



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010

Phone: 515-239-1741 Fax: 515-239-1726

e-mail: marykay.rogge@dot.state.ia.us

2002 OCT -4 A 11: 26

October 3, 2002

CON 12-15
Doc # 11125

DEPT. OF
NATURAL RESOURCES

Mr. Matthew Culp
Iowa Department of Natural Resources
Contaminated Sites Section
502 E. 9th
Des Moines, Iowa 50319

Subject: IDOT Dyersville Maintenance Facility
14067 Rte 136 North, Dyersville

Dear Mr. Culp:

Enclosed please find a copy of a brief report detailing collection of a down gradient groundwater sample at the above location. You will note from the date of the report that I am quite tardy in submitting these results. You have my apology. We feel that levels of hydrocarbons found in the analytical sample are too low to pose a serious risk to human health or the environment. We await your response on how to proceed at this site.

If you have any questions or comments, please feel free to contact me at the e-mail address above or at 515-239-1741.

Sincerely,

A handwritten signature in black ink, appearing to read "Mary Kay Rogge", written over a horizontal line.

Mary Kay Rogge
Office of Location and Environment

1. The first part of the paper is devoted to the study of the properties of the function $f(x)$ defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$

$$f(x) = \arctan x$$

It is shown that the function $f(x)$ is continuous and differentiable on the whole real axis. The derivative of the function is equal to $f'(x) = \frac{1}{1+x^2}$.

$$f'(x) = \frac{1}{1+x^2}$$

It is also shown that the function $f(x)$ is bounded on the whole real axis. The maximum value of the function is $\frac{\pi}{2}$ and the minimum value is $-\frac{\pi}{2}$.

$$f(x) = \arctan x$$

2. The second part of the paper is devoted to the study of the properties of the function $g(x)$ defined by the equation

$$g(x) = \int_0^x \frac{1}{1+t^4} dt$$

It is shown that the function $g(x)$ is continuous and differentiable on the whole real axis. The derivative of the function is equal to $g'(x) = \frac{1}{1+x^4}$.

$$g'(x) = \frac{1}{1+x^4}$$

It is also shown that the function $g(x)$ is bounded on the whole real axis. The maximum value of the function is $\frac{\pi}{4\sqrt{2}}$ and the minimum value is $-\frac{\pi}{4\sqrt{2}}$.

$$g(x) = \int_0^x \frac{1}{1+t^4} dt$$

$$g(x) = \frac{1}{3} \arctan \frac{x}{\sqrt{3}} + \frac{1}{6} \arctan \frac{x\sqrt{3}}{1-x^2}$$

$$g(x) = \frac{1}{3} \arctan \frac{x}{\sqrt{3}} + \frac{1}{6} \arctan \frac{x\sqrt{3}}{1-x^2}$$

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W. E. Miner
Environmental Consultants, Inc.

P.O. Box 461
Ames, Iowa 50010
(515) 232-4957

July 12, 2002

Iowa Dept. of Transportation
Attn: Ms. Mary Kay Rogge, Env. Specialist
800 Lincoln Way
Ames, IA 50010

Re: IDOT Maint. Garage, Hwy. 136 North, Dyersville, IA

Dear Ms. Rogge:

A site visit was made on June 25, 2002, to the above referenced site to obtain the downgradient groundwater sample requested by IDNR. As background, possible soil contamination was discovered in May 2002 when excavation work was completed for the wastewater treatment system. A letter dated May 29, 2002, documented the soil sampling completed on May 21, 2002.

Rewerts Well Company of Nevada, Iowa, was present to complete the drilling work. A temporary monitoring well was installed just to the southwest of the excavation area in the presumed downgradient direction (see attached Site Map). A copy of the soil boring log for the temporary well is attached. The temporary well readily charged with groundwater so a sample was taken in accordance with IDNR's sampling protocols. Dedicated sampling equipment was used and the sample was placed in containers provided by Keystone Laboratories of Newton, Iowa. After sampling the well was plugged with bentonite.

The groundwater sample was analyzed for both volatile and extractable hydrocarbons using Iowa Test Method OA-1 and OA-2. Attached are copies of the analytical results and chain of custody record. The results showed 2 ug/L of xylene and 100 ug/L of TEH as diesel fuel present in the sample. Using IDNR's Tier 1 Lookup Table, the lowest target levels for xylene is 10,000 ug/L and for TEH as diesel fuel is 1,200 ug/L. Therefore, it would not appear that the groundwater would be considered to be a threat by IDNR.

Thank you and if you have any questions or need additional documentation please contact me.

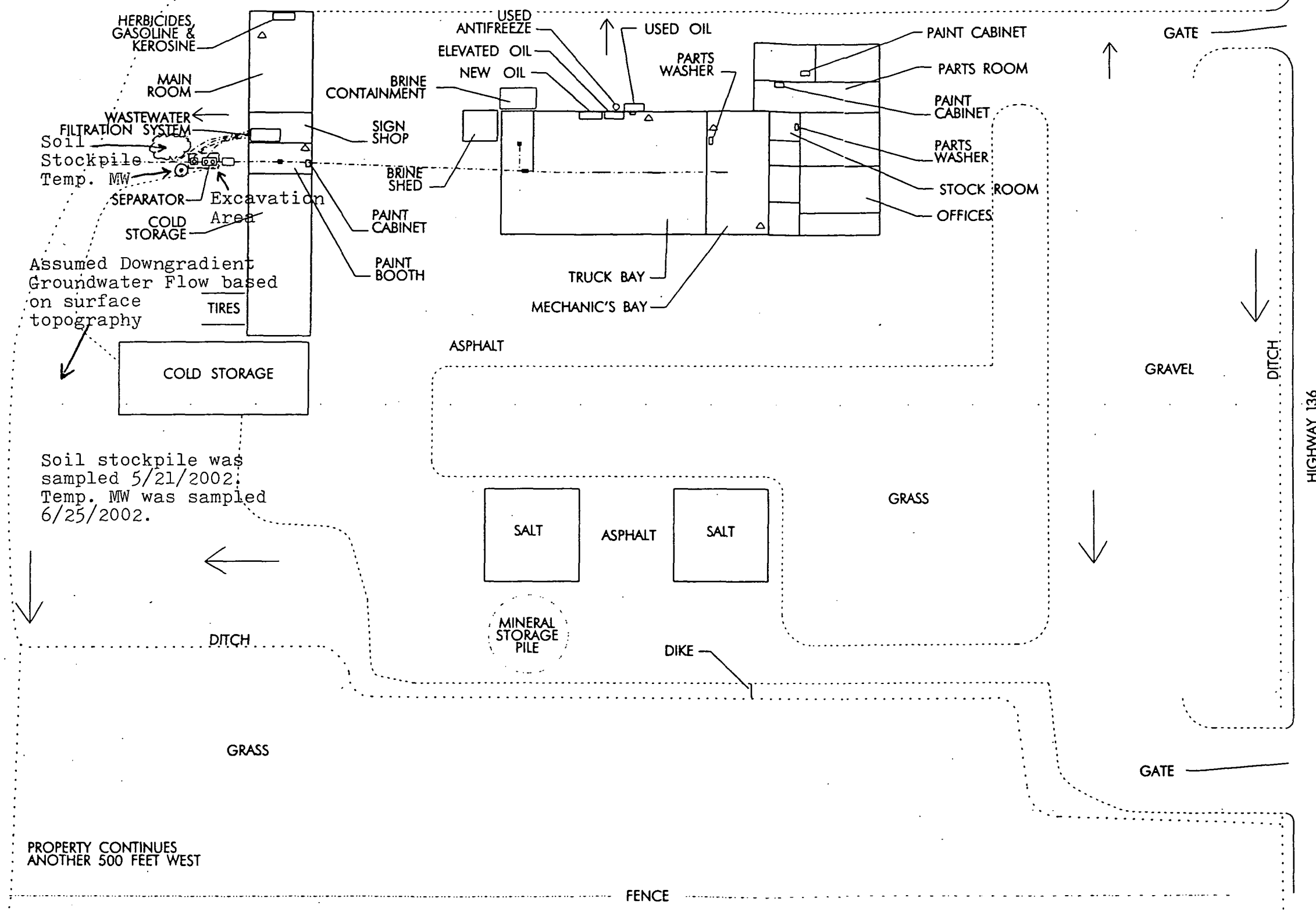
Sincerely,
W. E. Miner Environmental Consultants, Inc.

William E. Miner

William E. Miner

attachments

FENCE

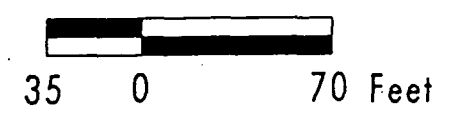


Soil stockpile was sampled 5/21/2002; Temp. MW was sampled 6/25/2002.

PROPERTY CONTINUES ANOTHER 500 FEET WEST



Scale



Legend:

■ Floor Drain

● Floor Drain

△ Spill Kit

→ Inferred Direction of Surface Runoff



Iowa Department of Transportation

Site Map

Figure 1-2

Dyersville Maintenance Garage

UPDATED: 04/2002

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DIAGRAM

Boring/Well Number: Temp. MW		Facility IDOT Maint. Garage Name:		Facility Hwy. 136 North Street Address: Dyersville, IA		
Boring Depth (ft) X Diameter (in): 15' x 6.5"				Drilling Method: HS Augers, with Continuous Sampler		
Certified Well Contractor Name: J. Rewerts Certification Number: 40281				Logged By: W. Miner		
Ground Surface Elevation (ASL): NA			Top of Casing Elevation (ASL): NA			
Date: 6/25/02 Start Time: 13:30		Date: 6/25/02 End Time: 13:45		UST NA Number:		
Date: 6/25/02 Start Time: 13:30		Date: 6/25/02 End Time: 13:45		LUST NA Number:		
Depth (feet)	Well Construction Details (Flush Cover)	Blow Count if applicable	Sample No.	Type*	Field Screening Results (PID /FID)	Rock Formations, Soil, Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
<div style="text-align: center;"> </div>	Plugged w/ bentonite after sampling	N/A	No Soil Samples Were Collected	0.0		Gravel (fill)
						CL - Lean Clay Brown, Firm, Moist
						SP - Sands, poorly sorted Brown, Loose, Wet
						CL - Lean Clay Olive, Soft, Wet
						Turns Grey
Total Depth: 15'						Bottom of Boring

• SS (Split Spoon) HS (Hollow Stem Auger)

OBSERVATIONS		Date:	6/25/02				
WATER LEVELS (ASL)		Level:	9.20' bgs				
Static Water Level Symbol ▼		Time:	13:45				

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

July 10, 2002

Work Order: 12F0959

Page 1 of 1

Report To
Bill Miner W.E. Miner Env. Consultants, Inc. P.O. Box 461 Ames, IA 50010

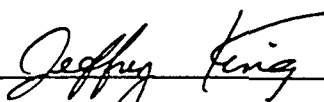
Work Order Information
Date Received: 06/26/2002 10:05AM Collector: Miner, W. Phone: 515-232-4957 PO Number:

Project: UST

Project Number: DOT Maint. Garage Dyersville, IA

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
12F0959-01 Temp. MW			Matrix: Water		Collected: 06/25/02 13:52	
Benzene	<2 ug/l	2	Iowa OA-1	MJS	06/29/02 14:12	
Toluene	<2 ug/l	2	Iowa OA-1	MJS	06/29/02 14:12	
Ethylbenzene	<2 ug/l	2	Iowa OA-1	MJS	06/29/02 14:12	
Xylenes, total	2 ug/l	2	Iowa OA-1	MJS	06/29/02 14:12	
Surrogate: Chlorobenzene	92.2 %		67-132	MJS	06/29/02 14:12	
TEH, as gasoline	<0.1 mg/l	0.1	Iowa OA-2	SMG	07/02/02 0:00	
TEH, as #2 diesel fuel	0.1 mg/l	0.1	Iowa OA-2	SMG	07/02/02 0:00	
TEH, as waste oil	<0.1 mg/l	0.1	Iowa OA-2	SMG	07/02/02 0:00	
Total Extractable Hydrocarbons	0.1 mg/l	0.1	Iowa OA-2	SMG	07/02/02 0:00	

End of Report



Keystone Laboratories, Inc.
Ericka Weintz
Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

PRINT OR TYPE INFORMATION BELOW SAMPLER: <u>W. Miner</u> SITE NAME: <u>DOT Maint, Garage</u> ADDRESS: <u>Hwy, 136 North</u> CITY/ST/ZIP: <u>Dyersville, IA</u> PHONE: <u>515-232-4957</u>		REPORT TO: NAME: <u>Bill Miner</u> COMPANY NAME: <u>Miner Env. Cons, Inc.</u> ADDRESS: <u>PO Box 461</u> CITY/ST/ZIP: <u>Ames, IA 50010</u> PHONE: <u>515-232-4957</u> FAX: _____		BILL TO: NAME: <u>Bill Miner - Same</u> COMPANY NAME: _____ ADDRESS: _____ CITY/ST/ZIP: _____ PHONE: _____ Keystone Quote No.: _____ (If Applicable)	
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CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY	
							BTEX (OA-1)	TEH (OA-2)									LABORATORY WORK ORDER NO.	
Temp. MW	6-25-02	1350	down gradient well	3	water	G	X	X									121-0959	

Relinquished by: (Signature) <u>W. Miner</u>	Date <u>6-26-2002</u> Time <u>10:05</u>	Received by: (Signature) 	Date Time 	Turn-Around: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush _____ Contact Lab Prior to Submission
Relinquished by: (Signature) 	Date Time 	Received for Lab by: (Signature) <u>Bill</u>	Date <u>6/26/02</u> Time <u>10:05 A.M.</u>	Remarks: <u>No chromatograms samples packed nice</u>

W. E. Miner
Environmental Consultants, Inc.

P.O. Box 461
Ames, Iowa 50010
(515) 232-4957

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