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Cook Composites and Polymers

Headquarters
P.O. Box 419389
Kansas City, MO 64141-6389
(816) 391-6000
FAX: (816) 391-6215

General Office
217 Freeman Drive
P.O. Box 996
Port Washington, WI 53074
(414) 284-5541
FAX: (414) 284-7519

September 30, 1992

Mr. Robert Dean Smith (HRE-8J)
Project Manager
United States Environmental Protection Agency - Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: DRAFT CORRECTIVE MEASURES MEETING MINUTES, COOK COMPOSITES & POLYMERS

Dear Mr. Smith:

We would like to thank you for meeting with us and our consultant, RMT, Inc., on September 9, 1992, to discuss the work required from the USEPA letter dated July 24, 1992. We believe that substantial progress was made in clarifying the necessary scope of work for corrective measures at our Saukville facility. We are providing you and Ms. Jill Fermanich the draft minutes from our September 9 meeting. The draft minutes are intended to document the agreements reached between CCP, the USEPA, and the WDNR, and our common understandings regarding the following work:

- The USEPA comments on the Revised Project Plans, Task 3a, 3b, and 3c (RMT, 1991)
- Outstanding work items requested by the USEPA from the Scope of Work under the 1987 Consent Order
- Additional work requested by the USEPA related to the investigation and potential remediation of on-site soils

These draft minutes are provided for your careful review and approval. Please provide your comments on the draft minutes by October 9, 1992, to Mr. Craig Bostwick of CCP. As you are aware, we are developing the draft Workplan (required by USEPA's letter dated July 24, 1992, and telefax dated September 10, 1992) in accordance with these agreements and understandings. Your timely response to the meeting minutes is essential for the development of this Workplan, since the Workplan is due December 11, 1992. If no comments are received by October 9, it is CCP's understanding that the USEPA approves of the draft minutes and that the minutes may be considered final.

Once the meeting minutes are final, CCP intends to prepare a Response to Comments Memorandum that documents CCP's approach to addressing each of the concerns raised in the USEPA's July 24, 1992, letter. The past disposal history of the 18 areas of concern would be included in this memorandum.

* point out to Stacey that we basically want to evaluate whether or not that these are not continuing sources of gw contam or gross soil contam or.

1832.17:MSD:smith

⇒ serve public interest

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(414) 284-5541
FAX: (414) 284-7519

Thank you for your timely response. We look forward to working with you and the WDNR to improve the environment at our Saukville facility.

Sincerely,

Daniel Grasset
Vice President - Operations

nsr

Enclosure

cc: Craig Bostwick, CCP
Jill Fermanich, WDNR
Daniel Grasset, CCP
Laura Lodisio, USEPA
Stacy McAnulty, RMT
James Rickun, RMT

1832.17:MSD:smith

DRAFT MEETING MINUTES
SAUKVILLE CORRECTIVE MEASURES
Cook Composites & Polymers

The purpose of these minutes is to document the corrective measures meeting discussions held on September 9, 1992, among the United States Environmental Protection Agency (USEPA), the Wisconsin Department of Natural Resources (WDNR), Cook Composites & Polymers (CCP), and RMT, Inc. (RMT).

List of Attendees

Laura Lodisio	USEPA/RCRA Enforcement	Branch Chief
Robert Dean Smith	USEPA/RCRA Enforcement	Project Manager
Kevin Bolger	USEPA/ESD/Monitoring and Quality Assurance Branch	Representative
Jill Fermanich	WDNR/Hazardous Waste Management Section	Project Manager
Daniel Grasset	CCP	Vice President-Operations
Craig Bostwick	CCP	Corporate Environmental Compliance Manager
James Rickun	RMT	Program Manager Air Pollution Engineering
Stacy McAnulty	RMT	Technical Coordinator

Background

The USEPA provided comments dated June 25, 1991, to CCP on the Revised Project Plans, Task 3A, 3B, and 3C (Hatcher-Sayre, April 1991). In response, a pre-QAPP meeting was held on September 30, 1991, to determine the course of action for incorporating the USEPA's comments and finalizing the Revised Project Plans. The Revised Project Plans consist of the Workplan for aquifer testing, groundwater monitoring, and off-site soil sampling; the data management plan; the community relations plan; and the QAPP, which focuses on laboratory procedures.

Cook Composites & Polymers had changed consultants from Hatcher-Sayre to RMT, Inc., prior to this pre-QAPP meeting. RMT documented CCP's intended course of action to the USEPA in the minutes

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from the pre-QAPP meeting. The USEPA did not comment on these meeting minutes. CCP followed the course of action outlined in the minutes by incorporating the USEPA's comments dated June 25, 1991; modifying the groundwater monitoring program to include sampling objectives; and preparing a project-specific laboratory QAPP (according to the RCRA QAPP model guidance).

The Revised Project Plans, Task 3A, 3B, and 3C (RMT, 1991), as described above, were submitted to the USEPA in November 1991. Time was considered of the essence since the USEPA's approval of this workplan was necessary to move ahead with the outstanding work items under the 1987 Consent Order.

The USEPA responded in writing to this submittal in the letter dated July 24, 1992 (approximately 8 months later). This letter included the USEPA's comments on the workplan portion of the Revised Project Plans (RMT, 1991). Most importantly, this letter requested the completion of outstanding work items and additional work requirements under the 1987 Consent Order.

The magnitude of these USEPA requirements were substantial, and CCP requested a meeting to discuss the corrective measures work.

Purpose of the Meeting

To discuss the objectives of the USEPA-requested corrective measures and to determine the scope of work for outstanding and additional work items that are to be performed under the 1987 Consent Order.

Response to the USEPA's Comments on the Revised Project Plans

Part of the history surrounding the Revised Project Plans (RMT, 1991) development was discussed at the meeting. Minor technical comments were received on the workplan portion of this document, and no USEPA comments were received on the laboratory QAPP. Apparently the laboratory QAPP was not reviewed by the USEPA's Monitoring and Quality Assurance Branch (MQAB). MQAB prefers the development of a new QAPP for all on-going and additional work, according to the Region V RCRA Model QAPP. Since the scope of additional work was not yet defined, MQAB did not believe it was appropriate to review the Revised Project Plans. CCP disagreed with this approach because the method for development of the Revised Project Plans was agreed to in the fall of 1991.

CCP is disappointed with the USEPA's position concerning the Revised Project Plans. To avoid further confusion concerning the QAPP and Workplan approval by USEPA, CCP is requesting formal

written approval of the proposed approach for the QAPP and Workplan development. CCP must be provided clear, definitive direction from the USEPA for the development of the Workplan and QAPP. We understand that Bob Smith is the Project Manager and we expect that direction will come from Bob Smith regarding this matter. CCP further requests that the criteria for review and approval of the Workplan/QAPP be documented by the USEPA and provided to CCP.

To progress with the work in good faith, CCP proposes to prepare an all-encompassing Workplan/QAPP for the existing work and the future scope of work for the corrective measures investigation. This Workplan/QAPP will include the following:

- Information contained in the Revised Project Plans (RMT, 1991) concerning on-going work, which will be revised to conform with the RCRA QAPP model guidance
- Outstanding work items from the Scope of Work of the 1987 Consent Order, which are documented in these meeting minutes
- Additional work items for the corrective measures investigation, which is documented in these meeting minutes
- QAPP procedures for the on-going and planned corrective measures

This all-encompassing document will be called the Corrective Measures Workplan/QAPP. An outline of the Workplan/QAPP will be provided to Bob Smith. To avoid further misunderstandings concerning the QAPP, CCP requests to meet with MQAB and Bob Smith after their review of the outline to document the project-specific QA/QC requirements that must be addressed for USEPA approval of the QAPP. Formatting issues are discussed below, followed by technical issues for the development of the Workplan/QAPP.

Formatting Issues

Additional file information is provided in Attachment 1 that documents the development of the Revised Project Plans. This information includes the following:

- Cover letter from Hatcher-Sayre's submittal of the laboratory QAPP (Enseco, July 1989). This letter notes the USEPA's previous approval of the field operations.
- The USEPA's comments from George Schupp, Chief of the Quality Assurance Section dated June 25, 1991, on the Revised Project Plans, Task 3A, 3B, and 3C (Hatcher-Sayre, April 1991). These comments focus on technical issues that require correction.

- Meeting minutes from the pre-QAPP meeting held on September 30, 1991. These minutes document RMT's approach for modification of the Hatcher-Sayre April 1991 submittal to address the USEPA's comments dated June 25, 1991, and to submit a new laboratory QAPP, according to the RCRA QAPP model guidance.

- Cover letter and response to the USEPA's comments for RMT's November 1991 submittal of the Revised Project Plans. This cover letter restates the reasoning behind the technical content and format of the submittal. Every effort was made to ease the review of the modified document.

This information clearly documents that the Revised Project Plans were modified as agreed to at the pre-QAPP meeting of September 30, 1991. If the USEPA did not agree with this approach, they should have contacted CCP upon receipt of the pre-QAPP meeting minutes.

To prepare an all-encompassing Workplan/QAPP for the existing and future scope of work, information from the Revised Project Plans would be updated to conform with the recent RCRA QAPP model guidance. This information includes the following:

- Sampling plan for groundwater monitoring
- Field methods for groundwater sampling
- Field methods for aquifer testing
- Data management plan
- Community relations plan
- Instrument calibration procedures
- Health and safety plan

The laboratory quality assurance/quality control (QA/QC) procedures are site specific and were developed according to the RCRA QAPP model guidance. Minimal further development of the laboratory quality assurance procedures for the on-going groundwater monitoring program is anticipated.

Technical Issues

Three technical issues were discussed concerning the groundwater monitoring program. These issues are documented below.

- Appendix IX groundwater sampling - CCP agrees to perform one round of sampling at seven of the eight wells identified. Well 44 has been dry, and it is not feasible to replace the well deeper in the overburden. CCP will propose in the Corrective Measures Workplan/QAPP that pesticides and dioxins be eliminated from the list of analytes based on the knowledge that these chemicals were not used at the site. Capacitors and transformers have been used at the southwestern corner of the facility. CCP proposes to include PCBs in the list of analytes for wells 6A and 29, which are located in the vicinity and downgradient of the capacitors and transformers.

- Frequency of groundwater sampling at receptor, perimeter, and remediation progress monitoring wells - CCP intends to propose in the Corrective Measures Workplan/QAPP that receptor wells be monitored quarterly (no change), perimeter wells be monitored semiannually (USEPA comment), and that remediation progress wells be monitored annually (CCP request). This program is intended as an interim program that is focused on protection of the municipal water supply. Six months after on-site soil remediation is implemented, CCP proposes that remediation progress monitoring may be increased to semiannually to assess the effectiveness of soil remediation measures on groundwater quality.

- Electronic transfer of groundwater analytical results to the USEPA - CCP intends to transfer to the USEPA the groundwater analytical results as an Aeskie file in a format of CCP's choosing. Field data (conductivity, water levels) will not be provided.

- Off-site soil contamination at the Logeman Property and Church Yard Property - CCP agreed to develop soil sampling programs for investigation of these two areas.

Outstanding Work Under the 1987 Consent Order

Outstanding work under the 1987 Consent Order discussed at the September 9 meeting included Tasks 4, 5, and 6 from the 1987 Scope of Work. The agreements reached and the clarifications made concerning the outstanding work are discussed below.

Task 4A Surface Water Storage and Siltation Basin - The USEPA clarified that the intent was for CCP to document the existence and purpose of the basin. CCP intends to document the location and purpose of the basin in approximately two to three sentences in the Response to Comments Memorandum.

Task 4B Updating Task 4 Report Exposure Information - It was agreed that this would not have to be performed by CCP. Exposure information for groundwater will be provided by CCP if CCP chooses to prepare a risk assessment in proposing Alternative Concentration Limits (ACLs) as groundwater cleanup goals.

Task 4C Groundwater Protection Standards - CCP agrees to develop groundwater protection standards following Appendix IX sampling as part of the Additional Work Report. If ACLs are proposed, CCP intends to prepare a risk assessment for groundwater.

Task 4D Fate and Treatment of Excavated and Stockpiled Soil - CCP noted that this was documented in the Task 2 site Conditions and Construction Report 1986 - Volumes 2 and 2A. The USEPA agreed that no further work is necessary to document the fate and treatment of excavated and stockpiled soil.

Task 5 Re-evaluated Groundwater Remediation System - The USEPA clarified that this is somewhat of a generic requirement that was intended for CCP to consider the compatibility of the future soil remedy with the on-going groundwater remediation. The USEPA clarified that actual re-evaluation of the groundwater remedy was not implied or intended.

Task 6 Reports - The number and type of reports required under the existing Scope of Work and for the additional work requirements were listed and discussed. CCP noted that nine major deliverables and 15 annual submittals were required. To streamline and expedite the actual implementation of corrective measures, the following was agreed upon:

- Bimonthly progress reports would not be required. Instead, the quarterly groundwater reports would include a one- or two-paragraph summary of the project status. ok
- An alternative to preparing the draft and final Corrective Measures Study (CMS) **Workplan** would be considered by the USEPA. CCP proposes that a detailed outline of the CMS Report be provided in writing to the USEPA and the WDNR followed by a meeting to discuss the objectives and approach for development of the CMS Report. ok

Additional Work Requirements

The remaining items discussed at the meeting were additional work requirements beyond the fulfillment of the 1987 Consent Order. These items are discussed below.

Task 1 Groundwater Monitoring Well Replacement and Additional Wells

The replacement of five wells (43, 44, 4A, 7A, and 8A) was required by the USEPA. CCP agreed to replace wells 7A and 8A. Wells 43 and 44 cannot be replaced in the overburden material because their screened intervals extend down to bedrock based on the available boring logs. CCP proposes that replacement of well 4A is not necessary because this well does produce water periodically and has been relatively clean in the past.

The installation of two new wells (sinkhole and south end of site near spill area) was required by the USEPA. It was agreed at the meeting that no additional well would be necessary at the sinkhole area because this area is relatively clean and the well coverage is adequate between well 20 (directly in sinkhole) and wells 3A, 3B, 7A, 8A, and 29 (surrounding area). In addition, total VOC levels are relatively low at well 20 (10's ppb range) and the sinkhole is not an area of concern.

CCP intends to propose as part of the Response to Comments Memorandum that no well is necessary at the south end of the site because this was not a spill area of concern. During the meeting, CCP explained that this was the established employee parking area and that raw materials were not stored at this location.

Task 2 Potential Sources of Groundwater Contamination

CCP presented a brief history of past disposal practices at the 18 areas of concern and noted corrections to Figure 1 of the Findings of Fact for the exact location and past use of some of the 18 areas of concern. It was suggested by CCP that three major potential sources of soil contamination exist at the site. These areas include the old dry well, tank farm area, and present incinerator area.

The present incinerator area includes the former hazardous waste incinerator and storage area. The former hazardous waste incinerator and storage area is being investigated and remediated under state requirements for closure of this area. Minimal additional corrective measures work is anticipated by CCP for the former hazardous waste incinerator area.

CCP requested that "double jeopardy" be avoided at the former incinerator area since this area is being addressed through the incinerator closure requirements of the Wisconsin Administrative Code. It was agreed that the incinerator closure investigation results could be used for corrective measures investigative purposes under RCRA.

Task 4 Bioremediation/Bioventing/Vapor Extraction

The USEPA waived this as a requirement and suggested that CCP merely consider this remedial technology. CCP agreed and commented that they were not in the business of pilot-testing innovative technologies for the USEPA.

Task 7 Corrective Measures Study

CCP agrees to perform a Corrective Measures Study dependent on the results of the corrective measures investigation.

Summary

The USEPA, the WDNR, and CCP (and RMT, Inc.) met on September 9, 1992, to discuss the corrective measures required at CCP's Saukville, Wisconsin, facility. A scope of work was agreed to that will focus CCP's efforts on the investigation and potential remediation of three major areas of concern. These areas include the following:

- Old dry well
- Tank farm area
- Present incinerator area

Proposed Method to Proceed with Work

Upon the USEPA's approval of these meeting minutes, CCP proposes to proceed with the work as follows:

- Prepare Responses to Comments Memorandum, including the rationale for not addressing the remaining 16 areas of concern.
- Prepare an outline of the Draft Corrective Measures Workplan/QAPP.
- Meet with Bob Smith and MQAB of the USEPA to clarify QAPP requirements.
- Prepare Draft Corrective Measures Workplan/QAPP that includes the following:
  - on-going activities
  - outstanding work items from the 1987 Consent Order
  - additional work requirements
  - QAPP for all on-going and planned corrective measures
- Prepare final Corrective Measures Workplan/QAPP incorporating the USEPA's comments.
- Obtain the USEPA's approval of the final Corrective Measures Workplan/QAPP.
- Perform the corrective measures investigation.
- Prepare Draft Corrective Measures Investigation Report.

HATCHER-SAYRE, INC.

August 4, 1989

RCRA Enforcement Branch
USEPA
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Attn: Mr. William E. Muno, Chief
5HR-12

Re: Freeman Chemical Corporation
Corrective Action Order
Task 3, Project Plans
Job No. 0001-003

Gentlemen:

In response to your letter dated June 29, 1989 and received on July 5, 1989, transmitted herewith is the revised QAPP for the above referenced project.

In the second paragraph of your June 29, 1989 letter it was stated that "the plan received addresses only the laboratory participation in the project and does not include the required field operations." The field operations were previously approved as stated in your March 2, 1989 letter and as confirmed in our April 7, 1989 letter response to you.

Should you have any questions concerning the QAPP, please contact us. We look forward to final approval of the QAPP so we can proceed with Task 3 of the Corrective Action Order.

Sincerely,

HATCHER-SAYRE, INC.

Stephen G. Werner, P.G.
V.P., Hydrogeologic Services

SGW/cc
muno.ltr
Attachment
cc: Mark Tusler (2)
Frank Schultz (2)
Craig Bostwick (1)
Russell Cerk (1)

FREEMAN OFFICES

905 Southlake Boulevard, Richmond, Virginia 23236 (804) 794-0216 Fax No. (804) 379-8934

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO ATTENTION OF: 5SMQA

MEMORANDUM

DATE: JUN 25 1991

SUBJECT: Review of First Revision Quality Assurance Project Plan (QAPjP) for Cook Composites and Polymers Co. (Formally Freeman Chemical), Saukville, Wisconsin.

FROM: George C. Schupp, Chief
Quality Assurance Section

TO: Laura Lodisio, Chief
MI/WI Section

ATTENTION: Robert Smith, Project Coordinator

We have completed our review of the subject first revision QAPjP (QAS Log-In #17) received on April 15, 1991. The present QAPjP is not approvable since it contains numerous deficiencies which are detailed in this memorandum. These deficiencies include CRL comments on both the QAPjP and laboratory QAPjP.

CRL has some general project concerns which must be addressed:

Page 16 of the QAPjP shows a map of high volatile concentrations. Page 75 of the QAPjP shows volatile concentrations from Well 6A. The QAPjP does not address how volatiles (Appendix IX, BTEX, or TCL) are going to be measured in the presence of large concentrations of volatiles (i.e. toluene and xylene at 70,000 µg/L). For Well 6A, the best detection limit for the remaining Appendix IX compounds is 3000 to 5000 µg/L. This was discussed in the laboratory evaluation report and several times with Hatcher-Sayre. Therefore, the following items must be addressed:

1) Specialized QA objectives are necessary for TCL volatiles,and BTEX method 602. The toluene and xylene could even effect Method 8270.

2) The selection of sampling wells for Appendix IX and will be critical since relatively clean downgradient wells may have to be selected for Appendix IX testing.

3) Detection limits in Tables 7-8, 7-9, and 7-1 are not meaningful for this type of gross contamination. The

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toluene problem is addressed somewhat from these tables but more information must be supplied in the QAPjP and LQAPjP.

4) Isoconcentration contours and trend analysis will not be practical for many of the volatiles on page 74 unless the detection limit problem is resolved.

5) Page 18 of the QAPjP mentions that 1,1,1-TCA, vinyl chloride and 1,2-DCE (total) are not important indicators. However, they will be important further from the site. Therefore, these contaminants should not be overlooked.

All of these issues must be resolved. This may involve running a sample twice and/or changing the locations of samples to be collected.

The remaining comments are outlined below:

I. LABORATORY QUALITY ASSURANCE PROJECT PLAN

A) Title Page

Valerie Jones is the QA Officer for Region V. Replace "David Payne" with "Valerie Jones".

B) Sampling Procedures

1) Table 4-2: ENSECO/RMAL does not use method 9030 for sulfide. In 1990, it used a distillation/methylene blue method with a detection limit of 0.10 mg/L or less (see Table 7-5). Please correct this ambiguity.

C) Analytical Procedures

1) The laboratory QAPjP does not address extraction procedures for methods 8080, 8140, and 8150. Specify in a table the extraction procedures to be used for each of these procedures.

2) Test procedures for 8140 and 8150 were found not acceptable during the laboratory evaluation. ERCO should have new SOPs developed by now (see lab evaluation report). Please address.

3) Methyl methacrylate, Pyridine, Ethyl methacrylate, and 2-Picoline need to be added to calibration standards. We recommend they be added to Method 8270 (along with 1,4-Dioxane. Correct Table 7-10 to reflect these additions.

4) Table 7-2 of this QAPjP (Method 8270) has reporting limits inconsistent with our observations of June 1990 (see item 3a through 3g on page 5 of the laboratory evaluation report). Please correct.

5) See comment on item 4 of page 5 of the laboratory evaluation report (vs. Table 7-1) regarding inconsistent reporting limits for volatiles. Please correct accordingly.

6) The laboratory evaluation report indicated that sample prep procedures, extract cleanups, matrix spike compounds and surrogates be used. These procedures and compounds have not been stated in the laboratory QAPjP. Provide tables for this information in this section. NOTE: WE have not approved sample extraction, extract cleanups and test procedures for methods 8140, 8150, and 8080. These items must be presented for review and approval.

7) QA objectives do not address specific matrix spikes and surrogates to be used (see pages 5 and 6 of laboratory evaluation report). Prepare a table for all matrix spikes, surrogates and their control limits based upon the recommendations of the laboratory evaluation report.

D) Data Reduction, Validation, and Reporting

Please specify in this section that the data reporting package will include "CLP-like" deliverables.

E) Performance and System Audits

1) Section 10.1.: Add the following sentence to the last paragraph of this section: "For this project, external laboratory audits will be performed by U.S. EPA Central Regional Lab (CRL) while field audits will be performed by U.S. EPA Central District Office (CDO)."

2) Section 10.2.: The first sentence states "Each laboratory is subjected to quarterly systems audits by ERCOs QA director as well as external audits by ...". Change the word "external" in this sentence to "internal". From a project standpoint, only U.S. EPA is responsible for external audits.

II. QUALITY ASSURANCE PROJECT PLAN

A) Section 1.2.2., bottom of page 5: The QA/QC Coordinator is responsible for internal performance and system audits only. The external performance and system audits are the responsibility of U.S. EPA. Please delete "external" from the descriptions in this section.

B) Section 1.2.2.: This section should specify the laboratories involved in sample analyses. For example, if ENSECO/CAL is to do Method 8280 for dioxins and dibenzofurans and ENSECO/RMAL is to test sulfide, these laboratories need to be mentioned in this section. Please add.

C) Table 2 (page 11): The following items need to be corrected:

1) Field blanks and field duplicates are to be collected at a frequency of one per ten or fewer investigative samples. For 15 samples, TWO field duplicates and TWO field blanks need to be collected. Change these numbers and examine all other values in this table for accurate numbers of field duplicates and field blanks.

2) This table shows that there will be 4 sampling rounds for BTX in groundwater. However, the number of quarterly samples to be taken is 15 while the annual number is also 15. Why, then, are there three OTHER sampling rounds if all the samples are collected in the first round? Correct all entries in this table to provide continuity.

3) This table specifies that one groundwater sample will be collected for Appendix IX analysis. However, the project scope on page 23 and beyond specifies more than one well to be sampled for Appendix IX. Correct this discrepancy between the samples to be collected in the project and the number of samples as stated in this table.

4) Methods listed in this table are not 600 series methods but 8000 series methods of SW-846. Also, "Total Sulfide" is not based on Method 376.2 but a different method. Please clarify these methods to be used as SW-846 third edition methods. Also, review ALL methods and specify the actual reference the method is based on.

D) Pages 18 and 75 (and others): Trans-1,2-DCE is mentioned. This terminology needs to be changed. The volatile is "1,2-DCE (total). Please correct all "trans-" terminologies.

E) Page 24: The "phenolics" test is mentioned. This is not in Table 2 or the ERCO QAPjP. Please correct the discrepancy by placing this analysis in Table 2 or deleting this test from the QAPjP.

F) Table 8: No sample preservation, container, or holding time is listed for sulfide, mercury, or cyanide. Please add and review this table to ensure all methods specified in the QAPjP are in this table.

G) The soil sampling discussed in sections 2.9 and 2.10 (page 48) is not discussed in the ERCO QAPjP and this information does not appear in Table 2. Table 2 must include ALL samples and analyses to be performed for the project. Add the number of soil samples to be collected in this section to Table 2.

H) Appendix D: The ENSECO/ERCO QAPjP is out of date and is not the QA plan usually presented by ENSECO in 1990. Please update the QA manual by submitting the most current revision (the present one is dated 3/87).

I) Please specify in this QAPjP that the data reporting package will include "CLP-like" deliverables, as well as the contents of evidential records. NOTE: This includes not just the laboratory deliverables but ALL information generated during the project (i.e. airbills, field logbooks, field calibration information, field corrective actions, etc.). Please provide.

Please have the RPM forward this memo to the contractor immediately. For the next revision, submit only those pages which need to be corrected. If you have any questions regarding this report, please feel free to contact Mike DeRosa, of my staff, at (312) 353-5966.

FIQOWM-3-4-

AUG 31 1990

5SCRL

MEMORANDUM

SUBJECT: Laboratory Evaluation - ENSECO-ERCO, Cambridge, MA for Freeman Chemical, WI RFI

FROM: Charles T. Elly, Acting Director
Central Regional Laboratory

TO: William E. Muno, Chief
RCRA Enforcement Branch

ATTN: Robert Smith

I. INTRODUCTION

On June 18, and 19, 1990, David A. Payne, Chemist, Central Regional Laboratory (CRL) evaluated ENSECO-ERCO, Cambridge, MA for chemical analyses to be done in support of the RCRA Facility Investigation (RFI) at Freeman Chemical, Saukville, Wisconsin. Chemical analyses to be done are Appendix IX for groundwaters and the Contract Laboratory Program (CLP) GC/MS semi-volatiles and volatile Target Compound List (TCL) for soils/solids. The laboratory is also to measure benzene, toluene, ethyl benzene and xylenes for waters and soils/solids using ERCO Method 8020.

The laboratory evaluation was done in conjunction with the Method Detection Limit (MDL) study for Appendix IX compounds provided by ENSECO-ERCO to Region V on November 30, 1989, and with the laboratory QA Project Plan (QAPP) (dated July 19, 1989) which was received by Region V on March 29, 1990. The Appendix IX MDL study documents performance for the Appendix IX organic compounds that are not part of the CLP TCL that the laboratory routinely determines on a day-to-day basis.

The laboratory evaluation did not cover Appendix IX dioxin, dibenzofuran compounds since these are to be tested by ENSECO-CAL for the subject RFI. The laboratory evaluation also determined that ENSECO-ERCO would not be determining sulfide. Sulfide will be determined by ENSECO-RMAL, Arvada, Colorado. The RFI QAPP must reflect this item.

A specialized site-specific condition for Freeman Chemical is that contaminated groundwater at the site can contain 20 or 25mg/l toluene. Appendix IX and CLP TCL volatile analyses for the RFI will be effected by this single large contaminant. We discussed this situation with ENSECO-ERCO staff for alternatives they could provide for volatile analyses but made no recommendations pending further discussions with the RCRA Enforcement Branch and Hatcher Sayre about data quality objectives.

II. SUMMARY

A. ENSECO-ERCO is acceptable and appropriate for the determination of:

1. Inorganics (metals and cyanide) See Table 7-4 and 7-5 of ERCO QAPP. The laboratory follows closely the CLP Inorganics SOW Cold vapor mercury, graphite furnace atomic absorption determinations for arsenic, lead, selenium, and thallium and ICP emission spectroscopy for the remaining metals (including tin) will be done. A very brief review was made for inorganics.

2. Aromatic Volatile Compounds. See Table 7-8 of ERCO QAPP. The laboratory provides excellent analyses using their in-house SOP LM-ER-003 (8-11-89). The method follows Method 8020 and properly uses methanol extraction of any soils for the aromatic determinations and a photoionization detector for the GC. This on excellent analytical system, which includes provision for a surrogate matrix spike compound for each sample, based on review of typical data packages.

3. Appendix IX Volatiles (See Table 7-1 or ERCO QAPP) for waters and TCL volatiles for solids (See Table 7-9) by Method 8240. The basic methodology and QC for this methodology follows the CLP SOW and is acceptable, and is consistent with the Freeman Chemical QAPP. Specialized issues concerning toluene and are discussed further below. The CLP SOW procedures are used for reference 5 Point Calibration Curves and daily continuing calibration standards for CLP TCL volatiles. A separate continuing calibration standard is used to calibrate the GC/MS instrumentation for the remaining volatiles required by Appendix IX. ERCO's 1989 MDL study was specific to these extra Appendix IX compounds. The Region V evaluation reviewed these Appendix IX instrument calibrations and found them appropriate for Region V. At the time of the lab evaluation ERCO was changing or had changed to megabore GC columns from packed columns for their GC/MS systems. Volatile data were found equivalent to the volatile data determined during the 1989 MDL study using packed GC columns.

4. Appendix IX semi-volatiles (See Table 7-2 or ERCO QAPP) for waters and TCL semi-volatiles for soils (See Table 7-10) by Method 8270, except for 5 compounds discussed below.

   This methodology and QC is the CLP SOW for TCL semi-volatiles. The extra semi-volatiles of ERCO QAPP Table 7-2 for Appendix IX are determined by reference to a daily continuing calibration standard prepared from propriety stock standard solutions. The ERCO 1989 MDL study documented appropriate performance for these extra Appendix IX semi-volatile compounds, except for 5 compounds discussed below. The lab evaluation evaluated these calibration procedures and found them acceptable for Region V.

It is important to note that ENSECO-ERCO has included the 9 phosphorus compounds of Method 8140 in its MS library for Method 8270 Appendix IX compounds, because the 9 compounds included are in its proprietary stock standards. So far ERCO plans to measure the compounds by Method 8140, but it has a certain capability to do so by Method 8270. The 9 compounds in question are the last 9 compounds listed in ERCO QAPP Table 7-3.

B. ENSECO-ERCO, Hatcher-Sayne, and Region V USEPA need to consider the following toluene condition when determining Appendix IX volatiles in groundwater, or TCL volatiles in soil, or aromatic volatiles in soil.

1. Past data for groundwaters at the Freeman Chemical site indicaye toluene is present at 20-25 mg/l with lesser concentrations as groundwaters are sampled further from the source. If TCL volatiles or aromatic volatiles are sampled from soils in the source area(s), toluene can be expected to be a gross concentrations in these soils.

2. Common measurement procedures/protocols for GC/MS volatiles (Method 8270) provide for sample screening prior to analysis, to adjust sample dilution prior to analysis. The larges dominant MS peak (expected to toluene) will be brought into the instrument calibration range through sample dilution. Where 20 or 25mg/l toluene is present, we can expect detection limits to be as large as 500-5,00ug/l for the remaining TCL or Appendix IX volatile compounds. The large concentrations of toluene are diluted-out so as to protect the MS instrument and to prevent toluene contaminastion of the purge and trap/GC system for subsequent samples.

3. For the Freeman Chemical site, volatile samples will require screening prior to analysis to prevent instrument down-time from a contaminated system, and any re-sampling due to missed required holding times. ENSECO-ERCO rightfully stated during the laboratory evaluation that toluene can be a troublesome contaminant for a purge and trap system requiring constant monitoring of its background level(s).

4. If a sample aliquot is selected for volatile analysis with resulting toluene concentration of 50ug/l or less (using a common calibration range of 1-200ug/l), detection limits for remaining Appendix IX or TCL volatiles will be quite large and destroy the useability of their analysis. It has been questioned whether there is a need for Appendix IX volatile analyses when toluene is so large. An alternative is to perform a second analysis using a sample aliquot with toluene of 200 to 250 ug/l. Detection limits for the remaining volatiles could be improved 5 fold.

5. Passing any sample through a GC/MS twice to improve detection limits for non-toluene volatiles has to be done carefully. ENSECO-ERCO indicates no commercial laboratory will do it for reasonable costs, because of the danger of instrument down-time and stopping the flow of other clients' samples.

6. With diluted samples due to toluene, the reporting of Appendix IX or TCL volatile contaminants between the required reporting limit of QAPP Table 7-1 and smaller instrument detection limit becomes important. See Item C-5 below.

RECOMMENDATION:

Any site-specific QAPP for the Freeman Chemical site needs to address the measurement of volatiles in the presence of large toluene concentrations. This should be discussed further by all parties concerned, so as to provide proper instructions and objectives to the laboratory.

C. The following corrective actions are requested or are necessary prior to QAPP approval or initiation of laboratory analyses for the Freeman Chemical RFI.

1. The ENSECO-ERCO QAPP needs to define whether soils results are to be reported on a dry weight basis, through use of percent solids data from the sample jar used for analysis. Region V requires data on a dry weight basis. The ENSECO laboratory system does not provide percent solids data unless requested.

2. The laboratory evaluation determined that 5 compounds were not contained in the Appendix IX calibration standard(s) used for Method 8270. The November 1989 MDL study contained no data for these compounds. The five compounds are:

    a. Methyl methacrylate
    b. Pyridine
    c. Ethyl methacrylate
    d. 2-Picoline
    e. Aramite

    ENSECO-ERCO has stock solutions if the first 4 compounds and can insert them or mix them with the proprietary standard solution used for Method 8270. Their performance is not good because of their short chromatography retention times, but their analysis can be done. ENSECO-ERCO has not been able to obtain an Aramite standard.

RECOMMENDATIONS:

a. Consider the first 4 compound deficiency as corrected.
b. Do not stop the project if Aramite is missing.

If unobtainable, change the Freeman Chemical QAPP to reflect Aramite will not be measured.

3. The November 1989 Appendix IX MDL study of ENSECO-ERCO provided poor performance for the following Method 8270 Appendix IX compounds.

a. 2-Chloronaphthalene - no response
b. Isosafrole #1 and #2 - no response
c. sym. Trinitrobenzene - poor response factor
d. Pentachloronitrobenzene - poor response factor
e. 4-Nitroguinoline-1-Oxide - poor response factor
f. Famphur (Method 8140 Pesticide) - poor response factor
g. Hexachlorophene - no response

The sensivity and Reporting Limits of QAPP Table 7-2 should be reviewed again for these compounds as to accuracy or whether the compounds can be detected. The 2-Chloronaphthalene is an apparent anomaly unique to ENSECO-ERCO and needs to be investigated further. The remaining 6 compounds' poor performance or non-detectability are commonly observed by Region V. In Table 7-2 N-nitrosodiphenyl amine and diphenylamine should be reported as "either/or" since they can not be differentiated by Method 8270. If Method 8140 pesticides are to be done by Method 8270, Dimethoate can not be detected because of its destruction at the high pH value of extraction Method 3510.

4. The following volatiles have very poor response factors by Method 8240

   a. Ethyl Cyanide
   b. Isobutyl Alchol
   c. 1,4 Dioxane

   The Reporting Limits for these compounds in Table 7-1 of the QAPP need to be reviewed as to accuracy. The detectability of 1,4 dioxane is questionable at any concentration. The detection limit reported at 25ug/l is unreasonable for metheylene chloride. It should be smaller.

5. ENSECO in all of its laboratories, provides for common Reporting Limits. If a compound is detected at less than the designated Reporting Limit its presence is not noted.

RECOMMENDATION:

As with all RFI sites supported by ENSECO labs, we request that contaminants, if detected less than Reporting Limits, be reported. This can be done with a "J" code for GC/MS results. It will be important for the samples diluted because of toluene or the uncertainty of Reporting Limits for water soluble volatiles. This in no way detracts from the professional judgement of ERCO chemists as to what is a legitimate identification.

6. ENSECO-ERCO follows ENSECO's practice of utilizing Lab Control Standards and Surrogate Control Standard in-house controls. These serve a useful quality control purpose, but do not replace site-specific surrogate and matrix spikes.

RECOMMENDATION:

The QAPP needs to specify the frequency of matrix spikes and specify compounds used for both matrix and surrogate spikes used for organic chemical analyses. The in-house QC controls do not replace these site-specific audits. Care will be needed for the toluene containing volatile samples. We request that DBC be replaced as a surrogate for Method 8080. ERCO is requested to consult with other ENSECO labs to define a surrogate for Method 8150, and if possible, for 8140 also. If it is determined that 8140 pesticides are to be done by Method 8270, we request that at least 2 of these compounds be added to the MS/MSD mixture for Method 8270. The QAPP needs to be upgraded to define QC audits for matrix spikes and surrogate spikes for organics. The duplicate, matrix spike audits are readily done for the inorganic analyses, but still must be defined in the QAPP.

A. The following corrective action(s) are necessary for Method 8080 pesticide and PCB compounds (See alpha-BHC through Kepone of QAPP Table 7-3).

The laboratory evaluation of ENSECO-ERCO found certain deficiencies for pesticide/PCB analysis which are readily correctable if ENSECO-ERCO so desires to do so.

The laboratory had available CLP sample extraction procedures, or their more preferred "commercial", sample preparation procedures of separatory funnel or continuous liquid/liquid extraction (being implemented), Florisil as needed for waters, and dual column chromatography using packed columns. The packed columns may well be changed to capillary columns by now. Reference 5 point calibration curves were not available for the pesticides as required by Method 8080, to define the usable concentration range of interest. The extract of 30g of soil or 1 liter water was being concentrated to 1 ml for clean-up when 0.5 or 1.0ml extract volume was sufficient to meet the required Reporting Limits. Extract clean-ups were overload by the small total extract volume. The November 1989 MDL study did reflect excellent chromatography for the extra Appendix IX compounds using packed columns for Method 8080.

RECOMMENDATIONS:

1. The QAPP needs to be upgraded to reflect and define the extraction step to use for waters.

2. This should not be done with a final volume of 1ml per liter of sample.

3. Florisil chromatography should be defined and used where necessary. Sample results should not be reported with sample interferences or elevated detection limits if no clean-ups have been attempted.

4. Five point calibration curves (per requirements of Method 8080) should be established to define the usable concentration range of the instrument(s) used.
5. DBC should be dropped as a surrogate, and replaced by tetrachlorometaxylene and decachlorobiphenyl. The decachlorobiphenyl is best used with capillary columns. DBC is not appropriate for Florisil clean-up procedures.

6. The Reporting Limits used should reflect the 5 point calibration curves after provision for aliquot selection from the total extract volume.

7. The Reporting Limits of QAPP Table 7-3 should be reviewed for accuracy for the extra Appendix IX compounds. Kepone is thought to have poor chromatography behavior that the 0.lug/l value may not be appropriate.

8. ENSECO-ERCO needs to rethink their pesticide/PCB procedures of SW-846 and Method 8080. ERCO has the necessary staff, instrumentation, equipment and expertise for this specification.

E. ENSECO-ERCO was not acceptable for Method 8140 and 8150 Appendix IX determinations.

SOP's provided by ERCO for these 2 determinations were written by ENSECO-RMAL, Denver, Colorado and do not reflect what ERCO is doing. The RMAL SOP for Method 8150 was found deficient in early 1990 by Region V. ENSECO-RMAL provided an acceptable, and quite excellent SOP for Method 8150 for another Region V site subsequent to the ERCO lab evaluations.

Method 8140 at ENSECO-ERCO suffers from:

1. One instrument having one GC column with a FPD detector and one GC column with a NP detector. Which is to be used? How is second column confirmation to be done?

2. The chromatography for the November 1989 MDL Study appears undesirable.

3. Finalized extraction, extract clean-ups were not in place.

4. Five point calibration curves were not available .

5. This analysis is not routinely done.

Method 8150 at ENSECO-ERCO suffers from:

1. Standards compounds for 2,4D and Silvex were available as methyl esters. The 2,4DB is not tested often and requires derivetization as the methyl ester.

2. The interferences and chromatography performance of 2,4DB in the November 1989 MDL study is undesirable. These data were selected from previous January 1989 results.

3. Sample extract clean-ups were not in place.

4. Surrogate spikes were not in place.

5. We are unsure if the required diazomethene reagent of Method 8160 will be used instead of the less desirable BF_3 reagent.

At ERCO, Method 8150 is routinely used for 2 of the 3 required herbicides of Appendix IX. 300ml sample volumes are used instead of the required 1 liter volumes, although the Reporting Limits of Table 7-6 can probably be met using 300 ml sample volumes.

RECOMMENDATIONS:

ENSECO-ERCO needs to decide if it will implement systematic procedures for Method 8140 and 8150 during the next 1-2 months, use other ENSECO labs for these analyses, or utilize Method 8270 for the 8 of the 9 8140 phosphorous pesticides (with elevated detection limits). Implementation of Methods 8140 and 8150 needs to be discussed further with ENSECO-ERCO, or alternative labs should be found for these 2 Appendix IX determinations.

F. ENSECO-ERCO was not familiar with pertinent details of the Freeman Chemical RFI Work Plan. ERCO did provide their lab-specific QAPP, but this has defined Appendix IX analysis in a generic manner. ERCO will need to have input into a finalized QAPP/Work Plan.

One item not discussed in the ERCO QAPP is documentation of results in a data package of evidential nature. ERCO does have a "CLP-Like" data package to provide documentation of analysis, sample preparation pages or logs, chain-of-custody information, instrumentation log book records, sequence files for instrumental measurements, etc. This is not a CLP SOW package, since CLP SOW data deliverables can not be reproduced for Appendix IX commercial determinations. The Region V laboratory evaluation members were favorably impressed with the record management and data deliverable options available from ENSECO-ERCO.

RECOMMENDATION:

The final Work Plan/QAPP should define the data package necessary from ERCO so that they can provide the appropriate evidentoial and analysis records.

cc: D. Payne, CRL
G. Schupp, QAS

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CHRON
FILE WM-3-4-3

RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

November 1, 1991

Mr. Robert Dean Smith
Remedial Project Manager
United States Environmental Protection Agency
230 S. Dearborn Street (5 HR-12)
Chicago, IL 60604

RE: Cook Composites & Polymers, Pre-QAPjP Meeting Minutes

Dear Mr. Smith:

Enclosed are the pre-QAPjP meeting minutes documenting our meeting held on September 30, 1991. Three extra copies are enclosed for your distribution to David Payne, Mike DeRosa, and Stephanie Nguyen. Jill Fermanich and Tim Mulholland will also receive these meeting minutes.

On behalf of CCP, we intend to send the QAPjP for your review around November 20, 1991. Please contact us at 608/831-4444 with any comments or concerns.

Sincerely,

James S. Rickun

James S. Rickun
Program Manager
Air Pollution Engineering

kk

Enclosure

cc/enc: Craig Bostwick
Tim Mulholland
Jill Fermanich

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MEETING MINUTES
QUALITY ASSURANCE PROJECT PLANS
Cook Composites and Polymers

The purpose of these minutes is to document the pre-QAPjP meeting discussions held on September 30, 1991, among Cook Composites and Polymers (CCP), RMT, Inc. (RMT), and the United States Environmental Protection Agency (USEPA). The meeting was held at 536 South Clark Street in Chicago, Illinois. Issues concerning the Quality Assurance Project Plans were discussed for the CCP site in Saukville, Wisconsin. The list of attendees is attached as Table 1. The Wisconsin Department of Natural Resources (WDNR) was invited to attend but was unable to make the meeting because of prior work commitments.

Background

The Revised Project Plans Tasks 3A, 3B, and 3C (Hatcher-Sayre, April 1991) and the laboratory QAPjP (Enseco, January 1991) were previously prepared by Hatcher-Sayre and Enseco Laboratories, respectively. The project QAPjP consists of these two documents, which have been under development since 1987. The USEPA commented on both of these documents in a memorandum dated June 25, 1991. As CCP's new consultant, RMT will address these comments to obtain USEPA approval of the QAPjP.

Purpose of the Meeting

The pre-QAPjP meeting was held for the following purposes:

1. To resolve laboratory issues concerning elevated detection limits for organic constituents analyzed in ground water samples collected from within the contaminant plume.

2. To present RMT's proposed sampling and analysis objectives and ground water monitoring program.

3. To discuss how the USEPA comments will be incorporated into the existing Project Plans by RMT.

4. To discuss the content and preparation of laboratory QAPjP procedures for RMT Laboratories to perform analyses for remedial measures at the Saukville site.

The meeting agenda is attached as Table 2. The minutes that follow summarize the agreements made between CCP and the USEPA concerning the QAPjP. If no consensus was reached on an issue, then the various opinions are stated from each group.

Appendix IX Sampling and Analysis

The USEPA stated that Appendix IX testing would be required at the Saukville site as a matter of policy for the purpose of characterizing the nature of contamination under RCRA. RMT proposed a truncated Appendix IX list, which excluded contaminants that are not a result of past operations at the

site, such as pesticides and herbicides. Bob Smith/USEPA discussed this proposal with RCRA Enforcement following the meeting, but the result of these discussions was that the full Appendix IX list must be analyzed for in ground water.

The number, location, and frequency of Appendix IX testing was also discussed. Hatcher-Sayre had formerly proposed a one-time sampling event at one location, according to the Project Plans. The USEPA stated that one sample would not be sufficient to characterize the nature of contamination at the site. RMT and CCP acknowledged this and proposed that three ground water samples be collected from within the plume for Appendix IX analyses.

Sample dilutions will be required for Appendix IX volatile and semivolatile analyses because of the high levels of toluene, xylene, and ethylbenzene compounds present within the plume. It was agreed at this meeting that dilution of the ground water samples collected from within the plume was more representative than analyzing samples collected from the perimeter of the plume, which do not require dilution for analysis.

The following procedures will be used for sample dilution prior to Appendix IX volatile and Appendix IX semivolatile analyses.

Volatiles - Method 8240

All samples will be screened using a HP 5890 gas chromatograph with a flame ionization detector (FID).

The purgeable organics screening procedure will show approximate concentrations of major sample components. After the screening is completed, a dilution factor, if necessary, will be calculated such that the concentration of the major sample component in the mass spectrometer run shall be within the upper half of the initial calibration range of that particular instrument.

If a dilution was needed to achieve the upper range requirement, a secondary analysis will be required. This analysis will require the sample to be run 10 times more concentrated then that of the primary analysis. When the primary dilution factor is 10 or smaller, the sample will be analyzed undiluted (straight).

Since o and p xylene overlap, the upper calibration limit for these isomers is 400 µg/L.

Semivolatiles - Method 8270

All samples will be screened by GC/FID on a Shimadzu GC-14A to determine the level of BTEX. Based on that preliminary information, an initial dilution may be employed to prevent saturation of the GC/MS.

The initial GC/MS analysis for the following Appendix IX analytes may be performed on a diluted extract:

1,4-dioxane
n-nitrosodimethlyamine
ethylmethacrylate
n-nitrosomethylethylamine
n-nitrosodiethylamine
methylmethacrylate
pyridine
2-picoline
methylmethanesulfonate
ethylmethanesulfonate

These analytes will have elevated reporting limits due to the dilution factor required to prevent chromatographic saturation of BTEX. If the initial analysis is required, the first surrogate, namely 2-fluorophenol, may be outside RMT's Quality Control limit.

Based on the initial GC/MS analysis, reanalysis of the sample may be performed at a higher concentration for the remaining Appendix IX analytes.

The procedures described for Appendix IX volatile analyses were agreed to at the meeting with David Payne/USEPA. The procedures described for Appendix IX semivolatile analyses are proposed by RMT Laboratories.

Sampling and Analysis Objectives and Ground Water Monitoring Program

RMT restated the following objectives for remedial ground water monitoring at the Saukville site, in addition to the RCRA Enforcement policy of Appendix IX ground water characterization:

- Quarterly receptor monitoring to protect potential receptors, i.e., municipal wells and the POTW.
- Perimeter monitoring to provide early warning if contaminants are transported further than expected at the perimeter of the ground water contamination.
- Remediation progress monitoring to determine the effectiveness of the ongoing ground water remediation efforts.

Copies of the ground water monitoring program were distributed to each of the attendees. Sampling locations, monitoring frequency, and analytes were presented for each of the objectives listed above. The monitoring program is very similar to that presently contained in the Project Plans. The main clarification is the rationale for performing the ground water monitoring. It was agreed at this meeting that Table 3 volatiles would be analyzed for by method 8240 and that Table 4 volatiles would be analyzed for by Method 8020.

The USEPA's initial reaction to the restated objectives and monitoring program appeared to be favorable. Upon Bob Smith's request, RMT clarified the objectives and plan with the WDNR at a meeting held on October 3, 1991, at RMT in Madison, Wisconsin. At this meeting, Jill Fermanich and Tim Mulholland of the WDNR both expressed their initial approval of the sampling objectives and monitoring program.

Clarification of the sampling and analysis objectives and ground water monitoring program will be included in the Project Plans, along with a one-time Appendix IX sampling event, based on preliminary approval from the USEPA and the WDNR.

Laboratory QAPjP

It was agreed at this meeting that a new laboratory QAPjP will be developed for RMT Laboratories and that the existing laboratory QAPjP for ENSECO Laboratories will be discarded, since RMT Laboratories will be assuming the analytical work for the site. The new laboratory QAPjP will be appended to the existing Project Plans and will replace Appendix D. QAPjP elements that are specific to laboratory

QA/QC procedures will be developed in general conformance with the most recent version of the model RCRA QAPjP (USEPA, May 1991).

Project Plans

The model RCRA QAPjP guidelines will not be used as the standard to review the Project Plans. This issue was discussed extensively at the September 30, 1991, meeting. Mike DeRosa explained that an attempt to alter the Project Plans to meet recent QAPjP format guidelines would almost certainly invite a new set of comments from QAS about conformance with those guidelines. RMT pointed out that the guidelines came out after the initial QAPjP submittal but before the QAS comments on the Project Plans, dated June 25, 1991. RMT noted that the new guidelines should not be applied to the Project Plans after the fact, and that QAS already had an opportunity to address format issues. RMT asked Mike for assurance that QAS not reopen the format issue at this late date in their review. Mike stated that Stephanie Nguyen would be reviewing the QAPjP but was unclear as to who else at QAS would review the QAPjP or whether he could direct that review. Mike was planning to leave QAS in the next two weeks. He then suggested some format changes despite his earlier comments about the risks of such changes. Mike also warned that, because the project was changing laboratories and because the objectives of the ground water monitoring program were being clarified, QAS may comment on the Project Plans again, potentially using the model RCRA QAPjP as the standard for review.

RMT contended that the monitoring program clarifications do not substantially change the Project Plans. David Payne noted that the documents had already received comments from QAS and should not be subjected to new comments on the same material. RMT agreed that the USEPA should be held to their most recent review comments on the Project Plans.

RMT plans to revise the Project Plans as follows:

- Incorporate the clarification of the sampling and analysis objectives and monitoring program, as proposed to the USEPA and the WDNR.
- Address previous USEPA comments on the Project Plans from the memorandum dated June 25, 1991.

CCP is concerned that the Project Plan approval will be delayed because of formatting issues, even though technical issues have been resolved.

Approval of RMT Laboratories

David Payne indicated that RMT Laboratories would receive approval for performing volatile analyses using Methods 8240 or 8020. Data submittal packages or a laboratory audit would be required prior to approval of other Appendix IX analyses (8140, 8150, and 8080). David also indicated that he would approve Triangle Laboratory for dioxin/furans analyses, which RMT Laboratories does not perform.

Summary

RMT will submit the revised Project Plans with RMT Laboratories QA/QC procedures appended as Appendix D before Thanksgiving of 1991. The USEPA has agreed to provide comments within three weeks of receipt of the document. A meeting will be held to discuss the USEPA's comments before incorporating these into the final QAPjP document.

TABLE 1
LIST OF ATTENDEES
Pre-QAPjP Meeting
September 30, 1991

Robert Dean Smith	Remedial Project Manager	USEPA - RCRA Enforcement Branch
David Payne		USEPA - Central Regional Laboratory (CRL)
Mike DeRosa		USEPA - Quality Assurance Section (QAS)
Stephanie Nguyen		USEPA - QAS
Craig Bostwick	Environmental Manager	CCP
Jim Rickun	Program Manager	RMT
Tom Stolzenburg	Project QA/QC	RMT
Mark Wirtz	Laboratory QA Officer	RMT
Stacy McAnulty	Assistant Project Manager/ Technical Coordinator	RMT

TABLE 2
COOK COMPOSITES & POLYMERS
Quality Assurance Project Plans
Meeting Agenda
September 30, 1991

Attendees: See Table 1 for the list of attendees present.

Discussion: To present our proposed sampling and analysis objectives, ground water monitoring program, and an outline of the new laboratory QAPjP; and to discuss incorporation of the USEPA's comments into the existing Project Plans.

Objectives: To obtain USEPA approval of our rationale and approach for development of the laboratory QAPjP and revision of the Project Plans.

Agenda:

I. INTRODUCTIONS (J. Rickun) Start at 9:30 a.m.

II. BACKGROUND (S. McAnulty)

III. DETECTION LIMIT PROBLEMS FOR ORGANIC CONTAMINANTS WITHIN THE PLUME (M. Wirtz)

IV. PROPOSED SAMPLING AND ANALYSIS OBJECTIVES (T. Stolzenburg)

V. PROPOSED GROUND WATER MONITORING PROGRAM (T. Stolzenburg)

VI. LABORATORY QAPjP OUTLINE (M. Wirtz)

VII. REVISION OF PROJECT PLANS (S. McAnulty)

VIII. APPROVAL OF RMT LABORATORIES (M. Wirtz)

IX. SUMMARY OF MEETING DECISIONS AND SCHEDULE (S. McAnulty)

RMT, Inc.
744 Heartland Trail
P.O. Box 8923
Madison, WI 53708-8923
Phone: 608-831-4444
FAX: 608-831-3334

November 20, 1991

Robert Dean Smith
U.S. Environmental Protection Agency
RCRA Enforcement Branch
230 South Dearborn (5 HR-12)
Chicago, IL 60604

Dear Bob:

Attached is the resubmittal of the QAPjP and the laboratory QAPjP for the Cook Composites and Polymers (CCP) site in Saukville, Wisconsin. As we agreed upon at the pre-QAPjP meeting of September 30, 1991, this resubmittal consists of a **new** laboratory QAPjP because a different laboratory will be performing the analytical work.

The QAPjP entitled "Revised Project Plans Tasks 3A, 3B, and 3C," dated April 1991, has been previously reviewed by the Region V Quality Assurance Section (QAS). Comments were received from George Schupp, Chief of QAS, in a memorandum dated June 25, 1991. The modifications to the QAPjP, which are attached here, are directed at these comments. Other changes incorporated in the text, as presented at the September 30, 1991, meeting, were made to clarify and more closely link sampling with stated objectives. Also, the soils investigation of the church yard property and the Logeman property investigation has been deleted from the Project Plans at this time. The church yard and the Logeman property investigations were noted as deficiencies by USEPA in the April 1991 version, because the sampling analytical programs were not scoped in sufficient detail. These investigations will be submitted as a separate sampling plan and will incorporate findings from the on-going incinerator closure at the site.

RMT has resisted making additional modifications to the QAPjP, which would bring the document into closer conformity with the May 1991 Model QAPjP, the July 1990 Content Requirements, or the recent QAPjP Preparation Considerations, because the April 1991 submittal is significantly different from all of these new guidance documents. As Mike DeRosa of QAS advised at the September 30, 1991, pre-QAPjP meeting, partial alterations to address these differences will invite more comparisons and additional review comments.

Since this is a high priority site and since QAS has submitted a clear and finite set of review comments, the best way to progress on this project is to address only the June 25 comments rather than opening up the QAPjP to new guidelines which were published after the original QAPjP submittal and which were not cited in the June review by QAS. In previous communications and at the pre-QAPjP meeting, there was agreement between the USEPA and CCP as to the sampling objectives, scope of work, and methods. Therefore, the format of the QAPjP should not be cause for further delay in the work.

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For ease in comparing this final QAPjP submittal with the June 1991 comments by QAS, every effort was made to retain the appearance of the original text (i.e., horizontal spacing and pagination). Where changes in response to comments have been incorporated, rather than deleting the original text it has been single-spaced and lined out. New text is highlighted by shading, and has been positioned above and below the lines of original text so that the original words appear in the same spaces. Replaced or deleted pages are attached to this letter. Hopefully, these efforts will streamline the review process.

Very truly yours,

Stacy McAnulty for James S. Rickun

James S. Rickun
Program Manager
Air Pollution Engineering

dew

Enclosure

1832.18 0000:MSF:smith

RESPONSE TO COMMENTS BY THE QUALITY ASSURANCE SECTION,
USEPA-REGION V ON THE REVISED PROJECT PLANS - TASKS 3A, 3B, 3C
COOK COMPOSITES AND POLYMERS COMPANY
(formerly Freeman Chemical Corporation)
SAUKVILLE, WISCONSIN

COMMENT	RESPONSE TO COMMENT
We have completed our Comment review of the subject first revision QAPjP (QAS Log-In #17) received on April 15, 1991. The present QAPjP is not approvable since it contains numerous deficiencies which are detailed in this memorandum. These deficiencies include CRL comments on both the QAPjP and laboratory QAPjP. CRL has some general project concerns which must be addressed: Page 3 of the QAPjP shows a map of high volatile concentrations. Page 75 of the QAPjP does not address how volatiles (Appendix IX, BTEX, or TCL) are going to be measured in the presence of large concentrations of volatiles (i.e., toluene and xylene at 70,000 μg/L). For Well 6A, the best detection limit for the remaining Appendix IX compounds is 3,000 to 5,000 μg/L. This was discussed in the Laboratory Evaluation Report and several times with Hatcher-Sayre. Therefore, the following items must be addressed:	
1. Specialized QA objectives are necessary for TCL volatiles and BTEX Method 602. The toluene and xylene could even effect Method 8270.	Based on discussions with David Payne of CRL on September 30, 1991, if a dilution is needed to bring individual volatile constituents within the upper half of the initial calibration range for an 8240 analysis, then a secondary analysis will be performed. The secondary analysis will consist of an analysis at 10x more concentration than the primary analysis. When the primary analysis is at a dilution factor of 10 or less, then the secondary analysis will be conducted undiluted. If 8270 analysis is affected by high xylene/toluene concentrations, then similar steps will be taken.
2. The selection of sampling wells for Appendix IX will be critical since relatively clean downgradient wells may have to be selected for Appendix IX testing.	The three Ranney Collectors have been selected for Appendix IX analysis because they effectively collect samples from a broad area of the site, rather than at discrete points.

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COMMENT	RESPONSE TO COMMENT
3. Detection limits in Tables 7-8, 7-9, and 7-1 are not meaningful for this type of gross contamination. The toluene problem is addressed somewhat in these tables, but more information must be supplied in the QAPjP and LQAPjP.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the review comments. (See also comment for Item #1.)
4. Isoconcentration contours and trend analysis will not be practical for many of the volatiles on Page 74 unless the detection limit problem is resolved.	Isoconcentration contours will not be used in future progress reports because they will become less useful at this site as ground water flow directions are altered by differential pumping schemes. Trend analysis in highly contaminated wells and pumping wells will be important, as will watching for breakthrough at the contamination perimeter.
5. Page 18 of the QAPjP mentions that 1,1,1-TCA, vinyl chloride and 1,2-DCE (total) are not important indicators. However, they will be important further from the site. Therefore, these contaminants should not be overlooked.	These contaminants are included in the analytical program for locations further from the site (i.e., in the perimeter monitoring program and the receptor monitoring program).
All of these issues must be resolved. this may involve running a sample twice and/or changing the locations of samples to be collected. The remaining comments are outlined below:	
I. LABORATORY QUALITY ASSURANCE PROJECT PLAN	
A) Title Page - Valerie Jones is the QA Officer for Region V. Replace "David Payne" with "Valerie Jones."	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
B) Sampling Procedures - Table 4-2 - UNSECO/RMAL does not use Method 9030 for sulfide. In 1990, it used a distillation/methylene blue method with a detection limit of 0.10 mg/L or less (see Table 7-5). Please correct this ambiguity.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.

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COMMENT	RESPONSE TO COMMENT
C) Analytical Procedures 1) The laboratory QAPjP does not address extraction procedures for Methods 8080, 8140, and 8150. Specify in a table the extraction procedures to be used for each of these procedures.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
2) Test procedures for 8140 and 8150 were found not acceptable during the laboratory evaluation. ERCO should have new SOPs developed by now (see Lab Evaluation Report). Please address.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
3) Methyl methacrylate, Pyridine, Ethyl methacrylate, and 2-Picoline need to be added to calibration standards. We recommend they be added to Method 8270 (along with 1,4-Dioxane). Correct Table 7-10 to reflect these additions.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
4) Table 7-2 of this QAPjP (Method 8270) has reporting limits inconsistent with our observations of June 1990 (see Items 3a through 3g on Page 5 of the Laboratory Evaluation Report). Please correct.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
5) See comment on Item 4 of Page 5 of the Laboratory Evaluation Report (vs. Table 7-1) regarding inconsistent reporting limits for volatiles. Please correct accordingly.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
6) The Laboratory Evaluation Report indicated that sample prep procedures, extract cleanups, matrix spike compounds, and surrogates be used. These procedures have not been stated in the laboratory QAPjP. Provide tables for this information in this section. NOTE: We have not approved sample extraction, extract cleanups, and test procedures for Methods 8140, 8150, and 8080. These items must be presented for review and approval.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.

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7) QA objectives do not address specific matrix spikes and surrogates to be used (see Pages 5 and 6 of the Laboratory Evaluation Report). Prepare a table for all matrix spikes, surrogates, and their control limits, based upon the recommendations of the Laboratory Evaluation Report.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
D) Data Reduction, Validation, and Reporting - Please specify in this section that the data reporting package will include "CLP-like" deliverables.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
E) Performance and System Audits 1) Section 10.1: Add the following sentence to the last paragraph of this section: "For this project, external laboratory audits will be performed by U.S. EPA Central Regional Lab (CRL), while field audits will be performed by U.S. EPA Central District Office (CDO)."	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
2) Section 10.2: The first sentence states, "Each laboratory is subjected to quarterly systems audits by ERCOs QA director as well as external audits by . . ." Change the word "external" in this sentence to "internal." From a project standpoint, only U.S. EPA is responsible for external audits.	A new laboratory QAPjP was submitted to reflect a change in laboratories. The new laboratory QAPjP incorporates the Review comments.
II. QUALITY ASSURANCE PROJECT PLAN	
A) Section 1.2.2, bottom of Page 5 - The QA/QC Coordinator is responsible for internal performance and system audits only. The external performance and system audits are the responsibility of U.S. EPA. Please delete "external" from the descriptions in this section.	The change was made.
B) Section 1.2.2 - This section should specify the laboratories involved in sample analyses. For example, if ENSECO/CAL is to do Method 8280 for dioxins and dibenzofurans, and ENSECO/RMAL is to test sulfide, these laboratories need to be mentioned in this section. Please add.	The change was made to reflect all the laboratories conducting analyses.

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COMMENT	RESPONSE TO COMMENT
C) Table 2 (Page 11) - The following items need to be corrected:	
1) Field blanks and field duplicates are to be collected at a frequency of one per ten or fewer investigative samples. For 15 samples, TWO field duplicates and TWO field blanks need to be collected. Change these numbers and examine all other values in this table for accurate numbers of field duplicates and field blanks.	Table 2 has been replaced. Comments are addressed in the new table.
2) This table shows that there will be four sampling rounds for BTX in ground water. However, the number of quarterly samples to be taken is 15, while the annual number is also 15. Why, then, are there three OTHER sampling rounds if all the samples are collected in the first round? Correct all entries in this table to provide continuity.	Table 2 has been replaced. Comments are addressed in the new table.
3) This table specifies that one ground water sample will be collected for Appendix IX analysis. However, the project scope on Page 23 and beyond specifies more than one well to be sampled for Appendix IX. Correct this discrepancy between the samples to be collected in the project and the number of samples, as stated in this table.	Table 2 has been replaced. Comments are addressed in the new table.
4) Methods listed in this table are not 600 series methods but 8000 series methods of SW-846. Also, "Total Sulfide" is not based on Method 376.2, but a different method. Please clarify these methods to be used as SW-846 third edition methods. Also, review ALL methods and specify the actual reference the method is based on.	Table 2 has been replaced. Comments are addressed in the new table.
D) Pages 18 and 75 (and others) - Trans-1,2-DCE is mentioned. This terminology needs to be changed. The volatile is "1,2-DCE (total). Please correct all "trans-" terminologies.	The change was made.
E) Page 24 - The "phenolics" test is mentioned. This is not in Table 2 or the ERCO QAPjP. Please correct the discrepancy by placing this analysis in Table 2 or deleting this test from the QAPjP.	Phenolics analysis is included because of a request by the Saukville POTW, and has been shown in Table 2.

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F) Table 8 - No sample preservation, container, or holding time is listed for sulfide, mercury, or cyanide. Please add and review this table to ensure all methods specified in the QAPjP are in this table.	Sample preservation, container, and holding times are included in Table 4-1 of the Laboratory Quality Assurance Project Plan.
G) The soil sampling discussed in Sections 2.9 and 2.10 (Page 48) - is not discussed in the ERCO QAPjP and this information does not appear in Table 2. Table 2 must include ALL samples and analyses to be performed for the project. Add the number of soil samples to be collected in this section to Table 2.	Soil sampling discussed in Sections 2.9 and 2.10 has been deleted from this plan, and will be submitted later as a separate sampling plan.
H) Appendix D - The ENSECO/ERCO QAPjP is out of date and is not the QA plan usually presented by ENSECO in 1990. Please update the QA manual by submitting the most current revision (the present one is dated 3/87).	Since a new laboratory (RMT Laboratories) is being used, the QA plan for RMT was substituted.
I) Please specify in this QAPjP that the data reporting package will include "CLP-like" deliverables, as well as the contents of evidential records. NOTE: This includes not just the laboratory deliverables but ALL information generated during the project (i.e., airbills, field logbooks, field calibration information, field corrective actions, etc.). Please provide.	RMT Laboratories will provide "CLP-like" deliverables as well as the contents of evidential records.
Please have the RPM forward this memo to the contractor immediately. For the next revision, submit only those pages which need to be corrected. If you have any questions regarding this report, please feel free to contact Mike DeRosa, of my staff, at (312) 353-5966.	The whole document was resubmitted, but deleted text was retained and shown with a single line through it, and new text is clearly delineated by shading.