US EPA RECORDS CENTER REGION 5
541954

SAMPLING DATA

ALBAR Lapeer Co.

SRS: Rubber, plastics, auto
point of release - Barrel
resource affected - soil, Potentially - Surface + Ground waters, air, fauna, flora
Xylene, toluene, methyl, ethyl, Ketone
Aquifer Vulnerability
Direct contact Hazard / Fire Explosion Hazard
Liquids
Priority Pollutant - ~~tuolene~~ toluene

PA: * paint thinner blend of methyl Ethyl Ketone and toluene - is ignitible
* thinners recycled and ~~*~~ still bottoms are waste / D001.
* waste leaked from drums and contaminated 4'x5' area in soils. adjacent to asphalt pad upon which barrels are stored. Vegetation Kill
* Wastes also toxic and persistent
* site less than 1/2 mile from south Branch flint River.
* workers directly exposed to chemicals as they fill drums
* 1 mile = 4431, 2 mile = 8992, 3 mile = 12,281, 4 mile = 46,468

DRAFT: —

FILES: * 30 drums of thinner spent every month
* U159 - 2-Butanone (I,T)
Xylene (I) / Toluene
* Company non-regulated small quantity generator
* in container storage area wastes have leaked from drums + have tainted soils immediately adjacent to your asphalt pad.
* facility managed improperly with regard to human + environmental health safety
* paint thinner used is a blend of M.E.K. + Toluol and is ignitable once spent. Thinner recycled and still bottoms manifested as D001 waste (ignitable)
* holding pad not properly diked
* lab samples by albar indicated non-detectable levels of M.E.K. (Not satisfied with these results DNR conduct own tests)
* population 1 mile = 4431
2 = 8992
3 = 12,281
4 = 46,468

Maps: * S. Branch Flint River Runs about 2/10 of a mile to the east
* 2 schools within 1 mile radius of site
* 3/10 of mile to the east is a small marshy area and ≈ 1/2 mile to the South.
* site located in town
* Elevation ≈ 810

Remarks: ALBAR PAINTS AUTOMOTIVE PLASTIC PARTS FOR THE AUTOMOTIVE INDUSTRY. PAINT THINNER USED IS A BLEND OF MEK and TOLUOL AND IS IGNITABLE. SPENT THINNERS ARE TAKEN TO A FACILITY OWNED BY THE SAME PEOPLE CALLED CAPEER PAINT MANUFACTURING WHICH IS LOCATED ADJACENT TO THIS FACILITY. THE THINNERS ARE RECYCLE THROUGH A STILL, THINNERS ARE REUSED AND STILL BOTTOMS ARE MANIFESTED AS A D001 WASTE.

APPROXIMATELY 30 DRUMS OF THINNER ARE SPENT EVERY MONTH. THE THINNER IS USED IN CLEANING THE MASKS IN THEIR PAINTING OPERATIONS.

(4-82B)

M.2 - SITE MAINTENANCE FORM

* ACTION: _ *

EPA ID : MID981189020

SITE NAME: ALBAR IND SOURCE: T

STREET : 780 WHITNEY DR CONG DIST: 07

CITY : LAPEER ZIP: 48446-2565

CNTY NAME: LAPEER CNTY CODE : 087

LATITUDE : 43/03/12.0 LONGITUDE : 083/18/54.0

LL-SOURCE: G LL-ACCURACY:

SMSA : 2160 HYDRO UNIT: 04080204

INVENTORY IND: Y REMEDIAL IND: N REMOVAL IND: Y FED FAC IND: N

NPL IND: N NPL LISTING DATE: NPL DELISTING DATE:

SITE/SPILL IDS:

RPM NAME: RPM PHONE: - -

SITE CLASSIFICATION: SITE APPROACH:

DIOXIN TIER: REG FLD1: REG FLD2:

RESP TERM: PENDING ( ) NO FURTHER ACTION ( )

ENF DISP: NO VIABLE RESP PARTY ( ) VOLUNTARY RESPONSE ( )
ENFORCED RESPONSE ( ) COST RECOVERY ( )

SITE DESCRIPTION:

PENDING (_) NO FURTHER ACTION (_)

M.2 - PROGRAM MAINTENANCE FORM

* ACTION: _ *

SITE: ALBAR IND

EPA ID: MID981189020 PROGRAM CODE: H01 PROGRAM TYPE: * _ *

PROGRAM QUALIFIER: ALIAS LINK : * *

PROGRAM NAME: SITE EVALUATION * *

DESCRIPTION:

* *

* *

* *

* *

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: ALBAR IND
PROGRAM: SITE EVALUATION

EPA ID: MID981189020 PROGRAM CODE: H01 EVENT TYPE: DS1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ __ _ *

EVENT NAME: DISCOVERY STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START:	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 08/26/86	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	__

M.2 - EVENT MAINTENANCE FORM

* ACTION: _ *

SITE: ALBAR IND
PROGRAM: SITE EVALUATION

EPA ID: MID981189020 PROGRAM CODE: H01 EVENT TYPE: PA1

FMS CODE: EVENT QUALIFIER : EVENT LEAD: S * _ __ _ *

EVENT NAME: PRELIMINARY ASSESSMENT STATUS: * _____ _ *

DESCRIPTION:

* _____ *
* _____ *
* _____ *
* _____ *

ORIGINAL	CURRENT	ACTUAL			
START:	START:	START:	__/__/__	__/__/__	__/__/__
COMP :	COMP :	COMP : 09/25/86	__/__/__	__/__/__	__/__/__

HQ COMMENT:

* _____ *

RG COMMENT:

* _____ *

COOP AGR #	AMENDMENT #	STATUS	STATE %				
			0	_____	_____	__	__

M.2 - REGIONAL UTILITY MAINTENANCE FORM

SITE: ALBAR IND

EPA ID: MID981189020

REG CODE:	5E02-01	* ACTION: _	*
DESCRIPTION:		* _____	*
		* _____	*
DATE1:	09/25/86	* __/__/__	*
DATE2:		* __/__/__	*
DATE3:		* __/__/__	*
FREE FIELD:	86PAMI	* _____	*
REG CODE:	5E03-01	* ACTION: _	*
DESCRIPTION:		* _____	*
		* _____	*
DATE1:		* __/__/__	*
DATE2:		* __/__/__	*
DATE3:		* __/__/__	*
FREE FIELD:	A0103	* _____	*

MICHIGAN DEPARTMENT OF NATURAL RESOURCES
HAZARDOUS WASTE DIVISION
LIST OF MANIFESTS
FOR GENERATOR MID981189020

albar

MANIFEST	TSD	HAULER-ID	DATES SHIPPED / RECEIVED	CNTY GEN / TSD	MICROFILM NUMBERS GEN ORIG./CURRENT / TSD ORIG./CURRENT	BYPAS GEN / TSD	FLAGS ERR A64 2-H / ATT DIS REJ	WASTE NO. R S EPA	WASTE UNIT	WASTE QTY	WASTE HAZ	CONTAINER NO	CONTAINER TYPE
MI0694283	MID006523385	MID006523385	1/07/87	44	03062962		Y	F003	G	1155	H	21	DR
			1/07/87	50	03050874								
MI0694284	MID006523385	MID006523385	1/30/87	44	03062961		Y	F003	G	1155	H	21	DR
			1/30/87	50	03050875								
MI0694285	MID006523385	MID006523385	2/26/87	44	03112513		Y	F003	G	1796	H	33	DR
			2/26/87	50	03092909 03161381								
MI0694286	MID006523385	MID006523385	4/01/87	44	03223023		Y	F003	G	2255	H	41	DR
			4/01/87	50	03172729								
MI0694288	MID006523385	MID006523385	6/18/87	44	03231309		Y	F003	G	1411	H	26	DR
			6/18/87	50	03310903		Y						
MI0694289	MID006523385	MID006523385	8/05/87	44	03482220		Y	F003	G	1375	H	25	DR
			8/05/87	50	03353313								
MI0694290	MID006523385	MID006523385	8/26/87	44	03482221		Y	F003	G	1508	H	29	DR
			8/26/87	50	03353312								
MI0694291	MID006523385	MID006523385	9/08/87	44	03482222		Y	F003	G	1111	H	22	DR
			9/08/87	50	03420723								
MI0694292	MID006523385	MID006523385	10/06/87	44	03482223		Y	F003	G	1925	H	35	DR
			10/06/87	50	03452441								
MI0694293	MID006523385	MID006523385	10/22/87	44	03522569		Y	F003	G	1540	H	28	DR
			10/22/87	50	03452440								
MI0694294	MID006523385	MID006523385	11/06/87	44	03592684		Y	F003	G	1100	H	20	DR
			11/06/87	50	03531653								
MI0694295	MID006523385	MID006523385	11/23/87	44	03592683		Y	F003	G	1155	H	21	DR
			11/23/87	50	03531654								
MI0694296	MID006523385	MID006523385	12/17/87	44	03533585		Y	F003	G	1540	H	28	DR
			12/17/87	50	03542159								

F003
76.10 tons

19,026.00 gallons

INSPECTION FORM B

Section A: Scope of inspection

Standards for generators of HAZARDOUS WASTE subject to 40 CFR 262.10

Section B: MANIFEST REQUIREMENTS (Part 262, Subpart B)

	Yes	No	NI*	Remarks
(1) Does the generator have copies of the manifest available for review? 262.40	✓			
(2) Examine manifests for shipments in past 6 months. Indicate approximate number of manifested shipments during that period. 5				
(3) Do the manifest forms examined contain the following information? (If possible, make copies of, or record information from, manifests that do not contain the critical elements) 262.21				
a. Manifest document number?	✓			
b. Name, mailing address, telephone number, and EPA ID number of generator?	✓			
c. Name and EPA ID number of transporter(s)?	✓			
d. Name, Address, and EPA ID Number of designated permitted facility and alternate facility?	✓			
e. The description of the waste(s) (DOT shipping name, DOT hazard class, DOT identification number)?	✓			
f. The total quantity of waste(s) and the type and number of containers loaded?	✓			
g. Required certification?	✓			
h. Required signatures?	✓			

(4) Reportable exceptions 262.42

a. For manifests examined in (2) (except for shipments within the last 35 days), enter the number of manifests for which the generator has NOT received a signed copy from the designated facility within 35 days of the date of shipment. N/A

b. For manifests indicated in (4a), enter the number for which the generator has submitted exception reports (40 CFR 262.42) to the Regional Administrator. 0

DEPARTMENT OF NATURAL RESOURCES
AIR QUALITY DIVISION

ACTIVITY REPORT

ESTABLISHMENT	COUNTY	ESTABLISHMENT NO.
ALBAR INDUSTRIES, INC.	LAPEER	N0802
EQUIPMENT LOCATION	DISTRICT	DATE MM DD YY
	SAGINAW	04 / 09 / 86
CITY / TOWNSHIP	STAFF	TRAVEL TIME
LAPEER	M. REED	—
CONTACT AND TITLE		TIME ON ACTIVITY

ACTIVITY:

- ☐ COMPLAINT RECEIVED _____
- ☐ COMPLAINT INVESTIGATION _____
- ☐ PARTIAL SCHEDULED INVESTIGATION
- ☐ COMPLETE SCHEDULED INVESTIGATION
- ☐ SELF–INITIATED INVESTIGATION
- ☐ CONSENT ORDER INVESTIGATION
- ☐ SOURCE TEST MONITORING
- ☐ VISIBLE EMISSIONS OBSERVATION
- ☐ SAMPLE COLLECTED
- ☐ PHOTOS TAKEN
- ☐ MEETING WITH COMPANY
- ☒ TELEPHONE CONVERSATION
- ☐ LETTER _____
- ☒ OTHER FILE REVIEW

MAJOR SOURCE: ☒ A-1 VOC ☐ A-2 ☐ NESHAP ☐ NSPS ☐ CEM ☐ PSD

LEVEL OF INSPECTION: N/A ☐ LEVEL I ☐ LEVEL II ☐ LEVEL III

INSPECTION RESULTS / REMARKS:

SOURCE / CONTROL	PERMIT / RULE / ORDER	STATUS
#3 Paint Line Coating of Plastic Parts	PE #321-84 / Rule 201 Rule 220	NC - Installed new Paint Booth 10-85 w/out permit and w/out 6 TPY offset

I discussed status of permit application # 906-85, received 11-12-85, for the new paint booth with P. Schleusener, AQD Permits. Paul gave me proposed emission limits for ~~new~~ Line 3 with new booth for PE 906-85; Paul recommends approval subject to offset coming from AQD inventory and voiding 321-84.

I have used Paul's emission estimate to calculate the "emission reduction" which will occur when offsets are provided.

VOC Limits			
pph	TPY		permit #
5.1	15.8	proposed	906-85
3.3	10.3	current	321-84
	5.5	Difference or ~~Net~~ VOC increase	

5.69 to 6.37 #VOC/gal Range
6.27 #/gal most common

1.1 (Rule 220) x 5.5 = 6.0 TPY offset needed.

6.0 - 5.5 = 0.5 TPY Net Allowed Emission Reduction once Rule 220 is complied with.

STATUS CODE: C = COMPLIANCE; NC = NONCOMPLIANCE; NO = NOT OPERATING; U = UNKNOWN

NAME Mark Reed DATE OF REPORT 4-10-86 SUPERVISOR'S INITIALS

DISTRIBUTION: White – Division Office; Canary – Staff Member; Pink – District Office

xc Joanne Foy
Paul Schleusener

Rec'd 6/2/86 PL Sch

R5642 Rev 5/85

Interoffice Memorandum

Date: January 24, 1986

TO: Paul Schleusener

FROM: Dorothy Bohn DB Air Quality Evaluation Unit (AQEU)

AIR QUALITY DIVISION

SUBJECT: Dispersion Analysis Summary

JAN 27 1986

PERMIT SECTION

Installation Name and Location

Albar Industries, Inc. Permit/Estab No. 906-85 / N0802

780 Whitney Dr., Lapeer Source Description paint spray booth

Pollutant(s)	Ambient Criteria	Averaging Time	Dilution Factor
Ethyl cellosolve	1% TLV	8 hour	

Conclusion:

The emissions from the proposed source will not exceed the 1% TLV criteria.

I. Model(s) Used BWEM Terrain Considered: ~~Yes~~/No

Buildings Considered: Yes/~~No~~ GEP Stack Height (m) N/A

II. Source(s) Input Parameters

Unit (#)	1	
Height (m)	6.7	(22')
Radius (m)	.30	(1')
Exit Temperature (°K)	294	(70°F)
Exit Vol.Flow Rate(m^3/s)	2.64	(5600 acfm)
Emission (g/s)	.042	(.33 pph)
Building Height (m)	6.1	(20')
Building Width(s) (m)	30 x 58	
Distance to Prop.Line(m)	27	(87')

Other Sources Considered: None

III. Predicted Ground Level Concentrations Without Background ($\mu g/m^3$).

UNIT	MODEL	STAB./WIND SPEED(m/s)	DIST. FROM SOURCE(m)	GLC ($\mu g/m^3$)	AVERAGING TIME	COMMENTS
1	BWEM	C D/2.5	50	32	8 hour	

Background Value(s) N/A Averaging Time(s) _____

IV. Summary and Comments

(8 hr GLC max) 32 ug/m^3 < 190 ug/m^3 (8 hr, 1% TLV)

NON-CRITERIA POLLUTANTS - EMISSION SUMMARY SHEET

Permit No. 906-85 E. I. No. N-0802 Company Albar Industries, Inc.

All Concentrations in mg/M^3 Unless Specified

Compound	Toxicity Data	Physical & Chem. Data	Acceptable Ambient Concentration	Dilution Factor & Averaging Time	Acceptable Emission Level	Expected Stack Emission	Comments
thyl cellosolve (2-methoxy ethanol)	TLV = 5 ppm = 19 mg/m^3	VOC	0.19	497 (8-hr)	94.4	15.7	OK ~~DF for~~ Dilution factor from modeling

PERMIT EVALUATION SHEET

Application No. 906-85

E.I. No. N-0802

Const. Commenced? Yes (Reg. Egr. notified) No

NSPS? Yes (Coord. notified) No

WQD notified? Yes No

RRD notified? Yes No

Other

NESHAPS? Yes (Coord. notified) No

Source Description (Installation date 10/15/85) (Covered by Permit No. This

Paint spray booth added to existing belt conveyor line. (Existing line permit #321-84.)

PLASTIC PARTS PAINTED

Control Description

Dry filters

Attainment Status	TSP	SO_2	CO	O_3
Attainment	A	A	A	
Non Attainment				A

P - Primary S - Secondary
A - All Standards U - Unclassified
* Close to Non attainment

	Plant Totals (TPY)			Equipment covered by this permit					
	Potential	Δ Pot. (5 years)	Allowed) 12-21-76	Uncon. PPH	Expected PPH	Expected TPY	Allowable PPH	Allowable TPY	Limit
TSP	—	—	—	~~1.78~~	~~1.78~~	~~5.49~~	~~1.78~~	~~5.49~~	~~5.49 tpy~~
SO_2									
CO									
NO_x									
~~This booth~~ VOC	—	—	—	1.78	1.78	5.49	1.78	5.49	~~5.49 tpy~~ This booth
VOC	—	—		5.1	5.1	15.8	5.1	15.8	15.8 tpy Line # total

Basis for Recommendation; Comments ① Paints are very similar to paints currently being used; additional control equipment not feasible. (LAER) ② Non-criteria pollutant emissions will comply w/ Rule 901. ③ Statewide sources in compliance. ④ Applicant has requested offsets from inventory. Larry Weemaes agrees w/ conditions (3/19/86). I recommend approval.

6.1 T/YR offsets from Inventory. [illegible] 6-4-86

EOP? Yes No Emissions Logged? Yes No PSD? Yes No PCDS? Yes No?

Reviewed by: PL Schl Date: 3/19/86

Production Rate ☐ Confidential Normal 96 gal/mo Maximum ?

Normal Operating Schedule ☐ Confidential Hours/Day 24 Days/Wk 5 Wks/Year 52

Maximum Allowable Operating Schedule Hours/Day 24 Days/Wk 5 Wks/Yr 52

Fuel type	Usage	Heat Content	% Sulfur	% Ash
N/A				

Collector Bypass Yes (No) Reasons - Conditions

Process/Control Waste and Disposal Filters via dumpster

Stack, Building & Dispersion Paramaters

Bldg 20' tall. Stack @ 29', & 24" diameter, 5600 cfm. Property line 80' west.
Rain sleeve to 29', 28" diameter.

Dispersion (Yes) No Comments:

Dilutions from modeling: $\left[\frac{(0.042 \times 10^6 \mu g/s)}{2.6 m^3/s}\right] \div 32 \mu g/m^3 = 497$

Emission Calculations (All paints are the same as 321-84, except the gray vinyl primer)

$\left(0.28 \frac{gal}{hr}\right)\left(6.37 \frac{\# VOC}{gal}\right) = 1.78 \# VOC/hr$ (hourly peak VOC rate)

Annual VOC rate =

$\left(0.28 \frac{gal}{hr}\right)\left(6.28 \frac{\# VOC}{gal}\right)\left(24 \times 5 \times 52 \frac{hr}{yr}\right)\left(\frac{1 ton}{2000 \#}\right) = 5.49$ tpy

Expected VOC = $\left(0.28 \frac{gal}{hr}\right)\left(6.27 \#/gal\right) = 1.76 \#/hr$ [spraying only the Bee Chemical since installation. Others "just in case".]

Bee Chemical ~~(Butylcellosolve~~) (RT232)

$$\frac{(1)\left(7.37 \frac{\#}{gal}\right)\left(0.63 \frac{\# VOC}{\# paint}\right) + (1.5)\left(7.36 \frac{\#}{gal}\right)(100\%)}{2.5} = 6.27 \# VOC/gal$$

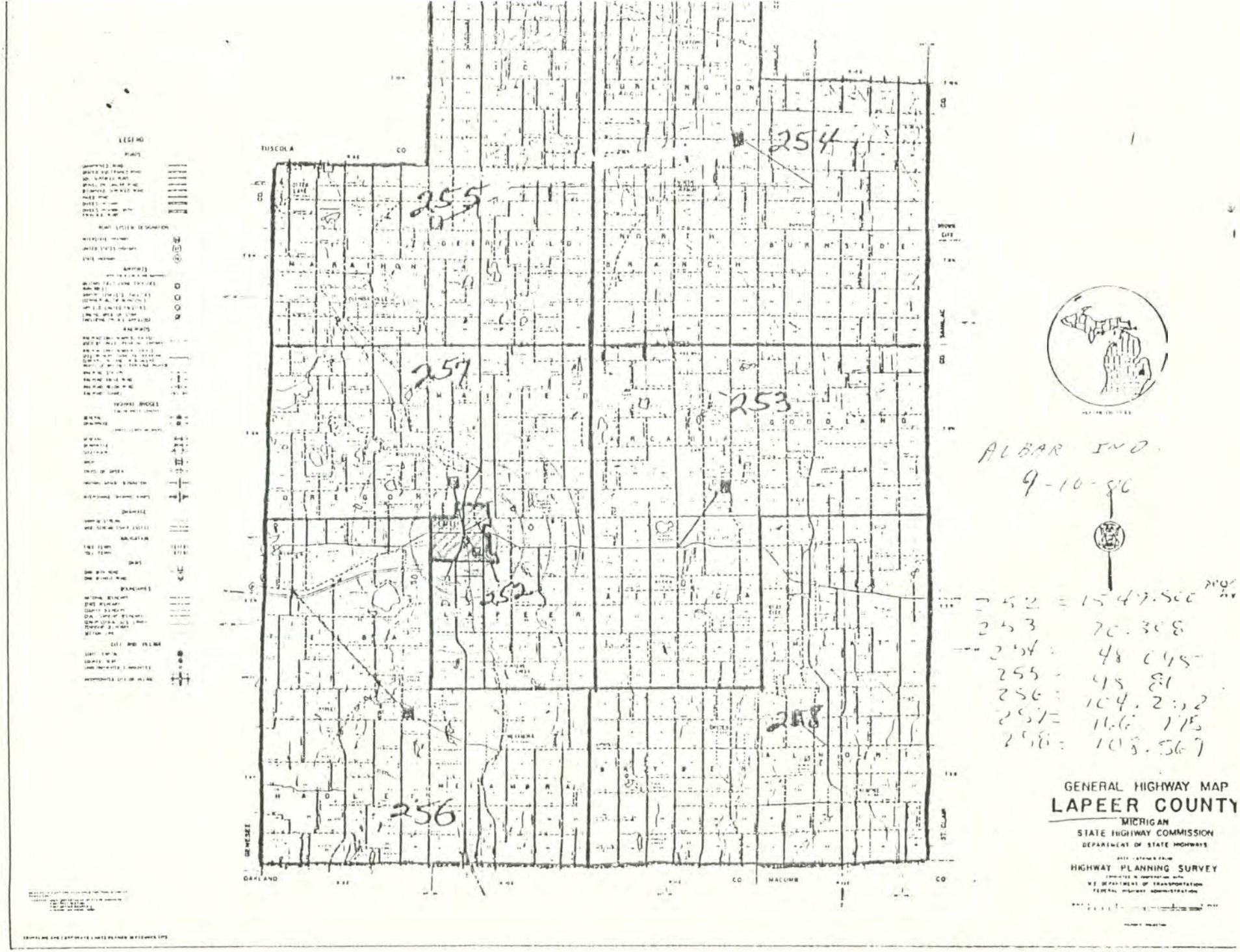
~~Butylcellosolve~~

$$\cancel{\frac{(1)(7.37)(0.16)}{2.5} = 0.47 \frac{\# Bu Cell}{gal paint}}$$

MDNR-HWD are not satisfied with results of the soil samples. They will conduct their own qualitative analysis. ~~They cannot perform a quantitative analysis because they do not have the necessary equipment.~~

4) Company is cooperative

5) Inspector (Jim Sygo) believes that their (Albar Ind) detection may not be low enough to detect the hazardous chemicals — HWD will perform their own analysis of the soil.


LEGEND
TUSCOLA CO
OAKLAND CO
MACOMB CO
GENESEE
ST. CLAIR
SANILAC
254
255
257
253
252
258
256
ALBAR IND.
9-10-86
252 = 1547.500
253 70.308
254 = 48.095
255 = 95.81
256 = 104.252
257 = 166.175
258 = 103.567
GENERAL HIGHWAY MAP
LAPEER COUNTY
MICHIGAN
STATE HIGHWAY COMMISSION
DEPARTMENT OF STATE HIGHWAYS
HIGHWAY PLANNING SURVEY
LAPEER COUNTY

GEOLOGICAL SURVEY SAMPLE No.

DEC 02 1969

32-4

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

SW - SW - SE D

1 LOCATION OF WELL

County	Twp.	Fraction	Section No.	Town	Range
Lapeer	Metamora	D ¼ ¼ ¼	32	6 N/S.	10 E/W.

NON-RESPONSIVE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Top Soil	1	2
Clayey Gravel	2	130
Gravel	130	137

4 WELL DEPTH: (completed) 137 ft. Date of Completion 7/28/68

5 ☑ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Threaded ☐ Welded ☐
Diam. 4 in. to ___ ft. Depth
___ in. to ___ ft. Depth
Height: Above/Below surface ___ ft.
Weight ___ lbs/ft.
Drive Shoe? Yes ☐ No ☐

8 SCREEN:
Type: Cook Dia.: 3
Slot/Gauze 12 Length 3
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
90 ft. below land surface

10 PUMPING LEVEL below land surface
___ ft. after ___ hrs. pumping ___ g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☐ 12" Above Grade

13 GROUTING:
Well Grouted? ☒ Yes ☐ No
Material: ☐ Neat Cement ☐ ___
Depth: From ___ ft. to ___ ft.

14 SANITARY:
Nearest Source of possible contamination
50 feet ___ Direction Septic Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:
Manufacturer's Name Fairbanks
Model Number 4 5044 HP 1/2
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: ☒ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[illegible] — REGISTERED BUSINESS NAME
[illegible] — REGISTRATION NO.
Address [illegible]
Signed [illegible] Date 7-28-68
AUTHORIZED REPRESENTATIVE

D67D 100M 6-66

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. 32-2

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
San & gravel mixed	100	100
Clay	244	344
Sandstone	51	395
it was all sand and gravel.		
We made well complete in the drill.	DMS	

4 in. to 344 ft. Depth | Weight 11 lbs./ft.
___ in. to ___ ft. Depth | Drive Shoe? Yes [X] No [ ]

8 SCREEN: ---

Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
120 ft. below land surface

10 PUMPING LEVEL below land surface
150 ft. after 2 hrs. pumping 40 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: ---
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[ ] Pitless Adapter [X] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [ ] Bentonite [X] SDG
Depth: From 0 ft. to 344 ft.

14 Nearest Source of possible contamination
75 feet W Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name ___
Model Number ___ HP ___ Volts ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: [ ] Submersible
[ ] Jet [ ] Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.
ADDED INFO BY CALLER ITEM 8
CORRECTED BY
ADDITION BY
ELEVATION
DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Matamora Well Drilling 0207
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1200 Imlay City Rd., Lapeer

Signed Mary Helen Kurek Date 11-4-74
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

RVEY SAMPLE No. 32-3

WATER WELL RECORD

MICHIGAN DEPARTMENT

RTMENT

NON-RESPONSIVE

[redacted]

FORMATION	OF STRATUM	BOTTOM OF STRATUM
Soil	2	2
Clay	4	6
AND	12	18
ue Clay	56	76
Ter B. Sand	8	84

3 in. to 84 ft. Depth | Drive Shoe? Yes ☒ No ☐

8 SCREEN:
Type: S.S. Dia.: 3"
Slot/~~Gauze~~ 10 Length 4'
Set between 80 ft. and 84 ft.
Fittings: 12 x 3 Nip K Packer 3" Plug.

9 STATIC WATER LEVEL
50 ft. below land surface

10 PUMPING LEVEL below land surface
____ ft. after ___ hrs. pumping 20 g.p.m.
____ ft. after ___ hrs. pumping 20 g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ____ Chlorides (Cl) ____
UNKNOWN
Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☐ In Approved Pit
☐ Pitless Adapter ☒ 12" Above Grade

13 Well Grouted? ☐ Yes ☒ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
63 feet S.W Direction Septic Type
Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☒ Not installed
Manufacturer's Name ____
Model Number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
Type: ☐ Submersible
☐ Jet ☐ Reciprocating

es ☒ No ☐

plings

g.p.m.

g.p.m.

Type

on

USE A 2ND SHEET IF NEEDED

s, elevation, source of data, etc.

...D BY DRILLER, ITEM NO.

...STED BY

...TION BY

...ION

TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

George Riken 1600
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1092 W Hunter Cr. Rd. Lowell 45446

Signed George Riken Date Dec. 20 77
AUTHORIZED REPRESENTATIVE

100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO AUG 16 1982

WATER WELL AND PUMP RECORD

PART 127 ACT 368 P.A. 1978

PERMIT NUMBER

NON-RESPONSIVE

[redacted]

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	30	30
Gravel	35	65
Clay	50	115
Water Bearing Water	12	127'

USE A 2ND SHEET IF NEEDED

5" in. to 123 ft. depth
____ in. to ____ ft. depth
Grouted Drill Hole Diameter
7 7/8 in. to 123 ft. depth
____ in. to ____ ft. depth

Weight ____ lbs./ft.
Drive Shoe ☐ Yes ☐ No

8 SCREEN ☐ Not Installed
Type Johnson Diameter 5"
Slot/Gauge 18 Length 4'
Set between 123' ft. and 127' ft.
FITTINGS: ☒ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL:
100' ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
120' ft. after 1 hrs. pumping at 20 G.P.M.
____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☐ Pitless adapter ☒ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☒ Yes From 0 to 123' ft.
☐ Neat cement ☒ Bentonite ☐ Other ____
No. of bags of cement ____ Additives ____

13 Nearest source of possible contamination
Type Septic Distance 75' ft. Direction W.
Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP: ☒ Not Installed ☐ Pump Installation Only
Manufacturer's name ____
Model number ____ HP ____ Volts ____
Length of Drop Pipe ____ ft. capacity ____ G.P.M.
TYPE ☐ Submersible ☐ Jet ____
PRESSURE TANK
Manufacturer's name ____
Model number ____ Capacity ____ Gallons

15. Remarks, elevation, source of data, etc.
ADDED INFO BY DRILLER, ITEM NO.
*CORRECTED BY
**ADDITION BY
ELEVATION
DEPTH TO ROCK

16. WATER WELL CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Lee Sharp Well Drilling
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 4028 Fraser St 0314
Signed Lee Sharp Date 6-30-82
AUTHORIZED REPRESENTATIVE

D67d (Rev 10 80)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO. [ ]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

W..TER WELL AND PUMP RECO

PERMIT NUMBER

NON-RESPONSIVE

[redacted]

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Brown Clay	35'	35'
Clay & Gravel	62'	97'
Soft Gray Shale	43'	140'
Hard Brown Limestone	10'	150'
Sandstone	20'	170'
Sandstone (Mixed Course Gravel)	13'	183'

USE A 2ND SHEET IF NEEDED

___ in. to 150 ft. depth
___ in. to ___ ft. depth
Grouted Drill Hole Diameter
8 in. to 149 ft. depth
___ in. to ___ ft. depth

Weight 1.75 lbs./ft.

Drive Shoe ☐ Yes ☒ No

8 SCREEN: ☒ Not Installed
Type ___ Diameter ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen ___ ft. Other ___

9 STATIC WATER LEVEL:
54 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
180 ft. after 1 hrs. pumping at 30 G.P.M.
___ ft. after ___ hrs. pumping at ___ G.P.M.

11 WELL HEAD COMPLETION: ☒ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☒ Yes From 35 to 97 ft.
☐ Neat cement ☒ Bentonite ☐ Other ___
No. of bags of cement ___ Additives 1 bag

13 Nearest source of possible contamination
Type S. Tank Distance 60 ft. Direction S
Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP: ☐ Not Installed ☐ Pump Installation Only
Manufacturer's name Red Jacket
Model number 75UW19BC HP 3/4 Volts 220
Length of Drop Pipe 100 ft. capacity 10 G.P.M.
TYPE: ☒ Submersible ☐ Jet ___
PRESSURE TANK:
Manufacturer's name X-trol
Model number ___ Capacity ___ Gallons

15. Remarks, elevation, source of data, etc.

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

F. E. Franzel Well Drilling # 79-0474
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 964 Barnes Rd. Fostoria

Signed Frank E Franzel Date 8/12/85
AUTHORIZED REPRESENTATIVE

D67d 2/84

GEOLOGICAL SURVEY COPY

Authority: Act 368 PA 1978
Completion: Required
Penalty: Conviction of a violation of any provision is a

(C) 5-7N-10E TD 260 in Marshall
Lapeer Twp. (Lapeer Co.) Water Well

Michigan Home and Training School, Lapeer, Michigan

Well #1-12"

Drilling Contractor: Ohio Drilling Company

Location: 200 yards south of N.Y.C. Railroad along main driveway of institution.

Record by: H. J. Snyder of Ohio Drilling Company, Massillon, Ohio.

	Thickness (feet)	Depth (feet)
PLEISTOCENE:		
Drift:		
Surface	5	5
Sand	30	35
Clay	30	65
Clay and gravel	35	100
Sand, clay and gravel	5	105
Clay, sand and gravel	8	113
	(113)	
MISSISSIPPIAN:		
Marshall:		
Sandrock - medium	60	173
Sandrock - coarse	7	180
Sandrock - fine	10	190
Shale	15	205
Shale, sandy	25	230
Sandrock	5	235
Shale, brown	5	240
Shale, sandy	10	250
Shale	10	260
	(147+)	
	TOTAL DEPTH	260

12" in diameter uniform depth.

Completed: 10-26-31

GEOLOGICAL SURVEY SAMPLE No.

(15)

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

2 FORMATION	OF STRATUM	BOTTOM OF STRATUM
Clay	100'	100'
Sandstone	60'	160'

160 ft. 7-3-69

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Diam. Threaded ☒ Welded ☐ Height: Above/~~Below~~ surface 1 ft.
4 in. to 100 ft. Depth Weight 11 lbs/ft.
___ in. to ___ ft. Depth Drive Shoe? Yes ☒ No ☐

8 SCREEN: ——
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
30 ft. below land surface

10 PUMPING LEVEL below land surface
60 ft. after 2 hrs. pumping 60 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: —
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☒ 12" Above Grade

13 GROUTING:
Well Grouted? ☒ Yes ☐ No
Material: ☐ Neat Cement ☒ Aqua Gel.
Depth: From 0 ft. to 100 ft.

14 SANITARY: None - City sewers
Nearest Source of possible contamination
___ feet ___ Direction ___ Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:
Manufacturer's Name Red Jacket
Model Number 100N17CB HP 1
Length of Drop Pipe 63 ft. capacity 20 G.P.M.
Type: ☒ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY DRILLER. ITEM NO

•CORRECTED BY:

••ADDITION BY: EEE

Elev 4347

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Metamora Well Drilling 0397
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 3875 S Lapeer, Metamora

Signed Marvin Kurek Date 7-3-69
AUTHORIZED REPRESENTATIVE

D67D 100M 6-66

AUG 1 1969

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

[redacted]

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
RED CLAY	6	6
SAND.	14	20
BLUE CLAY	78	98
CLAY AND SAND	22	120
SAND STONE CUT OUT	70	190
[illegible]		
[illegible]		

USE A 2ND SHEET IF NEEDED

4 in. to 190 ft. Depth

in. to ft. Depth

Surface ft.

Weight 11.00 lbs./ft.

Drive Shoe? Yes ☒ No ☐

8 SCREEN:

Type: None Dia.:

Slot/Gauze Length

Set between ft. and ft.

Fittings:

9 STATIC WATER LEVEL

3 ft. below land surface

10 PUMPING LEVEL below land surface

63 ft. after 1½ hrs. pumping g.p.m.

ft. after hrs. pumping g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) Chlorides (Cl)

Hardness Other

12 WELL HEAD COMPLETION: ☒ In Approved Pit ☒ Pitless Adapter ☒ 12" Above Grade

13 Well Grouted? ☐ Yes ☐ No

☐ Neat Cement ☐ Bentonite ☐

Depth: From ft. to ft.

14 Nearest Source of possible contamination

800 feet Direction RIVER Type

Well disinfected upon completion ☐ Yes ☐ No

15 PUMP: ☐ Not installed

Manufacturer's Name RAPIDCTON

Model Number 10R375 HP 1 Volts 220

Length of Drop Pipe 52 ft. capacity 25 G.P.M.

Type: ☒ Submersible ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO BY DRILLER, ITEM NO.

CORRECTED BY

LOCATION BY

ELEVATION

DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[illegible] Well Drilling — REGISTERED BUSINESS NAME — REGISTRATION NO.

Address 1105 ALICE DR 0881

Signed Ken Reyes AUTHORIZED REPRESENTATIVE Date July 30-73

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No.

MAY 02 1974

WATER WELL RECORD

ACT 294 PA 1965

SE SW

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	99	99
Sandstone	101	200

USE A 2ND SHEET IF NEEDED

4 in. to 99 ft. Depth
___ in. to ___ ft. Depth

Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe? Yes [X] No [ ]

8 SCREEN: ---
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
20 ft. below land surface

10 PUMPING LEVEL below land surface
70 ft. after 1 hrs. pumping 30 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: ---
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[X] Pitless Adapter [X] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [ ] Bentonite [X] SDG
Depth: From 0 ft. to 99 ft.

14 Nearest Source of possible contamination
75 feet NW Direction City Sewer Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name Red Jacket
Model Number R50N1 9BC HP ½ Volts 220
Length of Drop Pipe 63 ft. capacity 10 G.P.M.
Type: [X] Submersible
[ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO BY DRILLER, ITEM NO.
*CORRECTED BY
**ADDITION BY
ELEVATION 633
DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Matamoras Well Drilling — 0397
REGISTERED BUSINESS NAME — REGISTRATION NO.

Address 1200 Imlay City Rd., Lapeer

Signed Mary Helen Karch — Date 4-4-74
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Red Clay	30	30
Blue Clay	100	130
Blue Clay & Gravel	38	168
Sand & Stone	52	220

4 WELL DEPTH: (completed) 220 ft. Date of Completion 10-25-1967

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Threaded ☐ Welded ☒
Diam. 2 in. to ___ ft. Depth
___ in. to ___ ft. Depth
Height: Above/Below surface 1 ft.
Weight 3.75 lbs/ft.
Drive Shoe? Yes ☒ No ☐

8 SCREEN:
Type: None Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
48 ft. below land surface

10 PUMPING LEVEL below land surface
75 ft. after 5 hrs. pumping 12 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

Pipe left 1 ft above Grade

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

Septic Tank not Installed.

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☐ 12" Above Grade

13 GROUTING:
Well Grouted? ☐ Yes ☐ No
Material: ☐ Neat Cement ☐ ___
Depth: From ___ ft. to ___ ft.

14 SANITARY:
Nearest Source of possible contamination
___ feet ___ Direction ___ Type
Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: None
Manufacturer's Name ___
Model Number ___ HP ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

ADDED INFO. BY DRILLER, ITEM No.
CORRECTED BY: [redacted]
[redacted]

16 Remarks, elevation, source of data, etc.
Septic Tank not installed [illegible]

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[illegible] REGISTERED BUSINESS NAME ___ REGISTRATION NO.
Address 1307 [illegible]
Signed [illegible] AUTHORIZED REPRESENTATIVE Date 10 25 1967

D67D 100M 6-66

MAY 1968 GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO JUL 3 1984

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

W. ER WELL AND PUMP RECO

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

1 LOCATION OF WELL

[redacted]

NON-RESPONSIVE

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Soft Clay	50	50
Sand	20	70
Clay	34	104
Sand rock	154	160

RECEIVED
Mich. Dept. of Public Health
JUN 4 1984
Bureau of Sanitary Engineering
Occupational Health Section

USE A 2ND SHEET IF NEEDED

5 in. to 108 ft. depth
in. to ft. depth
Grouted Drill Hole Diameter
7 1/8 in. to 108 ft. depth
in. to ft. depth

Surface 1 ft.
Weight lbs./ft.
Drive Shoe ☐ Yes ☐ No

8 SCREEN: ☑ Not Installed
Type Diameter
Slot/Gauze Length
Set between ft. and ft.
FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen ft. Other

9 STATIC WATER LEVEL
ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface
A 1-160 ft. after 1 hrs. pumping at 30+ G.P.M.
ft. after hrs. pumping at G.P.M.

11 WELL HEAD COMPLETION: ☑ Pitless adapter ☑ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☑ Yes From 1 to 108 ft.
☐ Neat cement ☐ Bentonite ☑ Other Cuttings
No. of bags of cement Additives EZ Mud

13 Nearest source of possible contamination
Type Sewage Distance 150 ft. Direction SW
Well disinfected upon completion? ☑ Yes ☐ No

14 PUMP: ☐ Not Installed ☑ Pump Installation Only
Manufacturer's name Wetrol
Model number 105S2B3 HP 1/2 Volts 220
Length of Drop Pipe 60 ft. capacity 10 G.P.M.
TYPE ☑ Submersible ☐ Jet
PRESSURE TANK
Manufacturer's name Amtrol
Model number 203 Capacity 12.12 Gallons

15. Remarks, elevation, source of data, etc.
ADDED INFO BY DRILLER, ITEM NO.
*CORRECTED BY
**ADDITION BY
ELEVATION
DEPTH TO FORM

16. WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief

[illegible] Well Drill 1-07
REGISTERED BUSINESS NAME REGISTRATION NO.
Address [illegible]
Signed Edward Birkmeier Date 1-27-84
AUTHORIZED REPRESENTATIVE

D67d (Rev. 10-80)

SITE DESCRIPTION/EXECUTIVE SUMMARY

Site Name and Location

Albar Industries
780 Whitney Dr.
Lapeer, Michigan 48446

County: Lapeer
Michigan Code Number: 44-07N-10E-05CB
DNR District: Saginaw
EPA ID Number:

SAS Score/Screen No.: 07

Albar Industries, located in an industrial park on the eastern edge of Lapeer, decorates plastic components for the automotive industry. The paint thinner used at this facility is a blend of methylethyl ketone (MEK) and toluol. The thinner is used in cleaning the masks in the painting operations. Spent thinners are recycled by Lapeer Paint Manufacturing, an adjacent business also owned by Albar. The thinners are recovered by distillation and reused while the still bottoms are manifested as a D001 waste.

On May 6, 1986, a RCRA inspection revealed that waste materials had leaked from drums to an asphalt pad in the container storage area. Because the pad was not properly diked, a 4 foot by 5 foot area of soils immediately adjacent to the pad were stained. A soil sample revealed low levels of MEK.

The drum container storage area has been diked and reconstructed to comply with RCRA. In February, 1987, the stained soils were removed to a depth of two feet. There was no visible contamination remaining in the bottom of the excavation and no contaminants were detected using an H-Nu (the pre-agreed evaluation method) calibrated against on-site solvent drums. The soil samples were tested after the capped sample was heated for 40 minutes. Because a clay layer, ranging from 4 to 100 feet in thickness (beginning at a depth of 2 to 7 feet below grade) underlies the area, groundwater contamination is not suspected. Due to the soil removal, reconstruction of the container area and future compliance review under RCRA, this site no longer meets the definition of an environmental contamination site under Act 307 and is delisted from the FY 1989 MERA Priority Lists.

Date

Compliance Section Supervisor_____ _____

Remedial Action Section Supervisor_____ _____

Environmental Response Division Chief_____ _____

Date of Previous Summary: 9/17/86 Current Date: 1/24/88
Previous Author: G. Carpenter Author: G. Carpenter
Site Assessment Unit
Environmental Response Division
Michigan Department of Natural Resources

ALBAR INDUSTRIES

POPULATION

(1) mile Radius

(.9)(1549.5) + (.1)(166.775)

= 1411.2275 x 3.14 = 4431.3

(2) mile Radius

(.4)(1549.5) + (.5)(166.775) + (.1)(104.252)

= 713.613 x 12.6 = 8991.52

(3) mile Radius

(.15)(104.252) + (.20)(1549.5) + (.65)(166.775)

= 433.94 x 28.3 = 12,280.55

(4) mile Radius

(.80)(166.775) + (.15)(104.252) + (.5)(1549.5)

= 923.808 x 50.3 = 46,467.532

Robin Reffigee

9-10-86

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD

MICHIGAN DEPARTMENT OF

NON-RESPONSIVE

[redacted]

2 FORMATION	DEPTH OF STRATUM	DEPTH TO BOTTOM OF STRATUM
RED CLAY	6	6
SAND	14	20
BLUE CLAY	78	98
CLAY AND SAND	22	120
SAND STONE CUT OUT	70	190

[illegible] in. to [illegible] ft. Depth | Weight [illegible] lbs. ft.
[illegible] in. to ____ ft. Depth | Drive Shoe? Yes ☒ No ☐

8 SCREEN:
Type [illegible] Grade ____
Slot Gauge ____ Length ____
Set between ____ ft. and ____ ft.
Fittings:

9 STATIC WATER LEVEL
[illegible] ft. below land surface

10 PUMPING LEVEL below land surface
[illegible] ft. after [illegible] hrs. pumping ____ g.p.m.
____ ft. after ____ hrs. pumping ____ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron Fe ____ Chlorides Cl ____
Hardness ____ Other ____

12 WELL HEAD COMPLETION: ☒ In Approved Pit
☐ Pitless Adapter ☐ Off Above Grade

13 Well Grouted? ☐ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☐ ____
Depth: From ____ ft. to ____ ft.

14 Nearest Source of possible contamination
[illegible] feet ____ Direction [illegible] Type
Well [illegible] ☐ Yes ☐ No

15 [illegible] ☐ Not [illegible]
[illegible] Name [illegible]
[illegible]

GEOLOGICAL SURVEY

GEOLOGICAL SURVEY SAMPLE No.

MAY 02 1974

WATER WELL RECORD

ACT 294 PA 1965

SE SW

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	99	99
Sandstone	101	200

4 in. to 99 ft. Depth — Weight 11 lbs. ft.

in. to ft. Depth — Drive Shoe? Yes [X] No [ ]

8 SCREEN:

Type _____ Dia. _____

Slot Gauze _____ Length _____

Set between _____ ft. and _____ ft.

Installed:

9 STATIC WATER LEVEL

20 ft. below land surface

10 PUMPING LEVEL below land surface

72 ft. after 1 hrs. pumping 30 g.p.m.

_____ ft. after _____ hrs. pumping _____ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) _____ Chloride (Cl) _____

Hardness _____ Other _____

12 WELL HEAD COMPLETION: [ ] 1% Approved Pit

[X] 8 Meds Adapter [X] 20% Above Grade

13 Well Grouted? [X] Yes [ ] No

[ ] Neat Cement [ ] Sandpoint [X] 300

Depth: From 0 ft. to 99 ft.

14 Nearest Source of possible contamination

75 feet NW Direction City Sewer Type

Well is inflected upon completion [X] Yes [ ] No

15 Pump: [ ] Not installed

Manufacturer's Name [illegible]

[illegible]

[illegible]

To 1623

[illegible] 4-4-74

ALBAR INDUSTRIES

POPULATION

(1) mile Radius

$(.9)(1549.5) + (.1)(166.775)$

$= 1411.2275 \times 3.14 = 4431.3$

(2) mile Radius

$(.4)(1549.5) + (.5)(166.775) + (.1)(104.252)$

$= 713.613 \times 12.6 = 8991.52$

(3) mile Radius

$(.15)(104.252) + (.20)(1549.5) + (.65)(166.775)$

$= 433.94 \times 28.3 = 12,280.55$

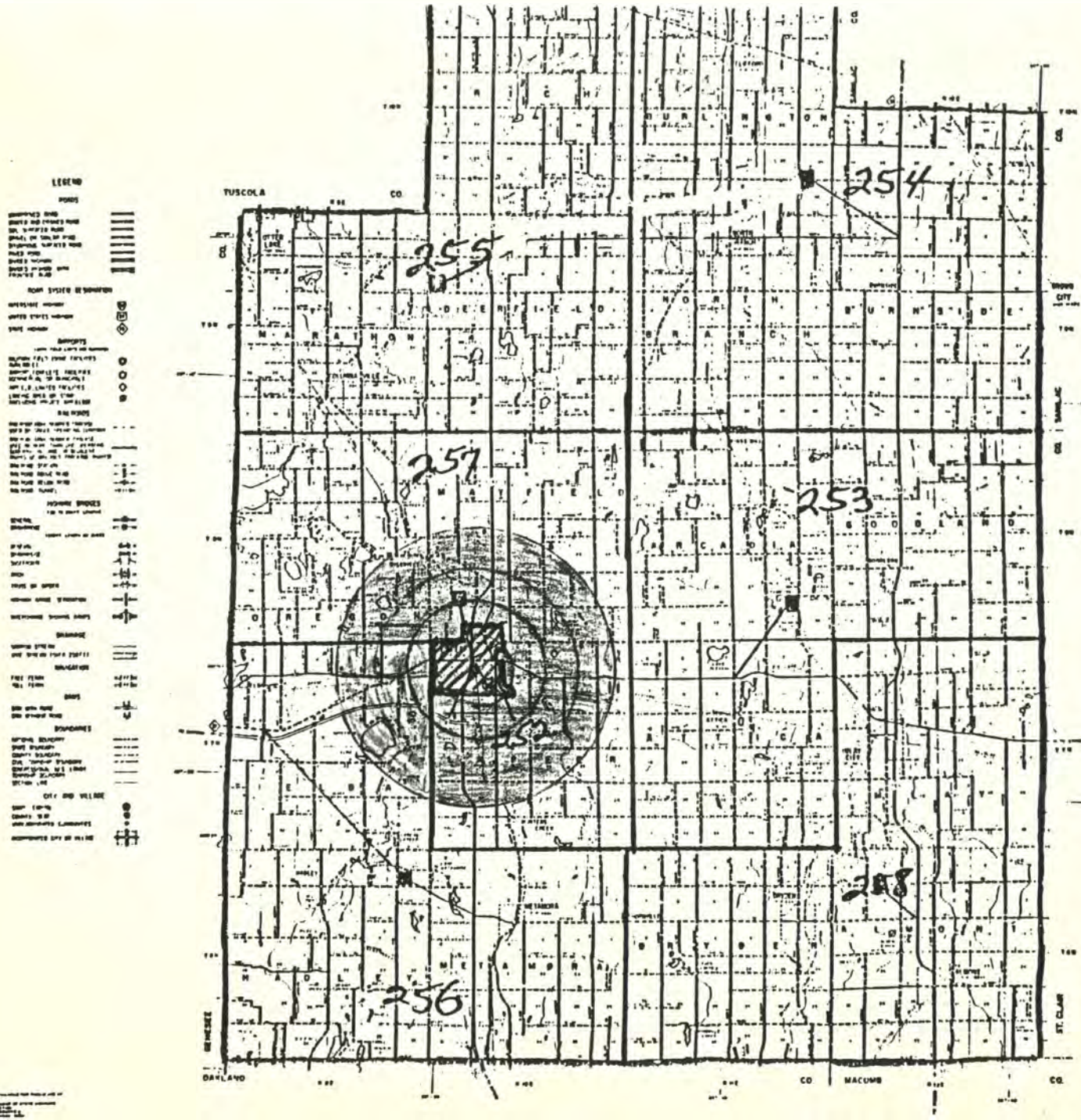
(4) mile Radius

$(.80)(166.775) + (.15)(104.252) + (.5)(1549.5)$

$= 923.808 \times 50.3 = 46,467.532$

Robin Reffigee

9-10-86



ALBAR IND.
9-10-80

252 = 1549.500
253 70.308
254 = 48.095
255 = 95.81
256 = 104.233
257 = 166.175
258 = 108.567

GENERAL HIGHWAY M
LAPEER COUN
MICHIGAN
STATE HIGHWAY COMMISSION
DEPARTMENT OF STATE HIGHWAYS
HIGHWAY PLANNING SURVE

LAPEER COUNTY

MDNR-HWD are not satisfied with results of the soil samples. They will conduct their own qualitative analysis. ~~They cannot perform a quantitative analysis because they do not have the necessary equipment.~~

4) Company is cooperative

5) Inspector (Jim Sygo) believes that their (Albar Ind) detection may not be low enough to detect the hazardous chemicals — HWD will perform their own analysis of the soil.

Date: 2/4/88

To: Jim Sygo, Waste Management Division Supervisor, Saginaw District Office

From: George Carpenter, Site Assessment Unit, Environmental Response Division Carp

Albar Delisting From Act 307 Lists

As we discussed during my visit to the Saginaw District Office yesterday, I cannot delist the Albar Site until I have some documentation that they complied with your cleanup instructions. If you could write a letter to your file, with a copy to me, that Albar had submitted and you had approved a cleanup plan for the soils removal, that HNu readings were agreed upon as a sufficient monitor for level of cleanup, and that the soils removal had proceeded according to the plan so that the required level of response was met, I can probably get the site delisted. In my delisting Site Description, I will mention that the company replaced and improved the containment and that future control will be managed through applicable RCRA and Act 64 regulations. Let me know if this meets your approval. I will need to receive the copy by 2/10 in order to get the site delisted this year.

PAGE ____ OF ____

DEPARTMENT OF NATURAL RESOURCES
HAZARDOUS WASTE DIVISION

STAFF REPORT

DAY: S | M | T | W | TH | F | S

- [ ] Complaint Inspection
- [ ] Compliance Inspection
- [ ] Construction Inspection
- [ ] Permitting Inspection
- [ ] PEAS Investigation
- [ ] PCB Report/Complaint
- [ ] Sampling Inspection
- [ ] Telephone Call
- [ ] Meeting Notes
- [ ] Other _____

WEATHER	Brite Sun	Clear	Overcast	Rain	Snow
TEMP	To 32	32-50	50-70	70-85	85 up
WIND	Still	Moder.	High	Report No.	
HUMIDITY	Dry	Moder.	Humid.		

- [x] Act 64 _____
- [ ] Act 136 _____
- [ ] Act 245 _____
- [ ] RCRA Follow-up

DATE: 2/23/87 TIME: 2:00 PM

COMPANY/FACILITY: Abbar Industries Inc

FACILITY NO.: MID 98118 9020

ADDRESS/LOCATION: 780 Whitney Dr Lapeer Mi

STAFF: Sygo

PARTICIPANTS: //

Larry Weinman - plant manager was not available - I contacted Maintenance Manager Gary Jock who directed me to the site of the clean up. Approximately 2 drums of soil had been removed. The drums were scanned with an H-Nu with no deflection indicated.

Snow was cleared from the 4x5x2 excavation site and a bore was used to penetrate the soil. Frozen soil were encountered so a hammer & a steel stake were used to penetrate the soil in 4 areas. The H-Nu showed no deflection. Soils were chipped from the site and collected in a glass jar and allowed to thaw under the car heater while capped. The H-Nu was inserted into the jar after heating for 40 minutes. No deflection was noted. The H-Nu was checked against existing solvent drums at the back of the plant and deflected off scale.

Conclusion: Site had been adequately cleaned up, spills were small losses coming from the asphalt pad area and more than likely evaporated rather than penetrating the soils beyond 2 feet. Adequate samples could not be obtained due to condition of soils.

SIGNED [signature]

Distribution: Original - District/Lansing _____ File.
1st copy - Lansing _____ File/District
2nd copy ~~Inspector~~ [illegible]

R-5114
Rev 1/86

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

LOCATION OF WELL

County | Township Name | Fraction NE SW | Section Number | Town Number | Range Number

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Sand	10	10
Blue clay	61	71
Shale	12	83
Sandstone	38	121

USE A 2ND SHEET IF NEEDED

___ in. to 71 ft. Depth | Weight 11 lbs./ft.

___ in. to ___ ft. Depth | Drive Shoe? Yes [X] No [ ]

8 SCREEN: -------

Type: ___ Dia.: ___

Slot/Gauze ___ Length ___

Set between ___ ft. and ___ ft.

Fittings:

9 STATIC WATER LEVEL

14 ft. below land surface

10 PUMPING LEVEL below land surface

42 ft. after 3 hrs. pumping 30 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: ------

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit

[X] Pitless Adapter [X] 12" Above Grade

13 Well Grouted [X] Yes [ ] No

[ ] Neat Cement [ ] Bentonite [X] SDG

Depth: From 0 ft. to 71 ft.

14 Nearest Source of possible contamination none

___ feet ___ Direction ___ Type

Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed

Manufacturer's Name Red Jacket

Model Number R50N1 9BC HP ½ Volts 220

Length of Drop Pipe 42 ft. capacity 10 G.P.M.

Type: [X] Submersible

[ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO BY DRILLER, ITEM ~~NO.~~

*CORRECTED BY

**ADDITION BY

ELEVATION

DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

METAMORA WELL DRILLING 0397

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1200 Imlay City Rd., Lapeer

Signed William Kurek Date 11-11-77

AUTHORIZED REPRESENTATIVE

D67d 1000 (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No.

NOV 22 1978

WATER WELL RECORD

ACT 294 PA [illegible]

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
gravel & sand dry	10	10
sand dry	38	48
water sand	23	71

4 in. to 65 ft. Depth | Weight 11 lbs./ft.
___ in. to ___ ft. Depth | Drive Shoe? Yes [X] No [ ]

8 SCREEN:
Type: slotted Dia.: 4"
Slot/Gauze 10/60 Length 5'
Set between 66 ft. and 71 ft.
Fittings: lead packer

9 STATIC WATER LEVEL
38 ft. below land surface

10 PUMPING LEVEL below land surface
___ ft. after 1½ hrs. pumping 3500 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[X] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [ ] Yes [X] No
[ ] Neat Cement [ ] Bentonite [ ] ___
Depth: From ___ ft. to ___ ft.

14 Nearest Source of possible contamination
50 feet S Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name Burks
Model Number SN13D HP 2 Volt 230
Length of Drop Pipe 54 ft. capacity 1855 G.P.M.
Type: [X] Submersible 60 psi
[ ] Jet [ ] Reciprocating

RECEIVED
SEP 5 1978
KENT COUNTY
HEALTH DEPT.

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

[illegible] DRILLER, ITEM NO.
[illegible]
[illegible]
[illegible]
TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Stovall Well Drilling Co. 0761
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 2132 4 Mile Rd. N.E.

Signed [signature] Date 7/1/78
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. ______

APR 0 6 1972

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Surface Clay, yellow	10'	10'
Clay, blue	30'	40'
Sand, course	12'	52'
Clay, blue, & gravel mixed	39'	91'
Sand rock, white	49'	140'

USE A 2ND SHEET IF NEEDED

2 in. to 91 ft. Depth | Weight 3.65 lbs./ft.
____ in. to ____ ft. Depth | Drive Shoe? Yes [X] No [ ]

8 SCREEN:
Type: ______ Dia.: ______
Slot/Gauze ______ Length ______
Set between ______ ft. and ______ ft.
Fittings:

9 STATIC WATER LEVEL
4 ft. below land surface

10 PUMPING LEVEL below land surface
35 ft. after 3 hrs. pumping 14 g.p.m.
______ ft. after ____ hrs. pumping ______ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ______ Chlorides (Cl) ______
Hardness ______ Other ______

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[XX] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [XX] Bentonite [ ] ______
Depth: From 1 ft. to 91 ft.

14 Nearest Source of possible contamination
50 feet S Direction Septic Type
Well disinfected upon completion [XX] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name Shetler
Model Number JE71 HP ½ Volts 110
Length of Drop Pipe 21 ft. capacity 7 G.P.M.
Type: [ ] Submersible
[XX] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY DRILLER, ITEM

CORRECTED BY

ADDITION BY

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Lyons Well Drilling — REGISTERED BUSINESS NAME
0032 — REGISTRATION NO.

Address G-8107 N. Dort Hwy. Mt. Morris, Michigan

Signed Earl L. Lyons — AUTHORIZED REPRESENTATIVE Date Jan. 1972

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

2 FORMATION	OF STRATUM	BOTTOM OF STRATUM
RED CLAY	15	15
CLAY - SAND LAYERS	105	120
ROCK - GRAVEL LAYERS	18	138
SANDSTONE	49	187

3 WELL DEPTH: (completed) 187 ft. Date of Completion 5/5/67

5 ☐ Cable tool ☑ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☑ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Diam. 2 in. to 138 ft. Depth; Threaded ☑ Welded ☐; ___ in. to ___ ft. Depth

Height: Above/Below surface ___ ft. Weight 3.75 lbs/ft. Drive Shoe? Yes ☑ No ☐

8 SCREEN: NC

Type: ___ Dia.: ___

Slot/Gauze ___ Length ___

Set between ___ ft. and ___ ft.

Fittings:

9 STATIC WATER LEVEL 8 ft. below land surface

10 PUMPING LEVEL below land surface 20 ft. after 2 hrs. pumping 20 g.p.m.

___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) ___ Chlorides (Cl) ___

Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☑ 12" Above Grade

13 GROUTING:

Well Grouted? ☑ Yes ☑ ~~No~~

Material: ☐ Neat Cement ☑ ~~thick heavy mud~~

Depth: From 0 ft. to 130 ft.

14 SANITARY:

Nearest Source of possible contamination

50 feet n Direction septic Type

Well disinfected upon completion ☐ Yes ☑ No

15 PUMP:

Manufacturer's Name RAPIDAYTON

Model Number 5X2 53A HP ½

Length of Drop Pipe 0 ft. capacity 300 G.P.M. 10

Type: ☐ Submersible ☐ ___ ☑ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY ORIGINAL ITEM NO.

*CORRECTED BY: 7

**ADDITION BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

JAMES C. WILCOX WELL DRILLING

REGISTERED BUSINESS NAME

0185

REGISTRATION NO.

Address 4760 N. LAPEER Rd Col-Mic.

Signed James C. Wilcox Date 5/14/69

AUTHORIZED REPRESENTATIVE

D67D 100M 6-66

GEOLOGICAL SURVEY SAMPLE No. [ ]

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL SW SW

NON RE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Red Clay	20	20
Blue Clay	80	100
Clay & Stone	40	140
White Sandstone	48	188

4 WELL DEPTH: (completed) 188 ft. Date of Completion 5-19-67

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Threaded ☒ Welded ☐ Height: (Above) Below surface 1 ft.
Diam. 2 in. to 140 ft. Depth Weight 3.75 lbs/ft.
___ in. to ___ ft. Depth Drive Shoe? Yes ☒ No ☐

8 SCREEN: NONE
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
13 ft. below land surface

10 PUMPING LEVEL below land surface
13 ft. after 5 hrs. pumping 16 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: Not Known
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☒ 12" Above Grade

13 GROUTING:
Well Grouted? ☐ Yes ☒ No
Material: ☐ Neat Cement ☐ ___
Depth: From ___ ft. to ___ ft.

14 SANITARY:
Nearest Source of possible contamination
70 feet N Direction Septic tank Type
Well disinfected upon completion ☐ Yes ☒ No

15 PUMP: NOT INSTALLED
Manufacturer's Name ___
Model Number ___ HP ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY DRILLER, ITEM NO.

CORRECTED BY:

ADDITION BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Charles P. Wilcox — REGISTERED BUSINESS NAME
0377 — REGISTRATION NO.

Address 3333 N. Saginaw Rd. Saginaw Mich.

Signed Charles P. Wilcox — AUTHORIZED REPRESENTATIVE
Date 5/20/67

D67D 100M 6-66

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD

ACT 294 PA 1965

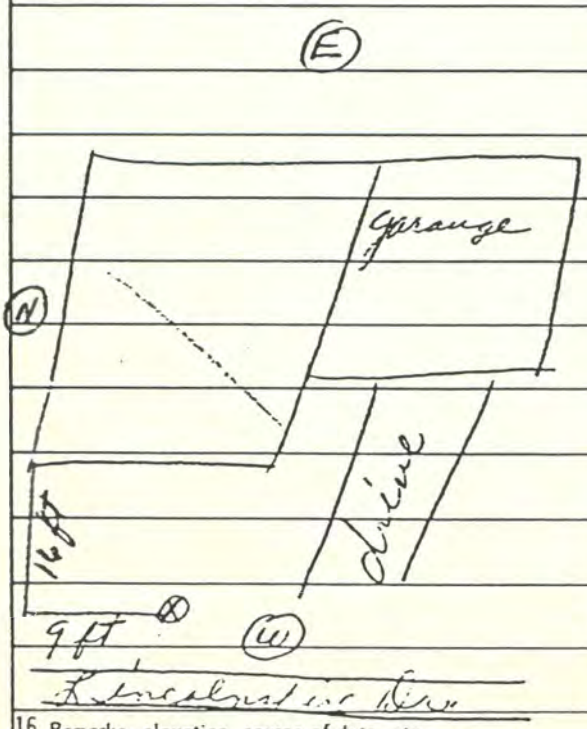
MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

Lot 4 of Locks Estates Sub

NON-RESPONSIVE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	8	8
Sand & Clay mixed	30	38
Clay	34	72
Rock Pock gravel	28	100
White Sand Stone	2	102
White Sand Stone	43	145



4 WELL DEPTH: (completed) 145 ft. Date of Completion Dec 24-66

5 ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Diam. 2 in. to 102 ft. Depth; Threaded ☒ Welded ☐; ___ in. to ___ ft. Depth; Height: Above/Below surface ___ ft.; Weight 3.75 lbs/ft.; Drive Shoe? Yes ☒ No ☐

8 SCREEN:
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
18 ft. below land surface

10 PUMPING LEVEL below land surface
40 ft. after 2 hrs. pumping 600 gph g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☐ Pitless Adapter ☒ 12" Above Grade

13 GROUTING:
Well Grouted? ☐ Yes ☒ No
Material: ☐ Neat Cement ☐ ___
Depth: From ___ ft. to ___ ft.

14 SANITARY:
Nearest Source of possible contamination
15 feet W Direction Sump Pump Type
Well disinfected upon completion ☐ Yes ☒ No

15 PUMP: Not Installed
Manufacturer's Name ___
Model Number ___ HP ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO. BY DRILLER, ITEM NO.

*CORRECTED BY:

**ADDITION BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

REGISTERED BUSINESS NAME ___ REGISTRATION NO. 0217

Address 7321 Lewis Rd. Mt. Morris

Signed [signature] Date ___
AUTHORIZED REPRESENTATIVE

D67D 100M 6-66

GEOLOGICAL SURVEY SAMPLE No.

WATER WELL RECORD
ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Surface clay	35'	35'
Sand-fine-water bearing	25'	60'
Gravel-water bearing	20'	80'
Clay with gravel	46'	126'
Gray sand rock	26'	152'

USE A 2ND SHEET IF NEEDED

2 in. to 126 ft. Depth | Weight 3.65 lbs./ft.
in. to ft. Depth | Drive Shoe? Yes [X] No [ ]

8 SCREEN:
Type: Dia.:
Slot/Gauze Length
Set between ft. and ft.
Fittings:

9 STATIC WATER LEVEL
15 ft. below land surface

10 PUMPING LEVEL below land surface
40 ft. after 3 hrs. pumping 15 g.p.m.
ft. after hrs. pumping g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) Chlorides (Cl)
Hardness Other

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[X] Pitless Adapter [ ] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [X] Bentonite [ ]
Depth: From 0 ft. to 126 ft.

14 Nearest Source of possible contamination
55 feet S Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name Shetler
Model Number JE 67 HP ½ Volts 110
Length of Drop Pipe 42 ft. capacity 7 G.P.M.
Type: [ ] Submersible
[X] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

*ADDED BY ORDER, ITEM NO.

*CORRECTED BY:

**ADDITION BY:

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Lyons Well Drilling — REGISTERED BUSINESS NAME
0032 — REGISTRATION NO.

Address 1155 Paul St. Mt. Morris, Michigan

Signed Earl Lyons — AUTHORIZED REPRESENTATIVE
Date Nov. 1, 1969

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY SAMPLE No.

FEB 01 1974

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	60	60
Clay & stones	38	98
Shale & Sandstone	62	160

USE A 2ND SHEET IF NEEDED

4 in. to 98 ft. Depth
___ in. to ___ ft. Depth

Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe? Yes [X] No [ ]

8 SCREEN: ----------
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
15 ft. below land surface

10 PUMPING LEVEL below land surface
84 ft. after 1 hrs. pumping 20 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: ------
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[X] Pitless Adapter [X] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [ ] Bentonite [X] SDG
Depth: From 0 ft. to 98 ft.

14 Nearest Source of possible contamination
100 feet N Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name Red Jacket
Model Number R50N1 9BC HP ½ Volts 220
Length of Drop Pipe 63 ft. capacity 10 G.P.M.
Type: [X] Submersible
[ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.

ADDED INFO BY DRILLER, ITEM NO.
CERTIFIED BY
VERIFICATION BY
ELEVATION
DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

Metamora Well Drilling 0397
REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1200 Imlay City Rd., Lapeer

Signed Thery Allen Yurek Date 1-21-74
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY NO. JUL 3 1984

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

W. ER WELL AND PUMP RECO

PART 127 ACT 368 P.A. 1978

PERMIT NUMBER

LOCATION OF WELL

NON-RESPONSIVE

[redacted]

FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
[illegible]	50	50
[illegible]	20	70
Clay	34	104
[illegible]	154	120

Weight ___ lbs/ft

Drive Shoe ☐ Yes ☐ No

OPEN ☑ Not installed

Type ___ Diameter ___

Not Gauge ___ Length ___

Set between ___ ft and ___ ft

FITTINGS ☐ K Packer ☐ Cast Packer ☐ Bremer Check

☐ Work above screen ___ ft Other ___

STATIC WATER LEVEL

___ ft below land surface ☐ Flow

PUMPING LEVEL (below land surface)

[illegible] 1 hrs. Pumping at 3 ft G.P.M.

___ ft after ___ hrs. Pumping at ___ G.P.M.

WELL HEAD COMPLETION ☑ [illegible] ☑ Above grade ☐ Basement [illegible] ☐ Approved pit

WELL GROUTED ☐ [illegible] ☑ [illegible] 1 to 1 ft

☐ [illegible] ☑ [illegible]

No. of Sacks of Cement ___ Additives [illegible]

Nearest source of possible contamination

Type [illegible] Distance 1[illegible] Direction SW

[illegible] ☑ ☐ No

[illegible]

GEOLOGICAL SURVEY SAMPLE No. 22-4

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

DEC 02 1969

1 LOCATION OF WELL SW - SW - SE

NON-RESPONSIVE

Top Soil	1	2
Clayey Gravel	2	130
Gravel	130	137

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Jetted ☐ Bored ☐ ___

6 USE: ☒ Domestic ☐ Public Supply ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ ___

7 CASING: Threaded ☐ Welded ☐ Height: Above/Below surface ___ ft.
Diam. 4 in. to ___ ft. Depth Weight ___ lbs/ft.
___ in. to ___ ft. Depth Drive Shoe? Yes ☐ No ☐

8 SCREEN:
Type: Brass Dia.: 3
Slot/Gauze 12 Length 3
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
60 ft. below land surface

10 PUMPING LEVEL below land surface
___ ft. after ___ hrs. pumping ___ g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___

12 WELL HEAD COMPLETION: ☐ In Approved Pit ☒ Pitless Adapter ☐ 12" Above Grade

13 GROUTING:
Well Grouted? ☒ Yes ☐ No
Material: ☐ Neat Cement ☐ ___
Depth: From ___ ft. to ___ ft.

14 SANITARY:
Nearest Source of possible contamination
50 feet ___ Direction Sep Tank Type
Well disinfected upon completion ☐ Yes ☐ No

15 PUMP:
Manufacturer's Name ___
Model Number ___ HP ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: ☐ Submersible ☐ ___ ☐ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

REGISTERED WELLDRILLER NAME ___ REGISTRATION NO. ___

Address ___

Signed ___ Date ___
AUTHORIZED REPRESENTATIVE

C670 100M 5-66

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. [redacted]

32-2

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

[redacted]

NON-RESPONSIVE

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
San & gravel mixed	100	100
Clay	244	344
Sandstone	51	395

4 in. to 344 ft. Depth
___ in. to ___ ft. Depth

Surface 1 ft.
Weight 11 lbs./ft.
Drive Shoe? Yes [X] No [ ]

8 SCREEN: ---------
Type: ___ Dia.: ___
Slot/Gauze ___ Length ___
Set between ___ ft. and ___ ft.
Fittings:

9 STATIC WATER LEVEL
120 ft. below land surface

10 PUMPING LEVEL below land surface
150 ft. after 2 hrs. pumping 40 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million: ------
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[ ] Pitless Adapter [X] 12" Above Grade

13 Well Grouted? [X] Yes [ ] No
[ ] Neat Cement [ ] Bentonite [X] SDG
Depth: From 0 ft. to 344 ft.

14 Nearest Source of possible contamination
75 feet W Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [ ] Not installed
Manufacturer's Name ___
Model Number ___ HP ___ Volts ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: [ ] Submersible
[ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.
[illegible]
CORRECTED BY
[illegible]
ELEVATION
DEPTH TO [illegible]

17 WATER WELL CONTRACTOR'S CERTIFICATION:
[illegible]

Signed [signature] Date 11-4-74
AUTHORIZED REPRESENTATIVE

[illegible] 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No. 32-3

MAR 08 1978

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

County | Township-Town | Section | Section Number | Town Number | Range Number

NON-RESPONSIVE

[redacted]

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Top Soil	2	2
Red Clay	4	6
Sand	12	18
Blue Clay	58	76
Water B. Sand	8	84

4 in. to 80 ft. Depth
3 in. to 84 ft. Depth

Surface ___ ft.
Weight 11 lbs./ft.
Drive Shoe? Yes [X] No [ ]

8 SCREEN:
Type: S.S. Dia.: 3"
Slot ~~Gauze~~ 10 Length 4'
Set between 80 ft. and 84 ft.
Fittings: 12 x 3 NIP K Packer 3" Plug.

9 STATIC WATER LEVEL
50 ft. below land surface

10 PUMPING LEVEL below land surface
___ ft. after ___ hrs. pumping 20 g.p.m.
___ ft. after ___ hrs. pumping 20 g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
UNTAXED
Hardness ___ Other ___

12 WELL HEAD COMPLETION: [ ] In Approved Pit
[ ] Pitless Adapter [X] 12" Above Grade

13 Well Grouted? [ ] Yes [X] No
[ ] Neat Cement [ ] Bentonite [ ] ___
Depth: From ___ ft. to ___ ft.

14 Nearest Source of possible contamination
63 feet S.W Direction Septic Type
Well disinfected upon completion [X] Yes [ ] No

15 PUMP: [X] Not installed
Manufacturer's Name ___
Model Number ___ HP ___ Volts ___
Length of Drop Pipe ___ ft. capacity ___ G.P.M.
Type: [ ] Submersible
[ ] Jet [ ] Reciprocating

16 Remarks, elevation, source of data, etc.
[illegible] Finish Hole
[illegible]
ABANDON BY
ELEVATION
DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[illegible] Kinsey 1640
REGISTERED BUSINESS NAME REGISTRATION NO.
[illegible]
Signed [illegible] Date Dec. 20 77
AUTHORIZED REPRESENTATIVE

D67a DDM Rev. 12-68

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY SAMPLE No.

MAR 28 1984

WATER WELL RECORD

ACT 294 PA 1965

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

1 MILE

2 FORMATION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	7	7
Clayed Gravel	38	45
Gravel	3	48
Clayed Gravel	30	78
Gravel	8	86

2 in. to 82 ft. Depth
___ in. to ___ ft. Depth

Surface 1 ft.
Weight 3.75 lbs./ft.
Drive Shoe? Yes ☑ No ☐

8 SCREEN:
Type: Stainless Dia.: 1¼
Slot/Gauze Slot Length 42
Set between 82 ft. and 86 ft.
Fittings: 3 Ft. 1¼ Tail & 2 Couplings

9 STATIC WATER LEVEL
50 ft. below land surface

10 PUMPING LEVEL below land surface
80 ft. after 2 hrs. pumping 20 g.p.m.
___ ft. after ___ hrs. pumping ___ g.p.m.

11 WATER QUALITY in Parts Per Million:
Iron (Fe) ___ Chlorides (Cl) ___
Hardness ___ Other Unknown

12 WELL HEAD COMPLETION: ☐ In Approved Pit
☒ Pitless Adapter ☐ 12" Above Grade

13 Well Grouted? ☒ Yes ☐ No
☐ Neat Cement ☒ Bentonite ☐
Depth: From 0 ft. to 82 ft.

14 Nearest Source of possible contamination
54 feet W Direction Septic Type
Well disinfected upon completion ☒ Yes ☐ No

15 PUMP: ☐ Not installed
Manufacturer's Name [illegible]
Model Number [illegible] HP 1 Volts [illegible]
Length of Drop Pipe [illegible] ft. capacity 7 G.P.M.
Type: ☐ Submersible
☒ Jet ☐ Reciprocating

16 Remarks, elevation, source of data, etc.

[illegible]

17 WATER WELL CONTRACTOR'S CERTIFICATION:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

[illegible]
REGISTERED BUSINESS NAME REGISTRATION NO.

Address [illegible]

Signed [illegible] Date 10/1/81
AUTHORIZED REPRESENTATIVE

D67d 100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

GEOLOGICAL SURVEY NO AUG 16 1982

WATER WELL AND PUMP RECORD

PART 127 ACT 368, P.A. 1978

PERMIT NUMBER

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION DESCRIPTION	THICKNESS OF STRATUM	DEPTH TO BOTTOM OF STRATUM
Clay	30	30
Gravel	35	65
Clay	50	115
Water Bearing Water	12	127'

3" in. to 123 ft. depth
in. to ft. depth
Grouted Drill Hole Diameter
7/8 in. to 123' ft. depth
in. to ft. depth

Weight lbs./ft.
Drive Shoe ☐ Yes ☐ No

8 SCREEN ☐ Not Installed
Type Johnson Diameter 2"
Slot/Gauze 18 Length 4'
Set between 123' ft. and 127' ft.
FITTINGS ☒ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen ft. Other

9 STATIC WATER LEVEL
100' ft. below land surface ☐ Flow

10 PUMPING LEVEL below land surface
120' ft. after 1 hrs. pumping at 20 G.P.M.
ft. after hrs. pumping at G.P.M.

11 WELL HEAD COMPLETION ☐ Pitless adapter ☒ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☒ Yes From 0 to 123' ft.
☐ Neat cement ☒ Bentonite ☐ Other
No. of bags of cement Additives

13 Nearest source of possible contamination
Type Septic Distance 75' ft. Direction W.
Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP ☒ Not Installed ☐ Pump Installation Only
Manufacturer's name
Model number HP Volts
Length of Drop Pipe ft. capacity G.P.M.
Type ☐ Submersible ☐ Set
PRESSURE TANK
Manufacturer's name
Model number

15 Remarks, elevation, source of data, etc.
ADDED [illegible] TRAILER, ITEM [illegible]
[illegible]
[illegible]
ELEVATION
DEPTH TO ROCK

16 WATER WELL CONTRACTOR'S CERTIFICATION
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
[illegible]
REGISTERED BUSINESS NAME REGISTRATION NO.
Address 41028 [illegible] St. 03 [illegible]
Signed [illegible] Date 6-30-82
AUTHORIZED REPRESENTATIVE

D67d (Rev. 10-80)

GEOLOGICAL SURVEY COPY

GEOLOGICAL SURVEY NO.

MICHIGAN DEPARTMENT OF PUBLIC HEALTH

WATER WELL AND PUMP RECORD

PERMIT NUMBER

1 LOCATION OF WELL

NON-RESPONSIVE

[redacted]

2 FORMATION DESCRIPTION	OF STRATUM	BOTTOM OF STRATUM
Brown Clay	35'	35'
Clay & Gravel	62'	97'
Soft Gray Shale	43'	140'
Hard Brown Limestone	10'	150'
Sandstone	20'	170'
Sandstone (Mixed Course Gravel)	13'	183'

Grouted Drill Hole Diameter
____ in. to ____ ft. depth
8 in. to 149 ft. depth
____ in. to ____ ft. depth

Weight 2.12 lbs./ft.

Drive Shoe ☐ Yes ☒ No

8 SCREEN: ☒ Not Installed

Type ____ Diameter ____

Slot/Gauze ____ Length ____

Set between ____ ft. and ____ ft.

FITTINGS: ☐ K-Packer ☐ Lead Packer ☐ Bremer Check

☐ Blank above screen ____ ft. Other ____

9 STATIC WATER LEVEL:

54 ft. below land surface ☐ Flow

10 PUMPING LEVEL: below land surface

180 ft. after 1 hrs. pumping at 30 G.P.M.

____ ft. after ____ hrs. pumping at ____ G.P.M.

11 WELL HEAD COMPLETION: ☒ Pitless adapter ☐ 12" above grade ☐ Basement offset ☐ Approved pit

12 WELL GROUTED? ☐ No ☒ Yes From 35 to 97 ft.

☐ Neat cement ☒ Bentonite ☐ Other ____

No. of bags of cement ____ Additives 1 bag

13 Nearest source of possible contamination

Type S. Tank Distance 60 ft. Direction S

Well disinfected upon completion? ☒ Yes ☐ No

14 PUMP ☐ Not Installed ☐ Pump Installation Only

Manufacturer's name Red Jacket

Model number 75UM19BC HP 3/4 Volts 220

Length of Drop Pipe 100 ft. capacity 10 G.P.M.

TYPE ☒ Submersible ☐ Jet ____

PRESSURE TANK

Model number 42-gal

Model Number ____ Capacity ____ Gal.

USE ADDITIONAL PAPER IF NEEDED

15. Remarks: elevation, source of data, etc.

16. WATER WELL CONTRACTOR'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge and belief.

J. J. Frenzel Well Drilling # 79-0476

REGISTERED BUSINESS NAME REGISTRATION NO.

Address 1067 Lemans Rd. Fostoria

Signed Frank F. Frenzel Date 8/12/85

AUTHORIZED REPRESENTATIVE

Authority: Act 368 PA 1978
Compilation: Required
Penalty: Conviction of a violation of any provision is a

GEOLOGICAL SURVEY COPY

[illegible] in Marshall

[illegible]

[illegible], Okla.

[illegible]	Thickness (feet)	Depth (feet)
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	100
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]