



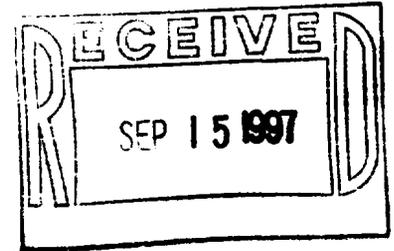
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, S.W.  
ATLANTA, GEORGIA 30303-3104

32501.015  
03.01.15.0029

N00204.AR.001504  
NAS PENSACOLA  
5090.3a

September 11, 1997



4WD-FFB

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

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

SUBJ: **Draft** Remedial Investigation Report  
Operable Unit 4, Site 15  
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 May 23, 1997. 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

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

**Site 15****1.0 COMMENTS**

1. Section 6.0, Page 6-1, Paragraph 2 indicates that Florida and/or EPA's RBCs, guidance concentrations and promulgated standards have been defined as PRGs for this investigation. For the groundwater, the PRGs are EPA's MCLs/SMCLs and Florida drinking water standards. However, it should be noted that Region 4 requires RBCs as criteria for COPC screening. Since MCL/SMCL and the Florida drinking water standards are not regarded as risk-based values, these values should not be used for the COPC screening. This section should be revised to follow the Region 4 guidance.
2. Figure 6-2 shows inorganics detected in Phase I and II soil samples exceeding PRGs. However, additional samples should be taken to properly delineate the areal and vertical extent of contamination of the site. The figure shows analytical results from surface soil samples (0-1 ft) only.

This comment applies to Figures 6-3 through 6-8.

3. Section 6.0, Page 6-3, Paragraph 1, Sentence 2 states that background soils samples were collected while installing background wells. However, the text does not reference the location of the background sampling analytical results in the document. The text should reference the location of the analytical results.
4. Figure 6.2 shows inorganics detected in soil samples exceeding PRGs. However, according to the Region 4 guidance, inorganic screening should be conducted by comparing the 2x mean background results. For example, the figure shows arsenic has its PRG as 0.43 ppm and its 2x mean background as 1.56 ppm (see Appendix G). Some points in this figure will be removed because they will not be exceedances where the arsenic 2x mean background value is used for the screening. The figure should be revised to follow the Region 4 guidance.

This comment also applies to the same issues in other tables in Section 6.

**2.0 SPECIFIC COMMENTS**

1. **Section 2.1, Page 2-1, Paragraph 2, Sentence 4**  
The text states that three concrete wash-down pads are present at Site 15. However, Figure 2-2 only shows two concrete pads. The discrepancy should be resolved accordingly.
2. **Section 3.**  
This section addresses the environmental setting. However, this document does not have a map showing the surface water flow and topography of the site. Maps showing the

aforementioned characteristics should be included in the document.

3. **Figure 6-3, Page 6-6.**

Figure 6-3 shows arsenic concentrations detected in Phase I and II surface soil samples exceeding PRGs. However, isoconcentration lines on the figure do not include all sampling results in exceedance of the PRG. The lines are centered only around areas with the highest concentrations. The figure should explain why only those areas with the highest concentrations were taken into account when constructing the isoconcentration lines and not the entire site.

4. **Section 6.3.2, Page 6-2, Paragraph 3**

The text indicates that three areas of groundwater PRG exceedances are identified. However, later in Section 9 (Risk Assessment), the areas for groundwater exposure are identified as Area 1 and Area 2. It is unclear how the three areas in this section are related to the Areas 1 and 2 in later sections. The text should clarify the groundwater areas.

5. **Appendix C**

Well construction diagrams and soil boring logs are presented in Appendix C. However, the groundwater levels are not shown graphically in the logs. These levels should be shown on all monitoring logs.

## RISK ASSESSMENT

6. Section 4.0, Page 4-2, Paragraph 2, Sentence 2 discusses the use of PRGs to screen the analytical results. However, the text does not state which PRG is used. If the only PRG used for soils is the human health oral ingestion PRG, then this PRG is not appropriate because the ecological receptors are not covered and the soil leaching to groundwater pathway is not considered. In addition, PRGs should be used to screen for COPCs after all analytical data has been collected. The screening process should be reevaluated to determine if potential COPCs have been missed.
7. Section 4.0, Page 6-2, Paragraph 1, Sentence 1 lists MCLs as one of the PRGs being used for screening. However, MCLs are specifically excluded for use as a screening criteria by the Region 4 Risk Assessment Guidance (EPA, 1995). This screening criteria should be removed from the report.
8. Section 6.0, Page 6-1, Paragraph 2 presents the PRGs used for evaluation of the analytical results. However, ecological concerns are not addressed. If PRGs are used, then this paragraph should be moved to Section 4.0. In addition, this section should be written to include all contaminants, since the nature and extent of contamination section is intended to discuss all contamination.
9. Section 7.4, Page 7-15, Paragraph 2 discusses the overall quality of the data collected for this RI and concludes that it is satisfactory. However, because of the amount of blank contamination, calibration problems, the number of samples re-analyzed, and surrogate recovery problems, the degree of confidence in the accuracy of the data is low. Accuracy should be discussed in this paragraph and in the uncertainty section.

10. Section 9.2.1.3, Page 9-139, Paragraph 2, Sentence 3 states that any inorganic parameter detected at a frequency greater than 5% is identified as an Ecological Chemical of Potential Concern (ECPC). However, EPA guidance states that frequency of detection should be evaluated to insure that a potential "hot spot" is not eliminated from consideration (EPA, 1995). The text should be revised to discuss the presence/absence of potential "hot spots", in addition to frequency of detection.
11. Section 9.2.1.3, Page 9-139, Paragraph 2, Sentence 3 states that values are considered to be ECPCs if they exceed or do not occur in the reference values for NAS Pensacola. However, the reference for these values is not cited in the text. The text should cite the reference accordingly.
12. Section 9.2.3, Page 9-149, Paragraph 1 lists the two assessment endpoint species for this site. However, no assessment endpoint has been included in the text. The text should be modified to state the assessment endpoint(s) for this site.
13. Section 9.2.3, Page 9-149, Paragraph 1, Sentence 1 list the two assessment endpoint species for this site. However, the only rationale for their selection is their presence at the site. The EPA Process Document addresses the four criteria that should be used to select the assessment endpoints and iterates the need to insure that knowledge of the fate and transport of the contaminant, specific mechanisms of toxicity of the contaminant, and presence of sensitive receptors at or near the site is important in the selection of appropriate assessment endpoints (EPA, 1994). Therefore, the text should be revised to include a discussion of the criteria stated in the EPA Process Document in order to insure that the appropriate assessment endpoint species is selected.
14. Table 9-55 states that the BAF utilized in the wildlife contaminant exposure model was obtained from Table 9-4. However, Table 9-4 (pages 9-50 and 9-51) does not contain BAF values. The table should be modified to identify the correct location of the BAF information.
15. Section 9.2.4, Page 9-150, Paragraph 1, Sentence 9 states that if a similar species could not be used for comparison, then one was not made. However, the text should be modified to state that any uncertainty, which may be present due to the lack of information, is discussed in the uncertainty section.
16. Section 9.2.5, Page 9-158, Paragraph 1, Sentences 3 and 5 state that samples having concentrations above the significant risk level (SRL) are presented in Table 9-59. However, Table 9-59 is not included in the text or the Table of Contents. This discrepancy should be resolved.
17. Section 9.2.8, Pages 9-174 and 9-175 contain the uncertainty section of the ERA. However, the bulleted statements should be expanded to include a discussion dealing with the potential underestimation/overestimation of risk due to the presence of uncertainty.
18. Section 9.2.8, Pages 9-175, Bullet 4 states that on occasion BAFs were assumed due to the lack of information. However, the text does not explain how the "assumed BAFS" were

determined. The explanation should be **added** accordingly.

19. Section 9.2.9, Page 9-176, Paragraph 1, Sentence 3 states that **the risk** from pesticide compounds could not be quantified due to **the lack of data** for toxicity reference values. However, Section 9.2.1.3 (page 9-146, paragraph 2) states that most environmental effect studies of organochlorine pesticides have been **directed** at mammals and birds. In addition, Opresko, et al. 1996\* contains values for organochlorine pesticides **as well as the original** document where these values were obtained. **This ERA** should use the appropriate values presented in Opresko, et al, which is a secondary document, then refer **back** to the **primary** document to insure that **correct values are** used for **the** selected assessment endpoints. Other appropriate references should be used where appropriate. The failure to **address the** potential risk from pesticides **at this** site, especially considering that **this** site was a pesticide handling facility, **poses** a serious problem for **this ERA**. (\*Opresko, D.M., B.E. Sample, and G.W. Suter, II. 1996. Toxicological Benchmarks for Wildlife: 1996 Revision, **ES/ER/TM-86/R3**, Oak Ridge National Laboratory, Oak Ridge, TN).

#### SPECIFIC COMMENTS

1. **Section 7.1.2, Page 7-3, Paragraph 3, Sentence 2.**

This sentence implies that continuing calibration problems **are** the norm for environmental data. However, such problems **are not the norm for the** environmental **data**. **This** sentence should be re-worded to state that **the** observed QC deficiencies for the particular compounds **are** common, but do not represent "common laboratory practices".

2. **Section 7.1.3, Page 7-4, Paragraph 1, Sentence 5.**

This sentence states that **the** action levels were based on **the** highest concentration of **any** laboratory **artifact** found in associated **method** blanks or QC samples. However, it is not clear if the word "associated" means individual analytical batches of samples. The maximum concentration of the laboratory **artifact** for the entire data set should not be used **as** action levels.

This comment **also** applies to inorganic blanks.

3. **Section 7.2.3, Page 7-10, Paragraph 3, Sentence 3.**

This sentence states that contamination of blanks by inorganic compounds is to be expected. However, **this** statement indicates low quality **data**. Very little contamination of blanks by inorganic compounds is expected.

4. **Section 9.1.2.4, Page 9-7, Paragraph 2, Sentences 6 and 7.**

**These two sentences describe the method for determining the** surrogate value for non-detect samples. However, **the** process of using one-half of **the** lowest reported "J" value if it was lower than the detection limit is not a **standard practice of EPA**. The surrogate non-detect values should be re-calculated using the **standard practice of one-half the** detection limit.

5. **Section 9.1.2.7, Table 9-1**

The text states that **air** exposure to fugitive dusts is not evaluated because it will be several orders of **magnitude** below **the** oral exposure. However, **the** calculation is not presented to support **this** statement. Either **the** calculation should be provided, or **the** fugitive dust pathway should be included in the evaluation.

This comment applies to all receptors.

6. **Section 9.1.2.7, Table 9-1.**

The table shows that ingestion and dermal pathways of exposure for current land use **are not** evaluated because **future** land use receptors **are** protective of current receptors. However, these two pathways should **be included** because **the** use of a potential receptor with a higher **risk** does not realistically evaluate the current **risk**.

7. **Section 9.1.2.7, Pages 9-21 to 9-23.**

The text presents the equations used in calculating the **CDI** for **each** pathway. However, **there** are no values listed for the **FI** (fraction ingested) or the **FC** (fraction contacted) parameters. It is normally assumed that these values **are** 1.0. If other values **are used**, there should be a justification for these values. **This** omission should **be** corrected.

8. **Section 9.1.2.8, Page 9-24.**

This section presents **an** abbreviated toxicity assessment for **the** **COPCs**. However, there is no table summarizing the toxicity values. **This** table should **be** added.

9. **Section 9.1.2.10, Page 9-39, Paragraph 3.**

This paragraph discusses **data** quality. However, **the** text does not **address** the **data** deficiencies noted in Section 7.0. This portion should be expanded to include such a discussion.

10. **Section 9.1.3.2, Page 9-48, Paragraph 2.**

This paragraph states that many of the initial **COPCs** were eliminated through **the** tiered sampling approach described in Section 6.3. In addition, some of the **COPCs** were eliminated because of frequency of detection. Chromium's detection frequency is 2/8 which is 25%, or the number over screening is 1/8 which is 12.5%. **This** level is much higher than 5% which was used as frequency detection criteria. Therefore, these **COPCs** should **be** included in the **risk** assessment.

11. **Section 9.1.3.6, Page 9-80, Paragraph 1, Sentence 6.**

This sentence introduces **the** CT estimates for the **groundwater** pathway. However, no CT **risk** estimates **are** presented for **the** soil pathways and no discussion of the parameters used in the CT calculations **are** presented. **This** discrepancy should **be** resolved.

12. **Table 9-53a, Page 9-140.**

Column 5 of the table contains concentrations from **NASP** reference concentrations. However, **at** the bottom of **this** table there is no **reference** for where **these** values can **be** found. The table should **be** modified accordingly.

13. **Figure 9-18, Page 9-148**

The figure is **the** contaminant pathway model for this site and includes several dark circles. However, **the** figure does not **include** the meaning of these circles in the note **at** the bottom of the figure. **The** figure should **be** modified accordingly.