

Site Name: Gramma's Kitchen, Monroe, Iowa

Brownfield Initial Site Screening (ISS)

Project Manager: Matt Culp

Date: 11/13/07

**CON 12-15
Doc #17950**

☒ **3931 - Phase II Assessment Review - standard**

Phase II submitted as part of standard real estate development, pre-purchase agreement, or other due diligence, not a part of a community grant project, or

☐ **3837 - Phase II Assessment – grant funded**

Phase II submitted as part of an EPA grant funded community-wide or targeted assessment project – see Mel Pins if questions on this determination

Location:

Latitude: 41.5174 Longitude: 93.1020
(Decimal Degree format)

County: Jasper

USGS Quadrant: Monroe

Site Size: <1

Site Dimension: ☒ Acres ☐ Square Feet
☐ Feet ☐ Square Miles ☐ Miles

Site Alias Name(s): none

Congressional District: 3rd

Grant Recipient Name, Address & Contact: NA

Current Owner & Address: Keith Roorda, PO Box 866 Monroe, Iowa 50170

Responsible Party Name(s) & Address, if different from current owner:
As above

Site Street Address or Tier, Range, Section & Subsections (if street address is unknown)
505 South Monroe Street (AKA Old Highway 163, Monroe, Iowa)

Directions to site: From Des Moines travel east on Highway 163 to Monroe. The site is located in town at the NW corner of Highway 14 and Monroe Street (AKA Old Highway 163).

Summarize the site history (past usages, past ownerships, wastes, known or suspected contamination pathways such as tanks, septic tank/tile field, lagoon, land applications, S.W. burial, etc)

No Phase I report was conducted for this site. As such, little is known about the site except from review of aerial photos. There are currently no buildings on the site. A service station was located on this site in the 1970's. The station had two above ground fuel storage tanks. The tanks are gone and the type(s) of fuel stored is unknown. Sample data indicate gasoline, diesel and waste oil. A storm water intake is located along the southeast boundary of the site but there is no apparent impact to that storm water line.

Briefly describe the site assessment that was conducted (number of borings, monitoring wells, number of samples, depth of soil samples and monitoring wells, analysis, etc.)

Site assessment was conducted in two steps. The initial report submitted sample data for just one soil boring TMW3 (sample data and boring log attached). Soil and ground water from this soil boring were analyzed for benzene, toluene, ethylbenzene, total xylenes, diesel and waste oil.

In a second assessment six additional soil borings were completed to depth of 15 feet in order to collect soil and ground water samples to better characterize conditions on the site. All soil samples were field screened with a Photovac 2020 photoionization detector (PID). The soil samples exhibiting the highest field screen values were submitted for lab analysis. All six soil borings were completed as monitoring wells (MW1-MW6) in order to collect ground water samples. Soil and ground water samples were tested for the presence of petroleum hydrocarbons by Iowa methods OA-1 and OA-2 for benzene, toluene, ethylbenzene, total xylenes (BTEX), diesel fuel and waste oil.

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

The BTEX compounds in soil are below Tier 1 standards with the exception of soil boring TMW3. In TMW3, both ethylbenzene and benzene exceed the Tier 1 standard. Ethylbenzene was detected at 16 mg/kg. The Tier 1 standard is 15 mg/kg. Benzene was detected at 0.553 mg/kg and the standard is 0.54 mg/kg.

In ground water, one or more of the BTEX contaminants were detected in each of the soil borings. Again, soil boring (TMW3) exhibited detections above the Tier 1 standards for all BTEX compounds, diesel fuel and waste oil. The concentration of benzene at TMW3 exceeded 290 ug/L, which is the standard concentration for potential ingestion, exposure to water line and surface water exposure pathways. Maximum concentration detections were observed in TMW3 and include 3,260 ug/L benzene, 1,760 ug/L toluene, 4,000 ug/L ethylbenzene, 11,400 ug/L total xylenes, 36,000 ug/L diesel and 624 ug/L waste oil. This sample location exhibited detections well above the Tier 1 standards. When compared to surrounding sample data it appears to be an isolated "hot spot" and does not appear to represent conditions elsewhere across on the site (see map).

Other monitoring wells MW1, MW2, MW3 and MW6 exhibited benzene above the Tier 1 actual ingestion standard of 5 ug/L but below the potential ingestion standard of 290 ug/L (see attached data table). The highest concentration of benzene outside of the hot spot was 154 ug/L. No other BTEX, diesel or waste oil concentrations in these wells exceeded Tier 1 standards.

Identify on-site or off-site potential and actual targets (e.g., municipal wells, private wells, drinking water intakes). What is known of the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there utility lines that could be impacted by site contaminants? Identify any other use/location issues that deserve consideration.

No actual or potential on-site targets have been identified. There are no buildings and no wells.

The only potential off-site ground water target that has been identified is the Monroe city well that is located about a ¼ of a mile southwest of the site (see map). Two known UST sites are located west of the site, up gradient and have no apparent impact on the subject site.

Rate the site on a scale of 1 to 4, in decreasing order of severity or priority.

3

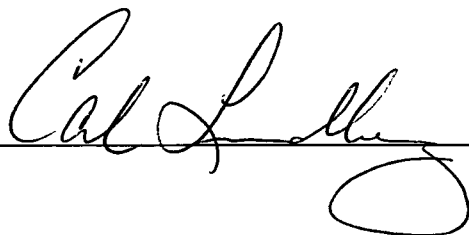
Summarize the reasoning, knowledge or any other information used in determining your recommendation regarding the priority assigned to this site.

This site is recommended for priority 3 based on the lack of on-site and off-site receptors, the limited extent and concentration of contamination demonstrated to be localized at sampling point TMW3.

Site recommended for:

- ☒ No further action
- ☐ Additional investigation under state program (activity code 2824)
- ☐ Additional investigation under CERCLA (Extended Site Screening)
- ☐ Additional investigation by responsible party
- ☐ Transfer to LUST/UST

Form Reviewed: _____



Date Reviewed: _____

11/21/07

Revised 7/2007



1 in ~ 100 ft
↑

Subject Property – 2006 Aerial Photograph

The Roorda property is shown on copy of 2006 aerial photograph (<http://ortho.gis.iastate.edu>). Red border approximates the parcels; yellow circles show approximate locations of monitoring wells 1-6 installed by ERS. See Sample Coordinates figure for detailed location of sample points. The east half of the Roorda property was the location of a former gas station. That station had two above ground tanks, and was taken out of service several decades ago.

TMW3 - Not Shown

Seneca Sample data

CON 12-15


Doc #16891

sample location
corrected

Soil

	<u>TMW3</u> <u>(ppm)</u>	<u>IDNR</u> <u>Action</u> <u>(ppm)</u>
Benzene	0.553	0.54
Toluene	4.87	42
Ethylbenzene	16.0	15
Xylenes	63.9	NA
Diesel	<10	3,800
Waste Oil	<10	NA

Groundwater

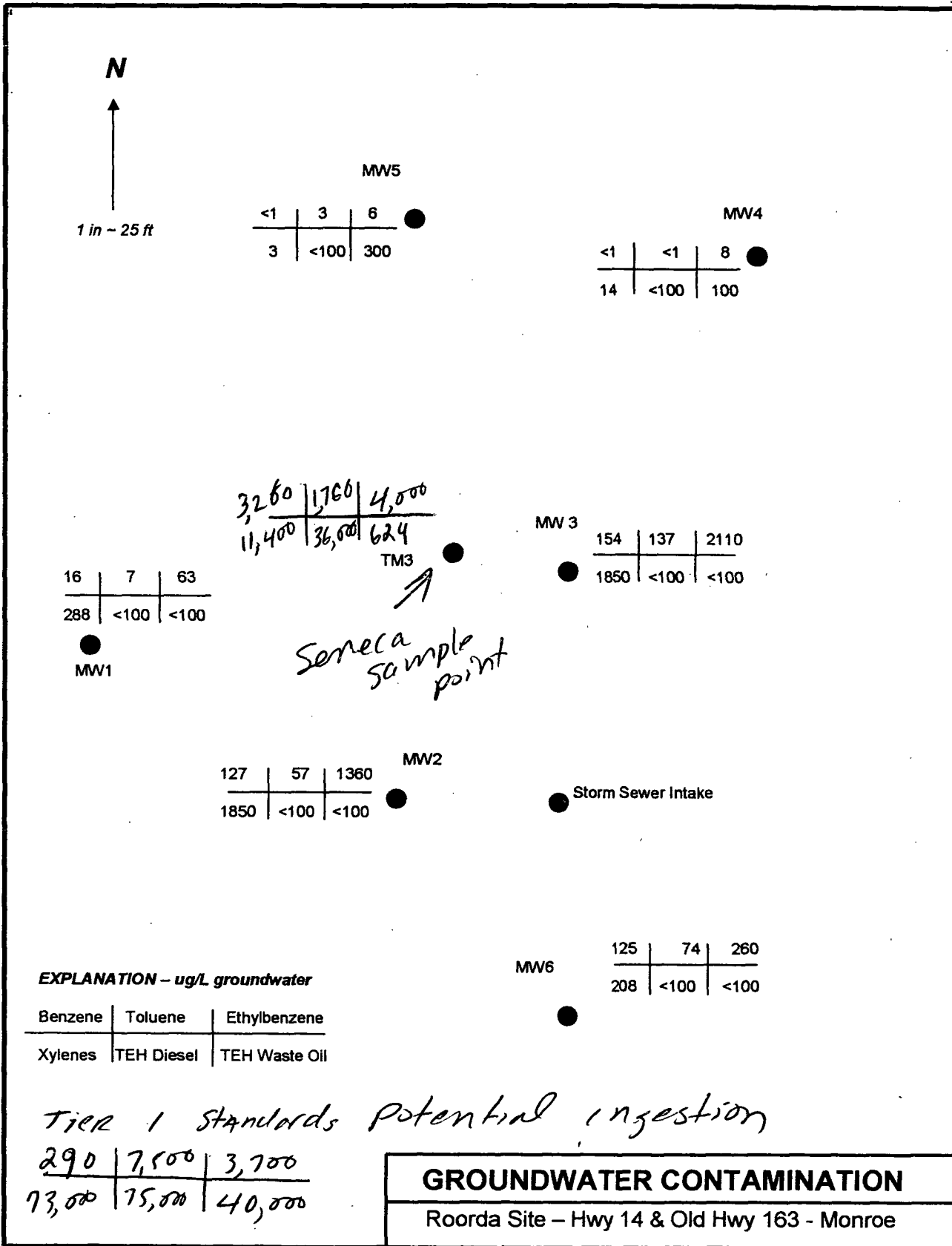
	 <u>TMW1</u> (ppb)	<u>IDNR</u> <u>Action</u> <u>(ppb)</u>
Benzene	3,260	5
Toluene	1,760	1,000
Ethylbenzene	4,000	700
Xylenes	11,400	10,000
Diesel	36,900	1,200
Waste Oil	624	400

Based on analytical results, Seneca recommends that the current owner of the subject property should be advised to report the findings of this audit to Mr. Matt Culp with the Iowa Department of Natural Resources, Contaminated Sites section. The address to which a copy of the report should be forwarded is as follows.

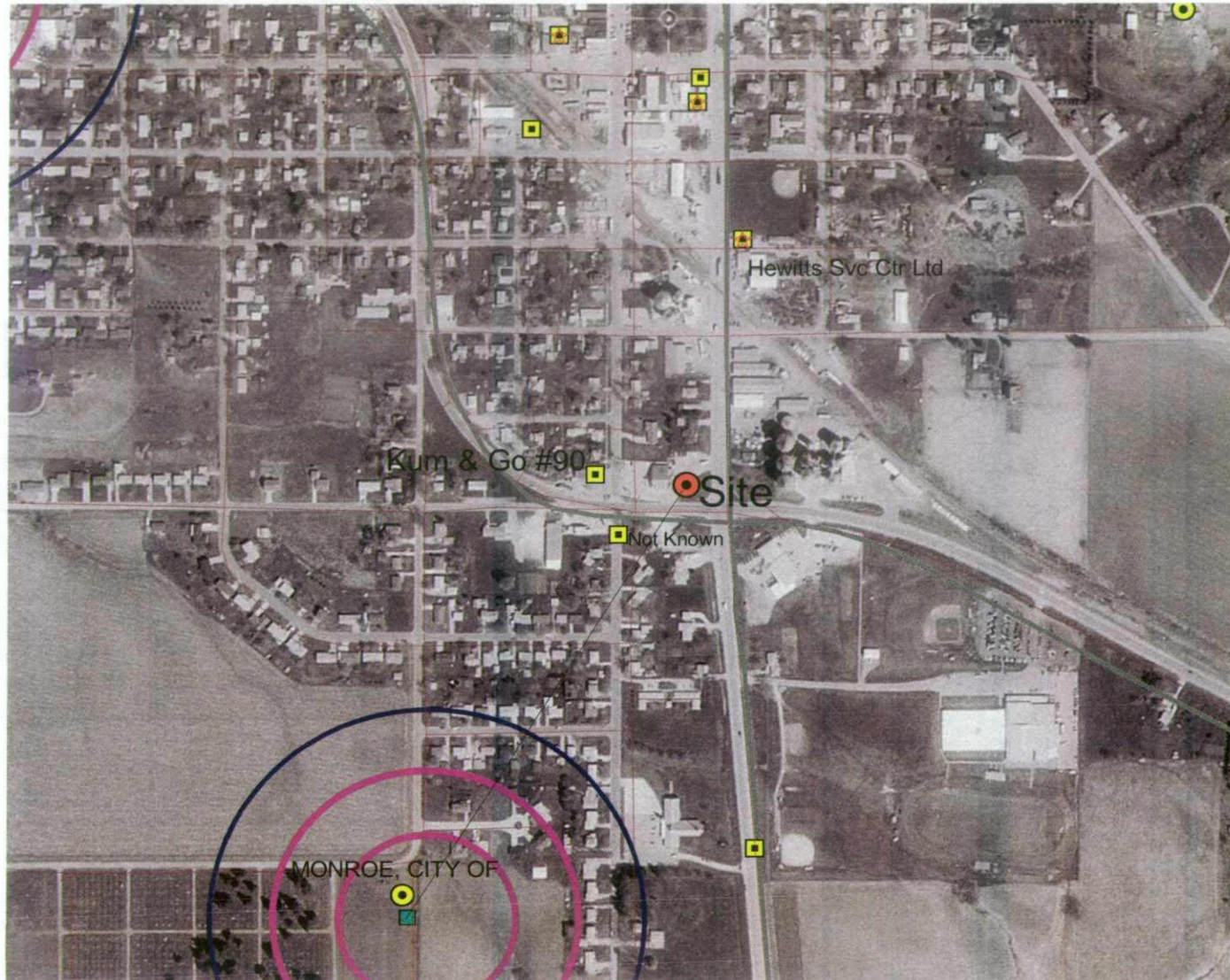
Mr. Matt Culp
Iowa Department of Natural Resources
Wallace State Office Building
502 East 9th Street
Des Moines, Iowa 50319

06680 AUG03'07 PM 3:00

ERS Sample data



Grammas Kitchen Monroe Iowa



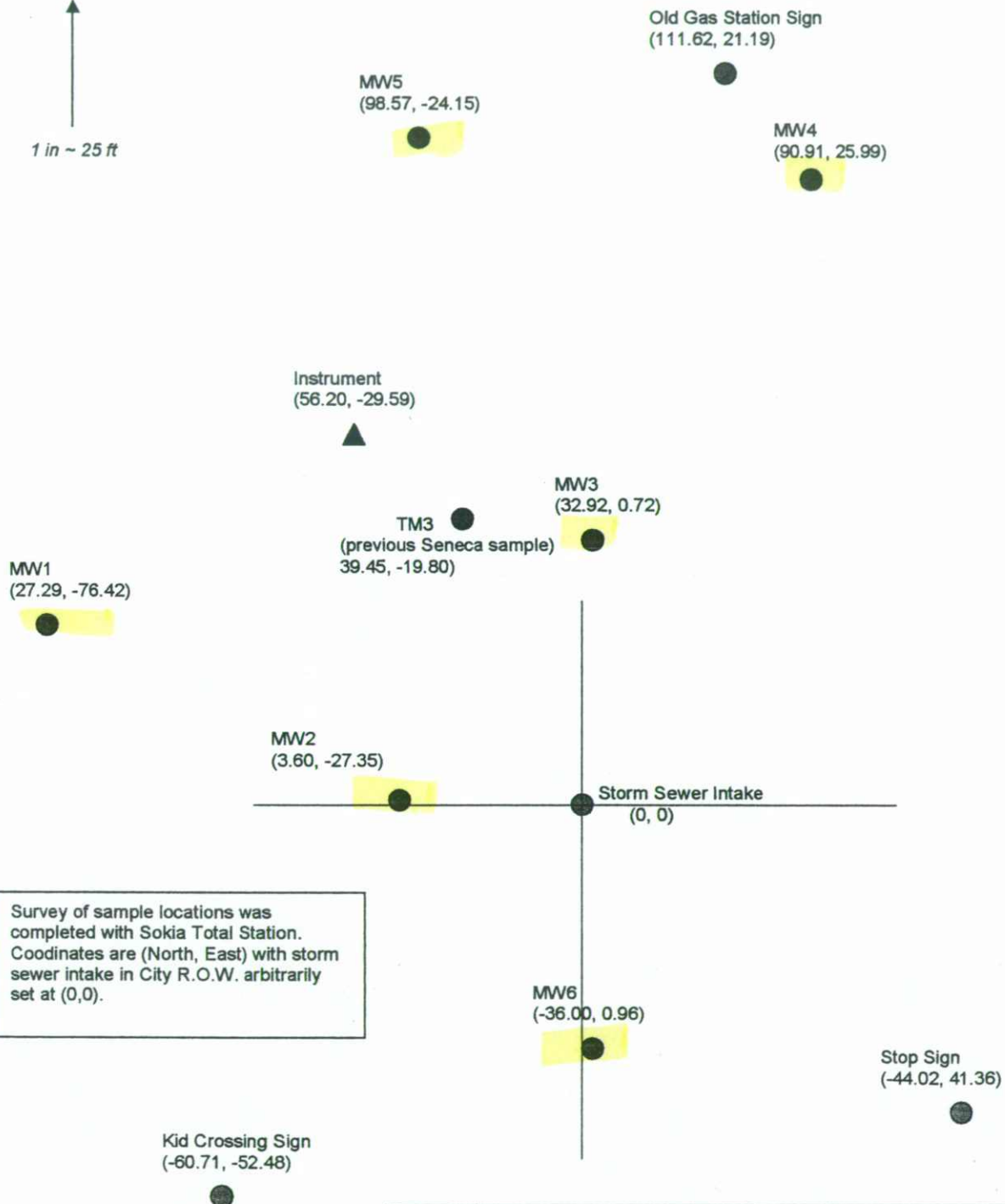
- Roads_2000_50.shp
- Municipal wells
- LUST sites
- UST Sites
- Welltest
- Geologic_sampling_points.shp
- Pvtperm
- Highway.shp
- Source Water Protection Area**
 - 2-year
 - 5-year
 - 10-year
 - 2500-foot
 - 1-mile
 - primary protection area
 - surface runoff area
 - hydrologic boundary
 - County



0.2 0 0.2 0.4 Miles

N

1 in ~ 25 ft



SAMPLE COORDINATES

Roorda Site – Hwy 14 & Old Hwy 163 - Monroe

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

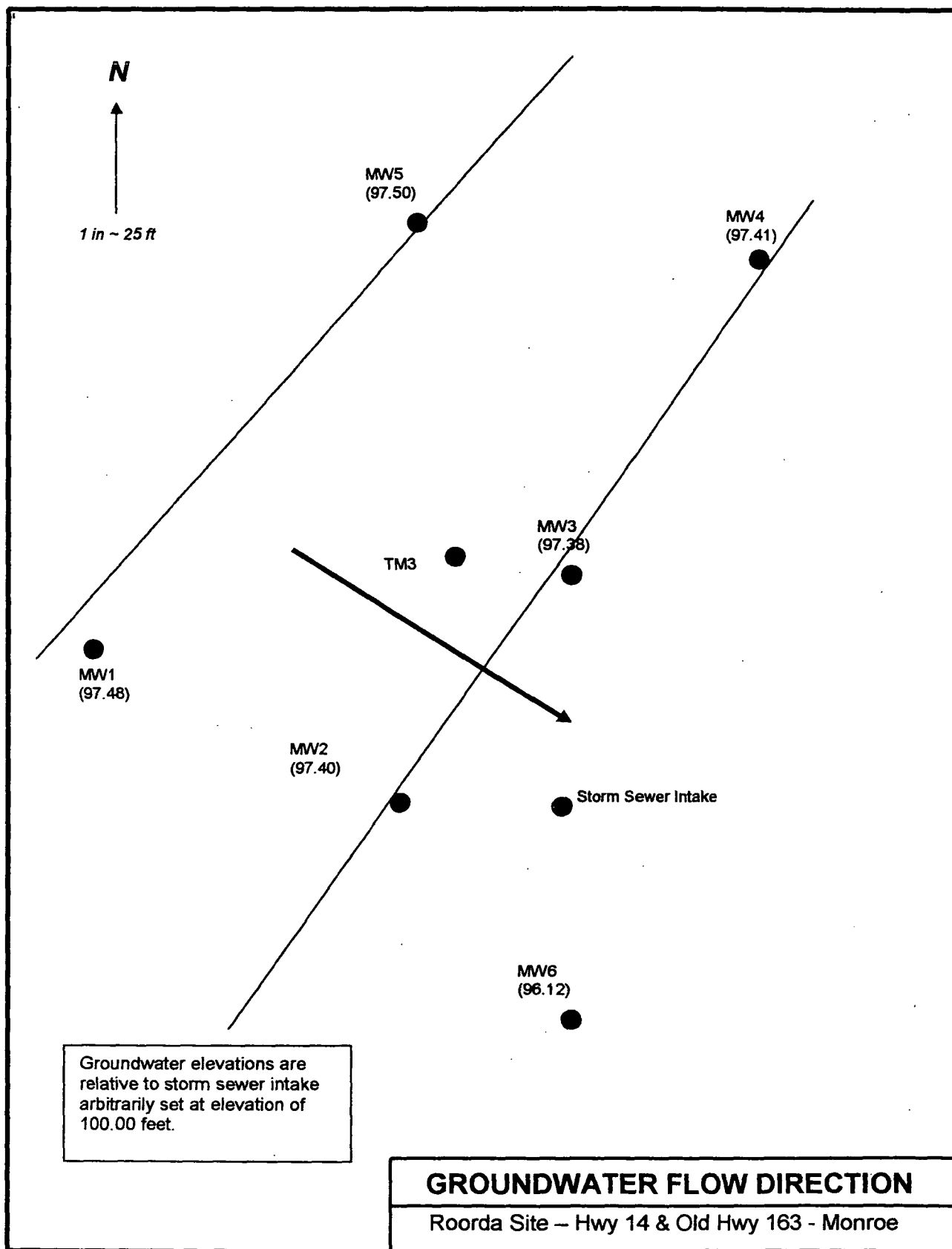
Boring/Well Number: **TMW3** Facility: Former Gramma's Kitchen Facility Street Address: S. Commerce and S. Monroe, Monroe, Iowa
 Boring Depth (ft) X Diameter (in): 15' x 6.25" Drilling Method: HSA
 Well contractor Name: Rewerts Logged By: Jayson Gunn
 Registration Number: 4715 Seneca Environmental Services

Ground Surface Elevation (ASL): NA Top of Casing Elevation (ASL): NA
 Date: 6/29/07 Date: 6/29/07 UST Number: NA LUST Number: NA
 Start Time: 0950 End Time: 1030

Depth (feet)	Well Construction Details Well casing-2" Dia. Sched 40 PVC	Blow Count	Sample No.	Type	PID/FID Reading	USCS Class.	Soil Classification
0		N/A					Overlay Material - concrete
1					20	SW	0-3 Brown Sand, loose, dry, slight petroleum odor
2					207		
3					485		
4					399	CL	Olive Silty Clay - dense, damp, firm, moderate petroleum odor
5					407		
6					471		
7					582		
8					739*		
9					610		
10					589		
11					320		
12					172	CL	Brown Silty Clay - dense, damp, firm, slight petroleum odor
13					52		
14					26		
15					10		
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

* SS (Split Spoon) HSA (Hollow Stem Auger)

Observations	Date:	6/29/07				
Water Levels (ASL)	Level:	8.25'				
Static Water Level v	Time:	10:40				



~~See~~ See Photo.

ERS Data

GROUNDWATER SAMPLE RESULTS (ug/L)

Sample Site	Benzene	Toluene	Ethylbenzene	Xylenes	Diesel	Waste Oil
MW1	16	7	63	288	ND	ND
MW2	127	57	1360	1850	ND	ND
MW3	154	137	2110	3270	ND	ND
MW4	ND	ND	8	14	ND	100
MW5	ND	3	6	3	ND	300
MW6	125	74	260	208	ND	ND

SOIL SAMPLE RESULTS (mg/kg)

Sample Site (depth ft)	Benzene	Toluene	Ethylbenzene	Diesel	Waste Oil
1-9	ND	ND			
2-8	ND	0.38	0.60	ND	16
3-6	ND	ND	ND	ND	ND
3-14	ND	ND	ND	ND	ND
4-6	ND	ND	ND	ND	ND
5-10	ND	ND	ND	ND	ND
6-8	ND	0.75	ND	ND	ND

Only benzene in groundwater samples exceed any IDNR target level. The samples highlighted in red exceed the target level for groundwater ingestion. If drinking water wells were in proximity to those wells, further investigations could be necessary. As the site is within the City of Monroe and all drinking water is from municipal sources, this is likely unnecessary.

