

MEMORANDUM

TO: HW/VRP Programs Staff
FROM: Jerry Breed, HW/VRP Program Manager
THROUGH: Vickie Meredith, OS/BF Programs Supervisor
DATE: March 24, 2010
RE: Voluntary Remediation Program Fact Sheet #19 Technical Support Memoranda 3 and 4 (Ecological Risk Assessment), and Fact Sheet #24 (Establish Site-Specific Background Metals Concentrations in Soil)

Fact Sheet #19

The Voluntary Remediation Program (VRP) process and requirements for evaluating ecological risk are found in Fact Sheet (FS) #14 and FS #19 (includes Technical Support Memoranda 3 and 4). The ecological risk assessment process consists of four possible steps. The first two steps, Step 1 – Ecological Exclusion Assessment and Step 2 – Ecological Scoping Assessment Checklist and Documentation, are described in Fact Sheet #14. Fact Sheet #19 describes Step 3 – Ecological Screening Assessment and Step 4 – Baseline Ecological Risk Assessment. The fact sheets are modeled after Environmental Protection Agency (EPA) Ecological Risk Assessment Guidance with some useful and important modifications that are appropriate for Wyoming sites.

Fact Sheet #19, Steps 3 and 4 are further described in technical support memoranda – Technical Support Memorandum: Step 3 Ecological Risk Assessment (Tech Memo 3) and Technical Support Memorandum: Step 4 Baseline Ecological Risk Assessment (Tech Memo 4). Tech Memos 3 and 4 also contain numerical "guidance" in associated tables regarding Ecological Risk Based Screening Concentrations (ERBSCs), Toxicity Benchmark Doses (TBDs) and Chemical Specific Ecological Exposure Parameters (e.g., bioaccumulation factors).

Although the text of FS #19 and Tech Memos 3 and 4 provide accurate detailed information to conduct the screening and baseline assessments, the numerical "guidance" described above are based on toxicological data from a number of references that were available at the time the tech memos were developed. As additional toxicological studies and information have become available since that time, the ERBSCs, TBDs and bioaccumulation factors have become dated. There is also now data available for some chemicals that previously had no values. Because the numerical "guidance" is out of date, VRP has decided to discontinue use of all tables in Tech Memo 3 and Tech Memo 4 that contain numeric information until funding is available to revise these documents. VRP plans to revise the technical support memoranda based on an approach to ensure toxicological information remains current over time.

In the meantime, Volunteers should use EPA's Ecological Soil Screening Level (Eco-SSL) Guidance (<http://www.epa.gov/oswer/riskassessment/ecorisk/ecossl.htm>) as the primary source for toxicological information. The Volunteer should contact their site VRP Project Manager for approval of references to use for chemicals that are not included in the Eco-SSL Guidance. FS

#19 and the text of Tech Memos 3 and 4 regarding this process (i.e., how to conduct screening and baseline assessments) should continue to be used by Volunteers.

Fact Sheet #24

Fact Sheet #24 provides information on how to establish background concentrations for metals in soil at a site, including when background data are needed, sampling requirements, methods to calculate background concentration and how to compare background data to site data. VRP is recognizing concerns brought to their attention by outside stakeholders, including a reference in EPA's ProUCL Version 4.00.02 User Guide indicating that a comparison of UCLs and upper percentiles as suggested in FS #24 cannot be considered fair and reliable. VRP has decided to discontinue use of FS #24 until funding is available to revise the fact sheet. In the meantime, the Volunteer should contact their site VRP Project Manager for approval of references to use to establish site-specific background metals concentrations in soil.

END OF MEMORANDUM