

# Department of Environmental Protection

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NAS PENSACOLA  
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Virginia B. Wetherell  
Secretary

July 8, 1998

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

Mr. Bill Hill  
Code 1851  
Southern Division  
Naval Facilities Engineering Command  
2155 Eagle Drive  
P.O. Box 190010  
North Charleston, South Carolina 29419-9010

RE: Draft Focused Feasibility Study Report, Site 15, NAS  
Pensacola

Dear Mr. Hill:

I have completed the technical review of the above referenced document dated April 21, 1998 (received April 22, 1998) and provide the following comment. Also, please address the comments in the attached memorandum from Mr. Greg Brown, P.E.

1. In the abstract, as well as throughout the document, it states that the remedial goal for the site is at a level of  $5E-06$  for current or future site workers. As I have stated numerous times, the state does not accept managing risk at levels greater than  $1E-06$ . This needs to be corrected accordingly throughout the document. Other areas of the document where this is found are: pages 2-1, 4-26, 4-28, 4-29, 4-31, 4-32, 5-26, 5-27 and 5-29.

Also, rather than saying a remedial goal of  $1E-06$ , the actual cleanup value should be stated. In this case, based on restricting the area to industrial use only, the remedial goal (as per the risk assessment) of  $1E-06$  would be in mg/kg, 3.53 for arsenic, 2.42 for chlordane, 0.43 for BEQs (e.g., benzo(a)pyrene), and 0.2 for dieldrin (Table 1-1, page 1-22). However, the state would not require cleanup lower than our Soil Cleanup Target Levels (SCTLs) - Industrial which are in mg/kg 3.7, 11.0, 0.5 and 0.3, respectively.

2. On pages 1-12 and 2-1, the document indicates that surface soil analytical results are compared to health risk based standards and subsurface soil results to leachability

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standards. Surface soil must also be compared to leachability.

3. On page 1-13, the document indicates the areas of greatest surface soil contamination are around the asphalt pad northwest of building 2540 and the concrete pad west-northwest of Building 3586. While these areas had some of the highest concentrations, industrial cleanup levels were exceeded in areas across the site and in the old disposal area north of the road.
4. On page 1-8, the document indicates that risks and hazards were assessed for the hypothetical site worker. This should be the current site worker as the site is still in use as the Golf Course Maintenance Area.
5. On page 1-24, the document indicates arsenic in groundwater is likely immobilized due to arsenic being absent in downgradient wells and therefore would not migrate into downgradient surface water bodies. I agree that arsenic has not migrated to definitive downgradient wells 15GS68 and 15GS69 which are adjacent to Bayou Grande and are downgradient of contaminated well 15GR65. However, as previously stated in comments on the Remedial Investigation, the actual area downgradient from well 15GR66 leading toward the tidal pond may not be correct. It was agreed in previous meetings that an additional well will be placed between well 15GR66 and well 15GS71 to adequately determine groundwater flow in this area of the site and assure that the nature and extent of the contamination is defined.
6. On page 2-1 and 2-2, what is meant by the sentence "Although Site 15 is industrial and expected to remain so, residential screening values were used to conservatively compare the magnitude of site impacts to other base areas.?" How do other areas of the base relate to the basis for the feasibility study.
7. On page 2-2, sample points exceeding risk or hazard criteria are eliminated from further evaluation \*if they are under asphalt or concrete. They still need to be carried through the evaluation. Institutional controls would need to be applied to retain the asphalt/concrete cover.
8. On page 2-9, subsurface soil is eliminated from further evaluation related to leachability. Based upon the results this is appropriate. However, surface soils still need to be considered related to leachability. The activities at this site used a form of arsenic laden pesticides which are dissolved with water. The type of arsenic could therefore be highly mobile and travel through subsurface soil to

groundwater via rainfall filtration and not necessarily bind to the subsurface soils.

9. On page 2-10, the term partnering team needs to be defined.
10. On page 3-5 remove "long term monitoring" as an institutional control. Monitoring is a remedial activity.
11. On page 3-10, Table 3-2, low capital costs and moderate O&M costs are indicated related to institutional controls and monitoring. Long term monitoring could have high costs if monitoring was to be performed for 30 years or more.
12. On page 3-12, the volume of soil requiring treatment needs to be reassessed based on the risk of **1E-06**.
13. On page 4-2, the document indicates that arsenic concentrations in groundwater have been decreasing in well **15GR03**. This is incorrect. The values on this well have fluctuated up and down. Also, in the last paragraph, it indicates that the contamination is As(V) and therefore has low mobility. The remedial investigation did not specify the type of arsenic and I question the lack of mobility based upon the fluctuating values in monitoring well **15GR03**.

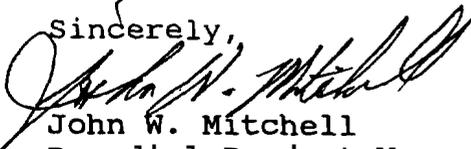
Another statement is that the source of arsenic contamination has been removed. Supposedly the current operations at the site have eliminated any ongoing releases. However, surface soil is contaminated at elevated levels above leachability values and could still be a source.

14. On page 4-4, a five year interval monitoring program is indicated with the No Action alternative. Monitoring would not be part of a No Action alternative and monitoring once every 5 years would be an inadequate monitoring interval under any of the listed alternatives.
15. On page 4-1, the groundwater monitoring interval for Alternative 2 would be once annually. As no analytical data has been taken in two years and it will be at least another year before an alternative is in place for this site, I suggest a bi-annual monitoring interval the first year. If values are unchanged or are decreasing and there is no evidence of migration, then going to annual monitoring would be appropriate. If levels show increases or downgradient wells show contamination, then bi-annual monitoring should continue or the monitoring possibly increased.
16. On page 4-16, the groundwater monitoring interval for Alternative 3 would be once annually. As this is an active recovery treatment system, monitoring should be quarterly in

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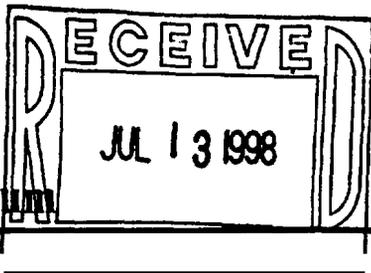
the beginning and then could be reduced dependent upon the monitoring results and the effectiveness of the recovery system.

If I can be of any further assistance with this matter, please contact me at (904) 921-9989.

Sincerely,  
  
John W. Mitchell  
Remedial Project Manager

cc: Ron Joyner, NAS Pensacola  
Gena Townsend, USEPA Region IV  
Brian Caldwell, EnSafe, Knoxville  
Allison Dennen, EnSafe, Memphis  
Karen Atchley, Bechtel, Knoxville  
Tom Moody, FDEP Northwest District

TJB B JJC JJC ESN ESN



Florida Department of  
**Environmental Protection**

Memorandum

TO: John Mitchell, Remedial Project Manager,  
Technical Review Section

THROUGH: Tim Bahr, P.G., Supervisor, Technical Review Section *B*

FROM: Greg Brown, P.E., Professional Engineer 11, Technical Review Section *JB*

DATE: May 29, 1998

SUBJECT: Draft Feasibility Study, Site 15; NAS Pensacola,  
Florida.

I reviewed the subject Feasibility Study for Site 15 dated April 21, 1998 (received April 22, 1998). I have the following minor comments:

1. The FS provides a reasonable range of alternatives for risk managers to consider. The comparative analysis, however, may be distorted. The volume of contaminated media is not based on adequately protective remediation goals. Balancing factors such as cost-effectiveness and implementability, among others, may therefore not be commensurable between alternatives. This will make remedy selection and implementation difficult for risk managers since they may need to revisit the comparative analysis at an inopportune time in the project life cycle. Using volume estimates based on adequately protective criteria and repeating the comparative analysis will thus give risk managers better information to make decisions. Rather than spend Department resources by commenting on the details of the draft comparative analysis, I suggest that the volume calculations and comparative analysis be refined first.
2. Prior Feasibility Studies from Pensacola NAS (for example, Site 38) took exception at using **ARARs** as remedial goals for groundwater contamination, advocating instead alternative risk-based concentrations. This FS rejects this approach and embraces groundwater ARARs without hesitation. This is interesting in light that the U.S. EPA **is** proposing possible changes in the current MCL for arsenic from 50 ug/l to somewhere between 2 and 20 ug/l. The lower level of 2 ug/l is based on an estimated incremental excess cancer risk of 1 in 10,000. The choice between **ARARs** or alternative risk-based concentrations in this FS is apparently one of expedience.

If you have questions, please call me at (850) 488-3935.