



December 10, 1992

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

RE: Responses to USEPA Comments Based from the July 24, 1992, Letter

Dear Bob:

On behalf of CCP, enclosed are responses to the USEPA comments from the July 24, 1992, letter. This information is provided to clarify the scope of work for the outstanding work items from the 1987 Consent Order and additional work requested by USEPA.

Comments from the cover letter and Attachments 1, 2, and 6 of the July 24, 1992, letter were addressed. (Attachments 3, 4, and 5 provide information but do not contain USEPA comments and therefore, were not addressed.) The past disposal practices at the 18 on-site areas of concern are also discussed. Figure 1 of the CAO was revised by Craig Bostwick to accurately locate these 18 areas.

The past disposal information clearly indicates that the three potential major on-site source areas of concern include the following:

- Former dry well
- Former tank farm storage area
- Former hazardous waste incinerator/former urethane laboratory area

The past disposal information further indicates that the remainder of the units are not of concern because hazardous materials were not significantly released to the environment.

Please review these comment responses in preparation for our meeting on December 17 and contact me at (608) 831-4444 with any questions. On behalf of CCP, we look forward to working together with the USEPA and the WDNR to evaluate continuing interim corrective measures.

Sincerely,

Stacy McAnulty, P.E.
Technical Coordinator

nsr

Enclosure

cc: Craig Bostwick, CCP
Jill Fermanich, WDNR
James Rickun, RMT

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HAZARDOUS WASTE MANAGEMENT

Cook
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TABLE 1

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>Subject: Corrective Action Order on Consent V-W-88-R-002 Workplan Comments Additional Work</p>	
<p>From: Joseph M. Boyle Chief RCRA Enforcement Branch</p>	
<p>To: Craig Bostwick Cook Composites & Polymers</p>	
<p>Date: July 24, 1992</p>	
<p>COVER LETTER</p> <p>Dear Mr. Bostwick:</p> <p>On October 19, 1987, pursuant to Section 3008(h) of the Resource Conservation and Recovery Act of 1976, as amended, the United States Environmental Protection Agency (U.S. EPA), and the Wisconsin Department of Natural Resources (WDNR) entered into a Corrective Action Order on Consent (CAO), V-W-88-R-002, with Cook Composites and Polymer's (CCP) predecessor, Freeman Chemical Company. Pursuant to Paragraph 3, Section II, <u>Parties Bound</u>, the Respondent (Freeman) would give notice to any successor (CCP) of the CAO and any sale or transfer of the facility would not relieve the Respondent of its obligations under the CAO.</p> <p>The objective of the CAO is to protect the public health and the environment through the prevention or reduction of the release or migration of hazardous waste or hazardous constituents to the groundwater, surface water, air and soil in and around the Respondent's facility. The objective is obtained through an investigation of the facility, a study of the alternative technologies available to remediate the environmental problems, and the implementation of appropriate corrective measures. Groundwater and soil have been addressed to some extent in a previously approved workplan, but other areas of the facility have not been adequately addressed. Due to additional information obtained from investigatory work, it is apparent that the corrective measures presently in place do not meet the objective of the CAO.</p> <p>Pursuant to the Section IX, <u>Additional Work</u>, the U.S. EPA has determined that additional investigatory work and corrective measures are necessary at the facility to protect human health and the environment. The scope of the additional work is outlined in the attached Scope of Work. The scope of this work will necessitate additional workplan submittals and approvals.</p>	<p>CCP would like to clarify that public health is being protected through the operation of the groundwater and surface water collection systems and through past corrective measures (e.g., paving of site, removal of source area structures, etc.). The focus of the additional work is to <u>further</u> reduce the release of hazardous waste or hazardous constituents to groundwater in and around the facility.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>This determination is based, in part, on the 1991 annual report (Task 5 of the CAO) and historical data. The 1991 annual report evaluated the present groundwater remediation as "effective". U.S. EPA disagrees with this conclusion because the groundwater remediation and monitoring system was designed and installed under significantly different hydrogeologic conditions. Specifically, the groundwater table is, at a minimum, 5 feet lower today than when the program was implemented. The lower water table at the site can be attributed to the drought-like conditions present from the time remediation began in 1987 and the dewatering of the glacial aquifer due to a hydraulic connection to the lower "dolomite aquifer" which is supplying noncontact cooling water for the facility. As a result, the present groundwater monitoring and remediation system has become deficient because it no longer accurately characterizes the actual site conditions nor completely remediates the contamination. The current remedial system is considered to be an "interim measure" at best; not a final, comprehensive corrective measure for the facility.</p> <p>In addition, the approved workplan does not address all areas of known or suspected contamination at the facility. The attached scope of work outlines the additional work needed to protect human health and the environment.</p> <p>Any sampling that is required pursuant to this letter must be performed pursuant to an approved Quality Assurance Project Plan (QAPjP). It is recognized that other sampling that was to be conducted in the approved workplan has not been carried out due to difficulties in obtaining an approved QAPjP. It is required that all work at the facility done pursuant to the CAO and this letter be done pursuant to an approved QAPjP. The Region V model QAPjP and appropriate guidance is attached to this letter. If this model is followed, all deficiencies in the previously submitted QAPjPs can be resolved.</p> <p>The CAO (V-W-88-R-002) is somewhat of a hybrid RCRA Facility Investigation (RFI) and Corrective Measures Study (CMS). In essence, the CAO formalized work conducted at the facility pursuant to a series of previous administrative orders entered into between the State of Wisconsin and the Respondent. The RFI included the groundwater monitoring in place at the signing of the CAO in addition to some soil sampling and the CMS consisted of an evaluation of the effectiveness of the pump and treat system. The narrow focus of the "CMS" portion of the order (TASK 5) has been proven to provide an incomplete characterization of contamination at the facility, as well as no assessment of alternative remedies. Therefore, the Respondent is now required to conduct a comprehensive Corrective Measures Study pursuant to the attached CMS Scope of Work in addition to filling in data gaps for a complete RFI.</p>	<p>CCP agrees that the groundwater remediation system may be contributing to dewatering of the overburden soils. However, one of the original objectives of the system was to remove contaminated shallow groundwater, which would potentially dewater the glacial overburden. The transport of contaminants from saturated soil to groundwater is reduced by dewatering the overburden. This situation may also be useful for potential in-place treatment of unsaturated soil. What is clear is that groundwater pumping is necessary to control the contaminant plume and protect the public water supply.</p> <p>A QAPjP will be prepared that addresses the outstanding work items from the 1987 CAO and additional work requirements. The project QAPjP will be appended to the Site Investigation and Continuing Interim Corrective Measures Workplan.</p> <p>A Corrective Measure Study (CMS) and investigations necessary to conduct the CMS will be performed as approved by USEPA and WDNR.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>Cook Composites and Polymers must submit a workplan which addresses: 1) the comments to the changes in the Tasks 3A, 3B, and 3C workplan proposed by RMT, 2) the additional work; 3) a Corrective Measures Study for the facility, and 4) a QAPjP based on the Region V Model QAPjP that addresses the sampling required in the previously approved Task 3A, 3B, and 3C workplan (Hatcher-Sayre) and the additional work. The workplan addressing the above requirements shall be submitted within 45 days from receipt of this letter.</p> <p>Because of the complexity of some of the above issues, the U.S. EPA is willing to meet with CCP and the WDNR to discuss and/or clarify the comments, scopes of work and/or guidance that has been provided to you in this letter. If such a meeting is desired, please contact Robert Smith to arrange an appropriate time and place. Depending on when the meeting will take place, there may be a need to modify the above timeframe for submittal of documents. U.S. EPA will consider such a modification upon your request, within 10 days of receipt of this letter.</p>	<p>The Site Investigation and Continuing Interim Corrective Measures Workplan is being prepared. CCP anticipates the draft workplan to be provided to USEPA and WDNR around the end of February 1993 (CCP letter, November 9, 1992).</p> <p>A meeting was held on September 9, 1992, to discuss these issues. A follow-up meeting is scheduled for December 17, 1992, to discuss the workplan outline (Scope of Work) and the QAPP requirements (pre-QAPP meeting).</p>
<p>ATTACHMENT 1 - COMMENTS ON RMT WORKPLAN SUBMITTAL</p> <p>RMT, Inc. has proposed a restructuring of both the groundwater monitoring and remediation program as well as Task V B, Evaluation of Corrective Measures, of the CAO. The purpose of Task 5B is to evaluate the corrective measures implemented at the site. The modifications of the groundwater monitoring and remediation that are proposed by RMT will be considered a function of Task 5B. It must be noted that regardless which proposed modifications are approved, the Appendix IX analysis and the pump test will most likely require further modification of the groundwater monitoring and remediation program. Specific comments are as follows:</p>	

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>COMMENT 1 - PAGE 1, INTRODUCTION</p> <p>The listed correspondence on page one does not include several key letters sent to CCP (Freeman) outlining conditions for approval and the conditional approval of the Hatcher-Sayre Workplan. To complete the record, the following letters need to be included in the list of correspondence on page 1: 1) letter dated May 9, 1988, Task 3 Conditional Approval; 2) Letter dated June 30, 1988, Task 1 and 3 Comments; 3) letter dated October 13, 1988, Task 3 Project Plans (this letter may already be included on this list as "EPA comments received on October 19, 1988"); 4) Letter dated December 21, 1988, Task 3 Project Plans; 5) letter dated February 10, 1989, Annual Report; and 6) letter dated March 2, 1989, Task 3 Project Plans. The previous Hatcher-Sayre workplan was given final conditional approval by U.S. EPA in the March 2, 1989 letter. Subsequent work plan submittals by Hatcher-Sayre were to include the requirements of these letters. These letters are found in Attachment 3.</p> <p>Certain conditions of the letters have been met while other conditions are no longer valid. The most important requirement listed in these letters includes the final approved wells for site-wide Appendix IX sampling. This is discussed in comment 6. The soil analysis by the EP Toxicity Procedure is now invalid and the Toxic Characteristic Leaching Procedure (TCLP) is now required.</p>	<p>Appendix IX groundwater sampling and analysis will be performed. The TCLP will be used for soil analyses for Level 4 Analytical Data Quality Objectives (DQOs).</p>
<p>COMMENT 2 - SECTION 1.1.2., PROJECT BACKGROUND, PAGE 4</p> <p>This section outlines six major components of previous remedial actions taken at the facility. Additional work is necessary to address the present groundwater remedial system (point 1) and the source contamination removal or repair (point 2). It is stated that the remedial measures were addressed by July 1987. It also refers to Task I which goes into more detail on the corrective measures taken at the site. However, it is apparent that the groundwater system needs modification and potential sources of contamination need to be addressed more completely. This is outlined in Attachment 2, Scope of Work for Additional Work.</p>	<p>As a clarification, the groundwater system requires <u>evaluation</u> to determine if modifications are required once the soil is remediated and the effectiveness of the soil remediation is determined (USEPA letter dated October 30, 1992).</p>
<p>COMMENT 3 - PAGE 11, TABLE 2</p> <p>Table 2 will have to be modified with respect to the comments on the proposed groundwater monitoring and remediation program.</p>	<p>Agreed. Tables will be prepared for the groundwater monitoring program approved by the USEPA and WDNR (USEPA letter dated October 30, 1992), and the soil sampling and analysis program for site investigations.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>COMMENT 4 - PROGRAM SCOPE AND RATIONALE, SECTION 2.3.1, PAGE 12</p> <p>The groundwater sampling proposed by RMT will have to be modified. Annual perimeter monitoring is not fully protective of human health and the environment. Therefore, the perimeter must continue with a quarterly schedule. The proposed semi-annual sampling has potential problems. The quarterly sampling in the past has given enough detailed information to show slugs of contamination that were created after the infrequent rainfall events over the last four years. Many of these peaks would not have been detected if the wells were sampled on a semiannual schedule during this period. The proposed sampling plan cannot be approved without modification and after discussing the adequacy of the proposed sampling system's integration to the Additional Work outlined in Attachment 2.</p>	<p>The approved groundwater monitoring program consists of the following sampling frequencies:</p> <ul style="list-style-type: none"> • Receptor Monitoring Wells - quarterly • Perimeter Wells - semiannually (spring and fall events) • Remediation Progress Wells - annually until soil remedy is installed, after which, semiannual sampling is required.
<p>COMMENT 5 - PROGRAM SCOPE RATIONALE, SECTION 2.3.1, PAGE 16</p> <p>The purpose of Appendix IX sampling is to characterize the site. As proposed by RMT, the Appendix IX analysis will characterize a specific plume only. The Appendix IX sampling will remain as stated in the June 30, 1988 and the October 13, 1988 letters from U.S. EPA to Freeman (CCP). The wells to be sampled for the full Appendix IX are: glacial wells 6A, 44, and 47; shallow dolomite wells 21A, 24A, 28, 29; and a deep dolomite sample from well 30. Considering that well 44 has been dry, it will be replaced as outlined in Attachment 2, Additional Work. The area where well 44 is located is located showed heavy contamination which is why the Appendix IX sampling is essential in this location.</p>	<p>Appendix IX sampling will be performed at the eight designated wells, if feasible. Well W-44 was dry in October of 1992 and likely cannot be sampled. USEPA's request to replace W-44 has been reviewed. Based on interpretation of available boring logs, the top of rock is located at an approximate 752-foot elevation, and the bottom of the well screen is located at an approximate 753.8-foot elevation (See Attachment B). Replacement of well W-44 is not practical.</p> <p>As an alternative to W-44, CCP proposes to sample glacial well W-43. This well is located at the potential source area of contamination (tank farm storage area).</p> <p>CCP states that there has been no known use of pesticides or dioxins/furans at the facility. Therefore, these compounds need not be analyzed in groundwater.</p>
<p>COMMENT 6 - OBJECTIVES, SECTION 2.12.2, PAGE 59</p> <p>An additional objective of the pump test is to more thoroughly understand the interrelationship between the Dolomite Aquifer and the glacial Aquifer. This is stated on page 63 in the Step I Test discussion.</p>	<p>Agreed.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>COMMENT 7 - HYDROGEOLOGIC TESTING PROGRAM, SECTION 2.12.3, SUBSECTION "STEP I TEST", PAGE 62</p> <p>Paragraph 2 states that the eight (minimum) driven well points that are proposed to be used to monitor the capture zone of the Ranney Collectors during the pump test are shown on Figure 5. Paragraph 3 states that the exact number of well points will be determined in the field and that a minimum of eight driven well points will be utilized. Figure 5 does not show any location of driven well points. The points need to be determined and located on Figure 5.</p>	<p>Agreed. The location of the driven well points will be shown on Figure 5.</p>
<p>COMMENT 8 - HYDROGEOLOGIC TESTING PROGRAM, SECTION 2.12.3, SUBSECTION "MONITORING PROGRAM", PAGE 64</p> <p>Six groups or nests of monitoring wells have been chosen to evaluate the pump test. Wells 43 and 16A have been dry recently (refer to the 1991 Annual Report). The pump test needs to address the possibility of dry wells at the time of the test.</p>	<p>Agreed. Because of the possibility of dry wells (specifically wells 43 and 16A) the pump test will be modified by selecting two alternative wells to evaluate the pump test. In October 1992, well 16A was dry and Well 43 had approximately 1 foot of water in the well.</p>
<p>COMMENT 9</p> <p>Upon correction of the deficiencies in the pump test, the test is approved.</p>	<p>Corrections to the pump test discussed above should satisfy the USEPA deficiencies noted.</p>
<p>COMMENT 10 - DATA REPORTS, SECTION 3.4, PAGE 74</p> <p>The perimeter wells will be sampled semiannually. The correction needs to be made.</p>	<p>Agreed. Perimeter wells will be monitored semiannually.</p>
<p>COMMENT 11 - GENERAL</p> <p>U.S. EPA now requires all groundwater monitoring data to be submitted in an electronic format in addition to the hard copy. Starting with the next groundwater monitoring round, CCP must also submit the data on computer disc. Any size disc and format is acceptable. CCP must submit the data in disc form for the past sampling events that RMT has conducted.</p>	<p>Agreed. CCP will submit future groundwater analytical results in an electronic format, in addition to the quarterly groundwater reports. Groundwater analytical results will be provided as an ascii file in a format of CCP's choosing. Field data (water levels, pH, conductivity, visible turbidity, etc.) will be provided via the groundwater monitoring reports.</p>
<p>ATTACHMENT 2 - SCOPE OF WORK FOR ADDITIONAL WORK</p> <p>Cook Composites and Polymers (CCP) must submit a Workplan, for approval by the United States Environmental Protection Agency (U.S. EPA), in consultation with the Wisconsin Department of Natural Resources (WDNR). The Workplan will address additional work needed at CCP's Saukville facility to more fully protect human health and the environment. The components to be addressed in the workplan are detailed below.</p>	

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>TASK 1 - GROUNDWATER MONITORING WELL REPLACEMENT AND ADDITIONAL WELLS</p> <p>The following wells must be replaced: 43, 44, 4A, 7A, and 8A. These wells are consistently dry and need to be replaced. Wells 43 and 44 defined a contamination plume during the early sampling events in 1986 and 1987. During this time, the wells were able to produce groundwater samples and thereafter well 44 was dry. Well 43 began to produce samples again in the Summer 1989 sampling round and the contamination plume was seen again by the Spring 1990 sampling round. Reliable coverage is needed in the glacial aquifer in this area. If it is determined that no replacement well will be capable of producing a constant groundwater sample in the glacial aquifer in this area (that area that was covered by wells 43 and 44), CCP must document this fact.</p> <p>Additional wells are necessary to monitor to the east of the sink hole determined by the seismic survey conducted by Hatcher-Sayre. Coverage is also missing at the southern end of the facility, especially between RC-2 and shallow dolomite well 23. This area includes the truck wash and a spill area as identified in Figure 1 of the Corrective Action Order. All contour maps show contamination to be located north of well 48 but no wells are located in the area that "show no contamination."</p> <p>CCP must provide a workplan that details the construction and locations of the replacement wells. CCP must comply with WDNR's standards regarding well installation, plugging and abandoning wells (Ch. NR 141, Wis. Adm. Code) or U.S. EPA's Technical Enforcement Guidance Document (TEGD), OSWER 9950.1, September 1986, or Handbook of Suggested Practices for the Design and Installation of Ground-Water Monitoring Wells, EPA/600/4-89/034, March 1989.</p>	<p>Replacement of wells W-43 and W-44 to a deeper depth is not feasible, nor likely to produce water because of dewatering affects and below average rainfall (see Attachment B). Glacial well W-43 did contain approximately 1 foot of water in October 1992 and produces water periodically. Glacial well W-44 is installed to a depth that is likely within 2 feet of the top of bedrock.</p> <p>Glacial well 4A does not require replacement because this well does produce water periodically and has been relatively clean in the past (typically < 5 µg/L total VOCs).</p> <p>It was agreed at the September 9, 1992, meeting that no additional well will be required at the sinkhole area because this area is relatively clean (10 µg/L range) and the well coverage is adequate between well W-20 (directly in sinkhole) and wells 3A, 3B, 7A, 8A, and 29 (surrounding area).</p> <p>An additional well at the south end of the site is not necessary because this area was used for employee parking and is not a spill area of concern. In addition, field-screening results (PID) from the installation of the storm sewer at this area indicate that these soils are not impacted (see Attachment C).</p> <p>Wells 7A and 8A will be replaced according to Chapter NR 141 Wisconsin Administrative Code.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>TASK 2 - POTENTIAL SOURCES OF GROUNDWATER CONTAMINATION</p> <p>Figure 1, <u>Potential Sources of Groundwater Contamination</u>, of the Corrective Action Order on Consent (CAO) identifies 18 Hazardous Waste Management Units (HWMUs), Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOC). Several have been addressed prior to the CAO and the method of remediation has been documented in Task 1 of the CAO. The remedial actions taken prior to the CAO are considered by U.S. EPA to be "interim measures" and not final solutions. Review of Task 1, Annual Reports (Task 5), and quarterly groundwater monitoring reports supports the need for further work that will determine the final solution to each of these 18 units. Each unit in Figure 1 of the CAO is listed and described below in the order found in Figure 1, which is reproduced as Attachment 6.</p> <p>Each unit must be described as it presently exists. Task 1 included only those units that had been addressed in pre-CAO remediation. In every case, there was a brief description and little post-remedial information is available. For example, much of the site is paved over which may include some of the old HWMUs, SWMUs, and AOCs listed in Figure 1 of the CAO. This may be an influencing factor in the investigation of the site and potential remediation of the sources of contamination. This factor must be addressed in the workplan.</p> <p>CCP shall conduct an investigation, sampling for Appendix IX compounds, to characterize the contamination of the soil and rock units above the water table in the vicinity of the known or suspected contaminant releases listed in Figure 1 of the CAO. The investigation shall include, but not be limited to, the following information for each unit that requires additional work:</p> <ol style="list-style-type: none"> a. A description of the vertical and horizontal extent of contamination in the soil; b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation, and other factors that might affect contaminant migration and transformation; c. Specific contaminant concentrations; d. The velocity and direction of contaminant movement; e. An extrapolation of future contaminant movement; 	<p>As discussed at the September 9, 1992, meeting, three major on-site sources exist that may be contributing contaminants to groundwater. These areas include the following:</p> <ul style="list-style-type: none"> • Former dry well • Former hazardous waste incinerator/urethane laboratory area • Former tank farm storage area <p>The remainder of the areas of concern may be characterized as nonexistent or nonsignificant areas of concern. Each area is discussed in more detail (see past waste disposal practices which follows). The proper locations of the 18 areas of concern are illustrated on Figure 1 of the AOC (see Attachment A).</p> <p>CCP is proposing an alternative soil investigation approach (refer to Workplan outline). The objectives are the following:</p> <ul style="list-style-type: none"> • To collect data necessary to adequately characterize the site for purposes of determining whether or not additional corrective measures are necessary to remediate remaining on-site sources of groundwater contamination. • To quantify the risk to public health posed by off-site sources which originated from CCP operations.

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>f. Pursuant to Task 4.D. of the CAO, contaminated soil that was managed on-site was to be in compliance with letters dated August 8, 1986 and June 10, 1987 from WDNR to Freeman Chemical. Task 1 gives little information with regards to the ultimate fate of the waste storage pile generated as a result of this activity. For each of the units below that have had contaminated soil excavated, describe the ultimate fate of the contaminated soil that was transported to the "storage pile.";</p> <p>g. Unit specific concerns are addressed in their respective listings; and</p> <p>h. If possible, link each source of groundwater contamination to a specific plume of groundwater contamination.</p> <p>As identified in Figure 1, Page 7, of the Corrective Action Order, the potential sources of groundwater contamination that must be addressed in the workplan for Additional Work are:</p> <p>1) <u>"Barrel Storage Areas"</u>: There are a minimum of six barrel storage areas that are pinpointed on this map. None of the six barrel storage areas are described in Task 1 and it appears that no remediation has occurred in any of the six storage areas nor has any work been done to determine if any release has occurred from these units. The following work needs to be done to address these units:</p> <ul style="list-style-type: none"> ○ Locate and describe each barrel storage area identified on Figure 1 of the CAO. If additional areas are known, they must be included as well. Include each barrel storage area in the workplan. Include each unit with contamination in the CMS Work Plan. Include any historical remedial information on each site, if available. ○ Paragraph 11.c of the CAO identifies soil adjacent to a barrel storage area along the southwest property line as contaminated. The soil sample was collected during soil boring and groundwater monitoring well installation. This location is also known to be located in a major hot spot of groundwater contamination adjacent to the old dry well. This area must be addressed in the workplan. ○ Paragraph 11.e identifies a solvent storage area north of the truck scales as having known soil contamination. The soil was collected during soil boring and groundwater monitoring well installation. This area must be addressed in the workplan. 	<p style="text-align: center;"><u>PAST WASTE DISPOSAL PRACTICES</u></p> <p>Information concerning past disposal practices and potential sources of groundwater contamination was obtained from interviews with the Plant Manager (Lee Barwick), Plant Supervisor (Curt Wiskirchen), Maintenance Supervisor (Dan Bolz), and Plant Engineer (Palmer Langteau). The information provided is based on their best knowledge of the plant operations, which dates back to the beginning of their respective employments. The earliest recollections begin in 1959 with Plant Manager, Lee Barwick.</p> <p>1) <u>Barrel Storage Areas</u></p> <p>A total of six barrel storage areas are identified on Figure 1 and discussed below.</p> <p>1A - Empty raw material drums placed on their sides for reuse. 1B - Both outdoor and roofed storage area for raw materials and finished product. 1C - Empty drums which were no longer usable were returned to the supplier. One drum of fuel oil may have been located on side of building to service the heater in the office. 1D - Raw material storage area. 1E - Storage of coatings products (i.e., 013-0130) which were drummed at Kettle 5. The coating products were cooled and allowed to solidify. 1F - This was rejected finished good (off-spec material) and general refuse storage. Refuse included only solid materials (i.e., press cleanings, filter aid-filter paper, and possibly cans, paper cups, pails) which were contained in fiber drums stored on pallets. Refuse storage was from 1970-1971.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>2) "<u>Buried Incinerator location (?)</u>": The old incinerator is not included in Task 1 as having been addressed prior to the CAO.</p> <ul style="list-style-type: none"> ○ Locate the incinerator and include the area in the workplan. If contamination is found, include the old incinerator in the CMS Work Plan. Include any historical remedial information on this site including any closure data. <p>3A) "<u>Old Farm Well</u>": The Old Farm Well was located and remediated as detailed in Task 1, Section 3.10. According to Task 1, "the well was located, plugged with a grout mix and abandoned". If this work was done in accordance with WDNR regulations, supply copies of the appropriate paperwork to U.S. EPA. It appears that no additional work is necessary with the "Old Farm Well".</p> <p>3B) "<u>Old Dry Well</u>": The "Old Dry Well" is included in Task 1, Section 3.9. The well was located, described (physically), fluid was removed from the well (but not totally drained), sludge was removed by backhoe, and the well was backfilled with road bond size gravel and compacted. It appears that no samples were taken to determine the extent of contamination or to characterize the contamination. It appears that the Old Dry Well has the potential to continue to be a potential source of groundwater contamination and that the soil in and around this well is likely to be contaminated.</p> <ul style="list-style-type: none"> ○ The Old Dry Well is to be included in the workplan. At a minimum, the Old Dry Well is to be located and the backfill excavated. The contaminated soil in the dry well must be characterized and the extent of contamination must be determined. If contamination is found, this unit must be included in the CMS Work Plan. If any additional historical remedial information exists beyond that which was included in Task 1, it must be incorporated into the workplan. ○ Paragraph 11.d of the CAO identifies the soil in the area of the "abandoned dry well" as having known soil contamination. The old dry well is located in a major hot spot of groundwater contamination. 	<p>Based on employee recollections, the barrels storing raw materials and finished products were generally maintained in good condition. These areas are now paved, preventing direct contact with surface soils. These areas are not suspected sources contributing to groundwater contamination.</p> <p>2) <u>Buried Incinerator Location</u> There is no buried incinerator at this location. Rather, there is a concrete culvert buried east of building 7 (near back door of former urethane laboratory). A backhoe was used to bury the concrete about 5 feet deep. This is not a suspected source of contamination.</p> <p>3A) <u>Old Farm Well</u> The location on the original map is incorrect. Employee recollections are identical to the narrative provided in the Hatcher-Sayre Construction and Documentation Report. No further work is necessary.</p> <p>3B) <u>Old Dry Well</u> Employee recollections are that from approximately 1952 through 1968 the old dry well was used to dispose of acid water. The former dry well consisted of a well pit with a sand and gravel base, which was located west of building 5. Employee recollections agree with the dry well abandonment procedures described in the Hatcher-Sayre Site Construction Documentation Report.</p> <p>This area is now paved and located adjacent to shallow dolomite pumping well W-34 and overburden drain RC-2. This is a potential major source area of concern. Further investigation is necessary to determine if this is a continuing source of groundwater contamination.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>4A) "<u>Buried Caustic Tank</u>": Task 1, Section 3.11, states that "the tank was located, the liquid within diluted and drained, sediment removed and taken to the storage pile, and the tank was filled with four yards of concrete after inspection."</p> <ul style="list-style-type: none"> ○ Include this unit in the workplan. At a minimum, the soils around and beneath the tank must be sampled to determine the extent of contamination, if any. Determine the fate of the contaminated soil that was taken to the storage pile. If contamination is found, this area must be included in the CMS Work Plan. 	<p>4A) <u>Buried Caustic Tank</u> Employee recollections are identical to the description of the tank abandonment procedures. The tank was not known to have leaked. Visual inspection of the tank by plant personnel confirmed this during the tank abandonment. This area is not a suspected source contributing to groundwater contamination.</p>
<p>4B) "<u>Buried Diesel Tank</u>": Task 1, Section 3.15.1, states that "the tank was excavated intact in August 1986 and 'no contaminated soil or water was present'. The tank was disposed of as scrap metal and the hole filled with concrete."</p> <ul style="list-style-type: none"> ○ Submit any soil and/or groundwater analysis that was conducted to make this determination. Submit any report generated pursuant to the excavation. If no sampling occurred, include this area in the workplan. If contamination is found, this area must be included in the CMS Work Plan. 	<p>4B) <u>Buried Diesel Tank (4B)</u> This description is somewhat incorrect. The buried tank at 4B was used as a gasoline tank (1950s), then a diesel tank (1962-1969), and then as a gasoline tank (1969-1974). It was emptied in 1974 and filled with sand and gravel in 1974. The tank remained abandoned in place until 1987-1988 when it was excavated. Miller Mason & Concrete Contractors witnessed the excavation. Visual inspection of the excavation confirmed that soil/water contamination were not present. If gasoline constituents were present, odors would have been noted. This area is not a suspected source contributing to groundwater contamination.</p>
<p>4C) "<u>Buried Tank</u>": This may be the styrene tank described in Task 1, Section 3.12.1. Task 1 states that "the tank was removed by Jacque's Welding and Crane Service of Port Washington. Contaminated soil was moved to the soil handling area for treatment, analysis, and disposition by the prescribed means."</p> <ul style="list-style-type: none"> ○ Submit information on the means in which the contamination was characterized, how the extent of contamination was determined in the excavation, the results of any sampling conducted in the soils adjacent and below the tank, any soil analysis that may have been conducted on the soils once they were stored in the "handling area" and the "proscribed means" in which the soil was disposed of. If the procedure has left contamination in place, include this area in the workplan the CMS Work Plan. 	<p>4C) <u>Buried Tank</u> This location is definitely incorrect. There never was any tank at the location originally noted. The actual tank location is north of Bldg. 31. This, in actuality, is the tank which contained gasoline from 1974-1980, and later contained diesel fuel from 1980-1983. The tank was excavated in August 1985 and disposed of as scrap metal. The hole was filled with clean backfill. No styrene tank was ever in either the original or revised locations.</p> <p>Two styrene tanks were located at the former tank farm storage area. These tanks were properly abandoned (see Hatcher-Sayre Site Construction Documentation Report).</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>5) <u>"Tank Farm"</u>: Task 1 does not mention this unit and thus, it appears that the tank farm was not addressed in pre-CAO remediation.</p> <ul style="list-style-type: none"> ○ This area must be included in the workplan. At a minimum, any release must be documented and soils analyzed to characterize the release, if any, and the extent of the release. If contamination is found, include this area in the CMS Work Plan. ○ Paragraph 11.a of the CAO identifies the tank farm as an area of known soil contamination. The contamination was identified during soil boring and groundwater monitoring well installation. This possibly is the area that monitoring wells 43 and 44 have identified a major hot spot of groundwater contamination. 	<p>The contaminated soil that was excavated was treated by mixing and aeration. Field-screening results (PID confirmed by laboratory analyses) of less than 10 ppm were required for complete remediation. The treated soil was then used to construct on-site landscaping berms along the southeast and northeast property limits.</p> <p>The former tank location is not a source area of concern contributing to groundwater contamination. The contaminated soil was sufficiently excavated during the tank removal.</p> <p>5) <u>Tank Farm</u> The tank farm was relocated and improved. Triad Engineering Inc. (TEI) oversaw all activities concerning the tank farm renovation. The former tank farm was approximately 50 feet east of the current location. The former location is at the present pumphouse (Bldg. 65) and unloading bay area (Bldg. 67). The former tanks were supported on a stone (No. 1 rock) base, which was bermed with dirt. The tanks were tested and found to be adequate (none were leaking). The new tank farm has a concrete dike with 33,000 gallons spill containment capacity.</p> <p>Although the tanks did not leak, considerable spillage may have occurred during tank filling operations. According to employee recollections, the styrene tanks were overfilled occasionally resulting in spills which may have infiltrated the ground surface.</p> <p>The tank farm area is a potential major source area of concern. Further investigation is necessary to determine if this is a continuing source of groundwater contamination.</p>
<p>6) <u>"Basement Sumps"</u>: The basement sumps were addressed in Task 1, Section 3.14. Task 1 states that "the sump was excavated, discarded and no contaminated soil or water was detected."</p> <ul style="list-style-type: none"> ○ Submit any soil and groundwater sample analysis used in the determination of "no contamination." If no sampling occurred, this area must be included in the workplan. 	<p>6) <u>Basement Sump</u> The explanation provided in Task 1, Section 3.14 is not correct. There is a sump pump in the basement of Bldg. 20. It is used to remove basement seepage. The sump is still operative. This area is not of concern. No further work is necessary.</p>

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>7) "Present Incinerator": Task 1 does not mention this unit and thus, it appears that no pre-CAO remediation was conducted at this unit.</p> <ul style="list-style-type: none"> ○ This unit must be included in the workplan. If contamination is found, include this area in the CMS Work Plan. 	<p>7) <u>Present Incinerator</u> The present solids incinerator area is of concern because the former hazardous waste liquids incinerator and storage area were located adjacent to the present incinerator. Acid water was burned in the hazardous waste incinerator from 1968 until October 1989.</p> <p>The former hazardous waste incinerator and storage area is of concern because of residual soil contamination. High levels of benzene, toluene, ethylbenzene, and xylene are present in soil as a result of incinerator operations, spills, and former urethane laboratory disposal practices.</p> <p>The former hazardous waste incinerator and storage area if defined as a 106-foot (E-W) by 60-foot (N-S) area that is being closed under Ch. NR 600 Wisconsin Administrative Code requirements.</p> <p>The area north of the incinerator was used to land dispose spent solvents, which were discarded out the east door of the former urethane laboratory (Bldg. 7). The soils north of the incinerator area are impacted by high levels of BTEX. In addition, these laboratory-spent solvents may have reached the church ball field on occasion (approximately 10 to 20 feet into the property).</p> <p>The former hazardous waste incinerator/ former urethane laboratory is a potential major source area of concern. Soil results for VOCs and semivolatiles are available for the incinerator area and laboratory disposal area. These results will be provided to the USEPA and used to evaluate potential soil remedial options. The effectiveness of the soil vapor extraction system (proposed for closure of the incinerator area) will also be evaluated. Further investigation is required at the Church ball field to determine potential health risks.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>8) <u>"Location of Former Tanks"</u>: Task 1 does not mention this unit, and thus, it appears that this area was not addressed in pre-CAO remediation.</p> <ul style="list-style-type: none"> ○ Include this area in the workplan. If contamination is found, include this area in the CMS Work Plan. <p>9) <u>"Underground route of 'acid H₂O' line"</u>: Task 1 does not mention this unit and thus, it appears that this was not addressed in pre-CAO remediation.</p> <ul style="list-style-type: none"> ○ Include this area in the workplan. If contamination is found, include this area in the CMS Work Plan. 	<p>8) <u>Location of Former Tanks</u> There never were any tanks at this location except for one tank that contained inert gas. This area had underground piping which was used to unload railcars of raw materials. The piping went from the railroad unloading area to the tank farm. The underground lines were not used since 1970. According to employees, the lines were capped and concreted over or removed when the tank farm was relocated. This area is not of concern.</p> <p>9) <u>Underground Route of Acid Water Line</u> This represents the underground route from Bldg. 13 to the former hazardous incinerator. In the closure plan which was submitted to WDNR in 1989, these lines were addressed. They were cleaned and capped. In addition, any aboveground piping (from Bldg. 13 to the Kettle area in Bldg. 3) was removed as part of the closure.</p> <p>This area was properly closed with WDNR approval, and is not an area of concern.</p>
<p>10) <u>"Broken linseed (?) oil line"</u>: This was addressed in pre-CAO remediation and is covered in Task 1, Section 3.13. Task 1 states that "Contaminated water collected from the area was incinerated and contaminated soil was moved to the soil handling area for treatment and approved disposal."</p> <ul style="list-style-type: none"> ○ Submit any soil and groundwater analysis used in the determination of contaminant characterization and extent of contamination. Determine the fate of the removed soil and define "approved disposal". This area must be included in the workplan. If contamination is found, this area must be included in the CMS Work Plan. 	<p>10) <u>Broken Linseed Oil Line</u> This was an underground vegetable oil line leading from the railroad unloading area to the tank farm. Normally the lines carried soybean oil or linseed oil. These vegetable oils may have leaked from this line. However, these vegetable oils are nonhazardous materials, and therefore, this is not an area of concern.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>11) <u>"Pit for Tank Scales"</u>: Task 1 does not mention this unit and thus, it appears that this area was not addressed in pre-CAO remediation. (Figure 1 of the CAO is taken from a previous Hatcher-Sayre submittal and the word "tank" is used to identify this area. However, "tank" should probably be replaced with "truck".</p> <ul style="list-style-type: none"> ○ This area must be addressed in the workplan. If contamination is found, this area must be included in the CMS Work Plan. 	<p>11) <u>Pit for Tank Scales</u> This description is not correct. This is a truck scale. The pit is where the mechanical equipment for the scale is located. The concrete pit is extremely clean. There is a sump located under the scale house in the event stormwater removal is required. This area is not of concern.</p>
<p>12) <u>"Truck Washing Area"</u>: It appears that this area was not addressed in pre-CAO remediation.</p> <ul style="list-style-type: none"> ○ This area must be addressed in the workplan. If contamination is found, this area must be included in the CMS Work Plan. 	<p>12) <u>Truck Washing Area</u> This area is not of concern. In essence, the following occurred: A driver would return with an empty tankwagon which was prerinsed by the driver on the road. Upon return, the empty tankwagon would be washed out with a soap solution. The soap solution would be cycled back to a 750-gallon storage tank (which has since been removed in 1992). The tankwagon would then be flushed out with water. The rinse water went to the floor where the floor drain carries it to the skimmer tank. The skimmer was basically a separation tank which dropped any solids out through a series of weirs. The liquid went down the sanitary sewer system. The solids were cleaned out annually. Skimmer sludge would be cleaned, as necessary, drummed and handled according to RCRA requirements. Employees mentioned that soap water could be used for 3 months. The pH would be adjusted. Then after 3 months, soap water, like rinse water, would be sent to the skimmer, and ultimately down the sanitary sewer.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>13) "Acid Water and Other Product Spill Areas": A minimum of five areas were defined as spill areas on Figure 1. No spill area was specifically addressed in the pre-CAO remediation as outlined in Task 1.</p> <p>○ Each area in Figure 1 and any other area identified by CCP must be included in the workplan. Each area where contamination is found must be included in the CMS Work Plan.</p>	<p>13) <u>Acid Water and Other Product Spill Areas</u> The locations for some of the spill areas are incorrect (see Figure 1). No product or raw material was spilled at two areas identified on the map.</p> <p>Products that do not contain hazardous constituents need not be addressed under this corrective action.</p> <p>In years past, approximately from 1965-1972, an acid water tankwagon was parked by the old dry well. Spills of acid water occurred when the tankwagon overfilled, which may have impacted the area immediately west of the dry well.</p> <p>There were no reaction water lines at this time to carry the reaction water from production areas to the incinerator area. Thus, the reaction water was trucked up to the incinerator area and transferred into the storage tank. Spills of acid water occurred at the former hazardous waste incinerator area.</p> <p>Spills did not occur at the south end of the facility. This area was used primarily for employee parking. Field-screening results for soils excavated during placement of the storm sewer line clearly indicate that these soils were not impacted (see Attachment C).</p> <p>On rare occasions, employees recollected hose leaks from phthalic and maleic tanks located near the old dry well. Phthalic and maleic materials solidify at ambient temperatures. This area is now paved and is not an area of concern for groundwater contamination.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>14) <u>"Storm Sewer"</u>: It appears that this area was not addressed in pre-CAO remediation.</p> <ul style="list-style-type: none"> ○ This area must be addressed in the workplan. If contamination is found, this area must be included in the CMS Work Plan. <p>15) <u>"Tanker Parking Areas"</u>: Two areas are identified in Figure 1 as being "tanker parking areas". The tanker parking area near the Church yard may be the source of spills that flowed off-site to the Church yard. The tanker parking areas were not listed as having been remediated or investigated prior to the CAO.</p> <ul style="list-style-type: none"> ○ The two tanker parking areas and any other tanker parking area must be included in the workplan. If contamination is found, this area must be included in the CMS Work Plan. 	<p>14) <u>Storm Sewer</u> This refers to the 8-inch open sewer tile located in the center of the southeast corner of the plant. This area was used to collect surface water runoff and divert it to the storm sewer inlet. In the event of a product spill, this inlet could be plugged. However, employees are certain that no spills were ever collected because plant spills would have infiltrated the gravel paving and would not have reached this location. This storm sewer existed from the 1970's until the new stormwater retention basin was built (mid 1980's).</p> <p>This area was used only to collect stormwater and is not of concern.</p> <p>15) <u>Tanker Parking Areas</u> There are three distinct tanker parking areas identified on Figure 1. Employees remember that no spills or leaks occurred at these areas and they are not of concern.</p> <p>15A - This was a parking area for full tankers and vans which had a concrete strip to support dolly wheels.</p> <p>15B - This was a parking area for empty tankwagons and vans. There was a strip of L-shaped concrete to allow forklifts to access area.</p> <p>15C - This area was primarily used for tankwagons loaded with finished product. Occasionally, empty cleaned tankwagons were also parked in the area. In early years the full raw material and finished goods tankwagons were parked on the concrete dolly strip.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>16) "Contamination plume in the glacial aquifer as defined by wells 43 and 44, 1987": This is not listed in Figure 1 of the CAO and may be a newly defined Area of Concern which could be associated with the tank farm immediately north of the plume area (area 5 above). This area indicated a third major hot spot in the facility's groundwater as seen in 1986 and/or 1987 groundwater sampling data. When wells 43 and 44 were no longer producing water samples due to the drought, this plume disappeared off of isocontour maps produced for the annual report (Task 5). (The Trend Analysis of the 1991 Annual Report shows well 43 as being dry between summer 1987 and summer 1989 with samples being taken until summer 1991 and well 43 became dry afterwards. Approximate contamination is 150,000 ppb.) The soils are likely to be contaminated in this location and must be investigated as source of contamination to the groundwater. If contamination is found, this area must be included in the CMS Work Plan.</p>	<p>The VOCs detected at wells W-43 and W-44 are likely a result of the upgradient tank farm storage area. Employees do not recollect disposal practices at these well locations that would constitute a separate source area.</p>
<p>TASK 3 - OFF-SITE CONTAMINATION</p> <p>CCP may propose an improved sampling plan for the off-site contaminated soils (e.g., Logeman Property and the Church Yard). A sampling plan which included each of the two sites, the Logeman property and the Church yard, was included in a conditionally approved workplan (Tasks 3A, 3B, and 3C) generated by Hatcher-Sayre. Since the conditional approval of the workplan, more advanced investigatory technologies have become available which may be beneficial to the investigation of the two contaminated off-site areas. CCP may propose improvements on the investigation contained in the conditionally approved workplan. Paragraph 11.b of the CAO identifies the Church yard as having known soil contamination.</p>	<p>Task 3: <u>Logemann Property</u> Property sold to Logemann in 1972. CCP (Freeman) operated air curtain incinerator on this site. The air curtain incinerator consists of a 8- to 10-foot-deep concrete pit that is presently covered by a wooden platform. The incinerator was used to burn primarily diatomaceous earth used in the resin manufacturing process. Acid water and water were used to quench the fire in the air curtain incinerator. Cracks in the bottom of incinerator may have allowed acid water out. Other materials burned may have included caustic and scrap iron.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
	<p>In addition, a waste pile was operated the southwest corner of the Logemann property. This site consists of ash primarily from the air curtain incinerator. The ash pile was covered with 60 cubic feet of soil in 1972.</p> <p>Moreover, cardboard containers (roughly 20 gallon capacity) were placed in a hole on the Logemann property. Employees recollect approximately 100 to 150 cardboard containers filled with solidified resin, filter paper, and diatomaceous earth. The containers were buried about 6 to 7 feet deep within a 20-by-20-foot area located approximately 50 yards northwest of the incinerator pit. The location of the buried containers is known by plant personnel.</p> <p>The incinerator area at the Logemann property may represent a concern for public health. CCP proposes to investigate the incinerator area and ash pile for risk assessment purposes.</p> <p><u>Churchyard Property</u> The churchyard property may have been impacted by the past disposal practices at the former urethane laboratory. Employees recollect that the topsoil of the churchyard ball field was replaced due to vegetation stress, installation of Ranney Collector RC-2, and aesthetic upgrading requested by the Parish Council. The plume of soil impacts will be defined near the east property line of the facility and the impacts to the remainder of the ball field will be investigated for risk assessment purposes.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
	<p><u>Northern Signal</u> The property located west and upgradient of the Saukville facility may also be impacting groundwater quality. Northern Signal used degreasers such as TCE and had two pits for TCE disposal. TCE has been detected in groundwater at CCP. In 1969 Laubenstein Roofing obtained the property and used phenols and tars in their processes. In 1974, sewer connections from Laubenstein to Freeman were plugged when phenols were discovered in the discharge.</p> <p>This information is provided for interpretation of groundwater results.</p>
<p>TASK 4 - BIOREMEDIATION/BIOVENTING/VAPOR EXTRACTION</p> <p>Table 2-1, Page 2-3 of Task 1 lists the Saukville site's major organic contaminants and their susceptibility to bioremediation. The benzene, ethylbenzene, toluene, and xylene that comprises the greatest amount of known site contamination may be remediated through biological means. Site remediation through the present groundwater system in only "containing" the contamination. Additional work to remediate the site may include bioremediation and/or vapor extraction in addition to actual physical removal of remaining soil contamination. CCP must propose a study which will determine the feasibility of bioremediation of the ground water and/or soils at the Saukville facility.</p>	<p>The corrective measures study will include and consider bioremediation/bioventing/vapor extraction as potential remedial technologies.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>TASK 5 - COMPLETION AND UPDATE OF TASK 4, WORK TO BE PERFORMED, CAO</p> <p>Task 4 of the Corrective Action Order has not been approved by U.S. EPA. Generally, certain requirements have been met by the Hatcher-Sayre submittal. However, additional work is necessary to complete and update this task.</p> <ul style="list-style-type: none"> ○ <u>Task 4A, Village of Saukville Water Supply</u>: At the time of the Hatcher-Sayre submittal, Task 4A, 4.b.iii, construction of 100,000 gallon storage/siltation basin had not been completed. Report on the completion of this portion of the task. The pump test will provide more information to complete this task. ○ <u>Task 4B, Exposure Information (Potential Receptors)</u>: Review the information submitted in the Hatcher-Sayre submittal and update the information where "no available information" was available. This information may be used in a Risk Assessment for the proposal of Alternate Concentration Limits (ACLs) in Task 4C and 4D. ○ <u>Task 4C, Groundwater Protection Standard</u>: A groundwater protection standard was to be established after the Appendix IX sampling was completed as stated in the CAO and the Task 4 submittal. This task is to be completed after the Appendix IX sampling has been completed at the site. If an Alternate Concentration Limit (ACL) is to be proposed, a Risk Assessment would be necessary to support the ACL. ○ <u>Task 4D, Soil Protection Standard</u>: The CAO based the soil protection standard on letters to Freeman Chemical Corporation from WDNR dated August 8, 1986 and June 10, 1987. The letters required that reliable field notes be taken during the soil excavation and treatment so that the information on soil handling be available on request. Rather than supplying redundant information, Task 2 of this Additional Work Scope of Work has requested that information be supplied to U.S. EPA on the fate and treatment of the excavated soil and Freeman's compliance with the two letters as required in Task 4D of the CAO. 	<p>4A) Construction of the 110,000 gallon stormwater retention basin was completed in 1986. This basin is used to store surface water collected at the site, which is tested for COD according to the NPDES prior to discharge to the Milwaukee River.</p> <p>4B) A risk assessment will be performed for off-site source locations. At this time, ACLs are not intended to be proposed for groundwater. However, CCP reserves the right to propose such in the future.</p> <p>4C) Agreed.</p> <p>4D) The excavated soil was remediated according to the WDNR approved method by aeration to acceptable levels of VOCs. Acceptable VOC levels were determined by field-screening methods, which were verified through laboratory analyses. These treated soils primarily remain on-site as landscaping berms along the southeast and northeast end of the property. A limited volume of soil was sent off-site and approved for landfilling (see Hatcher-Sayre Site Construction Documentation Report).</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>TASK 6 - QUALITY ASSURANCE PROJECT PLAN (QAPJP)</p> <p>All additional work conducted and all work yet to be completed pursuant to the Corrective Action Order must be conducted pursuant to the Attached Region V Quality Assurance Project Plan and accompanying guidance documents. Specifically, all soil samples and groundwater sampling (Appendix IX) must be conducted pursuant to an approved QAPJP. The Region V Model QAPJP and appropriate guidance is attached to this Order.</p>	<p>Agreed.</p>
<p>TASK 7 - CORRECTIVE MEASURES STUDY</p> <p>CCP must conduct a Corrective Measures Study (CMS) pursuant to Attachment 5. The CMS must address the facility's contaminated soils, and the potential for bioremediation/ bioventing/vapor extraction at the facility. Re-evaluation of the groundwater monitoring system is covered separately. The CMS may propose a modified groundwater system if a modification is necessary to implement other site remediations.</p>	<p>Agreed.</p>
<p>TASK 8 - EVALUATION OF THE GROUNDWATER REMEDIATION SYSTEM</p> <p>Task 5 of the CAO requires the evaluation of the groundwater remediation system in place. At the time that remediation was begun, one goal of the system was to "dewater the glacial aquifer". Due to a combination of the drought-like conditions of the past five years and the pumping of the dolomite aquifer, the glacial aquifer has shown signs that dewatering has occurred. However, it is necessary to re-evaluate the groundwater remediation system with respect to its compatibility with the removal and/or bioremediation that will address remaining sources of contamination on site. This task may be conducted as part of the Corrective Measures Study.</p>	<p>Agreed.</p>

TABLE 1 (CONTINUED)

RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES
<p>TASK 9 - REPORTS</p> <p>A. <u>Workplan</u></p> <p>Respondent shall submit to the U.S. EPA a workplan on Tasks 1 through 4. Included in the workplan is a Quality Assurance Project Plan (QAPJP) for the Additional Work and for the Appendix IX sampling to be conducted at the facility.</p> <p>B. <u>Progress</u></p> <p>Respondent shall at a minimum provide U.S. EPA with signed, bi-monthly progress reports containing:</p> <ol style="list-style-type: none"> 1. A description and estimate of the percentage of Additional Work completed; 2. Summaries of <u>all</u> findings; 3. Summaries of <u>all</u> changes made in the Additional Work investigation during the reporting period; 4. Summaries of <u>all</u> contacts with representatives of local community public interest groups or State government during the reporting period; 5. Summaries of <u>all</u> problems or potential problems encountered during the reporting period; 6. Actions being taken to rectify problems; 7. Changes in personnel during the reporting period; 8. Projected work for the next reporting period; and 9. Copies of daily reports, inspection reports, laboratory/ monitoring data, etc. <p>C. <u>Draft and Final Additional Work Report</u></p> <p>Upon U.S. EPA approval, Respondent shall prepare a Report detailing the findings of the Additional Work conducted pursuant to this workplan. The Report shall be developed in draft form for U.S. EPA review. The Additional Work Report shall be developed in final format incorporating comments received on the <u>Draft</u> Additional Work Report.</p>	<p>A. Agreed.</p> <p>B. It was agreed at the September 9, 1992, meeting that bi-monthly progress reports would not be required as separate reports. Instead, the quarterly groundwater reports will include a one- or two-paragraph summary of the project status.</p> <p>C. Agreed.</p>

TABLE 1 (CONTINUED)

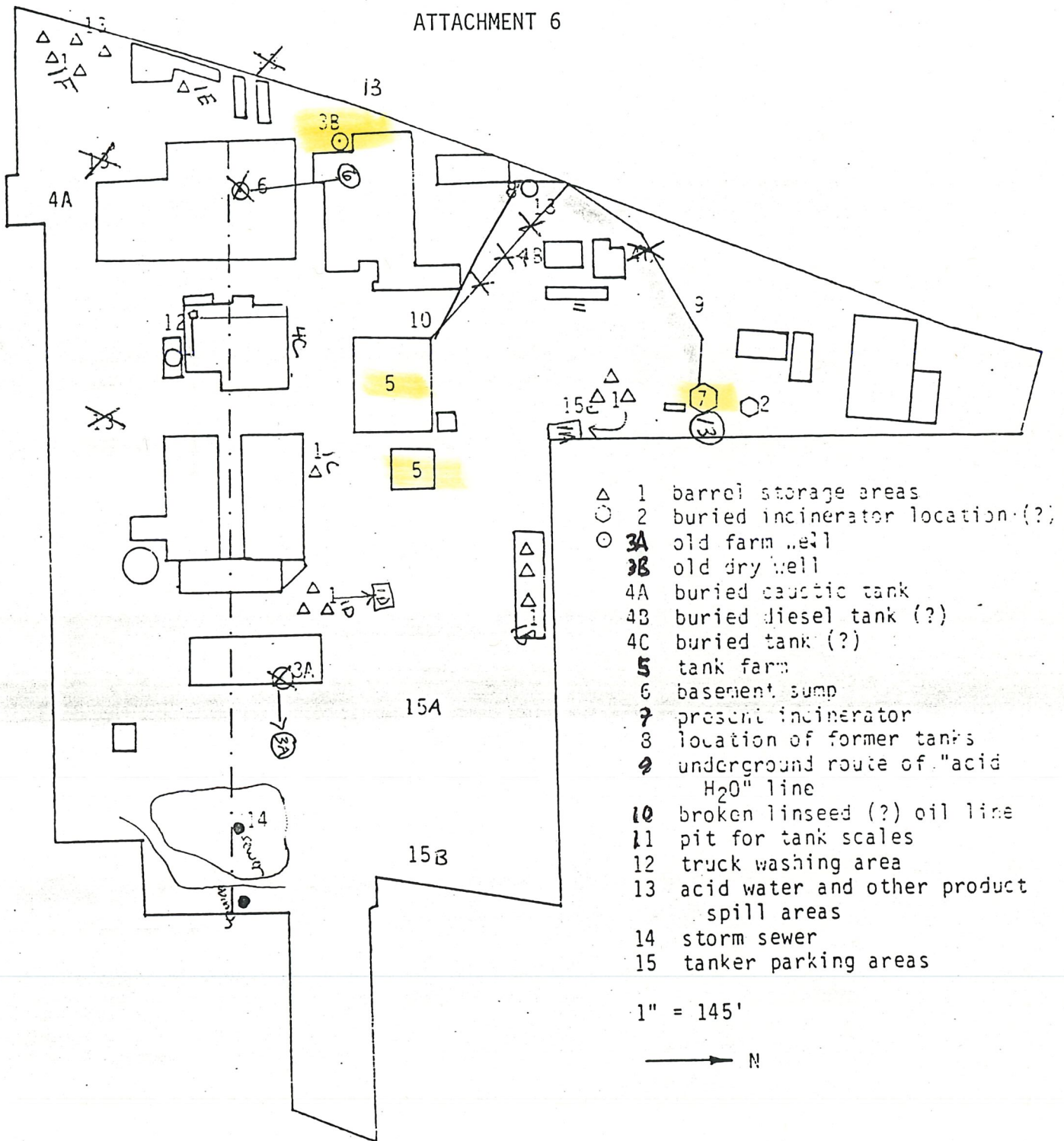
RESPONSES TO USEPA COMMENTS FROM THE JULY 24, 1992, LETTER

USEPA COMMENTS	RESPONSES																		
<p><u>Draft and Final CMS Report</u></p> <p>As determined in the CMS Work Plan schedule.</p> <p>Three copies of all reports, including the workplan, and both the <u>Draft</u> and <u>Final</u> RCRA Facility Investigation Reports shall be provided to U.S. EPA and three copies shall be provided to WDNR.</p>	<p>D. Agreed.</p>																		
<p><u>Facility Submission Summary</u></p> <p>A summary of the information reporting requirements contained in the additional Work Scope of Work is presented below.</p>	<p>This submittal schedule has been revised based on CCP letter dated November 9, 1992. Good-faith efforts will be maintained by CCP to provide submittals in a timely manner, to foster frequent communications with the Agencies, and to move forward with the required work.</p>																		
<table border="0"> <thead> <tr> <th data-bbox="71 777 454 819"><u>Facility Submission</u></th> <th data-bbox="454 777 984 819"><u>Due Date</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="71 840 454 924">Workplan for Additional Work (Tasks 1 through 4)</td> <td data-bbox="454 840 984 924">45 days upon Receipt of this letter</td> </tr> <tr> <td data-bbox="71 945 454 1029">Quality Assurance Project Plan (QAPjP) (Task 6)</td> <td data-bbox="454 945 984 1029">45 days upon Receipt of this letter</td> </tr> <tr> <td data-bbox="71 1050 454 1134">Draft Report for Additional Work (Tasks 1 through 4 and Task 5)</td> <td data-bbox="454 1050 984 1134">Within 30 days of completion of additional work as imposed by schedule in approved workplan</td> </tr> <tr> <td data-bbox="71 1155 454 1260">Final Report for Additional Work (Tasks 1 through 4 and Task 5)</td> <td data-bbox="454 1155 984 1260">30 days after receiving comments on Draft Report</td> </tr> <tr> <td data-bbox="71 1281 454 1365">CMS Workplan (Task 7 and 8)</td> <td data-bbox="454 1281 984 1365">Concurrent with Workplan for Additional Work (Tasks 1-4)</td> </tr> <tr> <td data-bbox="71 1386 454 1470">CMS Draft Report</td> <td data-bbox="454 1386 984 1470">Contingent on schedule imposed in CMS Plan</td> </tr> <tr> <td data-bbox="71 1491 454 1575">CMS Final Report</td> <td data-bbox="454 1491 984 1575">30 days after receiving final comments on Draft Report</td> </tr> <tr> <td data-bbox="71 1596 454 1659">Progress Reports on Tasks 1 through 8</td> <td data-bbox="454 1596 984 1659">Bi-monthly</td> </tr> </tbody> </table>	<u>Facility Submission</u>	<u>Due Date</u>	Workplan for Additional Work (Tasks 1 through 4)	45 days upon Receipt of this letter	Quality Assurance Project Plan (QAPjP) (Task 6)	45 days upon Receipt of this letter	Draft Report for Additional Work (Tasks 1 through 4 and Task 5)	Within 30 days of completion of additional work as imposed by schedule in approved workplan	Final Report for Additional Work (Tasks 1 through 4 and Task 5)	30 days after receiving comments on Draft Report	CMS Workplan (Task 7 and 8)	Concurrent with Workplan for Additional Work (Tasks 1-4)	CMS Draft Report	Contingent on schedule imposed in CMS Plan	CMS Final Report	30 days after receiving final comments on Draft Report	Progress Reports on Tasks 1 through 8	Bi-monthly	
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ATTACHMENT A

- **Figure 1–Potential Sources of Groundwater Contamination**
- **Groundwater Collection System–Freeman Chemical Corporation, Saukville, Wisconsin**

ATTACHMENT 6



- △ 1 barrel storage areas
- 2 buried incinerator location (?)
- 3A old farm well
- 3B old dry well
- 4A buried caustic tank
- 4B buried diesel tank (?)
- 4C buried tank (?)
- 5 tank farm
- 6 basement sump
- 7 present incinerator
- 8 location of former tanks
- 9 underground route of "acid H₂O" line
- 10 broken linseed (?) oil line
- 11 pit for tank scales
- 12 truck washing area
- 13 acid water and other product spill areas
- 14 storm sewer
- 15 tanker parking areas

1" = 145'



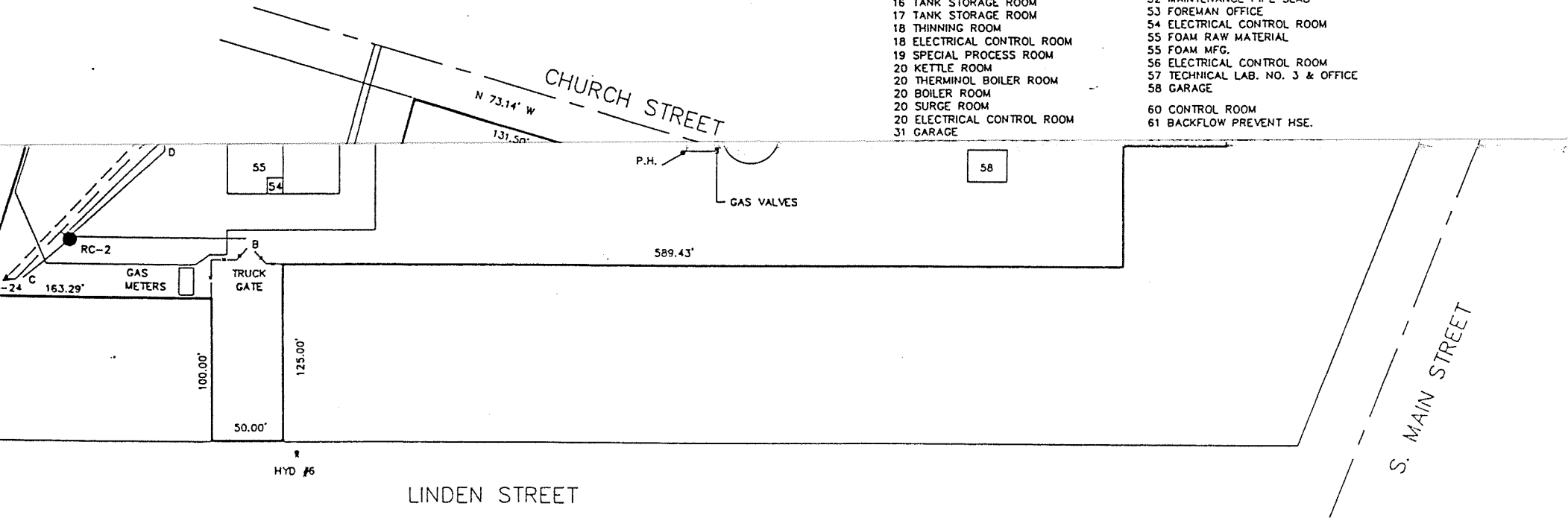
FIGURE 1 - Potential Sources of Groundwater Contamination

FREEMAN CHEMICAL CORPORATION

SAUKVILLE, WISCONSIN

KEY:

- | | |
|-------------------------------|----------------------------------|
| 1 BOILER ROOM | 40 HOT ROOM |
| 2 STORAGE ROOM | 41 EAST LOADING DOCK |
| 3 KETTLE ROOM | 42 SHED WAREHOUSE |
| 4 THINNING ROOM | 44 WAREHOUSE |
| 5 KETTLE ROOM | 45 WAREHOUSE |
| 6 THINNING ROOM | 46 R.F.P. APPLICATION LABORATORY |
| 7 FOAM LABORATORY | 47 POLYESTER STORAGE ROOM |
| 8 TANK FARM | 48 DRUM FILLING FACILITY |
| 9 CONTROL LABORATORY | 49 FIRE EQUIPMENT SHED |
| 10 STORAGE TANK ROOM | 50 MAINTENANCE STORAGE SHED |
| 11 TANK WAGON LOADING SHED | 51 MAINTENANCE STORAGE SHED |
| 13 WAREHOUSE RAW -- MATERIALS | 52 MAINTENANCE PIPE SLAB |
| 16 TANK STORAGE ROOM | 53 FOREMAN OFFICE |
| 17 TANK STORAGE ROOM | 54 ELECTRICAL CONTROL ROOM |
| 18 THINNING ROOM | 55 FOAM RAW MATERIAL |
| 18 ELECTRICAL CONTROL ROOM | 55 FOAM MFG. |
| 19 SPECIAL PROCESS ROOM | 56 ELECTRICAL CONTROL ROOM |
| 20 KETTLE ROOM | 57 TECHNICAL LAB. NO. 3 & OFFICE |
| 20 THERMINOL BOILER ROOM | 58 GARAGE |
| 20 BOILER ROOM | 60 CONTROL ROOM |
| 20 SURGE ROOM | 61 BACKFLOW PREVENT HSE. |
| 20 ELECTRICAL CONTROL ROOM | |
| 31 GARAGE | |



REVISION	SCALE: 1" = 50'	APPROVED BY:	DRAWN BY: D.J.S.	GROUND WATER COLLECTION SYSTEM	FREEMAN CHEMICAL CORP. SAUKVILLE, WISCONSIN	TRIAD ENGINEERING INCORPORATED	3333 north mayfair road Wauwatosa, wisconsin 53222 414/771/5050	DRAWING NUMBER D-256-3
	DATE: 10/7/87							

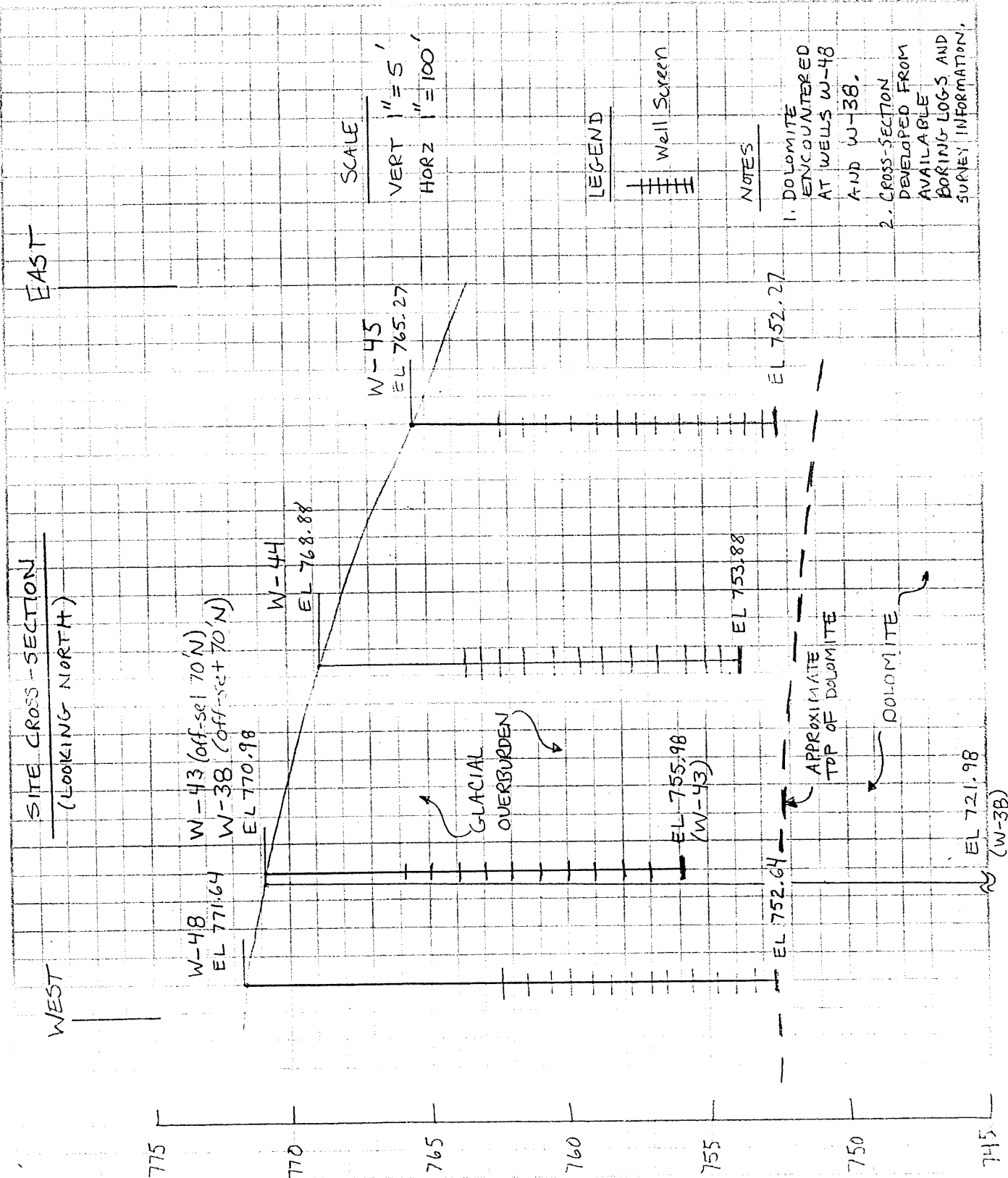


COMPUTATION SHEET

744 Heartland Trail P.O. Box 8923 Madison, WI 53708-8923 (608) 831-4444 FAX: (608) 831-3334

SHEET 1 OF 1

PROJECT / PROPOSAL NAME CCP - USEPA COMMENTS RESPONSE	PREPARED	CHECKED	PROJECT / PROPOSAL NO.
	By: SAM Date: 12/8/92	By: Date:	1832.36



ELEVATION (FT ABOVE M.S.L.)

ATTACHMENT C

- **PID Soil Screening Results from Storm Sewer Installation along South End of Property**
- **Storm Sewer/Surface Drainage—Freeman Chemical Corporation, Saukville, Wisconsin**

Lee Barwick
Russ Cerk
Bob Roob
File

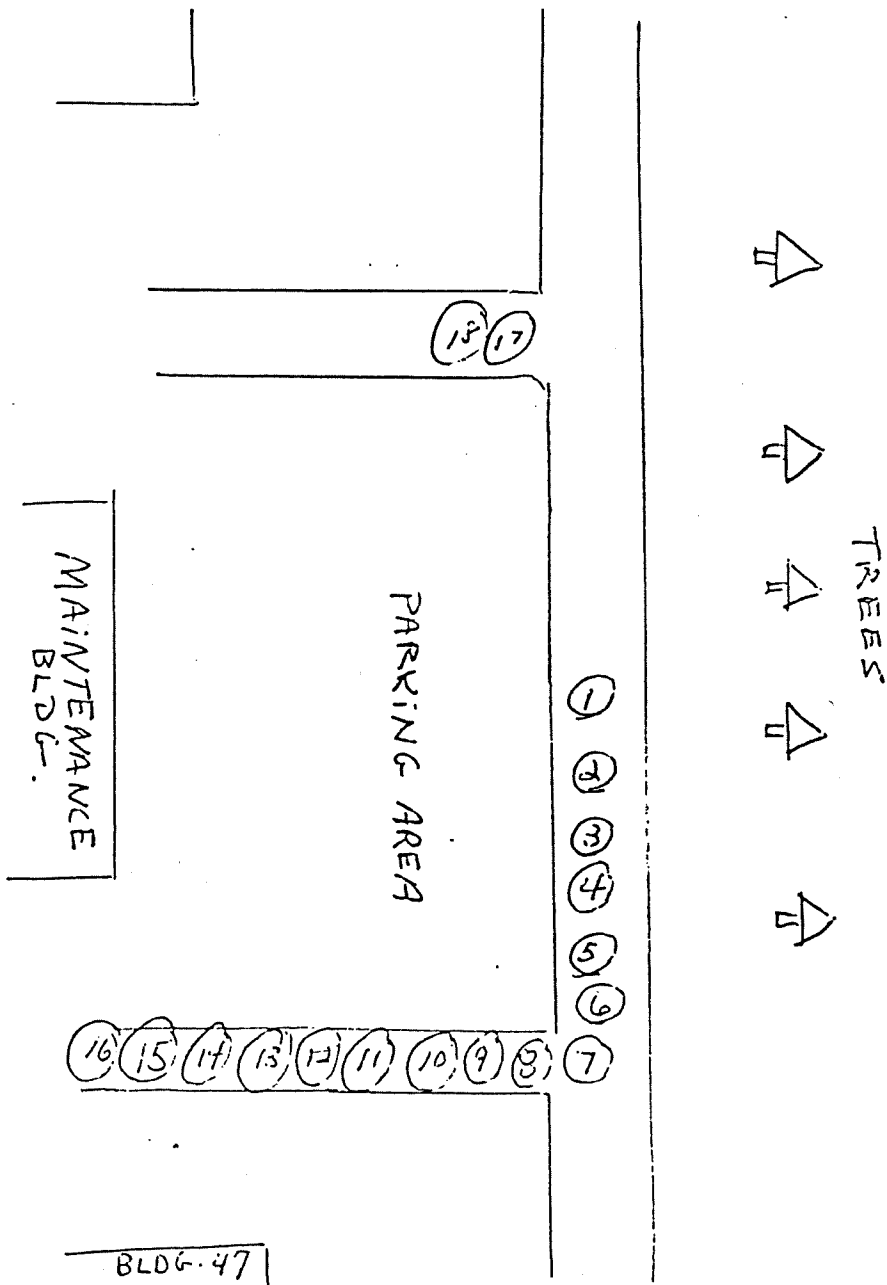
April 16 Soil readings (am only):

Number of loads: Six loads were moved to area south of drive but north of basin as specified from previous day's discussion. All loads contained dirt with readings of "0". Some soil also was used to refill sewer trenches that were dug.

Soil placement: As of 11:30 a.m. all soil had readings of "0" and were used in the aforementioned way. The PID had been properly calibrated according to direction prior to its usage at 7:45 a.m.

Sample readings & results:

- #1 0 ppm
- #2 0 ppm
- # 3 0 ppm
- #4 0 ppm
- #5 0 ppm
- #6 0 ppm
- #7 0 ppm
- #8 0 ppm
- #9 0 ppm
- #10 0 ppm
- #11 0 ppm
- #12 0 ppm
- #13 0 ppm
- #14 0 ppm
- #15 0 ppm
- #16 0 ppm
- #17 0 ppm
- #18 0 ppm



Note: Truck contains 20 yds. of dirt; larger truck contains 24 yds.

Lee Barwick .
 Russ Cerk
 Bob Roob
 File

Soil samples taken April 16 (afternoon)

Number of truck loads: Total of four

One taken at 12:00 noon

Second taken at 2:05 p.m.

Third taken at 3:15 p.m.

Fourth taken at 3:50 p.m.

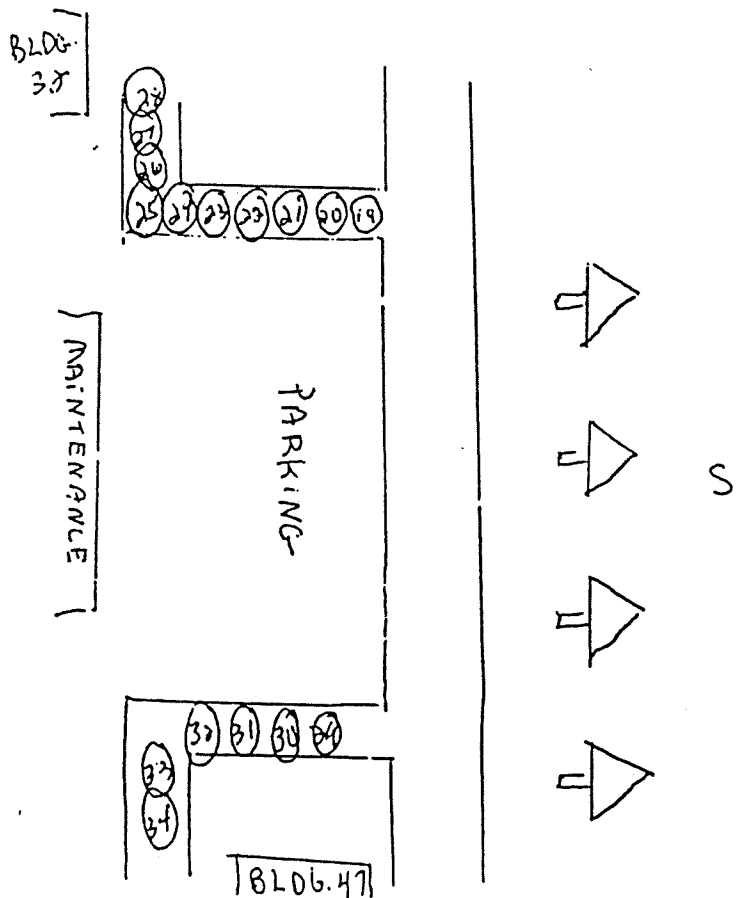
All loads contained dirt with "0" readings.

All loads taken to designated spot north of basin but south of drive as previous loads.

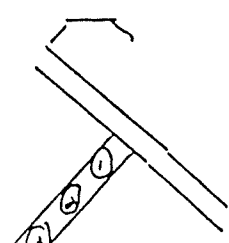
Soil placement: As of 4:10 p.m. all soil had readings of "0".
 The PID was again properly calibrated prior to use according to standards on calibration gas canister. Upon completion of tests, instrument was cleaned, sample jars washed and dried, and PID again checked for accurate calibration.

Sample readings and results:

- #19 0 ppm
- #20 0 ppm
- #21 0 ppm
- #22 0 ppm
- #23 0 ppm
- #24 0 ppm
- #25 0 ppm
- #26 0 ppm
- #27 0 ppm
- #28 0 ppm
- #29 0 ppm
- #30 0 ppm
- #31 0 ppm
- #32 0 ppm
- #33 0 ppm
- #34 0 ppm



- #1 0 ppm
- #2 0 ppm
- #3 0 ppm



Lee Barwick
Russ Cerk
Bob Roob
File

1987

APRIL 15 Soil readings:

Number of loads: Two loads moved to area A pile (these were moved prior to final decision as to correct placement due to readings, wetness, etc.)

Six loads moved to area north of basin and south of driveway. All loads had "0" readings. This removal was as of 4:30 p.m.

Much soil that had "0" reading was used to refill trench or placed to side of excavated ditch for removal on subsequent date.

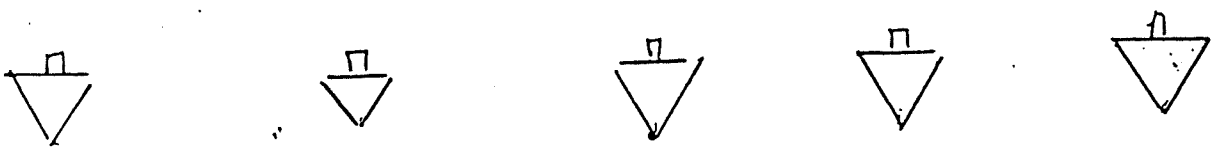
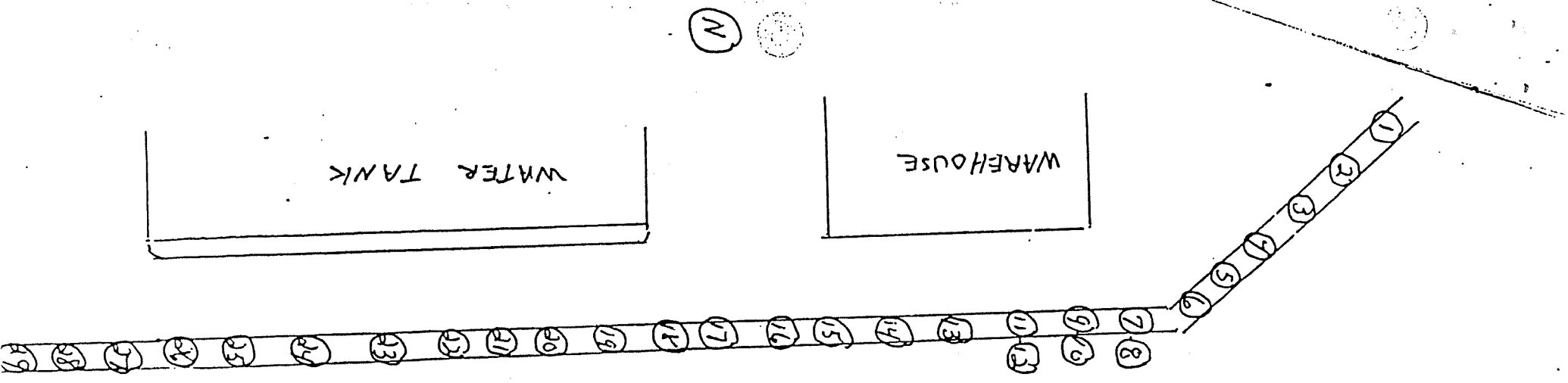
The procedure and placement was decided and adhered to. The PID was properly calibrated prior to use. Samples of soil were taken immediately as dirt was removed. Samples were taken at various depths of piles at least five to ten feet apart.

Soil would be moved as follows:

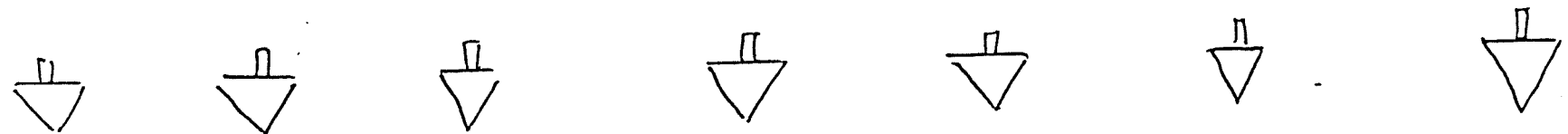
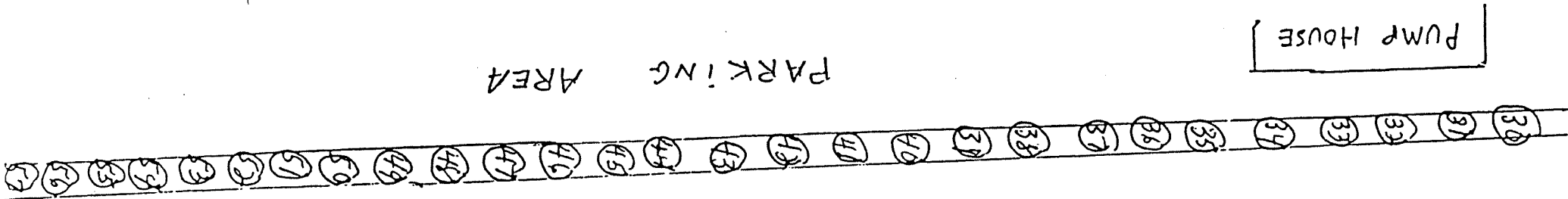
"0" ppm : moved off-site (weather permitting)
"10" - "10" ppm : moved to east of basin (when dry)
"10" - "40" ppm: moved parallel to Area A pile
"40" + ppm : placed along fence east of aerated area. Bob Roob will uncover present dirt if soil moved to this location.

Sample readings & results:

#1	0 ppm	#21	0 ppm	#41	0 ppm
#2	0 ppm	#22	0 ppm	#42	0 ppm
#3	0 ppm	#23	0 ppm	#43	0 ppm
#4	0 ppm	#24	0 ppm	#44	0 ppm
#5	0 ppm	#25	0 ppm	#45	0 ppm
#6	0 ppm	#26	0 ppm	#46	0 ppm
#7	0 ppm	#27	0 ppm	#47	0 ppm
#8	0 ppm	#28	0 ppm	#48	0 ppm
#9	0 ppm	#29	0 ppm	#49	0 ppm
#10	0 ppm	#30	0 ppm	#50	0 ppm
#11	0 ppm	#31	0 ppm	#51	0 ppm
#12	0 ppm	#32	0 ppm	#52	0 ppm
#13	0 ppm	#33	0 ppm	#53	0 ppm
#14	0 ppm	#34	0 ppm	#54	0 ppm
#15	0 ppm	#35	0 ppm	#55	0 ppm
#16	0 ppm	#36	0 ppm	#56	0 ppm
#17	0 ppm	#37	0 ppm	#57	0 ppm
#18	0 ppm	#38	0 ppm	#58	0 ppm
#19	0 ppm	#39	0 ppm		



TREES 5



TREES 5

PARKING AREA

Lee Barwick
 Russ Cerk
 Bob Roob
 File

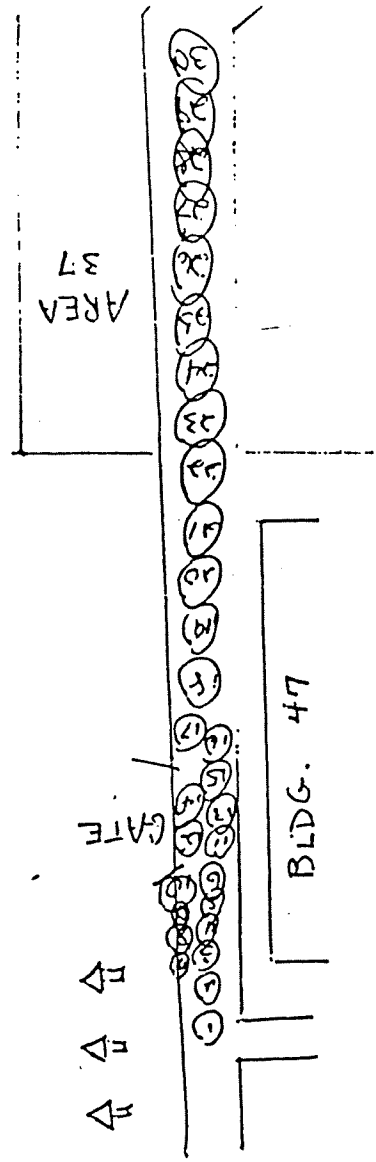
Soil samples taken on morning of April 17

Number of loads: Total of five
 Loads contained soil of "0" reading
 All loads moved to specified area north of
 Basin and south of drive as in previous days.

Soil placement: PID was properly calibrated.
 However, instrument seemed to be inconsistent
 and PID was sensitive to volatiles in air from
 plant and from Tillmann machinery. In some
 instances the meter started at a point higher
 than "0", but when probe was inserted in sniffling
 jar, the meter remained at level or moved lower.
 which would indicate that actual readings were
 "0".
 Instrument was cleaned, recalibrated, and
 prepared for afternoon check.

Sample readings and results:

#1	0 ppm	(0)
#2	0 ppm	(0)
#3	0 ppm	(2)
#4	0 ppm	(3)
#5	0 ppm	(0)
#6	0 ppm	(1)
#7	0 ppm	(2)
#8	0 ppm	(0)
#9	0 ppm	(0)
#10	0 ppm	(0)
#11	0 ppm	(2)
#12	0 ppm	(2)
#13	0 ppm	(2)
#14	0 ppm	(2)
#15	0 ppm	(3)
#16	0 ppm	(4)
#17	0 ppm	(1)
#18	0 ppm	(2)
#19	0 ppm	(0)
#20	0 ppm	(0)
#21	0 ppm	(0)
#22	0 ppm	(0)
#23	0 ppm	(0)
#24	0 ppm	(0)
#25	0 ppm	(0)
#26	0 ppm	(0)
#27	0 ppm	(0)
#28	0 ppm	(0)
#29	0 ppm	(0)
#30	0 ppm	(0)



Lee Barwick
Russ Cerk
Bob Roob
File

Soil testing on April 17 (afternoon)

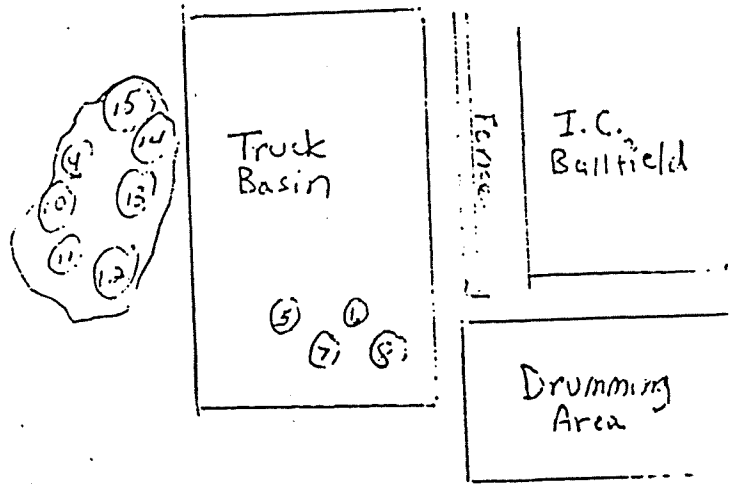
Soil testing location: Truck basin and adjacent fill pile

Number of loads: Three loads of approximately five yards taken to Area 1 designation after soil tested with PID.

Soil Placement: PID was calibrated. PID was tested for accuracy. Soil samples were taken for various loads before Miller driver would haul to specified area. All samples registered "0" on PID meter.

Soil readings and results:

- #5 0 ppm
- #6 0 ppm
- #7 0 ppm
- #8 0 ppm
- #9 0 ppm
- #10 0 ppm
- #11 0 ppm
- #12 0 ppm
- #13 0 ppm
- #14 0 ppm
- #15 0 ppm



Soil was also tested on concrete to be removed by Tillmann and sent to off-site landfill. Soil was scraped from cement blocks that had been moved to area a (north of basin, but south of drive).

Readings for soil were as follows:

- #1 0 ppm
- #2 0 ppm
- #3 0 ppm
- #4 0 ppm
- #5 0 ppm



Soil was also tested as it was excavated in area 37. Only a few samples were taken as most of sewer line was tested prior to this.

Results of PID readings:

- #1 0 ppm
- #2 0 ppm
- #3 0 ppm
- #4 0 ppm

