



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-3104

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August 25, 1998

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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: Draft Focused Feasibility Study &
Response to Comments/Remedial Investigation Report
Operable Unit **13**, Sites **8 & 24**
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 documents. In a letter dated, January **13, 1998**, EPA accepted the Remedial Investigation as final, however, in re-reviewing the response to comments some areas were not satisfactorily addressed. It is EPA's goal to resolve these issues with minimal effort. Until these issues are resolved the volumes identified in the Feasibility Study may be inaccurate. Comments are enclosed.

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

Sincerely,

Gene D. Townsend

Senior Project ~~Manager~~
Federal Facilities Branch

Enclosure

cc: Ron Joyner, NAS Pensacola
Brian Caldwell, Ensafe
Allison Dennon, Ensafe, Memphis
David Grabka, FDEP

Comments

The Response to Comments/RI

In general, the responses are unacceptable and unresponsive to EPA concerns. The nature and extent of contamination has not been adequately discussed and characterized particularly in regard to ecological concerns. Two key receptors (construction workers and cemetery workers) have been left out. The errors in the determination of the reference concentrations (RC) make it mandatory that the screening be re-performed. It is possible that when the corrections to the risk assessment are made that the risks may change and thereby change the conclusions. Certainly the picture of the pattern of contamination will change if the corrections are made.

As the responses to the comments on OU 13 were evaluated, it became apparent that there were four broad areas of disagreement. They were:

Comments on the display of the nature and extent of contamination;

- The adequacy of sampling to determine the extent of contamination; and
- The cross over between samples at Site 8 and 24.
- The omission of all potential human receptors

It is a general principal that the nature and extent of contamination be displayed and discussed relative to the detected compounds and not relative to human health criteria or regulatory **criteria**. The rationale for this principal relates to the CERCLA Guidance for Conducting Remedial Investigations (EPA 1988). In addition, it is a principal that MCLs and SMCLs **are** not to be used for screening **as** their basis is not risk-based.

- A. It is a general rule that contamination be delineated to non-detects or background values. **This** was not done. **This** is particularly important in terms of the dieldrin **contamination**.
- B. It was apparent **from** the **figures** that seven samples labeled **as** belonging to Site 24 **are** Site 8 samples. These samples did **contain** dieldrin and the presentation **of** these samples **as** Site 24 samples obscures the overall pattern of dieldrin **contamination**. **This** is a **serious** error and should be corrected. It is recognized that **this** may not change the overall risk, **but** it reduces the creditability of the document.
- C. It is stated in **RAGS** that **all potential** receptors should be considered in a **risk** assessment, and that both current and **future** receptors should be considered. It is apparent **that** there is a maintenance worker being exposed **as** the land is **maintained** such **as** mowing. In addition, it is stated that **part** of OU 13 will be reserved for **future** of the cemetery. It was noted in the text that cemetery workers have uncovered debris while digging graves. There is **also** a **data** gap in that the extent of contamination to the northeast **has** not delineated. For these reasons, it is the reviewers opinion that additional sampling is needed, the current exposure be evaluated, and the *cemetery* worker exposure be evaluated. **This** last exposure **should** be evaluated if nothing else **to** forestall future questions **from** the cemetery workers. The soil depth for the cemetery worker should be 0

to 6 feet. If samples were not collected at these depths then they should be.

- D. The additional review of the document revealed that the background reference concentration was calculated in correctly for a large number of metals. In each case, twice the detection limit was used **as** the reference concentration. When there are no detections, the detection limit is used **as** the background value. **This** occurred for both groundwater and soil. In addition, it appears that one half the detection limit was not used **as** a surrogate value for non-detects. Because of the errors in the RCs, it is mandatory that all screening be re-performed.

General Comments

1. Unacceptable: PRGs used for delineation - See Response A
2. Unacceptable: PRGs used for delineation - See Response A
3. Unacceptable: PAHs - The PAHs usually do not occur **as** single compounds, but rather **as** groups of **PAHs**. The distribution of individual PAHs can vary widely from sample to sample. Since the toxicological effects are very similar and may vary only by potency, the PAHs are grouped together by the use of equivalency factors so that the cumulative effect can be assessed. Therefore, the distribution of **PAHs** at a site should be done by using the **sum** of PAH concentrations or by calculating a BAP equivalent concentrations. It is to be noted that the screening values do not address cumulative effects for the **PAHs**. It should be noted that the risk-based screening values do not address multimedia and multiple chemical exposure. Again, **this** is an issue where the nature and extent should not have a different approach from the risk assessment.
4. Unacceptable: Antimony RC - It is apparent **from** reviewing the background data that twice the detection limit was used **as** the RC because antimony was not detected in the background samples. A further review revealed that **this** was true for **a number** of the metals. If a chemical is not detected in the background samples, then the detection limit is the background value not twice the background value. In addition, given the large discrepancy between the RC concentration and both the RBC and MCL, **this** RC should not be used. The technology (GFAA) existed in **1991** to detect antimony at concentrations at or below the MCL. **The** issue is rather that the wrong analytical method was used namely **ICP**. Since lower detection limits are available, **this** methodology should be used for antimony **analyses** and the RC should not be used **as a** screening value.
5. Partially acceptable: Background locations - The response states that background sample locations were established independent of site locations. However, it is **a usual** practice to establish background location taking into account site locations. The **thrust** of **this** comment is that additional justification is needed **to** use these samples **as** background locations.
6. Unacceptable: Use of background in screening - The point of **this** comment is that if a chemical's concentration is below the background, it is not to be considered **as a** COPC. The background screening **was** used for antimony, so why not use it for arsenic **as** well. Again,

this is part of the principal of keeping the same list of **COPCs** throughout the document.

7. Partially acceptable: limited exposure potential - This is a **risk** management decision and the rationale should be fully explained in **the** conclusion section.

Specific Comments

1. Acceptable: Groundwater Flow - However, a reference should be included ~~at~~ **this** point referencing groundwater flow in Section 5.
2. Unacceptable: - Source of PRGs - A table should be included or referenced that lists all detected chemicals and the screening values used to develop the PRGs. **This** table should include the selection of the PRG for each chemical. The use of the term PRG **as** a screening criteria is not a good use of the term PRG **as** these screening values are not preliminary remediation goals.
3. Acceptable: monitoring well construction
4. Unacceptable: Acetone contamination - If acetone is present in the samples due to isopropanol contamination, then evidence should be presented to **verify this** fact. It should be noted that if this is true, then **this** implies poor decontamination procedures. Otherwise, the 10x rule applies to acetone and any acetone concentrations greater than **10x** of the blanks should be considered **as COPCs**.
5. Unacceptable: Exceedances limited to Site **24** - The reviewer is aware that Site **24** and Site **8** are presented separately. However, the sentence stated "All organic exceedances were limited to Site **24**". Regardless, the statement is not correct.
6. Unacceptable: Conclusions - **The** conclusion **section** was reviewed **again** to **look** for specific examples for the need for references. The overall impression of the conclusion **section** is that broad statements and/or opinions **are** made with **minimal** backup., For example, Paragraph 1, Sentence **6** states that the arsenic exceedances **are also** attributable to background conditions, and/or the **red** clayey **road** base. There is **no** data to back up **this** opinion. The conclusion section should be **based on** facts presented elsewhere in the **report** and not conjecture.
7. Unacceptable: Water Levels on well logs - It is the **usual** practice to include an indicator on the well logs when the water table was encountered.
8. Acceptable - PRGs
9. Partially Acceptable: PRG references. Appendix D provides the basis for the screening values. **This** is the appropriate place to provide the references.
10. Unacceptable: - Data Tables - It is usually customary **to** provide tables of detected results

such that the **PRG** screening **can** be checked. Tables of detected results should be provided.

11. Acceptable: However, the extra zeros in the sample Ids do not aid in ready identification to the reader.
12. Unacceptable: Wells DSW50 and DSW51 - If the wells are from a deeper aquifer and the investigation is confined to the shallow aquifer, then why include the wells. At least some explanation should be provided in the text.
13. Acceptable: check
14. Unacceptable: Background levels for antimony - See USEPA General Comment 4

Risk Assessment Comments General Comments

1. Unacceptable: Use of RBCs for screening in Nature and Extent - See Evaluation Comment A. The reviewer is aware of the differences between nature and extent screening and BRA screening. In addition, a statement was made in the response that the pathway for human consumption of groundwater is incomplete, **as** there are no current users of the groundwater, nor it is reasonable to assume that there will be. It is EPA's policy that all groundwater should be returned to its beneficial state. It is then a risk management decision not to consider potential use of groundwater in terms of remediation or **risk**. **Risk** management decisions are not made in the Remedial Investigation.
2. Unacceptable: Mis-labeling of samples - See Evaluation Comment C
3. Acceptable
4. Unacceptable: Ecological Screening - **First**, it is unclear what **source** is being referenced in **this** response to comment. If EPA (**1997**) refers to the EPA **Process Document**, then the reference should be included at the end of the comment section. Second, the original comment questioned the term "significantly elevated". It is unclear **whether this term** was meant to include all contaminants which **exceed screening** values, or only those contaminants determined through **risk** management to be "significant". While the Screening **process** in the document, **may** in fact be appropriate, the **original** comment dealt **only** with the **manner** in which **contaminants** were reported in the text. The response to comment **number 4 does not** address the original comment.
5. Partially acceptable: Insect screening - Partially acceptable. The earth worm was only given **as** an example of a potential terrestrial invertebrate which could be **a** potential receptor, not **as** the specific receptor which should be included in the risk assessment. The comment more specifically dealt with the use of "insect populations, which is too general in **nature**". In the response, it is stated that the sandy soils **are** present and ground dwelling **insects are** much more common at the site. Then this fact should have been stated in the text and the text expanded to state that "ground-dwelling insects any be at **risk**".

6. Unacceptable - The response does not deal with the issue presented in the original comment, that the assessment endpoint chosen was the maintenance of well-balanced terrestrial wildlife populations and communities. More specifically, the problem that exists with this assessment endpoint is how can measurement endpoints determine if the terrestrial populations are well balanced if the populations that exist at the site are not "well-balanced" initially. Based on the habitat available at this OU, it is highly likely that a well-balanced terrestrial wildlife population and/or community is not present. One of the issues stated in the response to the comment was that representative wildlife species were selected based on the potential reproductive effects from suspected or known contaminants at the site. Then, in fact, reproductive effects should have been included in the assessment endpoint.
7. Unacceptable: Lead contamination - Move to uncertainty section.
8. Unacceptable: NOAELs vs LOAELs - In order to ensure that the ecological screening process is conservative in nature, EPA Region 4 Ecological Bulletins (1995) state that NOAELs should be used in the screening process. If the LOAEL is the only TRV available, then the NOAEL should be considered by dividing the LOAEL by 10
9. Acceptable

Risk Assessment Specific Comments

1. Unacceptable: PAHs - See USEPA General Comment 3
2. Unacceptable: Antimony - See USEPA General Comment 4
3. Unacceptable: Concentrations below Screening Values - See Evaluation Comment A
4. Unacceptable: Soil concentrations above leachability values - Whether or not detected chemicals had concentrations above the media transfer SSLs should be discussed. A distinction should be made between COPC selection for direct contact as opposed to selection due to media transfer. This would be an important part of the fate and transport discussion.
5. Unacceptable: Definition of the non-detected surrogate value - This was re-checked with Dr. Ted Simon. The use of one half of the minimum detected value as a surrogate concentration for nondetected values is not acceptable. However, the lowest detected concentration could be used as a surrogate value.
6. Unacceptable: misplaced COC discussion - Remove
7. Acceptable
8. Unacceptable: Worker exposures - See evaluation comment D
9. Unacceptable: Worker exposures - See evaluation comment D

10. Unacceptable: Construction Workers - It is noted that generally the concentrations of contaminants decreased with depth. However, it should also be noted that the **construction** worker exposure is more intense for a shorter period of **time**. Quite often the **non-carcinogenic** effects will be important for the **construction worker**. The conclusion that the construction and/or the cemetery worker exposure will be less should not be made until the calculations are performed.
11. Unacceptable: - Delineation of plumes - The Navy may have reviewed the data and determined that there is not defined plumes, **but without** the data being presented properly **this** conclusion cannot be verified.
12. Unacceptable: - Worker oral ingestion rate - The **maintenance** worker is likely to be exposed to **high** levels of dust while mowing and performing other **grounds** maintenance. The **480** mg/day ingestion rate should be used.
13. Acceptable
14. Acceptable
15. Unacceptable: FI/FC term - The use of the FI/FC term is not permitted without prior consultation with EPA Region IV (EPA **1995**). In addition, the **areas** of exposure are small enough that the workers would be exposed **to** the site **as** a whole and not to individual areas. In addition, it should be noted that the exposure area for a residential receptor is **0.5** acre. The risk assessment should be recalculated.
16. Unacceptable: Antimony - See USEPA General Comment **4**
17. Unacceptable: CSM - See Evaluation Comment D
18. Acceptable
19. Unacceptable: Sampling Frequency - **See Evaluation Comment A. This response** acknowledges that sampling was performed **based on** the screening results and **that** contamination was **not** delineated. Since the screening was **based on** human health values, **this means** that the delineation of ecological important **contaminants** was not performed. Additional sampling is required.
20. Partially Acceptable: Manganese and **Iron** - The response acknowledges the **comment, but** does not state whether or not the text will be changed.
21. Unacceptable: Inhalation of dust - This pathway was not considered for the maintenance worker and should be considered. It should be noted that the RBCs do not consider inhalation of particulates.
22. Unacceptable: Appendix E - See USEPA Specific comment **10**
23. Unacceptable: Antimony - See USEPA General Comment **4**