

6871 South Lovers Lane Franklin, WI 53132 Telephone: (414) 427-1200 Fax: (414) 427-1259

www.endpointcorporation.com

Mr. John Feeney, P.G. Hydrogeologist, Remediation & Redevelopment Program Wisconsin Department of Natural Resources 1155 Pilgrim Road Plymouth, WI 53073

December 3, 2021

Subject: Site Investigation Work Plan Addendum

Cook Composites/Former Freeman Chemical/Arkema 340 South Railroad Street, Saukville, Wisconsin

BRRTS #: 02-46-000767

Dear John:

Previously, Endpoint Solutions Corp. (Endpoint), on behalf of RETIA USA LLC, prepared a Site Investigation Work Plan (SIWP) for the Cook Composites/Former Freeman Chemical/Arkema facility located at 340 South Railroad Street, in the Village of Saukville, Ozaukee County, Wisconsin (the "Site"). The SIWP was submitted to the Wisconsin Department of Natural Resources (the "Department") on March 12, 2021. On August 17, 2021, we received an email from the Department with comments following initial review of the SIWP. It was suggested the comments be addressed via an Addendum to the SIWP; therefore, our responses to the specific comments included in the August 17, 2021 email are presented in the discussion below.

NEW, UPDATED CROSS SECTIONS AND FIGURES

- The conceptual site model needs to be better defined with revised/updated figures and crosssections through known and potential source areas:
 - Include locations and depths of piping, utilities, basements, sumps, etc. on the cross sections.

Response: Development at the Site dates back to the 1940s when it was initially occupied by a vegetable cannery. In 1949, Freeman installed resin manufacturing equipment at the Site. Due to expansion of the resin manufacturing process, additional Site buildings were constructed as necessary over the course of the next approximately 40-years, with much of the Site development occurring prior to the 1990s. As such, there is very limited information available for the location of subsurface utilities at the Site. We are in possession of "As-Built" drawings from the Plant Modernization project completed in 1986 that provides some rudimentary locational information regarding subsurface utilities; however, it is understood from tenured Site personnel that a significant amount of unmapped subsurface utilities have been encountered over the years.



In addition, our experience at the Site indicates that abandoned subsurface utilities were typically not removed, but rather new utilities were simply installed to replace those which may have failed. Therefore, for these reasons, it may be very difficult to provide an accurate representation of all of the subsurface utilities present at the Site. Lastly, during the extraction well upgrade project, we learned the exterior concrete pavement installed in the late 1980s as part of the plant modernization program contains a significant amount of large reinforcing steel that makes identification of subsurface utilities with standard magnetometer and ground penetrating radar (GPR) technology very challenging.

We request the Department's need for subsurface utility locational information on figures and cross-sections be addressed as part of the Site Investigation Report (SIR) to be prepared following the collection of the data described in the SIWP.

Add scales to all figures.

<u>Response:</u> A majority of the figures included in the SIWP were obtained from historical sources dating back to circa 1988, which either did not include a scale or were not drawn to scale. Future sample points will be surveyed using RTK-GPS equipment with the sample points located on the Site using a property survey previously performed. As part of the SIR preparation process, we will relocate historic sample locations as best as possible onto the surveyed Site plans using the information provided in the historical documentation.

 Add data to figures and iso-concentration lines to illustrate the known lateral and vertical extent of contamination.

Response: While we can certainly prepare iso-contours on Figure 19 where there are a significant number of historic data points, in areas such as AOCs 2 and 3 where we have proposed additional sampling locations, we only have one (1) and three (3) existing data points, respectively. As such, it is unclear what benefit may be gained at this time to adding iso-contours to Figures 20 and 21. Furthermore, per the WDNR's August 18, 2000 letter requesting the SIWP, "Wis. Admin § NR 716.15(4)(c) and (d) require the site investigation report to include isoconcentration maps and cross sections to depict the hazardous substance concentrations in each environmental medium." While we fully intend to meet the requirements of NR 716.15(4)(c) and (d) in preparing the SIR, it is our opinion these items are not required for approval of the SIWP submitted for review in March 2021. At this point, the purpose of the proposed sampling activities is to obtain information necessary to aid in preparation of the SIR and all of the required attachments. We understand that the SI at the Site is likely going to be iterative in nature and subsequently at this point, we are proposing this round of sampling activities



be performed to refine what is perhaps previously been noted and assess what the next steps may be.

All data, including confirmation soil samples taken from the church ballfield excavation, should be considered. The DNR is in the process of scanning and uploading the October 21, 1996 church ballfield soil remediation construction documentation report to the DNR's public database which has confirmation soil sampling data from the remedial excavation.

Response: We are in possession of the Construction Documentation Report (CDR) for the Immaculate Conception Church Property (AOC 5) prepared by RMT, Inc. in October 1996. The investigative and confirmation data collected from AOC 5, as contained in the CDR, will be included on the figures and geologic cross-sections prepared as part of the SIR following performance of the investigation activities described in the SIWP.

 Include proposed soil borings on the cross sections and figures to justify locations and depths for further delineation, based on known contamination and/or source areas.

Response: Based on the responses to previous comments, and with the understanding the SI at the Site will likely require several iterations to collect sufficient data to adequately delineate the extent of the contamination and to identify remedial methods in order to update the Corrective Measures Study (CMS), we propose the preparation of geologic cross-sections and figures be reserved for the SIR to be prepared following collection of the initial round of data described in the SIWP.

PROVIDE JUSTIFICATION OF PROPOSED SOURCE AREA(S) INVESTIGATIONS

- Review identified contaminant source areas that are <u>not</u> being evaluated (reference Figure 28 of the SIWP).
 - Discuss any potential source areas that are not being evaluated and explain why no sampling is needed.

Response: Based on the discussions included in Section 2.3.3 and Section 4.0 of the SIWP, we believe we have adequately justified the areas which require additional investigation. Our evaluation of areas was based on the specific areas identified in Site Conditions & Construction Report prepared by Hatcher (February 15, 1988). Based on the information contained in the Site Conditions & Construction Report and subsequent investigative activities performed at the Site, we have justified those areas that require additional investigation as described in the SIWP. In many cases, where information presented in the Site Conditions & Construction Report indicated issues were addressed without providing adequate backing documentation, we have reacted conservatively by



indicating that additional investigation be performed in these areas to confirm prior actions.

 Discuss if source areas exist inside the buildings and explain if/how sampling inside the buildings is needed. The SIWP suggests that most/all discharges occurred outside the buildings.

Response: At the time the SIWP was prepared, demolition of the Site buildings was not scheduled. While the Site remained under the control of Arkema until said buildings were demolished, the possibility of production restarting at the Site remained a possibility. Therefore, RETIA USA LLC was required to weigh the benefit of performing investigative activities beneath the existing buildings against the risks associated with possibly damaging subsurface structures and utilities which could limit the production capabilities of the Site, as well as create potential preferential pathways to the subsurface for additional contamination should production resume. Therefore, the site investigation activities described in the SIWP focused on the exterior portions of the Site buildings. Furthermore, to-date, the majority of the subsurface data collected at the Site has been located within the known areas of contamination, it was our decision to attempt to gain some knowledge regarding the overall extent of contamination in the unsaturated soils during this iteration of investigation activities. We fully expect that additional investigation activities will be required within the building footprints, primarily within the former active production areas during future site investigation activities.

Confirm material storage areas.

Response: Raw materials and finished product were located in several specific locations historically at the Site. Per **Figure 4**, included in the SIWP, raw materials were stored in the tank farm, identified as location #10, while several areas were identified as barrel storage areas, identified as locations #1. The barrel storage areas were located in the southwest corner of the Site, to the north and northeast of Building #34, within Building #42 and to the south of AOC 1 along the east fence line.

The most recent facility layout, utilized from approximately 1996 through the idling of the Site at the end of 2015 identified raw material and finished product storage areas as follows:

- Current concrete-diked tank farm (raw materials);
- Interior storage tank rooms (raw materials and finished products) Buildings # 10, 13, 16, 17, 47 and 55;
- Finished product warehouse (drums) Buildings 32, 44 and 45; and,



- Dry raw materials – Buildings #34, 42, 44 and 45.

A copy of the Site Map included in the 1996 CMS is attached in Appendix A.

SOIL PATHWAY COMMENTS TO ADDRESS

 Borings central to source areas are needed (not just perimeter borings) to assess current contaminant concentrations in soil.

Response: We understand the SI process is an iterative process with the results of SI activities potentially leading to the need for additional SI activities to be performed. It was not our intent to insinuate the SIWP submitted in March 2021 was a comprehensive SIWP that would answer all potential questions regarding the subsurface contamination at the Site and position the Site for final regulatory closure. Based on the limited existing data that has identified the AOCs, rather than immediately collecting additional data from the previously identified source areas, it was our intent to initially attempt to evaluate the horizontal extent of the previously noted impacts as they exist today. It is well understood, that in order to be able to complete the conceptual site model, evaluate remedial methods, update the Corrective Measures Study (CMS) and progress the Site towards closure, additional evaluation of the source areas would need to occur. However, it is our opinion that is premature at this point and our intent is to address these potential data gaps during a later phase of the SI process.

 Compare proposed sampling locations to known source areas or areas of contaminated soil requiring delineation.

Response: Using the historic investigative data available to us, it is our opinion we have developed an initial SIWP that provides needed additional information associated with known source areas, potential sources areas and areas requiring additional delineation. Again, as the investigation process at the Site is expected to require several iterations, we understand the necessity to investigate and delineate the horizontal and vertical extent of all known and potential areas of contamination in order to determine remedial methods which may be required to protect human health and the environment.

• When soil contamination has been identified at depth, deeper soil samples may be needed than what is identified in the SIWP.

Response: As the investigation process at the Site is expected to require several iterations, we understand the necessity to investigate and delineate the horizontal and vertical extent of all known and potential areas of contamination in order to determine remedial methods which may be required to protect human health and the environment.



• In very highly contaminated source areas, saturated soil samples are needed to a depth that fully characterizes the sources.

Response: As the investigation process at the Site is expected to require several iterations, we understand the necessity to investigate and delineate the horizontal and vertical extent of all known and potential areas of contamination in order to determine remedial methods which may be required to protect human health and the environment.

Discuss if proposed soil borings should be analyzed for PFAS.

Response: On July 13, 2021, Endpoint on behalf of RETIA USA LLC submitted a Report of Results - PFAS Contamination Site Investigation to the Department for review and comment. Based on the results of the PFAS investigation activities, additional soil sampling was not recommended. Furthermore, due to the presence of low-concentration PFAS in several of the groundwater samples submitted for analysis, additional groundwater sampling was recommended. However, as of the date of the SIWP and this Addendum, a response to the recommendations has not been received from the Department.

GROUNDWATER PATHWAY COMMENTS TO ADDRESS

- Discuss if all sources have been adequately identified for wells with highest groundwater concentrations.
 - Consider if additional soil borings are needed to determine possible sources of the groundwater contamination.

Response: The proposed investigation scope of work described in the SIWP includes areas outside of the previously identified AOCs. As these additional areas of investigation were identified utilizing historic Site data, it is our opinion the scope of investigation proposed will likely identify any additional areas of groundwater contamination.

- Ranney Collectors
 - Justify that these sampling points are representative of shallow groundwater conditions.

Response: Per information included in the Site Conditions & Construction Report prepared by Hatcher Incorporated in 1986, the Ranney Collectors designed for the Site consist of central large-diameter caissons to which lateral ditches drain groundwater via gravity. The laterals consist of a gravel-filled ditch containing a four-inch (4") diameter well screen radiating away from the bottom of each caisson at a designated gradient just above the upper surface of the underlying dolomite bedrock. A typical cross-section



- of the Ranney Collector system as presented on Figure 3-3 from the 1986 Site Conditions & Construction Report is attached for reference in **Appendix B**.
- If not, discuss if additional water table wells are needed for definition and/or long-term monitoring.

Response: Groundwater monitoring has been ongoing at the Site since 1991. The existing monitoring network appears to be sufficient to adequately monitor the plume(s) of contaminants emanating from the known source areas, and as such, we have not proposed the installation of additional water table wells at this time. However, if the investigative activities proposed in the SIWP or subsequent investigative actions identify additional source areas located in areas not adequately monitored, additional monitoring wells may be proposed at that time. Furthermore, as investigation and remediation of the source areas proceed in the future, there may come a time when a reduction in the groundwater extraction system is requested. It is understood that additional monitoring wells may also be needed at that time in the future to ensure contaminated groundwater is not migrating off the Site.

 Replacement well for W-37 is needed (It's the DNR's current understanding that a separate groundwater SIWP is to follow the additional soil investigations).

> **Response:** W-37 was formerly located on the portion of the Church Ballfield (AOC 5) which was excavated and remediated in 1995/1996. W-37 was formerly located less than ten (10) ft from the end of the extension of one (1) of the legs of RC-3 (see Figure 2 from the AOC 5 CDR attached for your reference in Appendix C). Furthermore, a letter dated August 13, 1996 documents a telephone conversation between Mr. Eugene McLinn with RMT and Mr. Tim Mulholland with the WDNR regarding the verbal approval to abandon and eliminate W-37 from the monitoring network due to the extension of the RC-3 leg as discussed above. A copy of the letter is attached for your reference in Appendix D. Finally, as the remediation of AOC 5 included the installation of a geomembrane over the base of the remedial excavation, reinstallation of monitoring well W-37 would penetrate the geomembrane; thereby, negating the protective quality of the membrane. Finally, monitoring well W-16A is located approximately 160 feet to the southeast of the former W-37 location. As W-37 was completed to a maximum depth of 18 feet below the ground surface (ft bgs) and W-16A is completed to 16 ft bgs, the two (2) wells monitored the same aquifer. Based on groundwater elevation data, the W-16A location appears to be directly down-gradient from the former W-37 location. Based on this information, it is our opinion the replacement of monitoring wells W-37 is not necessary and would potentially cause additional contamination to occur due to penetrating the geomembrane placed in the AOC 5 remedial excavation.



CLOSING

We appreciate the input provided in response to the SIWP submitted for review, and we trust the information provided in this Addendum provides the information necessary for the Department to approve the SIWP. If you have any further questions or comments, please feel free to contact me at 414-858-1202 or via email at bbb@endpointcorporation.com or Keith Linton at RETIA USA LLC at 713-483-5060 or via email at keith.linton@totalenergies.com.

Sincerely,

Endpoint Solutions

Robert A. Cigale, P.G.

Principal

cc: Keith Linton - RETIA USA LLC

ATTACHMENTS

Appendix A

Appendix B

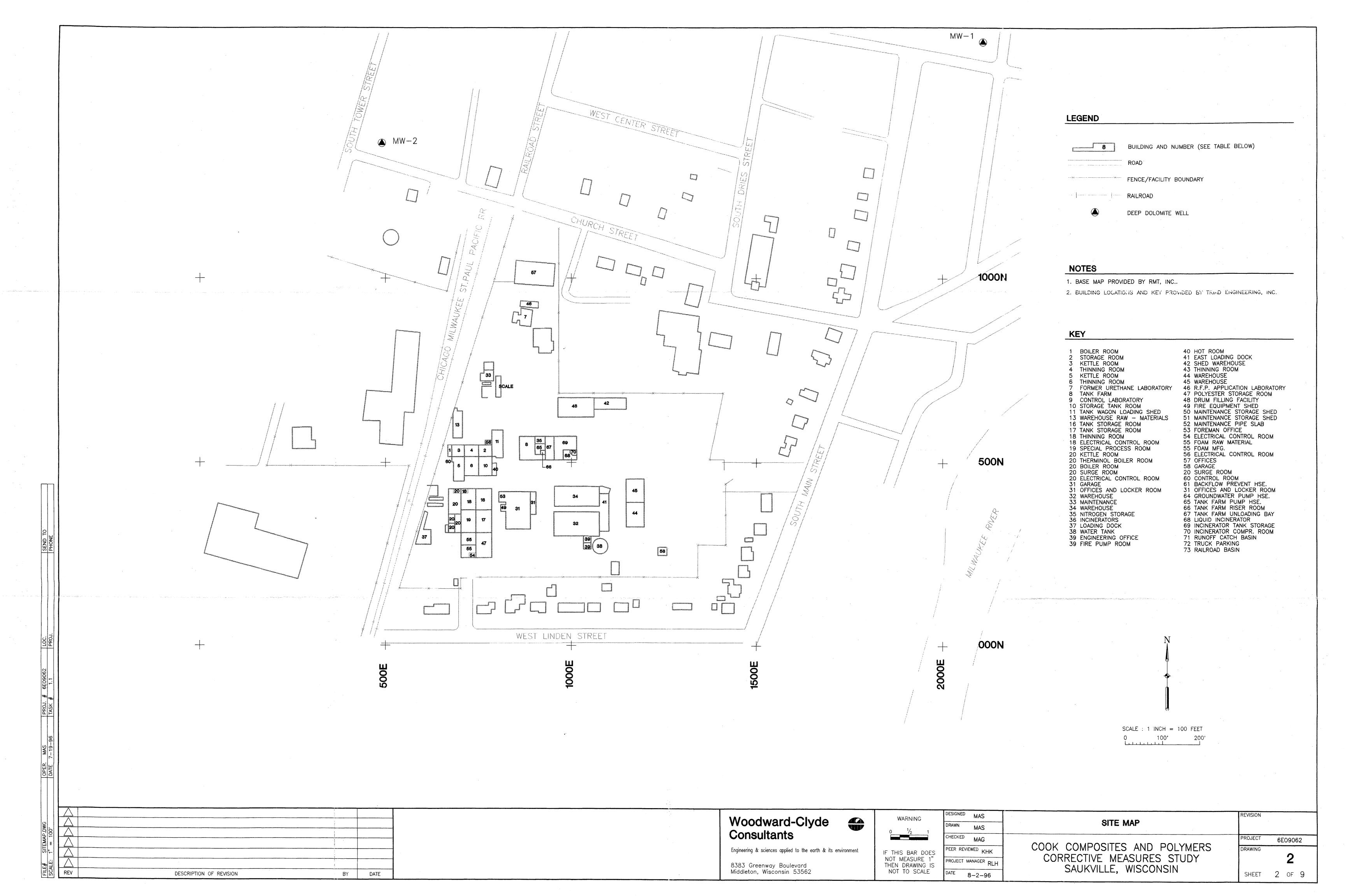
Appendix C

Appendix D



APPENDIX A

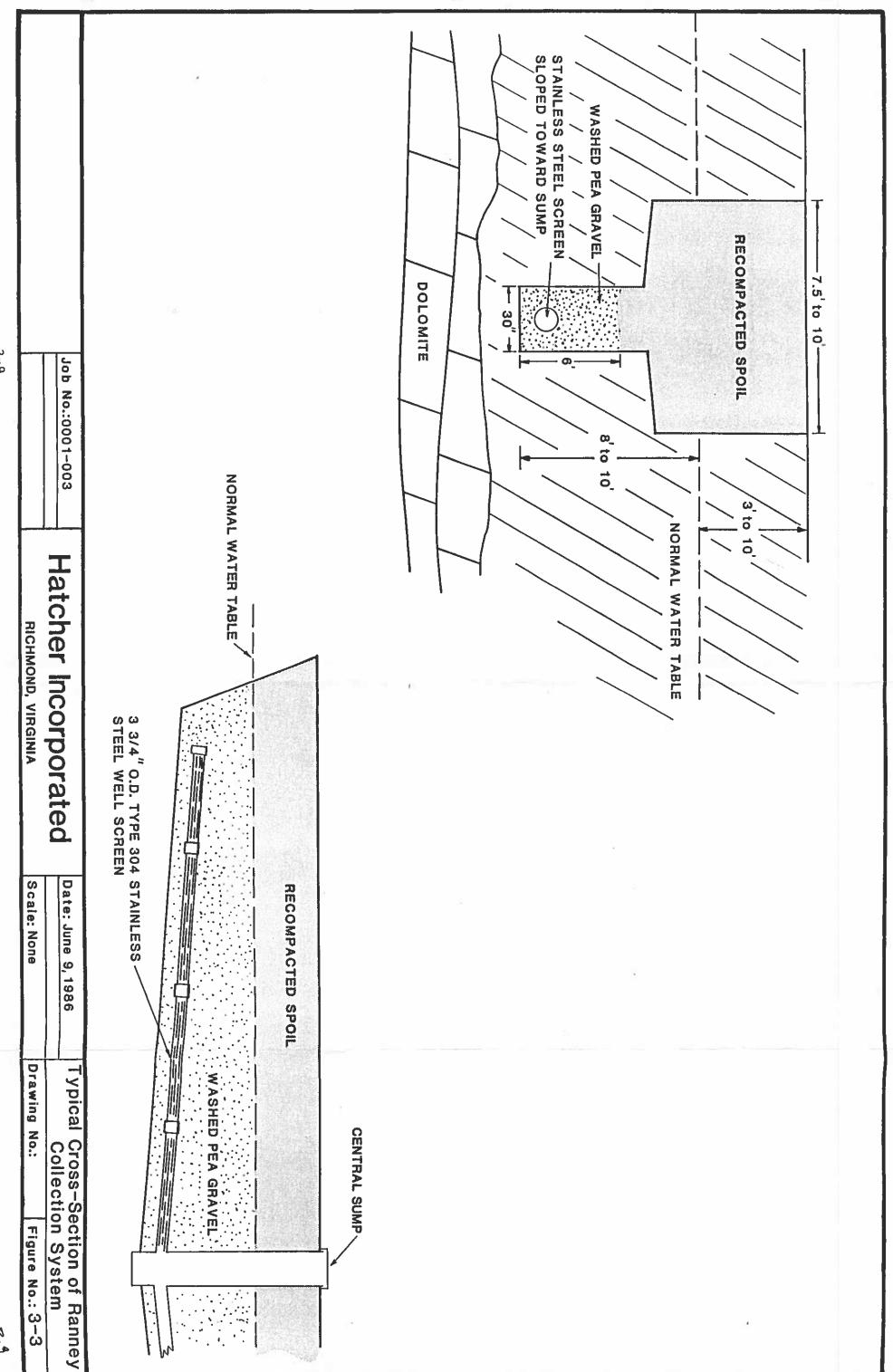
1996 CMS SITE MAP





APPENDIX B

1986 SITE CONDITIONS & CONSTRUCTION REPORT FIGURE 3-3



3-9



APPENDIX C

AOC 5 CDR FIGURE 2



APPENDIX D

RMT August 13, 1996 Letter to WDNR

August 13, 1996

Mr. Timothy S. Mulholland, Ph.D.
Bureau of Solid & Hazardous Waste Management
Wisconsin Department of Natural Resources
Box 7921
101 South Webster Street
Madison, Wi 53707-7921

RF.

Abandonment of well W-37 and extension of the Ranney collector system at The Immaculate Conception Church in Saukville, Wisconsin

DNR File Reference 246004330, Ozaukee, HW/CA

Dear Tim:

This letter is to provide a summary of the telephone conversations between you, Carol Geiger of Georgia Gulf Corporation, and myself on July 31, 1996, regarding the abandonment of well W-37 and extension of the Ranney collector system in the Churchyard at Saukville, Wisconsin. During the excavation of contaminated soil in the Churchyard, the electrical and water transfer lines for recovery well W-37 were destroyed. We agreed that well W-37 will be abandoned in accordance with NR 141, and that a Ranney collector trench that connects to the existing groundwater recovery system will be extended to the area of well W-37. Elimination of well W-37 and the extension of the Ranney collector trench to the area of former well W-37 will result in no decrease in the hydraulic control afforded by the groundwater recovery system in this area. Documentation of the well abandonment and of the construction of the extension of the recovery trench will be included in the Construction Documentation report, which will be prepared after the soil removal action in the Churchyard is complete.

The above is my understanding of the discussion during our July 31 telephone conversation. If you have any comments or questions about this summary, please contact me.

Sincerely,

Eugene L. McLinn, P.G.

Project Manager

gjs

CC:

Carol Geiger - Georgia Gulf

Craig Bostwick - CCP



WELL/DRILLHOLE/BOREHOLE ABANDONMENT

Form 3300-5B

All abandonment work shall be performed in accordance with the provisions of Chapters NR 111, NR 112 or NR 141, Wis. Admin. Code, whichever is applicable. Also, see instructions on back.

(1) GENERAL INFORMATION				(2) FACILITY NAME				
Well/Drillhole/Borchole Location W-37	County	<u> </u>		Original V	ell Owner	(If Known)		
			Œ.	Present W	ell Owner			
1/4 of 1/4	of Sec; T.	N; R	_ _ w	1	<u> </u>	Polymers Co.		
(If applicable)				Street or Route				
Grid Location Grid Number				340 Railroad Street City/State/Zip Code				
ft. DN. DS., ft. DE. DW								
Civil Town Name							e) WI Unique Well No.	
Saukville								
Street Address of Well				Reason for Abandonment				
340 Ratiroad Street				No Longer Part of the sampling program				
City, Village Saukville				Date of Abandonment 08-02-96				
WELL/DRILLHOL	R/PODEHOLE	NEODMATION	-	U8-U2-90				
				44)	10000			
(3) Original Well/Drillhole/Borehole Construction Completed On (Date)				(4) Depth to Water (Feet)				
(500)				Liner(s) Removed?				
■ Monitoring Well Construction Report Available?								
□ Water Well □ Yes □ No				Casing Left in Place? ☐ Yes ☐ No				
□ Drillhole				If No, Explain				
☐ Borehole				Was Casing Cut Off Below Surface? Yes No				
				Did Scaling Material Rise to Surface? Yes No				
Construction Type:				Did Material Settle after 24 hours? Yes No				
■ Drilled □ Driven (Sandpoint) □ Dug □ Other (Specify)				If Yes, Was Hole Retopped? Yes No				
			- 1	(5) Require	d Method	of Placing Sealing Materi	al	
Formation Type:				■ Condu	Conductor Pipe-Gravity Conductor Pipe-Pumped			
■ Unconsolidation Formation □ Bedrock				□ Dump Bailer □ Other (Explain)				
				· ·		•		
Total Well Depth (ft.) 18.0 (From groundsurface)	Casing Diamete	r (ins.) <u>18"</u>						
			,	(A) Caslina	V EI E-EI			
Casing Depth (ft.)				(6) Sealing Materials For monitoring wells and ■ Neat Cement Grout monitoring well boreholes only □ Sand-Cement (Concrete) Grout				
Was Well Annular Space Gr	outed? 🔲 Yes	□ No □ Unknown	ı [☐ Clay-Sand Slurry ☐ Granular Bentonite ☐ Bentonite-Sand Slurry ☐ Bentonite - Cement Grout				
If Yes, To What Der	oth?	Feet						
				☐ Chip	ped Bentor	nite		
					3.5	ű.		
(7)		12-3				No. Yards (Circle	Mix Ratio	
Sealing	Material Used		- 1	From (Ft.)	To (Ft)	Sacks Scalant One)	or Mud Weight	
Cement/Bentonite Slumv	·	· 		6	1400	or Volume		
Commence incline Staffy		····		Surface	18.0	20 bags/98#	14.3#/gal	
				• •				
(8) Comments:						<u></u>	<u> </u>	
(9) Name of Person or Firm I	oing Sealing Work		7	10) F	OP BN	R OR COUNTY U	SE ONI V	
D-hall			9		OK DI	R OR COUNTY D	DE UNLI	
Environmental & Foundation	<u> </u>		8	green services	Charles and the	cutof d'achterin de dies		
ignature of Person Doing Work Date Signed 08-06-96		D	Date Received/Inspected		District/County	District/County		
Street or Route	Telephone N	reshart -						
217 Raemisch Road	(608) 84		K	Reviewer/Inspector			☐ Complying Work ☐ Noncomplying Work	
ny, State, Zip Code			- F	Follow-up Necessary				
Waunakee WI 53597			8	270 H-mb 1400	William No.		ZOTEN MARKETANIA	