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November 17, 2000

Mr. Nick Delaplane
U.S. Department of Energy
National Environmental Training Office
P.O. Box A
Aiken, South Carolina 29802

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Re: Monitored Natural Attenuation (MNA) Training and MNAtoolbox Use

Dear Mr. Delaplane:

On September 20, 2000, I attended the United States Department of Energy (USDOE) National Environmental Training Office (NETO) training on monitored natural attenuation (MNA) at Richland, Washington. I would like to share with you a concern I have regarding use of the software presented at this class and its use at Hanford. My primary interest in monitored natural attenuation (MNA) is related to natural attenuation as selected for remediation of groundwater contamination in the 300-FF-5 groundwater operable unit (OU) at the Hanford Site. An interim record of decision (ROD) for the selected remedy was issued in July 1996. Currently, the selected remedy is undergoing a five-year review. During this review, it has been concluded that the 300-FF-5 operable unit groundwater contaminant plumes are neither static nor retreating. As part of the review, I have considered the materials presented at the NETO MNA course, including the *MNAtoolbox* software screening tool. Based on this experience, I would like to recommend a modification to *MNAtoolbox* that would improve the use of this tool. I recommend that the qualifying conditions listed in the user's guide (discussed below) be repeated as a pop-up, warning screen just prior to the data entry screen for the *MNAtoolbox* screening calculations. This would serve as a "gate" to force the user to consider the U.S. Environmental Protection Agency's (EPA) criteria and assess the appropriateness of their attempts at *MNAtoolbox* calculations.

To further explain the basis of the above recommendation, one of the modules of the MNA training was a presentation on the *MNAtoolbox* software tool recently developed by Sandia National Laboratories (SNL) for USDOE. The *MNAtoolbox* is available for use over the Web, and may be used to evaluate the potential of MNA at a particular site. A copy of a paper entitled "Site Screening for Monitored Natural Attenuation with *MNAtoolbox*" by Patrick Brady and others was provided as part of this module. This paper is a printout of the online user's guide for *MNAtoolbox*. It clearly identifies the following four conditions that must be met for considering MNA as a remedial action:

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- There is a clear indication that the site currently poses no unacceptable risk to human health or the environment.
- There is no active source term.
- Plume contours are static or retreating.
- Geochemical and/or hydrological data suggest a strong likelihood that attenuation processes are operative at the site, and that they may assure attainment of remedial goals in an acceptable time frame.

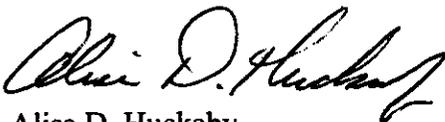
These qualifying conditions are also identified in EPA's policy directive on monitored natural attenuation [EPA's Office of Solid Waste and Emergency Response (OSWER) Directive 9200.4-17P] and USDOE's decision-making framework document for MNA [*Decision-Making Framework Guide for the Evaluation and Selection of Monitored Natural Attenuation Remedies at Department of Energy Sites*] (DOE, May 13, 1999)]. Copies of both these documents were provided and discussed at the NETO MNA training.

MNAtoolbox clearly directs each user to examine the user's guide before using *MNAtoolbox* and attempting MNA screening calculations. As an additional guard against inappropriate use, I recommend that the qualifying conditions listed in the user's guide (discussed above) be repeated as a pop-up, warning screen just prior to the data entry screen for the *MNAtoolbox* screening calculations. This would serve as a "gate" to force the user to consider EPA's criteria and assess the appropriateness of their attempts at *MNAtoolbox* calculations.

I have concluded that had I used the *MNAtoolbox* without satisfying the minimum site criteria, I could potentially have generated an inadequate screening evaluation of the suitability of MNA for the 300-FF-5 groundwater operable unit. This is not a fault in the design of *MNAtoolbox* and its documentation, but one of inappropriate use of such software. I respectfully recommend the *MNAtoolbox* be revised to include this initial "gate" that first requires the user to answer whether the site being screened is suitable for MNA per the criteria established by EPA OSWER Directive 9200.4-17P.

If you have any questions or would like to discuss the above comments, please contact me at (509) 736-3034.

Sincerely,



Alisa D. Huckaby
Nuclear Waste Program

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