through 2-11.

7. **Table 2-4, Page 2-10.**
This table displays a value of 100 ug/L for the chloroform MCL. However, this is not a M U for chloroform, but rather a Trihalomethane drinking water standard for use at the tap. This may not be appropriate as criteria or as a remedial goal for groundwater. The RGO should be used as the criteria for chloroform.