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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MCAS EL TORO
SSIC # 5090.3

January 16, 1998

Walter F. Sandza
Leader, Environmental Specialist
Support Team
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, CA 92132-5190

Dear Mr. Sandza:

I am writing to you on behalf of Dan Opalski in response to your two letters, dated 9/17/97 and 10/3/97, requesting EPA's position on several issues impacting Marine Corps Logistics Base Barstow and Marine Corps Air Station El Toro.

In your first letter you asked the following questions:

"Does USEPA still support the positions regarding the "drinkable leachate" issue as stated a year and a half ago in the enclosed Sharpe Army Depot dispute documents (enclosures 1 and 2)? Does USEPA believe that SVE [soil vapor extraction] systems must continue to operate after it has been adequately demonstrated that water quality-based cleanup goals have been achieved and will be maintained so long as it is "technically and economically feasible" to continue operations?"

EPA still supports the position it took in the Sharpe dispute, i.e., that vadose zone modeling with an appropriate aquifer mixing zone is the best method for evaluating the impact of vadose zone contamination on groundwater. EPA also still believes that a "drinkable leachate" standard overestimates the effects such leachate might have to the underlying aquifer. Furthermore, we do not support continuing to operate an SVE system after it has been demonstrated that water quality-based cleanup goals have been achieved. However, EPA recognizes that the California Regional Water Quality Control Board (Water Board) and the legal staff at the State Water Board have disagreed with these positions. As we understand it, it has been the State's position that State regulations require cleanup of leachate in the vadose zone to MCLs (if not to background) and require an SVE system to continue operating as long as it is technically and economically feasible, even after vadose zone cleanup goals have been achieved.

This issue has recently come up at several federal facilities in California, including Navy, Air Force and DOE sites, where shut off criteria for SVE systems are being developed. In the interest of compromise and avoiding protracted disputes that only serve to delay cleanup, EPA is willing, in these instances, to support the use of the State's Technical and Economic Feasibility Analysis (TEFA) as a primary criterion for shutting off an SVE system. In our opinion, the most

important component of the TEFA outlined by the Water Board is the cost effectiveness comparison between operating an SVE system to remove residual contamination to that of a groundwater pump-and-treat system. We believe that such an analysis provides a logical framework for determining when to shut off an SVE system.

Our comfort with a TEFA approach results from extensive experience with SVE systems that consistently demonstrates SVE as an effective and relatively quick vadose zone remedy. This experience leads us to conclude that it should not be too difficult a challenge to reach agreement when an SVE system should be shut off. For example, at Norton Air Force Base, regulatory agencies, including the Santa Ana Water Board, have recently approved the shut off of an SVE system after only 18 months of operation.

Both a TEFA approach and the more traditional soil concentration criteria approach, in our view, can be used successfully as criteria for determining when to shut off an SVE system. The use of either or both of these approaches should be based on the site specific contamination concerns and the regulatory requirements at a site.

As stated above, our proposal to support the use of a TEFA approach is, in part, a strategy to avoid a time consuming and potentially counterproductive dispute over concentration specific criteria, which may only produce mixed results, as was the case with the Sharpe dispute. Of course, the more subjective TEFA criteria may also eventually lead to a dispute at the time that SVE shut off is proposed. However, at that time, a dispute would have the benefit of actual data on the effectiveness of the system and would not be dependent only on theoretical modeling calculations.

As this issue arises at Barstow, the fact that the Navy employs an air sparging/soil vapor extraction (AS/SVE) system which remediates both groundwater and vadose zone contamination makes the situation different from a traditional SVE system. We believe that in this case, to rely only on vadose zone cleanup criteria to determine system shut off is not appropriate.

In your second letter, you asked for our comments and views on the "point of compliance" for groundwater cleanup levels as described in the NCP preamble at 55 FR 8753 (March 8, 1990). On this issue, it has been the practice of this region to use a groundwater point-of-compliance only at the edge of sites where the regulations for a RCRA regulated unit are applicable or relevant and appropriate requirements (ARARs). These RCRA regulations also include a definition of a waste management area, which we believe applies to the way this term is used in the NCP preamble. I am not aware of any RODs signed by Region 9 that have used a groundwater point-of-compliance at the edge of a site or sites where the regulations for a RCRA regulated unit are not ARARs.

It is our view that the NCP gives preference to attaining groundwater cleanup levels throughout the plume, and that to use a point-of-compliance approach to depart from that preference would require a compelling argument. In situations where groundwater standards can not be met throughout the plume, we have required a Technical Impracticability Waiver of ARARs. We appreciate your point that EPA regions have taken different approaches on this

issue. However, we believe those differences are not inconsistent with the flexibility that the NCP allows on this point and that they reflect differences in the types of sites, the physical environment, and the state regulatory climate from region to region. It also appears that California, particularly the Water Boards, would oppose a broader application of a point-of-compliance approach.

With regard to the use of a point-of-compliance approach for groundwater contamination at El Toro and Barstow, we do not believe that a case can be made at this time that groundwater cleanup levels can not be met throughout the plume in a reasonable time frame. For this and the other reasons stated above, we will agree to the use of a point-of-compliance approach for attaining groundwater cleanup levels only at the specific sites within El Toro or Barstow where the regulations for a RCRA regulated unit are ARARs. The State of California has also taken a similar position.

I also want to clarify the use of groundwater "mixing zones" as part of establishing vadose zone cleanup levels. We do not see this as being similar to the point-of-compliance approach. We use a mixing zone as part of a set of modeling assumptions to best predict whether the migration of vadose zone contamination will result in groundwater cleanup standards being exceeded over time. The mixing zone is established by taking into account factors such as the screen length of a typical monitoring well or drinking water well. This approach allows for the fact that a certain amount of mixing or dilution occurs in a monitoring or drinking water well, yet it still ensures that cleanup will result in groundwater concentrations that are health protective throughout the plume. In contrast, the point-of-compliance approach may be used to deliberately allow an area of the plume under a regulated unit to remain contaminated at concentrations that are not health protective, such as with a containment remedy. The mixing zone approach in part recognizes that, in order to be health protective throughout the plume, it is not necessary that every ounce of water meet the cleanup standard. With the mixing zone approach, we would expect that groundwater cleanup standards will eventually be met within the entire plume using an array of monitoring wells to determine compliance.

As always, we want to work with the Navy to try to resolve as quickly and as effectively as possible site-specific issues that arise. Your letters raise several important issues where it seems our respective policies are in agreement in some cases and in disagreement in others. It is our hope that, as we seek resolution to site specific issues, we can find common ground to resolve those site-specific issues despite any broader policy differences.

Please call me at 415/744-2384 if you wish to discuss this or any other issue further.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Huetteman", with a long horizontal flourish extending to the right.

Thomas Huetteman
Chief, Navy Section
Federal Facilities Cleanup Branch

cc: Dan Opalski, EPA