

October 11, 2019

Lynne M. Weierke
Operations Analyst
Dakota County Technical College
1300 145th Street East
Rosemount, MN 55068

Subject: Lead in Drinking Water Sampling/Analysis
Dakota County Technical College
LEGEND No. 1903983

1.0 INTRODUCTION

The following is the final report of the lead in drinking water testing performed at Dakota County Technical College (DCTC) located in Rosemount, MN. The sampling was performed by Corey Campbell of LEGEND TECHNICAL SERVICES, INC. (LEGEND).

2.0 BACKGROUND INFORMATION

LEGEND was requested by Dakota County Technical College to perform a lead in drinking water assessment and sampling at multiple locations on campus. Specific locations were limited to drinking water sources which could be used by high school students attending courses at the college. On August 27, 2019, LEGEND was on-site to review locations of potential drinking/food prep water taps and drinking fountains within the building. On September 26, 2019, LEGEND was back on-site to conduct sampling of the cold water taps identified as potential drinking water sources.

3.0 METHODOLOGY

On the evening of September 25, 2019, cold water taps/drinking fountains to be sampled were flushed for a period of 2-3 minutes by DCTC personnel. Water samples were collected on the morning of September 26, 2019 from ten (10) potential drinking water locations which could be utilized by the high school students. Samples were collected as 1st draw samples where the water was run and collected in 250-milliliter plastic bottles containing a nitric acid preservative.

Samples were analyzed via methods based on current U.S. EPA protocols, EPA Method 200.8. LEGEND is certified by the Minnesota Department of Health (MDH) for the analysis of lead in drinking water.

4.0 REGULATORY INFORMATION

The lead in drinking water action level as defined by the Minnesota Department of Health (MDH) for a Community Public Water Supply (CPWS) is 15 micrograms per liter ($\mu\text{g/L}$)/parts per billion (ppb) or greater.

The MDH document “Reducing Lead in Drinking Water, A Technical Guidance and Model Plan for Minnesota Public Schools” revision 03/2019, states that if lead in drinking water levels are at or below 20 $\mu\text{g/L}$, the tap may be used for drinking water or food preparation and should be retested in five years. If lead in drinking water levels exceed 20 $\mu\text{g/L}$, initiate twice daily flushing. Flush tap in the morning before school begins and at midday and evaluate and implement a corrective action plan.

5.0 RESULTS

A total of 10 1st draw samples were collected and analyzed for lead in drinking water. Of the 10 samples collected, none (0) were found to have lead levels above 15 $\mu\text{g/L}$.

See Table #1 and the corresponding laboratory report for additional information.

6.0 DISCUSSION/RECOMMENDATIONS

For drinking water locations found to have a 1st draw lead in water level below the MDH Action Level of 15 $\mu\text{g/L}$, retesting should be conducted again in 5 years.

Corrective Action

For drinking water locations found to have a 1st draw lead in water level above the MDH Action Level of 15 $\mu\text{g/L}$, the MDH Technical Guidance for Minnesota’s School and Child Care Facilities indicates that a twice a day flushing program be implemented as a corrective action. Flushing is to be conducted in the morning for 2-3 minutes and at mid-day for 2-3 minutes every day that school is in session. After long weekends or breaks, flush each tap for 10-15 minutes before students return to school. Then return to the normal flushing protocol.

Additional corrective actions may be implemented and could include; remove tap/fixture from service or replacement of faucets/plumbing components if thought to be the lead source.

Reassessment

All taps affected by this corrective action are to be retested after the corrective action is implemented. The retesting includes; flushing the cold water taps the night before sampling for a period of 2-3 minutes and allow to sit idle for a period of 6-8 hours before sampling; collect a 1st draw sample then allow the water to run for a period of 2-3 minutes and collect a 2nd draw sample to assess if this corrective action (flushing) is a viable option.

Communication Plan

A communication plan should be implemented to provide a process for school employees, students and parents to address questions, report results and provide ongoing, up-to-date information regarding sampling efforts. The EPA recommends that school management conduct the following:

- Assign a designated person to be the contact
- Notify affected individuals about the purpose of the testing and results
- Share specific activities being conducted to correct any lead in drinking water issues

Routine practices as outlined in the Environmental Protection Agencies (EPA) 3Ts for Reducing Lead in Drinking Water: Testing include the following.

- Clean debris from accessible screens (aerators) frequently. Clean and inspect periodically
- Thoroughly flush holding tanks to remove sediment (water fountains)
- Use only cold water for food and beverage preparation in kitchens and cooking classes
- Placard bathroom sinks with notices that water should not be consumed. Use pictures if there are small children using the bathroom

7.0 REMARKS

The recommendations in this report represent our professional opinions. These opinions were arrived at in accordance with currently accepted architectural, engineering, minimum code, and industrial hygiene practices at this time and location. Other than this, no warranty is implied or intended.

Cordially,

LEGEND TECHNICAL SERVICES, INC.

Corey Campbell, CHMM
MN Certified Lead Risk Assessor

Attachments: Table #1 – Lead in Drinking Water Sample Results
1903983 - Lead in Drinking Water Laboratory Report
Certifications/Accreditations

LEGEND TECHNICAL SERVICES, INC.
TABLE #1
LEAD IN DRINKING WATER SAMPLE RESULTS

LEGEND No. 1903983

DAKOTA COUNTY TECHNICAL COLLEGE
 ROSEMOUNT, MN

Sample No.	Laboratory No.	Location	Lead Results (µg/L)	MDH Action Level for Lead in Drinking Water
1	1903983-01	TESA Kitchen – 1 st Draw	2.0 µg/L	15 ug/L
2	1903983-02	2 nd Floor West Drinking Water Cooler – 1 st Draw	<0.20 µg/L	15 ug/L
3	1903983-03	2 nd Floor East Drinking Water Cooler – 1 st Draw	0.65 µg/L	15 ug/L
4	1903983-04	1 st Floor East Drinking Water Bubbler – 1 st Draw	1.9 µg/L	15 ug/L
5	1903983-05	1 st Floor West Drinking Water Cooler – 1 st Draw	0.2 µg/L	15 ug/L
6	1903983-06	Red Brick Room South Sink – 1 st Draw	0.42 µg/L	15 ug/L
7	1903983-07	Café Kitchen Sink – 1 st Draw	1.2 µg/L	15 ug/L
8	1903983-08	Kitchen East Sink – 1 st Draw	3.3 µg/L	15 ug/L
9	1903983-09	Kitchen West Sink – 1 st Draw	2.1 µg/L	15 ug/L
10	1903983-10	Ice/Water Machine in Commons Area – 1 st Draw	<0.2 µg/L	15 ug/L

ug/L = micrograms per Liter

MDH = Minnesota Department of Health

< = less than the reporting limit of the analyzer



88 Empire Drive
St Paul, MN 55103
Tel: 651-642-1150
Fax: 651-642-1239

October 08, 2019

Mr. Corey Campbell
Legend Technical Services
88 Empire Drive
St. Paul, MN 55103

Work Order Number: 1903983
RE: Analytical Services

Enclosed are the results of analyses for samples received by the laboratory on 09/26/19. If you have any questions concerning this report, please feel free to contact me.

Results are not blank corrected unless noted within the report. Additionally, all QC results meet requirements unless noted.

All samples will be retained by Legend Technical Services, Inc., unless consumed in the analysis, at ambient conditions for 30 days from the date of this report and then discarded unless other arrangements are made. All samples were received in acceptable condition unless otherwise noted.

All test results and QC meet requirements of the 2003 NELAC standard.

MDH (NELAP) Accreditation #027-123-295

Prepared by,
LEGEND TECHNICAL SERVICES, INC

A handwritten signature in black ink that reads "Bach Pham". The signature is stylized and written over a horizontal line.

Bach Pham
Client Manager II
bpham@legend-group.com

Legend Technical Services 88 Empire Drive St. Paul, MN 55103	Project: Analytical Services Project Number: DCTC Drinking Water Project Manager: Mr. Corey Campbell	Work Order #: 1903983 Date Reported: 10/08/19
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ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Tesa Kitchen	1903983-01	Drinking water	09/26/19 06:00	09/26/19 08:00
2nd Flr W. Cooler	1903983-02	Drinking water	09/26/19 06:00	09/26/19 08:00
2nd Flr E. Cooler	1903983-03	Drinking water	09/26/19 06:00	09/26/19 08:00
1st Flr E. Bubblers	1903983-04	Drinking water	09/26/19 06:00	09/26/19 08:00
1st Flr W. Cooler	1903983-05	Drinking water	09/26/19 06:00	09/26/19 08:00
Red Brick Rm Sink	1903983-06	Drinking water	09/26/19 06:00	09/26/19 08:00
Cafe Kitchen Sink	1903983-07	Drinking water	09/26/19 06:00	09/26/19 08:00
Kitchen East	1903983-08	Drinking water	09/26/19 06:00	09/26/19 08:00
Kitchen West	1903983-09	Drinking water	09/26/19 06:00	09/26/19 08:00
Ice/Water Machine	1903983-10	Drinking water	09/26/19 06:00	09/26/19 08:00

Shipping Container Information

Default Cooler

Temperature (°C): 22.5

Received on ice: No

Temperature blank was present

Received on ice pack: No

Received on melt water: No

Ambient: Yes

Acceptable (IH/ISO only): No

Custody seals: No

Case Narrative:

Legend Technical Services 88 Empire Drive St. Paul, MN 55103	Project: Analytical Services Project Number: DCTC Drinking Water Project Manager: Mr. Corey Campbell	Work Order #: 1903983 Date Reported: 10/08/19
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TOTAL METALS ANALYSIS
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Tesa Kitchen (1903983-01) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	2.0	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
2nd Flr W. Cooler (1903983-02) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	<0.20	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
2nd Flr E. Cooler (1903983-03) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	0.65	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
1st Flr E. Bubbler (1903983-04) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	1.9	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
1st Flr W. Cooler (1903983-05) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	0.20	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
Red Brick Rm Sink (1903983-06) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	0.42	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
Cafe Kitchen Sink (1903983-07) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	1.2	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
Kitchen East (1903983-08) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	3.3	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
Kitchen West (1903983-09) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	2.1	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	
Ice/Water Machine (1903983-10) Drinking water Sampled: 09/26/19 06:00 Received: 09/26/19 8:00										
Lead	<0.20	0.20	0.038	ug/L	1	B9J0416	10/04/19	10/04/19	EPA 200.8	

Legend Technical Services 88 Empire Drive St. Paul, MN 55103	Project: Analytical Services Project Number: DCTC Drinking Water Project Manager: Mr. Corey Campbell	Work Order #: 1903983 Date Reported: 10/08/19
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TOTAL METALS ANALYSIS - Quality Control
Legend Technical Services, Inc.

Analyte	Result	RL	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	%RPD	%RPD Limit	Notes
Batch B9J0416 - EPA 200.8 Digestion											
Blank (B9J0416-BLK1)											
Lead	< 0.20	0.20	0.038	ug/L							Prepared & Analyzed: 10/04/19
LCS (B9J0416-BS1)											
Lead	26.7	0.20	0.038	ug/L	25.0	<0.20	107	85-115			Prepared & Analyzed: 10/04/19
LCS Dup (B9J0416-BSD1)											
Lead	25.9	0.20	0.038	ug/L	25.0	<0.20	104	85-115	2.84	20	Prepared & Analyzed: 10/04/19
Matrix Spike (B9J0416-MS1)											
							Source: 1903983-01				Prepared & Analyzed: 10/04/19
Lead	25.7	0.20	0.038	ug/L	25.0	1.96	94.8	75-125			
Matrix Spike Dup (B9J0416-MSD1)											
							Source: 1903983-01				Prepared & Analyzed: 10/04/19
Lead	25.4	0.20	0.038	ug/L	25.0	1.96	93.7	75-125	1.15	20	

Legend Technical Services	Project: Analytical Services	
88 Empire Drive	Project Number: DCTC Drinking Water	Work Order #: 1903983
St. Paul, MN 55103	Project Manager: Mr. Corey Campbell	Date Reported: 10/08/19

Notes and Definitions

<	Less than value listed
dry	Sample results reported on a dry weight basis
NA	Not applicable. The %RPD is not calculated from values less than the reporting limit.
MDL	Method Detection Limit; Equivalent to the method LOD (Limit of Detection)
RL	Reporting Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Spike = Blank Spike (BS) = Laboratory Fortified Blank (LFB)
MS	Matrix Spike = Laboratory Fortified Matrix (LFM)

Page 1 of 1

LEGEND TECHNICAL SERVICES, INC
 88 Empire Drive, St. Paul, MN 55103 - Telephone: 651-642-1150, Fax: 651-642-1239
CHAIN-OF-CUSTODY RECORD

Client Name: Legend Technical Services		Bill To:		LEGEND Project#: 1903983		COC/Sample Comments:														
Address: 88 Empire Dr. St. Paul, MN 55103		Address:		Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> RUSH		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Requested Due Date:</td> </tr> <tr> <td colspan="2">Condition Received: <input type="checkbox"/> Received at 22.5 °C <input type="checkbox"/> Temp. from unpreserved sample <input type="checkbox"/> Received on ice <input type="checkbox"/> No temp. blank <input type="checkbox"/> Received on ice pack <input type="checkbox"/> Received on melt water <input checked="" type="checkbox"/> Received ambient <input type="checkbox"/> Acceptable (H/ISO only) <input type="checkbox"/> Custody Seals </td> </tr> <tr> <td colspan="2">ANALYSIS</td> </tr> </table>		Requested Due Date:		Condition Received: <input type="checkbox"/> Received at 22.5 °C <input type="checkbox"/> Temp. from unpreserved sample <input type="checkbox"/> Received on ice <input type="checkbox"/> No temp. blank <input type="checkbox"/> Received on ice pack <input type="checkbox"/> Received on melt water <input checked="" type="checkbox"/> Received ambient <input type="checkbox"/> Acceptable (H/ISO only) <input type="checkbox"/> Custody Seals		ANALYSIS								
Requested Due Date:																				
Condition Received: <input type="checkbox"/> Received at 22.5 °C <input type="checkbox"/> Temp. from unpreserved sample <input type="checkbox"/> Received on ice <input type="checkbox"/> No temp. blank <input type="checkbox"/> Received on ice pack <input type="checkbox"/> Received on melt water <input checked="" type="checkbox"/> Received ambient <input type="checkbox"/> Acceptable (H/ISO only) <input type="checkbox"/> Custody Seals																				
ANALYSIS																				
Attn: Corey Campbell		PO #:		Requested Due Date:		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="2" style="width:10%; text-align: center;">Number of Containers</td> <td rowspan="2" style="width:10%; text-align: center;">Pb in DW</td> <td colspan="5"></td> <td rowspan="2" style="width:20%; text-align: center;">Major Sample Components (5 greatest, including hazardous)</td> </tr> <tr> <td colspan="5" style="text-align: center;">200.8</td> </tr> </table>		Number of Containers	Pb in DW						Major Sample Components (5 greatest, including hazardous)	200.8				
Number of Containers	Pb in DW									Major Sample Components (5 greatest, including hazardous)										
		200.8																		
Phone: 651-221-4064		E-mail: info@legend-group.com		Requested Due Date:																
Project Name: DCTC Drinking Water		Project#:		Requested Due Date:																
Item No.	Sample Name	Grab	Comp.	Collection		Sample Matrix	Lab ID No.													
				Date	Time															
1	Tesa Kitchen	Y		9/26/19	0600	water	01A	1	Y											
2	2nd FIR W. cooler	Y					02	1	Y											
3	2nd FIR E. cooler	Y					03	1	Y											
4	1st FIR E. bubbler	Y					04	1	Y											
5	1st FIR W. cooler	Y					05	1	Y											
6	Red Brick Rm Sink	Y					06	1	Y											
7	Cafe Kitchen Sink	Y					07	1	Y											
8	Kitchen East	Y					08	1	Y											
9	Kitchen West	Y					09	1	Y											
10	Ice/water Machine	Y					10	1	Y											
Sample Collector (please print): Corey Campbell		Relinquished By: <i>Corey Campbell</i>		Date: 9/26/19	Time: 0800	Accepted by:		Date:	Time:											
Comments:		Relinquished By:		Date:	Time:	Received by Lab:		Date: 9/26/19	Time: 800											

PLEASE REVIEW TERMS AND CONDITIONS ON BACK BEFORE SIGNING

Form LAB-268.5 (12/14)

White Copy - Original Accompanies Shipment to Lab

Yellow Copy - Lab

Pink Copy - Customer or Field Copy

Certificate No: 5LM07261901PbRAR

Issue Date: July 26, 2019

This diploma is awarded to
Corey Campbell
3650 Upper 143rd St W Rosemount MN 55068
for successfully completing and passing the examination for the

**LEAD (Pb) RISK ASSESSOR
REFRESHER TRAINING COURSE**

This training course is Approved by the State of Minnesota
under Minnesota Rules, parts 4761.2000 to 4761.2700
and meets the requirements of 40 CFR 745.225,
and Title X of the Toxic Substances Control Act (TSCA)
conducted by

Lake States Environmental, Ltd.

in
White Bear Lake, MN on July 26, 2019
Examination Date: July 26, 2019

Lake States Environmental, Ltd
P. O. Box 645, Rice Lake, WI 54868
(800) 254-9811


Bob Rogalla - Training Course Manager


DEPARTMENT OF HEALTH
Licensed by:
State of Minnesota
Department of Health
License No. LR1188
Expires 07/26/2020
Corey D Campbell
3650 Upper 143rd St W
Rosemount, MN 55068




Director, Env. Health Div.



**Minnesota Department of Health
Environmental Laboratory Accreditation Program**

Issues accreditation to

State Laboratory ID: 027-123-295

EPA Lab Code: MN00908

Legend Technical Services, Inc.

88 Empire Drive

St Paul, MN 55103

for fields of accreditation listed on the laboratory's accompanying Scope of Certification
in accordance with the provisions in Minnesota Laws and Rules.

Continued accreditation is contingent upon successful on-going compliance with Minnesota Statutes 144.97 to 144.98, 2009 TNI Standard and applicable Minnesota Rules 4740.2010 to 4740.2120. The laboratory's Scope of Certification cites the specific programs, methods, analytes and matrices for which MDH issues this accreditation.

This certificate is valid proof of accreditation only when associated with its accompanying Scope of Certification.

The Scope of Certification and reports of on-site assessments are on file at the Minnesota Department of Health, 601 Robert Street North, Saint Paul, Minnesota. Customers may verify the laboratory's accreditation status in Minnesota by contacting MNELAP at (651) 201-5324.

Effective Date: 03/26/2019

Expires: 12/31/2019

Certificate Number: 1579854



Issued under the authority
delegated by the
Commissioner of Health,
State of Minnesota

Program	Method	Analyte	Matrix	Primary	SOP
RCRP	EPA 8260B	trans-1,2-Dichloroethylene	SCM	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	SCM	MN	
RCRP	EPA 8260B	trans-1,3-Dichloropropylene	NPW	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	NPW	MN	
RCRP	EPA 8260B	Trichloroethene (Trichloroethylene)	SCM	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	SCM	MN	
RCRP	EPA 8260B	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	NPW	MN	
RCRP	EPA 8260B	Vinyl chloride	SCM	MN	
RCRP	EPA 8260B	Vinyl chloride	NPW	MN	
RCRP	EPA 8260B	Xylene (total)	NPW	MN	
RCRP	EPA 8260B	Xylene (total)	SCM	MN	

Safe Drinking Water Program

EPA 300.0

Preparation Techniques: N/A

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 300.0	Chloride	DW	MN	
SDWP	EPA 300.0	Fluoride	DW	MN	
SDWP	EPA 300.0	Nitrate	DW	MN	
SDWP	EPA 300.0	Orthophosphate as P	DW	MN	
SDWP	EPA 300.0	Sulfate	DW	MN	

EPA 200.7

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 200.7	Aluminum	DW	MN	
SDWP	EPA 200.7	Arsenic	DW	MN	
SDWP	EPA 200.7	Barium	DW	MN	
SDWP	EPA 200.7	Beryllium	DW	MN	
SDWP	EPA 200.7	Cadmium	DW	MN	
SDWP	EPA 200.7	Calcium	DW	MN	

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 200.7	Chromium	DW	MN	
SDWP	EPA 200.7	Copper	DW	MN	
SDWP	EPA 200.7	Iron	DW	MN	
SDWP	EPA 200.7	Magnesium	DW	MN	
SDWP	EPA 200.7	Manganese	DW	MN	
SDWP	EPA 200.7	Nickel	DW	MN	
SDWP	EPA 200.7	Silica as SiO2	DW	MN	
SDWP	EPA 200.7	Silver	DW	MN	
SDWP	EPA 200.7	Zinc	DW	MN	

EPA 200.8

Preparation Techniques: Digestion, hotplate or HotBlock;

Program	Method	Analyte	Matrix	Primary	SOP
SDWP	EPA 200.8	Aluminum	DW	MN	
SDWP	EPA 200.8	Antimony	DW	MN	
SDWP	EPA 200.8	Arsenic	DW	MN	
SDWP	EPA 200.8	Barium	DW	MN	
SDWP	EPA 200.8	Beryllium	DW	MN	
SDWP	EPA 200.8	Cadmium	DW	MN	
SDWP	EPA 200.8	Chromium	DW	MN	
SDWP	EPA 200.8	Copper	DW	MN	
SDWP	EPA 200.8	Lead	DW	MN	
SDWP	EPA 200.8	Manganese	DW	MN	
SDWP	EPA 200.8	Mercury	DW	MN	
SDWP	EPA 200.8	Nickel	DW	MN	
SDWP	EPA 200.8	Selenium	DW	MN	
SDWP	EPA 200.8	Silver	DW	MN	
SDWP	EPA 200.8	Thallium	DW	MN	
SDWP	EPA 200.8	Zinc	DW	MN	

Underground Storage Tank Program

WI(95) DRO