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September 11, 1985

Project No. 850037

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Dr. Michael J. Champion
Vice President
Riverdale Chemical Company
220 East 17th Street
Chicago Heights, IL 60411

Responses to EPA Comments on the
Quality Assurance Project Plan
Sampling Plan
Health and Safety Plan
Riverdale Chemical Company
Chicago Heights, Illinois

Dear Dr. Champion:

Enclosed are five copies of the revised Quality Assurance Project Plan (QAPP) which incorporates the review comments from EPA Region V. The following illustrates specific revisions and our responses to the EPA recommendations in each section or element of the QAPP as listed in the EPA memorandum dated July 18, 1985 from James H. Adams, Chief, Quality Assurance Office, to Norman Niedergany, Chief, CERCLA Enforcement Section.

1.0 INTRODUCTION

1. Provide a summary of past soil data for the site as part of the QAPP Project Description.

Response: The organic analyses of soils conducted by Ecology and Environment in April, 1984 are presented in Table 1 (following p. 1-2).

2. Include the testing of herbicides if the herbicide compounds are considered contaminants.

Response: Testings of the herbicides; 2,4,D; 2,4,5-T; and silvex were not required in the Consent Decree.

3. Include the tentative identification of unknown compounds during GC/MS analyses, unless HSL compounds are all that are needed for the site. Once tentative identifications are made, a reasonable effort should be made by IT Corporation to confirm these compounds' identity.

Response: The GC/MS analyses would be limited to the HSL compounds per EPA CLP procedures.

4. Rewrite the Project Objectives to be consistent pollutant characterization of 4 soil samples from 9 soil borings, 6 surface soil samples, and 30 specialized dioxin soil samples for Phase I, or include more samples and sample types to be consistent with the all encompassing objectives of pages 1-2 and 1-3.

Response: The project objectives have been revised to be limited to the objectives of the Phase I RI, which includes geology characterization, and determination of the vertical and horizontal extent of contamination on the surface and subsurface soils (p. 1-2).

5. Consider the detection limits of Table 1 to be acceptable for the HSL GC/MS analyses of low-level soils. The detection limits for pesticides/PCB's are unacceptable for low-level soils. This must be resolved prior to QAPP approval.

Response: The detection limits for HSL compounds and pesticides/PCB's have been revised according to the Contract Required Detection Limits as shown in Table 2 (following p. 3-2) of the QAPP.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY

1. Field activities including sample collection.

Response: The Project Hydrogeologist/Engineer has the responsibilities for field activities including sample collection as described in Section 2.4.

2. Laboratory analysis. The specific laboratory to be used should be identified.

Response: The Laboratory Director of IT Analytical Services in Knoxville, Tennessee will be responsible for the laboratory analysis as described in Section 2.6.

3. Laboratory QA responsibility. The QA Manager appears to have responsibility for field activities and systems audits of field activities.

Response: The QA Manager will audit the field activities, which are the responsibilities of the Project Hydrogeologist/Engineer (Section 2.4).

4. Data Assessment prior to RI report preparation.

Response: Data assessment will be conducted prior to preparation of the RI report by the QC Coordinators (Section 2-7), the Project Hydrogeologist/Engineer (Section 2.2), the Project Manager (Section 2.1), and the Project Executive (Section 2.2).

5. Evaluation of tentative identifications of unknown compounds and their need for confirmation.

Response: As illustrated in the response to item (3) of 1.0 - Introduction, the GC/MS analysis would be limited to the HSL compounds including dioxin per EPA CLP procedures. Therefore, responsibilities for evaluation of tentative identifications of unknown compounds and their needs for confirmation are not included for the QC Coordinators or the Laboratory Director.

6. Performance Audits and Systems Audits for Field and Lab. Region V, EPA has a certain oversight responsibility in this area.

Response: The Project Manager will be responsible for coordination of the QAPP activities including the Performance Audits and System Audits for Field and Lab as required by EPA Region V (Section 2.1).

3.0 QA OBJECTIVES

1. The QA Objectives section is unacceptable because no specific information is provided for the test procedures being used. QA objectives need to be detailed such as what surrogate compounds will be used, their concentration, acceptance criteria for their recovery, as part of the accuracy objectives. QA Objectives need to be established for field blacks, etc. QA Objectives need to be precisely stated for accountability purposes.

Response: Sample analyses will be performed as specified by EPA Contract Laboratory Program protocol and methods. The QA objectives will be the same as CLP's.

2. Rewrite the QA Objectives Section

Response: Sections 3.0, 3.1 and 3.2 have been revised to specifically state that the sample analyses will be performed according to EPA Contract Laboratory Program protocol and methods. The objectives for data precision, accuracy and completeness will be the same as those established by EPA CLP protocol.

3. Detail the audits to be performed to define data accuracy, precision, and accuracy, but stress the qualitative identification of pollutants as being dominant if this is the primary purpose of Phase I of the RI; however, do not change QA Objectives as defined by the CLP program for dioxin.

Response: The audits to be performed will follow the EPA CLP protocol to define data accuracy, precision and completeness.

4.0 SAMPLING PROCEDURES

1. The Sampling Procedures and Sampling Plan (Appendix A) are generally acceptable, except in 2 instances. The IT QA Manuals should be provided to Region V if they are cited in Section 4.0.

Response: The IT Quality Assurance Manuals for Engineering and Analytical Services are provided along with this submittal for EPA review.

2. The Sampling Plan makes no special provisions for collection of dioxin. Are any special sampling equipment, decontamination procedures, and specially cleaned sample bottles used for dioxin soil samples that are different from routine HSL organics?

Response: The preparation of sampling bottles and decontamination procedures for dioxin soil samples will be the same as for routine HSL organics.

5.0 SAMPLE CUSTODY

1. The QAPP needs to address sample custody for the laboratory and for final evidence files. See NEIC guidelines for Chain-of-Custody which discuss these 2 parts.

Response: The IT Analytical Services Standard Operating Procedures for internal sample coding, tracking, chain-of-custody, etc. are stated in Section 5.4 and described in Appendix C.

6.0 EQUIPMENT CALIBRATION

1. The calibration procedures for the OVA and HNu instruments needs to be specifically described in this section or in the Sampling Plan.

Response: The calibration procedures for the OVA and HNu instruments are stated in Section 6.3 and described in Appendix E.

7.0 ANALYTICAL PROCEDURES

1. Specify the CLP IFB's if they are to be used for HSL Organics and pesticides/PCB's. Itemize any deviation from the IFB's if they are expected. If methods are used that are significantly different than IFB's, then provide write-ups for these test procedures, as an appendix to the QAPP, so they can be reviewed by Region V.

Response: As stated in Section 7.2, the analyses for HSL organics and pesticides/PCB's will follow the methods specified in EPA IFB WA-84-A267 and subsequent amendments and revisions in effect at the time of analysis.

2. The analytical procedures Section of the QAPP should not be considered acceptable as written until proposed methods are clearly defined for EPA review and for consistency with Consent Decree requirements.

Response: The revised analytical procedures follow the CLP protocols and methods, therefore, Section 7.0 should be considered acceptable.

8. DATA REDUCTION, VALIDATION, AND REPORTING

1. Data reporting and data records need to be specified and discussed in more detail if they are different from CLP protocols.

Response: The data reporting and data records will meet the requirements of CLP protocol (Section 8.0).

9.0 LABORATORY QUALITY CONTROL PROCEDURES

1. The QC protocol section of the QAPP should not be considered acceptable as written. Details necessary for review are not provided. IT should either use CLP protocols, or document and justify the QC protocols they are actually using, for Region V review.

Response: The CLP protocols will be used for the laboratory quality control procedures (Sections 9.2.1, 9.2.2, and 9.2.3). Therefore, the revised QC protocol section should be acceptable.

2. The dioxin IFB protocol is specified by IT. The Region V Quality Assurance Office can provide the EMSL-LV Performance Evaluation sample, blank, and matrix for spiking that are a necessary part of this protocol, since they are not commercially available.

Response: The quality control procedures specific for dioxin analysis at the IT Analytical Services Laboratories in Knoxville, Tennessee are stated in Section 9.2.4 and described in Appendix F.

10.0 PERFORMANCE AND SYSTEMS AUDITS AND FREQUENCY

1. Until analytical procedures and QA protocols are better defined by IT for the RI, Region V should not consider this Section to be acceptable.

Response: The analytical procedures and QA protocols have been defined to follow EPA CLP methods and protocols in the preceding sections, therefore, this section should be acceptable.

We trust this submittal satisfies the EPA review comments and the main concerns with the QAPP. If you have any questions, please contact me at 414-359-2222.

Respectfully submitted,

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Project Manager

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