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NAS PENSACOLA
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LETTER REGARDING DISAPPROVAL ON DRAFT FINAL PROPOSED PLAN AND
RESPONSE TO COMMENTS AND TO TEMPORARILY SUSPEND SITE MANAGEMENT
PLAN MILESTONES NAS PENSACOLA FL
3/17/2011
U S EPA REGION IV



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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CERTIFIED MAIL
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March 17, 2011

4SFD-FFB

Ms. Patty M. Whittemore
Remedial Project Manager
SOUTHNAVFACENGCOM
NAS Jacksonville Building 103
Jacksonville, FL 32212

SUBJ: Naval Air Station Pensacola
U.S. EPA ID FL9170024567
EPA Disapproval: Draft Final Proposed Plan and Responses to Comments from Regulatory Agencies, Operable Unit 19, Site 44 – Former UST Site 3221 SW, and EPA Proposal to Temporarily Suspend FY2011 Milestones for Operable Unit 19: Informal Dispute Resolution

REF: Correspondence from G. Walker (Tetra Tech NUS Inc) to P. Whittemore (SOUTHNAVFACENGCOM) dated February 3, 2011

Dear Ms. Whittemore:

The purpose of this letter is two-fold: the first is to provide EPA's disapproval of the Draft Final Proposed Plan (PP) for Operable Unit (OU) 19, Site 44, at the Naval Air Station Pensacola (NAS Pensacola) Superfund site. The primary basis for this disapproval is that the supporting documentation for Operable Unit 19 does not provide sufficient site-specific lines of evidence to propose and evaluate the groundwater remedial alternative of Monitored Natural Attenuation (MNA) in a manner consistent with EPA MNA guidance and the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) nine remedy selection criteria specified in the National Contingency Plan. EPA previously expressed concern regarding the proposed MNA remedy in our November 2010 comments on the Draft Proposed Plan (June 2010) for this site.

The second purpose of this letter is to propose that the Parties to the NAS Pensacola Federal Facility Agreement (FFA) agree to temporarily suspend the FY2011 Site Management Plan milestones for OU 19 to afford the time necessary to fully discuss and resolve the technical

and remedy selection issues related to MNA as a groundwater cleanup approach at this site. Since the Navy is also pursuing natural attenuation remedies at OUs 20 and 21 in the near-term, EPA is also amenable to extending this “no-fault” temporary milestone suspension proposal to OUs 20 and 21 such that the understanding achieved through OU 19 informal resolution may be extended by the Parties, if necessary, to the technical path forward and remedy selection timetable for OUs 20 and 21.

EPA Disapproval of the Draft Final Proposed Plan for Operable Unit 19, Site 44

In accordance with FFA Sections VIII.B. and VIII.H. , the EPA is invoking informal dispute process as part of its disapproval of the Draft Final Proposed Plan for OU19 Site 44. EPA was copied on the transmittal by Tetra Tech NUS Inc of the Draft Final PP to the Navy Remedial Project Manager under cover letter dated February 3, 2011. Under the same cover letter, the Navy’s responses to regulatory agency comments on the Draft version of the PP were transmitted. The Navy responses to EPA’s comments included a White Paper overview of the Navy’s lines of evidence for proposing MNA as the preferred remedial alternative for groundwater cleanup at OU 19. EPA has reviewed the Draft Final PP, the Navy responses to regulatory agency comments, and the White Paper and concluded that a defensible basis for evaluating and selecting MNA as the groundwater cleanup remedy is not supported by the information provided by the Navy to date for this site. EPA comments are enclosed with this letter: additional site-specific data will need to be collected to support groundwater remedy selection for OU 19.

Section VIII.G.5 of the FFA describes a step-wise process that moves the Parties from the draft version of a document, through response to and resolution of regulator concerns, followed by issuance of a draft final document that incorporates those resolutions. Because the Draft Final PP and the responses to regulator comments for OU 19 were issued concurrently, rather than sequentially, the parties did not have an opportunity to discuss and resolve EPA’s comments on the Draft PP prior to Navy preparation of the Draft Final document. EPA recognizes that the collective good intentions of the Navy, the State, and EPA to accelerate cleanup success at NAS Pensacola have led us to where we are today on OU 19.

EPA Proposal to Temporarily Suspend FY2011 Milestones for Operable Unit 19: Informal Dispute Resolution

Per FFA Section XXVI.B. *Informal Disputes*, the parties shall make all reasonable efforts to resolve the dispute informally and shall meet as many times as necessary to discuss and attempt resolution of the dispute. The FFA also provides that “*unless the Parties mutually agree to another time period*” the draft final primary document becomes the final primary document if no party invokes dispute resolution within thirty (30) calendar days after issuance of the document (FFA Section VIII.I *Finalization of Primary Documents*). It is EPA’s view that three-party efforts at informal resolution of the MNA issue for OU 19 are likely to be highly successful and can be accomplished in a reasonably short time period. Therefore, EPA proposes that the parties take advantage of the flexibility offered by the FFA and mutually agree to an extended time period to fully discuss, and reach consensus on, the lines of evidence needed to evaluate and select MNA as defensible approach to groundwater cleanup at OU 19.

EPA Proposal to Temporarily Suspend FY2011 Milestones for Operable Units 20 and 21

MNA has also been identified as the preferred cleanup strategy for groundwater at the OUs 20 and 21. Review and approval of decision documents for these OUs is scheduled in FY2011 and 2012. EPA anticipates that our three party discussions on OU 19 will enhance the project team's conceptual understanding of the lines of evidence needed to evaluate MNA as remedial alternative for OUs 20 and 21. Therefore, EPA is also amenable to extending this "no-fault" temporary milestone suspension proposal to OUs 20 and 21 such that the understanding achieved through OU 19 informal resolution may be extended by the Parties, if necessary, to the technical path forward and remedy selection timetable for OUs 20 and 21.

OU 19 Informal Dispute Exit Strategy

EPA recognizes the need to resolve the OU 19 informal dispute as quickly as possible. The Navy has proposed an exit strategy from the informal dispute process that hinges on EPA and State approval of (i) an OU 19 Work Plan and (ii) a revised OU 19 schedule of deadlines and milestones to amend the NAS Pensacola Site Management Plan (SMP). The Work Plan would be scoped among the three parties using the Data Quality Objective process and the scope would be tightly focused on the information needed to select the groundwater remedy for this OU.

EPA is amenable to this exit strategy and commits to bringing the necessary resources to the project team table to support the Work Plan and SMP schedule scoping effort. We are interested in moving quickly to achieve three-party agreement on the proposed path forward for OU 19 and propose that the Navy, the State and EPA hold a kick-off conference call to identify and resolve any impediments to proceeding as proposed in this letter as soon as practicable. In the meantime, please do not hesitate to contact me via electronic mail at corkran.julie@epa.gov or at 404-562-8547 if you have any questions about this correspondence.

Sincerely,



Julie L. Corkran, Ph.D.
Senior Remedial Project Manager
Federal Facilities Branch
Superfund Division

Enclosure

cc: David Grabka, FDEP
Helen Lockard, NAVFAC SE (OPUE3)
Gregory Campbell, NAS Pensacola PWD
Gerry Walker, Tetra Tech
Harold Taylor, EPA R4 Federal Facilities Branch
Kay Wischkaemper, EPA R4 Office of Technical Services
David Buxbaum, EPA Region 4 OEA

United States Environmental Protection Agency (U.S. EPA) Region 4
March 17, 2011, Comments on:

Operable Unit 19, Site 44 - Draft Final Proposed Plan and Navy Responses to Regulator
Comments on the Draft Proposed Plan, dated February 3, 2011
Naval Air Station Pensacola, Escambia County, FL
U.S EPA ID FL9170024567

General Comments:

Note: In support of reviewing the Navy's responses to comments on the Draft Final Proposed Plan (DF PP), EPA also benchmarked against the following relevant documents:

- *Contamination Assessment Report, Site 3221 SW (February 1993)*
 - *Remedial Investigation Report for Site 44 (Former UST Site 3221 SW) (October 2008)*
 - *Feasibility Study for Operable Unit 19 Site 44 – Former UST Site 3221 SW (April 2010)*
 - *Final Technical Memorandum, Evaluation of Monitored Natural Attenuation, Site 38 (Buildings 71 and 604) (December 1999)*
1. It is EPA's observation that Natural Attenuation with Monitoring (NAM) per 62-780 of the Florida Administrative Code has inadvertently evolved over time into a presumptive groundwater remedy at NAS Pensacola and as a substitute for a Monitored Natural Attenuation (MNA) demonstration consistent with EPA guidance in support of selecting remedies consistent with the requirements of CERCLA and the NCP at Superfund sites. In the case of OU 19 Site 44, this paradigm has resulted in the collection of limited site-specific data during the Remedial Investigation to support evaluation of a groundwater remedy. MNA lines of evidence for which adequate site specific data and information were not presented for OU 19 include the following:
- The nature and distribution of sources of contamination, and
 - whether these sources have been, or can be, adequately controlled;
 - Demonstration that the plume is stable or shrinking; alternatively, MNA must be proposed in combination with active measures to prevent plume migration;
 - Site-specific information must be sufficient to demonstrate the efficacy of MNA as a remediation approach, including (but not limited to) contaminant concentration trend data and the capacity of the aquifer to reduce concentrations down to the MCL (or the GCTL as appropriate) in a timely manner.

Similarly, absent this site specific information for OU 19, it is not possible to:

- Generate realistic estimates of the timeframe for remediation by MNA or evaluate in the Feasibility Study whether the estimated timeframe is reasonable compared to timeframes required for other more active methods of groundwater remediation;
- Identify appropriate remedy performance monitoring plan; or

- Identify and evaluate in the Feasibility Study an appropriate range of contingency remedies in the event that the MNA remedy does not perform as predicted.
2. In order to fill these data and information gaps, EPA proposes that additional site-specific data be collected as part of a focused Phase II investigation effort. The level of effort should be scoped among the three parties consistent with the Uniform Federal Policy for Quality Assurance Project Plans (2005) and should be tightly focused on data quality objectives for selecting the groundwater remedy at OU 19. Preliminarily, EPA proposes the following field work for discussion by the project team:
- At a minimum, four (4) rounds of sampling, performed during different weather seasons, should be obtained. Water levels and MNA parameters should also be collected during this period.
 - Determining the vertical extent of contamination, either using wells or other DPT-like techniques, would be necessary to evaluate plume movement and inform the depth to which a remedial process would perform.
 - Determine the time of remediation using the data collected and use this time frame to compare the various remedial alternatives.
 - Develop various combinations of remedial alternatives for the selection of a remedy.
 - Evaluate the possibility of an additional source to the plume at Site 44. One report suggested this possibility: the 3221 building as well as the solvent storage area seem to be additional possibilities.
 - Provide both a schematic and supporting text for a site conceptual model for contaminant transport and for each remedial alternative. For example, the effect of the petroleum products plume on the TCE plume is one aspect of the conceptual site model.

Specific Comments:

1. The OU 19 Site 44 Remedial Investigation consisted of one round of analytical data (collected across multiple dates during the RI) for the contaminants of concern proposed for MNA; a single round of data is not sufficient data to determine (i) trends in contaminant concentrations (increasing or decreasing over time) or (ii) whether the plume is stable or shrinking; therefore, an MNA proposal for this OU is not defensible.
2. EPA notes that concentrations of TCE in Site 44 groundwater were shown in 1995 to exceed the MCL or the FDEP GCTL by 10 to 17 times. The maximum concentration detected in the shallow wells was 52 ug/L in 2005 in Well ID PEN-3221-09. Thirteen years prior, the TCE concentration in this well was 5 ug/L. Assuming that there are no ongoing releases occurring in conjunction with the day to day operations of Building 3221 or surrounding operations, the available data suggest that secondary source materials may be present in the subsurface.

3. The Oxidation Reduction Potential (ORP) and presence of TCE daughter products at Site 44 do indicate MNA is occurring; however, the concentration data do not indicate that the attenuation capacity of the groundwater is sufficient to reduce concentrations down to the MCL or the GCTL in a timely manner. In order to select MNA as a remedy, the Navy must collect data to demonstrate the attenuation capacity of the groundwater.
4. No stratigraphy is provided in the White Paper that indicates what the subsurface looks like as it relates to vertical contaminant distribution and fate and transport. Also, no well construction details are provided in the White Paper to indicate the depth of contamination. Based on EPA's review of the White Paper and the Administrative Record (the CAR, the RI and the FS) for Site 44, it is clear that the vertical extent of TCE contamination at Site 44 has not been determined. Only two (2) deep wells (screened at approximately 65-75 feet below land surface) were advanced in support of the RI and neither of these wells is in the area(s) suspected primary source areas. Absent some idea of the vertical depth to which the TCE has migrated over time, the Navy is unable to estimate the volume of contamination subject to remediation. A reasonable estimate of the volume of contamination requiring remediation is necessary to evaluate MNA as a remedial alternative in a defensible manner in the FS.
5. The White Paper noted that the aircraft maintenance operations, presumably resulting in uncontrolled releases to the environment, ceased in 1975. The Navy states that Building 3221 was part of the Naval Air Rework Facility (NARF) which was used as aircraft maintenance. The Remedial Investigation sampling results were taken over 30 years after that operation and uncontrolled releases ceased. The TCE concentration at PEN-3221-03 was 52 ug/L in 2005 (highest concentration for the sampling event). Without knowing the source concentration for the 52 ug/L, EPA finds that estimating a half-life to be used in a model would create a result with very large uncertainty. A range of 70 to 700 days was referenced in the Site 44 White Paper for half-lives. The use of a literature value of 700 days would have provided the upward time of 8 years for remediation to achieve the TCE RG. Based on the 34 years that has intervened since maintenance operations were ceased, as well as the sampling result of 5 ug/L in 1995 and 52 ug/L in 2005 for PEN-3221-09, EPA concludes that an estimate of 8 years for remediation to occur by MNA at Site 44 is not supported by the data and is not valid.

Without knowledge of the source term or a concentration trend, an estimation of half-life for use in a model is pure speculation which makes the time for remediation pure speculation. In turn, the Feasibility Study evaluation that compares remedial alternatives cannot reasonably compare the time or cost of an MNA remedy to alternative engineered remedies. Further, the unsupported estimate of the time to reach the constituent-specific RG via MNA prevents a defensible evaluation by the Navy of this alternative against the CERCLA remedy selection criteria based on time and cost effectiveness.

Finally, it should be noted that neither calculations nor data input was provided for the one (1) to (8) year clean-up time described in the White Paper: including this information, or referencing where this information might be available in the Administrative Record, would have improved the utility of the White Paper.

6. The White Paper does not include a conceptual site model for contaminant transport at Site 44. There is no description of the aquifer properties except for the estimated seepage velocity of 0.48 ft/day. Since the data used by the Navy to calculate this value was not included, getting an idea of the uncertainty around that value was not possible. Using the head data between PEN-3221-05 and PEN-3221-08, a porosity of 0.2, and a hydraulic conductivity of 10^{-1} cm/sec, EPA estimated a seepage velocity about 57 ft/day. This kind of velocity would suggest that dilution alone should have removed the contamination long ago if the contamination was insignificant. This line of evidence underscores EPA's concern that a secondary source is present underneath the concrete that would cause an MNA remedy to extend beyond 20 years.
7. Also missing from the conceptual site model for Site 44 is an understanding of whether there is any subsurface infrastructure below the concrete, such as utility runs and pipe/pipe bedding, and how that infrastructure may be impacting the transport of contamination. Of particular interest is whether subsurface infrastructure may be transporting contamination to the South East Drainage Ditch described in Figure 2-1 of the 1993 CAR or in directions other than those inferred by groundwater level data.
8. Given the uncertainty in the source term estimate and the estimate of time to reach the constituent-specific RG, on what basis would the Navy propose a concentration schedule in the Remedial Design to support evaluation of effectiveness of the MNA remedy? EPA notes that performance monitoring of an MNA remedy at a Superfund site should be designed using the EPA guidance document *Performance Monitoring of MNA Remedies for VOCs in Ground Water* (EPA/600/R-04/027).
9. EPA notes that, because the aquifer is a porous medium and a conductive aquifer, a conventional aquifer restoration alternative would be practicable at Site 44; therefore, the focused Phase II investigation effort should include collection of data to support evaluation of one or more engineered remedies appropriate to site and contaminant conditions