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July 31, 2013

US EPA RECORDS CENTER REGION 5
468896

Stephen F. Nightingale
Manager, Permit Section
Bureau of Land
Illinois Environmental Protection Agency
1021 North Grand Ave. East
P.O. Box 19276
Springfield, IL 62794-9276

Re: 2018080001 – Winnebago County
Winnebago Landfill – Northern and Southern Units
Alternate Source Demonstration

Dear Mr. Nightingale:

On behalf of Winnebago Landfill, submitted herein are an original and three copies of an alternate source demonstration in accordance with Condition VIII.15 of Permit No. 1991-138-LF, Modification 60. Application forms (LPC-PA1 and Certification of Authenticity) are provided in Appendix A of the application.

Please contact Tom Hilbert at (815) 963-7516 if you have any questions or require additional information.

Sincerely,

Teresa N. Sharp

Teresa N. Sharp
Environmental Scientist

TNS:bjh:ask:enr

Enclosure(s)

cc: Tom Hilbert – William Charles Waste Companies
Bernie Shorle – US EPA Region 5

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Applications

Winnebago Landfill
Northern and Southern Units
Winnebago County, Illinois

Permit Number: 1991-138-LF
Site Number: 2018080001

Alternate Source Demonstration

July 2013

Submitted to:
Illinois Environmental Protection Agency
Bureau of Land
Springfield, Illinois

Prepared for:
Winnebago Landfill
8403 Lindenwood Road
Rockford, Illinois

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1. INTRODUCTION

Condition No. VIII.15 of Permit No. 1991-138-LF, Modification No. 60, granted to Winnebago Landfill Company (LLC as owner and Winnebago Reclamation Service, Inc. as operator), requires that either an alternate source demonstration be conducted for all confirmed monitored increases detected in facility monitoring wells or that an assessment monitoring program be implemented to determine whether the facility is the source of confirmed increases. Exceedences that were observed during the first quarter of 2013 were sampled for confirmation during the second quarter 2013 event. This alternate source demonstration will address the exceedence of the dissolved sulfate AGQS at upgradient well G13S (Northern Unit), which was confirmed during the second quarter 2013. The application forms (Certification of Authenticity and LPC-PA1) are contained in Appendix A.

2. BACKGROUND INFORMATION

2.1 Site Description

The Winnebago Landfill facility contains three separate disposal areas that have received waste. The Northern and Southern Units were authorized under Illinois EPA Permit No. 1991-138-LF, and the North Expansion Unit was authorized via Permit No. 2006-221-LF. The Northern Unit ceased accepting waste on September 8, 2000, while The Southern Unit ceased accepting waste on March 31, 2011. In addition, the North Expansion Unit—located between the existing Northern Unit and Baxter Road—began operation on May 16, 2008. The West Expansion Unit was permitted via 2010-133-LF but has not been developed at this time. A site location map showing the disposal areas has been provided as Figure 1.

2.2 Site Hydrogeological Summary

The site hydrogeologic characteristics have been determined based on implementation of a series of subsurface investigations, beginning with the initial drilling investigation in 1969 by Testing Engineers, Inc. Subsequent investigations have included advancement of borings, monitoring well/piezometer installations for the existing site and facility expansion, and comprehensive groundwater quality testing because of releases from Acme Solvents. Additional hydrogeologic information has been obtained due to development activities of the North Expansion Unit, which includes excavation of materials exposing bedrock and unconsolidated deposits. Since the West Expansion Unit has not been developed and is physically separated from the Northern, Southern, and North Expansion Units, the hydrogeologic conditions for the West Expansion Unit are not discussed herein.

2.2.1 Unconsolidated Deposits

The composition of the unconsolidated deposits, which appear to be glacial outwash belonging to the Henry Formation, varies with location throughout the facility boundaries. Coarse-grained sand and gravel with occasional silt and/or clay seams typically underlie the Northern Unit. The thickness of the sand and gravel varies from just a few feet beneath the east toe of the waste footprint to approximately 70 feet beneath the western edge of the waste boundary. The sand and gravel thickens to the west, corresponding with the erosion of the underlying dolomite surface. Unconsolidated sand and gravel glacial drift sediments directly underlie the western portion of the Northern Unit, while fractured dolomite bedrock underlies the eastern portion of the landfill.

2.2.2 Bedrock

The bedrock consists of dolomite belonging to the Galena and Platteville Groups, fractured and weathered to varying extents. Chert layers, chert nodules, and small vugs were commonly noted on boring logs. However, larger voids or karst characteristics were not encountered during the boring programs. The bedrock surface is highly variable throughout the facility. East of the site, a bedrock high is present and outcrops in the vicinity of the Acme Solvents site and two quarries. This bedrock upland represents the eastern escarpment of the Upper Rock buried bedrock valley. The previously described waste units are situated on the eastern edge of this bedrock valley. The overburden thickens as the elevation of the bedrock surface decreases to the west. As determined by previous boring investigations, monitor wells, and gas probe installations, the bedrock varies from a high of near 750 feet above Mean Sea Level (MSL) at the southeast corner of the Northern Unit to a low of approximately 675 feet MSL to the west and south of the Southern Unit.

2.2.3 Uppermost Aquifer

The uppermost aquifer for the site is located within the glaciofluvial sand and gravel deposits and the upper portion of the fractured dolomite bedrock. The saturated sands and gravels, which directly overlie the bedrock, occur in the western two-thirds of the Northern Unit. In locations where there are no saturated glaciofluvial deposits, the uppermost aquifer is located within the dolomite bedrock typically overlain by silty clay deposits. This occurs in the eastern third of the Northern Unit.

2.2.4 Groundwater Movement

The regional potentiometric surface resides within the fractured dolomite in the eastern portion of the site and within the unconsolidated glacial outwash in the western portion. The historical direction of movement within the uppermost aquifer is westward in the bedrock high east of the site and to the west-northwest in the unconsolidated sediments. However, dewatering activities implemented as part of cell development within the North Expansion Unit have caused the groundwater movement to temporarily deviate in a northward direction in the vicinity of the Northern Unit. Potentiometric surface maps (third quarter 2012 through second quarter 2013) have been provided in Appendix B.

Kilbuck Creek is located west of the Southern, Northern, and North Expansion Units. Shallow groundwater may discharge to Kilbuck Creek while groundwater in the lower part of the unconsolidated sediments and deeper bedrock moves beneath Kilbuck Creek. Kilbuck Creek is both a gaining and losing stream, dependent upon hydrogeologic and atmospheric conditions. During drier periods where the water table drops below the bottom of the creek bed, surface waters feed the groundwater system. During wetter periods where the water table is high (above the bottom of the creek bed) the groundwater system will recharge the stream. This fluctuation allows mixing of surface water (and, consequently, surface water constituents) with groundwater (and any groundwater constituents), often on a seasonal basis. In addition, dependent upon the creek stage, the surface waters of both the creek and the wetland mitigation area may be contiguous.

The bottom of the aquifer system beneath the facility, which includes both the saturated sand and gravel and the underlying weathered/fractured dolomite, lies at an elevation of approximately 665 feet MSL. Previous hydrogeologic investigations and evaluations have shown that vertical gradients do exist within the uppermost aquifer but are typically slight at any individual location. Therefore, groundwater elevations from the bedrock wells and the wells

screened in the unconsolidated materials (sand and gravel) were used to create one potentiometric surface for each quarterly sampling period. The horizontal hydraulic gradients are greater at the east end of the facility where the bedrock is higher and fairly flat near Kilbuck Creek. However, recent dewatering activities within the North Expansion Unit have induced an artificial hydraulic gradient towards the pumping centers, which is naturally higher compared to the preexisting gradient of the uppermost aquifer.

3. CURRENT GROUNDWATER MONITORING PROGRAM

3.1 Existing Monitor Well Network

The facility has an extensive network of monitoring wells from which groundwater data is obtained. Separate monitor well networks exist for the Northern and Southern Units. The Northern Unit contains 20 groundwater monitoring points, of which five are designated as background groundwater quality wells (upgradient). One is a compliance boundary well at the edge of the zone of attenuation, and the remaining wells monitor within the zone of attenuation downgradient and sidegradient of the landfill. Winnebago Landfill samples 15 additional wells on a quarterly basis as part of the Groundwater Management Zone (GMZ) monitoring network. Each well is identified in Figure 2. The following table provides a list of the monitoring wells for the Northern Unit.

Northern Unit Detection Monitoring Wells (20)	
Upgradient	G09D, G09M, G13S, G13D, G20D
Compliance Boundary	R39S
Zone of Attenuation	G03M, G16M, G17S, G33D, G34D, G35D,
	G37S, G38S, G40S, G41D, G41M, G41S, R42S, G51S
Northern Unit GMZ Only Wells (15)	
Compliance Boundary	G36S, G52S, G52M, G53S, G53M, G54S, G54M
Zone of Attenuation	R03S, G16D, G33S, G34S, G35S, G37D, G130, G50S

The Southern Unit contains 17 permitted groundwater monitoring points. Six are designated as background groundwater quality wells (upgradient); two (G13S and G13D) are also background wells for the Northern Unit. Although monitoring wells R05S, G29S, and G29D are permitted as zone of attenuation wells, based on the potentiometric surface maps (Appendix B), these wells are also located upgradient to the waste units. The wells have been used previously in the derivation of the background concentration values (sometimes called Applicable Groundwater Quality Standards [AGQS]) for the unit. The following table lists the monitoring wells for the Southern Unit.

Southern Unit Detection Monitoring Wells (17)	
Upgradient	R11S, G11D, G13S, G13D, R22S, G22D
Zone of Attenuation	R05S, G23D, R24D, R25D, R27D, A28D, R29S, G29D, G26S, G26D, G49D

3.2 Background Concentrations

The initial AGQSs for the Northern Unit were determined from data obtained from four wells located east of Lindenwood Road, on the Acme Solvents property (B-8, STI-2S, STI-2I, and STI-2D). Background sampling occurred from 1990 through 1992. The AGQSs were proposed in the initial significant modification application (Application Log No. 1991-138, received by the Illinois EPA April 12, 1991) and subsequent addenda. Addendum 3 to the initial significant modification, dated February 10, 1993, provided the first full listing of routine AGQS values derived from wells G09M, G09D, G13S, and G13D. Since the time the background concentrations were obtained, remediation at the Acme Solvents facility ceased and an additional quarry began operation north and east of Acme Solvents (the facilities are located upgradient to the landfill). The approximate locations of Acme Solvents and the quarries are shown in Figure 1. These activities have likely affected the current background conditions. To account for changes in the background groundwater quality since 1993, revised AGQS values for 60 G1 and G2 List parameters were submitted and subsequently approved with the issuance of Modification 24 to the current permit on March 26, 2004.

The initial AGQSs for the Southern Unit were determined from data obtained from the permitted upgradient/background wells. However, revisions to several background values have included data from wells R05S, G29S, and G29D as part of the statistical derivation. Although permitted as zone of attenuation wells, these wells are actually hydraulically upgradient to the Southern Unit and provide additional information on the background groundwater quality. As mentioned in Section 3.1 above, monitoring wells G13S and G13D are contained in the monitoring well networks for both the Northern and Southern Units and are located hydraulically upgradient to both units. As a special condition for the Southern Unit (Condition VIII.24 of Permit No. 1991-138-LF, Modification No. 60), the groundwater quality for these two wells—along with R05S—are not evaluated with respect to the permitted AGQSs but are reviewed based on intra-well trend analyses. The results are summarized in the annual report in accordance with Condition XI.2 of the Permit.

4. GROUNDWATER QUALITY

In accordance with 35 Illinois Administrative Code (Ill. Adm. Code) 811.319 and the current permit, the groundwater quality is evaluated on a quarterly basis. Results of the statistical evaluations are reported quarterly in accordance with Condition No. VIII.18. Notification of observed/confirmed increases has been submitted in accordance with Condition No. VIII.14 of the permit. As stated in the introduction, this alternate source demonstration will address the exceedence of AGQS (360 mg/L; Northern Unit) for dissolved sulfate at well G13S during the first quarter 2013 (450 mg/L), which was confirmed during second quarter 2013 (530 mg/L). The historical analytical data for well G13S (List G1 and G2 parameters) is provided in Table 1. Trend graphs for dissolved sulfate are provided in Appendix C.

4.1 Dissolved Sulfate

It has been determined that the source of the confirmed increase in well G13S is either natural variation in groundwater chemistry or an unknown anthropogenic source, not landfill impacts. The rationale used in making this determination is elaborated in the following sections.

- Dissolved sulfate concentrations at upgradient well G13S has exceeded the Northern Unit AGQS value (360 mg/L) only three times over the last fifteen years. Recent

concentrations of dissolved sulfate have not exceeded the AGQS in any other monitoring well for the Northern Unit, with the exception of G13S. Although the trend graph in Appendix C shows a pronounced increasing trend for dissolved sulfate in G13S, it should be noted that the parameter has never shown a progressive increase over eight consecutive quarters at G13S, or at any other well at the facility.

- Wells G13S and G13D are upgradient wells for both the Northern and Southern Units at the Winnebago Landfill. The 2013 annual flow assessment for the facility estimated hydraulic gradients between wells G09M and G184 that ranged from 0.013527 to 0.015141 during the four quarters of the review (Appendix B). This points to significant flow velocity in the uppermost aquifer and is partially due to the continuous dewatering activities in the North Expansion Unit. Given the high transmissivity and hydraulic gradient in the uppermost aquifer, it is highly improbable that any discharge from the landfill will migrate to an upgradient point.

- Analytical results from leachate monitoring points at the Northern Unit (L313, L314, L315, L316, L317, and L318; Table 2) indicate that sulfate has been non-detect in 60% of samples analyzed since 2000 and has been non-detect in all four samples analyzed since first quarter 2011. The highest sulfate concentration observed in the leachate samples since 2000 was 36 mg/L (fourth quarter 2008). This clearly demonstrates that the Northern Unit leachate is not a viable source of the high concentration of dissolved sulfate in well G13S.

- Analytical results from leachate monitoring points at the Southern Unit (L301 and L302; Table 2) indicate that sulfate has been non-detect in almost 40% of samples analyzed since 2000 and has shown significant fluctuations in concentration when detected. The highest sulfate concentration observed in the leachate samples since 2000 was 600 mg/L (second quarter 2010) while ten out of fourteen detected samples were below 100 mg/L. It should be noted that wells G13S and G13D are closer to the Southern Unit, a landfill with a modern composite liner system (geomembrane over compacted clay). Thus it is highly improbable that the Southern Unit leachate is the source of the high dissolved sulfate concentration in well G13S.

- Dissolved sulfate concentrations have been seen to fluctuate significantly in several facility wells, especially in wells G13S and G13D. Concentrations in well G13D reached a peak of 580 mg/L during second quarter of 2009 but dropped to 70 mg/L during the next sampling event (third quarter 2009). This could be indicative of a natural spatial variation in groundwater chemistry; however, it could also be an indirect result of the dewatering activities within the North Expansion Unit, which has temporarily altered the flow direction and hydraulic gradient.

- Given the consistent detects of dissolved sulfate in wells G13S, G13D, and other facility wells, as well as its predominant absence in the landfill leachate, it is likely coming from natural sources or some unknown anthropogenic source. Sulfate ions could originate from the dissolution of evaporate beds (anhydrite/gypsum) within the fractured Galena Dolomite that forms the uppermost aquifer in the western part of the facility. Higher sulfate could also result from a local change in redox conditions within the well/formation. Sulfate reducing bacteria normally convert sulfate to hydrogen sulfide in low oxygen environments; an oxidizing environment or natural reduction in bacteria concentration would immediately affect sulfate concentrations in the groundwater. However, it could also come from a host of anthropogenic sources that lie upgradient to

the site, which include but are not limited to multiple septic systems of residences and businesses, quarry operations, and groundwater remediation sites (ACME Solvents).

5. RECOMMENDATIONS AND CONCLUSIONS

Based on an evaluation of the historic sampling results, trend analyses, groundwater flow direction and gradient, and background information, the source of the confirmed exceedence of dissolved sulfate in well G13S is either a natural or offsite anthropogenic source. Given that dissolved sulfate is predominantly non-detect in the landfill leachate and that well G13S is located hydraulically upgradient to the Northern and Southern Units, the exceedence of dissolved sulfate AGQS is not consistent with landfill impacts, which are generally limited to just those wells located downgradient of a leak and are very rarely detected in upgradient wells.

Since concentrations are currently oscillating (with an increasing trend) it is proposed to monitor dissolved sulfate at G13S for another four quarters. If concentrations continue to exceed through second quarter 2014, either a revised AGQS value or further assessment will be proposed. Exceedences of dissolved sulfate at G13S will continue to be reported to the Illinois EPA in accordance with Condition VIII.14 of the permit; however, any additional assessment (i.e., alternate source demonstrations/assessment monitoring required by Condition VIII.15) will be conducted as part of the reevaluation.

TABLES

TAL

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	1stQtr97	2ndQtr97	3rdQtr97	4thQtr97	1stQtr98	2ndQtr98	3rdQtr98	4thQtr98	1stQtr99
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	0.19	0.13	0.27	0.63	0.23	0.235	0.24	0.24	0.13
G13S	Arsenic, Dissolved	ug/l	G1	2	< 2.2	< 2	3.4	< 2	8.2	< 2	< 3	< 2	< 3
G13S	Boron, Dissolved	ug/l	G1	98	< 110	< 110	< 110	< 110	< 110	< 110	110	110	110
G13S	Cadmium, Dissolved	ug/l	G1	5	< 0.44	< 0.4	0.49	< 0.44	< 0.44	< 0.44	< 0.3	< 0.49	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	45.8	64.7	58.7	49.2	48.6	48.3	44	36	< 2
G13S	Chromium, dissolved	ug/L	G1	72									
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.005	< 0.005	< 0.005	0.014	< 0.005	< 0.005	< 0.01	0.0052	< 0.01
G13S	Lead, Dissolved	ug/l	G1	4	< 3.3	< 3	< 3	< 3	< 3	< 3	< 3	2.9	< 3
G13S	Magnesium, dissolved	mg/L	G1	170.41									
G13S	Mercury, dissolved	ug/L	G1	0.2									
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	0.11	0.16	0.11	< 0.1	< 0.1	< 0.1	< 0.05	< 0.026	< 0.2
G13S	pH (field)	units	G1	5.4 - 8.1	6.59	6.39	6.4	6.88	6.27	6.86	6.36	6.79	6.77
G13S	Specific Conductance (field)	umhos	G1	3820	1330	1370	1370	1030	1370	1410	1340	1330	1330
G13S	Sulfate, Dissolved	mg/l	G1	360	39.1	12.9	25.8	35.5	31.9	35.3	31	50	37
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	777	714	596	876	759	790	940	790	800
G13S	Zinc, Dissolved	ug/l	G1	236072.4	550	750	560	380	440	311	320	360	300

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAL

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	2ndQtr99	3rdQtr99	4thQtr99	1stQtr00	2ndQtr00	3rdQtr00	4thQtr00	1stQtr01
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	0.18	0.13	0.4	< 0.1	< 0.1	0.1	< 0.1	0.14
G13S	Arsenic, Dissolved	ug/l	G1	2	< 0.84	< 3	< 3	< 3	1.4	< 2	< 2	< 2
G13S	Boron, Dissolved	ug/l	G1	98	110	< 100	< 100	< 100	< 98	< 98	< 98	< 98
G13S	Cadmium, Dissolved	ug/l	G1	5	0.3	< 1	0.41	< 0.3	< 1	0.34	0.52	< 0.3
G13S	Chloride, Dissolved	mg/l	G1	87.511	45	33	26	28	53	30	32	35
G13S	Chromium, dissolved	ug/L	G1	72								
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
G13S	Lead, Dissolved	ug/l	G1	4		< 3	< 3	< 3	< 3	< 3	< 3	< 3
G13S	Magnesium, dissolved	mg/L	G1	170.41								
G13S	Mercury, dissolved	ug/L	G1	0.2								
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	0.32	< 0.2	0.22	8.6	< 0.2	0.37	1.8	1
G13S	pH (field)	units	G1	5.4 - 8.1	7.7	6.66	5.94	7.78	7.2	7.18	6.54	6.91
G13S	Specific Conductance (field)	umhos	G1	3820	1320	1330	1375	647		1166	1331	1444
G13S	Sulfate, Dissolved	mg/l	G1	360	31	25	18	31	14	29	22	26
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	760	790	700	390	790	720	770	800
G13S	Zinc, Dissolved	ug/l	G1	236072.4	130	74	65	< 20	600	1500	2100	770

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAB

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	2ndQtr01	3rdQtr01	4thQtr01	1stQtr02	2ndQtr02	3rdQtr02	4thQtr02	1stQtr03	2ndQtr03
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	0.13	A 0.35	< 0.05	0.39	< 0.05	0.5	0.26	0.36	0.76
G13S	Arsenic, Dissolved	ug/l	G1	2	< 2	< 2	< 1	< 1	< 1	2	1	6	2.6
G13S	Boron, Dissolved	ug/l	G1	98	< 98	< 98	140	250	83	120	140	120	120
G13S	Cadmium, Dissolved	ug/l	G1	5	1.9	< 0.3	< 1	< 1	< 1	< 1	< 1	11	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	72	69	40	79	Q 43	42	31	36	39
G13S	Chromium, dissolved	ug/L	G1	72									
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.034	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
G13S	Lead, Dissolved	ug/l	G1	4	< 4	< 3	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41									
G13S	Mercury, dissolved	ug/L	G1	0.2									
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	0.76	< 0.2	5	0.42	Q 6.1	< 0.02	0.28	< 0.02	0.075
G13S	pH (field)	units	G1	5.4 - 8.1	6.83	7.01	7.23	7.14	6.46	6.96	6.78	6.57	7.2
G13S	Specific Conductance (field)	umhos	G1	3820	1230	2480	940	420	840	1050	1140	1070	610
G13S	Sulfate, Dissolved	mg/l	G1	360	26	22	94	100	190	95	84	100	94
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	870	870	790	900	1000	800	790	820	830
G13S	Zinc, Dissolved	ug/l	G1	236072.4	610	440	240	150	200	140	110	85	46

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

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Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	3rdQtr03	4thQtr03	1stQtr04	2ndQtr04	2ndQtr04re	3rdQtr04	3rdQtr04re	4thQtr04
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	0.38	0.5	< 0.05	0.094		0.14		0.27
G13S	Arsenic, Dissolved	ug/l	G1	2	3	2	1.6	1.8		1.3		1.1
G13S	Boron, Dissolved	ug/l	G1	98	110	130	88	100	100	82		87
G13S	Cadmium, Dissolved	ug/l	G1	5	< 1	< 1	< 1	< 1		< 1		< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	39	43	46	38		60		56
G13S	Chromium, dissolved	ug/L	G1	72								
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.005	< 0.005	< 0.005	< 0.005		< 0.005		< 0.005
G13S	Lead, Dissolved	ug/l	G1	4	< 1	< 1	< 1	< 1		< 1		< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41								
G13S	Mercury, dissolved	ug/L	G1	0.2								
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	0.049	0.034	0.24	< 0.02		< 0.02		< 0.02
G13S	pH (field)	units	G1	5.4 - 8.1	6.42	6.82	6.79	6.76	5.26	6.4	6.27	7.06
G13S	Specific Conductance (field)	umhos	G1	3820	690	900	910	1080	1260	1070	1250	1315
G13S	Sulfate, Dissolved	mg/l	G1	360	100	100	61	77	96	76	70	84
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	840	820	740	820		890		920
G13S	Zinc, Dissolved	ug/l	G1	236072.4	63	11	120	54		75		12

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAB[illegible]

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	4thQtr04re	1stQtr05	1stQtr05re	2ndQtr05	2ndQtr05re	3rdQtr05	3rdQtr05re	4thQtr05
G13S	Ammonia as N, dissolved	mg/l	G1	0.9		0.17		0.2		0.39		0.39
G13S	Arsenic, Dissolved	ug/l	G1	2		1.6		1.9		1.3		2.4
G13S	Boron, Dissolved	ug/l	G1	98		91		100		95		86
G13S	Cadmium, Dissolved	ug/l	G1	5		< 1		< 1		< 1		< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511		67		57		59		53
G13S	Chromium, dissolved	ug/L	G1	72								
G13S	Cyanide, Total	mg/l	G1	0.34		< 0.005		< 0.005		< 0.005		< 0.005
G13S	Lead, Dissolved	ug/l	G1	4		< 1		< 1		< 1		< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41								
G13S	Mercury, dissolved	ug/L	G1	0.2								
G13S	Nitrate as N, dissolved	mg/l	G1	11.74		< 0.2		< 0.02		< 0.02		H 0.021
G13S	pH (field)	units	G1	5.4 - 8.1		6.4	6.98	7.01		7.01	6.5	6.55
G13S	Specific Conductance (field)	umhos	G1	3820		1280	1240	1540		1540	1300	1005
G13S	Sulfate, Dissolved	mg/l	G1	360	73	89	120	99	92	54	59	54
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200		900		880		980		970
G13S	Zinc, Dissolved	ug/l	G1	236072.4		6.7		< 6		< 6		< 6

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAL

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	4thQtr05re	1stQtr06	1stQtr06re	2ndQtr06	2ndQtr06re	3rdQtr06	4thQtr06	1stQtr07
G13S	Ammonia as N, dissolved	mg/l	G1	0.9		0.34		< 0.1		< 0.09	0.14	< 0.09
G13S	Arsenic, Dissolved	ug/l	G1	2		1.9		1.5		1	2	1.8
G13S	Boron, Dissolved	ug/l	G1	98		110		92		100	120	87
G13S	Cadmium, Dissolved	ug/l	G1	5		< 1		< 1		< 1	< 1	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511		39		190		46	48	66
G13S	Chromium, dissolved	ug/L	G1	72								
G13S	Cyanide, Total	mg/l	G1	0.34		< 0.005		< 0.005		< 0.005	< 0.005	0.015
G13S	Lead, Dissolved	ug/l	G1	4		< 1		< 1		< 1	< 1	< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41								
G13S	Mercury, dissolved	ug/L	G1	0.2								
G13S	Nitrate as N, dissolved	mg/l	G1	11.74		< 0.02		H 30		2.1	0.11	0.027
G13S	pH (field)	units	G1	5.4 - 8.1	6.71	6.89	6.82	7.18	7.3	6.98	7.1	6.75
G13S	Specific Conductance (field)	umhos	G1	3820	650	1220	948	1250	826	1445	870	1521
G13S	Sulfate, Dissolved	mg/l	G1	360	100	71	110	77		160	140	210
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200		900		960		1000	950	1000
G13S	Zinc, Dissolved	ug/l	G1	236072.4		< 6		150		180	19	56

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAL

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	1stQtr07re	2ndQtr07	2ndQtr07re	3rdQtr07	4thQtr07	4thQtr07re	1stQtr08	1stQtr08re
G13S	Ammonia as N, dissolved	mg/l	G1	0.9		0.22		0.094	0.17		0.33	
G13S	Arsenic, Dissolved	ug/l	G1	2		1.8		1.2	1.6		1.6	
G13S	Boron, Dissolved	ug/l	G1	98		87		69	88		77	
G13S	Cadmium, Dissolved	ug/l	G1	5		< 1		< 1	< 1		< 1	
G13S	Chloride, Dissolved	mg/l	G1	87.511		54		100	120		120	
G13S	Chromium, dissolved	ug/L	G1	72								
G13S	Cyanide, Total	mg/l	G1	0.34		0.021		< 0.005	< 0.005		< 0.005	
G13S	Lead, Dissolved	ug/l	G1	4		< 1		< 1	< 1		< 1	
G13S	Magnesium, dissolved	mg/L	G1	170.41								
G13S	Mercury, dissolved	ug/L	G1	0.2								
G13S	Nitrate as N, dissolved	mg/l	G1	11.74		< 0.02		0.53	0.43		< 0.02	
G13S	pH (field)	units	G1	5.4 - 8.1	6.66	6.67		7.19	6.61	6.5	6.87	6.08
G13S	Specific Conductance (field)	umhos	G1	3820	1359	1111		1215	1300	1621	1920	1112
G13S	Sulfate, Dissolved	mg/l	G1	360	240	260	260	110	200	200	210	190
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200		1200		1500	1200		1200	
G13S	Zinc, Dissolved	ug/l	G1	236072.4		< 6		24	9.4		40	

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TA

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	2ndQtr08	3rdQtr08	4thQtr08	1stQtr09	2ndQtr09	3rdQtr09	4thQtr09	1stQtr10	2ndQtr10
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	0.22	0.45	0.51	< 0.09	0.16	0.75	0.59	1.1	0.39
G13S	Arsenic, Dissolved	ug/l	G1	2	2.3	1.6	7.6	3.9	< 1	1.2	4.5	1.8	< 1
G13S	Boron, Dissolved	ug/l	G1	98	96	90	100	160	81	100	100	150	93
G13S	Cadmium, Dissolved	ug/l	G1	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	220	150	140	73	77	54	72	67	58
G13S	Chromium, dissolved	ug/L	G1	72		4.8	< 4	4.3	5.4	4.7	< 4	< 4	< 4
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
G13S	Lead, Dissolved	ug/l	G1	4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41		74	77	83	84	92	90	89	81
G13S	Mercury, dissolved	ug/L	G1	0.2		< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	< 0.02	< 0.02	< 0.02	< 0.02	0.031	< 0.02	0.081	< 0.02	< 0.02
G13S	pH (field)	units	G1	5.4 - 8.1	7.13	6.49	7.67	6.96	6.41	6.71	7.01	6.8	6.39
G13S	Specific Conductance (field)	umhos	G1	3820	527	761	778	1320	1579	690	819	1147	1228
G13S	Sulfate, Dissolved	mg/l	G1	360	130	110	120	42	190	140	160	110	120
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	1400	1100	1000	970	1100	1100	1100	1100	1000
G13S	Zinc, Dissolved	ug/l	G1	236072.4	< 6	8.3	11	< 6	< 6	7.9	< 6	< 6	< 6

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAL

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	3rdQtr10	4thQtr10	1stQtr11	2ndQtr11	3rdQtr11	4thQtr11	1stQtr12	2ndQtr12
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	1.1	1.7	11	7	6	5.6	6.3	6.7
G13S	Arsenic, Dissolved	ug/l	G1	2	1.8	3.1	4.6	4.1	1.4	5.2	4.7	5.7
G13S	Boron, Dissolved	ug/l	G1	98	200	280	440	470	470	410	250	220
G13S	Cadmium, Dissolved	ug/l	G1	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	92	110	120	150	170	190	120	110
G13S	Chromium, dissolved	ug/L	G1	72	5.3	4.2	4.2	8.2	5.6	7.9	< 4	6.3
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0094	0.0075	< 0.005
G13S	Lead, Dissolved	ug/l	G1	4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41	89	96	88	100	130	140	130	130
G13S	Mercury, dissolved	ug/L	G1	0.2	< 0.2	< 0.2	< 0.2	0.24	< 0.2	< 0.2	< 0.2	< 0.2
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	0.037	< 0.02	H 0.032	< 0.02	0.04	0.07	< 0.02	0.3
G13S	pH (field)	units	G1	5.4 - 8.1	6.4	6.73	6.52	6.93	6.6	7.09	6.61	6.49
G13S	Specific Conductance (field)	umhos	G1	3820	1185	1900	1728	3820	1543	1798	2420	1175
G13S	Sulfate, Dissolved	mg/l	G1	360	20	97	190	160	190	300	280	310
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	1100	1200	1200	1300	1600	1400	1200	1400
G13S	Zinc, Dissolved	ug/l	G1	236072.4	< 6	< 6	22	< 6	< 6	10	< 6	13

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAb

Winnebago Landfill - Northern Unit

Well G13S - List G1

Well	Parameter Name	Units	GW List	AGQS	3rdQtr12	4thQtr12	1stQtr13	2ndQtr13
G13S	Ammonia as N, dissolved	mg/l	G1	0.9	7.7	5.3	8.4	1.6
G13S	Arsenic, Dissolved	ug/l	G1	2	1.5	< 1	2.1	4.9
G13S	Boron, Dissolved	ug/l	G1	98	230	240	240	160
G13S	Cadmium, Dissolved	ug/l	G1	5	< 1	< 1	< 1	< 1
G13S	Chloride, Dissolved	mg/l	G1	87.511	110	110	110	110
G13S	Chromium, dissolved	ug/L	G1	72	4.4	< 4	< 4	4.1
G13S	Cyanide, Total	mg/l	G1	0.34	< 0.005	0.0054	0.0053	< 0.005
G13S	Lead, Dissolved	ug/l	G1	4	< 1	< 1	< 1	< 1
G13S	Magnesium, dissolved	mg/L	G1	170.41	130	140	130	130
G13S	Mercury, dissolved	ug/L	G1	0.2	< 0.2	< 0.2	< 0.2	< 0.2
G13S	Nitrate as N, dissolved	mg/l	G1	11.74	< 0.02	< 0.02	< 0.02	0.06
G13S	pH (field)	units	G1	5.4 - 8.1	6.5	6.5	6.96	6.8
G13S	Specific Conductance (field)	umhos	G1	3820	1252	2560	1265	2390
G13S	Sulfate, Dissolved	mg/l	G1	360	390	260	450	530
G13S	Total Dissolved Solids, filtered	mg/l	G1	4200	1500	1400	1500	1500
G13S	Zinc, Dissolved	ug/l	G1	236072.4	< 6	< 6	160	9

Notes:

1. A shaded cell indicates an exceedence of the AGQS.

TAB'

Winnebago Land. orthern Unit

Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	2ndQtr97	2ndQtr98	2ndQtr99	2ndQtr00	2ndQtr01	2ndQtr02	2ndQtr03	3rdQtr03
G13S	1,1,1,2-Tetrachloroethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,1-Trichloroethane	ug/l	G2	12	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,2,2-Tetrachloroethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,2-Trichloroethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1-Dichloroethane	ug/l	G2	31	< 5	< 5	1.3	2.1	7	< 1	< 1	< 1
G13S	1,1-Dichloroethene	ug/l	G2	2.5	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1-Dichloropropene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,3-Trichlorobenzene	ug/l	G2	5	< 5	14	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,3-Trichloropropane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,4-Trichlorobenzene	ug/l	G2	5	< 5	7	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,4-Trimethylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 5	< 5	< 1
G13S	1,2-Dibromo-3-chloropropane	ug/l	G2	5	< 5	< 5	< 2	< 2	< 2	< 2	< 0.05	< 2
G13S	1,2-Dibromoethane (EDB)	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 0.5	< 0.05	< 0.5
G13S	1,2-Dichlorobenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2-Dichloroethane	ug/l	G2	2.5	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2-Dichloropropane	ug/l	G2	6	< 5	< 5	< 1	< 1	1.6	< 1	< 1	< 1
G13S	1,3,5-Trimethylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichlorobenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichloropropane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichloropropene	ug/l	G2	5	< 5				< 1	< 2	< 2	< 1
G13S	1,4-Dichlorobenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	2.4	< 1	< 1	< 1
G13S	2,2-Dichloropropane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	2-Butanone (MEK)	ug/l	G2	5	< 10	12	< 5	< 5	< 5	< 5	< 5	< 5
G13S	2-Chlorotoluene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	2-Hexanone (MBK)	ug/l	G2	10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 5
G13S	4-Chlorotoluene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	4-Methyl-2-pentanone (MIBK)	ug/l	G2	10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Acetone	ug/l	G2	10	14	< 10	< 5	< 5	< 5	< 10	< 10	< 10
G13S	Acrylonitrile	ug/l	G2	10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 50
G13S	Benzene	ug/l	G2	2.8	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromobenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromochloromethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromodichloromethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromoform	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromomethane	ug/l	G2	10	< 10	< 5	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Carbon disulfide	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Carbon tetrachloride	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chlorobenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chloroethane	ug/l	G2	10	< 10	< 5	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Chloroform	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chloromethane	ug/l	G2	10	< 10	< 5	< 2	< 2	< 2	< 2	< 2	< 2
G13S	cis-1,2-Dichloroethene	ug/l	G2	5	< 5	< 5	5.5	9	34	< 1	< 1	< 1

TAP' ¯ 1
Winnebago Lan(lorthern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	2ndQtr97	2ndQtr98	2ndQtr99	2ndQtr00	2ndQtr01	2ndQtr02	2ndQtr03	3rdQtr03
G13S	cis-1,3-Dichloropropene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dibromochloromethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dibromomethane	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dichlorodifluoromethane	ug/l	G2	19	< 5	< 5	< 2	1	2.3	< 2	< 2	< 2
G13S	Ethylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Hexachlorobutadiene	ug/l	G2	100	< 5	< 5	< 10	< 10	< 10	< 2	< 10	< 2
G13S	Iodomethane	ug/l	G2	10	< 5	< 5	< 5	< 5	< 5	< 1	< 1	< 1
G13S	Isopropylbenzene	ug/l	G2	5		< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Methylene Chloride	ug/l	G2	8	< 5	< 5	< 1	< 1	< 1	< 5	< 5	< 5
G13S	Naphthalene	ug/l	G2	100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
G13S	n-Butylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	n-Propylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Oil (Hexane Soluble)	mg/l	G2	5	< 5	< 5	< 5.3	< 1	< 1	< 6	< 5	< 5
G13S	Phenolics	ug/l	G2	100	< 10	< 10	< 10	< 10	< 10	< 5	< 5	< 5
G13S	p-Isopropyltoluene	ug/l	G2	5		< 5		< 1	< 1	< 1	< 1	< 1
G13S	sec-Butylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Styrene	ug/l	G2	10	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	tert-Butylbenzene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Tetrachloroethene	ug/l	G2	26	< 5	< 5	1.2	2	5.7	< 1	< 1	< 1
G13S	Tetrahydrofuran	ug/l	G2	42	< 5	< 5	< 5	< 5	< 5	20	< 5	< 5
G13S	Toluene	ug/l	G2	20	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,2-Dichloroethene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,3-Dichloropropene	ug/l	G2	5	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,4-Dichloro-2-butene	ug/l	G2	5	< 5	< 5	< 5	< 5	< 5	< 1	< 1	< 1
G13S	Trichloroethene	ug/l	G2	66	< 5	< 5	2.4	5	14	< 1	< 1	< 1
G13S	Trichlorofluoromethane	ug/l	G2	5	< 5	< 5	< 2	< 1	< 2	< 1	< 1	< 1
G13S	Vinyl acetate	ug/l	G2	10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Vinyl chloride	ug/l	G2	17	< 2	< 2	< 2	< 2	4.4	< 2	< 2	< 2
G13S	Xylenes (Total)	ug/l	G2	5	< 10	< 10	< 3	< 3	< 3	< 3	< 2	< 2

Notes:
1. A shaded cell indicates an exceedence of the AGQS.

TA 1

Winnebago Landfill - Northern Unit

Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	4thQtr03	1stQtr04	2ndQtr04	3rdQtr04	2ndQtr05	2ndQtr06	2ndQtr07	2ndQtr08
G13S	1,1,1,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,1-Trichloroethane	ug/l	G2	12	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,2,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1,2-Trichloroethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1-Dichloroethane	ug/l	G2	31	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1-Dichloroethene	ug/l	G2	2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,1-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,3-Trichlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,3-Trichloropropane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,4-Trichlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2,4-Trimethylbenzene	ug/l	G2	5	< 1	< 1	< 5	< 5	< 5	< 5	< 5	< 5
G13S	1,2-Dibromo-3-chloropropane	ug/l	G2	5	< 2	< 2	< 0.05	< 0.05	< 0.05	< 0.05	< 2	< 2
G13S	1,2-Dibromoethane (EDB)	ug/l	G2	5	< 0.5	< 0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.5	< 0.5
G13S	1,2-Dichlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2-Dichloroethane	ug/l	G2	2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,2-Dichloropropane	ug/l	G2	6	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3,5-Trimethylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichloropropane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 2	< 2	< 2	< 2	< 2	< 2
G13S	1,4-Dichlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	2,2-Dichloropropane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	2-Butanone (MEK)	ug/l	G2	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	2-Chlorotoluene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	2-Hexanone (MBK)	ug/l	G2	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	4-Chlorotoluene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	4-Methyl-2-pentanone (MIBK)	ug/l	G2	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Acetone	ug/l	G2	10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10
G13S	Acrylonitrile	ug/l	G2	10	< 50	< 50	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Benzene	ug/l	G2	2.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromochloromethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromodichloromethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromoform	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Bromomethane	ug/l	G2	10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Carbon disulfide	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Carbon tetrachloride	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chlorobenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Chloroethane	ug/l	G2	10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Chloroform	ug/l	G2	5	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1
G13S	Chloromethane	ug/l	G2	10	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
G13S	cis-1,2-Dichloroethene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

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Winnebago Landfill - Northern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	4thQtr03	1stQtr04	2ndQtr04	3rdQtr04	2ndQtr05	2ndQtr06	2ndQtr07	2ndQtr08
G13S	cis-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dibromochloromethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dibromomethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Dichlorodifluoromethane	ug/l	G2	19	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Ethylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Hexachlorobutadiene	ug/l	G2	100	< 2	< 2	< 10	< 10	< 10	< 10	< 2	< 2
G13S	Iodomethane	ug/l	G2	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Isopropylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Methylene Chloride	ug/l	G2	8	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Naphthalene	ug/l	G2	100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
G13S	n-Butylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	n-Propylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Oil (Hexane Soluble)	mg/l	G2	5	< 5	< 5	< 5	< 5	< 5	< 5	< 6	< 6
G13S	Phenolics	ug/l	G2	100	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	p-Isopropyltoluene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	sec-Butylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Styrene	ug/l	G2	10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	tert-Butylbenzene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Tetrachloroethene	ug/l	G2	26	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Tetrahydrofuran	ug/l	G2	42	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Toluene	ug/l	G2	20	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,2-Dichloroethene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	trans-1,4-Dichloro-2-butene	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Trichloroethene	ug/l	G2	66	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Trichlorofluoromethane	ug/l	G2	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
G13S	Vinyl acetate	ug/l	G2	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
G13S	Vinyl chloride	ug/l	G2	17	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
G13S	Xylenes (Total)	ug/l	G2	5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Notes:
1. A shaded cell indicates an exceedence of the AGQS.

Table 1
Winnebago Landfill - Northern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	4thQtr08	2ndQtr09	2ndQtr09re	4thQtr09	1stQtr10	2ndQtr10	4thQtr10	1stQtr11
G13S	1,1,1,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,1,1-Trichloroethane	ug/l	G2	12	< 1	< 1		< 1		< 1	< 1	
G13S	1,1,2,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,1,2-Trichloroethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,1-Dichloroethane	ug/l	G2	31	< 1	< 1		< 1		< 1	< 1	
G13S	1,1-Dichloroethene	ug/l	G2	2.5	< 1	< 1		< 1		< 1	< 1	
G13S	1,1-Dichloropropene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2,3-Trichlorobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2,3-Trichloropropane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2,4-Trichlorobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2,4-Trimethylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2-Dibromo-3-chloropropane	ug/l	G2	5	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05	
G13S	1,2-Dibromoethane (EDB)	ug/l	G2	5	< 0.05	< 0.05		< 0.05		< 0.05	< 0.05	
G13S	1,2-Dichlorobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2-Dichloroethane	ug/l	G2	2.5	< 1	< 1		< 1		< 1	< 1	
G13S	1,2-Dichloropropane	ug/l	G2	6	< 1	< 1		< 1		< 1	< 1	
G13S	1,3,5-Trimethylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,3-Dichlorobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,3-Dichloropropane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	1,3-Dichloropropene	ug/l	G2	5		< 1		< 1		< 1	< 1	
G13S	1,4-Dichlorobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	3.6	
G13S	2,2-Dichloropropane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	2-Butanone (MEK)	ug/l	G2	5	< 5	< 5		< 5		< 5	< 5	
G13S	2-Chlorotoluene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	2-Hexanone (MBK)	ug/l	G2	10	< 5	< 1		< 1		< 1	< 1	
G13S	4-Chlorotoluene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	4-Methyl-2-pentanone (MIBK)	ug/l	G2	10	< 5	< 5		< 5		< 5	< 5	
G13S	Acetone	ug/l	G2	10	< 10	5.6		< 5		< 5	< 5	
G13S	Acrylonitrile	ug/l	G2	10	< 50	< 5		5.9	< 5	< 5	< 5	
G13S	Benzene	ug/l	G2	2.8	< 1	< 1		1.2	< 1	1.6	4.1	
G13S	Bromobenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Bromochloromethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Bromodichloromethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Bromoform	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Bromomethane	ug/l	G2	10	< 2	< 2		< 2		< 2	< 2	
G13S	Carbon disulfide	ug/l	G2	5	< 1	< 1		< 1		< 1	12	< 1
G13S	Carbon tetrachloride	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Chlorobenzene	ug/l	G2	5	< 1	2.5	< 1	4.1	1.2	5.9	24	
G13S	Chloroethane	ug/l	G2	10	< 2	< 2		< 2		< 2	< 2	
G13S	Chloroform	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Chloromethane	ug/l	G2	10	< 2	< 2		< 2		< 2	< 2	
G13S	cis-1,2-Dichloroethene	ug/l	G2	5	< 1	< 1		< 1		< 1	1.1	< 1

TAbLE 1
Winnebago Landfill - Northern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	4thQtr08	2ndQtr09	2ndQtr09re	4thQtr09	1stQtr10	2ndQtr10	4thQtr10	1stQtr11
G13S	cis-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Dibromochloromethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Dibromomethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Dichlorodifluoromethane	ug/l	G2	19	< 2	< 1		< 1		< 1	< 1	
G13S	Ethylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Hexachlorobutadiene	ug/l	G2	100	< 2	< 2		< 2		< 2	< 2	
G13S	Iodomethane	ug/l	G2	10	< 1	< 1		< 1		< 1	< 1	
G13S	Isopropylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Methylene Chloride	ug/l	G2	8	< 5	< 2.5		< 2.5		< 2.5	< 2.5	
G13S	Naphthalene	ug/l	G2	100	< 5	< 5		< 5		< 5	< 5	
G13S	n-Butylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	n-Propylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Oil (Hexane Soluble)	mg/l	G2	5	< 5	< 6		< 6		< 5	< 5	
G13S	Phenolics	ug/l	G2	100	< 5	< 5		< 5		< 5	< 5	
G13S	p-Isopropyltoluene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	sec-Butylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Styrene	ug/l	G2	10	< 1	< 1		< 1		< 1	< 1	
G13S	tert-Butylbenzene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Tetrachloroethene	ug/l	G2	26	< 1	< 1		< 1		< 1	< 1	
G13S	Tetrahydrofuran	ug/l	G2	42	< 20	3.8		< 2.5		< 2.5	< 2.5	
G13S	Toluene	ug/l	G2	20	< 1	< 1		< 1		< 1	< 1	
G13S	trans-1,2-Dichloroethene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	trans-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	trans-1,4-Dichloro-2-butene	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Trichloroethene	ug/l	G2	66	< 1	< 1		< 1		< 1	< 1	
G13S	Trichlorofluoromethane	ug/l	G2	5	< 1	< 1		< 1		< 1	< 1	
G13S	Vinyl acetate	ug/l	G2	10	< 5	< 1		< 1		< 1	< 1	
G13S	Vinyl chloride	ug/l	G2	17	< 2	< 2		< 2		< 2	< 2	
G13S	Xylenes (Total)	ug/l	G2	5	< 2	< 1		< 1		< 1	< 1	

Notes:
1. A shaded cell indicates an exceedence of the AGQS.

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Winnebago Landfill - Northern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	2ndQtr11	4thQtr11	2ndQtr12	3rdQtr12	4thQtr12	2ndQtr13
G13S	1,1,1,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,1,1-Trichloroethane	ug/l	G2	12	< 1	< 1	< 1		< 1	< 1
G13S	1,1,2,2-Tetrachloroethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,1,2-Trichloroethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,1-Dichloroethane	ug/l	G2	31	< 1	< 1	< 1		< 1	< 1
G13S	1,1-Dichloroethene	ug/l	G2	2.5	< 1	< 1	< 1		< 1	< 1
G13S	1,1-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,2,3-Trichlorobenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,2,3-Trichloropropane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,2,4-Trichlorobenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,2,4-Trimethylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,2-Dibromo-3-chloropropane	ug/l	G2	5	< 0.2	< 0.2	< 0.2		< 0.2	< 0.2
G13S	1,2-Dibromoethane (EDB)	ug/l	G2	5	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05
G13S	1,2-Dichlorobenzene	ug/l	G2	5	1.1	< 1	1.1	< 1	1.1	< 1
G13S	1,2-Dichloroethane	ug/l	G2	2.5	< 5	< 1	< 1		< 1	< 1
G13S	1,2-Dichloropropane	ug/l	G2	6	< 1	< 1	< 1		< 1	< 1
G13S	1,3,5-Trimethylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,3-Dichlorobenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,3-Dichloropropane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	1,4-Dichlorobenzene	ug/l	G2	5	12	13	15		14	11
G13S	2,2-Dichloropropane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	2-Butanone (MEK)	ug/l	G2	5	< 5	< 5	< 5		< 5	< 5
G13S	2-Chlorotoluene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	2-Hexanone (MBK)	ug/l	G2	10	< 1	< 1	< 1		< 1	< 1
G13S	4-Chlorotoluene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	4-Methyl-2-pentanone (MIBK)	ug/l	G2	10	< 5	< 5	< 5		< 5	< 5
G13S	Acetone	ug/l	G2	10	< 5	< 5	< 5		< 5	< 5
G13S	Acrylonitrile	ug/l	G2	10	< 5	< 5	< 5		< 5	< 5
G13S	Benzene	ug/l	G2	2.8	3.7	4.7	6.1		4.8	2
G13S	Bromobenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Bromochloromethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Bromodichloromethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Bromoform	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Bromomethane	ug/l	G2	10	< 2	< 2	< 2		< 2	< 2
G13S	Carbon disulfide	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Carbon tetrachloride	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Chlorobenzene	ug/l	G2	5	23	29	34		40	16
G13S	Chloroethane	ug/l	G2	10	< 2	< 2	< 2		< 2	< 2
G13S	Chloroform	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Chloromethane	ug/l	G2	10	< 2	< 2	< 2		< 2	< 2
G13S	cis-1,2-Dichloroethene	ug/l	G2	5	< 1	1	1.2		< 1	< 1

TA_ _ 1
Winnebago Landfill - Northern Unit
Well G13S - List G2

Well	Parameter Name	Units	GW List	AGQS	2ndQtr11	4thQtr11	2ndQtr12	3rdQtr12	4thQtr12	2ndQtr13
G13S	cis-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Dibromochloromethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Dibromomethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Dichlorodifluoromethane	ug/l	G2	19	< 1	< 1	< 1		< 1	< 1
G13S	Ethylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Hexachlorobutadiene	ug/l	G2	100	< 2	< 2	< 2		< 2	< 2
G13S	Iodomethane	ug/l	G2	10	< 1	< 1	< 1		< 1	< 1
G13S	Isopropylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Methylene Chloride	ug/l	G2	8	< 2	< 2	< 1		< 1	< 1
G13S	Naphthalene	ug/l	G2	100	< 5	< 5	< 5		< 5	< 5
G13S	n-Butylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	n-Propylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Oil (Hexane Soluble)	mg/l	G2	5	< 5	< 6	< 5		< 6	< 5
G13S	Phenolics	ug/l	G2	100	< 5	< 5	< 5		< 5	< 5
G13S	p-Isopropyltoluene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	sec-Butylbenzene	ug/l	G2	5	< 1	< 1	1.1		< 1	< 1
G13S	Styrene	ug/l	G2	10	< 1	< 1	< 1		< 1	< 1
G13S	tert-Butylbenzene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Tetrachloroethene	ug/l	G2	26	< 1	< 1	< 1		< 1	< 1
G13S	Tetrahydrofuran	ug/l	G2	42	< 2	< 2	< 2		< 2	< 2
G13S	Toluene	ug/l	G2	20	< 1	< 1	1.1		< 1	< 1
G13S	trans-1,2-Dichloroethene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	trans-1,3-Dichloropropene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	trans-1,4-Dichloro-2-butene	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Trichloroethene	ug/l	G2	66	< 1	< 1	< 1		< 1	< 1
G13S	Trichlorofluoromethane	ug/l	G2	5	< 1	< 1	< 1		< 1	< 1
G13S	Vinyl acetate	ug/l	G2	10	< 1	< 1	< 1		< 1	< 1
G13S	Vinyl chloride	ug/l	G2	17	< 2	< 2	< 1		< 1	< 1
G13S	Xylenes (Total)	ug/l	G2	5	< 1	< 1	2		< 1	< 3

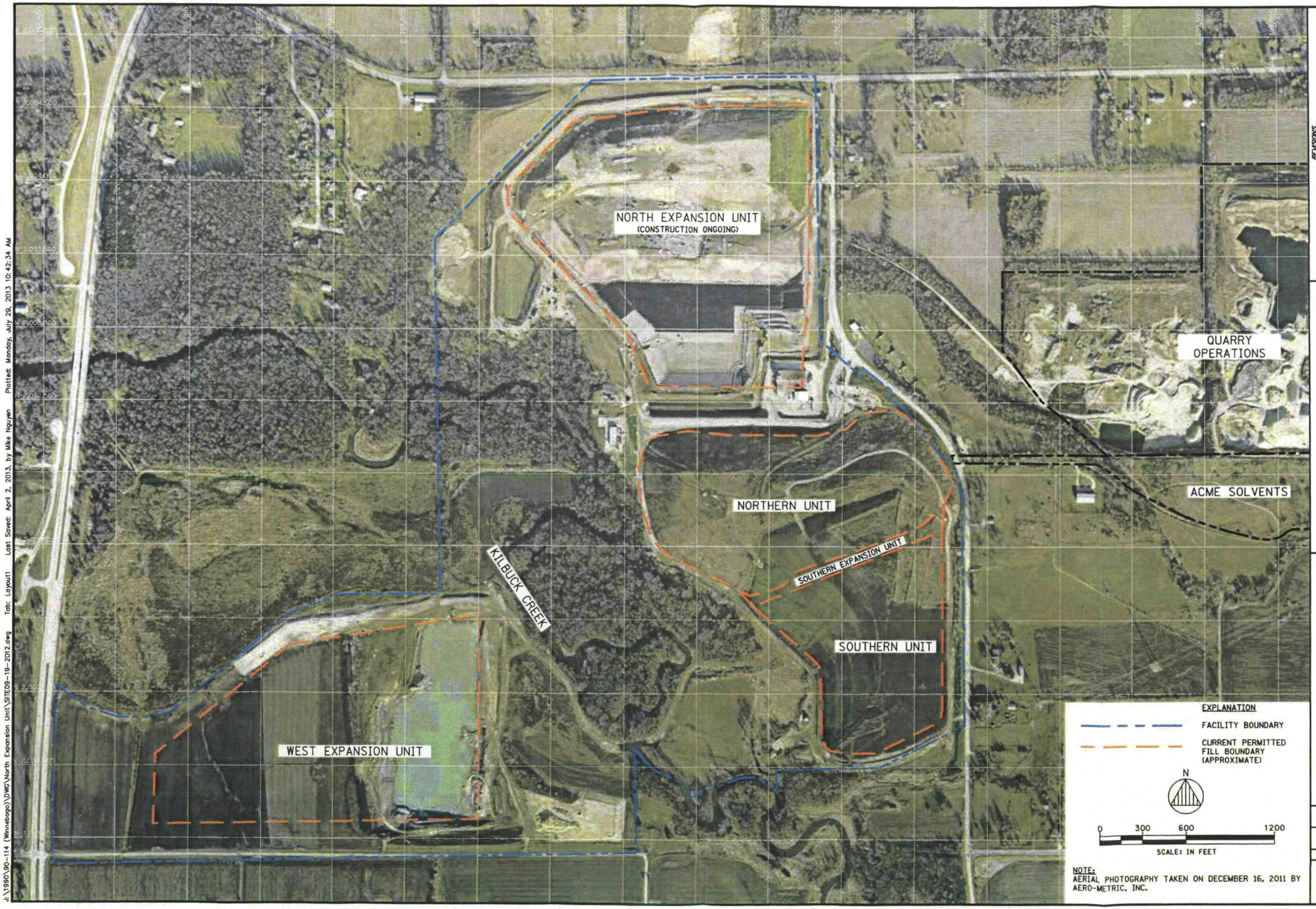
Notes:
1. A shaded cell indicates an exceedence of the AGQS.

Ta. - 2
Winnebago Landfill
Leachate - Northern and Southern Units

Well ID	Unit	Parameter	Units	2ndQtr00	2ndQtr01	2ndQtr02	2ndQtr03	2ndQtr04	2ndQtr05	2ndQtr06	2ndQtr07	2ndQtr08	4thQtr08
L313	Northern	Sulfate	mg/l		< 0.1	2.5	< 10		< 5	28	< 25	2.7	36
L314	Northern	Sulfate	mg/l	< 2	< 4	1.8							
L315	Northern	Sulfate	mg/l		< 40	1.8	< 10	< 5	6.9	< 25			
L316	Northern	Sulfate	mg/l	4	< 4					< 25			
L317	Northern	Sulfate	mg/l								< 25	< 5	
L318	Northern	Sulfate	mg/l										
L301	Southern	Sulfate	mg/l			220	< 10	< 1	< 1	62	< 25	4.9	6
L302	Southern	Sulfate	mg/l		7.5	86	< 10	2.6	< 1	< 25	< 25	5.4	

Well ID	Unit	Parameter	Units	2ndQtr09	4thQtr09	2ndQtr10	4thQtr10	2ndQtr11	4thQtr11	2ndQtr12	4thQtr12	2ndQtr13
L313	Northern	Sulfate	mg/l				9				< 10	
L314	Northern	Sulfate	mg/l									
L315	Northern	Sulfate	mg/l	3.4				< 10				< 10
L316	Northern	Sulfate	mg/l									
L317	Northern	Sulfate	mg/l			19						
L318	Northern	Sulfate	mg/l		2.6				< 10			
L301	Southern	Sulfate	mg/l		12		530					
L302	Southern	Sulfate	mg/l	150		600		25		13		< 10

FIGURES



NOTE:
AERIAL PHOTOGRAPHY TAKEN ON DECEMBER 16, 2011 BY AERO-METRIC, INC.

REVISIONS			
NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: TNS DESIGNED BY: TNS DRAWN BY: MPN

SITE LOCATION MAP

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: APRIL 2013

PROJECT ID: 1990-114

SHEET NUMBER:

FIG. 1

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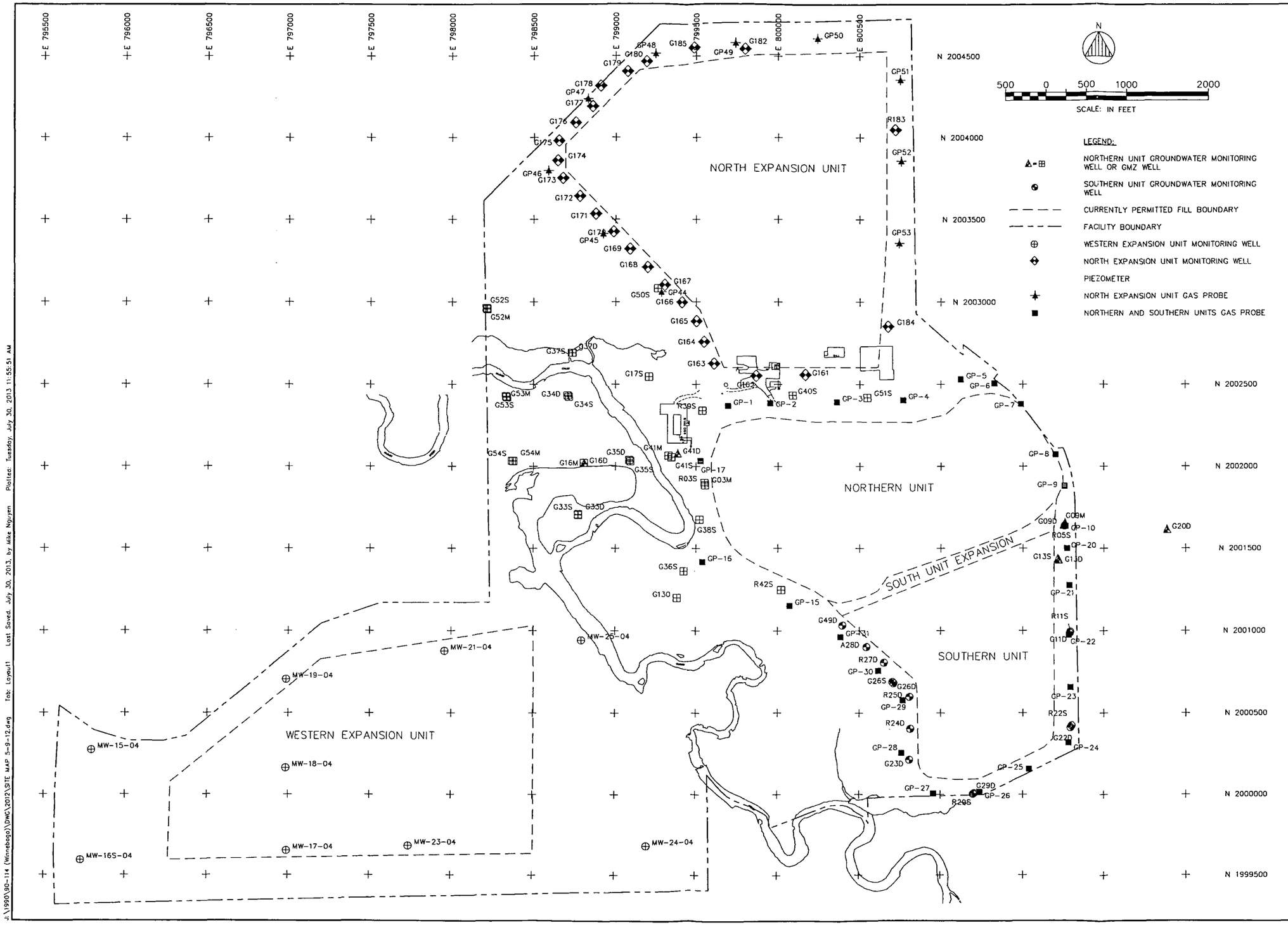
J:\1990\90-114 (Winnebago)\DWG\North Expansion Unit\SITE09-19-2012.dwg Tab: Layout1 Last Saved: April 2, 2013, by Mike Nguyen Plotted: Monday, July 29, 2013 10:42:34 AM



NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: JLR DESIGNED BY: LJR DRAWN BY: MPN

SITE MAP

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: MAY 2012
PROJECT ID: 1990-114
SHEET NUMBER:

FIG. 2

© 2013 Andrews Engineering, Inc.

J:\1990\90-114 (Winnebago)\DWG\2012\SITE MAP 5-9-12.dwg Tab: Layout1 Last Saved: July 30, 2013, by Mike Nguyen Plotted: Tuesday, July 30, 2013 11:55:51 AM

APPENDICES

APPENDIX A

APPLICATION FORMS

Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Certification of Authenticity of Official Forms

You may complete this form online, save a copy locally, print and sign it before submitting it to the Illinois EPA.

This form must accompany any application submitted to the Illinois EPA Bureau of Land, Division of Land Pollution Control, Permit Section on forms other than the official copy printed and provided by the Illinois EPA. The only allowed changes to the form are in spacing, fonts, and the addition of the information provided. Any additions must be underlined. The forms would not be considered identical if there is any change to, addition or deletion of words on the form or to the language of the form.

The same individuals that sign the application form it accompanies must sign the following certification.

I hereby certify under penalty of law that I have personally examined, and am familiar with the application form or forms and all included supplemental information submitted to the Illinois EPA herewith, and that the official Illinois Environmental Protection Agency application form or forms used herein is or are identical in all respects to the official form or forms provided by the Illinois EPA Bureau of Land Permit Section, and has not or have not been altered, amended, or otherwise modified in any way. I further certify under penalty of law that any attached or included electronic data version of the application form or forms complies with the official Illinois EPA's Electronic version thereof, and is or are identical in all respects to the official electronically downloadable form or forms provided by the Illinois EPA Bureau of Land Permit Section, and has not or have not been altered, amended or otherwise modified in any way.

Owner Signature	7-26-2013 Date
Thomas Hilbert Printed Name	Engineering Manager Title
Operator Signature	7-26-2013 Date
Thomas Hilbert Printed Name	Engineering Manager Title
Engineer Signature (if necessary)	7/31/13 Date
Douglas W. Maurtel Printed Name	

Subscribed and Sworn to Before Me, a Notary Public in and for the above-mentioned County and State.

Signature	7-26-2013 Date
Nicole K. DeBoer Printed Name	

"OFFICIAL SEAL"
Nicole K. DeBoer
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 1/10/2014

My commission expires on: 1/10/2014

Seal of Notary Public

IL 532-2941
LPC 670 Rev. 5/2012

Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

General Application for Permit
(LPC - PA1)

This form must be used for any application for permit from the Bureau of Land, except for landscape waste composting or hazardous waste management facilities regulated in accordance with RCRA, Subtitle C. One original, and two copies, or three if applicable, of all permit application forms must be submitted. Attach the original and appropriate number of copies of any necessary plans, specifications, reports, etc. to fully support and describe the activities and modifications being proposed. Attach sufficient information to demonstrate the compliance with all regulatory requirements. Incomplete applications will be rejected. Please refer to the instructions for further guidance. **Note: Applicants must provide a physical address; the post office will not deliver a certified letter (final action letter) to a P.O. Box only. Please provide an extended ZIP+4 code for the site identification and owner/operator information.**

You may complete this form online, save a copy locally, print, sign and submit it to the Bureau of Land at the address below. Note: Hand-delivered permit applications must be delivered between 8:30 am and 5:00 pm, Monday through Friday (excluding State holidays) to:

Bureau of Land, Permit Section, Mail Code #33
1021 North Grand Avenue East, P.O. Box 19276
Springfield, IL 62794-9276

I. Site Identification:

Site Name: Winnebago Landfill IEPA BOL No.: 2018080001

Street Address: 8403 Lindenwood Road P.O. Box: _____

City: Rockford State: IL Zip + 4:* 61109 *Notification letters will not be sent without a 9-digit zip code. County: Winnebago

Existing DE/OP Permit Numbers (if applicable): 1991-138-LF

II. Applicant Identification:

	Owner		Operator (if Different)
Name:	Winnebago Landfill Company, LLC	Name:	Winnebago Reclamation Service, Inc.
Street Address:	5450 Wansford Way, Suite 201B	Street Address:	5450 Wansford Way, Suite 201B
PO Box:		PO Box:	
City:	Rockford State: IL	City:	Rockford State: IL
Zip + 4:	61109 Phone:	Zip + 4:	61109 Phone:
Contact:	Tom Hilbert	Contact:	Tom Hilbert
Email Address:	thilbert@rresvcs.com	Email Address:	thilbert@rresvcs.com
FEIN ID No.	36-2917437	FEIN ID No.	36-2917437

Agency correspondence mailed to: Owner ☐ Operator ☐ Other - Explain ☐

TYPE OF SUBMISSION/REVIEW PERIOD:	TYPE OF FACILITY:	TYPE OF WASTE:
☐ New Landfill/180 days (35 IAC Part 813)	☑ Landfill	☑ General Municipal Refuse
☐ Landfill Expansion/180 days (35 IAC Part 813)	☐ Land Treatment	☐ Hazardous
☑ Sig. Mod. to Operate/90 days (35 IAC Part 813)	☐ Transfer Station	☑ Special (Non-Hazardous)
☐ Other Sig. Mod./90 days (35 IAC Part 813)	☐ Treatment Facility	☐ Chemical Only (exec. putrescible)
☐ Renewal of Landfill/90 days (35 IAC Part 813)	☐ Storage	☐ Inert Only (exec. chem. & putrescible)
☐ Development/90 days (35 IAC Part 807)	☐ Incinerator	☐ Used Oil
☐ Operating/45 days (35 IAC Part 807)	☐ Composting	☐ Potentially Infectious Medical Waste
☐ Supplemental/90 days (35 IAC Part 807)	☐ Recycling/Reclamation	☐ Landscape/Yard Waste
☐ Permit Transfer/90 days (35 IAC Part 807)	☐ Other (Specify)	☐ Other (Specify)
☐ Renewal of Experimental Permit (35 IAC Part 807)		

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed $50,000 for the violation and an additional civil penalty of not to exceed $10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

III. Description of this Permit Request: (Note: The box below will expand as needed)

Alternate source demonstration for first quarter 2013 confirmed exceedences.

IV. Completeness Requirements

1. Have all required public notice letters been mailed in accordance with the LPC-PA16 instructions? Yes ☑ No ☐ N/A ☐
   (If so, provide a list of those recipients of the required public notice letters for Illinois EPA retention. Such retention shall not imply any Illinois EPA review and/or confirmation of the list.)

Public Notice Recipients

Name: Steve Stadelman Title: Senator - District 34
Street Address: 200 South Wyman Street, Suite 301 P.O. Box:
City: Rockford State: IL Zip Code: 61101

Name: Charles Jefferson Title: Representative - District 67
Street Address: 200 South Wyman Street, Suite 304 P.O. Box:
City: Rockford State: IL Zip Code: 61101

Name: Joseph Bruscato Title: State's Attorney
Street Address: 400 West State Street P.O. Box:
City: Rockford State: IL Zip Code: 61101

Name: Scott Christiansen Title: County Chairman
Street Address: 404 Elm Street, Room 504 P.O. Box:
City: Rockford State: IL Zip Code: 61101

Name: Village of New Milford Title: Village Clerk
Street Address: 6771 11th Street P.O. Box:
City: Rockford State: IL Zip Code: 61109

Name: Village of Davis Junction Title: Village Clerk
Street Address: 106 North Elm Street P.O. Box: 207
City: Davis Junction State: IL Zip Code: 61020

Name: Cherry Valley Township Title:
Street Address: 4875 Blackhawk Road P.O. Box:
City: Rockford State: IL Zip Code: 61109

Name: Title: City of Rockford Clerk
Street Address: 425 East State St P.O. Box:
City: Rockford State: IL Zip Code: 61104

Name: Village of Cherry Valley		Title:	
Street Address: 806 East State Street			P.O. Box:
City: Cherry VAlley	State: IL	Zip Code: 61016	

		Yes	No	N/A
2.	Has the required Certification of Authenticity been completed and enclosed?	☑	☐	☐
3. a.	Is the Siting Certification Form (LPC-PA8) completed and enclosed?	☐	☑	☐
b.	Is siting approval currently under litigation?	☐	☑	☐
4. a.	Is a closure, and if necessary a post-closure plan covering these activities being submitted, or	☐	☑	☐
b.	has one already been approved? If yes, provide the permit number: 1991-138-LF	☑	☐	☐
5. a.	For operating waste disposal sites, only: Has any employee, owner, operator, officer or director of the owner or operator had a prior conduct certification denied, canceled or revoked?	☐	☑	☐
b.	Have you included a demonstration of how you comply or intend to comply with 35 Ill. Adm. Code 745?	☐	☑	☐
6. a.	For waste disposal sites, only: Is the property for the facility held in a beneficial trust?	☐	☑	☐
b.	If yes, is a beneficial trust certification form (LPC-PA9) completed and enclosed?	☐	☐	☑
7. a.	Does the application contain information or proposals regarding the hydrogeology; groundwater monitoring, modeling or classification; a groundwater impact assessment; or vadose zone monitoring for which you are requesting approval?	☑	☐	☐
b.	If yes, have you submitted a third copy of the application (4 total) and supporting documents?	☑	☐	☐
8.	Has a 39(i) certification been submitted for each owner and operator business entity, and each person who signed for each entity, and each person who signed or may sign any application for this facility? Note: Only the original set of these forms need be submitted. If no, then complete this certification as indicated.	☑	☐	☐

V. Signatures:

Original signatures are required. Signature stamps or applications transmitted electronically or by FAX are not acceptable.

All applications shall be signed by the person designated below as a duly authorized representative of the owner an/or operator. A printed name for each signature should also be provided.

Corporation - By a principal executive officer of the level of vice-president or above.
Partnership or Sole Proprietorship - By a general partner or the proprietor, respectively.
Government - By either a principal executive officer or a ranking elected official.

A person is a duly authorized representative of the owner and operator only if:

1. They meet the criteria above or the authorization has been granted in writing by a person described above; and
2. Is submitted with this application (a copy of a previously submitted authorization can be used).

I hereby affirm that all information contained in this application is true and accurate to the best of my knowledge and belief. I do herein swear that I am a duly authorized representative of the owner/operator and I am authorized to sign this permit application form.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Thomas Hilbert — Printed Name:
Engineering Manager — Title:
Owner Signature:
7-26-2013 — Date:

Notary: Subscribed and Sworn before me this 26th day of July 2013.

My commission expires on: 1/10/2014

"OFFICIAL SEAL"
Nicole K. DeBoer
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 1/10/2014

Signature & Stamp/Seal of Notary Public

Thomas Hilbert — Printed Name:
Engineering Manager — Title:
Operator Signature:
7-26-2013 — Date:

Notary: Subscribed and Sworn before me this 26th day of July 2013.

My commission expires on: 1/10/2014

"OFFICIAL SEAL"
Nicole K. DeBoer
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES 1/10/2014

Signature & Stamp/Seal of Notary Public

Licensed Professional Engineer's Name: Douglas W. Mauntel

Licensed Professional Engineer's Title: Project Engineer

Registration Number: 062-054530

Company: Andrews Engineering, Inc.

Street Address: 3300 Ginger Creek Drive PO Box:

City: Springfield State: IL Zip + 4: 62711

Email Address: dwmauntel@andrews-eng.com Phone: 217-787-2334

License Expiration Date: 11/30/13

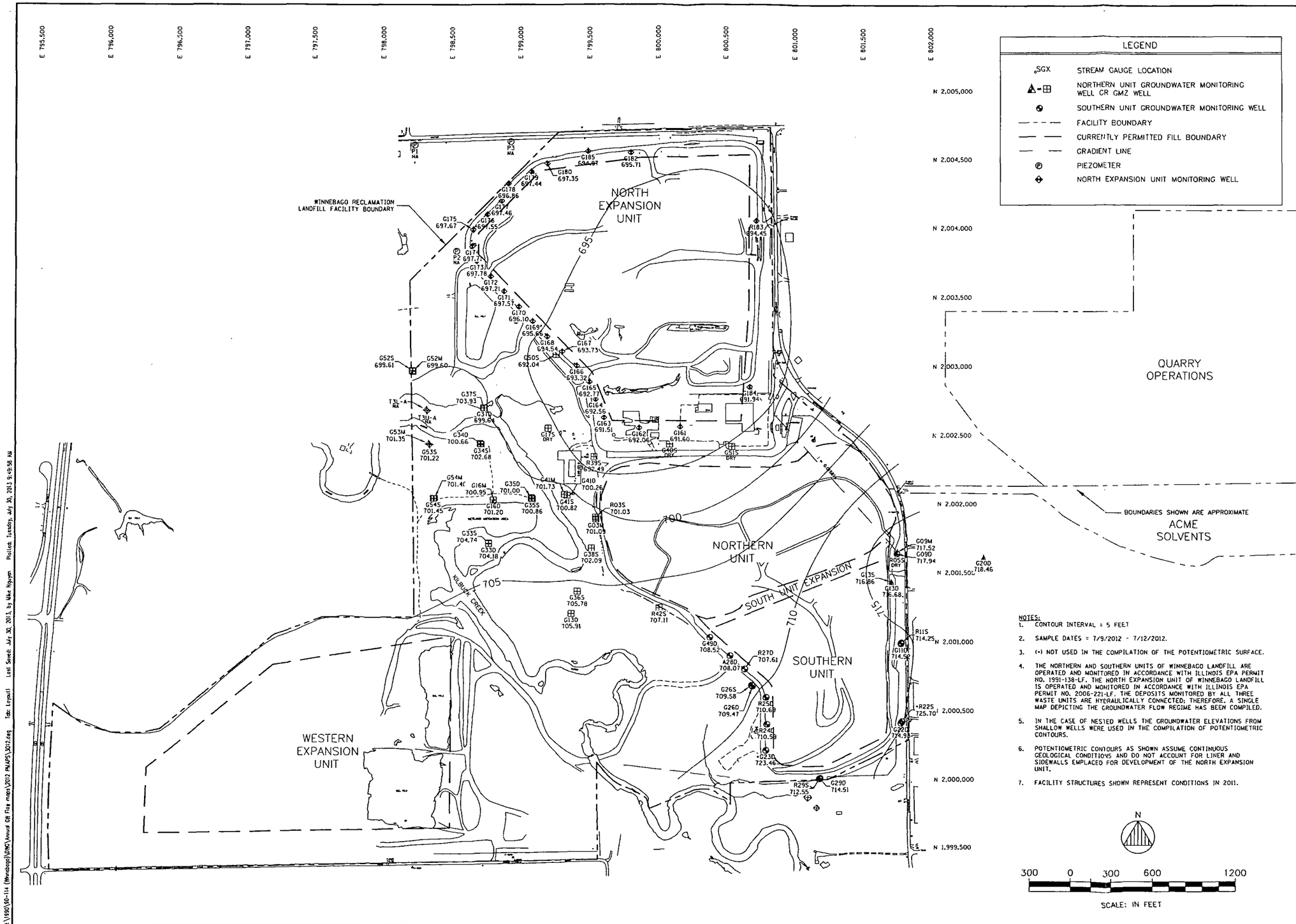
DOUGLAS W. MAUNTEL
LICENSED
REGISTERED
PROFESSIONAL
ENGINEER
OF
ILLINOIS

Licensed Professional Engineer's Seal

Signature: Date: 7/31/13

APPENDIX B

POTENTIOMETRIC SURFACE MAPS



NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 7/9/2012 - 7/12/2012.
3. (-) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991-138-LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006-221-LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001341

APPROVED BY: WTH DESIGNED BY: WTH DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
3RD QUARTER 2012

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: September 2012
PROJECT ID: 90-114
SHEET NUMBER: 3Q12

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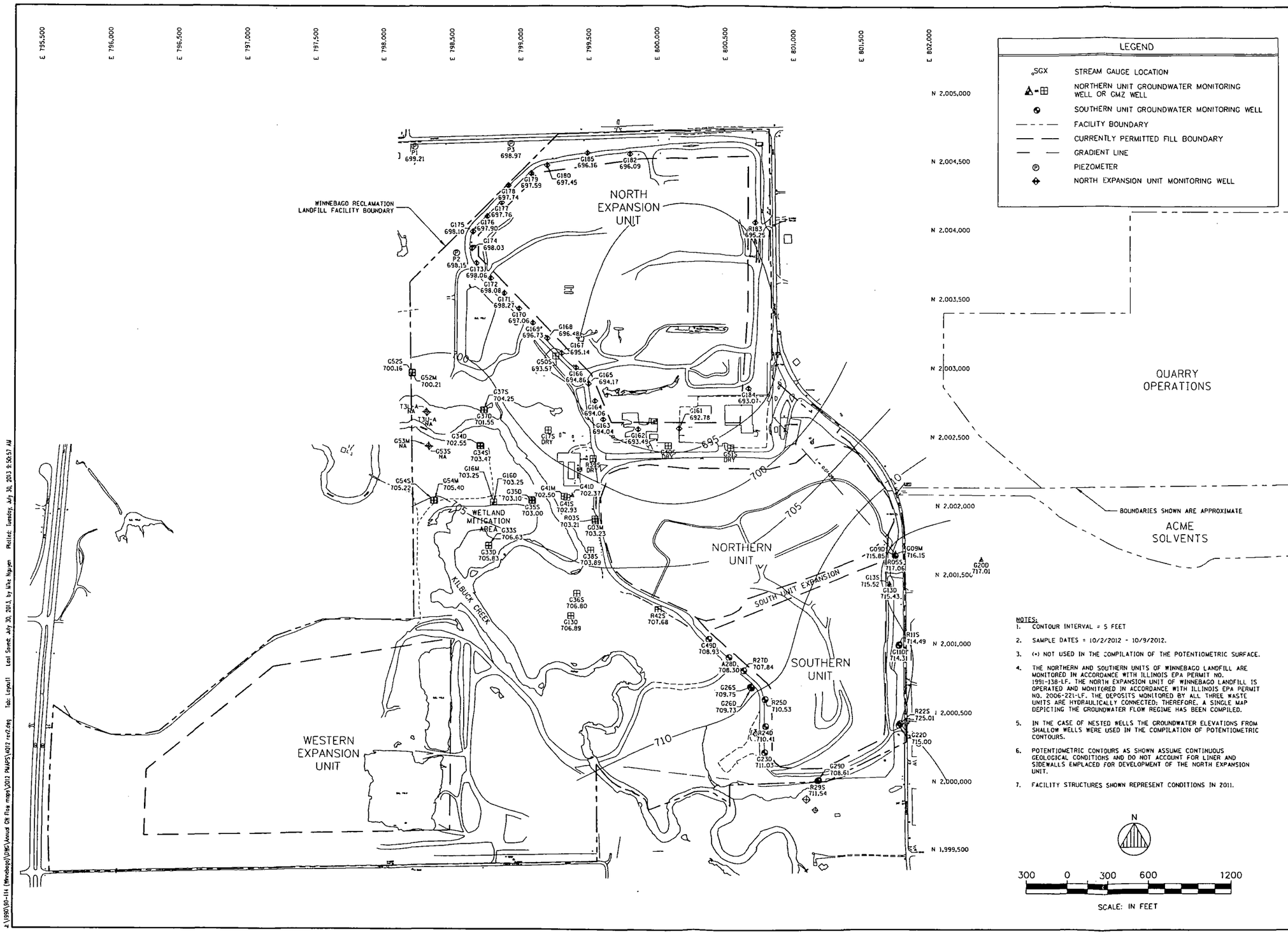
J:\1990\90-114 (Winnebago)\DWG\Annual GW Flow maps\2012 PM.APS\3Q12.dwg Tab: Layout1 Last Saved: July 30, 2013, by Mike Nguyen Plotted: Tuesday, July 30, 2013 9:49:58 AM



NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 10/2/2012 - 10/9/2012.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991-138-LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006-221-LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

NO.	DATE	REVISIONS DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2334 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: TNS DESIGNED BY: TNS DRAWN BY: WCU

POTENTIOMETRIC SURFACE MAP
4TH QUARTER 2012

PLANS PREPARED FOR

WINNEBAGO LANDFILL

ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: April 2013

PROJECT ID: 90-114

SHEET NUMBER: 4Q12

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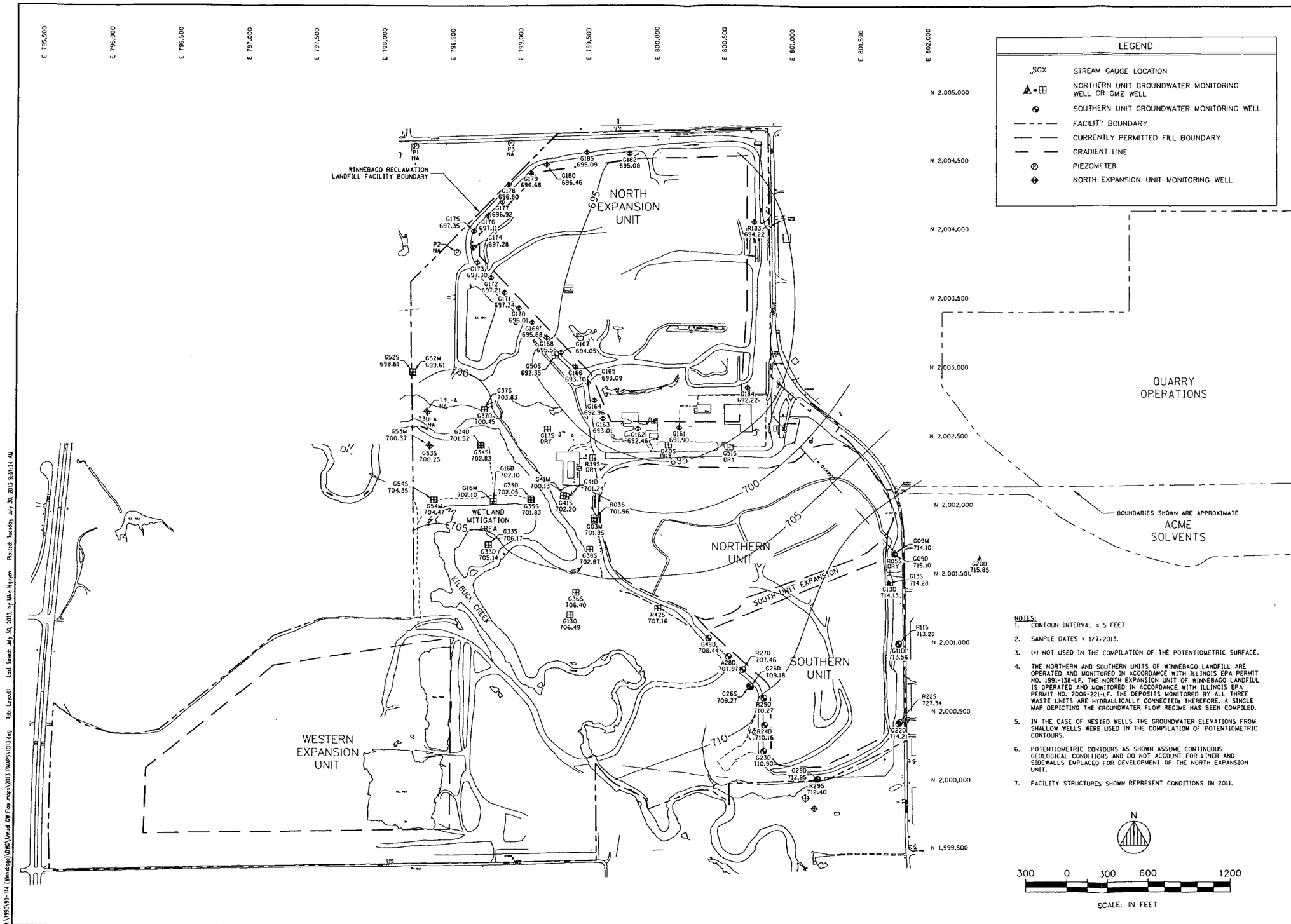

NOTES:

1. CONTOUR INTERVAL = 5 FEET
2. SAMPLE DATES = 1/7/2013.
3. (*) NOT USED IN THE COMPILATION OF THE POTENTIOMETRIC SURFACE.
4. THE NORTHERN AND SOUTHERN UNITS OF WINNEBAGO LANDFILL ARE OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 1991-138-LF. THE NORTH EXPANSION UNIT OF WINNEBAGO LANDFILL IS OPERATED AND MONITORED IN ACCORDANCE WITH ILLINOIS EPA PERMIT NO. 2006-221-LF. THE DEPOSITS MONITORED BY ALL THREE WASTE UNITS ARE HYDRAULICALLY CONNECTED; THEREFORE, A SINGLE MAP DEPICTING THE GROUNDWATER FLOW REGIME HAS BEEN COMPILED.
5. IN THE CASE OF NESTED WELLS THE GROUNDWATER ELEVATIONS FROM SHALLOW WELLS WERE USED IN THE COMPILATION OF POTENTIOMETRIC CONTOURS.
6. POTENTIOMETRIC CONTOURS AS SHOWN ASSUME CONTINUOUS GEOLOGICAL CONDITIONS AND DO NOT ACCOUNT FOR LINER AND SIDEWALLS EMPLACED FOR DEVELOPMENT OF THE NORTH EXPANSION UNIT.
7. FACILITY STRUCTURES SHOWN REPRESENT CONDITIONS IN 2011.

REVISIONS		
NO.	DATE	DESCRIPTION	BY

ANDREWS ENGINEERING, INC.
3300 Ginger Creek Drive, Springfield, IL 62711-7233
Tel (217) 787-2333 Fax (217) 787-9495
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO
Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: MTH DESIGNED BY: MTH DRAWN BY: NPN

POTENTIOMETRIC SURFACE MAP
1ST QUARTER 2013

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: April 2013
PROJECT ID: 90-114
SHEET NUMBER: 1Q13

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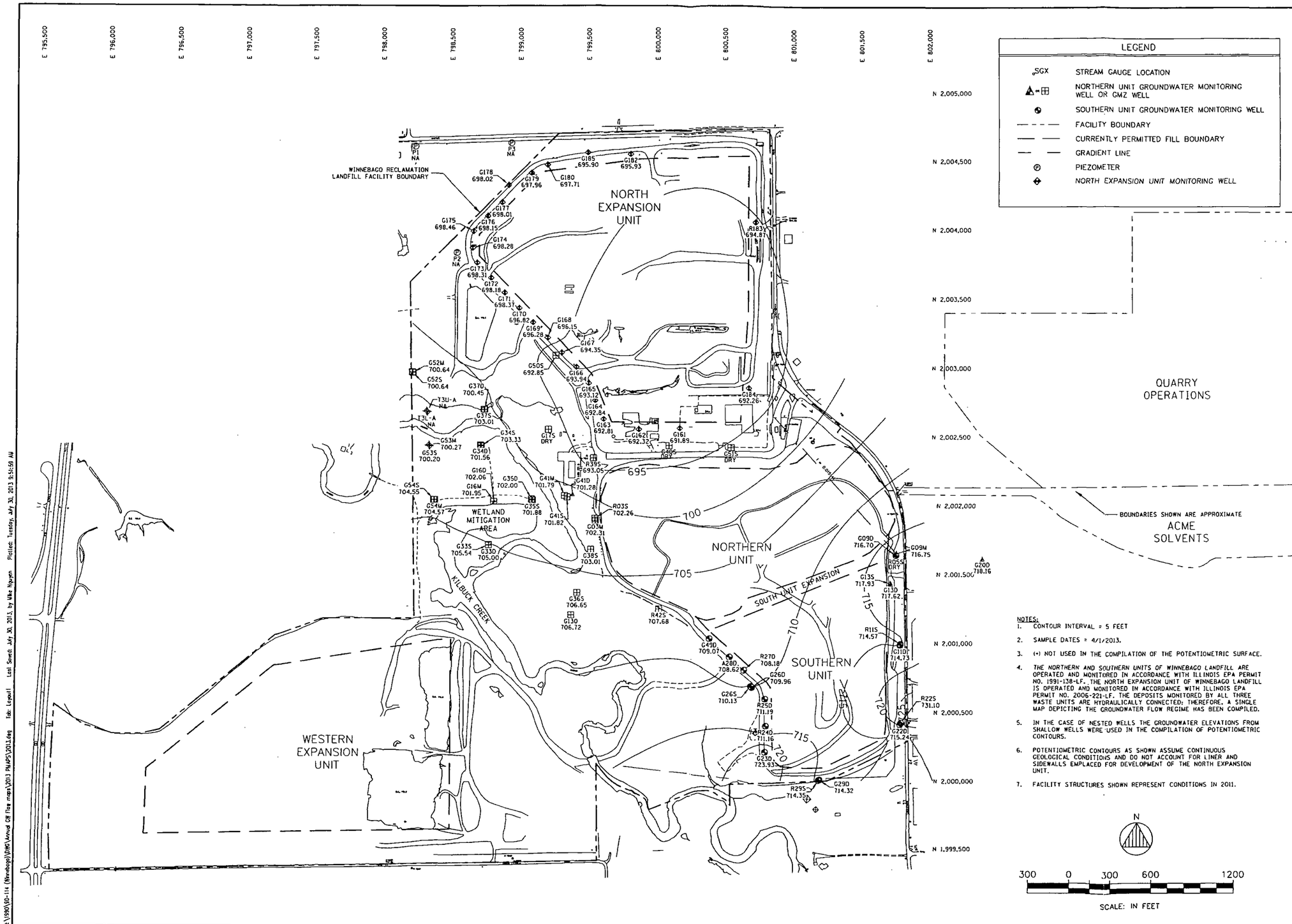

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Professional Design Engineering and Land Surveying Firm #184-001341

APPROVED BY: MTH DESIGNED BY: MTH DRAWN BY: MPN

POTENTIOMETRIC SURFACE MAP
2ND QUARTER 2013

PLANS PREPARED FOR
WINNEBAGO LANDFILL
ROCKFORD, WINNEBAGO COUNTY, ILLINOIS

DATE: July 2013
PROJECT ID: 90-114
SHEET NUMBER: 2Q13

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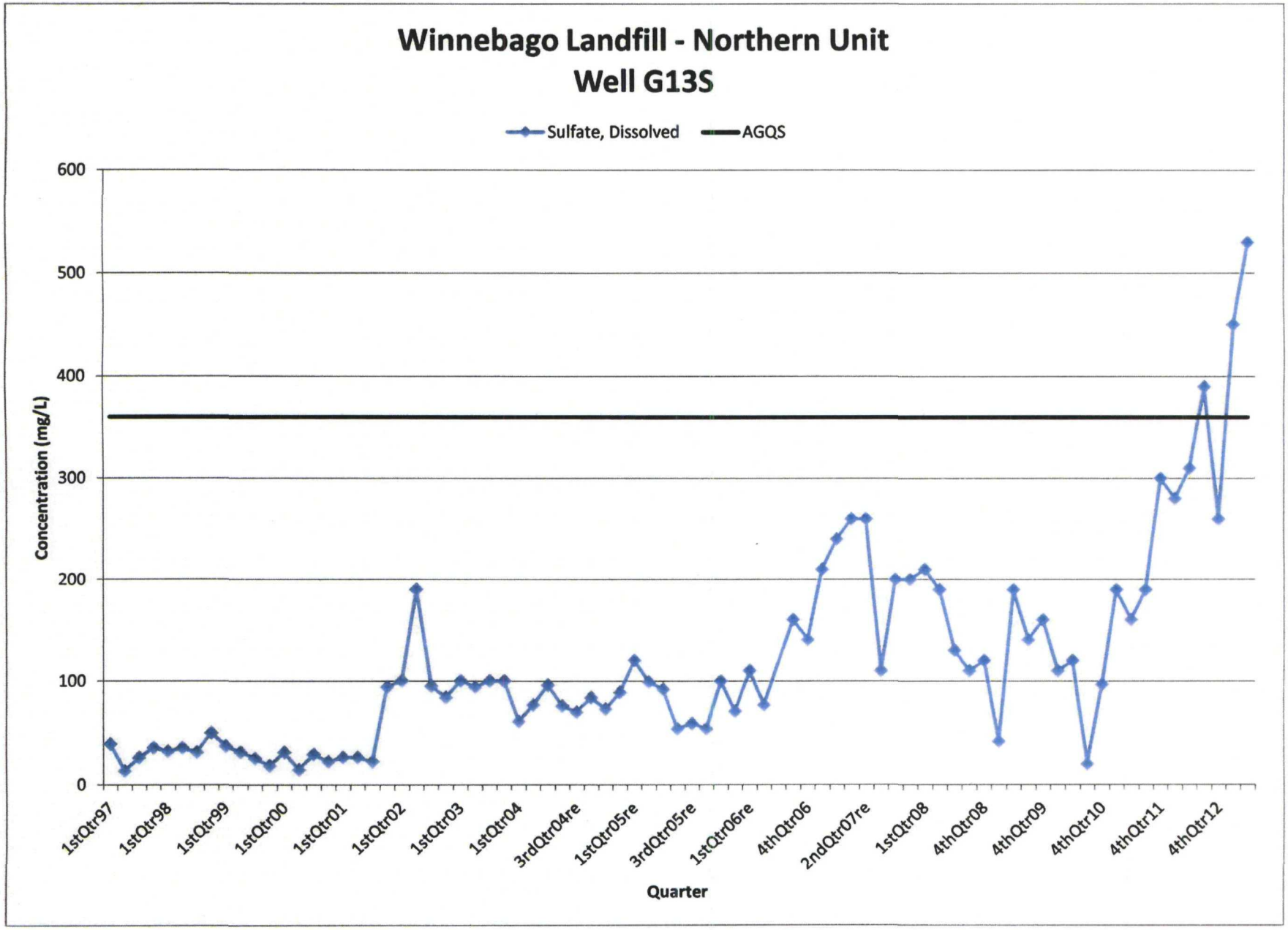
APPENDIX C

DISSOLVED SULFATE TREND GRAPHS



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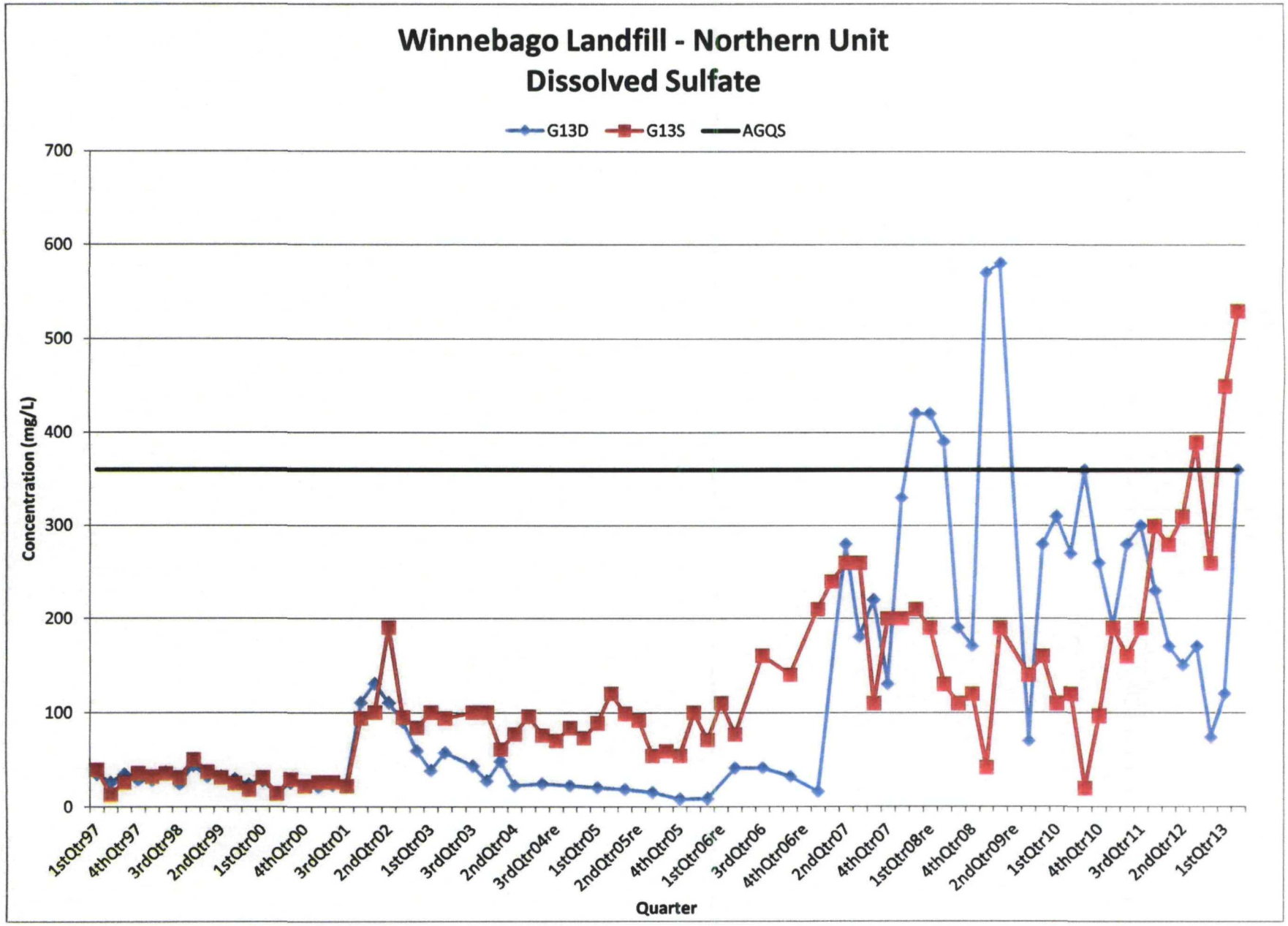
So4,d wAGQS



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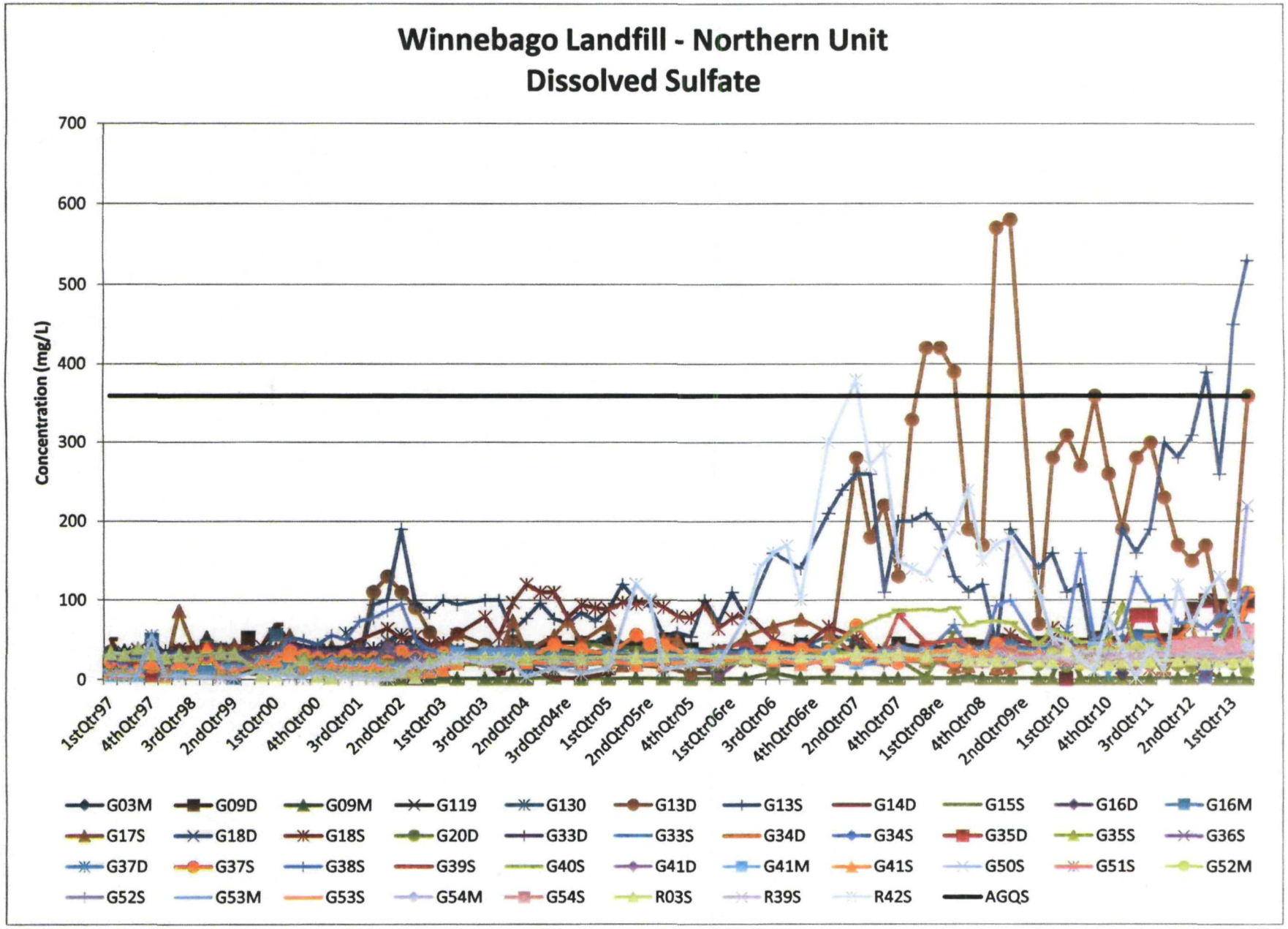
G13S G13D SO4



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