

GM — ✓



**CONESTOGA-ROVERS  
& ASSOCIATES**

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December 12, 2006

Reference No. 30264

Mr. Glenn M. May, CPG  
NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION  
270 Michigan Avenue  
Buffalo, NY 14203-2999

RECEIVED  
DEC 15 2006  
NYSDEC REG 9  
FOIL  
✓ REL UNREL

Dear Mr. May:

Re: GM Powertrain Group - Tonawanda, New York  
Endline Area Semi-Annual Groundwater Monitoring Report  
Spill Number 9875474

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Conestoga-Rovers & Associates (CRA) has prepared this Semi-Annual Groundwater Monitoring Report on behalf of the General Motors Powertrain Group (GMPTG) Tonawanda Engine Plant (Site). The purpose of this report is to summarize the November 2006 round of semi-annual groundwater monitoring activities and results for the Endline Area as discussed in the Remedial Action Work Plan (RAWP), dated April 30, 2003. The Work Plan was required by the New York State Department of Environmental Conservation (NYSDEC) to address residual unleaded gasoline contamination at the Endline Area.

SEMI-ANNUAL GROUNDWATER MONITORING ACTIVITIES

The most recent round of semi-annual groundwater monitoring was conducted on November 1, 2006. Monitoring wells MW-2 and MW-3 were sampled for the full Spill Technology and Remediation Series (STARS) list of compounds and MW-4 and MW-5 were sampled for methyl tertiary butyl ether (MTBE) only as approved by the NYSDEC in the letter dated January 19, 2006. Samples were analyzed by Severn Trent Laboratories (STL) of North Canton, Ohio.

SEMI-ANNUAL GROUNDWATER MONITORING RESULTS

Table 1 summarizes the results of the sampling completed on November 1, 2006. Table 2 summarizes the results for monitoring wells MW-2 through MW-5 from all sampling events (January 1999 to present) and is provided for comparison of contaminant concentrations. Monitoring well locations are shown on Figure 1.

Groundwater analytical results were compared to the New York State (NYS) Class GA (Groundwater) Standards as presented in Title 6 of the New York State Code of Rules and Regulations (6 NYCRR) Part 703.5.





The analytical results for MW-2 continued to have elevated reporting limits (830 micrograms per liter [ $\mu\text{g/L}$ ]). Because of the elevated reporting limits, the data for MW-2 relative to the STARS parameters is not usable for any results that are reported as non-detect. This has occurred previously at this location due to the presence of elevated concentrations of chlorinated solvents, which results in matrix interference and increased reporting limits for the STARS volatile organic compounds (VOCs). The presence of chlorinated solvents is being addressed as a separate issue as detailed in the "Endline Area Chlorinated Solvent Subsurface Investigation Work Plan", dated June 3, 2005 and the "Supplemental Phase I and Phase II Chlorinated Solvent Subsurface Investigation Work Plan", dated November 17, 2006.

Reported detections for MW-2 included 1,2,4-trimethylbenzene, m&p-xylene, o-xylene, and toluene at estimated concentrations of 390  $\mu\text{g/L}$ , 300  $\mu\text{g/L}$ , 160  $\mu\text{g/L}$ , and 180  $\mu\text{g/L}$ , respectively, all above NYS Groundwater Standards. The concentration of total xylenes was reported at an estimated value of 450  $\mu\text{g/L}$ . Since previous data have been unusable due to elevated detection limits, no comparison of the November 2006 data can be made to determine if concentrations are exhibiting a trend.

The data from MW-3 for the November 2006 sampling round showed benzene and MTBE detected at concentrations of 3.5 and 95  $\mu\text{g/L}$ , respectively. These concentrations are above the NYS Groundwater Standards and are consistent with previous rounds of sampling for this well. Isopropylbenzene was detected at an estimated concentration of 1.9  $\mu\text{g/L}$ , below the NYS Groundwater Standard of 5  $\mu\text{g/L}$ . All other analytes were non-detect at a reporting limit of 3.3  $\mu\text{g/L}$ .

Samples from monitoring wells MW-4 and MW-5 were analyzed for MTBE only. MTBE was detected at MW-4 at a concentration of 12  $\mu\text{g/L}$ , representing a slight decrease over the prior four rounds of sampling, although still above the NYS Groundwater Standard of 10  $\mu\text{g/L}$ . There has been no substantial change in the concentration of MTBE at MW-5 over the last three sampling events. The reported concentration of 8.1  $\mu\text{g/L}$  is below the NYS Groundwater Standard.

### GROUNDWATER CONTOUR MAPS

Groundwater contour maps are attached to assist with the evaluation of the analytical data. Wells MW-1, MW-9, MW-10, MW-11, MW-12, and MW-13 are screened entirely in the clay unit and are therefore referred to as clay wells. MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8 are screened across the fill and clay unit interface and are referred to as fill wells. Since the two groups of wells are representative of different units, they are contoured as such. Furthermore, an underground tunnel is constructed in the fill and bisects the monitoring well



field between MW-5 and MW-6. Separate fill well contours are completed for wells MW-2 through MW-5 and MW-6 through MW-8 to represent the likely effect the tunnel has on the flow through the fill unit. Figures 2 and 3 depict the groundwater contours for the fill and clay wells, respectively, for October/November 2006.

Figure 2 indicates a groundwater flow direction to the east through the fill unit in the area east of the tunnel. Contours could not be prepared for the fill wells west of the tunnel as MW-8 was unable to be located during the sampling monitoring field effort and was likely covered by equipment. Figure 3 indicates a groundwater flow direction to the east-northeast in the clay unit.

#### CONCLUSIONS AND RECOMMENDATIONS

The November 2006 results for MW-2 continue to show elevated reporting limits due to the presence of chlorinated solvents. This well is being addressed as part of the ongoing chlorinated solvent investigation.

Results for MW-3 are primarily consistent with prior rounds of sampling. The concentration of benzene (3.5 µg/L) is still slightly above the NYS Groundwater Standard of 1 µg/L. MTBE concentrations show a slight decrease over the previous four events although still exceed the NYS Groundwater Standard.

There has been no substantial change in the MTBE results from monitoring wells MW-4 and MW-5 over the last four sampling events (April 2005 through November 2006). Monitoring well MW-4 continues to slightly exceed the NYS Groundwater Standard, while MW-5 continues to be below the NYS Groundwater Standard.

In summary, groundwater at MW-4 and MW-5 is essentially at standard for MTBE, while groundwater at MW-3 exceeds the applicable standards for benzene and MTBE by less than an order of magnitude. Groundwater flow in this area is eastward toward the area impacted with chlorinated solvents currently being addressed as a separate project with the NYSDEC. Furthermore, groundwater at the site is not used for potable purposes and the perched water present in the fill is not permanent or consistent. Due to the minimal nature of these exceedances, we request that no further monitoring of the Endline Area wells be conducted in relation to NYSDEC Spill Number 9875474 and that the spill number be closed. Residual contamination at and in the vicinity of MW-2 will be addressed as part of the ongoing chlorinated solvent investigation.



**CONESTOGA-ROVERS  
& ASSOCIATES**

December 12, 2006

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Reference No. 030264

Please contact Jim Hartnett at 315-463-2391 (GM) or Katherine Galanti at 716-856-2142 (CRA) if you should have any questions or comments.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in cursive script that reads "Katherine B. Galanti".

Katherine B. Galanti  
Project Manager

KBG/jbh/6

Encl.

c.c.: M. Antonetti, J. Hartnett (GM)  
K. Malinowski (CRA)

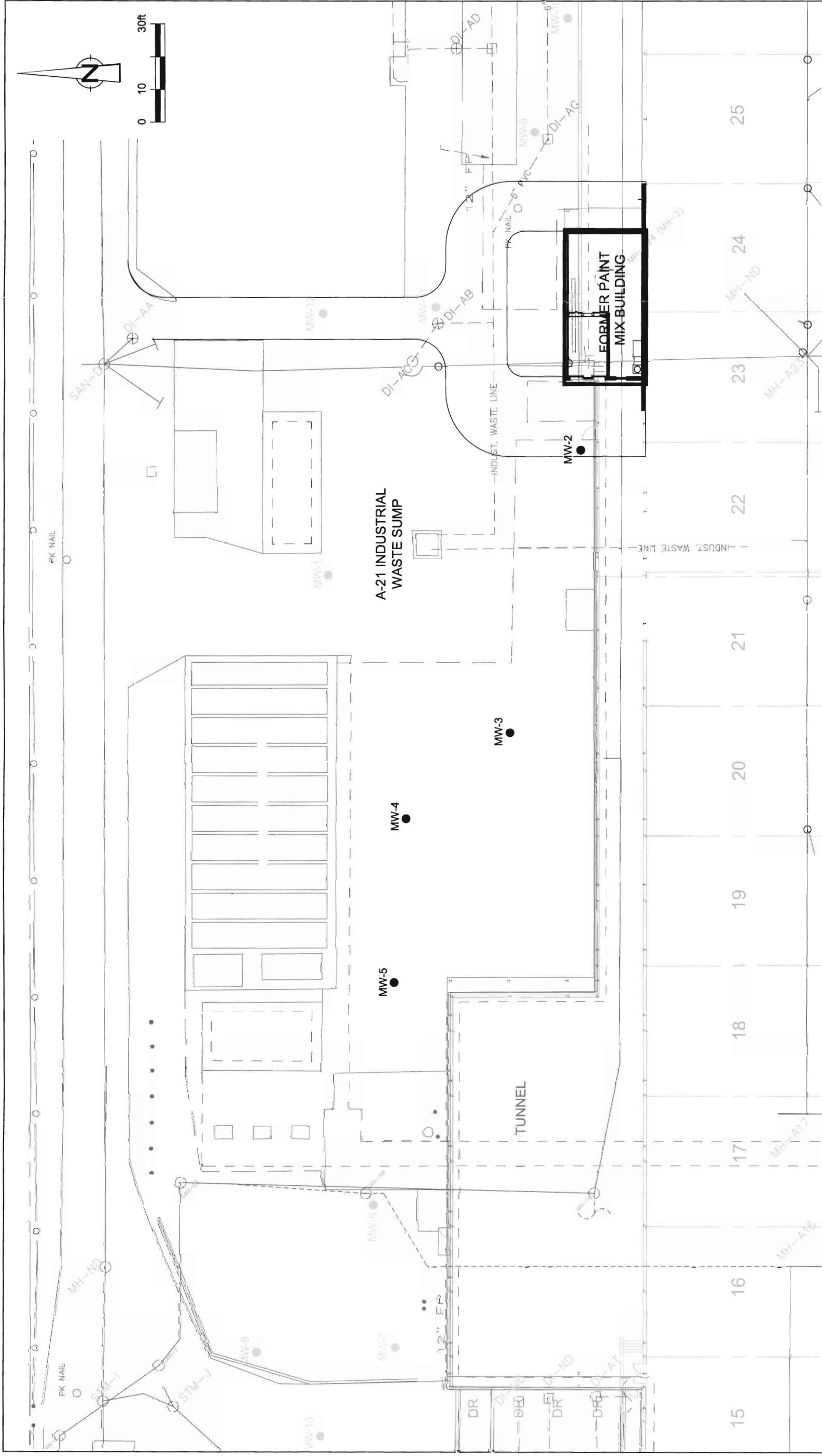


figure 1  
 ENDLINE AREA LAYOUT AND MONITORING WELL LOCATION  
 ENDLINE AREA SEMI-ANNUAL GROUNDWATER MONITORING  
 GM POWERTRAIN GROUP TONAWANDA ENGINE PLANT  
 Tonawanda, New York

**LEGEND**  
 MW-2 ● MONITORING WELL LOCATION  
 ○ MANHOLE  
 ● MONITORING WELLS ELIMINATED FROM SAMPLING PROGRAM BY NYSDEC  
 IN LETTER DATED JANUARY 19, 2006



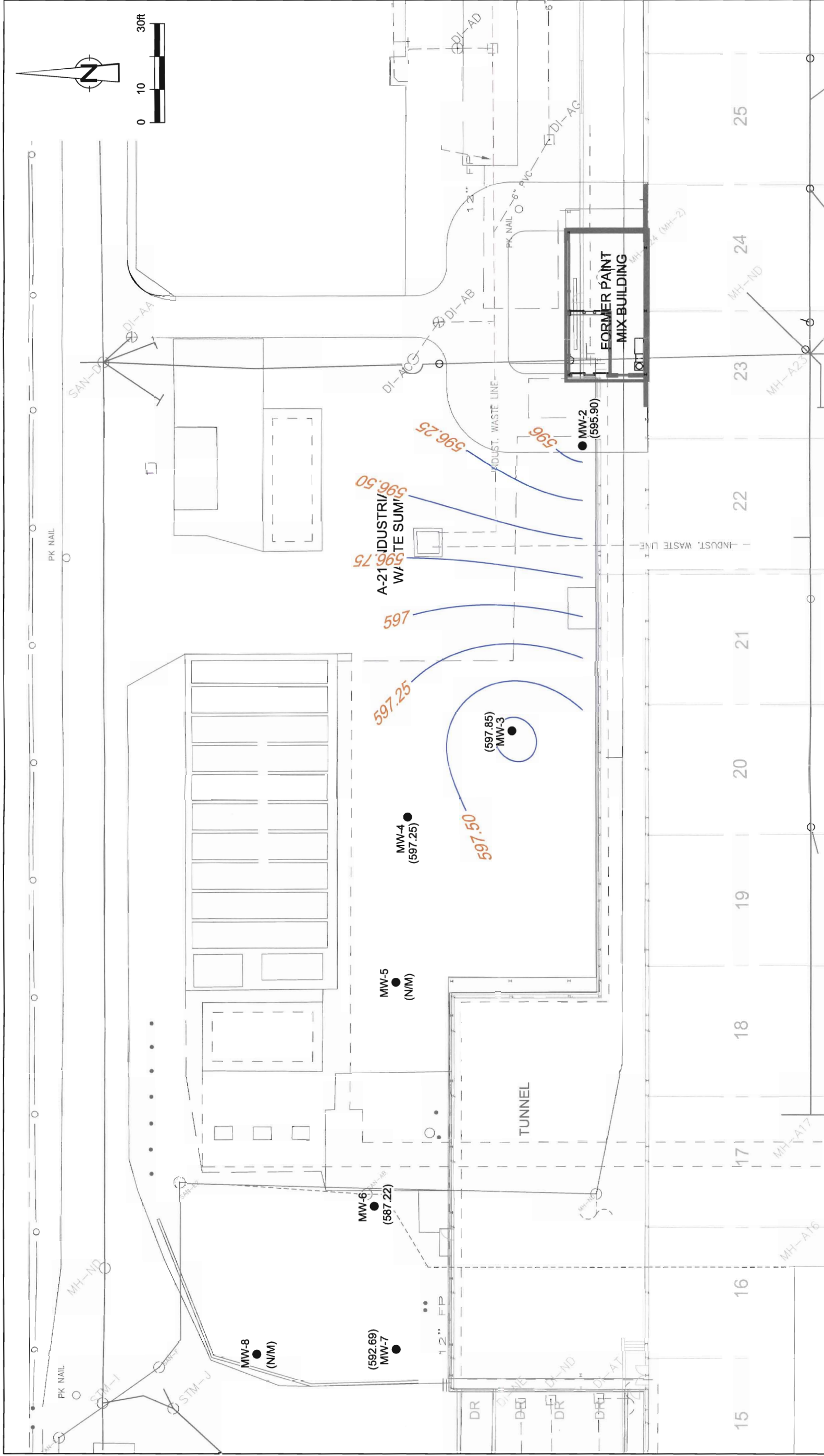


figure 2  
 FILL INTERVAL GROUNDWATER CONTOURS - OCTOBER 31, 2006  
 ENDLINE AREA SEMI-ANNUAL GROUNDWATER MONITORING  
 GM POWERTRAIN GROUP TONAWANDA ENGINE PLANT  
 Tonawanda, New York

**LEGEND**  
 MW-2 ● MONITORING WELL LOCATION  
 (531.89) ○ BOREHOLE LOCATION  
 ○ MANHOLE



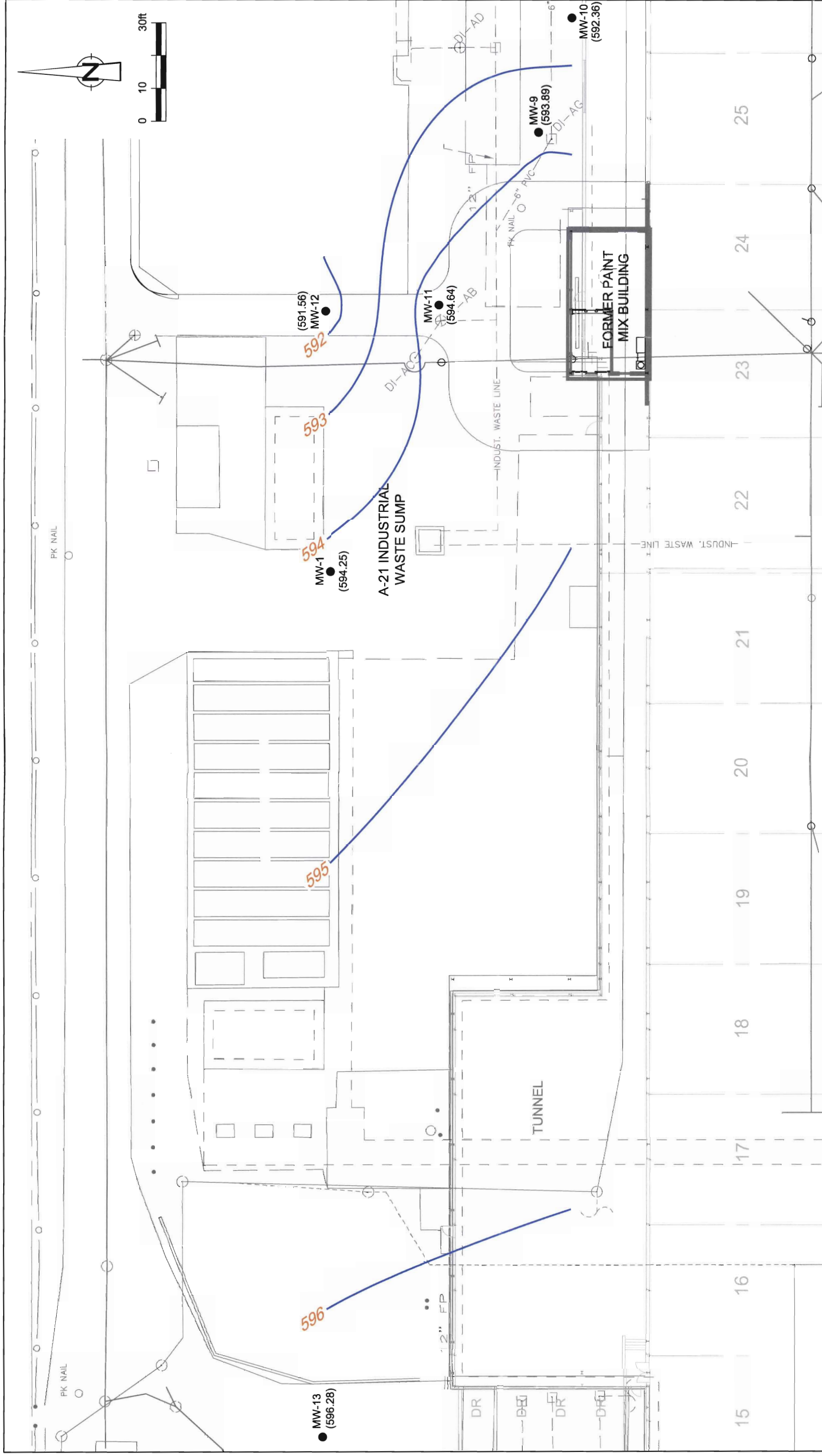


figure 3

CLAY INTERVAL GROUNDWATER CONTOURS - OCTOBER 31, 2006  
 ENDLINE AREA SEMI-ANNUAL GROUNDWATER MONITORING  
 GM POWERTRAIN GROUP TONAWANDA ENGINE PLANT  
 Tonawanda, New York

LEGEND

- MW-1 ● MONITORING WELL LOCATION
- (531.89) ○ GROUNDWATER ELEVATION (ft AMSL)
- MANHOLE



TABLE 1

ANALYTICAL RESULTS SUMMARY  
 ENDOLINE AREA SEMI-ANNUAL GROUNDWATER MONITORING  
 GENERAL MOTORS POWERTRAIN GROUP  
 TONAWANDA, NEW YORK  
 NOVEMBER 2006

Parameters	Units	Sample Location:				
		MW-2	MW-2	MW-3	MW-4	MW-5
		GW-30264-11012006-MW2-001	GW-30264-11012006-006	GW-30264-110106-002	GW-30264-110106-003	GW-30264-110106-004
		11/1/06	11/1/06	11/1/06	11/1/06	11/1/06
		Duplicate				
		NYS GW Guidance Values/Standards				
		6NYCRR Part 703.5*				
Volatile Organic Compounds						
1,2,4-Trimethylbenzene	µg/L	5	390 J	1400 U	3.3 U	-
1,3,5-Trimethylbenzene	µg/L	5	830 U	1400 U	3.3 U	-
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	830 U	1400 U	3.3 U	-
Benzene	µg/L	1	830 U	1400 U	3.5	-
Cymene (p-Isopropyltoluene)	µg/L	5	830 U	1400 U	3.3 U	-
Ethylbenzene	µg/L	5	830 U	1400 U	3.3 U	-
Isopropylbenzene	µg/L	5	830 U	1400 U	1.9 J	-
m&p-Xylene	µg/L	5	300 J	1400 U	3.3 U	-
Methyl Tert Butyl Ether	µg/L	10	830 U	1400 U	95	12
Naphthalene	µg/L	10	830 U	1400 U	3.3 U	-
n-Butylbenzene	µg/L	5	830 U	1400 U	3.3 U	-
n-Propylbenzene	µg/L	5	830 U	1400 U	3.3 U	-
o-Xylene	µg/L	5	160 J	230 J	3.3 U	-
tert-Butylbenzene	µg/L	5	830 U	1400 U	3.3 U	-
Toluene	µg/L	5	180 J	1400 U	3.3 U	-
Xylene (total)	µg/L	5	450 J	1400 U	3.3 U	-

Notes:

- \* The New York State Groundwater Guidance Values/Standard (NYS GW) for the xylene isomers (o,m,&o-Xylene) is 5 µg/L and has been presented as the standard for both m&p-Xylene and Xylene (total)
- Not analyzed.
- J Estimated.
- U Non-detect at associated value.



TABLE 2

ANALYTICAL RESULTS SUMMARY  
 GROUNDWATER - STARS VOCs  
 GENERAL MOTORS POWERTRAIN GROUP  
 TONAWANDA, NEW YORK  
 1999 TO PRESENT

Parameters	Units	Sample Location:	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2
		Sample ID:	MWGP-2	GW-1783518-092302-CB-MW2	GW-061104-MW2-DRS	GW-072004-MW2-DRS	WG 102104 JMF 002	10/21/2004	GW-30264-042605-MW2-JMF
		Sample Date:	9/28/1999	9/23/2002	6/11/2004	7/20/2004	10/21/2004	4/26/2005	
NYS GW									
Guidance									
Values/Standards									
6 NYCRR Part									
703.5									
<b>Volatile Organic Compounds</b>									
1,2,4-Trimethylbenzene	µg/L	5	190 D	41.7	3300 U	2000 U	5000 U	5000 U	10 U
1,3,5-Trimethylbenzene	µg/L	5	47	17.2	3300 U	2000 U	5000 U	5000 U	31
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	2.8	10 U	3300 U	2000 U	5000 U	5000 U	10 U
Benzene	µg/L	1	280 D	39.4	3300 U	2000 U	5000 U	5000 U	130
Cymene (p-Isopropyltoluene)	µg/L	5	4.2	10 U	3300 U	2000 U	5000 U	5000 U	10 U
Ethylbenzene	µg/L	5	530 D	85.6	3300 U	2000 U	5000 U	5000 U	94
Isopropylbenzene	µg/L	5	25	10 U	3300 U	2000 U	5000 U	5000 U	10 U
m&p-Xylene	µg/L	5*	3020 D	556	6700 U	4000 U	2700 J	2700 J	660
Methyl Tert Butyl Ether	µg/L	10	-	10 U	17000 U	10000 U	25000 U	25000 U	10 U
Naphthalene	µg/L	10	18	15.3	3300 U	2000 U	5000 U	5000 U	10 U
n-Butylbenzene	µg/L	5	33	10 U	3300 U	2000 U	5000 U	5000 U	10 U
n-Propylbenzene	µg/L	5	2.00 U	10 U	3300 U	2000 U	5000 U	5000 U	10 U
o-Xylene	µg/L	5	1770 D	286	3300 U	2000 U	5000 U	5000 U	320
tert-Butylbenzene	µg/L	5	2.00 U	10 U	3300 U	2000 U	5000 U	5000 U	10 U
Toluene	µg/L	5	1640 D	336	660 J	440 J	5000 U	5000 U	340
Xylene (total)	µg/L	5*	-	-	6700 U	4000 U	2700 J	2700 J	980

ANALYTICAL RESULTS SUMMARY  
 GROUNDWATER - STARS VOCs  
 GENERAL MOTORS POWERTRAIN GROUP  
 TONAWANDA, NEW YORK  
 1999 TO PRESENT

Parameters	Units	Sample Location: Sample ID: Sample Date:	MW-2 GW-30264-103105-MW2-SM 10/31/2005	MW-2 WG-30264-050506-005 5/5/2006	MW-2 GW-30264-11012006-MW2-001 11/1/06	MW-2 GW-30264-11012006-006 11/1/06	MW-3 MWGP-3 9/28/1999
<b>Volatile Organic Compounds</b>							
1,2,4-Trimethylbenzene	µg/L	5	1000 U	580 J	390 J	1400 U	4430 D
1,3,5-Trimethylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	1670 D
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	1000 U	1000 U	830 U	1400 U	56
Benzene	µg/L	1	1000 U	1000 U	830 U	1400 U	9280 D
Cymene (p-Isopropyltoluene)	µg/L	5	1000 U	1000 U	830 U	1400 U	12
Ethylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	2580 D
Isopropylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	110 D
m&p-Xylene	µg/L	5*	1000 U	340 J	300 J	1400 U	6930 D
Methyl Tert Butyl Ether	µg/L	10	1000 U	1000 U	830 U	1400 U	—
Naphthalene	µg/L	10	1000 U	1000 U	830 U	1400 U	2430 D
n-Butylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	1780 D
n-Propylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	270 D
o-Xylene	µg/L	5	1000 U	690 J	160 J	230 J	170 D
tert-Butylbenzene	µg/L	5	1000 U	1000 U	830 U	1400 U	2.00 U
Toluene	µg/L	5	1000 U	200 J	180 J	1400 U	160 D
Xylene (total)	µg/L	5*	1000 U	1000	450 J	1400 U	—

ANALYTICAL RESULTS SUMMARY  
 GROUNDWATER - STARS VOCs  
 GENERAL MOTORS POWERTRAIN GROUP  
 TONAWANDA, NEW YORK  
 1999 TO PRESENT

Parameters	Units	Sample Location:				
		MW-3 GW-1783518-092302-CB-MW3 9/23/2002	MW-3 GW-072004-MW3-DRS 7/29/2004	MW-3 GW-072804-MW3-DRS 7/28/2004	MW-3 WG 102104 JMF 003 10/21/2004	MW-3 GW-30264-042605-MW3-JMF 4/26/2005
NYS GW Guidance Values/Standards 6 NYCRR Part 703.5						
<b>Volatile Organic Compounds</b>						
1,2,4-Trimethylbenzene	µg/L	30.9	2.6 J	5.4	19	5.0 U
1,3,5-Trimethylbenzene	µg/L	17.9	5.4	5.7	11	5.0 U
2-Phenylbutane (sec-Butylbenzene)	µg/L	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene	µg/L	245	7.9	4.0 J	5.0 U	5.0 U
Cymene (p-Isopropyltoluene)	µg/L	10 U	5.0 U	5.0 U	6.0	5.0 U
Ethylbenzene	µg/L	151	3.7 J	4.2 J	4.4 J	5.0 U
Isopropylbenzene	µg/L	10 U	5.0 U	2.7 JB	6.1	5.0 U
m&p-Xylene	µg/L	123	7.3 J	6.6 J	18	5.0 U
Methyl Tert Butyl Ether	µg/L	11.1 J	99	130	190	170
Naphthalene	µg/L	27.4	5.0 U	5.0 U	9.8	5.0 U
n-Butylbenzene	µg/L	10 U	5.0 U	5.0 U	5.0 U	5.0 U
n-Propylbenzene	µg/L	10 U	5.0 U	5.0 U	5.1	5.0 U
o-Xylene	µg/L	47.8	14	5.6	5.5	5.0 U
tert-Butylbenzene	µg/L	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Toluene	µg/L	10 U	5.0 U	5.0 U	5.0 U	5.0 U
Xylene (total)	µg/L	--	21	12	23	5.0 U

ANALYTICAL RESULTS SUMMARY  
GROUNDWATER - STARS VOCs  
GENERAL MOTORS POWERTRAIN GROUP  
TONAWANDA, NEW YORK  
1999 TO PRESENT

Parameters	Units	Sample Location: Sample ID: Sample Date:	MW-3 GW-30264-103105-MW3-SM 10/31/2005	MW-3 WG-30264-050506-003 5/5/2006	MW-3 WG-30264-050506-004 5/5/2006 Duplicate	MW-3 GW-30264-062006-MW3-001 6/20/2006	MW-3 GW-30264-110106-002 11/1/06	MW-4 MWGP-4 9/28/1999
<b>Volatile Organic Compounds</b>								
1,2,4-Trimethylbenzene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
1,3,5-Trimethylbenzene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
Benzene	µg/L	1	0.64	42	35	7.0	3.5	2.4
Cymene (p-Isopropyltoluene)	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
Ethylbenzene	µg/L	5	0.79	83	68	3.6	3.3 U	3.7
Isopropylbenzene	µg/L	5	2.0 U	4.9	4.3	1.4	1.9 J	2.0 U
m&p-Xylene	µg/L	5*	2.0 U	0.81 J	2.5 U	2.8 U	3.3 U	13
Methyl Tert Butyl Ether	µg/L	10	110	89	88	98	95	--
Naphthalene	µg/L	10	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	15
n-Butylbenzene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.1
n-Propylbenzene	µg/L	5	2.0 U	1.4 J	1.4 J	2.8 U	3.3 U	2.0 U
o-Xylene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	3.7
tert-Butylbenzene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
Toluene	µg/L	5	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	2.0 U
Xylene (total)	µg/L	5*	2.0 U	2.5 U	2.5 U	2.8 U	3.3 U	--

TABLE 2

ANALYTICAL RESULTS SUMMARY  
 GROUNDWATER - STARS VOCs  
 GENERAL MOTORS POWERTRAIN GROUP  
 TONAWANDA, NEW YORK  
 1999 TO PRESENT

Parameters	Units	Sample Location: Sample ID: Sample Date:	MW-4 GW-1783518-092302-CB-MW4 9/23/2002	MW-4 GW-061104-MW4-DRS 6/11/2004	MW-4 WG 102104 JMF 004 10/21/2004	MW-4 GW-30264-042605-MW4-JMF 4/26/2005	MW-4 GW-30264-103105-MW4-SM 10/31/2005
<b>Volatile Organic Compounds</b>							
1,2,4-Trimethylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3,5-Trimethylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	1	10 U	1.0 U	1.2	1.0 U	1.0 U
Cymene (p-Isopropyltoluene)	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
m&p-Xylene	µg/L	5*	10 U	2.0 U	0.53 J	1.0 U	1.0 U
Methyl Tert Butyl Ether	µg/L	10	10 U	5.6	20	17	14
Naphthalene	µg/L	10	10 U	1.0 U	1.7	1.0 U	1.0 U
n-Butylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
n-Propylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Xylene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
tert-Butylbenzene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	5	10 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	5*	—	2.0 U	0.53 J	1.0 U	1.0 U

TABLE 2

ANALYTICAL RESULTS SUMMARY  
GROUNDWATER - STARS VOCs  
GENERAL MOTORS POWERTRAIN GROUP  
TONAWANDA, NEW YORK  
1999 TO PRESENT

Parameters	Units	Sample Location: Sample ID: Sample Date:	MW-4 WG-30264-050506-001 5/5/2006	MW-4 GW-30264-110106-003 11/1/06	MW-5 MWGP-5 9/28/1999	MW-5 GW-1783518-092302-CB-MW5 9/23/2002	MW-5 GW-061104-MW14-DRS 6/11/2004	MW-5 GW-061104-MW5-DRS 6/11/2004	MW-5 Duplicate
<b>Volatile Organic Compounds</b>									
1,2,4-Trimethylbenzene	µg/L	5	-	-	2.00 U	10 U	0.17 J	0.22 J	
1,3,5-Trimethylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
Benzene	µg/L	1	-	-	2.00 U	10 U	0.38 J	0.29 J	
Cymene (p-Isopropyltoluene)	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
Ethylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
Isopropylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
m&p-Xylene	µg/L	5*	-	-	6.9	10 U	2.0 U	2.0 U	
Methyl Tert Butyl Ether	µg/L	10	14	12	--	10 U	1.4 J	1.7 J	
Naphthalene	µg/L	10	-	-	2.3	10 U	1.0 U	1.0 U	
n-Butylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
n-Propylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
o-Xylene	µg/L	5	-	-	2.4	10 U	1.0 U	1.0 U	
tert-Butylbenzene	µg/L	5	-	-	2.00 U	10 U	1.0 U	1.0 U	
Toluene	µg/L	5	-	-	2.00 U	10 U	0.27 J	0.29 J	
Xylene (total)	µg/L	5*	-	-	--	--	2.0 U	2.0 U	

TABLE 2

ANALYTICAL RESULTS SUMMARY  
GROUNDWATER - STARS VOCs  
GENERAL MOTORS POWERTRAIN GROUP  
TONAWANDA, NEW YORK  
1999 TO PRESENT

Parameters	Units	Sample Location: Sample ID: MW-5 WG 102104 JMF 005	MW-5 10/21/2004	MW-5 JMF 014	MW-5 WG-30264-042605-MW5-JMF	MW-5 10/31/2005	MW-5 WG-30264-050506-002	MW-5 5/5/2006	MW-5 GW-30264-110106-004
Values/Standards 6 NYCRR Part 703.5									
<b>Volatle Organic Compounds</b>									
1,2,4-Trimethylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
1,3,5-Trimethylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
Benzene	µg/L	1	1.0 U	1.0 U	1.2	1.0 U	-	-	-
Cymene (p-Isopropyltoluene)	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
Ethylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
Isopropylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
m&p-Xylene	µg/L	5*	2.0 U	0.55 J	1.0 U	1.0 U	-	-	-
Methyl Tert Butyl Ether	µg/L	10	10	11	6.3	8.0	8.0	8.1	8.1
Naphthalene	µg/L	10	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
n-Butylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
n-Propylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
o-Xylene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
tert-Butylbenzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
Toluene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-
Xylene (total)	µg/L	5*	2.0 U	0.55 J	1.0 U	1.0 U	-	-	-

Notes:

- Not analyzed.
- \* The New York State Groundwater Guidance Values/Standard (NYS GW) for the xylene isomers (o,m,&o-Xylene) is 5 µg/L and has been presented as the standard for both m&p-Xylene and Xylene (total).
- B Analyte detected in an associated blank.
- D Sample result from a diluted analysis.
- J Estimated.
- U Non-detect at associated value.