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**RESPONSES TO THE USEPA COMMENTS ON THE
"REMOVAL ACTION PROJECT PLAN (RAPP)
FOR THE PROCESSING AND DISPOSAL OF AN
ESTIMATED 2,210 TONS OF NON-RCRA SCRAP
METAL"**

11/23/92

DOE-FN/EPA

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(RAPP) FOR THE PROCESSING AND DISPOSAL OF AN ESTIMATED 2,210 TONS
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General Comments:

1) COMMENT:

The U.S. Department of Energy (DOE) has contracted Scientific Ecology Group, Inc. (SEG), to conduct the removal and off-site reprocessing of scrap metal. The Removal Action Project Plan (RAPP) submitted by SEG is not integrated with the Removal Action (RA) work plan conditionally approved by the United States Environmental Protection Agency (EPA). At a minimum, the RAPP should indicate that the RA work plan will be followed for actions that take place on site.

RESPONSE:

The Objectives section of the Removal Action Project Plan (RAPP) has been modified to better illustrate the integration with Removal Action Number 15 Work Plan.

It should be noted, however, that based on the contract between Fernald Environmental Restoration Management Company of Ohio (FERMCO) and Scientific Ecology Group, Inc. (SEG), only Phase I activities from within Removal Action Number 15 Work Plan will be performed. The Removal Action Work Plan will be followed for all actions that take place on the FEMP site.

2) COMMENT:

SEG indicates that it possesses the appropriate Nuclear Regulatory Commission (NRC) licenses for storage and treatment of the radioactive scrap metal. Because the scrap metal will be transported to either the Oak Ridge facility or the Quadrex facility, SEG should also examine the applicability of EPA's off-site disposal policy relative to this removal action. SEG should discuss potential notification requirements, including those of EPA, Region 4, for the ultimate disposition of radioactive materials originating from a Superfund site.

RESPONSE:

SEG is aware of certain off-site disposal policies and notification requirements for hazardous and mixed waste streams originating from Superfund sites but not for radioactive materials independently. Officials from EPA Regions 4 and 5 and the State of Tennessee were consulted on these matters and no disposal policies or notification requirements were found to be prudent.

Attachment 6 of the RAPP contains the copies of the SEG and Quadrex Radioactive Material Licenses.

3) COMMENT:

SEG has provided no specific details regarding on-site assessment of radioactivity. Specific details for measuring radioactivity, particularly the methods to be used for measuring fixed and removable radionuclides, should be provided. In addition, SEG indicates that 100 percent surface area surveys will be conducted at SEG facilities before any metal is "free released" as reusable scrap metal. Further information on the survey methodology should be provided.

RESPONSE:

The methods for ensuring 100 percent surface area coverage during radiological screening of materials for free release have been included within SEG Work Procedure 3001-HP-5.6, entitled Unconditional Release of Materials located in Attachment 4 (Work Procedures) of the RAPP. The procedures within this Attachment have been used on many other projects and have been found to be effective in situations similar to those expected during the removal, processing, and disposal of FEMP scrap metal.

4) COMMENT:

SEG indicates that demobilization efforts will include decontaminating equipment for "free release" and returning the site area to "baseline" levels. SEG should provide specific methods for (1) decontaminating equipment and measuring residual radionuclides on decontaminated equipment and (2) identifying baseline conditions before and after completion of the work. Also, SEG should identify the methods to be used to dispose of waste materials from on-site decontamination efforts.

RESPONSE:

Section 2.2 Technical Approach for On-site Processing - Demobilization, has been expanded to clarify the methods of equipment and facility decontamination. The data implemented into the RAPP includes the following:

- Decontamination of small tools and slightly contaminated equipment will be performed by hand wiping with a foaming cleaner and paper towels or HEPA filtered vacuuming.
- SEG will utilize the existing FERMCO decontamination (steam cleaner) facility to clean large and multi-dimensional equipment.

- All tools and equipment will be radiologically monitored prior to, during, and after decontamination attempts using the work procedures in Attachment 4.
- Any FERMCO facilities or equipment found to have increased radiological contamination due to SEG operations will be cleaned to pre-mobilization levels. The pre and post project contamination levels will be determined by performing cursory radiological surveys and documenting the results as averages on a project area map.
- Residuals left on the concrete pad, such as oxidation and paint chips, will be removed by FEMP personnel. Materials such as these are potentially RCRA bearing and are not within the Scope of Work for this sub-contract. Clean up of the concrete pad after the scrap metal removal will be conducted by FEMP personnel using site policies and procedures such as those specified in RA #9, RA #12 or via best management practices.

5) COMMENT:

The Objectives section on page 1 fails to state the specific purpose of the RAPP, its relation with Removal Action #15, and is incomplete in stating the nature of the work and materials involved. The following information should be included in the Objectives section:

- A description of the Phase I activities of Removal Action 15.
- A description of the metals types (ferrous and/or non-ferrous), their general nature (large pieces, smaller pieces, mixed-mode composite scrap, etc.), and estimates of their respective amounts.
- The solicitation statement of work and how those work objectives will be met by SEG.

RESPONSE:

Additional background and informational data has been added to the Objectives section of the RAPP. The Objectives section includes the following information:

- Only Phase I activities from RA 15 Work Plan will be performed under this contract. These activities will include on-site mobilization, sizing, packaging, and transportation of 2,210 tons of non-RCRA, ferrous and non-ferrous scrap metal to Oak Ridge for processing.
- Known history of the scrap metal pile, description of the amount to be handled, and the assumption that the

types of materials seen on the surface is typical throughout the pile.

- How the objectives will be met by utilizing the following equipment:
 - 1,200 ton shear for sizing materials as required
 - 50 ton crawler crane in conjunction with a 50 ton crane magnet for removing materials from the pile and loading into containers going to SEG-Oak Ridge
 - Cat crawler with a 4-1 bucket for removing materials from the pile and loading materials into sea/land containers going to Quadrex
 - tool trailer for small equipment storage
 - stocked mechanics truck for equipment repairs
 - portable air compressor for use with air powered tools
 - portable welder for heavy equipment repairs
 - dynamometer for weighing metals and equipment suspended by the crane
 - yard tractor for placing the flatbed trailers where needed
 - 12,000 pound fork lift for moving containers and other equipment

6) COMMENT:

The Objective section is unclear as to what specifically the Work Breakdown Structure (WBS) is and where its to be found. Sections 2.1 through 2.6 appear to be a topical description of the WBS without stated specifics. The complete WBS should be included with this RAPP for evaluation and subsequent approval.

RESPONSE:

The WBS provides the major assessment tool to establish the baseline project planning activities necessary for execution of this project. These tools provide for the managerial and technical functions to support the Project. The WBS is especially helpful in the scheduling and procurement activities of a project by way of ensuring proper time and monies have been allocated for each specific task.

SEG has outlined the project tasks in the form of a Work Breakdown Structure Dictionary located in Attachment 2 of the RAPP.

7) COMMENT:

Section 2.1, Planning and Integration, mentions the coordination of the Quadrex, Southern Alloy Metals, and SEG transportation subcontractor's activities. Section 2.2, Technical Approach for On-Site Processing, page 8, paragraph 3 states that metals will be moved to Quadrex Oak Ridge for decontamination. The Removal Action #15 Work Plan, April 1992 (Section 2.1, Page 11, Paragraph 3) states that no waste will be transported from the FEMP for storage or processing at a lower-tier subcontractor's facility. With this being the case, the relationship between SEG, Southern Alloy Metals, and Quadrex should be clearly stated.

RESPONSE:

Quadrex was selected, by a bid and award process, as a subcontractor to decontaminate large quantities and pieces of scrap metal through various methods. Quadrex was also deemed a qualified subcontractor due to retention of the proper licenses and permits. Southern Alloys Metals SAM was selected, also by a bid and award process, as a subcontractor due to their metal handling experience and heavy equipment supply. As a result of the Quadrex and SAM subcontracts, the RA #15 Work Plan has been modified to allow for lower-tier subcontractors to accept and process materials.

Please replace the revised page 11 for the current page 11 in the existing approved work plan for Removal Action #15 - Scrap Metal Files. The third paragraph of the existing page 11 has been deleted in its entirety.

During the bid/award process of this contract, the selected bidder evaluated the capabilities and expertise of lower-tier subcontractors and elected to subcontract a portion of the metal processing activities to subcontractors best-suited to perform these activities. This deviation from the work plan and the WEMCO Request For Proposal (RFP) was evaluated by the WEMCO Source Evaluation Board during the procurement process. Based on the FEMP review of the proposed subcontractors' facilities and expertise, SEG's proposed deviation from the original wording in the RFP, which subsequently was incorporated into the Removal Action work plan, was accepted. The aforementioned third paragraph has therefore been deleted to accommodate the successful bidders' proposal to utilize an outside vender to perform this removal action to achieve optimum unrestricted or beneficial reuse of all materials processed while minimizing environmental and economic impact to the FEMP.

A copy of the Quadrex Radioactive Materials License has been included in Attachment 6 of the RAPP. In addition, all required licenses and permits reference numbers have been included in Section 2.4 - Processing Facilities in the RAPP.

8) COMMENT:

Section 2.2, Technical Approach for On- Site Processing, fails to state the basis of judgement for the segregation of the scrap metal into the two processing option categories. It is assumed that judgements will be made based upon contamination activity and size of the scrap pieces, but the specific segregation methodology should be stated. The dispensation of contaminated scrap waste found not to fall into either of the two processing categories should also be discussed.

RESPONSE:

Section 2.2, Technical Approach for On-Site Processing - Waste Segregation, has been modified to better illustrate the methods for segregating the scrap metal.

In general, all of the non-ferrous metal will be transported to the Quadrex facility for decontamination and the ferrous metals will be transported to the SEG-Oak Ridge facility for metal melting. However, other determining factors, such as specific geometry, visual qualification, and guidance from NUREG 1.86 will play a part in the analogical decision.

9) COMMENT:

Section 2.2, Technical Approach for On-Site Processing, fails to state the means to be used to control radionuclide emissions during processes relative to the size reduction, sorting, and loading of the scrap waste.

RESPONSE:

Section 2.2, Technical Approach for On-Site Processing, has been modified to incorporate airborne radiological contamination control information from the Site Safety and Health Plan (SSHP). This information describes how SEG will monitor personnel and the environment to ensure their safety.

It should be noted that SEG does not expect to encounter elevated airborne emissions. This expectation is based on past experience from working with similar materials and FERMCO supplied air sampling data from when the scrap metal piles were relocated.

10) COMMENT:

A complete copy of the Work Breakdown Structure (WBS) Dictionary should be included as an attachment rather than just its table of contents (Attachment 2). The inclusion of this dictionary is stated on page 2, section 1.1, paragraph 5 (of page). This dictionary supposedly contains information on size reduction, separation of metals, and other aspects of this project specific to the Fernald site. Such information is necessary for the evaluation and subsequent approval of this RAPP.

RESPONSE:

The Work Breakdown Structure Dictionary located in Attachment 2 has been included. A Work Breakdown Structure Outline may better define the dictionary's intended purpose. Please see the response to Comment #6 for a description of uses for the WBS.

11) COMMENT:

The enclosed copy of the SEG Radioactive Material License (Attachment 6) is of poor quality and is hardly legible for many of the amendments. A clean, legible copy of the license should be enclosed with this RAPP.

RESPONSE:

A better quality reproduction of the SEG Radioactive Material License has been supplied. In addition, a copy of the Quadrex Radioactive Materials License has also been included in the RAPP.

SPECIFIC COMMENTS

Comment No. 1 -- Page 5, Paragraph 12 through 3. SEG indicates that baseline surveys will be conducted with a number of field instruments. The specific approach, objectives, and sampling methods for identifying baseline conditions should be provided.

RESPONSE:

Baseline or occupational safety surveys will be performed during mobilization, operation, and demobilization to ensure workers and the environment are sufficiently protected against radiological contaminants. The methods in which these surveys are to be conducted are described in various work procedures within Attachment 4 of the RAPP.

Comment No. 2 -- Page 6, Paragraph 5. SEG indicates that material will be barcoded to maintain strict accountability. SEG should provide further information on the procedures to be used, the level of detail that will be provided, and the methods that will be used to determine the ultimate disposition of scrap metal and waste. In particular, the final report should provide a detailed breakdown of the final disposition of scrap metal and waste, including material destined for "free release".

RESPONSE:

A procedure for utilizing the SEG Waste Inventory Tracking System (WITS) has been included in the RAPP as part of Attachment 5. This procedure will describe the methods for tracking each box of scrap metal that enters the SEG-Oak Ridge facility through its final dispositioning. In addition, a description of Quadrex's method of tracking materials entering their facility has also been included.

A material balance will be included in the final report to detail the total scrap metal packaged and processed compared to its dispositioning.

Comment No. 3 -- Page 11, Paragraph 8. SEG indicates that the final report will be produced within 4 weeks of demobilization. This seems unrealistic because since most processing, treatment, and disposal will be conducted off site. The DOE's final report should provide complete information to EPA regarding the final disposition of the waste materials after the conclusion of the off-site activities.

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RESPONSE:

The final report submittal date has been changed to reflect this comment. The new submittal date is within four weeks after final processing and dispositioning of the scrap metal.

Comment No. 4 -- Page 13, Paragraph 8. SEG indicates that "free release" will be determined after a 100-percent survey of all surfaces. SEG should provide specific details on the procedures that will be used to obtain a 100-percent surface area survey.

RESPONSE:

Please see Attachment 4 - Work Procedures included in the RAPP.

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TONS OF NON-RCRA SCRAP METAL"~~

1) COMMENT:

DOE must submit a schedule for the activities described within the RAPP, including the submission of a final report for the actions to the EPAs. The schedule should include specific deadlines for the initiation and completion or material packaging and shipment as well as demobilization.

RESPONSE:

As specified in the RAWP, completion of the processing of the scrap metal activities will be completed by March, 1994, and the submission of the Final Report will be completed by September, 1994. Completion deadlines for interim activities are not provided since this project was awarded as a fixed-price contract. The contractor is only held accountable for completion milestone dates for this fixed-priced contract. Based on current information provided by the contractor, the completion of all phase I activities, including the Final Report, is anticipated prior to March, 1994.

2) COMMENT:

The final report submitted to the EPAs should include a tracking of the final disposition of all material removed under the RAPP from the scrap metal piles. The report should include a mass balance of sorts. The report should provide a clear picture to the EPAs of the removal actions effectiveness in reducing volume, toxicity and mobility. The information gained from this removal action will be valuable in determining additional/future response actions at the site.

RESPONSE:

The final report shall include the following information: a mass balance of material, waste weights per classification, total radiological exposure, health and safety concerns, and decontamination details. Attachments 4 and 5 of the RAPP detail the Waste Inventory Tracking Systems to be utilized by the subcontractor.