



DEPARTMENT OF THE NAVY

CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE, INDIANA 47522-5000

N00164.AR.000513
NSWC CRANE
5090.3a

IN REPLY REFER TO:

5090
Ser 095/0036

24 FEB 2000

U.S. Environmental Protection Agency, Region V
Waste, Pesticides, & Toxics Division
Waste Management Branch
Illinois, Indiana, and Michigan Section
Attn: Mr. Peter Ramanauskas (DW-8J)
77 West Jackson Blvd.
Chicago, IL 60604

Dear Mr. Ramanauskas:

The purpose of this letter is to document the supplemental toxicity testing requirements agreed upon in our telephone conversation February 8, 2000 for Mine Fill A (MFA) and Mine Fill B (MFB) at the NSWC Crane Bioremediation Facility (Biofacility), Crane, Indiana. Previous toxicity testing performed at MFA (MK, 1998) verified that treated contaminated soil compost did not show a greater toxicity than treated non-contaminated soil compost. However, the testing program was not designed to evaluate the effects on toxicity of treated and field placed compost over time, as we discussed. Naval Surface Warfare Center Crane proposes to collect four additional samples which will be analyzed for select toxicity tests in order to provide additional toxicity information from previously composted windrows.

The objective of the supplemental toxicity testing is to demonstrate that there is a reduction in the toxicity of treated compost over time when compared to the initial full scale windrow (compost windrow S001) toxicity testing. In order to determine if there is a reduction in toxicity over time, the four minimum additional samples will be collected with duplicates from areas backfilled with composted material at various time intervals since the placement of windrow S001. Sampling and testing will be in accordance with the *Full-Scale Operational Plan (OP)* [MK, 1998a] and the *Quality Assurance Project Plan for Full-Scale Operations at the Bioremediation Facility (QAPP)*; [MK, 1998b] except as noted below.

Compost testing will consist of collecting grab samples from previously processed compost at varying stages of maturity. Samples will be collected from areas backfilled with composted material from MFA or MFB as applicable in order to obtain the desired age. Mature compost testing will be limited to earthworm toxicity, pathogen, and Microtox®. Other toxicity tests, described in QAPP, will not be performed because acceptable results were obtained for the previous toxicity testing on windrow S001 compost.

SUBJ: SUPPLEMENTAL TOXICITY TESTING REQUIREMENTS

Based upon the current Biofacility processing production, it is necessary to collect samples from MFA and MFB as follows:

- MFB, 2 to 4 month aged compost
- MFB, 5 to 7 month aged compost
- MFA or MFB, 11 to 15 month aged compost
- MFA compost from S001

Number of samples and sample locations will be field selected to provide a representative sample of the desired compost material. At a minimum, the top two inches of compost will be discarded before sample collection.

At the request of US EPA, the standard soil used for the earthworm toxicity testing will have its pH adjusted, if necessary, to have a similar pH to that of the compost samples. This is a change from the Standard Operating Procedures (SOPs) included in the QAPP. However, a revised SOP is not required to be issued.

Upon completion of the supplemental toxicity testing outlined above, no additional toxicity testing will be required at MFB since the soil types and contaminants of concern are similar to that of MFA. The remaining MFA soil will be excavated, composted, and returned to the excavation area once the clean-up criteria have been met. Once written approval of this supplemental toxicity testing requirements is received, revision pages for the appropriate OP and QAPP sections will be submitted. Complete toxicity testing for soils at Rockeye, ABG, and any other site selected to be remediated for explosives contaminated soils will be performed as outlined in the approved revisions to the OP & QAPP, including earthworm toxicity, Microtox®, pathogen, & leachability.

NAVSURFWARCENDIV Crane point of contact is
Ms. Christine D. Freeman, Code 09511, telephone 812-854-4423.

Sincerely,



JAMES M. HUNSICKER, DIRECTOR
ENVIRONMENTAL PROTECTION DEPARTMENT
BY DIRECTION OF THE COMMANDER

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