

July 10, 1996

Mr. Mark Gordon, P.E.
Bureau of Solid and Hazardous Waste Management
Wisconsin Department of Natural Resources
P.O. Box 7921
101 S. Webster Street
Madison, WI 53707-7921

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File # 246004330
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JUL 11 1996

**BUREAU OF SOLID
HAZARDOUS WASTE MANAGEMENT**

RE: Meeting at RMT with Georgia Gulf and RMT concerning WDNR comments on the report entitled "Remedial Action Options Report and Remedial Action Plan for Soil Remediation at the Churchyard and Logemann Brothers Property, Saukville, Wisconsin," dated June 1996
WDNR File Reference 246004330, Ozaukee, HW/CA

Dear Mark:

This letter is a summary of our meeting held on June 27, 1996, to discuss the above-referenced document. The meeting was attended by you, Carol Geiger of Georgia Gulf Corporation (GGC), and me. The purpose of the meeting was to discuss the WDNR's comments on the proposed remediation plan. It was agreed that the modifications to the remediation plan would be documented using technical memoranda that would be issued as addenda to the initial remediation plan. The technical issues are briefly discussed in this letter, and technical memoranda on several specific issues will be issued separately. Technical memoranda Nos. 1, 2, 3, and 4 are attached.

During the meeting, we discussed the following issues concerning the soil remediation in Saukville:

1. Churchyard

The depth to water encountered in the Churchyard during the pre-design investigation was shallower than expected. This issue is addressed in Attachment A (Technical Memorandum No. 1, Addendum A to the Remedial Action Plan).

The analytical program for soil samples collected from the Churchyard will be expanded to include SVOCs and VOCs of concern (i.e., SVOCs and VOCs detected in soil from the Churchyard during the RFI) as well as BTEX. This issue is addressed in Attachment B (Technical Memorandum No. 2, Addendum B to the Remedial Action Plan).

At our meeting, you characterized the cleanup as a performance-based cleanup and, as such, under NR 700, GGC should publish a public notice. We submit that the remedial measures to be undertaken at this site are more consistent with a site-specific cleanup using residual contaminant levels (RCLs). In the Churchyard, GGC will be removing all the contaminated soil laterally until BTEX levels are below the limits of detection. Although GGC is not addressing groundwater directly, the soil removal will reduce the mass of VOCs in the subsurface that is available to leach to the groundwater flow system. In addition, active groundwater remediation is currently being performed by CCP. Thus, both the soils and groundwater eventually will be remediated to NR 700 standards. Consequently, we believe the implementation of the Remedial Plan is a site-specific RCL cleanup and not a performance-based cleanup.



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Mr. Mark Gordon, P.E.
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2. Logemann Brothers Property - Ash Pile

The analytical program for soil samples collected from the base of the ash pile will be expanded to include SVOCs and VOCs of concern (i.e., SVOCs and VOCs detected in soil from the Logemann Brothers property during the RFI) and arsenic, as well as BTEX. This issue is addressed in Attachment C (Technical Memorandum No. 3, Addendum C to the Remedial Action Plan).

3. Logemann Brothers Property - Former Air Curtain Incinerator

The analytical program for soil samples collected from the base of the former air curtain incinerator will be expanded to include SVOCs and VOCs of concern, and arsenic, as well as BTEX. This issue is addressed in Attachment D (Technical Memorandum No. 4, Addendum D to the Remedial Action Plan).

As we discussed during our meeting, I will prepare a proposal for calculating background levels of arsenic in soil at the Logemann Brothers property in accordance with NR 720.11. The background concentrations for arsenic developed under this method will be the soil cleanup levels for the ash pile and the former air curtain incinerator. A technical memorandum describing the method for determining background arsenic concentrations in more detail will be sent to you in the next 2 weeks.

In addition, soil and groundwater samples will be collected from the shallow groundwater flow system in the area downgradient (generally east) of the former air curtain incinerator to assess whether groundwater has been affected by past practices at the former air curtain incinerator. A technical memorandum describing the groundwater investigation in more detail will be sent to you in the next 2 weeks.

4. Schedule

The remedial action at the Churchyard will begin during the week of July 22, with excavation of soil beginning Saturday, July 27. This is one week later than the original start date RMT and Georgia Gulf had proposed. The remedial action at the Logemann Brothers property has not been scheduled yet.

5. Closure Letters

Carol Geiger submitted draft closure letter language to you for the Churchyard and the Logemann Brothers property. You agreed to discuss the proposed language with WDNR legal staff.

If you have any questions or comments about this letter, please contact me or Carol Geiger.



Eugene L. McLinn, P.G.
Project Manager



gjs/Attachments

DATE: July 10, 1996

TO: Mark Gordon, WDNR

FROM: Gene McLinn, RMT *ELM*

SUBJECT: Depth to water in the Churchyard
Addendum A to the RAP

The depth to water expected to be encountered in the Churchyard was approximately 5 feet below grade, based on historical water level measurements as discussed in the remediation plan (RMT, 1996) and the RCRA Facility Investigation Report (RMT, 1995). However, the depth to the water table was up to 2 feet below grade in the northern section of the area we are planning to excavate, based on water level measurements collected from temporary piezometers installed in the Churchyard. The depth to water in the central and southern portions of the excavation is near or greater than 5 feet below grade. The higher than expected water levels are likely due to the unusually heavy rainfall in Saukville during June 1996.

Because the excavation cannot be extended below the water table, the elevation of the base of the excavation and of the vapor barrier will be contoured to follow the water table. Water levels are being measured weekly in six temporary wells in the Churchyard. In areas where the water table is still more than 5 feet below grade, the soil will be excavated to the initially proposed depth of 5 feet below grade.

DATE: July 10, 1996

TO: Mark Gordon, WDNR

FROM: Gene McLinn, RMT *EM*

SUBJECT: Analytical Parameters for Soil in the Churchyard
Addendum B to the RAP

Soil samples will be collected from the sides of the excavation in the Churchyard and will be analyzed for VOCs of concern (i.e., VOCs detected in soil in the Churchyard during the RFI) using EPA Method 8021 instead of for BTEX, as was originally specified in the remediation plan. The sampling frequency and locations will remain as originally described in the initial remediation plan. The total number of sample locations is estimated to be 22. In addition, approximately 25 percent of the soil samples will also be collected and analyzed for SVOCs of concern (i.e., SVOCs detected in soil in the Churchyard during the RFI). SVOC analysis will be performed using EPA Method 8270. It is estimated that soil samples will be collected for SVOC analysis at six locations along the northern, eastern, and southern sidewalls of the excavation. It is intended that the cleanup standards for the lateral extent of soil remediation in the Churchyard will be to limits of detection for the Constituents of Concern.

DATE: July 10, 1996

TO: Mark Gordon, WDNR

FROM: Gene McLinn, RMT *ELM*

SUBJECT: Analytical Parameters for Soil beneath the Ash Pile
Addendum C to the RAP

Soil samples will be collected from the base of the excavation to document that the material from the ash pile, and the soil potentially affected by ash disposal, was removed. The sampling frequency and locations will remain as originally described in the initial remediation plan. Soil samples will be collected from the base of the excavated ash pile and analyzed for VOCs of concern (i.e., VOCs detected in soil at the Logemann Brothers property during the RFI). Twenty-five percent of the soil samples will also be analyzed for SVOCs of concern (i.e., SVOCs detected at the Logemann Brothers property during the RFI). VOCs will be analyzed using EPA Method 8021, and SVOCs will be analyzed using EPA Method 8270. If residual VOCs or SVOCs are detected in soil samples from below the base of the of the ash pile after the ash pile is removed, Residual Contamination Levels (RCLs) will be calculated to assess the potential risk associated with leaving those constituents in the ground.

In addition, soil samples will be collected from the soil beneath the base of the excavated ash pile and from background locations on the Logemann Brothers property. The samples will be analyzed for arsenic using EPA Method 206.2. The method for comparison of arsenic concentrations from samples collected from beneath the ash pile to background concentrations of arsenic will be described in a separate Technical Memorandum.

DATE: July 10, 1996**TO:** Mark Gordon, WDNR**FROM:** Gene McLinn, RMT *ELM***SUBJECT:** Analytical Parameters for Soil beneath the Former Air Curtain Incinerator
Addendum D to the RAP

Material excavated from the former air curtain incinerator will be disposed as solid waste, as initially proposed in the remediation plan. However, soil samples will be collected from the base of the excavation and will be analyzed for VOCs of concern (i.e., VOCs detected in soil from the Logemann Brothers property during the RFI). Twenty-five percent of the samples will also be analyzed for SVOCs of concern (i.e., SVOCs detected in soil from the Logemann Brothers property during the RFI). VOCs of concern will be analyzed using EPA Method 8021, SVOCs of concern will be analyzed using EPA Method 8270, and arsenic will be analyzed using EPA Method 206.2. The method for comparison of arsenic concentrations from samples collected from beneath the ash pile to background concentrations of arsenic will be described in a separate technical memorandum.



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DATE: 7/10/96	JOB NO.: 3974.07
ATTENTION: Mark Gordon	
RE: Replacement Table 1	

TO: Mark Gordon, P.E.

Department of Natural Resources

Bureau of Solid & Hazardous Waste Management

101 South Webster Street

Madison, WI 53707-7921

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Contract Documents Purchase Order Waiver of Lien Laboratory Analysis Report
- Certificates of Insurance Copy of letter Plans Replacement Table

COPIES	DATE	NO.	DESCRIPTION
1	1 July 96		Replacement Table 1

THESE ARE TRANSMITTED as checked below:

- FOR APPROVAL SIGN AND RETURN FOR YOUR USE
- APPROVED AS NOTED FOR REVIEW AND COMMENT AS REQUESTED
- APPROVED AS SUBMITTED RETURNED FOR CORRECTIONS _____

REMARKS:

Mark - As we discussed during our meeting in Madison in June, several corrections have been made to Table 1 in the report entitled "NR 700 Remedial Action Options Report and Remedial Action Plan for the Churchyard and Logemann Brothers Property, Saukville, Wisconsin, June 1996". Enclosed please find a revised Table 1 to replace the initial Table 1. Please insert the replacement Table 1 and dispose of the initial Table 1 in your copy of the report. The changes made to the table do not change our approach or the conclusions reached in the aforementioned Remedial Action Plan. If you have any questions, please contact me at RMT. - - Gene

COPY TO Immaculate Conception Church - Fr. Karl
 Acker

 CCP - Craig Bostwick

 Whyte Hirschboek & Dudek - Elizabeth
 Gamsky Rich

SIGNED Eugene L. McLinn

TABLE 1 MAXIMUM DETECTED CONCENTRATIONS IN SOIL (µg/kg)

Analyte	Maximum Detected Concentration			NR 700 Generic Cleanup Criterion	Background Concentration	Risk-Based Concentrations - Soil Ingestion (Residential) (USEPA, 1995)
	AOC 4 Ash Pile	AOC 4 Incinerator	AOC 5 Churchyard			
METALS						
Antimony	1,200	<2,400	NA	NS	<1,200	31,000
Arsenic	3,000	3,500	NA	39	2,700	430
Barium	47,000	31,000	NA	NS	56,000	5,500,000
Chromium	12,000	12,000	NA	14,000	15,000	390,000
Cobalt	9,300	3,500	NA	NS	11,000	4,700,000
Copper	11,000	8,500	NA	NS	11,000	3,100,000
Lead	44,000	9,000	NA	50,000	14,000	NS
Nickel	12,000	11,000	NA	NS	12,000	1,600,000
Vanadium	27,000	26,000	NA	NS	32,000	550,000
Zinc	50,000	35,000	NA	NS	53,000	23,000,000
SVOCS						
Acetophenone	NA	<780	2,100	NS	<800	7,800,000
1,2-Dichlorobenzene	NA	<380	1,000	NS	<400	7,000,000
2,4-Dimethylphenol	NA	<390	270	NS	<400	1,600,000
1,4-Dioxane	NA	1,500*	<810	NS	<800	58,000
2-Methylnaphthalene	NA	<390	110	NS	<400	NS
2-Methylphenol	NA	<390	180	NS	<400	3,900,000
3-Methylphenol	NA	<780	280	NS	<800	3,900,000
Naphthalene	NA	<390	860	NS	<400	3,100,000
Phenanthrene	NA	< 390	43	NS	<400	NS
Phenol	NA	410*	<410	NS	<400	47,000,000
NOTES:						
* = Sample collected from below estimated water table.						
NA = Not analyzed. NS = No standard.						
All concentrations in µg/kg.						
Concentrations in soil from RFI (RMT, 1995).						

TABLE 1 MAXIMUM DETECTED CONCENTRATIONS IN SOIL (µg/kg) (CONTINUED)

Analyte	Maximum Detected Concentration			NR 700 Generic Cleanup Criterion	Background Concentration	Risk-Based Concentrations - Soil Ingestion (Residential) (USEPA, 1995)
	AOC 4 Ash Pile	AOC 4 Incinerator	AOC 5 Churchyard			
VOCS						
Acetone	160	130*	<1,500	NS	<3	7,800,000
Benzene	5	22*	960	5.5	<6.0	22,000
2-Butanone	<15	98*	<1,500	NS	<6.0	47,000
Carbon disulfide	<7.5	12*	<4	NS	<6.0	7,800,000
Ethylbenzene	180	1,500*	560,000	2,900	<6.0	7,800,000
Fluorotrichloromethane	22	<6	<760	NS	<6.0	NS
2-Hexanone	<15	3	<1,400	NS	<6.0	NS
Isobutanol	<150	<1,200	13,000	NS	<120	23,000,000
4-Methyl-2-pentanone	<15	37*	<1,500	NS	<6.0	6,300
Styrene	32	<6	5,100	NS	< 6.0	16,000,000
Tetrachloroethene	<7.5	<6.2	150	NS	<6.0	12,000
Toluene	14	39*	430,000	1,500	<6.0	16,000,000
Xylene	700	6,700*	2,800,000	4,100	<6.0	160,000,000

NOTES:

* = Sample collected from below estimated water table.

NA = Not analyzed. NS = No standard.

All concentrations in µg/kg.

Concentrations in soil from RFI (RMT, 1995).