City of De Pere
WASTEWATER TREATMENT PLANT
315 Leonard St. • De Pere, Wisconsin 54115-2324 • Phone: (414) 339-4094 • FAX# 339-4048

December 5, 1995

Kathy Erdmann
Wisconsin Department of Natural Resources
Lake Michigan District Headquarters
P.O. Box 10448
Green Bay, WI 54307-0448

Dear Kathy:

Enclosed, please find copies of the reports of results of the most recent sampling at the Better Brite groundwater treatment facility. The untreated samples were taken on 11/10/95, while the samples of the treated discharge were taken on 11/14/95.

If you have any questions or require any additional information, please contact me.

Sincerely,

Albert R. Kardoskee, Jr.
Quality Control Supervisor/Chemist

\ERDMANN\95-12-05.WRI

ROBERT E. LEE & ASSOCIATES, INC.
Wisconsin Certification NO: 405043870

- CERTIFICATE OF ANALYSIS -

De Pere Wastewater Treatment Plant
315 Leonard Street
De Pere WI 54115

Attn: Al Kardoskee
Phone: 414-339-4094
Fax: 414-339-4048

Customer Number: 000404
Project Number: NONE
Project Name : BETTER BRITE
Chain Number : 24217
Report Date : 11/22/1995

SAMPLE_ID / PARAM NAME	LAB# / RESULT	COLLECT DATE / UNITS	MDL	MATRIX / METHOD	ANALYST	ANALYZED DATE
LANDE GROUNDWATER	95REL022491	11/10/1995		GW		
METAL PREPARATION				SW846-3010	DLB	11/15/1995
TOTAL ZINC ICP	39	UG/L	3	SW846-6010	DLB	11/17/1995
TOTAL CADMIUM ICP	<3	UG/L	3	SW846-6010	DLB	11/17/1995
TOTAL CHROMIUM ICP	370000	UG/L	7	SW846-6010	DLB	11/17/1995
SIXTH GROUNDWATER	95REL022492	11/10/1995		GW		
METAL PREPARATION				SW846-3010	DLB	11/15/1995
TOTAL ZINC ICP	66	UG/L	3	SW846-6010	DLB	11/17/1995
CYANIDE-TOTAL	1.01	MG/L	0.001	EPA-335.3	DAW	11/15/1995
TOTAL CADMIUM ICP	<3	UG/L	3	SW846-6010	DLB	11/17/1995
TOTAL CHROMIUM ICP	63000	UG/L	7	SW846-6010	DLB	11/17/1995
BETTER BRITE UNTREATED	95REL022493	11/10/1995		GW		
METAL PREPARATION				SW846-3010	DLB	11/15/1995
TOTAL ZINC ICP	35	UG/L	3	SW846-6010	DLB	11/17/1995
CYANIDE-TOTAL	0.757	MG/L	0.001	EPA-335.3	DAW	11/15/1995
TOTAL CADMIUM ICP	<3	UG/L	3	SW846-6010	DLB	11/17/1995
TOTAL CHROMIUM ICP	120000	UG/L	7	SW846-6010	DLB	11/17/1995

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Wisconsin Certification NO: 405043870

- CERTIFICATE OF ANALYSIS -

De Pere Wastewater Treatment Plant
315 Leonard Street
De Pere WI 54115

Attn: Al Kardoskee
Phone: 414-339-4094
Fax: 414-339-4048

Customer Number: 000404

Lab Number: 95REL022694
Sample ID : BETTER BRITE TREATED
Matrix : WW

Chain Number: 24218
Report Date : 11/29/1995
Sample Date : 11/14/1995

METHOD	PARAMETER NAME	RESULT	UNITS	MDL	DATE	BY
EPA-335.3	CYANIDE-TOTAL	0.389	MG/L	0.001	11/21/1995	DAW
EPA-200.7	TOTAL CADMIUM ICP	<3	UG/L	3	11/28/1995	DLB
EPA-200.7	TOTAL CHROMIUM ICP	4800	UG/L	7	11/28/1995	DLB
EPA-200.7	TOTAL ZINC ICP	9	UG/L	3	11/28/1995	DLB
EPA-200.7	METAL PREPARATION (TOTAL)	COMPLETE			11/20/1995	DLB

CORRESPONDENCE / MEMORANDUM **State of Wisconsin**

DATE: September 14, 1995 FILE REF: 3200

TO: Dave Hantz - WW/2

FROM: Bob Masnado - WR/2

SUBJECT: Projected Surface Water Quality-Based Effluent Limits for the Better Brite Superfund Site in De Pere

The purpose of this memo is to summarize the water quality-based effluent limitations calculated for the proposed 130,000 gallon per day discharge from the Better Brite Superfund site to the Fox River in De Pere. Effluent limitations are calculated for each of the substances requested in a letter dated August 1, 1995 from Brian Keller of Hydro-Search, Inc. to you. Those limitations are calculated using chapters NR 102, 105, 106 and 207 of the Wisconsin Administrative Code and are discussed below. Based on our review, the following recommendations are made on a water quality basis (concentrations rounded to two significant digits):

Substance	Daily Maximum (mg/L)	Weekly Average (lbs/day)	Monthly Average (lbs/day)
Aluminum *	2.2		
Antimony	13		
Arsenic *	0.73		
Beryllium	2.3		1.61 #
Cadmium *	0.11		
Chromium (total or +3) *	8.2		
Chromium (+6)	0.028		
Copper *	0.082		
Cyanide @	0.092		
Iron		339 #	
Lead *	1.1		
Nickel *	4.8		
Selenium *	0.12		
Silver *	0.012		
Thallium	1.4		
Zinc *	0.46		
Carbon Tetrachloride	35		
Chloroform	29		
1,2-Dichloroethane	120		
Tetrachloroethylene	13		
1,1,1-Trichloroethane	70		
1,1,2-Trichloroethane	36		
Trichloroethylene	41		

* - These effluent limitations may be reported in the "total recoverable" form if such a test is reasonably available.

@ - The cyanide result may be reported either as "free cyanide" or as "cyanide amenable to chlorination."

- The indicated limitation is based upon the prevention of the significant lowering of water quality as defined in ch. NR 207. As such, it represents the limit which is based upon 1/3 of the available assimilative capacity of the Fox River after subtracting out the existing or permitted loadings from Nicolet Paper and the City of De Pere municipal treatment plant. If the proposed discharge from Better Brite exceeds the indicated limitation, the discharger is required to perform the demonstrations in s. NR 207.04 (1)(d) before the Department can consider increased discharge limitations. Those demonstrations, for a new discharge such as

this, involve evaluation of the ability to prevent the significant lowering of water quality in a cost-effective manner using conservation measures, recycling measures, other applicable wastewater treatment process or operational changes, or source reduction measures. If it is found that there are cost effective pollution control alternatives which would prevent the significant lowering of water quality, the limitations are those indicated above. If it is found that these cost-effective alternatives do not exist, the effluent limitations are as follows for the indicated parameters and averaging periods:

Substance	Effluent Limitations
Beryllium	4.83 lbs/day monthly average
Iron	1,105 lbs/day weekly average

The 4.83 lbs/day beryllium limit is, at the proposed discharge rate of 130,000 gpd, equivalent to a concentration greater than the 2.33 mg/L daily maximum limit , so this limit would not be necessary because at the proposed flow, the daily maximum limit would also be protective of human cancer criteria-related concerns.

The above limitations should be compared to any categorical or Best Professional Judgment-type limitations, with the lowest of those limitations being applicable to the proposed discharge.

It is recommended that the set of the above limitations which is deemed appropriate based on the s. NR 207.04 (1)(d) evaluation should be accompanied by a requirement to perform, at a minimum, monthly testing for a period of up to six months following commencement of discharge during the remediation process. Following the conclusion of that sampling period, effluent limitations for individual substances may be removed from the recommended list if those substances are not detected at levels of detection equal to or less than 1/5 the calculated limits for those substances. If the level of detection exceeds 1/5 of the applicable limitation or f the substance is detected in the discharge to surface water, the need for limitations and/or monitoring should be re-evaluated by this Bureau using the procedures in NR 106.

Chemical-Specific Discussion:

The Better Brite Superfund Site is located in the City of De Pere. The proposed discharge is to the Fox River near the Nicolet Paper mill below the De Pere dam. The Fox River is classified as a warmwater sport fish community and is not a public water supply at this location.

Effluent limitations for a discharge to the Fox River from the Better Brite Superfund Site are calculated for each of the substances requested in Brian Keller's letter of August 1, 1995 that have water quality criteria in ch. NR 105, Wis. Adm. Code. That letter also proposed a discharge rate of 130,000 gpd and an effluent hardness of 260 ppm, which is consistent with municipal water supply data (groundwater) available to the Department. In addition, hardness data used in calculating water quality criteria and associated effluent limitations for metals are generated from data available on the Fox River, while background values for toxic substances are calculated using low-level metals data from the Fox River at Wrightstown along with discharge data from nearby facilities with WPDES permits, namely Nicolet Paper and the City of De Pere municipal treatment plant.

The general information used in calculating effluent limitations at this location is summarized below:

EFFLUENT LIMIT CALCULATIONS FOR: Better Brite Superfund Site
RECEIVING WATER: Fox River at De Pere

RECEIVING WATER INFORMATION:
CLASSIFICATION: Warmwater Sport Fish, Non-Public Water Supply

RECEIVING WATER FLOWS (in cfs):		4Q3	7Q2	30Q5	Qave
	=	754	1570	1330	4480

OTHER DISCHARGERS (1994 CALENDAR YEAR MEAN FLOWS):
NICOLET PAPER = 2.603 MGD = 4.03 cfs (100% withdrawn from river)
De PERE POTW = 5.99 MGD = 9.27 cfs

HARDNESS = 182 PPM (from Nicolet Paper evaluation - 3/9/94)

EFFLUENT INFORMATION:

PROP. DISCH. RATE (mgd)	(cfs)
0.13	0.20

EFFLUENT HARDNESS = 260 PPM (ESTIMATED)
EFFLUENT DILUTION
DUE TO ZID = not applicable

Daily maximum effluent limitations are equal to twice the NR 105 acute toxicity criteria (ATC) where available, pursuant to s. NR 106.06 (2). If, for a given substance, an NR 105 criterion is not available, the daily maximum effluent limitation equals the lowest species mean LC50 value for aquatic species considered among the warmwater sportfish classification. Those limitations are summarized in the following table:

CALCULATION OF EFFLUENT LIMITATIONS BASED ON ATC (in ug/L)

SUBSTANCE	REF. HARD. or pH	ATC	MAX. EFFL. LIMIT
Arsenic		363.80	727.60
Cadmium	260	53.89	107.78
Chromium (+3 or TOTAL)	260	4092.45	8184.90
Chromium (+6)		14.20	28.40
Copper	260	40.78	81.56
Cyanide		46.20	92.40
Lead	260	570.58	1141.16
Nickel	260	2418.34	4836.68
Selenium		58.00	116.00
Silver	260	6.08	12.16
Zinc	260	232.01	464.02
EPA Criteria (adjusted for WI warmwater species :			
Aluminum		1101.50	2203.00

Substances with LC50 Values but no NR 105 ATC:	MAX. EFFL. LIMIT
Antimony	13008
Beryllium	2330
Thallium	1408

[continued on next page]

Substances with LC50 Values but no NR 105 ATC:	MAX. EFFL. LIMIT
Carbon Tetrachloride	35200
Chloroform	28900
1,2-Dichloroethane	118000
Tetrachloroethylene	12900
1,1,1-Trichloroethane	69700
1,1,2-Trichloroethane	36127
Trichloroethylene	40700

A specific discharge rate has been proposed for the groundwater remediation, but the typical approach is to calculate weekly and monthly average effluent limitations (in units of pounds per day) based on the available assimilative capacity in the tributary which, based on the definition in s. NR 207.02 (1), is the difference between the applicable water quality criterion for a substance and the existing concentration of that substance in a surface water. Since the proposed discharge rate is very small compared to the river flow plus the hydraulic rate addition from De Pere, the discharge rate from Better Brite has little impact on the calculated weekly and monthly average mass limits. The antidegradation provisions in ch. NR 207 are applicable at Better Brite since this represents a new discharge.

Weekly average limitations based on NR 105 chronic toxicity criteria (CTC) and monthly average limitations based on NR 105 wild and domestic animal criteria (WDAC), human threshold criteria (HTC), and human cancer criteria (HCC), are summarized in the tables beginning on the following page. Those limits are calculated using the following formula:

Assimilative capacity (ug/L)
= [((Qs + QDP) X (WQC)) - (Qs X Cs) - (QNP X CNP) - (QDP X CDP)] / (Qs + QDP)

Convert assimilative capacity in ug/L to a mass limit in lbs/day using the quantity (Qs + QDP) and the appropriate conversion factor.

where:
- WQC = Water quality criterion (CTC, WDAC, HTC, or HCC),
- Qs = The applicable streamflow (1/4 of 4Q3 for limits based on CTC, 30Q5 for limits based on WDAC, and mean annual flow for limits based on HTC or HCC),
- Cs = Background concentration in the Fox River,
- QDP = Current average discharge rate from the De Pere treatment plant,
- CDP = Effluent concentration at the De Pere treatment plant,
- QNP = Current average discharge rate from Nicolet Paper, and
- CNP = Effluent concentration at Nicolet Paper.

NOTES: 1) QNP is not included in the first multiplication in the formula (total flow times WQC) because Nicolet Paper's water is withdrawn from the Fox River and returned to the river via the permitted outfall. Nicolet Paper may have a net loading addition of compounds to the river, but not a net flow addition to the river.

2) None of the substances at Better Brite have wild and domestic animal criteria in ch. NR 105, so no table for WDAC-based limits is necessary at this time.

3) None of the substances evaluated at Better Brite are currently limited in the WPDES permits for De Pere or Nicolet Paper. If they were, the limits would be used in place of the effluent concentrations in the above formula because the permittee is theoretically allowed to discharge up to the limit in its permit. Lacking permit limits, only the mean effluent concentrations are used. If a substance is not

detected in those effluents, zero is used as the "background" concentration.

CALCULATION OF EFFLUENT LIMITATIONS BASED ON CTC (concs. in ug/L)

RECEIVING WATER FLOW (cfs) = 188.5 (25% of 7Q10)

SUBSTANCE	REF. HARD. or pH	CTC	BACKGROUND DATA: FOX RIVER	NICOLET PAPER	DE PERE POTW	ASSIM. CAP. (ug/L)	1/3 OF CAP. (ug/L)	ASSIM. CAP. (lb/d)	1/3 OF CAP. (lb/d)
Arsenic		153.00		< 1	< 1.4	153.00	51.00	155.3822	51.79408
Cadmium	173	3.11	0.0156	1.7	2.37	2.95	0.98	2.995302	0.998434
Chromium (+3 or TOTAL)	182	88.28	0.264	0.8	45.5	85.88	28.63	87.21598	29.07199
Chromium (+6)		9.74		0.8	2.11	9.62	3.21	9.774634	3.258211
Copper	182	20.24	1.247	0.014	7.6	18.69	6.23	18.98594	6.328647
Lead	182	21.62	0.61	1.7	5.25	20.76	6.92	21.08102	7.027008
Nickel	182	109.75		< 15	84	105.81	35.27	107.4592	35.81974
Selenium		7.07		< 2	4.4	6.86	2.29	6.970577	2.323526
Silver	182	4.01		< 1	0.487	3.99	1.33	4.049248	1.349749
Zinc	182	82.37	3.45	25	24.04	77.45	25.82	78.65113	26.21704
Cyanide		4.96		< 10	92 (limit)	0.65	0.22	0.690152	0.230051
EPA Criteria:									
Iron		1000				1000.00	333.33	1015.57	338.5234

CALCULATION OF EFFLUENT LIMITATIONS BASED ON HTC (concs. in ug/L)

RECEIVING WATER FLOW (cfs) = 4480

SUBSTANCE	HTC	BACKGROUND DATA: FOX RIVER	NICOLET PAPER	DE PERE POTW	ASSIM. CAP. (ug/L)	1/3 OF CAP. (ug/L)	ASSIM. CAP. (lb/d)	1/3 OF CAP. (lb/d)
Antimony	7800		< 50	< 1.4	7800	2600	188265.7	62755.23
Cadmium	82	0.0156	1.7	2.37	81.98	27.33	1978.673	659.5576
Chromium (+3 or TOTAL)	9500000	0.264	0.8	45.5	9500000	3166667	2.29E+08	7643265
Chromium (+6)	9000		0.8	2.11	9000	3000	217229.5	72409.84
Lead	50	0.61	1.7	5.25	49.38	16.46	1191.84	397.28
Nickel	460		< 15	84	459.83	153.28	11098.66	3699.554
Selenium	170		< 2	4.4	169.99	56.66	4103.007	1367.669
Silver	430		< 1	0.487	430.00	143.33	10378.73	3459.575
Thallium	11		< 2	< 11.8	11.00	3.67	265.5029	88.50097
Cyanide	40000		< 10	92	39999.8	13333.2	9.7E+05	3.22E+05
1,1,1-Trichloroethane	33000		< 10	< 1	33000	11000	796508.7	265502.9

E = Exponent of 10 (1E+03 = 1,000)

CALCULATION OF EFFLUENT LIMITATIONS BASED ON HCC (concs. in ug/L)

RECEIVING WATER FLOW (cfs) = 4480

SUBSTANCE	HCC	BACKGROUND DATA: FOX RIVER	NICOLET PAPER	DE PERE POTW	ASSIM. CAP. (ug/L)	1/3 OF CAP. (ug/L)	ASSIM. CAP. (lb/d)	1/3 OF CAP. (lb/d)
Arsenic	50		< 1	< 1.4	50.00	16.67	1206.831	402.2771
Beryllium	0.2		< 5	< 6.3	0.20	0.07	4.827325	1.609108
Carbon Tetrachloride	31		< 10	< 1	31.00	10.33	748.2354	249.4118
Chloroform	87		26	< 1	86.98	28.99	2099.323	699.7744
1,2-Dichloroethane	370		< 10	< 1	370.00	123.33	8930.552	2976.851
Tetrachloroethylene	49		< 10	< 1	49.00	16.33	1182.695	394.2316
1,1,2-Trichloroethane	140		< 10	< 1	140.00	46.67	3379.128	1126.376
Trichloroethylene	360		< 10	< 1	360.00	120.00	8689.186	2896.395

The mass limits based on full assimilative capacity and 1/3 of that capacity (the latter represents the significant lowering of water quality as defined in ch. NR

207), are compared to the daily maximum concentration limits based on ATC using the proposed discharge rate of 130,000 gpd. The mass limits will be relatively constant if a discharge rate other than 130,000 gpd is selected, but this comparison is made to determine if criteria other than ATC are controlling the limits that are applicable to Better Brite. If the weekly or monthly average mass limits are much greater than the daily maximum concentration limits at a flow of 130,000 gpd, only the daily maximum limits are provided at the beginning of this memo. As a result, the only substances for which mass limits are provided are beryllium (limit at 1/3 of assim. capacity = 1.609108 lbs/day = 1.48 mg/L at 0.13 MGD, which is less than the 2.3 mg/L daily max.) and iron (no daily maximum limit is available).

Whole Effluent Toxicity Testing Discussion:

No whole effluent toxicity monitoring is recommended at this time. Typically, acute toxicity test batteries are recommended at a frequency of once each three months upon commencement of discharge unless the applicable receiving water flow is more than 1000 times the effluent flow. In this case, the ratio is under 1000:1, but very close (Effl. Q = 0.13 MGD = 0.201 cfs, 4Q3/4 + QDP = 188.5 cfs + 9.23 cfs = 197.73, and 197.73 / 0.201 = 983.7 : 1). NOTE: If the proposed discharge rate is significantly greater than 0.13 MGD, or if several of the substances requested for evaluation are detected in the groundwater (particularly if they are detected at levels approaching 1/5 of the calculated chemical-specific effluent limitations), acute toxicity test batteries will be recommended.

If there are any questions or comments on the surface water discharge limits, please contact Jim Schmidt at (608) 267-7658 regarding chemical-specific determinations or Bob Masnado at (608) 267-7662 regarding general issues.

jws/wp15/betbrite.sfs/

PREPARED BY:

James W. Schmidt
Water Resources Engineer

APPROVED FOR SIGNATURE BY:

Bernie C. Robertson
Water Resources Engineer

cc: Dennis Weisensel / Tim Doelger - LMD
Gary Kincaid - Green Bay Area
Jim Reyburn - LMD
Katherine Freiberg - SW/3

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

101 South Webster Street
Box 7921
Madison, Wisconsin 53707
SUPERFUND/SOLID WASTE FAX 608-267-2768
DIRECT DIAL 608-267-5232
TDD 608-267-6897

April 17, 1995

Harold Aldrich
1025 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results (basement sump and monitoring well) for 1025 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Aldrich:

The groundwater samples collected from your basement sump (8/25/94) and from the monitoring well, MW-112, in your yard (10/25/94 and 11/16/94) were free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)
The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

Basement Sump
None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your basement sump groundwater sample were all in normal concentrations.

Monitoring Well MW-112
Monitoring well MW-112 is approximately 15 feet deep and draws water from the 30-foot thick clay layer found below the ground surface (see Attachment B). None of the volatile organic compounds analyzed for were detected in either of the MW-112 groundwater samples and all of the metals detected in the samples were in normal concentrations.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory and/or a copy of the monitoring well construction report for MW-112. Both are readily available.

Better Brite Update
By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries. Chromium-contaminated groundwater has not reached the monitoring well in your yard.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the well on your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the well and collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

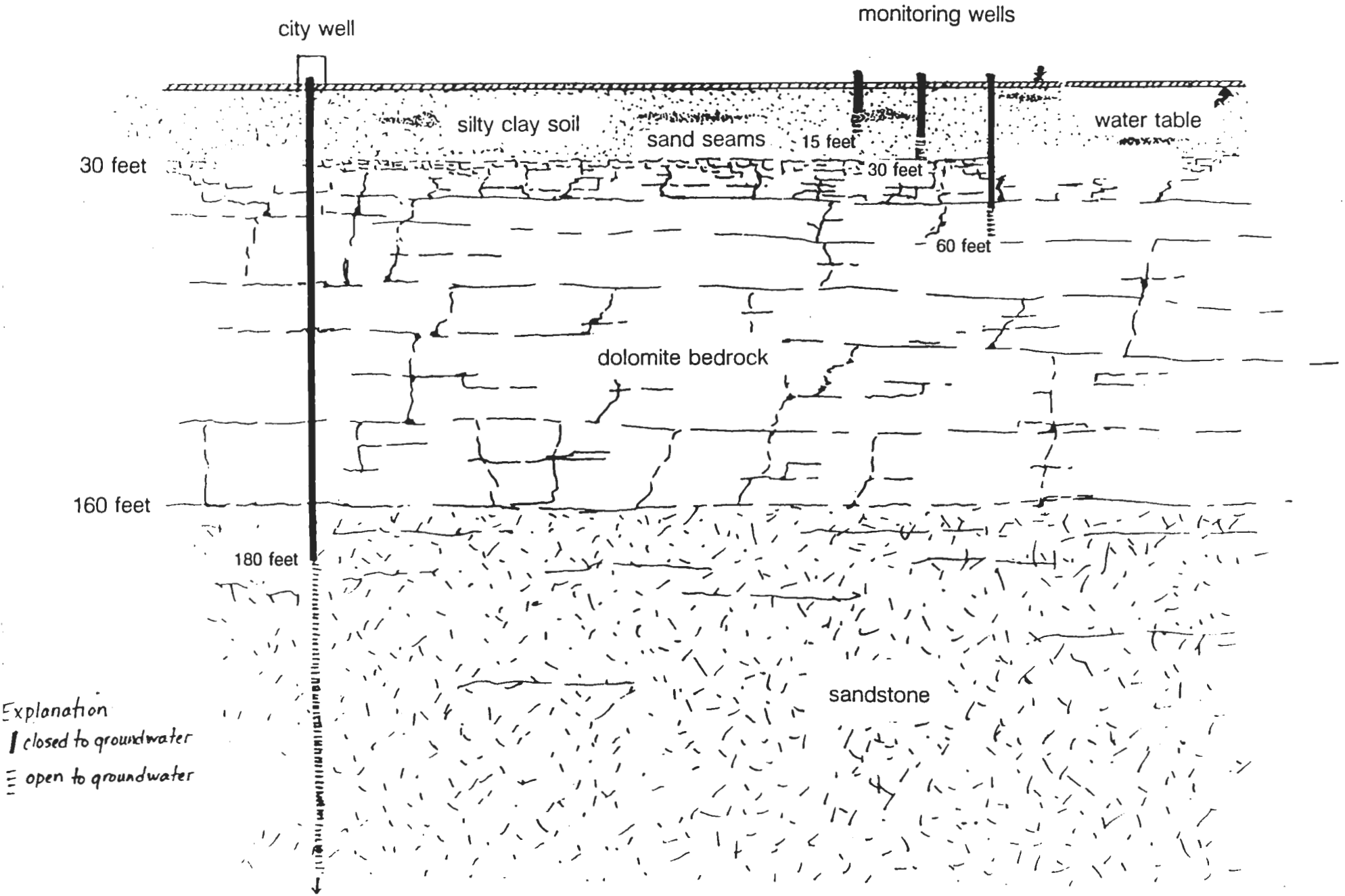
Attachment A

BETTER BRITE REMEDIAL INVESTIGATION - GROUNDWATER ANALYSES
TARGET COMPOUND AND TARGET METAL LIST

Volatile Organic Compound	Metals	Others
chloromethane	aluminum	cyanide
bromomethane	antimony	total organic carbon
vinyl chloride	arsenic	
methylene chloride	barium	
acetone	beryllium	
carbon disulfide	cadmium	
1,1-dichloroethene	calcium	
1,1-dichloroethane	chromium (hexavalent)	
1,2-dichloroethene (total)	chromium (total)	
chloroethane	cobalt	
chloroform	copper	
1,2-dichloroethane	iron	
2-butanone	lead	
1,1,1-trichloroethane	magnesium	
carbon tetrachloride	manganese	
bromodichloromethane	mercury	
1,2-dichloropropane	nickel	
cis-1,3-dichloropropene	potassium	
trichloroethene	selenium	
dibromochloromethane	silver	
1,1,2-trichloroethane	sodium	
benzene	thallium	
trans-1,3-dichloropropene	vanadium	
bromoform	zinc	
4-methyl-2-pentanone		
2-hexanone		
tetrachloroethene		
1,1,2,2-tetrachloroethane		
toluene		
chlorobenzene		
ethylbenzene		
styrene		
xylene (total)		

Attachment B

SIMPLIFIED REPRESENTATION OF GEOLOGY AND MONITORING WELLS NEAR CHROME AND ZINC SHOPS



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DIRECT DIAL 608-267-5232
TDD 608-267-6897

April 17, 1995

Gerald Rasmussen
320 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results (basement sump and monitoring well) for 320 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Rasmussen:

The groundwater samples collected from your basement sump (on 8/24/94) and from the monitoring wells in your yard (on 08/30/94 and 10/18/94) were free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)
The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

Basement Sump
None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your basement sump groundwater sample were all in normal concentrations.

Monitoring Wells MW-4 and MW-4A
Monitoring wells MW-4 and MW-4A both draw groundwater from the 30-foot thick clay layer found below the ground surface (see Attachment B). None of the volatile organic compounds analyzed for were detected in the groundwater samples from these wells and all of the metals detected in the samples were in normal concentrations.

Please let me know if you are interested in obtaining a copy of the groundwater test results submitted by the laboratory.

Better Brite Update
By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the wellson your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the wellsand collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

101 South Webster Street
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TDD 608-267-6897

April 13, 1995

Marvin and Elaine Konrath
1041 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 1041 S. Sixth Street, De Pere, Wisconsin

Dear Mr. and Mrs. Konrath:

The groundwater samples collected from the monitoring wells on your property met state and federal groundwater quality standards, with the exception of the chromium concentration in MW-109 and zinc concentration in MW-109A. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A). The test results for all of the groundwater samples collected from the monitoring wells on your property are summarized below.

Summary of Groundwater Test Results

Well No. (depth)	Sample Date	Contaminant	Concentration @(ug/L)
MW-109 (15 feet)	08/94	chromium (hexavalent)	6,780
		chromium (total)	9,570
	10/94	chromium (hexavalent)	%2,400
		chromium (total)	%1,980
MW-109A (24 feet)	08/94	zinc	525
	10/94	___	---
MW-109B (61 feet)	08/94	*---	---
	10/94	*---	---
MW-110 (15 feet)	08/94	carbon disulfide	15
	10/94	iron	315
MW-110A (24 feet)	08/94	carbon disulfide	6
	10/94	---	---

@ug/L-micrograms per liter (one microgram of contaminant per liter of water=one part of contaminant per billion parts of water)
%It is not possible to have more hexavalent chrome than total chrome; the difference in values reflects the difference in methods used to analyze for each component.
*sample analyzed only for hexavalent chromium (could not collect enough water for other analyses)

Carbon disulfide, a common solvent, was the only volatile organic compound detected in any of the groundwater samples collected from your property. We don't know yet if it is coming from the former chrome shop property. It may coming from another source and it is also possible that it is a laboratory contaminant (introduced to the sample at the lab). It goes without saying that the chromium in the groundwater samples collected from MW-109, and zinc in MW-109A, are from the former Better Brite chrome shop.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory and/or copies of the monitoring well construction reports for MW-109, MW-109A, MW-109B, MW-110 and MW-110A. All of this information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the wells on your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the wells and collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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George E. Meyer
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April 13, 1995

Michael Kruse
1011 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 1011 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Kruse:

The groundwater sample from your basement sump, collected on August 24, 1994, met state and federal groundwater quality standards. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater sample was analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your basement sump groundwater sample, with the exception of copper, were all in normal concentrations. Copper was detected in your basement sump sample at 355 micrograms per liter. (One microgram of copper per liter of water is one part of copper per billion parts of water.) This concentration of copper is higher than what we've seen in other groundwater samples, but is still far below the state health-based standard of 1300 micrograms per liter. In addition, this standard applies to groundwater being used for drinking water and the shallow groundwater in your area is not used for drinking water.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory. The information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. I will continue to inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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April 13, 1995

Donald and Shirley Fischer
1031 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 1031 S. Sixth Street, De Pere, Wisconsin

Dear Mr. and Mrs. Fischer:

The groundwater sample from your basement sump, collected on August 24, 1994, met state and federal groundwater quality standards. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater sample was analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A). The test results for your basement sump groundwater sample are summarized below.

Contaminant	Sample Concentration (@ug/L)	Wisconsin Groundwater Quality Standards (ug/L) (health-based standards)
Chromium	42.1	100
Iron	17,300	*
Lead	37.2	15
Zinc	116	*

@micrograms per liter. One microgram per liter is one part of contaminant per one billion parts of water.
*No state/federal health-based standard assigned

None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. The chromium and zinc found in your basement sump sample probably originated from the former Better Brite Chrome shop. However, as you can see from the above table, the concentration of chromium in your basement sump sample is below the state health-based standard of 100 micrograms per liter. In addition, this standard applies to groundwater being used for drinking water and the shallow groundwater in your area is not used for drinking water. Although the concentration of lead in your basement sump sample is above the state's groundwater quality standard, it is normal for your area and is probably naturally occurring. The iron in your basement sump sample most likely came from the sump itself.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory. The information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. I will continue to inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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April 13, 1995

Milfred Manning
614 N. Erie Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 1109 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Manning:

The groundwater samples collected from the monitoring wells MW-108, MW-108A, and MW-108B, which are located on your mother's property, met state and federal quality standards. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property).
The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A). The test results for all of the groundwater samples collected from the monitoring wells on your mother's property are summarized below.

Summary of Groundwater Test Results

Well No. (depth)	Sample Date	Contaminant	Concentration @(mg/L)
MW-108 (16 feet)	08/94 10/94	carbon disulfide ----	.007 ---
MW-108A (33 feet)	08/94 10/94	---- ----	--- ---
MW-108B (62 feet)	08/94 10/94	*--- **---	--- **

@mg/L - milligrams per liter (one milligram of contaminant per liter of water = one part of contaminant per million parts of water)
*sample analyzed only for hexavalent chromium (could not collect enough water for other analyses)
**no sample collected - monitoring well was dry

Carbon disulfide is a common solvent. We don't know yet if it is coming from the former chrome shop property; it is possible that it is coming from another source. I did not include any metals in the table because all of the metals detected in these groundwater samples were in normal concentrations (all of the metals analyzed for are naturally occurring in groundwater).

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory and/or copies of the monitoring well construction reports for MW-108, MW-108A, and MW-108B. All of this information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries. Chromium-contaminated groundwater has not reached any of the monitoring wells in your mother's yard.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the wells on your mother's property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the wells and collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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George E. Meyer
Secretary

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April 13, 1995

Thomas Hendricks
1103 S. Sixth Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 1103 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Hendricks:

Both of the groundwater samples from the monitoring well in your yard (MW-111), collected on August 30, 1994, and October 25, 1994, were free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)
The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

Monitoring well MW-111 is approximately 15 feet deep and draws water from the 30-foot thick clay layer found below the ground surface (see Attachment B). None of the volatile compounds analyzed for were detected in either of the groundwater samples. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your groundwater samples were all in normal concentrations.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory and/or a copy of the monitoring well construction report for MW-111. Both are readily available.

Better Brite Update
By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries. Chromium-contaminated groundwater has not reached the monitoring well in your yard.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the well on your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the well and collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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George E. Meyer
Secretary

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April 13, 1995

Nicholas Colling
529 Lande Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 529 Lande Street, De Pere, Wisconsin

Dear Mr. Colling:

The groundwater sample from your basement sump, collected on August 26, 1994, was free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your basement sump groundwater sample were all in normal concentrations.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory. The information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. I will continue to inform you about further action

planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

WISCONSIN
DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

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April 13, 1995

Watermolen Enterprises
2129 S. Oneida Street
Green Bay, WI 54304

SUBJECT: Groundwater test results for 1030 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Watermolen:

The groundwater sample from the basement sump at 1030 S. Sixth Street, collected on August 24, 1994, was free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater sample was analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

None of the volatile organic compounds analyzed for were detected in the basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in the basement sump groundwater sample were all in normal concentrations.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory. The information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. I will continue to inform you about further action

planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

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April 13, 1995

Michael Cowen
612 Butler Street
De Pere, WI 54115

SUBJECT: Groundwater test results for 612 Butler Street, De Pere, Wisconsin

Dear Mr. Cowen:

The groundwater sample from your basement sump, collected on August 26, 1994, met state and federal groundwater quality standards. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater sample was analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

None of the volatile organic compounds analyzed for were detected in your basement sump groundwater sample. All of the metals analyzed for are naturally occurring in groundwater, and the metals detected in your basement sump groundwater sample were all in normal concentrations.

Please let me know if you are interested in obtaining a copy of the test results submitted by the laboratory. The information is readily available.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background (normal) levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. I will continue to inform you about further action

planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD
David Linear - US EPA

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April 17, 1995

Michael Bonville
3057 Holland Road
Green Bay, WI 54303

SUBJECT: Groundwater test results for 310-314 Grant Street, De Pere, Wisconsin

Dear Mr. Bonville:

The groundwater samples from the monitoring wells on your Grant Street Property (MW-4B, MW-8, and MW-8A), collected on October 24, 1995, and November 16, 1995, were all free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)
The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

Monitoring well MW-8 and MW-8A both draw water from the 30-foot thick clay layer found below the ground surface (see Attachment B). None of the volatile organic compounds analyzed for were detected in any of the groundwater samples collected from these wells. All of the metals analyzed for are naturally occurring in groundwater and the metals detected in the samples from MW-8 and MW-8A were in normal concentrations.

Monitoring well MW-4B (located in the front drive) draws its water from the dolomite bedrock (see Attachment B). No volatile organic compounds were detected in the samples collected from this monitoring well. All of the metals detected in the samples were in normal concentrations.

For your records, I have enclosed copies of the monitoring well construction reports for the monitoring wells on your property (Attachment C). Please let me know if you are interested in obtaining a copy of the groundwater test results submitted by the laboratory.

Better Brite Update
By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries. Chromium-contaminated groundwater has not reached any of the monitoring wells on your property.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the wells on your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the wells and collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD (w/o attachments)
David Linear - US EPA (w/o attachments)
Carl Weber - Director of Public Works, City of De Pere

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DEPT. OF NATURAL RESOURCES
George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

101 South Webster Street
Box 7921
Madison, Wisconsin 53707
SUPERFUND/SOLID WASTE FAX 608-267-2768
DIRECT DIAL 608-267-5232
TDD 608-267-6897

April 17, 1995

Andrews, Peterson, & Associates, Inc.
P.O. Box 12812
Green Bay, WI 54307-2812

SUBJECT: Groundwater test results for 601 Grant Street, De Pere, Wisconsin

Dear Mr. Andrews and Mr. Peterson:

The groundwater samples from the monitoring wells on your Grant Street Property (MW-7 and MW-7A), collected on August 24, 1995, and October 18, 1995, were free of contaminants. The sampling was performed as part of the Superfund remedial investigation of the Better Brite chrome and zinc shop properties.

Test Results (your property)

The groundwater samples were analyzed through the U.S. Environmental Protection Agency's Contract Laboratory Program (CLP) for a wide selection of volatile organic compounds and metals. I have attached a complete list of these parameters for your information (Attachment A).

Monitoring wells MW-7 and MW-7A both draw water from the 30-foot thick clay layer found below the ground surface (see Attachment B). None of the volatile organic compounds analyzed for were detected in any of the groundwater samples collected from these wells. All of the metals analyzed for are naturally occurring in groundwater and the metals detected in the samples from MW-7 and MW-7A were in normal concentrations. The concentrations of chromium, iron, and zinc increased slightly between sampling rounds, but were still within normal ranges for groundwater.

For your records, I have enclosed copies of the monitoring well construction reports for the monitoring wells on your property (Attachment C). Please let me know if you are interested in obtaining a copy of the groundwater test results submitted by the laboratory.

Better Brite Update

By sampling all of the monitoring wells on and around the Better Brite chrome and zinc shop properties, we have learned that groundwater samples from the shallowest monitoring wells (15 feet deep) have the highest levels of chromium and groundwater samples from the deepest monitoring wells (60 feet deep) have background levels of chromium. This tells us that the groundwater is generally moving horizontally away from the Better Brite properties without moving deeper into the ground. Fortunately, the nearby De Pere municipal well is cased (closed to groundwater) to 180 feet and does not draw its water from the contaminated clay layer which is just below the ground surface (see Attachment B). This municipal well is tested every six months (as a precaution) and shows no signs of contamination.

We also learned that only four groundwater contaminants occur at levels above state and federal groundwater quality standards. Only one of these four contaminants, chromium, was found to have moved beyond the Better Brite chrome and zinc shop property boundaries.

Our goals at the Better Brite chrome and zinc properties are to prevent exposure to toxic levels of contaminants and to protect groundwater quality. The information from the wellson your property is crucial to deciding what further steps are needed to clean up the site. The Department of Natural Resources appreciates your letting us install the wellsand collect samples. I will continue to send you sample results and inform you about further action planned for the Better Brite properties. Please feel free to call me at (608) 267-5232 if you have any questions in the meantime. Thanks for your cooperation.

Sincerely,

Kate Freiberg

Katherine S. Freiberg
Superfund Remedial Unit

Noted:

Jane Lemcke

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urben - LMD (w/o attachments)
David Linear - US EPA (w/o attachments)

→ Bruce Urban - LMD

WISCONSIN
DEPT. OF NATURAL RESOURCES

George E. Meyer
Secretary

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

101 South Webster Street
Box 7921
Madison, Wisconsin 53707
SUPERFUND/SOLID WASTE FAX 608-267-2768
DIRECT DIAL 608-267-5232
TDD 608-267-6897

January 4, 1995

RECEIVED
JAN 06 1995
LMD SOLID WASTE

Paul Allen
RE/MAX Realty
Green Bay, WI 54301

SUBJECT: Analytical results for soil and basement-chip samples collected at 326 S. Sixth Street, De Pere, Wisconsin

Dear Mr. Allen:

This letter is provided in response to your request for information on soil and basement-chip samples collected at 326 S. Sixth Street (the property) as part of an investigation of the Better Brite Superfund site (Zinc shop).

Contaminated soil removal activities and groundwater collection system modifications were completed by the U.S. Environmental Protection Agency (US EPA), with the cooperation of the Wisconsin Department of Natural Resources (WDNR), in early 1993. These actions are thought to have significantly improved conditions at both of the Better Brite sites.

The enclosed analytical results (Attachment A) are for soil samples collected in April 1993 (post-completion of the removal activities described above). Soil sample #3 was collected from the front yard of the property (see attached map) and had a chromium concentration of 18.5 mg/kg. To give you an idea of what this concentration means, the natural concentration of chromium in De Pere-area soils is between 10 and 40 mg/kg. (Chromium was detected at a concentration of 20.1 mg/kg in a soil sample collected from a park at the corner of College Avenue and 4th Street.) Attachment B is a copy of a memorandum, dated February 8, 1993, from the Wisconsin Department of Health (WDOH), regarding chromium in soils. In this memorandum, WDOH conservatively states that concentrations of total chromium less than 135 mg/kg are not expected to pose a health threat to people.

In addition to the soil sample, a basement-chip sample was collected from the property and analyzed for chromium, cyanide, and zinc. I have included a copy of the results in the form of a letter addressed to Ms. Anna Mae Dunlap (Attachment C). A basement-chip sample and a basement-sump (groundwater) sample were collected from the home on the neighboring property (320 S. Sixth St.) and analyzed for the same parameters; a copy of the results in the form of a letter addressed to Mr. Gerald Rasmussen is also attached (Attachment D).

For your information, groundwater samples were collected from the monitoring wells located at 320 S. Sixth Street in August 1994, and again in October 1994. These samples were analyzed for volatile organic compounds, metals and cyanide (see Attachment E for a complete list of parameters). I have received the sample results for the August sampling round; none of the compounds or analytes analyzed for were detected.

Please note that some amount of industrial-like activity should be expected to take place on the Zinc shop property in conjunction with both the current investigation and future remediation of soil and groundwater. The WDNR will keep the public informed about activities related to the cleanup of the Better Brite Superfund site through direct mailings and public meetings. Also, an Information Repository on the Better Brite sites is maintained at the Brown County Library, De Pere Branch, 380 Main Avenue, De Pere, Wisconsin.

Please feel free to contact me if you have any additional questions. I can be reached at (608) 267-5232 between 8:00 am and 6:00 pm, Monday through Thursday. I hope the information provided is helpful.

Sincerely,

Kate Freiberg

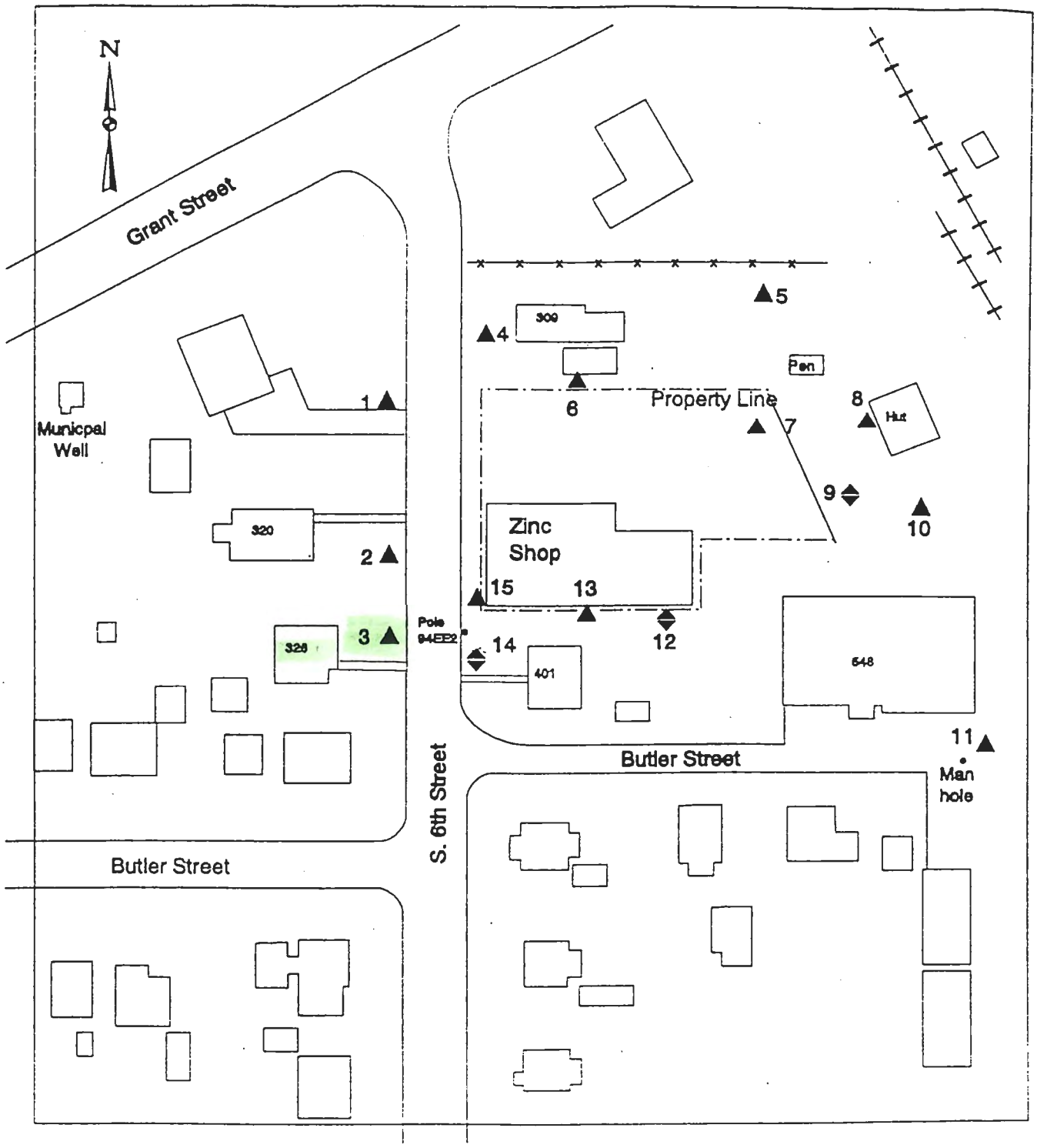
Katherine S. Freiberg
Project Manager

I will back in the office January 24 if you have any additional questions.
KSF

Noted:

Jane Lemcke, Unit Leader
Superfund Remedial Unit

cc: Bruce Urban



SAMPLING LOCATIONS
BETTER BRITE ZINC

LEGEND

▲ Shallow (0-6"): Metals & CN
◆ Shallow (0-6"): Metals & CN & Deep(2.5-3'): Metals, CN & VOA

Sampled by U.S.EPA, 5/3-4/93
2 Background samples taken off map.

CN = cyanide
VOA = volatile organic analys.

Zinc Shop Soil Samples: Sample locations and analytical results

Sample ID ITR/OTR Date:	Location	Parameters Cr/Zn Results (mg/kg)	Comments
SSZ001 MESR47 5/3/93	91' North of SSZ002, 15' West of S. 6th Street curb. Front yard of corner house, SW corner 6th and Grant	CN, Total Metals: 11.9/51.3	
SSZ002 MESR48 5/3/93	Front yard of 320 S. 6th Street, 74' North of SSZ003, 10' off of S. 6th Street curb	CN, Total Metals: 13.5/76.9	
SSZ003 MESR49 5/3/93	Front yard of 326 S. 6th Street, 54' West of telephone pole #94EE2 located in front of 401 S. 6th Street.	CN, Total Metals: 18.5/65.9 ↑ Chromium ↑ Zinc	
SSZ004 MESR50 5/3/93	8' West of SW corner of porch at 309 S. 6th Street, 25' North of NW fence post of Zinc property, 15' east of S. 6th Street curb	CN, Total Metals: 24.9/128	
SSZ005 MESR51 5/3/93	71' East off of NE corner of house at 309 S. 6th Street, 33' north of NW corner of rabbit pen, located immediately east of active garden area	CN, Total Metals: 38.8/180	sampled here at owners request
SSZ006 MESR52 5/3/93	11' ESE off of SW corner of garage at 309 S. 6th Street, 3' north of Zinc property fence.	CN, Total Metals: 110/1050	Dup. of SSZ901
SSZ007 MESR53 5/3/93	15' south of north fence of Zinc property and 20' west of east fence of Zinc property. Located within Zinc shop area, beneath area that was used to stockpile soils on-site.	CN, Total Metals: 125/219	

SSZ003 = sample #3

SSZ004 = sample #4

etc.

KSF

Sample ID ITR/OTR Date:	Location	Parameters Cr/Zn Results (mg/kg)	Comments
SSZ008 MESR54 5/3/93	5' west off of NW corner of Merkatoris's quonset hut/garage. Sample taken immediately west of manhole.	CN, Total Metals: 46.4/327	
SSZ009 MESR55 5/3/93	Manhole in west-central portion of North American Van Lines lot north of 548 Butler. Sample taken from west side of manhole.	CN, Total Metals: 48.4/330	
SBZ009 MESR57 ESQ47 5/3/93	Same as SSZ009 2.5-3.0'	CN, Total Metals, VOAs: 26.3/88.0	
SSZ010 MESR56 5/3/93	Manhole in east-central portion of North American Van Lines lot to the north of 548 Butler. Sample taken from the north side of manhole.	CN, Total Metals: 8.6/77.7	MS/MSD
SSZ011 MESR59 5/3/93	Manhole at far east end of Butler Street. Sample taken from east side (lowest in relative elevation) of manhole	CN, Total Metals: 10.1/26.4	
SSZ012 MESR58 5/3/93 Sample 12	112' east of telephone pole #94EE2, located in front of 401 S. 6th Street, 60' north off of NE corner of 401 S. 6th Street's garage.	CN, Total Metals: 32.3/161	
SBZ012 MESR60 ESQ48 5/3/93	Same as SSZ012 2.5-3.0' dup	CN, Total Metals, VOAs: 200/46.9	Dup. of SSZ902

KSF 7/94

Zinc Shop Soil Samples: Page 3/4

Sample ID ITR/OTR Date:	Location	Parameters Cr/Zn Results (mg/kg)	Comments
SSZ013 MESR61 5/3/93 Sample 13	73' east of telephone pole #94EE2 located in front of 401 S. 6th Street, 15' NE off of NE corner of 401 S. 6th Street house.	CN, Total Metals: 127/629	
SSZ014 MESR62 5/3/93 Sample 14	25' SE off of telephone pole #94EE2 located in front of 401 S. 6th Street, 26' west off of NW corner of 401 S. 6th Street house.	CN, Total Metals: 21.7/92.8	
SBZ014 MESR64 ESQ49 5/3/93	Same as SSZ014 2.5-3.0'	CN, Total Metals, VOAs: 26.9/41.5	
SSZ015 MESR63 5/3/93	15' NE off of telephone pole #94EE2, just off of east side of sidewalk located 15' south of entrance curb to Zinc property.	CN, Total Metals: 37.3/853	
SSZ016 MESR83 5/4/93	Park at SE intersection of College Ave. and S. 4th Street. Sample from NW base of large tree just east of seesaw.	CN, Total Metals: 20.1/40.1	bkg sample
SSZ017 MESR84 5/4/93	West DePere High School, at north side of east parking lot, from north base of tree immediately south of the entrance of the walkway	CN, Total Metals: 20.1/60.3	bkg sample, Dup. of SSZ903
SSZ901 MESR65 5/3/93	Same as SSZ006	CN, Total Metals: 93.0/977	Dup. of SSZ006
SSZ902 MESR66 ESQ50 5/3/93	Same as SBZ012 2.5-3.0'	CN, Total Metals, VOAs: 202/51.2	Dup. of SBZ012
SSZ903 MESR28 5/4/93	Same as SSZ017	CN, Total Metals: 21.7/54.2	Dup. of SSZ017

No Volatile Organics were detected in any of the samples analyzed for VOAs.

All samples taken from the surface, 0-6", unless otherwise noted.

ITR = Inorganic Traffic Report
OTR = Organic Traffic Report
Dup. = Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate
bkg = Background
CN = cyanide
VOA = Volatile Organic Analysis

Attachment B

Tommy G. Thompson
Governor

Gerald Whitburn
Secretary

State of Wisconsin
Department of Health and Social Services

DIVISION OF HEAL
WEST WI SON STRE
P O BOX
MADISON WI 53701-

MEMORANDUM

DATE: February 8, 1993

TO: Dan Cozza, SACM Project Manager
U.S. Environmental Protection Agency - Region 5

FROM: Kenneth Bro, Environmental Engineer KMB
Wisconsin Division of Health

Louise Fabinski, Senior Regional Representative LF
U.S. Agency for Toxic Substances and Disease Registry

SUBJECT: Health evaluation of chromium-contaminated soils at residential property near the Better Brite Chrome and Zinc Shops, De Pere, Wisconsin.

As we explained in our consultation on remediation of soils at this site, total chromium concentrations in surface soils less than 135 milligrams per kilogram (or 135 parts of chromium per million parts of soil) are not expected to pose a health threat to people living in the area.

There are two reasons why this concentration should be sufficiently protective of people's health. First, we assumed that all of the chromium found in the soil is in the hexavalent form. Other forms of chromium (trivalent and metallic) are considerably less toxic than hexavalent chromium. Your November sampling results list the total of all forms of chromium found. Second, in recommending the concentration of 135 mg/kg, we assumed that contamination of at least this concentration would be distributed in unvegetated soils across the site. In fact, most of the areas tested are vegetated. As a result, the airborne dust levels we estimated are likely to be higher than what is actually the case. The amounts of windblown soil we assumed that people would breathe are probably lower than our prudently conservative estimate.

Breathing hexavalent chromium is the pathway by which people are likely to be most sensitive to the chemical's toxic effects. Soil concentrations based on preventing toxic effects caused by other routes of exposure (such as swallowing soils) would be about three times higher than the level we recommended. The level we recommend is based on minimizing the cancer risk to people who over several decades might inhale windblown dust from contaminated soil. Inhaling hexavalent chromium causes lung cancer in workers exposed to high concentrations for several years. At 135 mg/kg of total chromium in surface soil, we would not expect chromium to cause health effects in people living near the site.

cc: T. Koehn, WDNR

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

Lake Michigan District Headquarters
1125 N. Military Avenue
P.O. Box 10448
Green Bay, WI 54307-0448
TELEPHONE # (414)492-5869
TELEFAX # (414)492-5913

April 7, 1992

File Ref: WIT-560010118
WID-006132088
Brown Co./SFND

Ms. Anna Mae Dunlap
326 South Sixth St.
DePere, WI 54115

Re: **Sample Results from 326 S. Sixth St.**
De Pere, Wisconsin

Dear Ms. Dunlap:

This letter is to advise you of the analytical results obtained from the chip sample collected from your basement on September 17, 1991. The results presented below were recently received from the State Laboratory of Hygiene in Madison. I am pleased to let you know that these results do not indicate a health threat to you nor is it likely that they represent contamination related to the Better Brite Zinc Shop.

Sample BBR-02 (Chip Sample)

Chromium	15. mg/kg
Cyanide	**
Zinc	1700. mg/kg

mg/kg = milligrams/kilogram (parts/million)
** = Insufficient Sample Quantity, No Test Performed

As you would expect there are not any "standards" for basement chip samples, thus, evaluation of these results is based upon comparison to similar samples and to values for normal soils (background) of the area. Chromium and zinc are normal constituents of soil and can also be found in concrete. Chromium values in soils are often observed to be greater than 50 mg/kg and zinc values can be higher. The chromium concentration observed in the collected chip sample does not appear to be elevated and it is essentially the same as normal soils in the area. The value observed for zinc is not thought to represent contamination related to the Better Brite Site either.

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

Lake Michigan District Headquarters
1125 N. Military Avenue
P.O. Box 10448
Green Bay, WI 54307-0448
TELEPHONE # (414)492-5869
TELEFAX # (414)492-5913

April 7, 1992

File Ref: WIT-560010118
WID-006132088
Brown Co./SFND

Mr. Gerald Rasmussen
320 South Sixth St.
DePere, WI 54115

Re: **Sample Results from 320 S. Sixth St.**
DePere, Wisconsin

Dear Mr. Rasmussen:

This letter is to advise you of the analytical results obtained from the samples collected from your basement on September 18, 1991. The results presented below were recently received from the State Laboratory of Hygiene in Madison. I am pleased to let you know that these results do not represent a health threat to you nor is it likely that they represent contamination related to the Better Brite Zinc Shop.

Sample BBR-08	(Sump Water)	
	Chromium	<3. ug/l
	Cyanide	<0.01 mg/l
	Zinc	14. ug/l
Sample BBR-09	(Chip Sample)	
	Chromium	<5. mg/kg
	Cyanide	**
	Zinc	16. mg/kg

As you are aware an additional sample of your sump water was collected on September 30, 1991. Results from this sample were provided to you by letter dated October 22, 1991. For ease of comparison the results of that sample are presented below.

Sample RAS-01	(Sump Water)	
	Chromium	<3. ug/l (<0.003 mg/l)
	Cyanide	<0.01 mg/l
	VOCs	All Less Than Detection Limits

mg/l = milligrams/liter (parts/million)
ug/l = micrograms/liter (parts/billion)
mg/kg = milligrams/kilogram (parts/million)

TARGET COMPOUND AND TARGET ANALYTE LIST

VOLATILE COMPOUNDS	SEMIVOLATILE COMPOUNDS		PESTICIDES and PCBs	METALS AND CYANIDE
Acrolein	Phenol	Acenaphthylene	Alpha-BHC	
Acrylonitrile	bis(2-Chloroethyl)Ether	2,6-Dinitrotoluene	Beta-BHC	Aluminum
Chloromethane	2-Chlorophenol	3-Nitroaniline	Delta-BHC	Antimony
Bromomethane	1,3-Dichlorobenzene	Acenaphthene	Lindane	Arsenic
Vinyl Chloride	1,4-Dichlorobenzene	2,4-Dinitrophenol	Heptachlor	Barium
Chloroethane	Benzyl Alcohol	4-Nitrophenol	Aldrin	Beryllium
Methylene Chloride	1,2-Dichlorobenzene	Dibenzofuran	Heptachlor Epoxide	Cadmium
Acetone	2-Methylphenol	2,4-Dinitrotoluene	Endosulfan I	Calcium
Carbon Disulfide	bis(2-Chloroisopropyl)Ether	Diethylphthalate	Dieldrin	Chromium
1,1-Dichloroethene	4-Methylphenol	4-Chlorophenyl Phenyl Ether	4,4'-DDE	Cobalt
1,1-Dichloroethane	N-Nitroso-di-n-propylamine	Fluorene	Endrin	Copper
1,2-Dichloroethene (total)	Hexachloroethane	4-Nitroaniline	Endosulfan II	Iron
Chloroform	Nitrobenzene	4,6-Dinitro-2-Methylphenol	4,4'-DDD	Lead
1,2-Dichloroethane	Isophorone	N-Nitrosodiphenylamine(1)	Endosulfan Sulfate	Magnesium
2-Butanone	2-Nitrophenol	4-Bromophenyl Phenyl Ether	4,4'-DDT	Manganese
1,1,1-Trichloroethane	2,4-Dimethylphenol	Hexachlorobenzene	Methoxychlor	Mercury
Carbon Tetrachloride	Benzoic Acid	Pentachlorophenol	Endrin Ketone	Nickel
Vinyl Acetate	bis(2-Chloroethoxy)Methane	Phenanthrene	Alpha-Chlordane	Potassium
Bromodichloromethane	2,4-Dichlorophenol	Anthracene	Gamma-Chlordane	Selenium
1,2-Dichloropropane	1,2,4-Trichlorobenzene	Di-n-Butylphthalate	Toxaphene	Silver
cis-1,3-Dichloropropene	Naphthalene	Fluoranthene	Aroclor-1016	Sodium
Trichloroethene	4-Chloroaniline	Pyrene	Aroclor-1221	Thallium
Dibromochloromethane	Hexachlorobutadiene	Butyl Benzyl Phthalate	Aroclor-1232	Vanadium
1,1,2-Trichloroethane	4-Chloro-3-Methylphenol	Benzo(a)Anthracene	Aroclor-1242	Zinc
Benzene	2-Methylnaphthalene	bis(2-Ethylhexyl)Phthalate	Aroclor-1248	Cyanide
trans-1,3-Dichloropropene	Hexachlorocyclopentadiene	Chrysene	Aroclor-1254	
Bromoform	2,4,6-Trichlorophenol	Di-n-Octyl Phthalate	Aroclor-1260	
4-Methyl-2-Pentanone	2,4,5-Trichlorophenol	Benzo(b)Fluoranthene		
2-Hexanone	2-Chloronaphthalene	Benzo(k)Fluoranthene		
Tetrachloroethene	2-Nitroaniline	Benzo(a)Pyrene		
1,1,2,2-Tetrachloroethane	Dimethyl Phthalate	Indeno(1,2,3-cd)Pyrene		
Toluene		Dibenzo(a,h)Anthracene		
Chlorobenzene		Benzo(g,h,i)Perylene		
Ethyl Benzene				
Styrene				
Xylene (total)				

NOT ANALYZED FOR

NOT ANALYZED FOR

Attachment E

ROBERT E. LEE & ASSOCIATES, INC.
Wisconsin Certification NO: 405043870

- CERTIFICATE OF ANALYSIS -

To: De Pere Wastewater Treatment Plant
315 Leonard Street
De Pere WI 54115

Attn: Al Kardoskee
Phone: 414-339-4094
Fax: 414-339-4048

Customer Number: 000404

Lab Number: 94REL000241
Sample ID : 069598/069599
Matrix : LIQUID

Chain Number: 2018
Report Date : 01/17/1994
Sample Date : 01/04/1994

METHOD	PARAMETER NAME	RESULT	UNITS	MDL	DATE	BY
EPA 200.7	TOTAL CADMIUM ICP	<4	UG/L	4	01/12/1994	EWW
EPA 200.7	TOTAL CHROMIUM ICP	595	UG/L	8	01/12/1994	EWW
EPA 200.7	TOTAL ZINC	3	UG/L	3	01/12/1994	EWW
EPA-335.2	CYANIDE-TOTAL	0.067	MG/L	0.004	01/12/1994	DJB

treated groundwater

- the sample sent for analysis is a composit sample of groundwater from both the chrome shop & zinc shop. sample is collected from the holding tank prior to treatment

CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN

DATE: March 4, 1994

TO: Paul Kozol - SW/3

FROM: Terry Koehn - LMD

SUBJECT: **Better Brite Project - Pretreatment Plant Operation Analytical Results**

Samples of water are collected from the Better Brite Chrome Shop pretreatment plant basically on a quarterly basis. Results from samples collected September 29 and October 1, 1993 are presented in the table below. These samples represent contaminated water prior to treatment. On-site testing of the treated water (prior to discharge) from each batch continues to be performed.

The analyses were performed by Robert E. Lee & Associates. Results are presented below:

Sample Results

Sample #	Date Sampled	Parameter	Result	Unit
Zinc-929-CNA [1]	09/29/93	Amenable Cyanide	65	ug/l
Zinc-929-CN	09/29/93	Total Cyanide	1.821	mg/l
Zinc-929-MA	09/29/93	Total Chromium	565,000	ug/l
Zinc-929-MA	09/29/93	Total Zinc	28	ug/l
Zinc-929-MA	09/29/93	Total Cadmium	<3	ug/l
Zinc-929-MB [2]	09/29/93	Total Chromium	704,000	ug/l
Zinc-929-MB	09/29/93	Total Zinc	46	ug/l
Zinc-929-MB	09/29/93	Total Cadmium	<3	ug/l
Lande Street [3]	10/01/93	Total Chromium	234,000	ug/l
Lande Street	10/01/93	Total Zinc	29	ug/l
Lande Street	10/01/93	Total Cadmium	<4	ug/l

[1] Samples Zinc-929-CNA, Zinc-929-CN, Zinc-929-MA and Zinc-929-MB were collected directly from the Zinc Shop Sump
[2] Sample Zinc-929-MB is a duplicate of sample Zinc-929-MA
[3] Sample, Lande Street, was collected from the Lande Street pretreatment facility and represents a mixture of water from both the Zinc Shop site and from the Chrome Shop site

Laboratory analysis sheets are attached. Please contact Mike Kersten from the City of De Pere POTW (414-339-4094) regarding future sampling events. If you have any questions regarding the above please give me a call.

cc: D. Rossberg LMD - SW
D. Linnear U.S. EPA Region V
D. Benner City of De Pere
w/o att.

ROBERT E. LEE & ASSOCIATES, INC.
Wisconsin Certification NO: 405043870

- CERTIFICATE OF ANALYSIS -

To: De Pere Wastewater Treatment Plant
315 Leonard Street
De Pere WI 54115

Attn: Al Kardoskee
Phone: 414-339-4094
Fax: 414-339-4048

Customer Number: 000404

Lab Number: 94REL000240
Sample ID : 069596/069597
Matrix : LIQUID

Chain Number: 2018
Report Date : 01/17/1994
Sample Date : 01/04/1994

METHOD	PARAMETER NAME	RESULT	UNITS	MDL	DATE	BY
EPA 200.7	TOTAL CADMIUM ICP	<20	UG/L	20	01/12/1994	EWW
EPA 200.7	TOTAL CHROMIUM ICP	394000	UG/L	8	01/12/1994	EWW
EPA 200.7	TOTAL ZINC	830	UG/L	3	01/14/1994	EWW
EPA-335.2	CYANIDE-TOTAL	0.230	MG/L	0.004	01/12/1994	DJB

untreated
groundwater

Better Brite

Total gallons treated from Jan-March 1994 —
28,800

# of gallons transferred from Znc Shop —
21,150

# of gallons pumped from chrome shop.
7650

this # is incorrect
actual is 13,900
Kathy Gudmundsen 7/21/94

SIMON HYDRO-SEARCH

February 25, 1994
(301483158)

175 N. Corporate Drive
Suite 100
Brookfield, WI 53045

Telephone (414)792-1282
Facsimile (414)792-1310

Mr. Paul L. Kozol, P.E.
Wisconsin Dept. of Natural Resources
Bureau of Solid & Hazardous Waste Management
101 S. Webster St.
P.O. Box 7921
Madison, WI 53707-7921

RE: Better Brite Monitor Well Evaluation Results

Dear Paul:

On February 17, 1994, Simon Hydro-Search conducted a monitor well evaluation of the existing wells at the Better Brite Zinc and Chrome Shops. As was discussed at a meeting held with the WDNR later that day, the findings of this evaluation were comparable with the results of the 1991 WDNR evaluation with two notable exceptions. Well B-101A at the Chrome Shop, previously thought to be useable, has been damaged, and is no longer useable and well W-16 is no longer locatable at the Chrome Shop. Other findings are summarized as follows:

Chrome Shop

Bedrock Chrome Shop Piezometers B-101 and B-102 are likely useable to obtain potentiometric data and samples for chemical analysis. The wells are constructed with 15-foot screens so direct comparison with potentiometric elevations from proposed wells will be estimated. Five other wells will be useable for obtaining ground-water elevation data. These include four water table wells (W-5, W-9, B-104A, and B-105B) and one shallow piezometer (W-1). All seven of these wells should be rechecked in spring for surface seal integrity and appropriately repaired based on the results of the check.

The remainder of the locatable wells at the site, including wells W-1A, W-3, W-7, W-8, B-101A, B-102A, and B-103 are not useable primarily due to casing damage and questionable integrity. These wells should be abandoned, however, with the exception of well B-103, the wells are less than 20 feet in depth and do not represent a significant migration pathway for contaminants. Abandonment of these wells could be postponed until a later phase of this project (RD/RA).

Well B-103 may represent a significant vertical migration route for contaminants. The constructed depth is 56.4 feet below ground surface with a 15-foot screened interval. Four inch diameter Schedule 40 steel casing was cement grouted into the top of the bedrock. Surface observations indicate that substantial force may have been applied to the casing potentially damaging the cement grout seal and the casing at depth below grade.

Zinc Shop

Both wells W-1A (a water table well) and W-1 (a shallow piezometer) will likely be useful for obtaining near source water level elevations. Both should be examined for adequate surface sealing and repaired prior to use as necessary.

The flush mount well W-3 or W-3A could not be opened, so no evaluation was completed on the well. The well will be evaluated during other field activities at the site.

The two wells installed by U.S. EPA in 1993 during the IRM activities are assumed to be useful for all aspects of the project. No evaluation was conducted at these wells.

Conclusions

Simon Hydro-Search will use the wells as qualified herein unless otherwise directed by the WDNR. Most wells were not locked and all wells, especially those proposed for use in the RI, should be fitted with lockable caps or protective tops to reduce the risk of damage or tampering. Also, the wells to be used for measuring ground-water elevations should be resurveyed to confirm that casings have not heaved and to provide state plane coordinate locations.

Monitor well evaluation field forms completed during the investigation are attached for your information. Please call if you have any questions or comments.

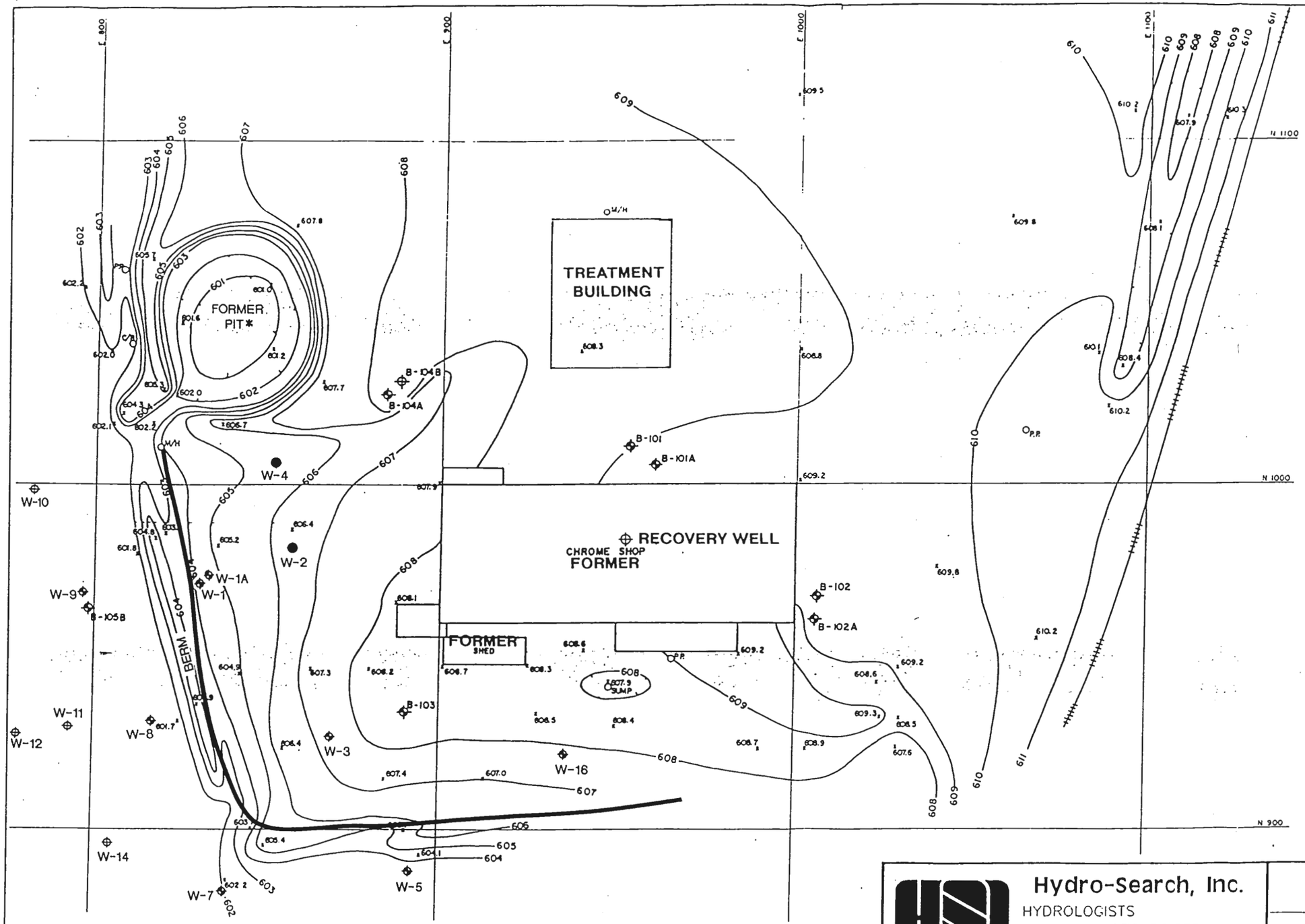
Sincerely,

SIMON HYDRO-SEARCH

Mark A. Manthey
Hydrogeologist

Judy L. Fassbender
Senior Hydrogeologist

MAM/JLF:jo
encl.
cc: Terry Koehn, WDNR, Lake Michigan District



LEGEND

- 608 — GROUND SURFACE CONTOUR
- 608.2 GROUND SURFACE SPOT ELEVATION
- SOIL BORING
- SOIL BORING WITH MONITORING WELL
- FORMER WELL LOCATIONS
- OP.P POWER POLE
- OM/H MANHOLE
- OC/B CATCHBASIN
- RAILROAD TRACKS
- FRENCH DRAIN GROUND-WATER COLLECTION SYSTEM

NOTES: 1) TOPOGRAPHY BY STS CONSULTANTS LTD DATE OF SURVEY: 8/12/87.

2) 8M – ARROWHEAD ON FIRE HYDRANT ON SOUTH SIDE OF LANDE ST. AT RAILROAD CROSSING. ELEV. 614.75 U.S.G.S. DATUM.

* THE PIT HAS BEEN FILLED IN SINCE THIS MAP WAS PRODUCED.

Source: STS Consulants, Ltd., Soil Borings, Monitor Well Installation and Groundwater Sampling. 10/21/87.

Hydro-Search, Inc.
HYDROLOGISTS
GEOLOGISTS
ENGINEERS
Reno Denver Milwaukee Irvine Sacramento

BETTER BRITE
DePERE, WISCONSIN

CHROME SHOP – 1991 EXISTING CONDITIONS

PROJECT: 148115003 | DATE: 03/11/92

DRAWING NO.: | FIGURE: 1

MONITOR WELL INSPECTION FORM

Project Name: WDNR Better Brite — Location: Zinc DePere, Wisconsin

Project No: 30148.3158 — Personnel: M Manthey & J Fassbender

Well No.: W-1 — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	✓			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?				inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			4" diam STEEL
Protective Casing Locked? Type of Lock?	X			0356 MASTER
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X		Kinked @ ~ Ground surface ~4'
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC BLACK
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	More than ½ of SEAL MISSING - VOID
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.8'
Protective casing stickup (ft. above grade)				-2.8
Depth to Water Level (below PVC casing)				17.20
Measured Well Depth (below PVC casing)				32.72 + .28 = 33.00
Saturated Thickness (feet)				
Constructed Well Depth (from log):				31.0 plus 2.0 stickup
Thickness of Siltation: (ft.)				No silt
Other:				NOT USEABLE - Kinked
Zinc Shop				Seal was 19" of Bentonite Slurry

OK for ▽ only

SIMON HYDRO-SEARCH

Good depth for comparisons

MONITOR WELL INSPECTION FORM

Project Name: WDNR BETTER BRITE
Project No: 301483158
Well No.: W-1A
Location: ZINC DePERE, WI
Personnel: MARK MANTHEY & Judy Freeberg
Inspection Date: FEBRUARY 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?				inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			4" DIAM STEEL
Protective Casing Locked? Type of Lock?	X			0356 MASTER
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X		TAPE STICKS @ 8' but will PASS
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC BLACK
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				1.83 >EVEN
Protective casing stickup (ft. above grade)				1.83
Depth to Water Level (below PVC casing)				15.94
Measured Well Depth (below PVC casing)				20.26 + .28 = 20.54
Saturated Thickness (feet)				
Constructed Well Depth (from log):				18.8' bgs.
Thickness of Siltation: (ft.)				Rust brown Silt
Other:				Seal is not Adequate - probably OK for it surface seal is Adjustable or intact
Zinc Shop				Possibly OK for

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MONITOR WELL INSPECTION FORM

Project Name: WDNR Better Brite — Location: De Pere, Wisconsin

Project No: 30483158 — Personnel: M. Matthey & J Fassbender

Well No.: W-3 3A? — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?		X		Flush mount - under snow (NOT easily found)
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?			X	
Is Well Flushmount?	X			
Protective Casing Present? Material? Diameter?	X			4" diameter steel
Protective Casing Locked? Type of Lock?	X	→	→	H type locking well cap - No keyed lock
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?			X	
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?			X	
Well Cap Present, Vented?			X	
Well Diameter and Material			X	
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				Below grade
Protective casing stickup (ft. above grade)				@ Ground surface
Depth to Water Level (below PVC casing)			X	
Measured Well Depth (below PVC casing)			X	
Saturated Thickness (feet)				
Constructed Well Depth (from log):				
Thickness of Siltation: (ft.)			X	
Other:				
Zinc Shop				

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MONITOR WELL INSPECTION FORM #6

Project Name: WDNR BetterBrite
Location: DePere Wisconsin
Project No: 30148315E
Personnel: Mark Manthey & Judy Fassbender
Well No.: MW-1
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?				Paint label inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			STEEL 3½" DIAM
Protective Casing Locked? Type of Lock?	X			0356 MASTER
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?			X	
Well Cap Present, Vented?		X		
Well Diameter and Material				1½" PVC white
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.85
Protective casing stickup (ft. above grade)				2.9
Depth to Water Level (below PVC casing)				9.58
Measured Well Depth (below PVC casing)				27.78 ft. ID = 2806
Saturated Thickness (feet)				
Constructed Well Depth (from log):				27.3' bgs
Thickness of Siltation: (ft.)				gravel & coal base of inside bottom
Other:				NOT checked for kinks with 3/4"
chrome shop				bailer due to small diameter

SIMON HYDRO-SEARCH

MONITOR WELL INSPECTION FORM

Project Name: WDNR BETTER BRITE
Location: DE PERE, WISCONSIN
Project No: 301483158
Personnel: MARK MANTHEY & JUDY FASSBENDER
Well No.: W-1A
Inspection Date: FEBRUARY 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			3½" STEEL
Protective Casing Locked? Type of Lock?	X			3056 MASTER
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X		Inval Kink in Pipe @ Ground
Well Cap Present, Vented?		X		
Well Diameter and Material				1½" White PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.7'
Protective casing stickup (ft. above grade)				2.8'
Depth to Water Level (below PVC casing)				NO WATER
Measured Well Depth (below PVC casing)				6.66 + .28
Saturated Thickness (feet)				
Constructed Well Depth (from log):				15.0 BGS.
Thickness of Siltation: (ft.)				much Rusty Silt
Other:				not checked for Kinks with bailer
Chrome Shop				due to small diameter well

SIMON HYDRO-SEARCH

NOT USABLE

MONITOR WELL INSPECTION FORM

Project Name: WDNR BETTER BRITE
Location: DE PERE, WISCONSIN
Project No: 301483158
Personnel: MARK MATTHEY & JUDY FASSBEND
Well No.: W-3
Inspection Date: FEBRUARY 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?	X			
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		But has a Flush mount type CAP
Protective Casing Present? Material? Diameter?	X			4" diam CAP could not be Removed - H type Flush Mount
Protective Casing Locked? Type of Lock?		X		
Protective Casing Secure in Ground?				Significant Bend in Protop - Curved
Rust Inside Protective Casing Cap?			X	
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?			X	Curved - Assume Bend inside
Well Cap Present, Vented?			X	
Well Diameter and Material			X	
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)			X	
Protective casing stickup (ft. above grade)			X	~ 2'
Depth to Water Level (below PVC casing)			X	
Measured Well Depth (below PVC casing)			X	
Saturated Thickness (feet)				
Constructed Well Depth (from log):				
Thickness of Siltation: (ft.)				
Other:				
chrome shop				

SIMON HYDRO-SEARCH

MONITOR WELL INSPECTION FORM

Project Name: WINK Better Brite — Location: De Pere, WI

Project No: 301483158 — Personnel: M Manthey & J Fassbender

Well No.: W-5 — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			STEEL, 3½"
Protective Casing Locked? Type of Lock?		X		could be locked if lock was present
Protective Casing Secure in Ground?			X	looks good
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?			X	NOT checked with bailer due to small DIAM
Well Cap Present, Vented?		X		
Well Diameter and Material				1½" PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.0
Protective casing stickup (ft. above grade)				2.3
Depth to Water Level (below PVC casing)				5.23
Measured Well Depth (below PVC casing)				11.38 + .28 = 11.66
Saturated Thickness (feet)				
Constructed Well Depth (from log):				14.2' bgs
Thickness of Siltation: (ft.)				Minor Amt of Silt on Pebbles & Evidence of Bass
Other:				
Chrome Shop				

MONITOR WELL INSPECTION FORM

Project Name: WDNR Better Brite
Project No: 301483158
Well No.: W-7

Location: De Pere, WI
Personnel: M Manthey & J Tussbender
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		on Angle w/Fence Po
Protective Posts Necessary?		X		
Is Well Painted?		X		Needs new
Located in a Dry Area?			X	
Well Labelled Inside and Outside?				Inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			3 1/2" Steel
Protective Casing Locked? Type of Lock?	X			0356 Master
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X		Fence Post Supporting; Water Level Probe would not pass kinks
Well Cap Present, Vented?		X		
Well Diameter and Material				1 1/2" PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				3.0
Protective casing stickup (ft. above grade)				3.3
Depth to Water Level (below PVC casing)				Probe would not Pass Kinks
Measured Well Depth (below PVC casing)				
Saturated Thickness (feet)				
Constructed Well Depth (from log):				2.04' Probe Stuck
Thickness of Siltation: (ft.)			X	5.0' bgs
Other: Chrome shop				

SIMON HYDRO-SEARCH

Not useful

MONITOR WELL INSPECTION FORM

Project Name: WDNR BETTER BRITE
Project No: 30148 3158
Well No.: W-8
Location: De Pere, WI
Personnel: M Manthey & T Fassbender
Inspection Date: FEBRUARY 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			3½" STEEL
Protective Casing Locked? Type of Lock?		X		NOT LOCKABLE
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?	X			NOT checked with DALEE due to small PIAMETER
Well Cap Present, Vented?		X		
Well Diameter and Material				1½" PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				1.95
Protective casing stickup (ft. above grade)				2.3
Depth to Water Level (below PVC casing)				NO liquid Present
Measured Well Depth (below PVC casing)				3.02 + 1.28 = 3.03
Saturated Thickness (feet)				
Constructed Well Depth (from log):				15.6' bgs
Thickness of Siltation: (ft.)				Rust @ Bot - Not wet
Other:				
Chrome shop				

SIMON HYDRO-SEARCH

NO USE

MONITOR WELL INSPECTION FORM

Project Name: WDNR Better Brite — Location: DePere, WI
Project No: 301483158 — Personnel: M Manthey + J Fassbender
Well No.: W-9 — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			4½" STEEL
Protective Casing Locked? Type of Lock?	X			2121 - Replaced old lock
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?			X	Not checked with bailer due to small Diameter
Well Cap Present, Vented?		X		
Well Diameter and Material				1½" PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.15
Protective casing stickup (ft. above grade)				2.35
Depth to Water Level (below PVC casing)				7.02
Measured Well Depth (below PVC casing)				15.93 + .28 = 16.21
Saturated Thickness (feet)				
Constructed Well Depth (from log):				15.2' bgs.
Thickness of Siltation: (ft.)				None noted
Other:				
Chrome Shop				

SIMON HYDRO-SEARCH

ok for ▽ =

MONITOR WELL INSPECTION FORM #3

Project Name: WDNR Better Brite
Project No: 304483158
Well No.: B101
Location: DePere Wisconsin
Personnel: Mark Mantkey & Judy Fassbender
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			needs new paint
Located in a Dry Area?	X			
Well Labelled Inside and Outside?				inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			6" steel flip top square
Protective Casing Locked? Type of Lock?	X			master # 0350
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?	X			
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC Black
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	Excavated Evidence
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				2.45
Protective casing stickup (ft. above grade)				2.55
Depth to Water Level (below PVC casing)				35.18
Measured Well Depth (below PVC casing)				62.10 + .28 = 62.38
Saturated Thickness (feet)				
Constructed Well Depth (from log):				60.55 BGS
Thickness of Siltation: (ft.)				0 - very solid
Other:				
Chrome Shop				

SIMON HYDRO-SEARCH

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MONITOR WELL INSPECTION FORM

44

Project Name: WDNR BETTER BRITE
Location: DePere Wisconsin
Project No: 301483158
Personnel: Mark Matthey & Judy Fassbender
Well No.: B-101A
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?				inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			4" STEEL
Protective Casing Locked? Type of Lock?	X			0356 master
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X		kinked @ ~ 9' BTOC
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC Black
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				3.20'
Protective casing stickup (ft. above grade)				3.75
Depth to Water Level (below PVC casing)				10.04
Measured Well Depth (below PVC casing)				11.70 + .28 = 11.98
Saturated Thickness (feet)				
Constructed Well Depth (from log):				19.2' bgs
Thickness of Siltation: (ft.)			X	
Other:				
Chrome Shop				

SIMON HYDRO-SEARCH

NO USE

#1

MONITOR WELL INSPECTION FORM

Project Name: WDNR Beaver Brook — Location: De Pere, (Wisconsin)

Project No: 30148158 — Personnel: Mark Manthey & Judy Fassbender

Well No.: B-102 — Inspection Date: FEBRUARY 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	V			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			NEEDS NEW PAINT
Located in a Dry Area?	X			
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			STEEL 6"
Protective Casing Locked? Type of Lock?		X		NOT LOCKABLE
Protective Casing Secure in Ground?				DOUBLE CASED - 2" CASING NOT CENTERED
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?		X		
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?	X			Protop looks like it's been hit
Well Cap Present, Vented?			X	
Well Diameter and Material				2" BLACK PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?	X			
Well stickup (ft. above grade)				2.80'
Protective casing stickup (ft. above grade)				2.30'
Depth to Water Level (below ~~PVC~~ STEEL casing)				52.80'
Measured Well Depth (below PVC casing)				64.7 + .78 = 64.98'
Saturated Thickness (feet)				
Constructed Well Depth (from log):				63' bgs
Thickness of Siltation: (ft.)				NONE FELT - ~~TAN~~ BROWN SILTY CLAY
Other:				
Chrome Shop				

SIMON HYDRO-SEARCH

MONITOR WELL INSPECTION FORM

±12

Project Name: WDNR Better Brite — Location: De Pere Wisconsin

Project No: 30148.3058 — Personnel: Mark Mankey & Judy Fassbender

Well No.: B-102A — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?			X	
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			STEEL 4" w/ Hinged lid - No lid plate
Protective Casing Locked? Type of Lock?		X		
Protective Casing Secure in Ground?			X	
Rust Inside Protective Casing Cap?		X		
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		X	-	Kinked @ ground surface BAILER will not PASS
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC Black
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	
Ground/Seal Sloped to Prevent Ponding?	X			
Well stickup (ft. above grade)				2.3'
Protective casing stickup (ft. above grade)				2.4
Depth to Water Level (below PVC casing)				8.82
Measured Well Depth (below PVC casing)				19.24+.28 = 19.52
Saturated Thickness (feet)				
Constructed Well Depth (from log):				19.5' bgs.
Thickness of Siltation: (ft.)				NOW NOTED
Other:				
Chrome Shop				

SIMON HYDRO-SEARCH

NO use

MONITOR WELL INSPECTION FORM

Project Name: WDNR BETTER Brite
Location: DePere, Wisconsin
Project No: 3014&3158
Personnel: Mark Matthey & Judy Tiesborn
Well No.: B-103
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?		X		
Located in a Dry Area?			X	
Well Labelled Inside and Outside?		X		
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			6" STEEL
Protective Casing Locked? Type of Lock?		X		
Protective Casing Secure in Ground?		X		HANGING on double casing
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?		N	-	Kinked @ 10' BTOC
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?				NONE
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				4.9' - PVC above PID top
Protective casing stickup (ft. above grade)				4.5
Depth to Water Level (below PVC casing)				19.93
Measured Well Depth (below PVC casing)				57.38' + .28 = 57.66
Saturated Thickness (feet)				
Constructed Well Depth (from log):				56.4' bgs
Thickness of Siltation: (ft.)				small amount - rusty brown
Other:				
chrome shop				

SIMON HYDRO-SEARCH

bit of P only 15' screen NO use

MONITOR WELL INSPECTION FORM #5

Project Name: WDNR Better Brite — Location: De Pere, Wisconsin
Project No: 30148 3158 — Personnel: Mark Matthey & Judy Fassbender
Well No.: D-104A — Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?	X			
Well Labelled Inside and Outside?				Inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			Steel 4" STEEL
Protective Casing Locked? Type of Lock?	X			3056 MASTER
Protective Casing Secure in Ground?		X		4½' 3S' Riotop Exposed
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	No seal
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?	X			
Well Cap Present, Vented?		X		
Well Diameter and Material				2" Black PVC
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?				NONE Present
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				4.1'
Protective casing stickup (ft. above grade)				4.1 Protective CASING is held up by WELL CASING
Depth to Water Level (below PVC casing)				11.89
Measured Well Depth (below PVC casing)				21.84+.28 22.12
Saturated Thickness (feet)				
Constructed Well Depth (from log):				20.0' bgs
Thickness of Siltation: (ft.)				NONE NOTED
Other:				
Chrome Step				

SIMON HYDRO-SEARCH

w/ surface seal

3' of dirt above screen

MONITOR WELL INSPECTION FORM

Project Name: WDNR Beiler Brite
Project No: 30148358
Well No.: B-105B

Location: De Pere Wisconsin
Personnel: M Mantley & J Fassbender
Inspection Date: February 17, 1994

ITEM	YES	NO	N/A	COMMENTS
Map Location Accurate?	X			
Adequately Visible in Hard-to-Find Area?	X			
Protective Posts Present? Type?		X		
Protective Posts Necessary?		X		
Is Well Painted?	X			
Located in a Dry Area?			X	
Well Labelled Inside and Outside?				inside only
Is Well Flushmount?		X		
Protective Casing Present? Material? Diameter?	X			4" STEEL
Protective Casing Locked? Type of Lock?	X			0356 master
Protective Casing Secure in Ground?			X	looks like Concrete Surface Seal
Rust Inside Protective Casing Cap?	X			
Evidence of Frost Heave?			X	
Weep Hole at Base of Protective Casing?			X	
Well Casing Free of Kinks or Bends?	X		-	
Well Cap Present, Vented?		X		
Well Diameter and Material				2" PVC Black
Solvent cement present?			X	
Type of Surface Seal? Is Seal Cracked?			X	Cement ?
Ground/Seal Sloped to Prevent Ponding?			X	
Well stickup (ft. above grade)				1.7' WAYdamin side Protop
Protective casing stickup (ft. above grade)				2.3'
Depth to Water Level (below PVC casing)				est. difficult to see 5.56
Measured Well Depth (below PVC casing)				20.90+.28 = 21.18
Saturated Thickness (feet)				
Constructed Well Depth (from log):				18.8' bgs.
Thickness of Siltation: (ft.)				MINER AMT of Silt
Other:				
Chrome shop				

SIMON HYDRO-SEARCH

Vif
Surf Seal ci

Better Brite File

CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN

DATE: July 22, 1993

TO: Meg Raatz - SW/3

FROM: Terry Koehn - LMD

SUBJECT: Private Well Monitoring and Owner Notification

The following information is provided in response to the June 15, 1993 memorandum from M. Giesfeldt regarding monitoring and notification at Superfund sites. Two sites are addressed in this memo; Better Brite (De Pere, WI) and N.W. Mauthe (Appleton, WI).

N.W. Mauthe
I am not aware of any private well sampling in the vicinity of the site nor am I aware of any wells in the immediate area. The City of Appleton obtains its drinking water from a surface water source.

Better Brite
I am aware of only a single private well in the immediate vicinity of the sites. Two sampling events have been completed for the well (1992, 1990). Copies of the notification letters are attached. Additional monitoring is planned. One of De Pere's six municipal wells is located in close proximity to one of the Better brite sites. This well has been sampled on numerous occasions, since around 1986, by the WDNR and U.S. EPA. To my knowledge the City has been notified of the analytical results. The City also samples the well on a regular basis, providing the WDNR with the associated data. I am in the process of collecting and tabulating all of the sample results obtained from the municipal well (Grant Street Well). If needed this tabulation can be provided when completed.

cc: G. Edelstein SW/3 with att.
K. Erdmann LMD

WISCONSIN
DEPT. OF NATURAL RESOURCES

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
Secretary

Lake Michigan District Headquarters
Box 10448, 1125 N. Military Avenue
Green Bay, Wisconsin 54307-0448
MAIN# 414-492-5800/FAX# 414-492-5913

January 22, 1992

File Ref: 3300
WUWN: EC581

Brian & Carol Maes
1026 S. 7th St.
De Pere, WI 54115

Dear Mr. & Mrs. Maes:

This letter confirms the November 4, 1991, sampling of your private well located in the SE¼ NW¼ of Section 28, Township of Lawrence, Brown County. Sampling was done to monitor your water quality because you are near the Better Brite Chrome and Zinc Shops Superfund site.

The State Laboratory of Hygiene reports the results as follows:

TESTS	RESULTS	DRINKING WATER STANDARD
Volatile Organic Chemicals	No Detect	--
Inorganic Elements		
Cadmium	No Detect	--
Chromium	No Detect	--
Cyanide	No Detect	--
Zinc	20	5,000

* Note: Concentrations are reported in ug/l = micrograms per liter = ppb = parts per billion

All results are within acceptable limits.

Copies of lab results are enclosed for your reference. If you have any questions, feel free to call me at (414) 492-5891.

Sincerely,

Liz Heinen

Liz Heinen, R.S.
Water Supply Specialist

LH:cm
Enc.
cc: Private Water Supply - WS/2
Private Water Supply - LMD
VOC File
Terry Koehn - SF/LMD
Gary Edelstein - SW/3
Al Baeten, Water Superintendent, City of De Pere, 925 S. 6th St., De Pere, WI 54115
Kenneth Bro, Wisc. Dept. of Health, P.O. Box 309, Madison, WI 54307-0309
David Lennear, U.S. EPA - Region 5, 77 W. Jackson Blvd., Chicago, IL 60604

State Laboratory of Hygiene
University of Wisconsin Center for Health Sciences
465 Henry Mall, Madison, WI 53706
R.H. Laessig, Ph.D., Director S.L. Inhorn, M.D., Medical Director

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Environmental Science Section (608) 262-2797 DNR LAB ID 113133790
Organic chemistry (#4 of 3 on 11/19/91, unseen)

Id: EC581 Point/Well/..: Field #: MAES Route: WS40
Collection Date: 11/04/91 Time: 14:30 County: 05 (Brown)
From: BRIAN & CAROL MAES, 1026 S. 7TH STREET., DE PERE
Description: KITCHEN HARD WATER TAP
To: LIZ HEINEN Type: Miscellaneous
DNR - LMD Source: Private
GREEN BAY
Account number: WS046 Collected by: SUE BEAUMIER
Date Received: 11/05/91 Labslip #: OC001926 Reported: 11/18/91

---- test: GCMS VOC SCAN BY HEADSPACE - WATER

BENZENE	<1.0	UG/L
BROMOBENZENE	<4.0	UG/L
BROMODICHLOROMETHANE	<1.0	UG/L
BROMOFORM	<5.0	UG/L
BROMOMETHANE	<1.0	UG/L
CARBON DISULFIDE	<5.0	UG/L
CARBON TETRACHLORIDE	<2.0	UG/L
CHLOROBENZENE	<2.0	UG/L
CHLOROETHANE	<2.0	UG/L
2-CHLOROETHYL VINYL ETHER	<4.0	UG/L
CHLOROFORM	<1.0	UG/L
O-CHLOROTOLUENE	<1.0	UG/L
P-CHLOROTOLUENE	<1.0	UG/L
DIBROMOMETHANE	<2.0	UG/L
DIBROMOCHLOROMETHANE	<2.0	UG/L
1,2-DIBROMO-3-CHLOROPROPANE	<7.0	UG/L
1,2-DICHLOROBENZENE	<2.0	UG/L
1,3-DICHLOROBENZENE	<2.0	UG/L
1,4-DICHLOROBENZENE	<2.0	UG/L
1,1-DICHLOROETHANE	<1.0	UG/L
1,2-DICHLOROETHANE	<1.0	UG/L
1,2-DICHLOROETHYLENE, CIS	<1.0	UG/L
1,1-DICHLOROETHYLENE	<1.0	UG/L
1,2-DICHLOROETHYLENE, TRANS	<1.0	UG/L
1,3-DICHLOROPROPANE	<1.0	UG/L
1,1-DICHLOROPROPENE	<2.0	UG/L
1,2-DICHLOROPROPANE	<1.0	UG/L
2,2-DICHLOROPROPANE	<2.0	UG/L
1,3-DICHLOROPROPENE, CIS	<2.5	UG/L
1,3-DICHLOROPROPENE, TRANS	<2.5	UG/L

State Laboratory of Hygiene
University of Wisconsin Center for Health Sciences
465 Henry Mall, Madison, WI 53706
R.H. Laessig, Ph.D., Director S.L. Inhorn, M.D., Medical Director

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Environmental Science Section (608) 262-2797 DNR LAB ID 113133790
... continuing Labslip # OC001926, Field # MAES

ETHYLBENZENE	<1.0	UG/L
ETHYLENE DIBROMIDE	<1.0	UG/L
METHYLETHYLKETONE (MEK)	<12.0	UG/L
METHYLENE CHLORIDE	<5.0	UG/L
STYRENE	<2.0	UG/L
1,1,1,2-TETRACHLOROETHANE	<3.0	UG/L
1,1,2,2-TETRACHLOROETHANE	<3.0	UG/L
TETRACHLOROETHYLENE	<1.0	UG/L
TETRAHYDROFURAN (THF)	<200.	UG/L
TOLUENE	<1.0	UG/L
1,2,4-TRICHLOROBENZENE	<1.0	UG/L
1,1,1-TRICHLOROETHANE	<1.0	UG/L
1,1,2-TRICHLOROETHANE	<2.0	UG/L
TRICHLOROETHYLENE	<1.0	UG/L
TRICHLOROFLUOROMETHANE	<1.0	UG/L
TRICHLOROTRIFLUOROETHANE	<3.0	UG/L
1,2,3-TRICHLOROPROPANE	<2.0	UG/L
VINYL CHLORIDE	<1.0	UG/L
XYLENES	<2.0	UG/L
METHYL TERTIARY BUTYL ETHER	<10.	UG/L
GCMS PREP : WATER	C	

State Laboratory of Hygiene
University of Wisconsin Center for Health Sciences
465 Henry Mall, Madison, WI 53706
R.H. Laessig, Ph.D., Director S.L. Inhorn, M.D., Medical Director

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Environmental Science Section (608) 262-3458 DNR LAB ID 113133790
Inorganic chemistry (#18 of 39 on 01/13/92, unseen)

Id: EC581 Point/Well/..: Field #: MACS Route: WS40
Collection Date: 11/04/91 Time: 13:30 County: 05 (Brown)
From: BRIAN & CAROL MACS 1026 S. 7TH ST. DEPERE KITCHEN HARD WATER TAP
To: HEINEN Type: Miscellaneous
DNR Source: Private
GREEN BAY
Account number: WS001 Collected by: BEAUMIER
Date Received: 11/05/91 Labslip #: IC046036 Reported: 01/10/92

CADMIUM, AA FURNACE	<0.2	UG/L
CHROMIUM, AA FURNACE	<3	UG/L
CYANIDE	<0.01	MG/L
ZINC, ICP	20.	UG/L

detected between 10 (LOD) and 40 (LOQ) UG/L

TO: BRIAN MAES
1026 S. 7TH ST
DE PERE WI. 54115

FROM: J. REYBURN - NNR
PO BOX 10448
GREEN BAY WI. 54307

SUBJECT–MESSAGE

— Mr. Maes — Enclosed is the lab results for your well taken 5/1/90. Although lead and zinc were detected the concentrations are well below the drinking water STANDARD of 50 ug/l LEAD and the NR140 Enforcement standard for ZINC 500 ug/l.

Call me AT 497-4397 WITH QUESTIONS.

REPLY

SIGNED Jim Reyburn DATE 7-9-9

SENDER RETAIN THIS COPY

SIGNED _____ DATE _____

State Laboratory of Hygiene
University of Wisconsin Center for Health Sciences
465 Henry Mall, Madison, WI 53706
R.H. Laessig, Ph.D., Director S.L. Inhorn, M.D., Medical Director

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Environmental Science Section (608) 262-3458 DNR LAB ID 113133790
Inorganic chemistry (#47 of 84 on 07/02/90, unseen)

Id: Point/Well/..: Field #: 1
Route: SW40
Collection Date: 05/01/90 Time: 16:00 County: 05 (Brown)
From: BRIAN MAES TAP OFF PRESSURE TANK
To: REYBURN
DNR Source: Private Well
GREEN BAY
Account number: WS001 Collected by: REYBURN
Date Received: 05/03/90 Labslip #: IA086903 Reported: 06/28/90

CADMIUM, AA FURNACE	<0.2 UG/L
CHROMIUM, AA FURNACE	<3 UG/L
LEAD, AA FURNACE	13. UG/L
STANDARD ADDITION, AAS	SA PB
ZINC, ICP	39. UG/L

detected between 10 (LOD) and 40 (LOQ) UG/L

CORRESPONDENCE MEMORANDUM

STATE OF WISCONSIN

DATE: May 4, 1993

TO: Gary Edelstein - SW/3

FROM: Terry Koehn - LMD

SUBJECT: **Better Brite - Monitoring Well Results**

EPA installed two groundwater monitoring wells near the Zinc Shop in January, 1993. The wells are located approximatley 75 feet to the west of the site, west of Sixth Street on property owned by the Rasmussen's (320 S. Sixth St). This location is approximately 170 feet east of the De Pere Grant Street municipal well.

It is my understanding that one of the wells was drilled to bedrock, approximately 30 feet deep (MW-2), and the other to around 15 feet deep (MW-1). At this time I do not have any specific information regarding well construction.

Groundwater samples were obtained by EPA in March, 1993. The samples were analyzed by Robert E. Lee and Assoc. Inc. for VOCs, chromium (total and hexavalent), cyanide and zinc (Job # 1014508). A summary table of the results is attached.

As you will note on the attached both wells indicated an impact for chromium, but not at very high concentrations. The results additionally indicate that the higher chromium concentration was found in the deeper well.

Att: Summary Table & Laboratory Report

cc: K. Bro WDOH
M. Noel Hydro-Search (Lab Report also att.)
D. Rossberg LMD
W. Nied U.S. EPA
D. Linnear U.S. EPA
with Summary Table att.

Zinc Shop Groundwater Results - March, 1993

Parameter	Well MW1	Well MW2	Units
Chromium (total)	20	160	ug/l
Chromium (hex)	ND	ND	ug/l
Cyanide	ND	0.004	mg/l
Zinc	56	282	ug/l
Benzene	14	ND	ug/l
n-Butylbenzene	12	ND	ug/l
Ethylbenzene	12	ND	ug/l
Naphthalene	18	ND	ug/l
Toluene	73	ND	ug/l
1,2,4-Trimethylbenzene	27	ND	ug/l
1,3,5-Trimethylbenzene	14	ND	ug/l
m,p-Xylene	45	ND	ug/l
o-xylene	22	ND	ug/l

For additional information note laboratory report

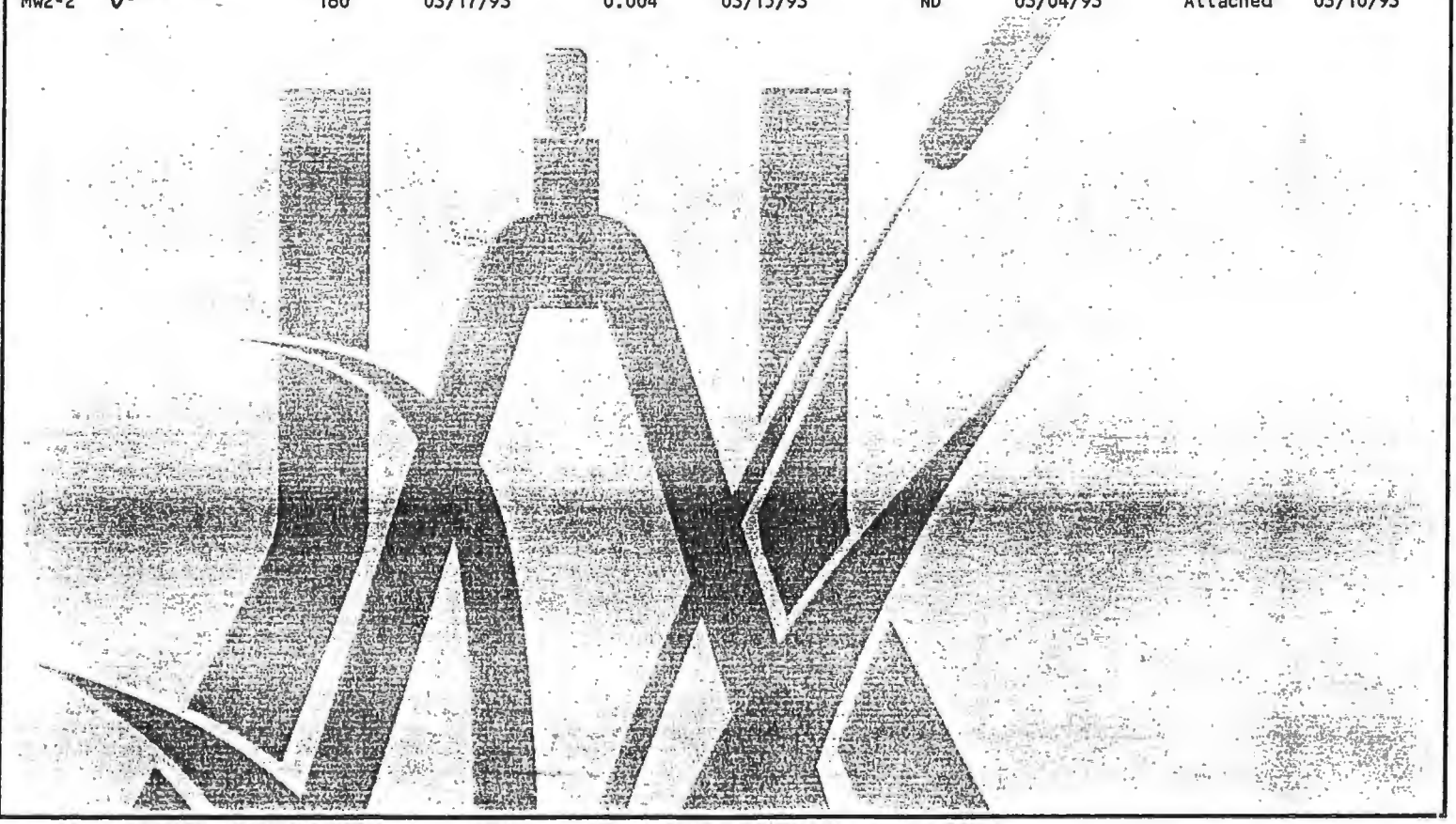
ROBERT E. LEE & ASSOCIATES, INC.
LABORATORY SERVICES
P.O. BOX 2100, 2825 S. WEBSTER AVE.
GREEN BAY, WI 54306-2100
TEL NO: (414) 336-6338
FAX NO: (414) 336-9141
Wisconsin Certification No: 405043870

Client: Riedel Environmental
Date Received: 03/03/93
Date of Samples: 03/03/93
Report Date: 03/22/93
Client Project: Better Brite Plating
Client Project Number: Z72051/Better Brite
REL Job Number: 1014508 Batch: 1

THE FOLLOWING DATA HAS BEEN REVIEWED AND MEETS THE QA/QC REQUIREMENTS FOR BLANKS, STANDARDS, DUPLICATE ANALYSES AND SPIKED SAMPLES.

TEST PARAMETER	CHROMIUM	CYANIDE	HEXAVALENT CHROMIUM	VOLATILE ORGANICS LIQUIDS
MDL	0.2 ug/l	0.004 mg/l	3 ug/l	Attached ug/l
WDNR NUMBER	00122	00720	121	84085
ANALYZED BY	J. Jung	D. Basten	J. Jung	L. He
ANALYTICAL METHOD EXTRACTED/DIGESTED	6010 [1]	9010 [1]	7196 [1]	8021 [1]

SAMPLE NAME	RESULT ug/l	DATE ANALYZED	RESULT mg/l	DATE ANALYZED	RESULT ug/l	DATE ANALYZED	RESULT ug/l	DATE ANALYZED
MW1-2 NEW WELLS W. OF B.B.Zn.	20	03/17/93	ND	03/15/93	ND	03/04/93	Attached	03/10/93
MW2-2	160	03/17/93	0.004	03/15/93	ND	03/04/93	Attached	03/10/93



COMMENTS:

ND = COMPOUND NOT DETECTED
MDL = METHOD DETECTION LIMIT WITH NO DILUTION
D = DETECTED BUT BELOW MDL
* = MDL CHANGED DUE TO DILUTION

ANALYTICAL METHODS

[1] TEST METHODS FOR EVALUATING SOLID WASTE, SW-846
[2] METHODS OF CHEMICAL ANALYSIS OF WATER AND WASTES
[3] STANDARD METHODS, FOR THE EXAMINATION OF WATER & WASTES, 16th Ed.

ATTEST _____

ROBERT E. LEE & ASSOCIATES, INC.
LABORATORY SERVICES
P.O. BOX 2100, 2825 S. WEBSTER AVE.
GREEN BAY, WI 54306-2100
TEL NO: (414) 336-6338
FAX NO: (414) 336-9141
Wisconsin Certification No: 405043870

Client: Riedel Environmental
Date Received: 03/03/93
Date of Samples: 03/03/93
Report Date: 03/22/93
Client Project: Better Brite Plating
Client Project Number: Z72051/Better Brite
REL Job Number: 1014508 Batch: 1

THE FOLLOWING DATA HAS BEEN REVIEWED AND MEETS THE QA/QC REQUIREMENTS FOR BLANKS, STANDARDS, DUPLICATE ANALYSES AND SPIKED SAMPLES.

TEST PARAMETER	ZINC
MDL	2 ug/l
WDNR NUMBER	00275
ANALYZED BY	E. Weid
ANALYTICAL METHOD EXTRACTED/DIGESTED	6010 [1]

SAMPLE NAME	RESULT ug/l	DATE ANALYZED	RESULT	DATE ANALYZED	RESULT	DATE ANALYZED	RESULT	DATE ANALYZED
MW1-2	56	03/15/93						
MW2-2	282	03/15/93						

COMMENTS:

ND = COMPOUND NOT DETECTED
MDL = METHOD DETECTION LIMIT WITH NO DILUTION
D = DETECTED BUT BELOW MDL
* = MDL CHANGED DUE TO DILUTION

ANALYTICAL METHODS

[1] TEST METHODS FOR EVALUATING SOLID WASTE, SW-846
[2] METHODS OF CHEMICAL ANALYSIS OF WATER AND WASTES
[3] STANDARD METHODS, FOR THE EXAMINATION OF WATER & WASTES, 16th Ed.

ATTEST

ROBERT E. LEE & ASSOCIATES, INC.

CLIENT: Riedel Environmental
PROJECT: Z72051/Better Brite
REL JOB NUMBER: 1014508

NARRATIVE

This set consisted of 2 liquid samples: MW1-2 and MW2-2. The samples were collected and received on March 3, 1993.

The samples were analyzed for volatile organic compounds on March 10, 1993 following SW-846 Method 8021.

The following is a summary of the Quality Control results accompanying this set of samples and a description of any problems encountered during analysis:

1. The method blank contained 2.3 ug/L methylene chloride.

2. Of the twenty-eight duplicate compounds, n-butylbenzene was not within laboratory limits. The data was accepted because the out-of-control situation was caused by an interference

3. The surrogates were within laboratory limits.

4. All of the twenty-eight matrix spike compounds were within laboratory limits.

5. The daily check standard confirmed the initial calibration curve for all reported analytes.

Sheldon Stone
Laboratory Manager
03/18/93 lh

ROBERT E LEE & ASSOCIATES, INC.
LABORATORY SERVICES
2825 S. WEBSTER AVE. P.O. BOX 2100
GREEN BAY, WIS 54306
TELEPHONE NUMBER: (414) 336 – 6338
WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8021. VOLATILE ORGANIC COMPOUNDS IN WATER BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH PHOTOIONIZATION AND ELECTROLYTIC CONDUCTIVITY DETECTORS IN SERIES.

CLIENT:	Riedel Environmental	PROJECT:	Better Brite
DATE SAMPLED:	03/03/93	PROJECT NUMBER:	Z72051
DATE ANALYZED:	03/10/93	REL JOB NUMBER:	1014508
REPORT DATE:	03/11/93 LH	SAMPLE:	MW1–2
ANALYZED BY:	LH	DILUTION:	NONE

ANALYTE	MDL ug/L	RESULT ug/L
BENZENE	0.6	14
BROMOBENZENE	4.0	ND
BROMOCHLOROMETHANE	2.6	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	2.2	ND
BROMOMETHANE	2.8	ND
n–BUTYLBENZENE	3.5	12
sec–BUTYLBENZENE	3.8	ND
tert–BUTYLBENZENE	5.8	ND
CARBON TETRACHLORIDE	1.3	ND
CHLOROBENZENE	3.7	ND
CHLOROETHANE	2.8	ND
CHLOROFORM	1.7	ND
CHLOROMETHANE	2.9	ND
2–CHLOROTOLUENE	2.9	ND
4–CHLOROTOLUENE	3.7	ND
DIBROMOCHLOROMETHANE	1.2	ND
1,2–DIBROMO–3–CHLOROPROPANE	2.8	ND
1,2–DIBROMOETHANE (EDB)	2.4	ND
DIBROMOMETHANE	1.0	ND
1,2–DICHLOROBENZENE	3.0	ND
1,3–DICHLOROBENZENE	3.5	ND
1,4–DICHLOROBENZENE	3.2	ND
DICHLORODIFLUOROMETHANE	2.7	ND
1,1–DICHLOROETHANE	1.7	ND
1,2–DICHLOROETHANE	2.2	ND
1,1–DICHLOROETHENE	1.9	ND
cis–1,2–DICHLOROETHENE	2.0	ND
trans–1,2–DICHLOROETHENE	2.4	ND
1,2–DICHLOROPROPANE	3.7	ND

ANALYTE	MDL ug/L	RESULT ug/L
1,3–DICHLOROPROPANE	3.3	ND
2,2–DICHLOROPROPANE	2.2	ND
1,1–DICHLOROPROPENE	1.9	ND
cis–1,3–DICHLOROPROPENE	2.4	ND
trans–1,3–DICHLOROPROPENE	2.3	ND
ETHYLBENZENE	2.0	12
HEXACHLOROBUTADIENE	1.7	ND
ISOPROPYLBENZENE	3.6	ND
p–ISOPROPYLTOLUENE	3.6	ND
METHYLENE CHLORIDE	1.5	ND
NAPHTHALENE	4.7	18
n–PROPYLBENZENE	3.4	ND
STYRENE	1.0	ND
1,1,1,2–TETRACHLOROETHANE	4.5	ND
1,1,2,2–TETRACHLOROETHANE	2.4	ND
TETRACHLOROETHENE	1.8	ND
TOLUENE	5.0	73
1,2,3–TRICHLOROBENZENE	3.5	ND
1,2,4–TRICHLOROBENZENE	1.3	ND
1,1,1–TRICHLOROETHANE	1.4	ND
1,1,2–TRICHLOROETHANE	3.1	ND
TRICHLOROETHENE	3.1	ND
TRICHLOROFLUOROMETHANE	1.5	ND
1,2,3–TRICHLOROPROPANE	13.0	ND
1,2,4–TRIMETHYLBENZENE	3.5	27
1,3,5–TRIMETHYLBENZENE	3.5	14
VINYL CHLORIDE	2.3	ND
m,p–XYLENE	1.5	45
o–XYLENE	1.5	22

* 2–BROMO–1–CHLOROPROPANE SURROGATE RECOVERY (%)	108
* 1,4–DICHLOROBUTANE SURROGATE RECOVERY (%)	113
* 2–HEXANONE SURROGATE RECOVERY (%)	109

ND = COMPOUND NOT DETECTED
MDL = METHOD DETECTION LIMIT
D = COMPOUND DETECTED BUT BELOW MDL
* SURROGATE STANDARD PERCENT RECOVERY
N/A = COMPOUND NOT ANALYZED

ATTEST

ROBERT E LEE & ASSOCIATES, INC.
LABORATORY SERVICES
2825 S. WEBSTER AVE. P.O. BOX 2100
GREEN BAY, WIS 54306
TELEPHONE NUMBER: (414) 336 – 6338
WISCONSIN CERTIFICATION NUMBER: 405043870

METHOD 8021. VOLATILE ORGANIC COMPOUNDS IN WATER BY PURGE AND TRAP CAPILLARY COLUMN GAS CHROMATOGRAPHY WITH PHOTOIONIZATION AND ELECTROLYTIC CONDUCTIVITY DETECTORS IN SERIES.

CLIENT:	Riedel Environmental	PROJECT:	Better Brite
DATE SAMPLED:	03/03/93	PROJECT NUMBER:	Z72051
DATE ANALYZED:	03/10/93	REL JOB NUMBER:	1014508
REPORT DATE:	03/11/93 LH	SAMPLE:	MW2-2
ANALYZED BY:	LH	DILUTION:	NONE

ANALYTE	MDL ug/L	RESULT ug/L
BENZENE	0.6	ND
BROMOBENZENE	4.0	ND
BROMOCHLOROMETHANE	2.6	ND
BROMODICHLOROMETHANE	1.0	ND
BROMOFORM	2.2	ND
BROMOMETHANE	2.8	ND
n-BUTYLBENZENE	3.5	ND
sec-BUTYLBENZENE	3.8	ND
tert-BUTYLBENZENE	5.8	ND
CARBON TETRACHLORIDE	1.3	ND
CHLOROBENZENE	3.7	ND
CHLOROETHANE	2.8	ND
CHLOROFORM	1.7	ND
CHLOROMETHANE	2.9	ND
2-CHLOROTOLUENE	2.9	ND
4-CHLOROTOLUENE	3.7	ND
DIBROMOCHLOROMETHANE	1.2	ND
1,2-DIBROMO-3-CHLOROPROPANE	2.8	ND
1,2-DIBROMOETHANE (EDB)	2.4	ND
DIBROMOMETHANE	1.0	ND
1,2-DICHLOROBENZENE	3.0	ND
1,3-DICHLOROBENZENE	3.5	ND
1,4-DICHLOROBENZENE	3.2	ND
DICHLORODIFLUOROMETHANE	2.7	ND
1,1-DICHLOROETHANE	1.7	ND
1,2-DICHLOROETHANE	2.2	ND
1,1-DICHLOROETHENE	1.9	ND
cis-1,2-DICHLOROETHENE	2.0	ND
trans-1,2-DICHLOROETHENE	2.4	ND
1,2-DICHLOROPROPANE	3.7	ND

ANALYTE	MDL ug/L	RESULT ug/L
1,3-DICHLOROPROPANE	3.3	ND
2,2-DICHLOROPROPANE	2.2	ND
1,1-DICHLOROPROPENE	1.9	ND
cis-1,3-DICHLOROPROPENE	2.4	ND
trans-1,3-DICHLOROPROPENE	2.3	ND
ETHYLBENZENE	2.0	ND
HEXACHLOROBUTADIENE	1.7	ND
ISOPROPYLBENZENE	3.6	ND
p-ISOPROPYLTOLUENE	3.6	ND
METHYLENE CHLORIDE	1.5	ND
NAPHTHALENE	4.7	ND
n-PROPYLBENZENE	3.4	ND
STYRENE	1.0	ND
1,1,1,2-TETRACHLOROETHANE	4.5	ND
1,1,2,2-TETRACHLOROETHANE	2.4	ND
TETRACHLOROETHENE	1.8	ND
TOLUENE	2.0	ND
1,2,3-TRICHLOROBENZENE	3.5	ND
1,2,4-TRICHLOROBENZENE	1.3	ND
1,1,1-TRICHLOROETHANE	1.4	ND
1,1,2-TRICHLOROETHANE	3.1	ND
TRICHLOROETHENE	3.1	ND
TRICHLOROFLUOROMETHANE	1.5	ND
1,2,3-TRICHLOROPROPANE	3.0	ND
1,2,4-TRIMETHYLBENZENE	3.5	ND
1,3,5-TRIMETHYLBENZENE	3.5	ND
VINYL CHLORIDE	2.3	ND
m,p-XYLENE	1.5	ND
o-XYLENE	1.5	ND

* 2-BROMO-1-CHLOROPROPANE SURROGATE RECOVERY (%)	103
* 1,4-DICHLOROBUTANE SURROGATE RECOVERY (%)	118
* 2-HEXANONE SURROGATE RECOVERY (%)	137

ND = COMPOUND NOT DETECTED
MDL = METHOD DETECTION LIMIT

D = COMPOUND DETECTED BUT BELOW MDL
* SURROGATE STANDARD PERCENT RECOVERY
N/A = COMPOUND NOT ANALYZED

ATTEST

NVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 5
230 South Dearborn Street
Chicago, Illinois 60604

CHAIN OF CUSTODY RECORD

PROJ. NO. ZT2051

PROJECT NAME: Better Brite Plating

SAMPLERS: (Signature) R. Nagam

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	40ml - VOCs	1Lt Plastic: Total Chrome Hex-Val Chrome, Zinc (*)	1 Lt Plastic: Cyanide (*)				REMARKS
MW1-Z	3/3/93	1330		✓	OFF-SITE (SHALLOW WELL)	5	3	1	1				TURNAROUND TIME: NORMAL
MW2-Z	3/3/93	1425		✓	OFF-SITE (DEEP WELL)	5	3	1	1				QA LEVEL II PROTOCOL
													DETECTION LIMITS SHOULD BE LOWER
													THAN THE DRINKING WATER STANDARDS.
													SEND BILL & RESULTS TO:
													KEVIN NEAL, RES
													@ U.S. EPA, BETTER BRITE PLATING
													515 LANDE STREET
													DE PERE, WI 54115
													PHONE: (414) 337-9641
													FAX: (414) 337-9650
													(*) PLEASE FILTER THESE SAMPLES AND ADD
													PRESERVATIVES.

LAB PRESERVED
Sodium Hydroxide
Nitric

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
R. Nagam	3/3/93 1548				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
		Mail Samples same day			
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		Julie Sell	3/3/93 3:46	HAND DELIVERED TO ROBERT E. LEE & ASSOCIATES 2825 S. WEBSTER AVENUE GREEN BAY, WI 54301 ATTN: SHELDON STONE (414) 336-6338	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

c: Metals, Chlrd Hex Cr. 3/3 @3:46. JJ.

5- 03409

ROBERT E. LEE & ASSOCIATES
Wisconsin Certification No: 405043870

CUSTOMER=> 001422 - IT Environmental Programs, INC.
REPORT DATE=> 04/19/91 PROJECT=> 9010-023
JOB NUMBER=> 1002230 LOCATION=> OHM
BATCH=> 1 SAMPLED=> 03/06/91

ple #	Sample Id	Result		Analyzed	By
SENIC					
1	MW-1	<0.0014	mg/l	04/08/91	EW
2	MW-2	<0.0014	mg/l	04/08/91	EW
3	SUM-21	<0.0014	mg/l	04/08/91	EW
4	101	0.0031	mg/l	04/08/91	EW
5	101A	<0.0014	mg/l	04/08/91	EW
6	104A	<0.0014	mg/l	04/08/91	EW
7	102A	<0.0014	mg/l	04/08/91	EW
8	103	<0.0014	mg/l	04/08/91	EW
9	DUP	<0.0014	mg/l	04/08/91	EW
10	105B	<0.0014	mg/l	04/08/91	EW
11	MW-5	<0.0014	mg/l	03/25/91	EW
12	MW-7	<0.0014	mg/l	03/25/91	EW
13	Blank	<0.0014	mg/l	03/25/91	EW
ARIUM					
1	MW-1	0.016	mg/l	03/22/91	AW
2	MW-2	0.070	mg/l	03/22/91	AW
3	SUM-21	0.025	mg/l	03/22/91	AW
4	101	0.006	mg/l	03/22/91	AW
5	101A	0.051	mg/l	03/22/91	AW
6	104A	0.067	mg/l	03/22/91	AW
7	102A	0.034	mg/l	03/22/91	AW
8	103	0.008	mg/l	03/22/91	AW
9	DUP	0.041	mg/l	03/22/91	AW
10	105B	0.049	mg/l	03/22/91	AW
11	MW-5	0.051	mg/l	03/22/91	AW
12	MW-7	0.029	mg/l	03/22/91	AW
13	Blank	0.007	mg/l	04/05/91	AW
ADMIUM					
1	MW-1	<0.002	mg/l	03/22/91	AW
2	MW-2	<0.002	mg/l	03/22/91	AW
3	SUM-11	<0.002	mg/l	03/22/91	AW
4	101	<0.002	mg/l	03/22/91	AW
5	101A	<0.002	mg/l	03/22/91	AW
6	104A	<0.002	mg/l	03/22/91	AW

[CONTINUED]

ROBERT E. LEE & ASSOCIATES
Wisconsin Certification No: 405043870

CUSTOMER----------> 001422 - IT Environmental Programs, INC.
REPORT DATE-------> 04/19/91 PROJECT-------> 9010-023
JOB NUMBER--------> 1002230 LOCATION------> OHM
BATCH-------------> 1 SAMPLED-------> 03/06/91

ample #	Sample Id	Result		Analyzed	By
ADMIUM	(Continued)				
7	102A	<0.002	mg/l	03/22/91	AW
8	103	0.004	mg/l	03/22/91	AW
9	DUP	0.004	mg/l	03/22/91	AW
10	105B	0.004	mg/l	03/22/91	AW
11	MW-5	0.004	mg/l	03/22/91	AW
12	MW-7	<0.002	mg/l	03/22/91	AW
13	Blank	<0.006	mg/l	03/27/91	AW
HROMIUM					
1	MW-1	5.45	mg/l	03/22/91	AW
2	MW-2	73.2	mg/l	03/22/91	AW
3	SUM-11	135	mg/l	03/22/91	AW
4	101	0.01	mg/l	03/22/91	AW
5	101A	<0.06	mg/l	03/22/91	AW
6	104A	<0.06	mg/l	03/22/91	AW
7	102A	0.27	mg/l	03/22/91	AW
8	103	12.9	mg/l	03/22/91	AW
9	DUP	<0.06	mg/l	03/22/91	AW
10	105B	33.3	mg/l	03/22/91	AW
11	MW-5	0.32	mg/l	03/22/91	AW
12	MW-7	6.79	mg/l	03/22/91	AW
13	Blank	<0.06	mg/l	03/27/91	AW
EAD					
1	MW-1	<0.06	mg/l	03/22/91	AW
2	MW-2	<0.06	mg/l	03/22/91	AW
3	SUM-11	<0.06	mg/l	03/22/91	AW
4	101	<0.06	mg/l	03/22/91	AW
5	101A	<0.06	mg/l	03/22/91	AW
6	104A	<0.06	mg/l	03/22/91	AW
7	102A	<0.06	mg/l	03/22/91	AW
8	103	<0.06	mg/l	03/22/91	AW
9	DUP	<0.06	mg/l	03/22/91	AW
10	105B	<0.06	mg/l	03/22/91	AW
11	MW-5	<0.06	mg/l	03/22/91	AW
12	MW-7	<0.06	mg/l	03/22/91	AW

3-7-91

[CONTINUED]

ROBERT E. LEE & ASSOCIATES
Wisconsin Certification No: 405043870

CUSTOMER----> 001422 - IT Environmental Programs, INC.
REPORT DATE---> 04/19/91 PROJECT----> 9010-023
JOB NUMBER----> 1002230 LOCATION---> OHM
BATCH----------> 1 SAMPLED----> 03/06/91

mple #	Sample Id	Result		Analyzed	By
AD (Continued)					
13	Blank	<0.06	mg/l	03/27/91	AW
ERCURY					
1	MW-1	<0.0002	mg/l	03/15/91	EW
2	MW-2	<0.0002	mg/l	03/15/91	EW
3	SUM-11	<0.0002	mg/l	03/15/91	EW
4	101	<0.0002	mg/l	03/15/91	EW
5	101A	<0.0002	mg/l	03/15/91	EW
6	104A	<0.0002	mg/l	03/15/91	EW
7	102A	<0.0002	mg/l	03/15/91	EW
8	103	<0.0002	mg/l	03/15/91	EW
9	DUP	<0.0002	mg/l	03/15/91	EW
10	105B	<0.0002	mg/l	03/15/91	EW
11	MW-5	<0.0002	mg/l	03/15/91	EW
12	MW-7	<0.0002	mg/l	03/15/91	EW
13	Blank	<0.0002	mg/l	03/15/91	EW
ELENIUM					
1	MW-1	<0.003	mg/l	04/19/91	AW
2	MW-2	<0.003	mg/l	04/19/91	AW
3	SUM-11	0.016	mg/l	04/19/91	AW
4	101	0.006	mg/l	04/19/91	AW
5	101A	<0.003	mg/l	04/19/91	AW
6	104A	<0.003	mg/l	04/19/91	AW
7	102A	<0.003	mg/l	04/19/91	AW
8	103	<0.003	mg/l	04/19/91	AW
9	DUP	<0.003	mg/l	04/19/91	AW
10	105B	<0.003	mg/l	04/19/91	AW
11	MW-5	<0.003	mg/l	04/19/91	AW
12	MW-7	<0.003	mg/l	04/19/91	AW
13	Blank	<0.003	mg/l	04/19/91	AW
ILVER					
1	MW-1	<0.006	mg/l	03/22/91	AW

[CONTINUED]

ROBERT E. LEE & ASSOCIATES
Wisconsin Certification No: 405043870

CUSTOMER ----> 001422 - IT Environmental Programs, INC.
REPORT DATE ----> 04/19/91 PROJECT ----> 9010-023
JOB NUMBER ----> 1002230 LOCATION ----> OHM
BATCH ----> 1 SAMPLED ----> 03/06/91

Sample #	Sample Id	Result		Analyzed	By
SILVER (Continued)					
2	MW-2	<0.006	mg/l	03/22/91	AW
3	SUMP	<0.006	mg/l	03/22/91	AW
4	101	<0.006	mg/l	03/22/91	AW
5	101A	<0.006	mg/l	03/22/91	AW
6	104A	<0.006	mg/l	03/22/91	AW
7	102A	<0.006	mg/l	03/22/91	AW
8	103	<0.006	mg/l	03/22/91	AW
9	DUP	<0.006	mg/l	03/22/91	AW
10	105B	<0.006	mg/l	03/22/91	AW
11	MW-5	<0.006	mg/l	03/22/91	AW
12	MW-7	<0.006	mg/l	03/22/91	AW
13	Blank	<0.006	mg/l	03/27/91	AW

Each < 0.006

BBC

Water Levels
(From Top of PVC)

MW-1 – 16.0 ft
MW-2 – 4.0
102A – 2.7
102 – Dry
103 – 18.5
104A – 4.0
101 – 52.0
101A – 4.0
105B – 2.0
MW 7 – 4.0 (13 ft Deep)
MW 5 – 3.0

Old Wells (Btw Brite) at Chrome Shop

From Bill Sass TAT
9-11-91

[END OF BATCH: 1]

State of Wisconsin \ DEPARTMENT OF HEALTH AND SOCIAL SERVICES

DIVISION OF HEALTH
MAIL ADDRESS:
1 WEST WILSON STREET
P.O. BOX 309
MADISON, WI 53701-0309

April 4, 1990

Annette Weissbach
DNR Lake Michigan District
1125 N. Military Ave., Box 10448
Green Bay WI 54307

Dear Annette:

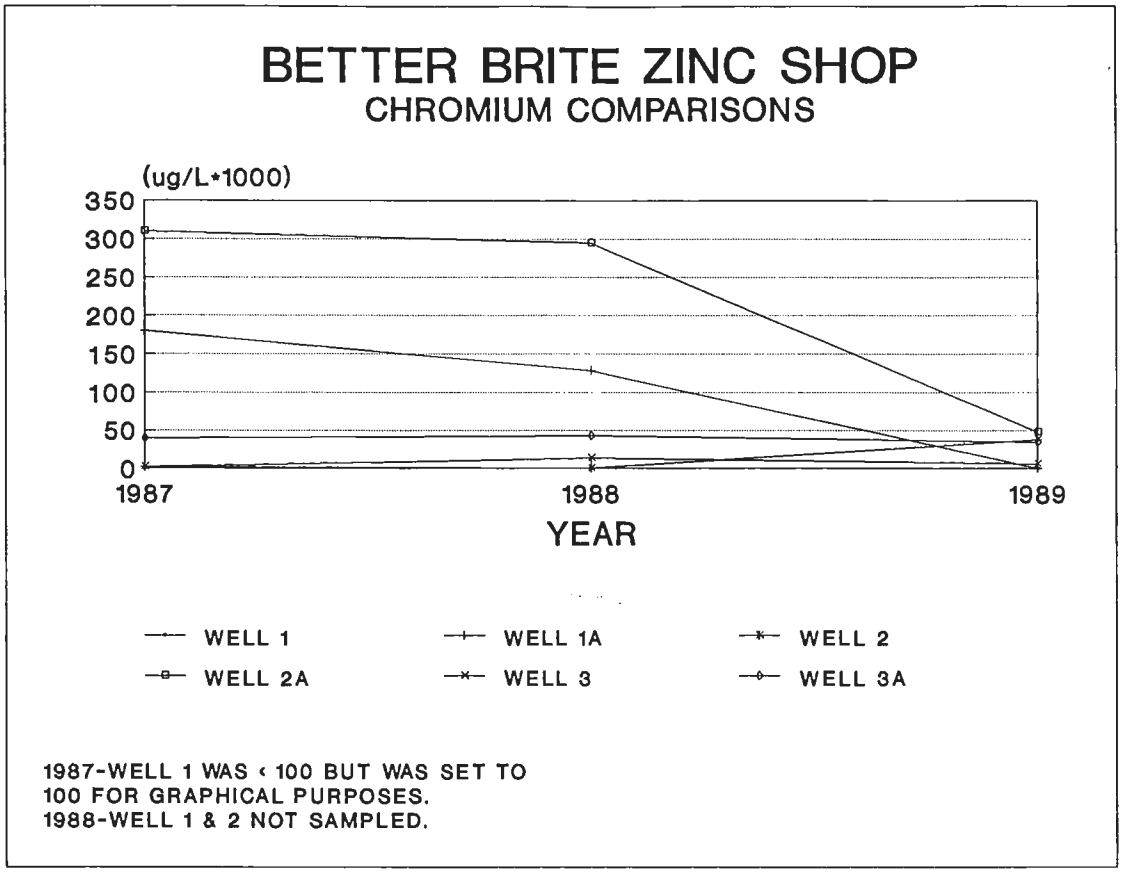
Enclosed are the graphs you requested yesterday.

Thanks for the Better Brite material you had copied and sent to us, and for other help along the way.

Sincerely,

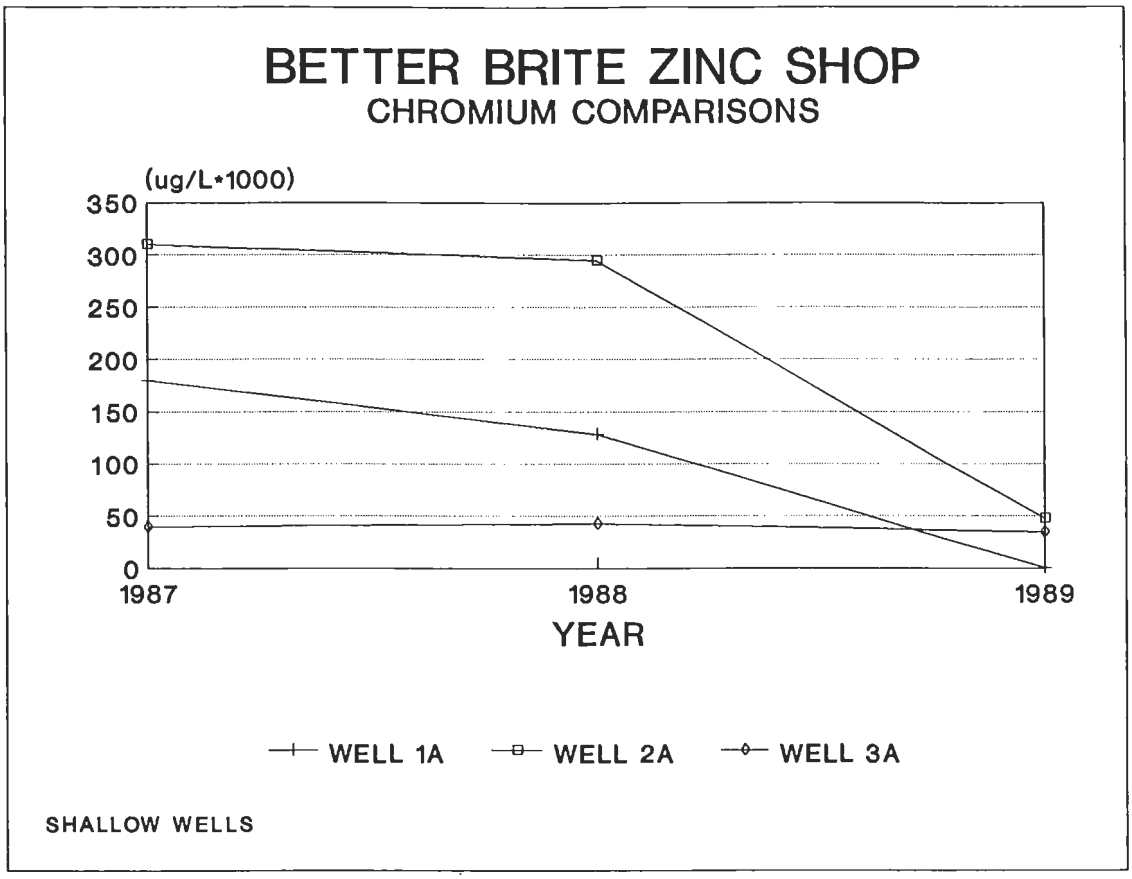
Julie

Julie Hayward



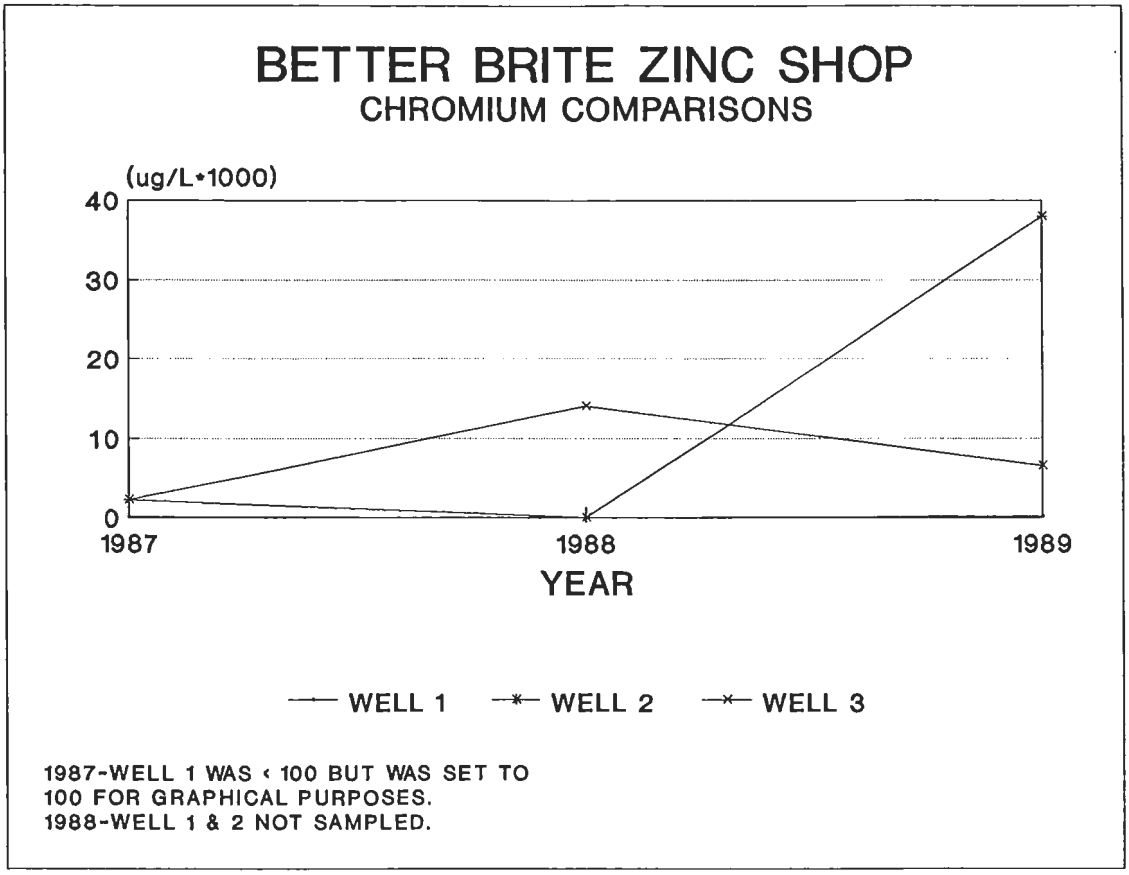
BETTER BRITE ZINC SHOP CHROME DATA

	1987	1988	1989
WELL 1	100	-	160
WELL 1A	180000	128000	570
WELL 2	2300	-	38000
WELL 2A	310000	295000	48000
WELL 3	2300	14000	6600
WELL 3A	40000	43000	35000



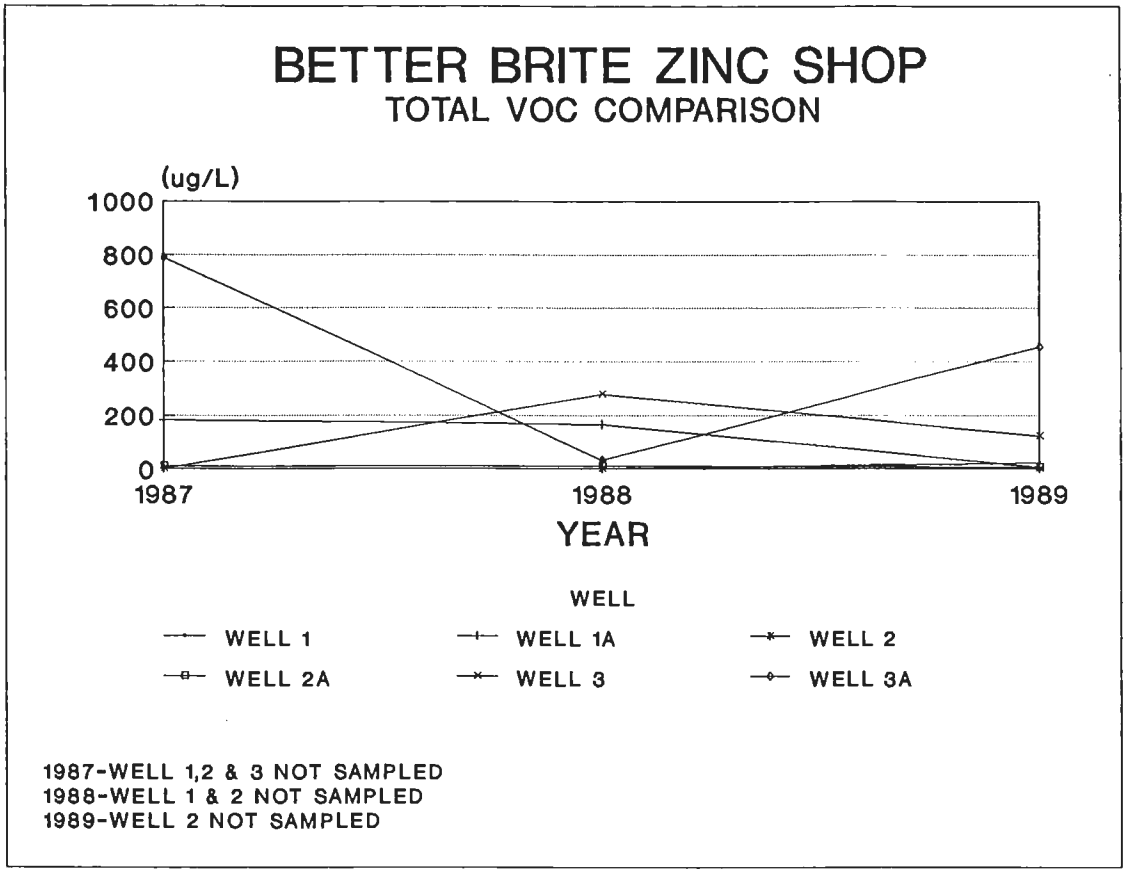
BETTER BRITE ZINC SHOP CHROME DATA

	1987	1988	1989
WELL 1A	180000	128000	570
WELL 2A	310000	295000	48000
WELL 3A	40000	43000	35000



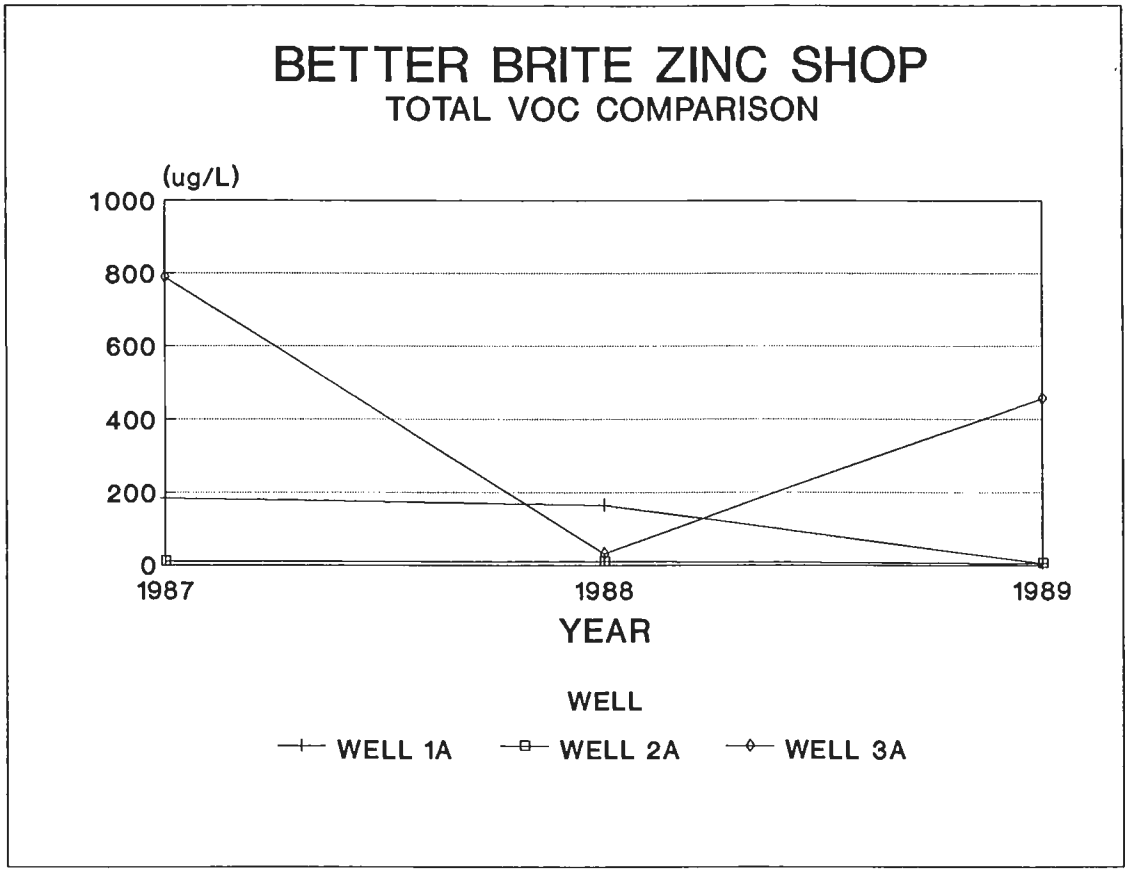
BETTER BRITE ZINC SHOP CHROME DATA

	1987	1988	1989
WELL 1	100	-	160
WELL 2	2300	-	38000
WELL 3	2300	14000	6600



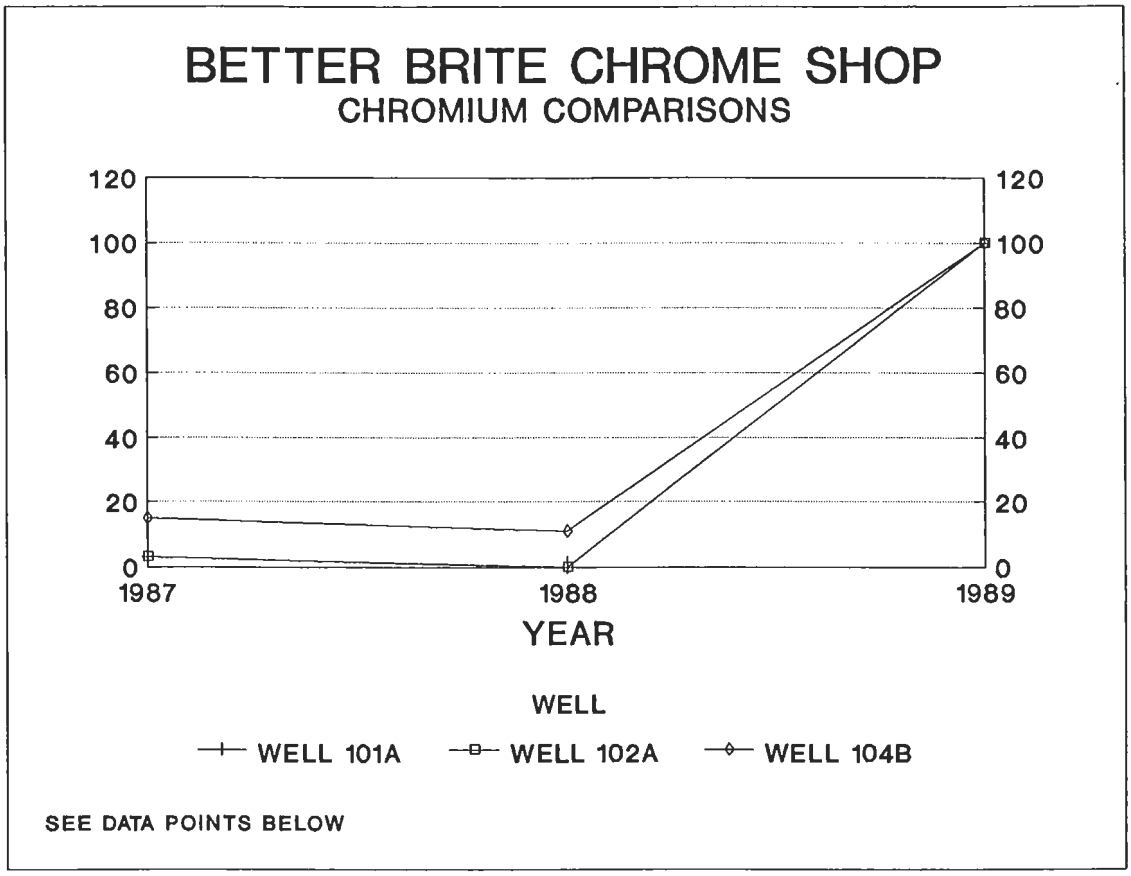
BETTER BRITE ZINC SHOP TOTAL VOC DATA

	1987	1988	1989
WELL 1	-	-	23.2
WELL 1A	183.5	265	5.6
WELL 2	-	-	-
WELL 2A	10.2	10	5.3
WELL 3	-	279	121.8
WELL 3A	789	31	455.9



BETTER BRITE ZINC SHOP TOTAL VOC DATA

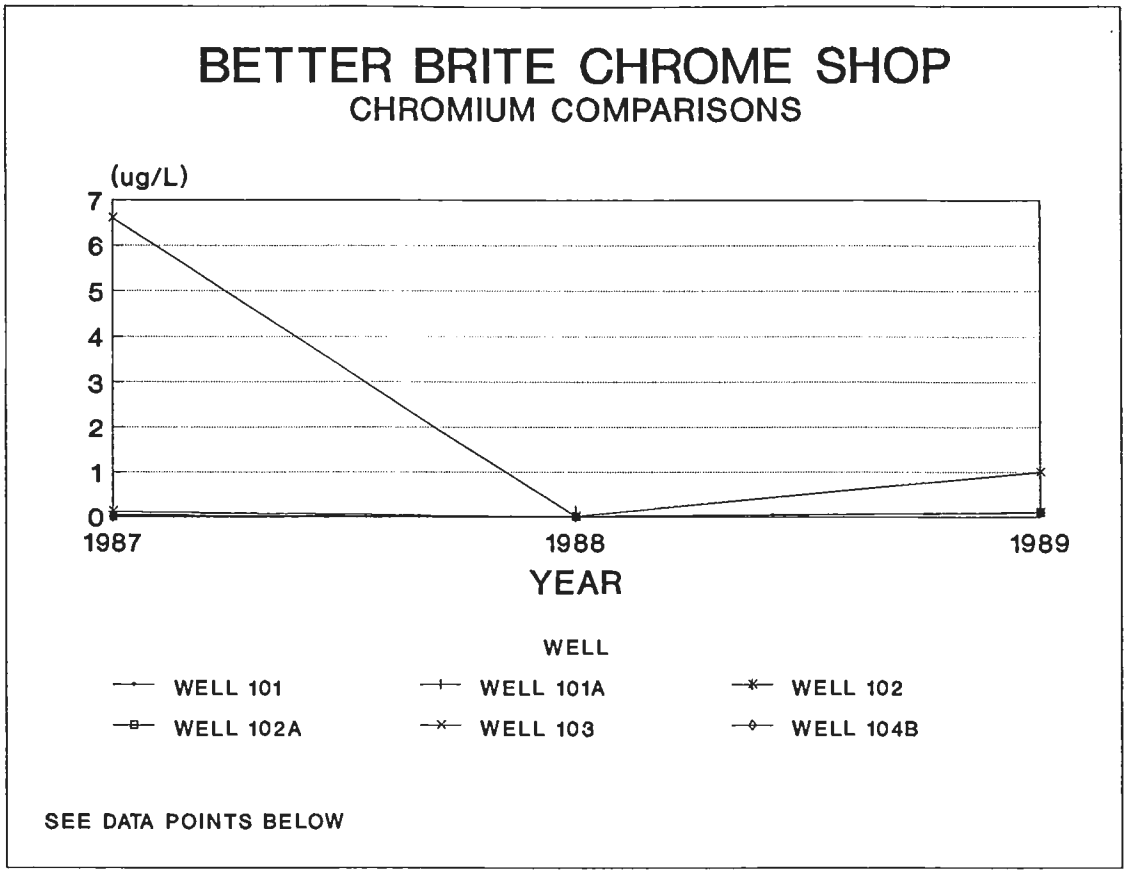
	1987	1988	1989
WELL 1A	183.5	265	5.6
WELL 2A	10.2	10	5.3
WELL 3A	789	31	455.9



BETTER BRITE CHROME SHOP CHROME DATA

	1987	1988	1989
WELL 101A	<3	-	<100
WELL 102A	<3	-	<100
WELL 104B	15	11	<100

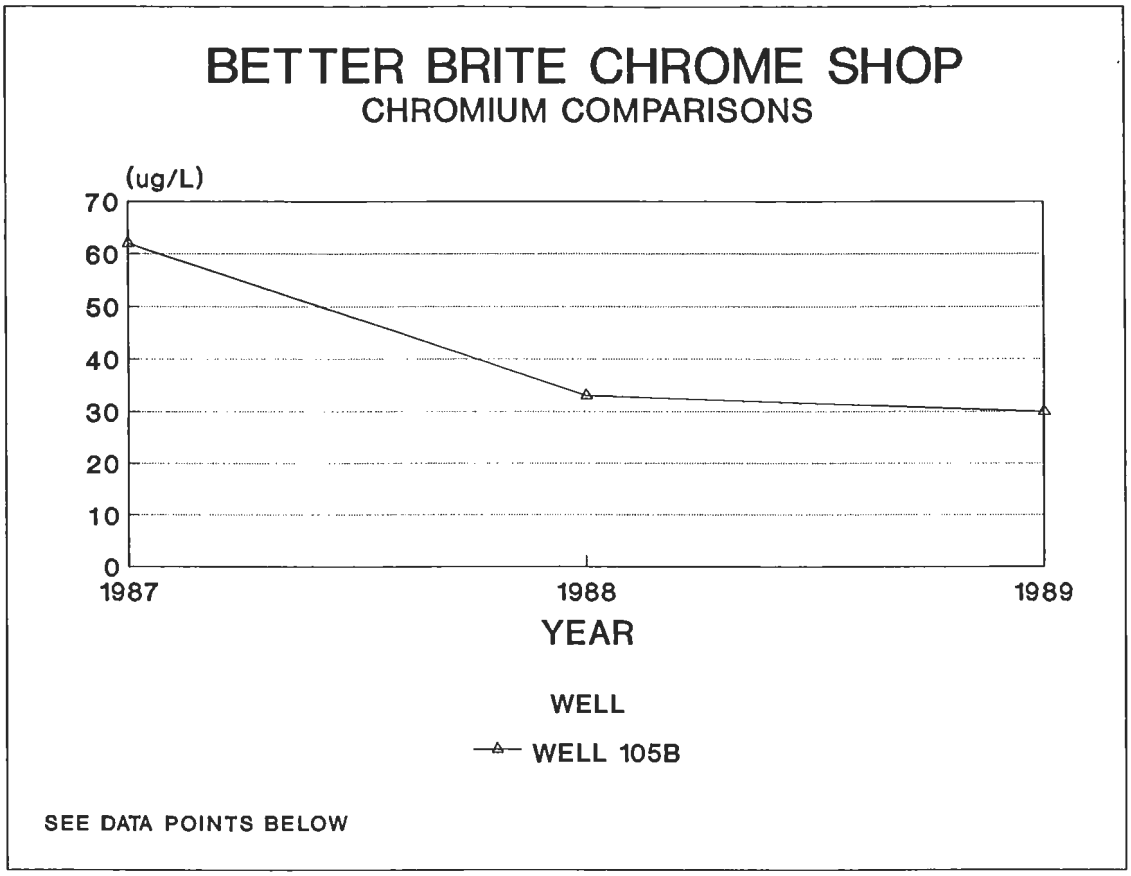
* FOR GRAPHICAL PURPOSES ALL DATA LESS THAN A NUMBER IS ASSUMED TO BE THAT NUMBER.



BETTER BRITE CHROME SHOP CHROME DATA

	1987	1988	1989
WELL 101	44	-	<100
WELL 101A	<3	-	<100
WELL 102	120	-	<100
WELL 102A	<3	-	<100
WELL 103	6600	14.7	1000
WELL 104B	15	11	<100

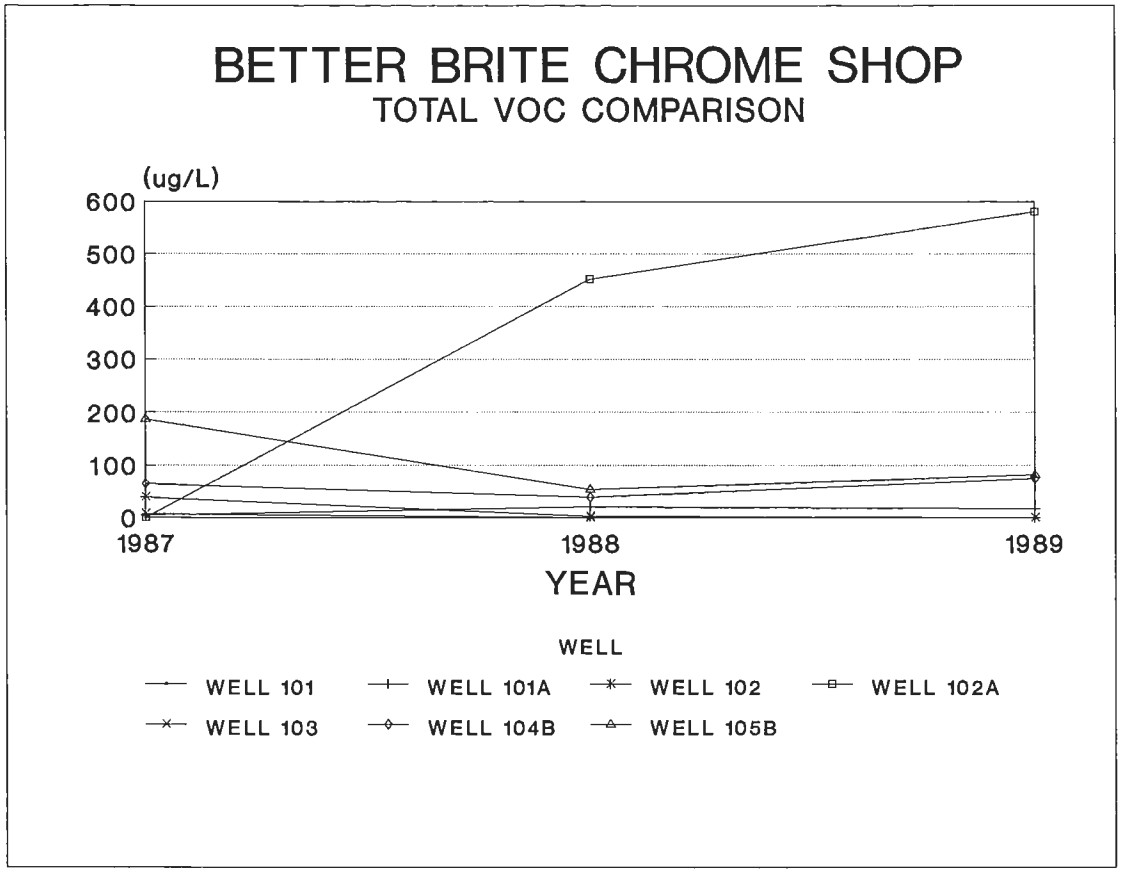
* FOR GRAPHICAL PURPOSES ALL DATA LESS THAN A NUMBER IS ASSUMED TO BE THAT NUMBER.



BETTER BRITE CHROME SHOP CHROME DATA

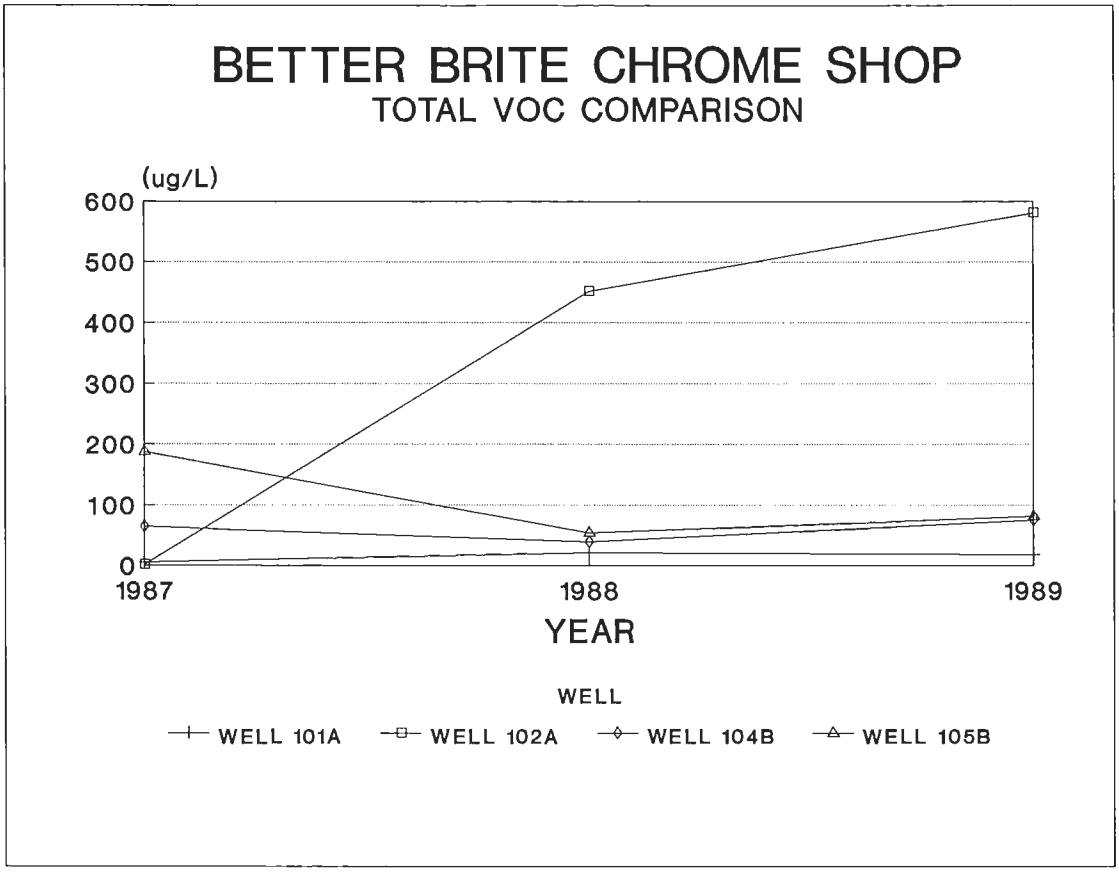
	1987	1988	1989
WELL 105B	62000	33000	30000

* FOR GRAPHICAL PURPOSES ALL DATA LESS THAN A NUMBER IS ASSUMED TO BE THAT NUMBER.



BETTER BRITE CHROME SHOP TOTAL VOC DATA

	1987	1988	1989
WELL 101	-	-	-
WELL 101A	5.1	21	17.2
WELL 102	39	3	-
WELL 102A	-	452	581
WELL 103	7.6	-	-
WELL 104B	64.4	39	74
WELL 105B	187.4	53	80.9



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