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MEMORANDUM REGARDING FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMENTS ON REMEDIAL ACTION PLAN FOR NORTH FUEL FARM NAS CECIL FIELD FL

5/19/1997

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Florida Department of
Environmental Protection

Memorandum

TO: Mike Deliz, P.G., Remedial Project Manager, Technical Review Section

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

FROM: Greg Brown, P.E., Professional Engineer II, Technical Review Section

DATE: May 19, 1997

SUBJECT: Remedial Action Plan, North Fuel Farm, NAS Cecil Field, Jacksonville, FL.

I reviewed the subject document dated January 1997 (received January 30, 1997). Immediate demands from other projects delayed my review of this document. Thank you for your patience. Apparently, the timing of the Navy's funding and contract actions mitigated impacts of my delayed review. I have both specific and general comments. Specific comments are as follows:

1) This comment is not related to the RAP strategy, but is relevant to protection of public health. Figure 4-5 shows at least two potable water supply wells within about 0.25 miles of the site (PS-4 and PS-5). These wells are completed within the Floridan Aquifer and are reported to be unaffected by contamination in the surficial aquifer. A small but credible potential exists for contamination to enter these wells if the well casings are in poor repair. Depending upon existing monitoring of the potable supplies, I suggest that periodic water samples be collected from these wells (particularly PS-4) and analyzed for appropriate contaminants to assure potable quality.

- will be done

2) Figure 7-4 is the PID for the bioslurping and SVE systems. Details adequate to describe the interlocks that assure fail safe operation should be included either in the RAP narrative or in the PID.

RAP will provide adequate documentation

- need explicit fail safe

3) Figure 9-5 is the PID for the biosparging and recirculation well systems. Detail adequate to describe the interlocks that assure fail safe operation should be included either in the RAP narrative or in the PID.

4) Chapter 10 describes the Recirculation Well System. Earlier chapters summarizing CAR findings reported evidence of vertical variations in hydraulic conductivity and stratagraphy. There should be a brief discussion about how these variations may affect the site-specific performance of this well system.

Was addressed & taken into consideration

Radius of influence 1:1 - conservative - = 100 ft centers (50' radius of influence)

I wrote you a memorandum on April 7, 1995, where I suggested using a phased approach to remediate the NFF during the CAR because of technical complexity and institutional constraints. The Navy followed this approach focusing on free product and contaminated soil removal. These are important source reduction actions that have advanced this complex site towards final remediation. For example, Appendix C in the subject RAP suggests that the bioslurper system alone has removed about 7,800 pounds of hydrocarbons as of September 1996.

The proposed RAP prudently specifies multiple technologies to address the various contaminated media at NFF. I believe a phased approach to remedy implementation similar to the one I suggested earlier remains applicable with this multi-technology RAP strategy. A phased approach allows an adaptive cleanup response based on empirical remediation performance. Cost-effective technology types and levels of effort can thus be incrementally selected and applied. The proposed RAP can therefore be viewed as an upper bound estimate of total remediation requirements.

A <u>rational</u> incremental application of these proposed requirements while collecting remediation performance monitoring data for feedback on effectiveness can reduce these requirements to only those responses necessary to achieve cleanup goals. Time to cleanup and levels of risk reduction may be used as decision criteria to measure effectiveness. (Refer to Black & Veatch's "Technical Memorandum, Assessment of Remedial Alternatives," for MacDill AFB, March 1997, as an example of an analysis using time to cleanup to distinguish benefits between alternative remedial actions).

I suggest that emphasis remain on source removal as the primary concern (i.e., free-product and contaminated soil removal) followed by groundwater hotspot reduction. Low level dissolved phase groundwater contamination can be the last remediation concern. Empirical evidence, albeit anecdotal, observed at other petroleum sites in Florida indicates that dissolved phase petroleum groundwater contamination begins to decrease significantly once petroleum source areas are adequately remediated. If we are fortunate to observe a similar trend at NFF, we may not need to apply the extensive groundwater remediation efforts described in the RAP. Adequate commitment and capacity by the Cecil Field Team and its Tier II management are necessary for this phased approach to succeed should it be chosen. Please call me if you have questions.