

**Brickyard Disposal & Recycling, Inc.  
Danville, Vermilion County, Illinois**

**Site Number: 1838040029**

**EXHIBIT B  
Adjusted Standard Petition  
Technical Support Document**

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**TABLE OF CONTENTS**

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1.	INTRODUCTION .....	1
1.1	Facility Information .....	1
1.2	Adjusted Standard Petition .....	1
2.	UNIT 1 MONITOR WELL NETWORK .....	2
3.	IDENTIFICATION OF EXTRANEous MATERIALS .....	4
3.1	2006 Field Investigation .....	5
3.2	2008 Field Investigation .....	5
4.	FACTORS FOR REVIEW .....	6
4.1	Section 814.402(b)(3)(A):.....	6
4.1.1	Site Geology .....	6
4.1.2	Site Hydrogeology .....	7
4.1.3	Summary.....	9
4.2	Section 814.402(b)(3)(B):.....	9
4.2.1	Volume of Leachate .....	9
4.2.2	Physical and Chemical Characteristics.....	10
4.2.3	Summary.....	12
4.3	Section 814.402(b)(3)(C):.....	12
4.3.1	Quantity .....	12
4.3.2	Quality.....	13
4.3.3	Direction of Flow .....	13
4.3.4	Summary.....	13
4.4	Section 814.402(b)(3)(D):.....	14
4.4.1	Summary.....	15
4.5	Section 814.402(b)(3)(E):.....	15
4.5.1	Summary.....	16
4.6	Section 814.402(b)(3)(F):.....	16
4.6.1	Summary.....	18
4.7	Section 814.402(b)(3)(G):.....	18
4.7.1	Slope Stability .....	18
4.7.2	Mass Stability .....	19
4.7.3	Air Quality .....	19
4.7.4	Groundwater and Surface Water Affects .....	21
4.7.5	Leachate Collection System Capacity .....	21
4.7.6	Cover Thickness Over the Extraneous Material .....	21
4.7.7	Cost of Institutional Controls .....	22
4.7.7.1	Cover Plan.....	22
4.7.7.2	Removal of Extraneous Materials .....	22
4.7.8	Summary.....	26
4.8	Section 814.402(b)(3)(H):.....	26
4.8.1	Summary.....	27
4.9	Section 814.402(b)(3)(I):.....	28
4.9.1	Summary.....	28
4.10	415 ILCS 5/28.1(c) Factors .....	28
4.10.1	415 ILCS 5/28.1(c)(1).....	29
4.10.2	415 ILCS 5/28.1(c)(2).....	30
4.10.3	415 ILCS 5/28.1(c)(3).....	30

4.10.4415 ILCS 5/28.1(c)(4).....	31
5. SUMMARY .....	32
5.1 Limited Extent of Water-Bearing Zone.....	33
5.2 No Water Supply Wells Downgradient of Unit 1.....	33
5.3 Public Health, Safety and Welfare Effects .....	33
5.4 Existing Cover.....	34
5.5 Temporary Monitor Well Network .....	35
6. CONCLUSION.....	35
7. REFERENCES .....	37

## **FIGURES**

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- Figure 1 – Site Map
- Figure 2 – Unit 1 Monitoring Well Location Map
- Figure 3 – Unit 1 Extraneous Materials Location Map
- Figure 4 – Railroad Tie Investigation
- Figure 5 – Bedrock Topography Map
- Figure 6 – Proposed Compliance Boundary
- Figure 7 – Danville, IL Area Image
- Figure 8 - Unit 1 Gas Extraction System
- Figure 9 – Maximum Compliance Boundary
- Figure 10 – Maximum Compliance Boundary and Proposed Compliance Boundary
- Figure 11 – Zone of Attenuation

## **TABLES**

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- Table 1 – Unit 1 Extraneous Material Investigation
- Table 2 – Second Quarter 2013 Analytical Data
- Table 3 – Second Quarter 2013 Exceedences
- Table 4 – Permit Modification History – Background Revisions
- Table 5 – Cost to Implement Cover Plan
- Table 6 – Cost for Excavation and Backfill of Extraneous Materials

## **ATTACHMENTS**

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### Attachment 1 – Geologic Cross Sections (1993)

Sheet No. A-1 - Existing Site Conditions  
Sheet No. B-2 - Cross Section at E 3,000  
Sheet No. B-3 - Cross Section at E 4,000

### Attachment 2 – Geologic Cross Sections (2010)

Sheet No. 1 - Cross Section Location Map  
Sheet No. 2 - Cross Section A-A'  
Sheet No. 3 - Cross Section B-B'  
Sheet No. 4 - Cross Section C-C'  
Sheet No. 5 - Cross Section D-D'  
Sheet No. 6 - Cross Section E-E'

### Attachment 3 – Potentiometric Surface Maps

Sheet No. 1Q14 - Unit 1 Potentiometric Surface Map/1st Quarter 2014  
Sheet No. 4Q13 - Unit 1 Potentiometric Surface Map/4th Quarter 2013  
Sheet No. 3Q13 - Unit 1 Potentiometric Surface Map/3rd Quarter 2013  
Sheet No. 2Q13 - Unit 1 Potentiometric Surface Map/2nd Quarter 2013  
Sheet No. 1Q13 - Unit 1 Potentiometric Surface Map/1st Quarter 2013  
Sheet No. 4Q12 - Unit 1 Potentiometric Surface Map/4th Quarter 2012  
Sheet No. 3Q12 - Unit 1 Potentiometric Surface Map/3rd Quarter 2012  
Sheet No. 2Q12 - Unit 1 Potentiometric Surface Map/2nd Quarter 2012  
Sheet No. 1Q12 - Unit 1 Potentiometric Surface Map/1st Quarter 2012

### Attachment 4 – 1994 Soils Analyses

Table 2-6B - Summary of Laboratory Test Results for Mine Spoil  
Table 2-7 - Summary of Laboratory Test Results for Upper Clay  
Table 2-8 - Summary of Laboratory Test Results for Glacial Sand  
Table 2-9 - Summary of Laboratory Test Results for Lower Silty Clay

### Attachment 5 – Unit 1 Leachate Data

Table 5-1 - Leachate Data  
Graphs of Leachate Data

### Attachment 6 – Source Water Assessment Program Data

Sheet No. 1 - SWAP Database Community Water Supply Well Location Map  
Sheet No. 2 - SWAP Database Non-Community Water Supply Well Location Map  
Sheet No. 3 - SWAP Database ISGS Well and Boring Location Map  
Table 6-1 - Illinois EPA SWAP Database - ISGS Wells  
Table 6-2 - Illinois EPA SWAP Database - CWS Wells  
Table 6-3 - Illinois EPA SWAP Database - Non-CWS Wells  
Table 6-4 - Illinois EPA SWAP Database - RTK Area  
ISGS Log - API No. 01505  
ISGS Log - API No. 24029

### Attachment 7 – Slope Stability Evaluation

### Attachment 8 – USGS Gage Station Data

### Attachment 9 – FEMA Study

### Attachment 10 – Curriculum Vitae

## **1. INTRODUCTION**

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### **1.1 Facility Information**

Brickyard Disposal & Recycling is located in Vermilion County approximately one mile southeast of Danville, Illinois, within Danville Township, Sections 15, 16, 21, and 22 of Township 19 North, Range 11 West of the 2nd Principal Meridian. The site is at the edge of an upland area directly west of the wastewater treatment facility for the Danville Sanitary District. As shown in Figure 1, the wastewater treatment facility is located between Brickyard Disposal & Recycling and the Vermilion River.

Brickyard Disposal and Recycling employs eight fulltime persons at the facility located at 601 Brickyard Road. Temporary personal are hired on an as-needed basis for site development, maintenance, and operations. The temporary staff may number up to, but is not limited to, 10 individuals, any of whom may be on site for months at a time. Republic Services employs additional personal at their offices located at 180 S. Henning Road in Danville, which include truck drivers, maintenance personnel, and those related to local and regional business operations supporting the landfill activities.

The facility was initially developed and operated pursuant to Permit No. 1981-24-DE, issued June 1, 1981. The disposal area, Units 1 and 2, currently consists of approximately 152 acres within a 293-acre site. The two units are delineated by a haul road, which allows independent groundwater and gas monitoring systems (see Figure 1). Unit 1, the south unit, contains final cover and no longer accepts waste. Unit 1 was operated and covered pursuant to 35 Illinois Administrative Code (Ill. Adm. Code) Part 814, Subpart D (standards for existing units accepting chemical and putrescible wastes that must initiate closure within seven years [from the effective date of adoption of R88-7 by the Illinois Pollution Control Board – September 18, 1990]). Unit 2, the north unit, is currently filling in Cell 6 and operating pursuant to 35 Ill. Adm. Code Part 814, Subpart C (which includes all regulations contained in 35 Ill. Adm. Code Part 811) in accordance with Permit No. 1994-419-LFM.

### **1.2 Adjusted Standard Petition**

Groundwater assessment monitoring efforts identified the occurrence of railroad ties, demolition debris, and small amounts of municipal solid waste located beyond the perimeter of the permitted waste boundary, referenced as extraneous materials. It was determined that numerous monitoring wells, both hydraulically upgradient and downgradient to the waste unit, were installed in or near the extraneous materials. Therefore, the groundwater quality in the subject monitor wells is influenced by the extraneous materials. The monitor well network must be extended beyond the extraneous materials in order to appropriately monitor the waste unit and extraneous materials. This will require an adjusted standard.

The following sections detail the occurrence of materials encountered outside the permitted waste boundary adjacent to Unit 1, which necessitates this Adjusted Standard Petition in order to more appropriately monitor Unit 1. An adjusted standard is sought to extend the compliance boundary, designate a zone of attenuation, and allow for the proper well placement adjacent to Unit 1.

Section 28.1 of the Illinois Environmental Protection Act (Act) provides the legal basis for the Illinois Pollution Control Board (Board) to approve an adjusted standard. As referenced in

Section 28.1(a-c) of the Act, the Board may grant an adjusted standard if the level of justification is adequate based on a regulation of general applicability, or if a regulation of general applicability does not specify a level of justification necessary to qualify for an adjusted standard, the Board may grant the adjusted standard based on Sections 28.1(c)(1-4).

A regulation of applicability does exist for extending the compliance boundary and creating a zone of attenuation. The subject regulation of applicability is 35 Ill. Adm. Code Section 814.402(3). However, since a regulation of general applicability does not directly apply to the placement of monitor wells beyond the edge of the waste, as will be necessitated by this adjusted standard, justification pursuant to Section 28.1(c)(1-4) of the Act is provided in Section 4 of this Technical Support Document.

As stated above, the regulations identified in 35 Ill. Adm. Code Part 814, Subpart D, are applicable to Unit 1. This includes Section 814.402(b)(3), which states in part:

“A unit shall not contaminate a source of drinking water at the compliance boundary, defined as any point on the edge of the unit at or below the ground surface. At any point on the compliance boundary, the concentration of constituents shall not exceed the water quality standards specified in 35 Ill. Adm. Code 302.301, 302.303, 302.304, and 302.305. *The Board may provide for a zone of attenuation and adjust the compliance boundary in accordance with Section 28.1 of the Act and the procedures of 35 Ill. Adm. Code 106. Subpart G upon petition demonstration by the owner or operator that the alternative compliance boundary will not result in contamination of groundwater which may be needed or used for human consumption. In reviewing such petitions, the Board will consider the following factors:...*” (emphasis added).

Pursuant to the referenced regulation, the compliance boundary is presumed to be the edge of the waste unit. Circumstances exist on the perimeter of Unit 1 such that the compliance boundary cannot reasonably be located at the edge of the waste unit. Therefore, this Adjusted Standard Petition requests the compliance boundary be extended outward from the waste boundary allowing for a monitor well network to be located more appropriately, capable of detecting changes in groundwater quality that may be associated with the permitted waste unit and materials located adjacent to and outside the permitted waste boundary. Adjustment of the compliance boundary will occur coincident with the establishment of a zone of attenuation.

Hydrogeologic and other characteristics at this site support a finding that an alternative compliance boundary will not result in contamination of groundwater that may be needed or used for human consumption.

The factors to be considered by the Illinois Pollution Control Board for granting this Adjusted Standard Petition (identified in 35 Illinois Administrative Code [Ill. Adm. Code] 814.402(b)(3)(A-I)) are addressed in Section 4 below. Also, in Section 4 below, the factors relevant to the Board’s consideration pursuant to Section 28.1(c) of the Act addressed.

## **2. UNIT 1 MONITOR WELL NETWORK**

Unit 1 monitor wells are located horizontally and vertically to provide early detection of changes to the groundwater that may be attributable to potential sources related to Unit 1. This includes both the permitted waste unit and extraneous materials. Unit 1 is located in an area of variable

stratigraphy, both vertically and horizontally, due to historical mining activities at the site; mining was conducted for both shale and coal. Subsequently, significant spatial variability of the groundwater quality exists historically within the Unit 1 wells. The most probable route of contaminant migration has been identified as the coal seam, the mine void where the coal has been removed via underground mining, or the spoil/bedrock interface where surface mining has occurred. The pathway is continuous beneath Unit 1.

The Unit 1 monitor well network consists of 33 wells that are tested quarterly and/or semiannually. The majority of monitor wells identified below are screened across the coal seam/mine void, or the spoil/bedrock interface where surface mining has occurred. However, seven of the 33 (R106, R123, R132, G33S, T101, T103, and T104) wells are screened below the coal or spoil/bedrock interface in the shale deposit identified as the Middle Shale, and one well (R103) is screened in the Glacial Sand upgradient to Unit 1. The wells and sampling intervals are listed below:

**Routine/Annual Monitoring**

R123	G34S	T112	T117	T122
R124	G35S	T113	T118	T123
G125	T109	T114	T119	
R127	T110	T115	T120	
G33S	T111	T116	T121	

**Semiannual Monitoring**

+R103	+G134	R132
+G130	R106	
+G133	G131	
+ Upgradient		

**Remedial Monitoring (Semiannual)**

T101	R123	A126 (Quarterly)
T103	R124	R127
T104	G125	

The location of the Unit 1 monitor wells is provided in Figure 2.

The wells contained in the first two tables above are tested for routine and semiannual parameters, identified in the current permit as List G1 and G2, respectively. Wells T101, T103, T104, R123, R124, G125, and R127 are tested for 1,1-dichloroethane and dichlorodifluoromethane during the second and fourth quarters of each year, and a modified list of 40 CFR Part 258 Appendix II parameters are tested in wells R124, G125, and R127 semiannually as well. Well A126 is tested for cis-1,2-dichloroethene semiannually.

A groundwater management zone (GMZ) was established with the approval of the October 20, 2000 GMZ application (Log No. 2000-403). The GMZ defines the area where elevated levels of the parameters dichlorodifluoromethane, and 1,1-dichloroethane were observed in the groundwater. Cis-1,2-dichloroethene was later added via application Log No. 2012-535 to address the parameter in well A126. The GMZ is largely located within extraneous materials deposited outside the waste footprint as shown in Figure 3. Detection of the referenced organic compounds was identified to be the result of gas migration from Unit 1.

The facility is required to evaluate the remedial activities on an annual basis pursuant to Condition No. IX of the current permit. The most recent Evaluation of Remedial Activities (Illinois EPA Log No. 2014-132—pending) occurred in 2013 and that evaluation found no detections of 1,1-dichloroethane. Dichlorodifluoromethane was also not detected in any well during the second and fourth quarters of 2013. Cis-1,2-dichloroethene was detected in well A126 each of the four quarters in 2013. The concentrations ranged from 6.5 ug/L (first quarter) to 8.8 ug/L (second quarter). The subject concentrations have been stable, slightly above the detection limit (and applicable standard) of 5.0 ug/L since 2010. No additional organic parameters contained on the modified 40 CFR Part 258 Appendix II list were detected in any of the assessment wells, indicating the remedial activities are effective in controlling gas migration.

As described in Application Log Nos. 2006-013, 2006-344, 2008-138, and 2009-089, railroad tie/construction debris and minor amounts of municipal waste were discovered outside the permitted waste boundary. Several investigations were conducted as part of these applications to determine the nature and extent of the material. Permit Modification 63, issued October 30, 2008, approved Application Log Nos. 2006-013, 2006-344, and 2008-138 and provided for additional monitoring points and assessment under Condition VIII.A.19 of the applicable permit.

The groundwater monitoring program for Unit 1 was augmented in late 2008 and again in 2009 and 2010 by the addition of 15 temporary wells located along the perimeter of the extraneous materials. These wells were installed to characterize the groundwater quality beyond the extraneous materials. The wells listed below were located as close to the limits of the extraneous materials as possible given the topographic constraints (extreme topographic relief or surface water). The wells included:

T109	T113	T117	T121
T110	T114	T118	T122
T111	T115	T119	T123
T112	T116	T120	

Most of the referenced wells are anticipated to comprise the perimeter monitor well network if the Adjusted Standard Petition is granted. Not all of the referenced wells will be necessary due to the hydrogeologic characteristics east of the unit; some of the wells are upgradient and not necessary for adequate monitoring. A detailed discussion of the hydrogeologic characteristics pertaining to Unit 1 is provided in Section 4.1.1.

### **3. IDENTIFICATION OF EXTRANEous MATERIALS**

The Adjusted Standard Petition for a revised compliance boundary is due to the occurrence of railroad ties, demolition debris, and small amounts of municipal solid waste located beyond the perimeter of the permitted waste boundary. The monitor wells listed above (T109 through T123) were located based on the results of the investigations to identify the location and extent of the subject materials. Details of the investigation of the subject materials are provided herein.

Assessment monitoring activities were proposed and implemented pursuant to Permit Condition VIII.A.15 and 35 Ill. Adm. Code 811.319(b), and Application Log Nos. 2004-098 and 2005-036 along the northeast perimeter of Unit 1. This included installation of three temporary assessment monitoring wells in November/December 2005 (T106, T107, and T108) in the vicinity of R123. During the advancement of wells T106 and T107, railroad ties, as wells as other materials were encountered. Due to the occurrence of the materials, several attempts

were necessary to identify locations where wells could be installed. The intermittent nature of the material warranted additional investigation to characterize the extent outside the permitted waste boundary. As described below, two separate field investigations were conducted to define the extent of materials located outside the waste footprint.

### **3.1 2006 Field Investigation**

A field investigation along the northeast corner of Unit 1, where the material was first encountered, was conducted during July/August of 2006. As shown in Figure 4, the test pits were conducted in a sequence, following the material away from Unit 1, and at individual locations verifying historical information. Thirteen test pits were completed altogether with three series of pits conducted in sequence; (1) 2A, 2B, 2C, and 2D; (2) 3A, 3B, and 3C; and (3) 4A, 4B, and 4C. Individual pit locations included Test Pit Nos. 1, 5, and 6.

The results of the 2006 investigation documented the material along the east waste boundary of Unit 1 west of the haul road and within the existing GMZ in the vicinity of R123. The location of the material is not continuous on a large scale; there are areas within the identified limits of the external deposits where no material was encountered. Historical boring information shows that routine monitoring wells G131, R124, and R123; piezometer P104; and temporary assessment wells T101, T106, and T107 were installed through soils devoid of extraneous material even though the locations are generally within area of the material.

### **3.2 2008 Field Investigation**

Pursuant to recommendations by Illinois EPA personnel, an additional field investigation was conducted during August and September 2008 that included the excavation of an additional 60 test pits completed along the perimeter of Unit 1 to further identify the extent of the materials. The limits of the materials outside the landfill footprint, which are indicated by the yellow shading in Figure 4, were determined from several events, including the 2006 and 2008 field investigations conducted as part of Application Log No. 2006-013, well and piezometer installations reports, and from visual inspection of the subject area. The shaded areas represent the estimated maximum extent of material outside the permitted waste boundary. The occurrence of materials in the shaded areas is generally not continuous but is encountered in pockets, consisting mainly of railroad ties. The occurrence of the material is more prevalent to the south and east. The discontinuous nature of the materials explain why some existing background, detection monitoring and temporary assessment wells within the shaded areas are installed through soils and mine spoil devoid of the material.

Table 1 lists the probe and trench excavations used to evaluate the presence of the materials and provides details of the overlying cover, thickness of the material, and vertical extent. The proposed compliance boundary pursuant to this Adjusted Standard Petition is beyond the extent/limits identified. The proposed limit must take into consideration accessibility issues. The current topography is also shown in Figure 2. The steep slopes paralleling and outside the permitted waste footprint typically identify the approximate extent of the extraneous materials. With the exception of the west perimeter, drainage structures are immediately adjacent to the material, making placement of a well at the limit unlikely. The previously referenced wells (T109 through T123) were installed as close as practical to the limits without jeopardizing the well integrity or the safety of the drilling contractors. Well T109 and T110 were also located to enhance the possibility of obtaining groundwater at the bedrock/mine spoil interface as the bedrock surface elevation was high east of the trough (see Section 4.1.2).

## 4. FACTORS FOR REVIEW

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Pursuant to 35 Ill. Adm. Code Section 814.402(b)(3) and 415 ILCS 5/28.1(c), the Illinois Pollution Control Board will consider the factors identified in Section 814.402(b)(3)(A) through 814.402(b)(3)(I) and Sections 28.1(c)(1) through 28.1(c)(4) of the Act. Each factor is identified, followed by site-specific information, generally and as it relates to the requested Adjusted Standard Petition.

### 4.1 Section 814.402(b)(3)(A):

***The hydrogeological characteristics of the unit and surrounding land, including any natural attenuation and dilution characteristics of the aquifer.***

The hydrogeologic characteristics for Unit 1 are provided in the following sections.

#### 4.1.1 Site Geology

Multiple site investigations, including exploratory boring programs and subsequent monitor well installations, have been conducted since the early 1970s to identify the hydrogeologic and geochemical conditions beneath and immediately adjacent to the facility. The near-surface materials include disturbed sediments in the form of mine spoil (both coal and shale), backfill material, and Pennsylvanian-aged bedrock. Mine spoil from the strip mine areas is a composite of the overburden material, including clay, sand and silt, shale/siltstone, and coal and underclay. Detailed hydrogeologic reports were provided to the Illinois EPA in the form of permit modifications, identified as Application for Significant Modification to Permit for a New Expansion Unit (Illinois EPA Log No. 1993-057 [February 1, 1993]) and Application for Significant Modification (Illinois EPA Log No. 1994-419 [September 9, 1994]). Information provided below was obtained from the referenced reports and subsequent investigations.

The approximate western half of the facility has not been surface mined. Therefore, the following deposits are generally present in that area:

1. Upper Clay – The Upper Clay consists of typically brown silty clay with isolated packets of silty or clayey sand. It is only present in the western portion of the site since surface mining and landfill development activities resulted in removal of the materials to the east.
2. Glacial Sand – The Glacial Sand demarks a transition between the upper and lower clay deposits. It is only present in the near west side of the property where no surface mining activities occurred. The sand deposit is not present hydraulically downgradient (east) to Unit 1.
3. Lower Silty Clay – The Lower Silty Clay consists of silty clay, clayey silt, silt and clay. It directly overlies Pennsylvanian shale in areas not removed due to surface mining activities. Where present, it is directly overlain by the waste unit.
4. Upper Shale – The Upper Shale is the uppermost bedrock deposit at the site and consists of the Anna Shale and occasionally the Brereton Limestone Member. This deposit is absent where surface mining occurred for coal.
5. Coal and Underclay – The coal unit beneath Unit 1 was identified as the Herrin #6 and/or Danville #7 Coal, which was both strip-mined and subsurface mined. The coal/voids, or spoil/bedrock interface, has been identified as the contaminant migration pathway for

Unit 1. Potential solute migration from Unit 1 will be vertical to the coal seam/void, then laterally.

6. Middle Shale – The Middle Shale is the lower confining layer for the contaminant migration pathway for Unit 1. It essentially creates a vertical hydraulic barrier beneath the coal/mine void. Monitoring wells for Unit 1 do not extend below the upper few feet of the middle shale.

Cross sections contained in Attachment 1 were obtained from the Application for Significant Modification to Permit for a New Expansion Unit (Illinois EPA Log No. 1993-057). Cross Section A-8 (Sheet No. B-2) illustrates Unit 1 entirely overlies in-situ (undisturbed) deposits along the north-south line of East 3,000. The unit invert is located on the glacial silty clay deposit overlying the upper shale unit. Cross Section A-9 (Sheet B-3) illustrates that Unit 1 overlies in-situ deposits and mine spoil, and is adjacent to disturbed material containing railroad ties to the south, along the north-south line of East 4,000. The two cross sections represent the variability of the materials beneath Unit 1. Sheet A-1 was included to illustrate the locations of the subject cross sections.

Cross Sections provided in Attachment 2 (contained in Addendum 1 to Illinois EPA Log No. 2009-393) illustrate subsurface conditions on the east perimeter of Unit 1. As shown, the entire eastern perimeter is disturbed, containing both mine spoil and railroad tie material. The bedrock surface decreases east of Unit 1 due to the surface mining activities. As discussed below, this affects the groundwater movement in this area. The cross sections in Attachment 2 are further discussed in Section 4.1.2.

Coal mining operations have historically impacted the groundwater quality and potentiometric surface characteristics of the Unit 1 area. Historical records indicate the following mines occurred beneath and/or adjacent to Unit 1:

- Danville Brick and Tile Company – strip-mined coal and shale east Unit 1
- Western Brick Mine – underground mine directly southeast of Unit 1
- Delaware No. 1 Mine – southeast of Unit 1 and south of the Danville Brick and Tile Company strip mine
- Delaware No. 2 Mine – directly south of Unit 1
- Delaware No. 3 Mine – present beneath Unit 1
- Dry Bread Coal Company Mine – south/southwest of Unit 1
- Traer Mine

#### **4.1.2 Site Hydrogeology**

The migration pathway for Unit 1 has been identified as the coal seam, the mine void where the coal has been removed via underground mining, or the spoil/bedrock interface where surface mining has occurred; the pathway is continuous beneath Unit 1. Groundwater subject to monitoring for Unit 1 occurs in the coal seam, mine voids, or on top of the shale underlying the mine spoil.

Data from existing Unit 1 monitor wells have been used to evaluate potentiometric surface characteristics for the Unit 1 area. Potentiometric surface maps for the first quarter 2011 to the first quarter 2014 sampling events are contained in Attachment 3.

As illustrated in the potentiometric surface maps, overall groundwater movement is from west to east beneath Unit 1. Due to mechanical disturbance of the bedrock surface east of Unit 1, the groundwater movement east of Unit 1 varies. Temporary wells (T109 through T116, including T118) were screened in an area that was previously strip mined for coal by the Danville Brick and Tile Company. Therefore, the screen intervals are at the bedrock/spoil interface. To the south and west of Unit 1, the thickness of the overburden increases, which ultimately limited the extent of surface mining. Typically, coal is present south and west of Unit 1 as indicated in the boring logs of wells T119 through T123, T104, R127, and G130, and at G133 and G134 as inferred in the current permit.

A detailed bedrock surface topography map (Figure 5) was created for the area east of Unit 1 based on boring data from the monitor well installations. As shown in Figure 5, the bedrock was excavated in a trench-like manner, decreasing in elevation from well T102 (south) to T108 (north). The trench, referred to as a trough, creates not only a surface drainage structure, but also a groundwater divide. The trough intersects groundwater moving west to east beneath the site, as well as east to west from an area west of the Vermilion River. Groundwater within the trough moves down slope via gravity towards wells T113, T114, and T115 near the northeast corner of Unit 1. The bedrock trough appears to widen and dissipate as it nears the City of Danville's wastewater treatment plant directly to the east (see Figure 1).

The groundwater contours contained in the potentiometric surface maps generally mimic the bedrock topography east of Unit 1. The groundwater divide was further explored and delineated through the construction of geologic cross sections for this area of Unit 1. See Attachment 2.

Geologic Cross Sections A-A' and B-B' (Attachment 2) are oriented parallel to the groundwater divide and the eastern waste boundary of Unit 1. Cross Section A-A' intersects wells A126, G125, G131, R123, R124, T106, and T107, which were installed within the extraneous materials area immediately downgradient of the Unit 1 waste boundary. Cross Section B-B' intersects wells T110, T112, G113, T114, T115, and T117. Cross Sections C-C' through E-E' run perpendicular to the groundwater divide and intersect wells located on both sides of the trough. As depicted on the geologic cross sections, the coal was generally present west of the trough and absent to the east. Historical records indicate that the Danville Brick and Tile Company mined the No. 7 coal in the area east of the ditch. Subsequent geologic evaluations suggest the Herrin #6 Coal was actually mined and had been misidentified as the Danville #7 Coal.

The hydraulic conductivity of the potential migration pathway can vary significantly dependent upon the material present and whether mining activities occurred. Hydraulic conductivity testing (horizontal) conducted as part of the 1994 permit modification application indicated values ranged from a high of  $5.3 \times 10^{-6}$  cm/sec to low as  $3.8 \times 10^{-8}$  cm/sec in undisturbed coal. The horizontal hydraulic conductivity of wells screened in disturbed materials will range widely dependent upon the material present and its consolidation. Spoil rich in glacial clay may contain an extremely low value, whereas spoil comprised largely of blocky bedrock may be quite high. It is difficult to apply a narrow range to the general area since it can vary within a short distance.

The attenuation capabilities of the screened material will also vary. Attenuation largely relies on sorption, dilution, and dispersion within the water-bearing zone. Variable materials comprising the migration pathway (coal, void, or spoil) will significantly affect the attenuation. The areas of

lower hydraulic conductivity will not disperse/dilute solute as quickly as mine voids or coarse bedrock spoil, which contain higher hydraulic conductivities.

Spoil rich in clay typically contains a higher cation exchange capacity than bedrock material. Therefore, sorption in the clay spoil will increase, increasing the attenuation properties. As part of the 1994 permit application, seven soil samples were analyzed for cation exchange capacity. The values ranged from 3.2 (mine spoil – low) to 27 meq/100 gm (Lower Silty Clay). It was apparent that the Lower Silty Clay deposit contained a much higher cation exchange capacity than the samples tested for the mine spoil and Upper Clay. The Lower Silty Clay deposit is present beneath part of Unit 1 where no mining occurred or only underground mining occurred. The Lower Silty Clay is intermixed with the mine spoil where surface mining occurred. The subject data from the 1994 application is provided in Attachment 4.

Total organic carbon within a water-bearing zone can support reductive dechlorination of chlorinated contaminants. Total organic carbon was analyzed in seven samples as part of the 1994 application. The results range from 1.6 mg/g (Lower Silty Clay) to a high of 71 mg/g (also in the Lower Silty Clay). Values from the Lower Silty Clay deposit are variable but are overall higher than in the Upper Clay. The Lower Silty Clay deposit provides better attenuation capabilities than the Upper Clay. As stated previously, Unit 1 partially overlies the Lower Silty Clay, and the Lower Silty Clay is contained in the mine spoil where surface mining occurred.

#### **4.1.3 Summary**

The hydrogeologic characteristics beneath and in the vicinity of Unit 1 are such as to minimize the potential to impact groundwater which may be needed or used for human consumption. The requested Adjusted Standard Petition will not in any way negatively impact those characteristics and, in fact, will allow for more appropriately monitoring of actual conditions.

### **4.2 Section 814.402(b)(3)(B):**

*The volume and physical and chemical characteristics of the leachate.*

#### **4.2.1 Volume of Leachate**

Pursuant to 35 Ill. Adm. Code 814.402(3), Unit 1 is not required to incorporate a leachate drainage and collection system. However, leachate is extracted from three manholes (L101, L103, and L104) which are centrally located within Unit 1, and discharges to the conveyance line that runs to the leachate storage tank east of Unit 2. Level sensors discharge liquid from the storage tank via force main to the treatment facility owned by the City of Danville, Illinois. The treatment facility is located directly adjacent to (east) the Brickyard Disposal and Recycling facility as shown on Figure 1.

Pursuant to Condition VII.2 of the current permit (Permit No. 1994-419-LFM, Modification No. 82), the leachate levels within Unit 1 shall be maintained to prevent buildup of three feet of head above the manhole invert. Although the manhole invert elevations are typically lower than the liner elevations, for purposes of leachate volume calculations, the maximum leachate head in the manholes shall be assumed to exist on the entire liner. The leachate volume calculation is based on the following assumptions:

1. Unit 1 consists of an area of 56 acres of waste
2. The saturated thickness is a maximum of three feet
3. The volume available to retain liquids (porosity of the waste) is 53 percent
4. The field capacity of the waste is approximately 35 percent

The volume of leachate is determined by multiplying the area of Unit 1 (56 acres) by the saturated thickness of the waste (3 feet).

$$56 \text{ Acres} \times 43,560 \text{ ft/acre} \times 3 \text{ ft} = 7,318,080 \text{ ft}^3$$

Forty-seven percent of the volume of Unit 1 is occupied by refuse (assuming a porosity of 0.53, Benson, C. H., and Wang, X. (1998)).

$$7,318,080 \text{ ft}^3 \times 0.53 = 3,878,582 \text{ ft}^3$$

Based on the age of the waste, it is assumed the field capacity is 0.35, indicating (by definition) only 65 percent of the 3,878,582 cubic feet is available to drain via gravity.

$$3,878,582 \text{ ft}^3 \times 0.65 = 2,521,079 \text{ ft}^3$$

Therefore, 2,521,079 cubic feet equates to 18,850,000 gallons. Under normal conditions, approximately 18,850,000 gallons are present over the 56-acre unit, which is considered potentially mobile. Due to sidewall liners and final cover, mobilization of liquid is restricted.

#### ***4.2.2 Physical and Chemical Characteristics***

The leachate in Unit 1 is generated by precipitation infiltration of the cover system and, potentially, groundwater infiltration from saturated deposits coincident with the sidewall liner west of the unit. The physical characteristics are very similar to water as confirmed by observation of the leachate during sampling activities required by Permit Condition VII.5.

Leachate is extracted from three manholes (L101, L103, and L104), which are centrally located within Unit 1. Unit 1 is inspected on a routine basis pursuant to the closure plan, and essentially on a continual basis due to gas system adjustments, gas probe monitoring, and groundwater monitoring activities. Any observed release, such as a seep, would be repaired immediately. However, due to the existing cover and current leachate extraction, no visual observation of a release has occurred. Therefore, the only mechanism available to monitor for a release is through the groundwater monitoring program. There is no accurate way to quantify the volume of leachate that may migrate through a low hydraulic conductivity media to the monitored zones adjacent to Unit 1. Calculation for an approximated volume of leachate for Unit 1 was presented in Section 4.2.1. However, unless there is a driving force (pressure gradient) causing the leachate to move, diffusion is the only process by which contaminants could migrate, which is comparatively negligible to advection.

The Unit 1 monitor well network consists of 33 wells that are tested quarterly and/or semiannually and compared to interwell and/or intrawell background concentrations, and/or the appropriate 35 Ill. Adm. Code 620 class standards. A leachate release should become apparent due to changing groundwater characteristics, typically resulting in increasing concentrations trends or multiple exceedences of indicator parameters. However, determination of a potential

source has been complicated by past facility activities, including coal and brick mining operations, and by the placement of extraneous materials along the periphery of the waste unit.

The chemical characteristics of the leachate have been monitored for several years as required by Condition Nos. VII.4 and VII.5 of the current permit. An extensive list of parameters is routinely monitored at alternating manholes (L101, L102, L103, and L104). Recent data for each manhole have been graphed and compared to the concentrations provided in Attachment 1 to Appendix C (Chemical Parameters Associated with Putrescible and Chemical Landfill) to LPC-PA2. The concentrations contained in Attachment 1 to Appendix C represent average concentrations expected in leachate for a municipal solid waste disposal facility. It must be noted that not all parameters analyzed contained corresponding values from Attachment 1 to Appendix C; the current parameter lists contain more constituents than are contained in Attachment 1 to Appendix C. As shown in the graphs (Attachment 5), only barium and boron were detected in the leachate at higher concentrations in each manhole than listed in Attachment 1 to Appendix C. Periodic exceedences were note for several parameters. However, leachate concentrations were significantly less than the values listed in the Attachment 1 to Appendix C for the vast majority of parameters. This further minimizes the potential for Unit 1 to impact groundwater which may be needed or used for human consumption. A potential release is difficult to confirm given the lower source concentrations. Two of the indicator parameters (chloride and sulfate) are relatively low for the environment (former mining area) and have no groundwater standard pursuant to 35 Ill. Adm. Code 620.440. Boron is also prevalent in the groundwater, but is present in similar concentrations in upgradient and downgradient wells. There are no current inorganic parameter concentrations in the groundwater that indicate a leachate release.

Volatile organic parameters can also be an indication of a leachate release. The leachate concentrations presented in Attachment 5 show the presence of several volatile organic parameters, including 1,3,5-trimethylbenzene, bis(2-ethylhexyl)phthalate (semi-volatile), ethylbenzene, xylenes, p-isopropyltoluene, tetrahydrofuran, toluene, and vinyl chloride, typically in manhole L102. Tetrahydrofuran has been detected in well T114 three times, including the second quarter 2013, since becoming active the second quarter 2010. However, the parameter was never confirmed (detected during the following sampling event). Cis-1,2-dichloroethene has been detected in well A126 slightly above the practical quantitation limit of 5.0 ug/L for the last several quarters. Detection of the parameter has been attributed to gas migration. A GMZ was implemented pursuant to Application Log No. 2000-403 to address limited volatile organic compound detections (dichlorodifluoromethane and 1,1-dichloroethane) as a result of gas migration. An evaluation of remedial activities is submitted to the Illinois EPA on an annual basis. The most recent evaluation stated dichlorodifluoromethane and 1,1-dichloroethane were not detected during the 2013 review period, indicating the remedial activities were effective to control potential gas migration from Unit 1.

Given the site history and hydrogeologic characteristics, a leachate release cannot be quantified let alone confirmed. The facility minimizes the potential for a leachate release by maintaining the cover; promoting drainage by augmenting low areas to negate ponded water on the cover, thereby minimizing precipitation infiltration, adjusting the gas extraction well field to ensure effective removal of landfill gas, and maintaining all monitoring devices. In the event of a confirmed release, the facility will permit and implement appropriate corrective action to effectively protect the environment. Potential remedial activities are environment dependent and cannot be predetermined.

#### **4.2.3 Summary**

The volume and physical and chemical characteristics of Unit 1's leachate are well known and have been effectively analyzed. Collection and monitoring systems are in place for proper management of the leachate. The proposed adjusted standard will not in any way adversely impact that leachate, but instead will allow for a more effective groundwater monitoring system.

#### **4.3 Section 814.402(b)(3)(C):**

***The quantity, quality, and direction of flow of groundwater underlying the facility.***

##### **4.3.1 Quantity**

The water-bearing zone beneath Unit 1 varies as described in Section 4.1 above. The subject water-bearing zone consists of coal in unmined areas, voids where coal was underground mined, and spoil where the coal was surface mined. Therefore, it is difficult to determine the actual quantity of groundwater underlying the unit. The groundwater within the coal seam/void space is under pressure; the potentiometric surface exceeds the top of the coal deposit or roof rock (artesian conditions). In areas where surface mining occurred, the saturated thickness may be slightly higher.

For purposes of calculating the quantity of groundwater beneath the unit, the following is assumed:

1. Unit 1 consists of an area of 56 acres of waste.
2. The saturated thickness is a maximum of five feet.
3. The volume available to retain liquids (porosity of the water-bearing zone) is 50 percent. Field hydraulic conductivity tests (packer/pressure testing) of the coal indicate the coal is dense with a low porosity; however, voids contain 100-percent porosity. To be conservative, a total porosity value of 50 percent (0.50) should be representative of the 56 acres underlying Unit 1.

The volume of groundwater is determined by multiplying the area of Unit 1 (56 acres) by the saturated thickness (5 feet).

$$56 \text{ Acres} \times 43,560 \text{ ft/acre} \times 5 \text{ ft} = 12,196,800 \text{ ft}^3$$

Fifty percent of the volume is occupied by solids (assuming a total porosity of 0.5)

$$12,196,800 \text{ ft}^3 \times 0.5 = 6,098,400 \text{ ft}^3$$

Therefore, 6,098,400 cubic feet equates to 45,619,200 gallons. This is the approximate gross volume of groundwater present beneath Unit 1. Not all pore spaces are connected. The effective porosity is the amount of interconnected pore space through which fluids can pass. Part of the total porosity will be occupied by static fluid being held to the mineral surface tension, so the effective porosity will be less than the total porosity for granular materials. The effective porosity may be equivalent to the total porosity in voids and fractured bedrock.

#### **4.3.2 Quality**

The groundwater within the coal deposit, mine voids, and strip mine area has been classified as a Class IV (Other) groundwater pursuant to 35 Ill. Adm. Code Section 620.240(g). The referenced section states "Other Groundwater is—Groundwater within a previously mined area, unless monitoring demonstrates that the groundwater is capable of consistently meeting the standards of Sections 620.410 or 620.420. If such capability is determined, groundwater within the previously mined area shall not be Class IV." Due to mining activities, the groundwater quality cannot meet Class I or II groundwater quality standards for all listed parameters. Therefore, the Class IV classification applies.

Class IV groundwater quality standards are less restrictive due to the disturbance of the water-bearing zone and associated geochemical effects. Effects have been documented such that groundwater standards for total dissolved solids, chloride, iron, manganese, sulfates, and pH do not exist (35 Ill. Adm. Code Section 620.440(c)). These parameters have been shown to be impacted by coal mining activities, either underground or surface mining. However, the subject regulation does not exempt the referenced parameters from being monitored. All parameters required to be monitored pursuant to Condition VIII.A of the current permit shall continue to be monitored unless revised via permit modification.

Because of the mining activities, the groundwater quality is highly variable dependent upon location (spatial variability). This creates complexities when comparing downgradient groundwater quality with background (upgradient) groundwater quality. The permitted interwell background concentrations contained in the current permit were derived from data obtained from wells screened in the coal or unmined areas west of Unit 1. Several downgradient wells are screened at the bedrock/mine spoil interface; screened deposits vary dependent upon the well location. Wells to the south and west typically are screened in in-situ coal, and wells to the southeast and east screen mine spoil on top of the bedrock surface. Groundwater constituent concentrations can significantly vary with no implications of impacts from the waste unit.

The groundwater adjacent to the waste unit has been monitored since the facility was initially permitted; the current monitoring network was described in Section 2 above. The Unit 1 groundwater quality has been evaluated in detail as part of site assessment activities. Comprehensive reports have been submitted to the Illinois EPA, including a pending application identified as Log No. 2009-393 and annual assessments submitted pursuant to Condition No. IX.5 of the current permit. Further details of the existing groundwater quality are contained in Section 4.6 below.

#### **4.3.3 Direction of Flow**

Groundwater movement within the monitored water-bearing zone is generally from west to east, towards the bedrock trough located east of Unit 1. Due to mechanical disturbance of the bedrock surface east of Unit 1, the groundwater movement east of Unit 1 varies. A detailed discussion of the potentiometric surface for Unit 1 was provided in Section 4.1.2 above.

#### **4.3.4 Summary**

The quantity, quality, and direction of flow of groundwater underlying Unit 1, and the surrounding area, are well known and have been extensively analyzed. The proposed adjusted

standard will not in any way adversely impact that flow but instead will allow for a more effective groundwater monitoring system.

#### **4.4 Section 814.402(b)(3)(D):**

##### ***The proximity and withdrawal rates of groundwater users.***

Data from the Illinois EPA Source Water Assessment Program (SWAP) and the Illinois State Geological Survey were utilized to evaluate area water wells in the proximity of Unit 1. The evaluation included community water supply wells, non-community water supply wells, and private wells.

Four community water supply wells were identified to the northeast of the facility. The locations are provided on Sheet No. 1 (CWS Well Location Map) contained in Attachment 6. All four wells are located across the river from the landfill and no impact is reasonably expected from Unit 1. The wells are listed as a five-digit number. Data from the Public Water Supply List (Illinois EPA, 1999) indicated well 45229 as inactive. The remaining three wells were identified as active. Each well was screened in unconsolidated deposits, varying from approximately 88 to 105 feet in depth. The nearest well, 45225, is approximately 3,400 feet northeast of the northeast corner of Unit 1.

Three non-community water wells were identified in the SWAP database. The closest well (18300186) is located approximately 5,500 feet east of Unit 1. A map depicting the well locations (Sheet No. 2) is also provided in Attachment 6. No geologic data or pumping records were available for these wells.

As identified in Sheet No. 3 in Attachment 6, numerous wells/borings are listed in the proximity of Unit 1. The maps derived by the SWAP database do not differentiate between wells and borings, except as part of the interactive feature for viewing the logs online. The well/boring designation corresponds to a location listed on Sheet No. 3.

Fourteen of the closest wells/borings to the facility have been reviewed. Of the fourteen, only two designations were actually water wells. A detail of the fourteen wells/borings are listed in the following table:

<b>Well/Boring Designation</b>	<b>Notes</b>
00199	Coal Boring
00200	Coal Boring
00201	Coal Boring
00203	Coal Boring
00204	Western Brick Co. Coal Boring
01505	Jim Hewes Well
23991	Brickyard Monitor Well G103
24025	Brickyard Monitor Well G126
24029	Essie Williams Well
24030	Brickyard Monitor Well G131
24725	Bridge Boring

Well/Boring Designation	Notes
25210	Brickyard Monitor Well
25211	Brickyard Monitor Well
25212	Brickyard Monitor Well

One of the residential wells (01505) is shown to be located upgradient to the west of the landfill facility. It is assumed that usage of the well is typical for a single-family dwelling; no withdrawal rate or usage information was provided. Given the upgradient location of the well, the groundwater at the subject well should not be susceptible to influences from Unit 1.

The only other water well located in the proximity of Unit 1 that may be used for residential purposes is identified as 24029. Based on the SWAP data, the well is located approximately 3,200 feet east/southeast of Unit 1, east of the Vermilion River and screened in a basal sand from 93 to 97 feet in depth. Given the historical land use of the Unit 1 area, and the facts that well 24029 is located more than half a mile east of Unit 1, on the other side of the Vermillion River, the groundwater is not susceptible to influences from Unit 1. Well logs and construction information for wells 01505 and 24029 are also provided in Attachment 6.

The SWAP and Illinois State Geological Survey databases have been reviewed to identify public or residential wells near the landfill facility. Given the historical land usage on and near the facility, there are no groundwater users or receptors located downgradient to Unit 1. Data in tabular format are provided in Attachment 6 for the well/boring identifications, which are accompanied by a yellow circle on Sheet No. 3. Well designations not accompanied by a yellow circle are not included in the table and are considered beyond the study area.

Moving the compliance boundary to the location proposed in Figure 6 will not affect any groundwater users of community water supply wells, non-community water supply wells, or residential wells.

#### **4.4.1 Summary**

The proximity and withdrawal rates of nearby groundwater users have been extensively investigated, as reported above. The proposed adjusted standard will not have any adverse impact on any groundwater users, but will serve to more effectively monitor groundwater conditions at the site.

#### **4.5 Section 814.402(b)(3)(E):**

##### ***The availability of alternative drinking water supplies.***

Most residents in the vicinity of Brickyard Disposal and Recycling are connected to a public water supply via Aqua Illinois. A water line is located on the south side of Brickyard Road leading up to the gate of the landfill facility. Aqua Illinois services the City of Danville, Villages of Tilton, Indianola, Catlin, Westville, Belgium, and unincorporated surrounding areas. Aqua Illinois obtains water for distribution from a surface water body, Lake Vermilion. The southern tip of Lake Vermilion is located approximately 5.5 miles north/northwest of Unit 1 (See Figure 7).

In areas that are not serviced by Aqua Illinois near the facility, alternative drinking water can include bulk supply (tanks), bottled water, and groundwater from deeper geologic formations.

#### **4.5.1 Summary**

While Andrews Engineering has conducted an investigation of alternative drinking water supplies, the proposed adjusted standard is not expected to implicate a need for such alternative supplies; instead, it will simply serve to more effectively monitor actual conditions at the site.

#### **4.6 Section 814.402(b)(3)(F):**

##### ***The existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater.***

The existing groundwater quality within the coal seam, mined voids, and mine spoil/bedrock contact has been evaluated extensively adjacent to Unit 1. Significant spatial variability has been demonstrated to exist, based on the extent and type of mining that occurred beneath and adjacent to the unit. The initial background concentrations used to evaluate the downgradient groundwater quality pursuant to permit requirements has magnified the spatial variability issue. The permitted interwell background concentrations were derived from data obtained from wells screened in the coal west of Unit 1. This background data did not represent groundwater quality in mined areas, either in underground or surface mined. This led to several groundwater assessments that were not related to the waste unit.

Monitor wells T109 through T113, located east of Unit 1, are screened at the bedrock/mine spoil interface. Screened deposits for wells T114 through T123 vary dependent upon the well location. In general, wells to the south and west of Unit 1 typically are screened in in-situ coal, and wells to the southeast and east are screened in the mine spoil on top of the bedrock surface.

To aid in evaluating the groundwater quality and accounting for spatial variability, a series of introwell background concentrations were proposed and approved for specific parameters in several monitor wells. The specific wells (T109 through T123) were each located outside the perimeter of the extraneous materials. As stated in Section 4.1.2, wells T109, T110, T111, and T112 are located upgradient to the extraneous materials due to the bedrock trough east of Unit 1. The remaining "T" wells are located downgradient to Unit 1 and the extraneous materials, capable of detecting potential changes in groundwater quality due to both Unit 1 and the extraneous materials. Alternate source demonstrations were conducted for wells T114, T115, T116, T117, T118, T119, and/or T121 as part of Illinois EPA Application Log Nos. 2010-472, 2011-007, 2012-428, 2013-034, and 2013-159. The subject applications demonstrated that background concentration exceedences were the result of spatial variability between upgradient and downgradient groundwater quality and not the result of impacts from Unit 1 or the extraneous materials. The Illinois EPA concurred with the demonstrations via approval of the subject applications, resulting with the incorporation of introwell background concentrations to the permit.

Data from the most recent comprehensive sampling and reporting event at (at the time of the completion of this document, second quarter 2013) have been used to summarize the groundwater quality within the area bound by the proposed compliance boundary. The second quarter sampling event is the most comprehensive event of the year, requiring analyses of parameters contained in lists G (field parameters), G1 (quarterly/routine parameters), G2 (semiannual parameters), and assessment parameters (Modified Appendix II parameters

including Dichlorodifluoromethane and 1,1-dichloroethane) for specified wells. Table 2 (attached) lists all of the analytical data and background concentration(s) for each parameter and each well that exists within the proposed compliance boundary, and identifies concentrations which exceeded the applicable background values. The proposed compliance boundary does not extend north of Unit 1; therefore, wells G33S, G34S, and G35S were not included in this summary.

Table 3 lists only those parameters that exceeded applicable background concentrations during the second quarter 2013 sampling event. Of the wells listed, six are upgradient to Unit 1, including G130, G133, G134, R103, T110 and T111. As stated in Section 4.1.2, wells T110 and T111 are located upgradient to the extraneous materials due to the bedrock trough east of Unit 1, even though all other upgradient wells are west of Unit 1. Five of the wells (A126, G125, G131, R123, and R124) are located within the area containing the extraneous materials. Five wells (R106, R127, R132, T113, and T114) are located beyond the limits of the extraneous materials. However, each of these wells is screened in or was advanced through disturbed soils creating spatially variable conditions. In addition to the multiple revisions of historical interwell and intrawell background concentrations, and pursuant to Condition No. VIII.A.22 of Permit Modification No. 97, intrawell background concentrations were developed for total manganese and total recoverable phenols at well T114, and total manganese and total sulfate at well T115. Existing Condition No. VIII.A.24 requires the development of an intrawell background value for dissolved magnesium at well R132. The referenced parameters were shown to be spatially variable and not affected by the waste unit or extraneous materials.

Any well approved for the monitor well network subsequent to the granting of the Adjusted Standard Petition will require evaluation of the groundwater quality data with respect to appropriate background concentrations. Revisions to some background values will likely be necessary given the history of the facility. However, until the monitoring program is approved by the Illinois EPA (to be submitted within 90 days of the approval of this Petition), it is premature to develop such background concentrations.

#### Background Concentrations

As presented in Section 4.1.2, the migration pathway for Unit 1 has been identified as the coal seam, the mine void where the coal has been removed via underground mining, or the spoil/bedrock interface where surface mining has occurred; the pathway is continuous beneath Unit 1. Groundwater subject to monitoring for Unit 1 occurs in the coal seam, mine voids, or on top of the shale underlying the mine spoil. Therefore, the groundwater within the coal deposit, mine voids, and strip mine area has been classified as a Class IV (Other) groundwater pursuant to 35 Ill. Adm. Code Section 620.240(g). Because of the mining activities, the groundwater quality is highly variable dependent upon location (spatial variability). This creates complexities when comparing downgradient groundwater quality with background (upgradient) groundwater quality. The permitted interwell background concentrations contained in the current permit were derived from data obtained from wells screened in the coal or unmined areas west of Unit 1. To account for the significant spatial variability, intrawell background concentrations have been approved for numerous parameters at varying wells since the issuance of the significant modification permit. Spatial variability of the "T" wells was discussed in Section 4.6.

As stated above, numerous revisions to the background concentrations have occurred since the approval of the initial significant modification application. Table 4 lists the permits and related revisions to the background concentrations.

#### **4.6.1 Summary**

The potential sources of contamination at the subject location are the waste unit, the extraneous material areas outside the permitted boundary of the waste unit, and the former coal mining activities. The proposed adjusted standard will allow for a more effective monitoring of actual conditions. Specifically, it will allow for the placement of permanent monitoring wells in an area which will account for all three potential sources and any cumulative effects.

#### **4.7 Section 814.402(b)(3)(G):**

##### ***Public health, safety, and welfare effects.***

As stated previously, the materials located outside the waste boundary of Unit 1 have been in place for approximately 25 years or greater. Yet, in order to assess whether leaving the materials in place is the best environmental option, Brickyard Disposal and Recycling has evaluated the possibility of excavating the debris and backfilling with available materials. As part of the evaluation process, the facility reviewed slope stability issues, disturbance of existing final cover and permitted appurtenances (gas and leachate extraction systems, including extraction wells and conveyance lines), and environmental impacts such as control of the liquid contacting the materials. Due to safety and environmental concerns, excavation is not an option the facility plans to pursue as it is not environmentally or economically practicable. Further discussion of the specific concerns with excavation of the extraneous materials is provided below, as it relates to the criteria here: public health, safety and welfare.

##### **4.7.1 Slope Stability**

The location, thickness, and total depth of the extraneous materials have been evaluated with respect to excavation and related potential/probable slope stability issues. The areas containing the extraneous materials can be divided into three segments, east, south, and northwest (Figure 4) and consist of approximately 9.1, 9.2, and 0.3 acres, respectively.

The bottom extent of the extraneous materials encountered adjacent to the waste unit varies dependent upon location. The eastern portion of Unit 1 was largely surface-mined prior to site development and filling operations; therefore, the bedrock topography is lower in this area. Historical documentation places the invert elevation of Unit 1 between 585 to 590 feet above mean sea level (MSL), with some areas as low as 565 feet MSL near well T106 in the northeast corner of Unit 1. Figure 5 identifies the bedrock surface immediately east of Unit 1 and horizontal extent of the materials outside the waste boundary. Coincident to the surface mining, the bottom extent of the extraneous materials in the eastern portion of Unit 1 is lower than elsewhere on the site, averaging an elevation of 564 feet MSL. The material at the deepest location is 556.5 feet above MSL.

Slope stability calculations were conducted using the software PC Stable Version 6 at two representative locations along the east perimeter of the waste unit. Figure 8-1 (Attachment 7) identified the locations as C-C' and E-E'. Calculations for E-E' were determined to also represent the conditions along the south perimeter of Unit 1. The slope failure/slip planes were based on the vertical location of the extraneous materials adjacent to the permitted waste boundary. Information used in for the slope stability evaluation is provided in Attachment 7.

Based on typical friction angles of municipal solid waste, it was projected that the overburden (waste upslope of the extraneous material) would have to be removed at an approximate 2:1

slope (horizontal to vertical) in order to achieve a minimum safety factor for the excavation. However, a variation in refuse characteristics (highly saturated) could require the removal of additional waste to maintain an appropriate factor of safety. The slope of 2:1 was used to calculate the volume of refuse to be temporarily relocated in the areas shown in Figure 8. Based on the stability requirements, approximately 197,000 cubic yards of waste would need to be excavated and temporarily stock-piled on site. This includes 88,000 cubic yards from the eastern perimeter and 109,000 cubic yards from the southern perimeter of Unit 1.

The temporary relocation of waste material from the eastern and southern perimeters of Unit 1 would require the removal of the permitted final cover for Unit 1 and interruption of the gas extraction system. The areas along the eastern and southern perimeters where the temporary relocation of waste material would be required are depicted in Figure 8. As shown, several gas extraction wells and the gas conveyance line leading to the gas plant are located within the area along the eastern perimeter of Unit 1 requiring waste relocation. Waste relocation in this area would require temporary deactivation, or abandonment and replacement of these gas extraction wells. Along the southern perimeter of Unit 1 where extraneous material removal would require waste relocation, three gas extraction wells would require temporary deactivation, or abandonment and replacement. Additionally, waste relocation along the southern perimeter of Unit 1 would require the relocation of the vacuum line that runs through that area.

The removal of extraneous materials along the eastern and southern perimeter of Unit 1 would require the removal of the cap and temporary relocation of waste material. In addition to compromising the structural integrity of Unit 1, these activities would result in the temporary shutdown of the gas extraction system for Unit 1 and creating potential contractual issues with the gas extraction company. In addition to the facility's contractual obligations, a temporary shutdown of the gas extraction system would halt the remedial action system pursuant to Condition IX of the current permit.

#### **4.7.2 Mass Stability**

If excavation of the extraneous materials was undertaken, dewatering of the subject areas would likely be necessary to minimize potential groundwater impacts and exposure of the liquids within the excavation to adjacent surface water. However, dewatering of the subject areas could result in mass stability issue for the Unit 1 fill area.

As discussed previously, the potentiometric surface of the uppermost aquifer exceeds the top of the coal formation present beneath the Unit 1 fill area. As a result, the hydraulic up-lift pressure of the groundwater helps support the roof rock of these underground mined areas. The actual connectivity of the groundwater within the subject areas to the existing mine voids is unknown, but dewatering the mine voids would likely lower the potentiometric surface below the top of the mine, removing support from the overlying rock. The removal of this hydraulic support could promote void collapse, which can cause liner fatigue and ultimately the potential failure of the liner.

#### **4.7.3 Air Quality**

Unit 1 maintains an active gas extraction system. The gas extraction system includes 42 vertical extraction wells within Unit 1, and seven additional vertical gas extraction wells on the periphery of Unit 1. Vacuum lines extend to well headers at each location and tie in to the conveyance line that encircles the unit (inside the waste boundary). The conveyance line runs to the main sump where it comes with gas from the Unit 2 gas extraction system. The combined gas is then

routed to two gas-to-electric engines that run continually, or to a flare station if excess gas is collected. The flare station and generators are located east of Unit 2. Liquid collected in the condensate sumps is conveyed to the leachate storage tank also located east of Unit 2. Extraction well and conveyance line locations with respect to Unit 1 are provided on Figure 4 and Figure 8.

Removing the final cover for slope stabilization purposes would create additional difficulties. Once the final cover is removed from applicable areas, the air quality will need to be monitored to ensure worker safety, including but not limited to methane/lower explosive limit and hydrogen sulfide levels. Dependent upon weather conditions, the odor may be a nuisance to downwind residents. Odor control measures may be necessary in the event waste must be relocated as part of slope stabilization efforts.

Gas emissions at the Brickyard facility occur from two separately permitted entities; Brickyard Disposal and Recycling, Inc. (facility ID No. 183020AIF) and Brickyard Energy Partners, LLC. (facility ID No. 183020AIJ). Emissions from Brickyard Disposal and Recycling, Inc. are limited to operations pertaining to the roadways, fugitive landfill, and the tub grinder. Emissions from operations pertaining to Brickyard Energy Partners, LLC. include the flare station and gas-to-energy plant. The qualitative and quantitative nature of the gas emissions were obtained from the 2012 Annual Emission Report filed pursuant to Title V CAAPP Permit No. 9810021 and from the owner/operator of the gas-to-energy plant and flare station (Brickyard Energy Partners, LLC) (CAAPP Application No. 00080067).

The following parameters and reported emissions occurred at the facility during 2012.

<b>Constituent</b>	<b>Brickyard Disposal and Recycling, Inc.</b>	<b>Brickyard Energy Partners, LLC.</b>
Carbon Monoxide	0.55	89.32
Carbon Dioxide	3996.50	22592.00
Methane	1426.00	2.29
Nitrogen Oxides	2.55	49.39
Particulate Matter	7.66	5.05
Sulfur Dioxide	0.17	2.12
Volatile Organic Material	1.15	7.35

Units in Tons

The reported emissions have been below the allowable emissions for each entity.

Brickyard Disposal and Recycling, Inc. manages (minimizes) emissions by watering the roadways to minimize dust (particulate matter) or applying other dust control measures, ensuring proper cover is in place on the refuse to minimize fugitive emissions, working with Brickyard Energy Partners, LLC. to ensure the gas extraction wells are properly adjusted and maintained, and properly maintaining the internal combustion engine and exhaust system for the tub grinder to ensure maximum combustion of the fuel occurs. Brickyard Energy Partners, LLC. through a contractor, adjusts the gas extraction wells to maximize gas recovery from Unit 1 as well as Unit 2, provides maintenance as necessary to the extraction wells and conveyance lines, and maintains the flare unit and gas-to-energy engines to ensure proper combustion/destruction of the landfill gas.

#### **4.7.4 Groundwater and Surface Water Affects**

The water-bearing zone monitored along the eastern perimeter of Unit 1 is located at the spoil/bedrock interface. Groundwater occurring along the spoil/bedrock interface is underlain by very low hydraulic conductivity shale. This shale is a vertical hydraulic barrier (aquitard).

The extraneous material is generally located along the same stratigraphic horizon as the saturated deposits overlying the shale. As a result, the extraneous material is expected to be saturated. Excavating, loading, and hauling the saturated materials are anticipated to be problematic. Removal of the debris may require dewatering to control runoff (ensure groundwater within the excavation does not drain to the surface ditches) and to allow placement of structural backfill. The drainage swales/ditches along the perimeter of Unit 1 ultimately discharge to the Vermilion River.

Disturbance of the materials will likely affect the chemical properties of the groundwater, potentially causing the mobilization of inorganic constituents and the degradation of groundwater and surface water quality near the affected areas.

#### **4.7.5 Leachate Collection System Capacity**

As discussed above, test excavations have shown that groundwater will likely be encountered within the extraneous materials, requiring dewatering. It is assumed that the recovered liquids will have to be collected and treated as leachate. This will entail conveyance directly to the leachate storage tank prior to transfer to the offsite treatment facility. The volume of recovered liquids may become excessive and require operational or design changes to the leachate conveyance and storage systems. At no time would liquids be introduced into Unit 2 disposal cells.

The transmissivity of the coal and/or mined areas, as well as railroad ties, is expected to be high. This directly corresponds with a higher discharge rate and higher volume of liquid that may need to be collected and treated.

#### **4.7.6 Cover Thickness Over the Extraneous Material**

Historical information indicates the railroad ties were placed along the periphery of Unit 1 in the 1980s. The tie placement was not continuous but occurred in pockets or specific areas. Three field investigations were conducted over the years to better identify the locations of the extraneous materials, which also determined the thickness of cover overlying the materials. The field investigations accounted for 109 probe locations, including 36 cover probe borings (conducted with a drilling unit) and 73 test pits completed with the use of a tracked backhoe. Based on the 1992 cover probe investigation and the 2006 and 2008 trench investigations, the thickness of soils overlying the extraneous materials ranged from 0 to 15 feet, with an average thickness of 5.5 feet. The number of probes/test pits conducted to evaluate the cover occurred on the average one per 0.17 acres, less than a 100-foot grid spacing. The 1992 cover probe locations and the 2006 and 2008 test pit locations are shown on Figure 4. Cover thicknesses, or depths to the top of the extraneous materials, are provided in Table 1.

Based on the aforementioned investigations, the cover composition ranges from clayey soil to a combination of clay, silt and stone. In areas directly adjacent to the Unit 1 waste boundary, the cover appears to be consistent with that present on Unit 1, i.e., vegetated clayey soil. It is

expected this cover was placed simultaneously with the capping of areas of Unit 1 and in the same manner (compacted soil with a vegetated cover). With distance from the waste boundary, the percentage of aggregate increases within the soil matrix; the cover composition varies with location.

Visual observation of the trench excavations indicate the cover is highly compacted due to over 25 years of traffic during placement and site operation/development. The cover is well vegetated in most areas except in areas of equipment traffic due to soil borrow activities adjacent to Unit 1 and facility maintenance. As illustrated in Figure 2, the cover overlying the extraneous materials is sloped to promote drainage such that no ponding water occurs, minimizing the potential of surface water infiltration into materials. Existing cover overlying the extraneous material will not be disturbed except as to conduct maintenance and augment the vegetation.

Pursuant to comments provided by Illinois EPA personnel, an additional investigation was conducted to further evaluate the qualities of the cover overlying known areas containing extraneous materials. The cover investigation included test pits at 24 locations. Soil samples were retained for analyses, including grain size, standard proctor curves, and vertical hydraulic conductivity. Each test pit location included field density/moisture testing utilizing a nuclear density gauge. Details of the cover investigation are included in the Extraneous Materials Cover Plan which is provided as Exhibit C to the Adjusted Standard Petition.

The Extraneous Materials Cover Plan was developed to ensure adequate placement of cover and vegetative soil occurred (over extraneous materials) in areas identified as having less than two feet of protective cover by the previously discussed field investigations. The cover is considered an institutional control pursuant to 35 Ill. Adm. Code 104.406(f).

#### **4.7.7 Cost of Institutional Controls**

##### **Cover Plan**

The Cover Plan, provided as Exhibit C to the Adjusted Standard Petition, defines measures necessary to ensure adequate cover exists over areas containing extraneous materials. Based on previous investigations detailed in Section 3 above, it was determined that extraneous materials may be present in approximately 18.6 acres within three areas. It was also determined that adequate cover exists in all but approximately three acres. The costs to implement the Cover Plan as currently written account for the following items:

1. Design, field oversight, documentation and reporting,
2. Site preparation (clearing, backfilling and grading),
3. Placement of low hydraulic conductivity material,
4. Placement of protective layer,
5. Vegetation (lime, fertilizer, seed and mulch or other erosion control measurements).

All activities are assumed conducted by third-party personnel. As provided in Table 5, the cost to implement the Cover Plan is approximately \$573,018. As noted on Table 5, and for purposes of being conservative, the costs assume four acres of final cover will need to be augmented.

##### **4.7.7.1 Removal of Extraneous Materials**

As discussed earlier in this section, removal of the extraneous materials was evaluated. However, exposing site/contractor personnel and the environment to such activities was deemed an unnecessary risk. Therefore, Brickyard Disposal and Recycling does not intend to pursue removal of the extraneous materials. For purposes of addressing 35 Ill. Adm. Code

104.406(f), the tasks and associated costs are discussed for removal and replacement of the extraneous materials located within the 18.6 acres previously defined.

Based on the aforementioned site investigations, it is known that the presence of the extraneous materials is not contiguous throughout the 18.6-acre area. However, the extraneous materials do appear prevalent along much of the Unit 1 waste boundary as shown in Figure 3. Comingling of the extraneous materials and backfill materials will require the removal of larger quantity of soils to ensure complete removal is attained. Therefore, it is assumed the vast majority of the 18.6 acre area will be removed/disturbed as part of the extraneous materials excavation. The tasks necessary to complete removal of the extraneous materials are discussed below. The tasks are numerous and involve multiple parties. For purposes of clarity, the major tasks are summarized. The tasks are presented in the order of anticipated implementation; associated costs are provided in Table 6. The tasks provided in Table 6 are consistent with those provided below.

*1. Design and Implementation of the Extraneous Materials Investigation*

- a. In order to minimize the need for disturbance of areas containing no extraneous materials, a detailed investigation will be designed. Design work shall include bid specification and acquisition of a contractor(s).
- b. Fieldwork shall include an invasive investigation (backhoe and/or drilling), surveying, oversight and documentation.

*2. Extraneous Materials Excavation Design*

- a. Dependent upon the results of the field investigation, designs shall be completed for the excavation of the extraneous materials. This includes bid specification for acquisition of the applicable earth excavation contractors.
- b. Any permitting necessary to complete the excavation of the extraneous materials will be identified.

*3. Design and Permit Modifications*

Excavation of the extraneous materials will impact several permitted active systems within Unit 1. Therefore, permit modifications will be necessary prior to excavation of the extraneous materials. The permit modifications will include design modifications. The effected systems are discussed below.

- a. Excavation of the extraneous materials will create unstable slopes within the waste along the periphery of the waste unit boundary. Therefore, temporary relocation of waste will be necessary. This will impact the current operation of the gas extraction system and the leachate conveyance lines. Areas requiring temporary waste relocation are shown in Figure 8, which comprise of approximately 7.7 acres. Permit modifications are anticipated with respect to the gas system, leachate collection system, and temporary relocation of the waste. Permit revisions may also be necessary to address potential odor control and stormwater runoff from the relocated waste.
- b. The monitor well network within the extraneous materials will need to be abandoned and redesigned prior to excavation.
- c. Additional modification may be necessary to the leachate collection system due to anticipated dewatering of the excavation areas; the system must be capable of handling additional volume. It is anticipated that groundwater collected during

excavation and backfilling will be treated as leachate, being conveyed to the leachate storage tank.

**4. Extraneous Material Excavation**

Excavation of the extraneous materials would be conducted in segments in order to enhance the structural integrity of the excavation area, minimize exposure of materials and facilitate control of groundwater encountered during excavation. The following tasks will be conducted as part of the extraneous materials excavation. This process contains significant effort and includes numerous entities. Most activities include third party contractors and engineering oversight. Additional tasks may be included that are not referenced below.

- a. Field preparation will be necessary, which includes staking of the areas to be excavated.
- b. Mobilization and demobilization of multiple contractors.
- c. Monitor wells, piezometers and gas probes located within the areas designated for excavation will need to be abandoned pursuant to Illinois Department of Public Health regulations prior to disturbance of the surrounding area.
- d. Gas extraction wells within the slope stabilization areas will need abandoned or decommissioned prior to cover removal and waste relocation.
- e. Gas vacuum lines will need to be relocated prior to disturbance of the applicable areas to ensure continued operation of the system.
- f. The leachate conveyance line located in the northeast corner of Unit 1 will need to be relocated prior to excavation activities in that area.
- g. Unit 1 waste relocation efforts for slope stability issues will include the following:
  - i. Final cover removal and stockpile of vegetative and clay materials. This will occur on the approximate 7.7-acre area as highlighted in Figure 8. Approximately 80,747 cubic yards of final and vegetative cover material will need to be stripped and stockpiled.
  - ii. Waste excavation and stockpile. As stated above, it is estimated that approximately 197,000 cubic yards of waste will need temporarily relocation for purposes of slope stability.
  - iii. Temporary/daily cover will be placed over stockpiled and exposed waste.
  - iv. Construction of temporary drainage control structures for waste stockpiles and exposed waste.
  - v. Odor control measures will be employed during this process.
  - vi. A Health and Safety Plan will be implemented during this process that includes gas monitoring and visual inspection for asbestos.
- h. Activities associated with excavation of the extraneous materials include the following:
  - i. Construction of temporary drainage control structures for extraneous materials excavation areas.
  - ii. Removal and stockpile of overburden (above the extraneous materials).
  - iii. Mass excavation of the extraneous materials.
  - iv. Depending upon the depth of the extraneous materials, structural supports, such as shoring, may be necessary.

- v. Transport and disposal of extraneous materials in the active area of Unit 2. It is assumed that a third-party contractor will move the waste from the excavation area to the active landfill face in Unit 2. The extraneous materials will require handling and compaction at the working face.
- vi. The extraneous materials will consume airspace designed to create revenue for the facility. Placement of the extraneous materials in the active unit is an expense/lost revenue which applies to the cost of removal and replacement of the extraneous materials.
- vii. Groundwater control/dewatering, which includes extraction of water in the excavation as necessary to assure proper removal of extraneous materials, protection to surface water bodies, and proper compaction of backfill material.
- viii. Any groundwater collected from excavation of extraneous materials will be treated as leachate, incurring disposal and treatment costs.
- ix. Verification documentation/report to Illinois EPA documenting the activities and results.

**5. Acquisition and Placement of Backfill Material in Extraneous Material Excavation**

It is assumed the material to be used as structural backfill will be obtained from onsite sources. However, the haul distances vary which will significantly affect the costs. Backfill material will be placed and compacted as deemed necessary for purposes of long-term structural stability. This includes placement of vegetative soil, seeding, mulch and fertilizer.

**6. Replacement of Stockpiled Refuse**

The stockpiled refuse exhumed as part of the slope stabilization must be placed back in the initial disturbed areas. Daily cover (6,210 cubic yards) will be placed over areas that will be subject to reinstallation of applicable appurtenances.

**7. Replacement of Appurtenances in Unit 1**

Gas vacuum and leachate conveyance lines should have been permanently relocated. However, it is expected that a minimum 10 gas extraction wells will require reinstallation and/or reconnection to the vacuum line. Extension of the vacuum lines will be required for each extraction well.

**8. Reinstallation of Final Cover**

Reinstallation of final cover will be necessary for an approximate 7.7-acre area on Unit 1. The current final cover design requires a three-foot thick protective cover that overlies compacted clay cover that is also three-foot in thickness. Final cover placement includes the following:

- a. Transport, place, grade and compact clayey soils over 7.7 acres (31,057 cubic yards).
- b. Transport, place, grade, and compaction (as needed) of protective cover soils (31,057 cubic yards).
- c. Transport, place, grade, and disc the vegetative layer. The vegetative cover will require approximately 21,215 cubic yards of material, assuming the entire area needs final cover augmentation. A minimum six-inch thick vegetative cover will be placed on the 7.7-acre disturbed area pertaining to waste relocation as well as the 18.6-acre area disturbed as part of the excavation of the extraneous materials.

Placement of the vegetative cover includes seed, mulch (or other erosion control methods), and fertilizer.

- d. Provide construction quality assurance of compacted clay cover, which includes:
  - i. Moisture-density tests
  - ii. Hydraulic conductivity tests
  - iii. Surveying

#### 9. *Construction Quality Assurance Report*

A Construction Quality Assurance Report will be submitted to the Illinois EPA documenting each area of construction. The report will be submitted as a permit modification application.

Based on the above information, it is estimated removal and backfill of the extraneous materials will cost approximately \$47,285,326. The compilation of the costs is provided in Table 6. As with any effort of this size, costs can vary significantly dependent upon actual conditions encountered.

#### **4.7.8 Summary**

The temporary groundwater monitor well network can adequately monitor the groundwater quality on the perimeter of both Unit 1 and the extraneous materials. By leaving the extraneous materials in place, there are no negative effects to the public safety, health, and welfare. By removing the extraneous materials, potential effects to the public safety, health and welfare can occur. The temporary monitor well network will be further justified and or modified as necessary via subsequent permitting which will include appropriate well spacing calculations/modeling.

Brickyard Disposal and Recycling, Inc. is responsible for monitoring and managing the groundwater quality as necessary to maintain statutory compliance. This not only includes Unit 1, but also the extraneous materials identified in this Adjusted Standard Petition. Approving the Adjusted Standard Petition will not negatively impact public health and safety, but will allow for greater protection against any unnecessary risk and harm at this site.

#### **4.8 Section 814.402(b)(3)(H):**

***In no case shall the zone of compliance extend beyond the facility property line or beyond the annual high water mark of any navigable surface water.***

Pursuant to Section 814.402(b)(3)(I), the compliance boundary cannot extend beyond 150 meters from the edge of the unit. The maximum extent of the compliance boundary (150 meters) is shown in Figure 9, which is within the property limits of the facility. The proposed compliance boundary (100 feet from the waste unit or 100 feet from the edge of the extraneous materials) is shown in Figure 6. At no point does the proposed compliance boundary exceed the referenced maximum extent (property line). For purposes of reference, the maximum allowable compliance boundary and the proposed compliance boundary are both illustrated in Figure 10.

The term "annual high water mark" as contained in Section 814.402(b)(3)(H) is ambiguous and does not fit the typical terminology for the study of hydrology. The term as presented in Section 814.402(b)(3)(H) implies the highest water elevation that occurs on a frequency of one time per year (one-year recurrence interval) or a 100 percent probability of occurring annually. The

annual high water mark will vary from year to year, which is why an average annual high (maximum) elevation is derived.

The Vermilion River is a navigable surface water located adjacent (east) of Unit 1. The average annual high water level was derived from data obtained from the United States Geological Survey gaging station (No. 03339000) located at the bridge directly west of County Highway 505 (Back Bone Road) at the wastewater treatment facility directly east of the landfill. The location is shown in Figure 1.

Daily measurements were available from October 1, 1993 to July 18, 2012. Additional water level measurements were available dating back to June 23, 1960; however, measurements were sporadic. The maximum river elevations were determined for each year data were available. The maximum values were then averaged over the subject time interval. The maximum average annual high water mark is 519.14 feet MSL. Figure 9 also shows the topography of Unit 1 and the surrounding area. The maximum average annual high water mark does not encroach on the facility property and therefore does not affect the proposed groundwater monitoring network. The gage data discussed above are provided in Attachment 8.

The Federal Emergency Management Agency (FEMA) Flood Insurance Study for Vermilion County (#1718CV000A) was evaluated to determine the Vermilion River elevations associated with the recurrence intervals of 10, 25, 50, and 100 years near Brickyard Disposal and Recycling. As shown in documents provided in Attachment 9 to this submittal, a detailed study was conducted at a cross section directly adjacent to Unit 2 of the landfill facility (marked as Cross Section A). As listed in the accompanying Table 8 of the study, the 100-year flood elevation (1-percent probability of occurrence) at that location is 533.4 feet MSL. The remainder of the flood elevations had to be interpreted from the Flood Profiles graph (Drawing 10P) contained in Attachment 9. The 50-year flood elevation (2-percent probability of occurrence) is approximately 531.9 feet MSL. The 25-year flood elevation (4-percent probability of occurrence) is approximately 530.5 feet MSL. It must be noted the 25-year flood elevation was interpolated since the profile was not listed on the graph. The 10-year flood elevation (10-percent probability of occurrence) is approximately 529.2 feet MSL.

As stated above, the 100-year flood elevation is 533.4 feet MSL. As shown in Figure 9-3 (Attachment 9) to this document, the proposed compliance boundary does extend beyond the 100-year flood elevation in the northeast corner. This is true for the 50-, 25-, and 10-year flood elevations, although to lesser extents. However, the proposed location of the compliance boundary does not extend beyond the average annual high watermark. It must be noted that the 100-year flood elevation (worst-case) does not encroach on any well locations anticipated to be part of the monitor well network subsequent to approval of the Petition.

#### **4.8.1 Summary**

The proposed adjusted standard would allow Petitioners to establish, through permitting, an effective groundwater monitoring network within the facility property line and not beyond the annual high water mark of any nearby surface water. Thus, Section 814.402 (b)(3)(H) is not negatively implicated.

#### 4.9 Section 814.402(b)(3)(I):

***Notwithstanding the limitations of subsection 814.402(b)(3)(H), in no case shall the zone of compliance at an existing MSWLF unit extend beyond 150 meters from the edge of the unit.***

Figure 9 identifies the permitted waste boundary, the limits of the extraneous materials, current monitor wells, and the 150 meter distance (maximum). The proposed compliance boundary is identified in Figure 6 and in Figure 10. Brickyard Disposal and Recycling, Inc. does not seek to permit any future wells beyond 150 meters from the edge of Unit 1. As previously stated, a proposed monitor well network will be submitted to the Illinois EPA within 90 days of the approval of this Petition in the form of a permit application. The proposed monitor well network will provide justification for the proposed well locations. Each of the well locations will be either at the compliance boundary or within the zone of compliance, defined as the lateral area extending from the Unit 1 waste boundary to the compliance boundary. The zone of compliance is being used contemporaneously with the zone of attenuation. The zone of attenuation is illustrated in Figure 11. Where appropriate, however, upgradient monitoring wells may need to be located beyond the zone of compliance, as determined through permitting. Nonetheless, the compliance boundary as referenced, shall not exceed a distance of 100 feet from the Unit 1 waste boundary, or 100 feet from the extent of the extraneous materials. There is one exception. The compliance boundary may extend beyond 100 feet as to be consistent with an existing Groundwater Management Zone (GMZ). This occurs at the southern perimeter of Unit 1 where a permitted GMZ boundary extends slightly beyond 100 feet from the waste unit boundary.

##### 4.9.1 Summary

The proposed adjusted standard would allow for a new groundwater compliance boundary relevant to Unit 1, so that the effects of Unit 1 (and the extraneous material) are adequately monitored. Any routine wells within the revised compliance boundary will not extend beyond 150 meters from the edge of the Unit 1. Thus, Section 814.402(b)(3)(I) is not negatively implicated.

#### 4.10 415 ILCS 5/28.1(c) Factors

***If a regulation of general applicability does not specify a level of justification required of a petitioner to qualify for an adjusted standard, the Board may grant individual adjusted standards whenever the Board determines, upon adequate proof by petitioner, that such relief is appropriate.***

While adjustment to the compliance boundary and establishment of a zone of attenuation were evaluated pursuant to a set of factors that are specifically articulated in a regulation of general applicability (i.e., Section 814.402(b)(3)), to the extent relief from the other regulations requires an analysis of the general Section 28.1(c) factors, Brickyard has evaluated those factors as well. A regulation of specific applicability does not exist for the placement of monitor wells beyond the edge of the waste unit. Therefore, the level of justification for the adjustment to the definition of zone of attenuation pursuant to Section 810.103, the determination of a zone of attenuation pursuant to Section 811.320(c), and certain standards for the location of groundwater monitoring points pursuant to Section 811.318(b)(3) will also be addressed pursuant to Section 28.1(c)(1-4) of the Act. However, the information relevant to such justification is essentially the same as that which was evaluated pursuant to Section 814.402(b)(3). Nonetheless, for

completeness, Brickyard here provides a discussion of the Section 28.1 (c) justification, with appropriate citation and/or reference to the previously discussed material.

#### **4.10.1 415 ILCS 5/28.1(c)(1)**

***Factors relating to the petitioner are substantially and significantly different from the factors relied upon by the Board in adopting the general regulation applicable to that petitioner.***

The factors relating to the petitioner are substantially or significantly different from those considered by the Board in its promulgation of the regulations of general applicability relevant to Subpart D landfills.

The Adjusted Standard Petition is sought due to the occurrence of railroad ties, demolition debris, and small amounts of municipal solid waste located beyond the perimeter of the permitted waste boundary. The monitor wells listed above (T109 through T123) were located based on the results of the investigations to identify the location and extent of the subject materials. Details of the investigation of the subject materials were provided in Section 3 above. Assessment monitoring activities were proposed and implemented pursuant to Permit Condition VIII.A.15 and 35 Ill. Adm. Code 811.319(b), and Application Log Nos. 2004-098 and 2005-036 along the northeast perimeter of Unit 1. This included installation of three temporary assessment monitoring wells in November/December 2005 (T106, T107, and T108) in the vicinity of R123. During the advancement of wells T106 and T107, railroad ties, as well as other materials were encountered. Due to the occurrence and location of the materials, Brickyard seeks placement of the wells outside this area, via this Adjusted Standard Petition. The materials located outside the waste boundary of Unit 1, which have now been extensively evaluated, appear to have been in place for approximately 25 years or greater, while under previous ownership. The situation presented was not one envisioned by the Board while adopting the Part 811 landfill rules, or other landfill rules. Accordingly, the factors facing Petitioner are "substantially and significantly different" from the factors relied upon by the Board in adopting the applicable rules of general applicability.

Historical information indicates the railroad ties were placed along the periphery of Unit 1 in the 1980s. The tie placement was not continuous but occurred in pockets or specific areas.

The bottom extent of the extraneous materials encountered adjacent to the waste unit varies dependent upon location. The eastern portion of Unit 1 was largely surface-mined prior to site development and filling operations; therefore, the bedrock topography is lower in this area. Historical documentation places the invert elevation of Unit 1 between 585 to 590 feet MSL, with some areas as low as 565 feet MSL near well T106 in the northeast corner of Unit 1. Figure 5 identifies the bedrock surface immediately east of Unit 1 and horizontal extent of the materials outside the waste boundary. Coincident to the surface mining, the bottom extent of the extraneous materials in the eastern portion of Unit 1 is lower than elsewhere on the site, averaging an elevation of 564 feet MSL. The material at the deepest location is approximately 556.5 feet above MSL. As discussed below, removal of this material is not believed to be a viable or necessary option.

#### **4.10.2 415 ILCS 5/28.1(c)(2)**

##### ***The existence of those factors justifies an adjusted standard.***

The potential sources of contamination at the subject location are the waste unit, the extraneous material areas outside the permitted boundary of the waste unit, and the former coal mining activities. The proposed adjusted standard will allow for a more effective monitoring of actual conditions. Specifically, it will allow for the placement of permanent monitoring wells in an area which will account for all three potential sources and any cumulative effects.

Removal of the extraneous materials was evaluated as described in Section 4.7.7.1. However, removal of these materials would cost in excess of \$45 million and result in no environmental gain. In fact, removal of extraneous material and reconstruction of the cover and walls of the landfill cell would pose unnecessary and inappropriate structural, environmental and worker exposure risks. Removal of the extraneous material will also necessitate removal of several acres of the existing cover within Unit 1 and interruption of the gas extraction system. Removing these features may create both safety and nuisance concerns. Removal will also require dewatering that could promote mine void collapse, liner fatigue and possible failure, and other potentially serious problems. Alternative well placement will provide a greater degree of environmental safety than removing the extraneous material due to the monitoring of the exterior area as well as the landfill unit.

The current monitor well network with wells located outside the extraneous materials can adequately monitor the groundwater quality on the perimeter of both Unit 1 and the extraneous materials. By leaving the extraneous materials in place, there are no negative effects to the public safety, health, and welfare. By removing the extraneous materials, potential effects to the public safety, health and welfare can occur. The existing monitor well network will be further justified and or modified as necessary via subsequent permitting which will include appropriate well spacing.

Brickyard Disposal and Recycling, Inc. is responsible for monitoring and managing the groundwater quality as necessary to maintain statutory compliance. This not only includes Unit 1, but also the extraneous materials identified in this Adjusted Standard Petition. Approving the requested adjusted standard will not negatively impact public health and safety, but will allow for greater protection against any unnecessary risk and harm at this site.

#### **4.10.3 415 ILCS 5/28.1(c)(3)**

##### ***The requested adjusted standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability***

As discussed in Section 4.1, the hydrogeologic characteristics beneath and in the vicinity of Unit 1 are such as to minimize the potential to impact groundwater which may be needed or used for human consumption. The requested Adjusted Standard Petition will not in any way negatively impact those characteristics and, in fact, will allow for more appropriately monitoring of actual conditions.

As discussed in Section 4.2, the volume and physical and chemical characteristics of Unit 1's leachate are well known and have been effectively analyzed. Collection and monitoring systems

are in place for proper management of the leachate. The proposed Adjusted Standard Petition will not in any way adversely impact that leachate, but instead will allow for a more effective groundwater monitoring system.

As discussed in Section 4.3, the quantity, quality, and direction of flow of groundwater underlying Unit 1, and the surrounding area, are well known and have been extensively analyzed. The proposed Adjusted Standard Petition will not in any way adversely impact that flow but instead will allow for a more effective groundwater monitoring system

As discussed in Section 4.4, the proximity and withdrawal rates of nearby groundwater users have been extensively investigated. The proposed Adjusted Standard Petition will not have any adverse impact on any groundwater users, but will serve to more effectively monitor groundwater conditions at the site.

While Andrews Engineering has conducted an investigation of alternative drinking water supplies (Section 4.5), the proposed Adjusted Standard Petition is not expected to implicate a need for such alternative supplies; instead, it will simply serve to more effectively monitor actual conditions at the site.

As discussed in Section 4.6, the existing groundwater, including other sources of possible contamination and their cumulative impacts have been evaluated. The proposed adjusted standard will not have any adverse impact on any groundwater users, but will serve to more effectively monitor groundwater conditions at the site.

Multiple factors were discussed in Section 4.7 which relate to public health, safety, and welfare effects of the proposed adjusted standard. The factors considered slope and mass stability of removing wastes versus leaving it in place, air quality issues that could arise by disturbing the waste, groundwater and surface water effects, impacts to the existing leachate collection system, and existing cover quality. The requested standard will not result in environmental or health effects substantially and significantly more adverse than the effects considered by the Board in adopting the rule of general applicability.

Regardless of evaluating the petition based on a rule of general applicability (Section 814.402(b)(3)) or 415 ILSC 5/28.1(c), the following two factors remain the same: 1) in no case shall the zone of compliance (Section 814.402(b)(3)(H)) extend beyond the facility property lines or beyond the annual high water mark of any navigable surface; and 2) in no case shall the zone of compliance (Section 814.402(b)(3)(I)) extend beyond 150 meters from the edge of the waste unit. The two factors are discussed in Sections 4.8 and 4.9, respectively.

Approving the adjusted standard will not negatively impact public health and safety, but will allow for greater protection against any unnecessary risk and harm at this site.

#### **4.10.4 415 ILCS 5/28.1(c)(4)**

***The adjusted standard is consistent with any applicable federal law.***

40 CFR Part 258 (Criteria for Municipal Solid Waste Landfills) was the impetus for the new Illinois landfill regulations initially designated as R88-7 (35 Ill. Adm. Code 810-815). With respect to groundwater monitoring and well placement, the federal rules put the onus on the States'. 40 CFR Part 258.51 (Groundwater Monitoring Systems) states in part:

(a) A ground-water monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer (as defined in §258.2) that:

(1) Represent the quality of background ground water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background ground-water quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Represent the quality of ground water passing the relevant point of compliance specified by Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States. The downgradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under §258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of groundwater contamination in the uppermost aquifer. When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer.

The Adjusted Standard Petition requests, in part, that the placement of monitor wells be extended beyond the edge of the waste unit in order to more appropriately monitor Unit 1. The extension not only allows the monitor well network to encapsulate the waste unit and the extraneous materials, but also accounts for physical obstacles to the placement of the wells, such as drainage features and topographic barriers. 40 CFR Part 258.51(a)(2) allows for such obstacles by stating: "...When physical obstacles preclude installation of groundwater monitoring wells at the relevant point of compliance at existing units, the downgradient monitoring system may be installed at the closest practicable distance hydraulically downgradient from the relevant point of compliance specified by the Director of an approved State under §258.40 that ensure detection of groundwater contamination in the uppermost aquifer."

The adjusted standard would be consistent with this applicable federal regulation.

## **5. SUMMARY**

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The Adjusted Standard Petition for the modified compliance boundary and contemporaneous zone of attenuation is the result of the occurrence of materials encountered outside the Unit 1 landfill footprint adjacent to Unit 1. Historical records indicate the materials were placed approximately 25 years ago or more. The materials, largely railroad ties, were generally used as backfill adjacent to the Unit 1 waste boundary. The location of the materials was determined

from two field investigations that occurred in 2006 and 2008. Details of the investigations were discussed in Section 3.

As discussed in Section 2, the current Unit 1 monitor well network includes a series of temporary assessment wells T109 through T123 located beyond the perimeter of the extraneous material capable of evaluating potential influences to the groundwater from Unit 1 and/or the extraneous materials. In order to permit some of the referenced wells outside the perimeter of the extraneous material (as routine detection wells and not assessment wells), and allow for the permitting of any other appropriate monitoring wells, an adjusted standard is necessary to revise the location of the compliance boundary.

### **5.1 Limited Extent of Water-Bearing Zone**

Site hydrogeologic investigations have identified the coal seam, voids where the coal has been underground mined, or the spoil/bedrock interface (where the coal was surface mined) as the potential contaminant migration pathway. In the event of a release from Unit 1, changes in groundwater quality should be discernible in wells screened in the identified pathway or water-bearing zone.

Groundwater has been shown to move overall from west to east in the water-bearing zone with localized deviations, from the coal or underground mines to surface mined areas to the east of Unit 1. As discussed in Section 4.1.2, the bedrock was excavated in a trench-like manner east of Unit 1, decreasing in elevation from well T102 (south) to T108 (north). The trench, referred to as a trough, creates not only a surface drainage structure, but also a groundwater divide. The trough intersects groundwater moving west to east beneath the site, as well as east to west from an area west of the Vermilion River but east of the trough. Groundwater within the trough moves down slope via gravity towards wells T113, T114, and T115 near the northeast corner of Unit 1. The bedrock trough is expected to terminate prior to or at the Vermilion River. The river denotes the maximum extent of the water-bearing zone; therefore, the extent of the water-bearing zone downgradient of Unit 1 is very limited.

### **5.2 No Water Supply Wells Downgradient of Unit 1**

Given the limited extent of the water-bearing zone, no water supply wells were identified downgradient to Unit 1 screened in the subject zone. As discussed in Section 4.4, the Illinois Environmental Protection Agency SWAP database and the Illinois State Geological Survey database have been reviewed to identify public or residential wells near the landfill facility. Given the historical land usage on and near the facility, there are no groundwater users or receptors located downgradient to Unit 1. Refuse at the Unit 1 location has been present since the 1960s, bordered by the wastewater treatment plant and Vermilion River in the hydraulically downgradient direction (east). There will be no development within that area that would create the need or use of groundwater for human consumption.

### **5.3 Public Health, Safety and Welfare Effects**

As discussed in Section 3, the extraneous materials are typically covered with several feet of compact soil, isolating the materials from the surrounding environment. Excavating the materials will create several potential issues, including:

1. Slope Stability – Removing extraneous materials adjacent to Unit 1 would destabilize the slopes of the existing waste unit such that the minimum safety factors could not be met

pursuant to 35 Ill. Adm. Code Section 811.304(d). In order to stabilize the waste, approximately 197,000 cubic yards of waste would need to be excavated and temporarily stockpiled on site. This includes 88,000 cubic yards from the eastern perimeter and 109,000 cubic yards from the southern perimeter of Unit 1. The temporary relocation of waste material would require the removal of the permitted final cover for Unit 1, and interruption of the gas extraction system. Several gas extraction wells and the gas conveyance line leading to the gas plant would have to be abandoned and subsequently reinstalled. In addition, a temporary shutdown of the gas extraction system will halt the remedial action system pursuant to Condition IX of the current permit.

2. Mass Stability – Dewatering of the excavation areas will likely be necessary to minimize potential groundwater impacts and exposure of the liquids within the excavation to adjacent surface water. Dewatering mine voids present within the vicinity of Unit 1 could promote void collapse, which can cause liner fatigue and potential failure.
3. Air Quality – If the final cover is removed from applicable areas, the air quality will need to be monitored to ensure worker safety, including but not limited to methane/lower explosive limit, hydrogen sulfide, and asbestos particles. Dependent upon weather conditions, the odor may be a nuisance to downwind residents. Odor control measures may be necessary in the event waste must be relocated as part of slope stabilization efforts.
4. Groundwater and Surface Water Affects – During the 2006 and 2008 investigations, the material encountered was typically saturated. Excavating, loading, and hauling the saturated materials are anticipated to be problematic. Removal of the materials may require dewatering to control runoff (ensure groundwater within the excavation does not drain to the surface ditches) and to allow placement of structural backfill. The drainage swales/ditches along the perimeter of Unit 1 ultimately discharge to the Vermilion River.
5. Leachate Collection System Capacity – If excavation of the debris along the eastern and southern perimeter of Unit 1 requires dewatering, it is assumed that the recovered liquids will have to be collected and treated as leachate, ultimately being disposed in the Unit 2 leachate tank. Liquids recovered from dewatering would be conveyed directly to the Unit 2 storage tanks. At no time would liquids be introduced into the cells of Unit 2.

#### **5.4 Existing Cover**

Based on the 1992 cover probe investigation and the 2006 and 2008 trench investigations, the thickness of the clean fill overlying the debris ranges from 0 to 15 feet, with an average thickness of 5.5 feet. Visual observation of the trench excavations indicate the cover is highly compacted due to over 25 years of traffic during placement and site operation/development, resulting in a low hydraulic conductivity barrier. The cover is well vegetated except in areas of equipment traffic due to soil borrow activities and facility maintenance.

The follow-up cover investigation (October 2012) further confirmed the results aforementioned investigations. The 2012 cover investigation determined the soil characteristics of the cover overlying the extraneous materials were more than sufficient to provide a long-term low hydraulic conductivity barrier. In fact, the 2012 laboratory hydraulic conductivity tests of the cover were lower than the Illinois EPA's recommended long-term soil cover hydraulic conductivity of  $1 \times 10^{-5}$  cm/sec. Details of the 2012 cover investigation are contained in the Extraneous Materials Cover Plan provided in Exhibit C to the Adjusted Standard Petition.

## **5.5 Temporary Monitor Well Network**

The existing temporary monitor well network was designed to monitor the groundwater quality beyond the Unit 1 waste boundary and the extraneous materials. However, a permit application defining the Unit 1 monitoring program will be submitted to the Illinois EPA in the form of a permit application within 90 days of the approval of the Adjusted Standard Petition. The subject permit application will provide justification for the well locations with respect to site hydrogeologic characteristics. It is expected that temporary assessment wells identified as T111, T113 through T121, and T123 shall become part of the routine monitor well network along with existing wells G130, R106, R132, G33S, G34S, G35S, and G36S. Additional wells shall be proposed as necessary based on evaluation of the well spacing requirements. The current network of monitor wells is shown in Figure 9 and Figure 10. The routine monitor wells shall be located no greater than 100 feet beyond the Unit I waste boundary or 100 feet beyond the limits of the extraneous materials, whichever is greater, except as discussed in Section 4.9. At least one well will be located at the proposed compliance boundary. The groundwater monitoring program is defined as an institutional control pursuant to 35 Ill. Adm. Code 104.406(f).

The temporary assessment wells defined above were located as close to the limits of the extraneous materials as possible given the topographic constraints (extreme topographic relief or the presence of surface water). The monitor well network may be modified in the future as necessary via the permit modification process to address changing conditions for the areas referenced in the Adjusted Standard Petition.

This adjusted standard is necessary to sanction the regulatory appropriateness of this network location, for purposes of compliance and, ultimately, closure. By leaving the extraneous materials in place, there are no negative effects to the public safety, health, and welfare. By removing the extraneous materials, potential effects to the public safety, health, and welfare can occur. Absent removal, monitoring for actual effects is insufficient, since monitoring wells must be placed above the extraneous materials.

## **6. CONCLUSION**

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Approval of the alternative compliance boundary sought in the Adjusted Standard Petition is necessary in order to leave the materials in place and still achieve consistency with the Illinois Pollution Control Board's regulations. Specifically, extending the compliance boundary will allow for a more appropriate monitoring network, so that the regulatory framework related to monitoring any potential impacts is more effectively achieved at this site, given actual site conditions. The Adjusted Standard Petition will not result in contamination of groundwater, let alone contamination of groundwater needed or used for human consumption. No adverse impacts will be created by approving the requested adjusted standard.

The Technical Support Document has been completed by and under the direct supervision of Brad Hunsberger, a Licensed Professional Geologist for Andrews Engineering, Inc. A curriculum vitae for Mr. Hunsberger is provided in Attachment 10.



Bradley Hunsberger 6-27-14

Brad J. Hunsberger

Date

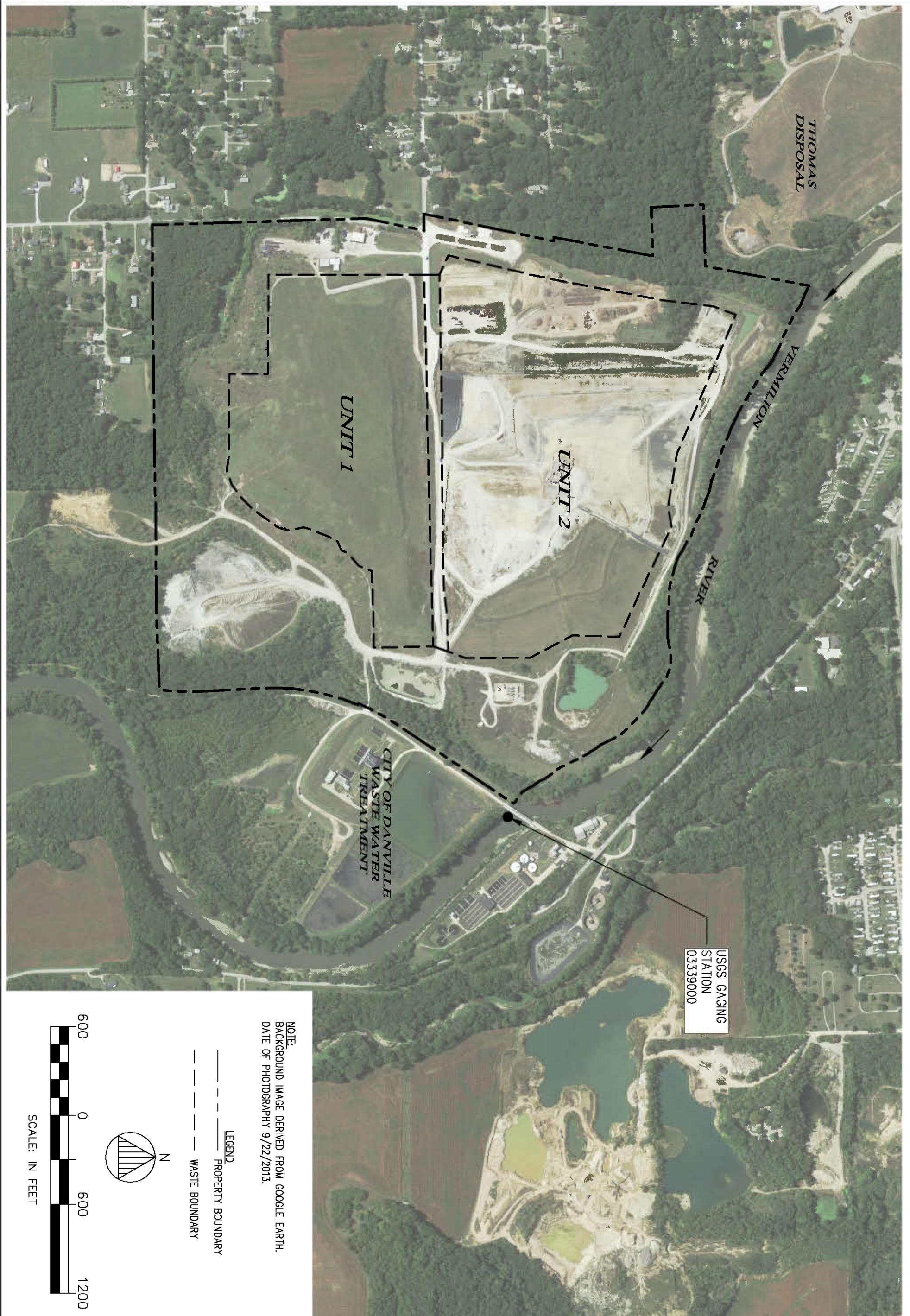
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## **7. REFERENCES**

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- Benson, C. H., and Wang, X. (1998). *Soil Water Characteristic Curves for Solid Waste*.
- Environmental Management, Inc., *Application for Significant Modification to Permit for a New Expansion Unit*, Brickyard Disposal and Recycling, February 1993.
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- Patrick Engineering, Inc., *Application for Significant Modification*, Brickyard Disposal and Recycling, September 1994.
- Rowe, R.K., Quigley, R.M. and Booker, J.R. (1995), *Clayey Barrier Systems for Waste Disposal Facilities*.
- United States Geologic Survey, *Streamflow Measurements for the Nation* (USGS 03339000 Vermilion River Near Danville, IL).

## **FIGURES**

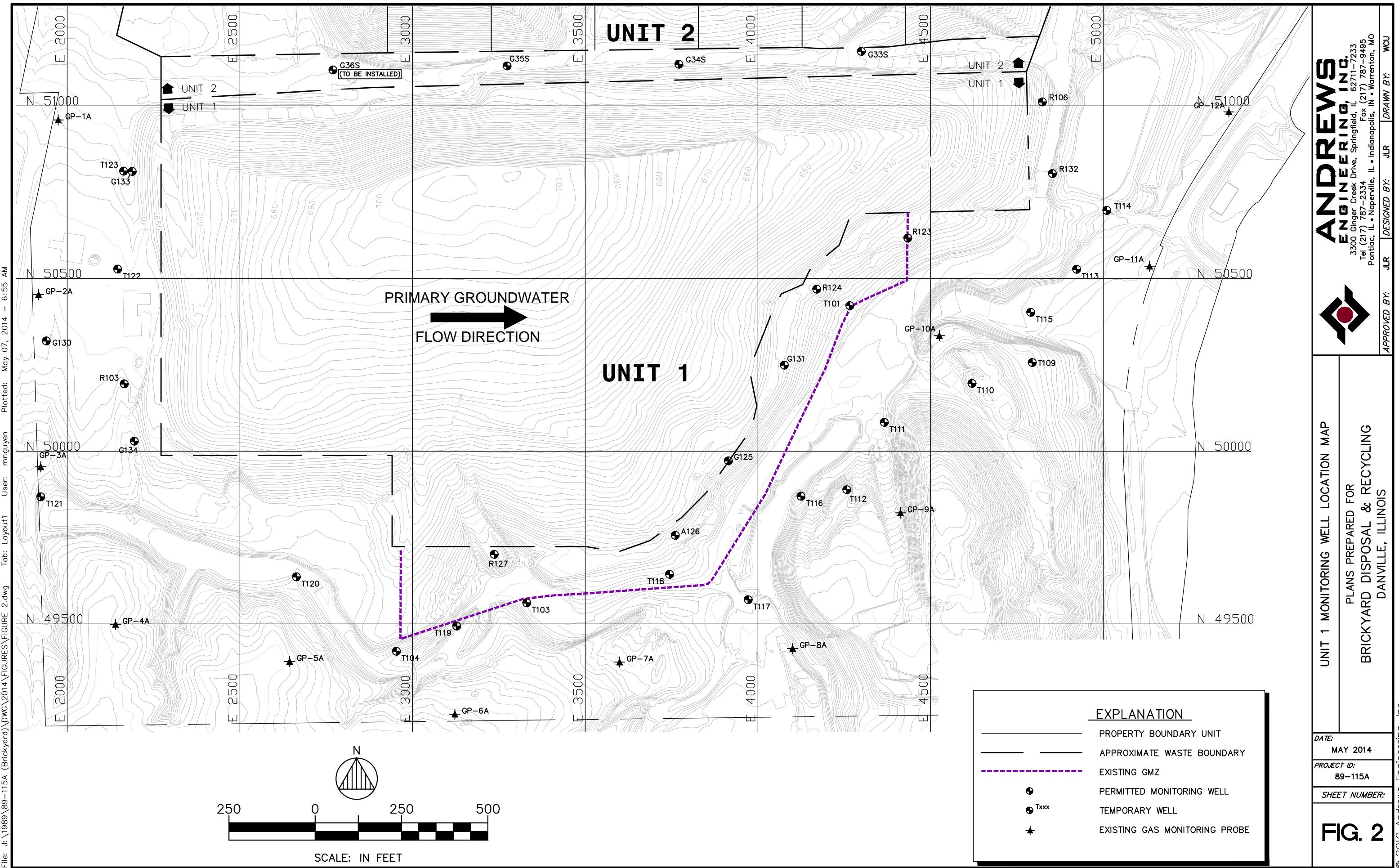
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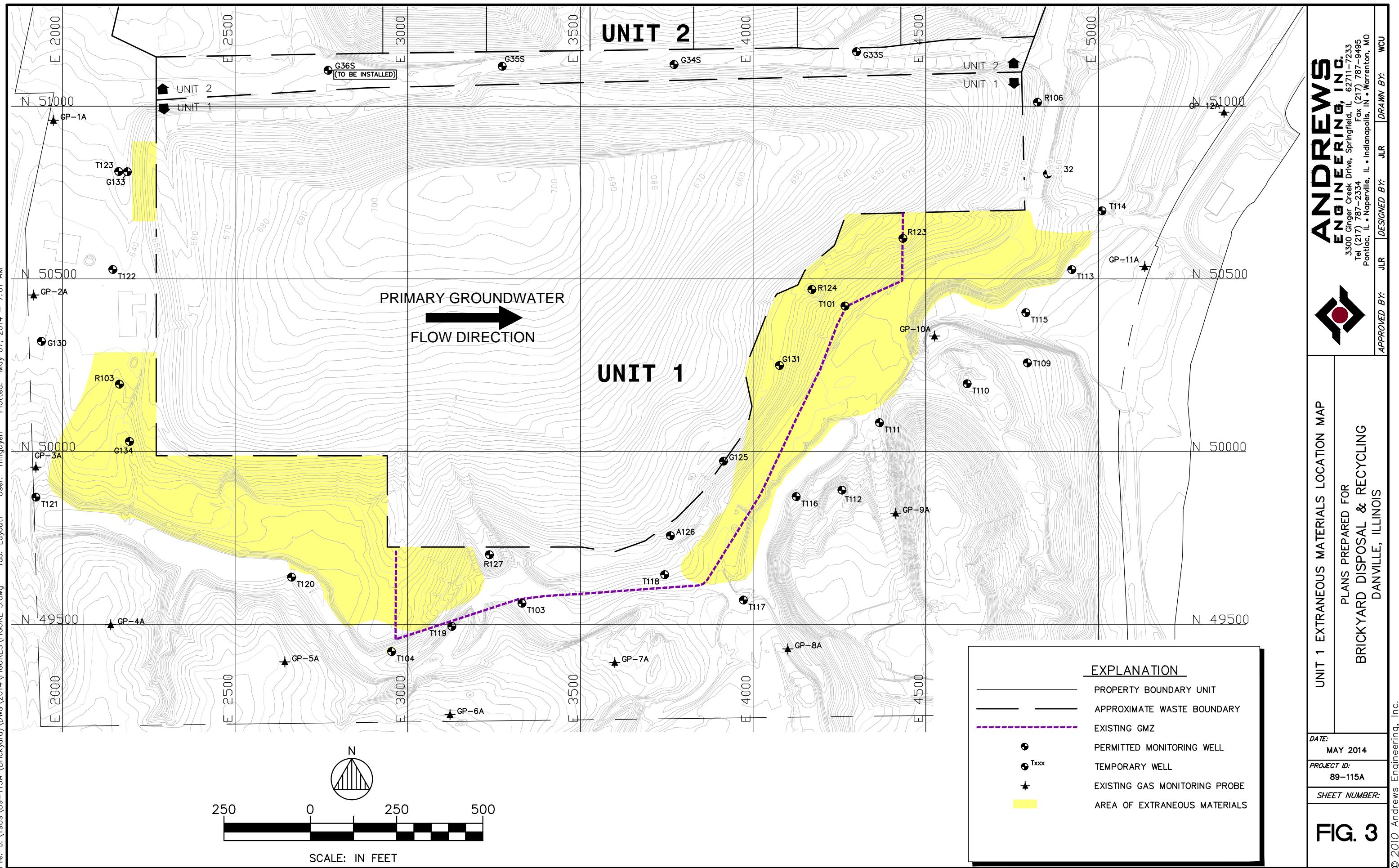
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DANVILLE, ILLINOIS

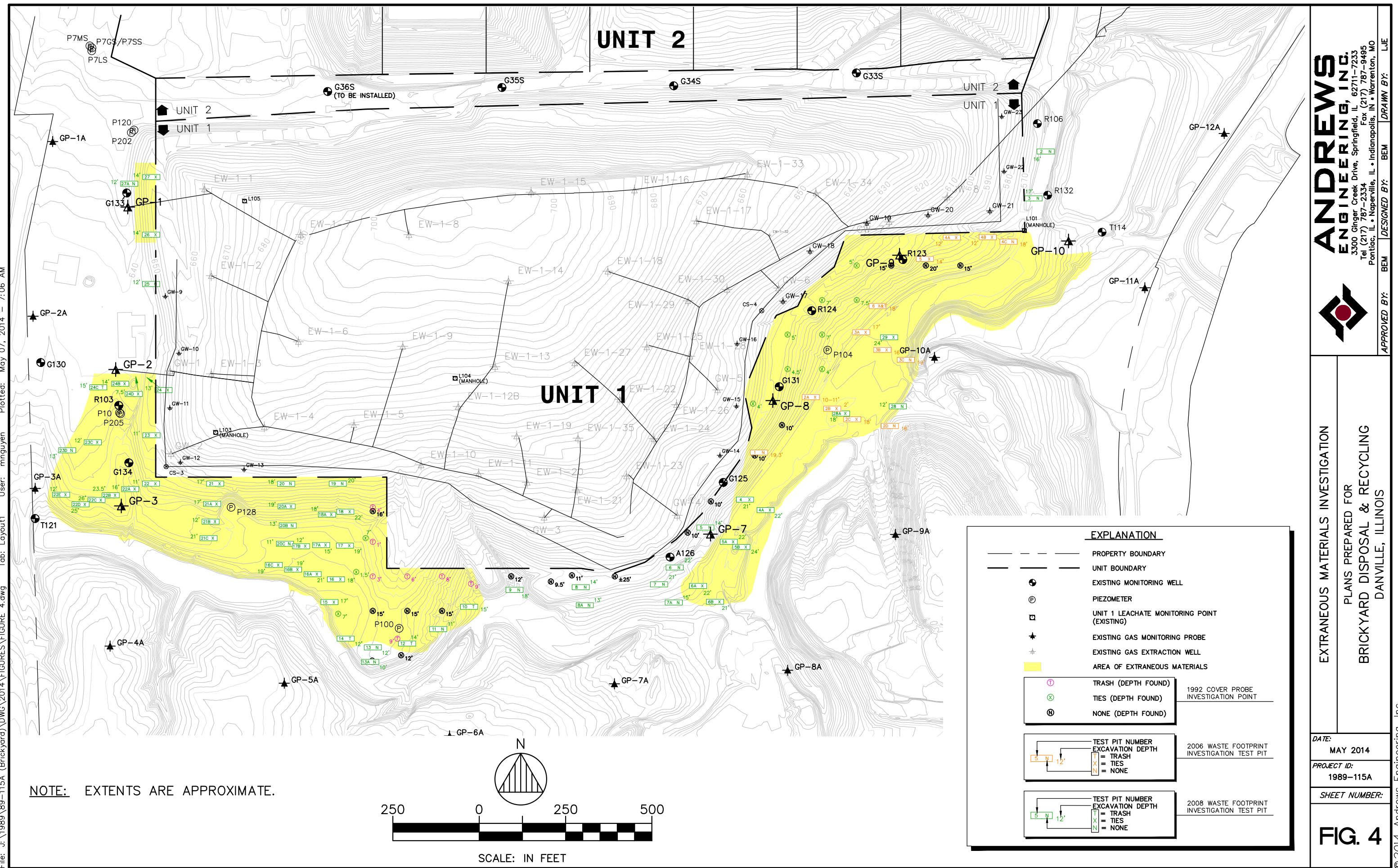
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MAY 2014  
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SHEET NUMBER:

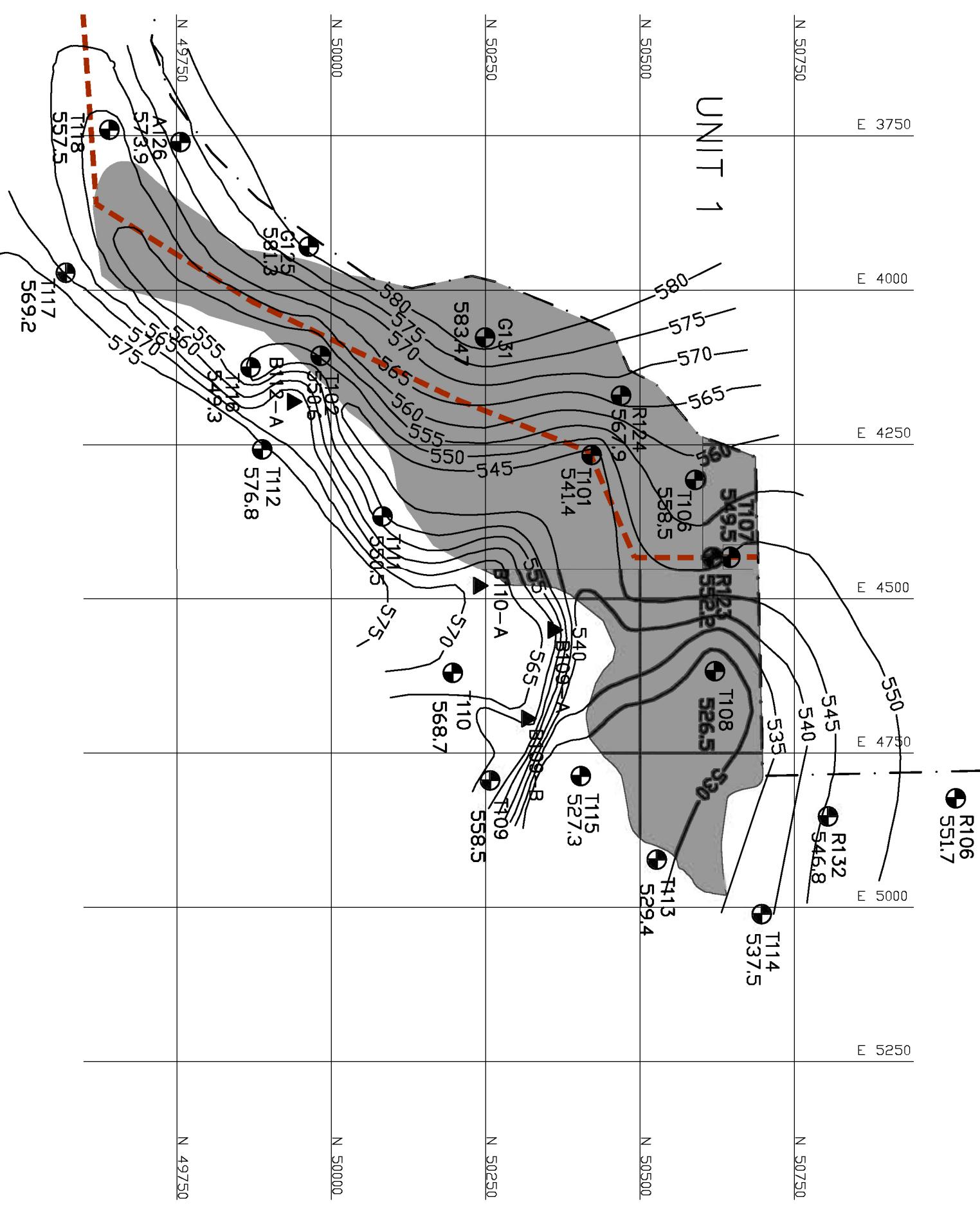
**ANDREWS**  
**ENGINEERING, INC.**  
3300 Ginger Creek Drive, Springfield, IL 62711-7233  
Tel (217) 787-2334 Fax (217) 787-9495  
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

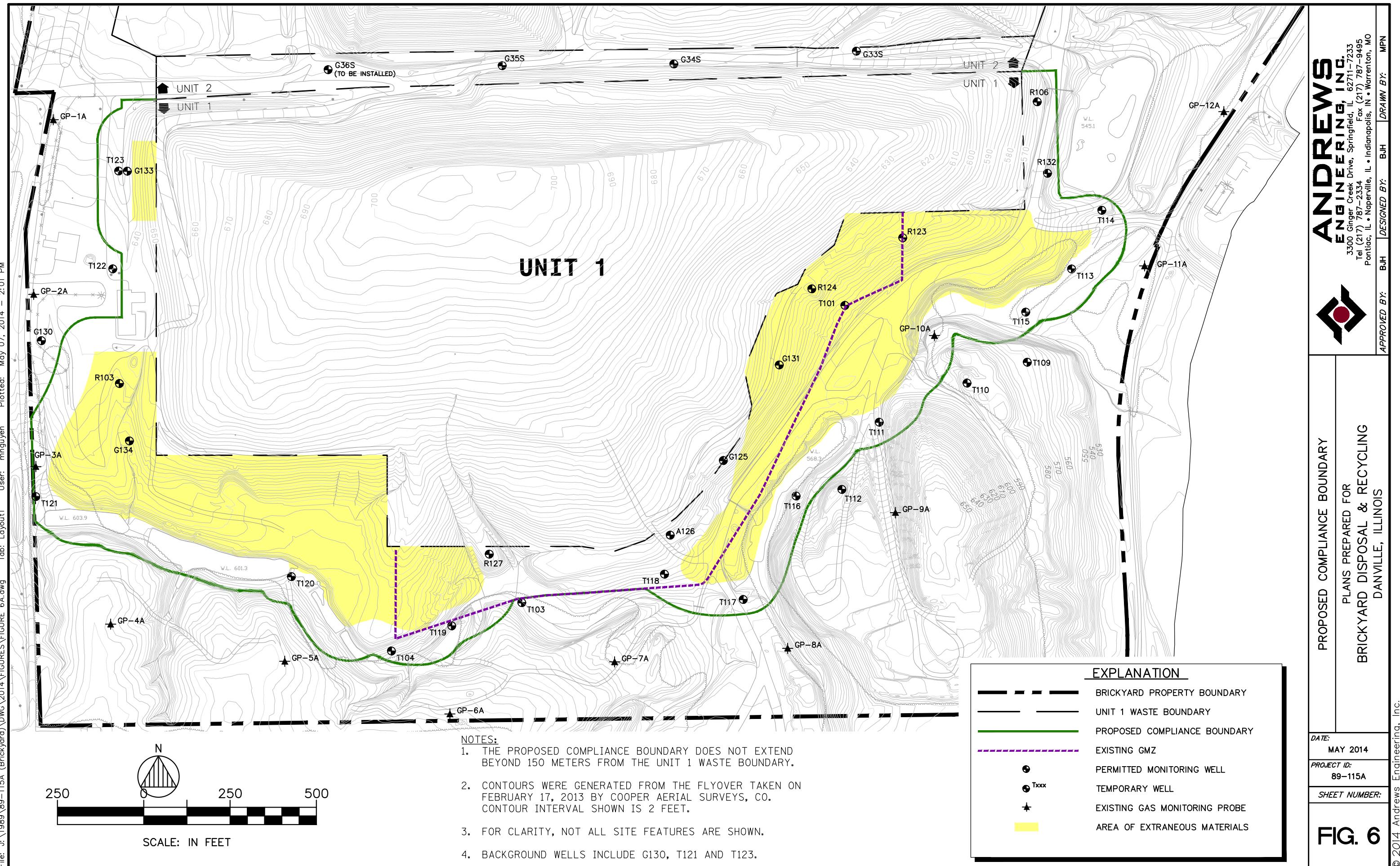
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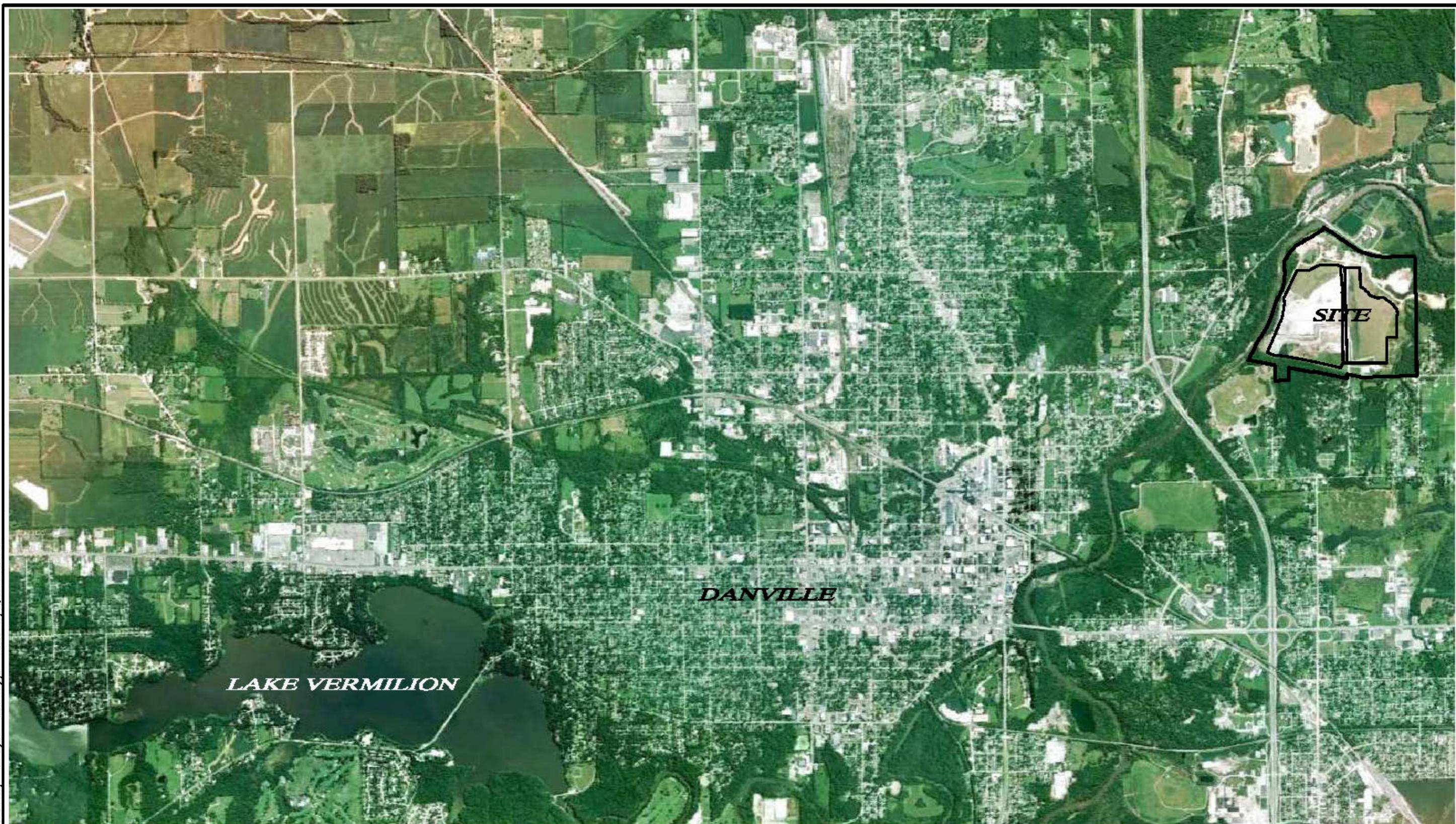












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DATE OF PHOTOGRAPHY 6/27/2009.

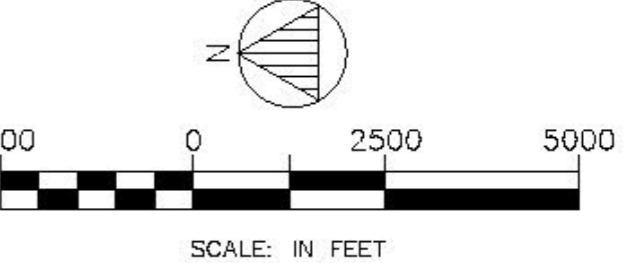


FIG. 7

DANVILLE, IL AREA IMAGE  
PLANS PREPARED FOR  
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DANVILLE, ILLINOIS

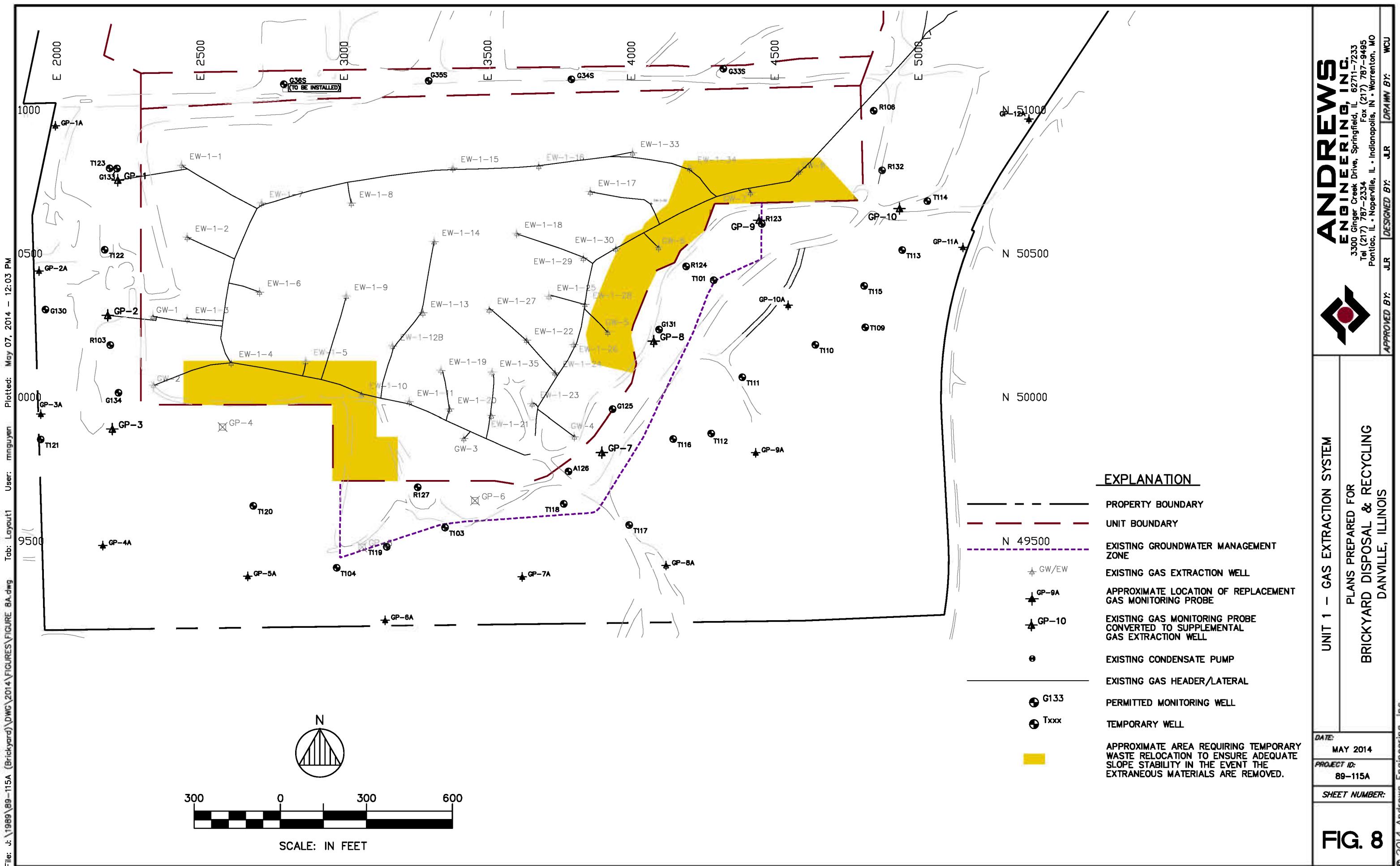
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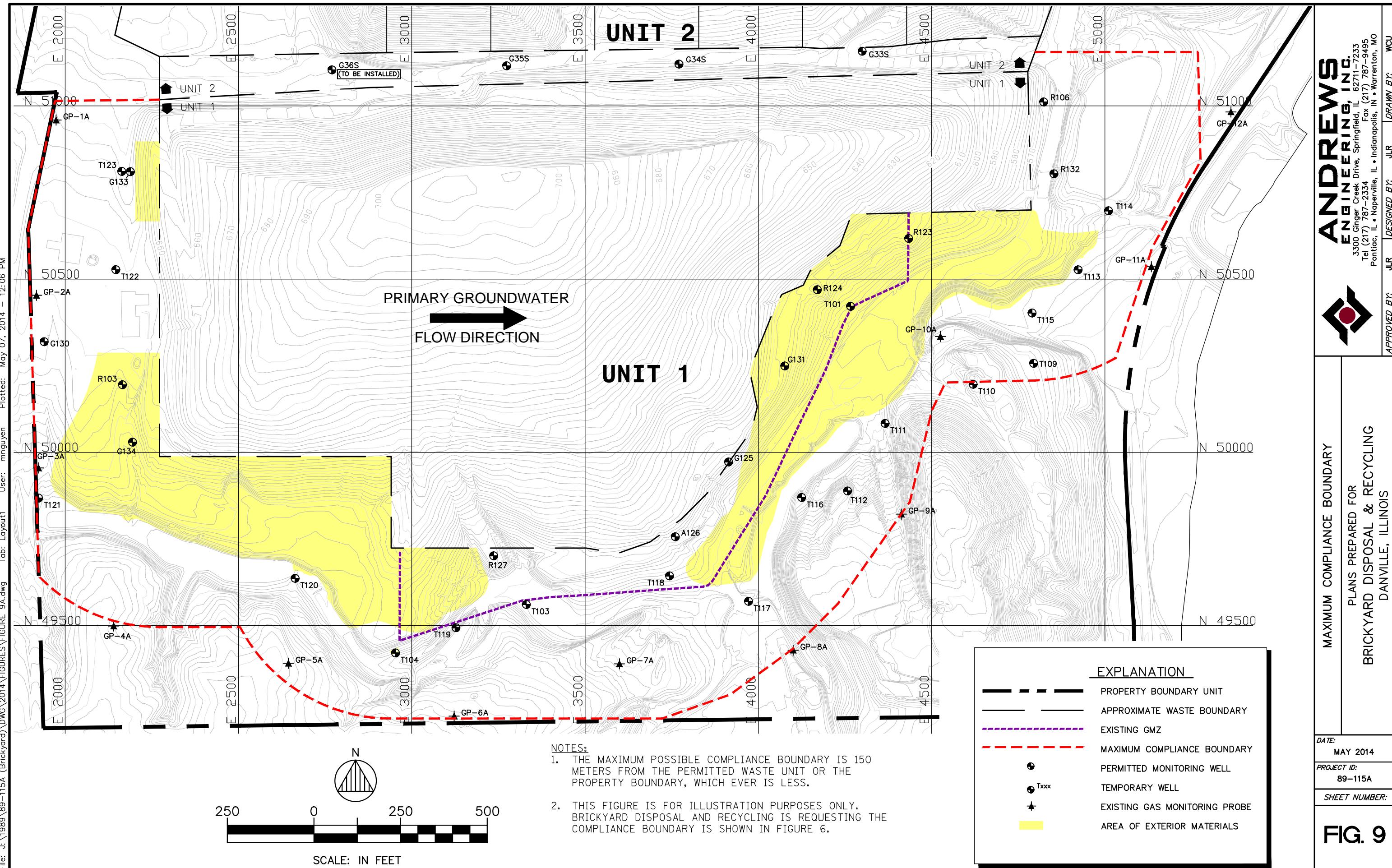
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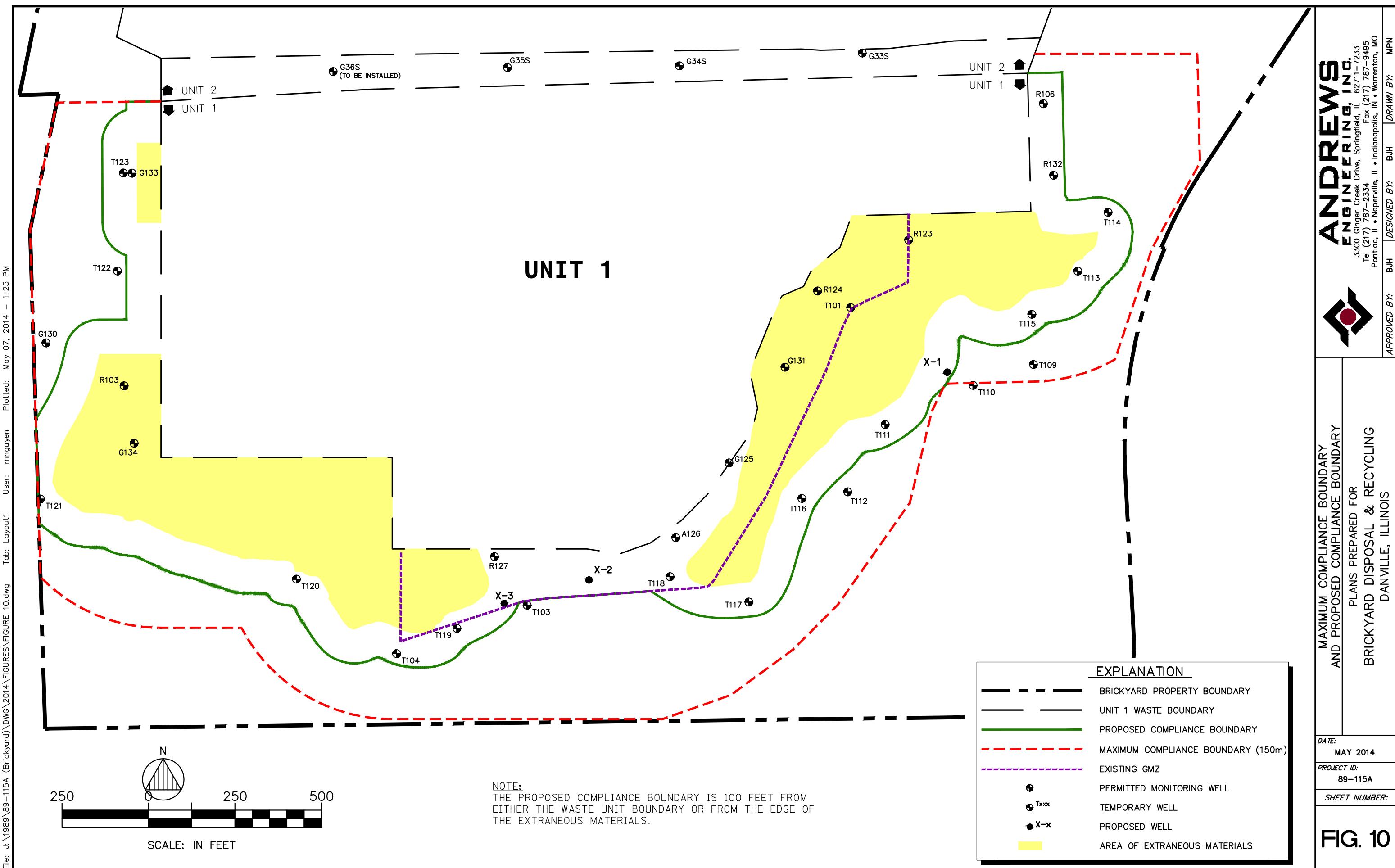
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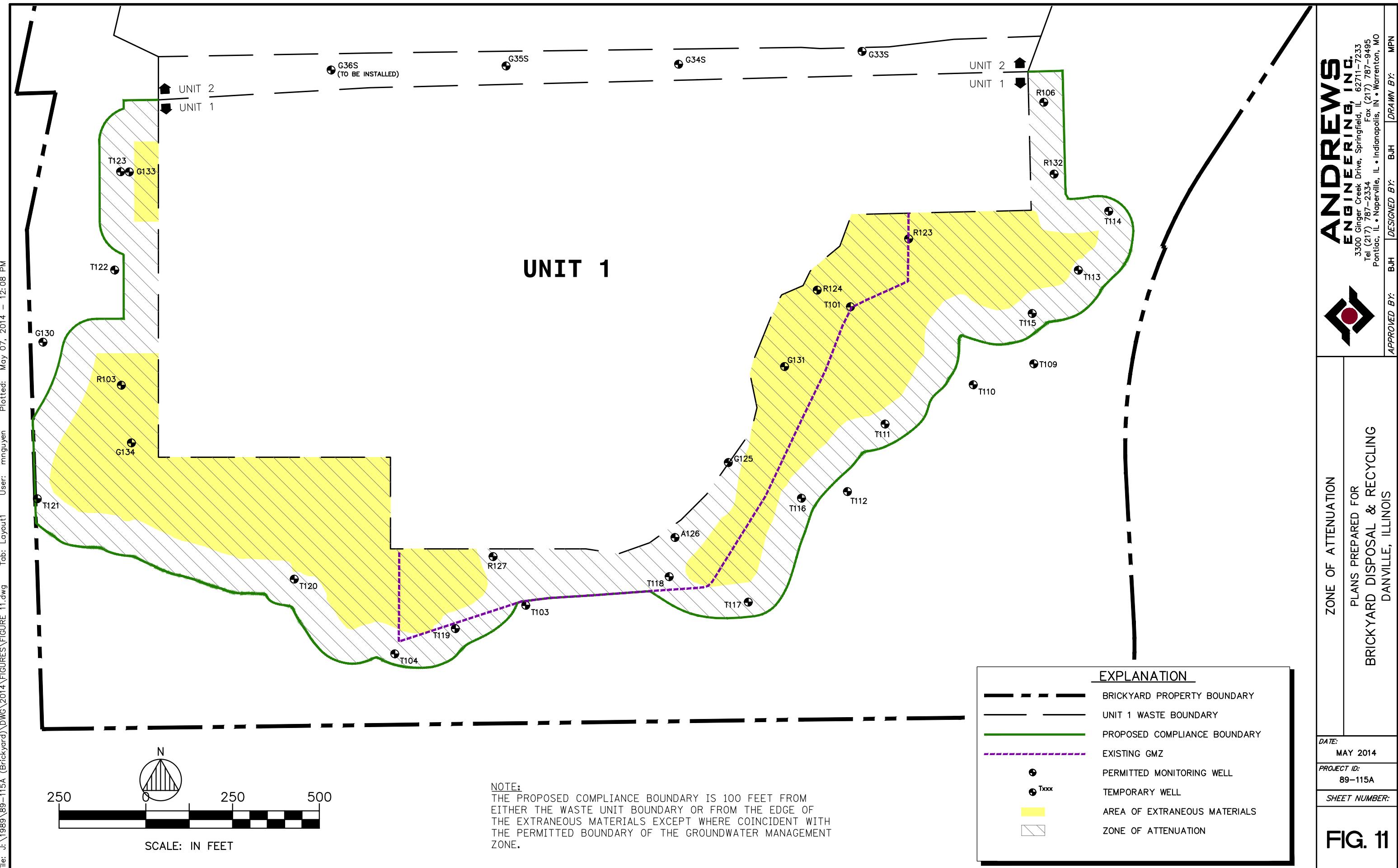
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**TABLES**

**Table 1**  
**Unit 1 Extraneous Material Investigation**

**Table 1**  
**Brickyard Disposal and Recycling**  
**Unit 1 Extraneous Material Investigation**

Year	Test Pit/ Boring Number	Northing (ft)	Easting (ft)	Elevation (ft)	Total Depth of Test Pit/ Boring (ft)	Top of Material (ft)/Cover Thickness		Thickness of Material (ft)	Bottom Pit Elevation	Bottom of Material	Type of Material  N=None, T=Trash, X=Ties
						Material Thickness	Bottom of Material (ft)				
1992	n/a	49900	2900	n/a	4	4	n/a	n/a	n/a	n/a	T
1992	n/a	49889	2900	n/a	16	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49800	2900	n/a	1	1	n/a	n/a	n/a	n/a	T
1992	n/a	49811	2879	n/a	7	7	n/a	n/a	n/a	n/a	X
1992	n/a	49714	2853	n/a	1.5	1.5	n/a	n/a	n/a	n/a	X
1992	n/a	49700	2900	n/a	3	3	n/a	n/a	n/a	n/a	T
1992	n/a	49592	2800	n/a	7	7	n/a	n/a	n/a	n/a	X
1992	n/a	49600	2900	n/a	15	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49456	2898	n/a	12	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49472	2892	n/a	12	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49520	2971	n/a	9	9	n/a	n/a	n/a	n/a	T
1992	n/a	49600	3000	n/a	15	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49700	3000	n/a	6	6	n/a	n/a	n/a	n/a	T
1992	n/a	49700	3100	n/a	8	8	n/a	n/a	n/a	n/a	T
1992	n/a	49679	3184	n/a	9	9	n/a	n/a	n/a	n/a	T
1992	n/a	49600	3100	n/a	15	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49700	3300	n/a	12	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49685	3415	n/a	9.5	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49700	3475	n/a	11	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49700	3600	n/a	25	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49700	3700	n/a	1	1	n/a	n/a	n/a	n/a	T
1992	n/a	49827	3711	n/a	10	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	49917	3878	n/a	10.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50050	4005	n/a	10.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50138	4084	n/a	10.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50200	4000	n/a	4.0	4.0	n/a	n/a	n/a	n/a	X
1992	n/a	50300	4100	n/a	4.5	4.5	n/a	n/a	n/a	n/a	X
1992	n/a	50300	4200	n/a	4.0	4.0	n/a	n/a	n/a	n/a	X
1992	n/a	50400	4100	n/a	5.0	5.0	n/a	n/a	n/a	n/a	X
1992	n/a	50400	4200	n/a	7.0	7.0	n/a	n/a	n/a	n/a	X
1992	n/a	50500	4200	n/a	7.0	7.0	n/a	n/a	n/a	n/a	X
1992	n/a	50500	4300	n/a	7.5	n/a	n/a	n/a	n/a	n/a	X
1992	n/a	50600	4600	n/a	15.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50600	4500	n/a	20.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50600	4400	n/a	15.0	n/a	n/a	n/a	n/a	n/a	N
1992	n/a	50600	4300	n/a	5.0	n/a	n/a	n/a	n/a	n/a	X
2006	1	50059	4005	598.2	19.3	n/a	n/a	n/a	578.9	n/a	N
2006	2A	50219	4155	580.2	10.5	1.5	10.1	8.6	569.7	570.1	X
2006	2B	50186	4217	580.0	3.0	2.0	3.0	1.0	577.0	577.0	X

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						Material Thickness	Bottom of Material (ft)				
2006	2C	50155	4275	577.3	18.0	7.0	18.0	11.0	559.3	559.3	X
2006	2D	50136	4384	576.2	16.0	n/a	n/a	n/a	560.2	n/a	N
2006	3A	50407	4301	576.5	17.0	3.0	17.0	14.0	559.5	559.5	X
2006	3B	50356	4362	575.1	16.0	5.0	16.0	11.0	559.1	559.1	X
2006	3C	50327	4430	574.0	19.0	n/a	n/a	n/a	555.0	n/a	N
2006	4A	50681	4563	585.5	12.0	9.0	12.0	3.0	573.5	573.5	X
2006	4B	50682	4667	579.8	12.0	7.0	12.0	5.0	567.8	567.8	X
2006	4C	50669	4727	574.3	18.0	7.0	8.0	1.0	556.3	566.3	X
2006	5	50619	4485	587.5	14.0	13.0	14.0	1.0	573.5	573.5	X
2006	6	50483	4348	578.6	18.0	11.0	18.0	7.0	560.6	560.6	X & T
2008	2	50930.21	4847.26	564.99	16.0	n/a	n/a	n/a	549.0	n/a	N
2008	3	50794.63	4811.97	566.14	17.0	n/a	n/a	n/a	549.1	n/a	N
2008	4	49922.46	3977.33	581.22	21.0	4.0	21.0	17.0	560.2	560.2	X
2008	4A	49892.32	4036.72	578.49	22.0	6.0	22.0	16.0	556.5	556.5	X
2008	5	49841.86	3862.76	592.41	14.0	n/a	n/a	n/a	578.4	n/a	N
2008	5A	49811.06	3914.58	580.79	22.0	6.0	22.0	16.0	558.8	558.8	X
2008	5B	49788.93	3966.82	580.54	24.0	10.0	24.0	14.0	556.5	556.5	X
2008	6	49725.86	3773.40	595.68	17.0	n/a	n/a	n/a	578.7	n/a	N
2008	6A	49672.88	3841.17	583.62	22.0	11.0	22.0	11.0	561.6	561.6	X
2008	6B	49626.65	3890.72	578.42	21.0	6.0	21.0	15.0	557.4	557.4	X
2008	7	49677.41	3728.55	593.02	21.0	n/a	n/a	n/a	572.0	n/a	N
2008	7A	49624.66	3771.00	581.70	15.0	n/a	n/a	n/a	566.7	n/a	N
2008	8	49669.04	3501.81	600.74	14.0	n/a	n/a	n/a	586.7	n/a	N
2008	8A	49616.85	3513.29	591.16	13.0	n/a	n/a	n/a	578.2	n/a	N
2008	9	49661.22	3310.08	581.07	18.0	n/a	n/a	n/a	563.1	n/a	N
2008	10	49612.38	3166.38	587.19	15.0	6.0	15.0	9.0	572.2	572.2	T
2008	11	49547.68	3089.57	600.35	11.0	n/a	n/a	n/a	589.4	n/a	N
2008	12	49506.09	2999.43	614.50	14.0	8.0	12.0	4.0	600.5	602.5	T
2008	13	49494.75	2900.10	615.27	12.0	n/a	n/a	n/a	603.3	n/a	N
2008	13A	49452.64	2892.78	615.14	10.0	n/a	n/a	n/a	605.1	n/a	N
2008	14	49520.42	2821.62	610.83	12.0	2.0	10.0	8.0	598.8	600.8	T
2008	15	49625.89	2774.86	610.36	17.0	3.0	16.0	13.0	593.4	594.4	X
2008	16	49692.04	2781.26	612.14	18.0	6.0	16.0	10.0	594.1	596.1	X
2008	16A	49706.96	2713.45	612.96	21.0	3.0	21.0	18.0	592.0	592.0	X
2008	16B	49720.25	2657.00	613.38	19.0	2.0	19.0	17.0	594.4	594.4	X
2008	16C	49733.29	2601.19	614.95	19.0	5.0	19.0	14.0	595.9	595.9	X
2008	17	49789.38	2806.95	615.54	19.0	4.0	15.0	11.0	596.5	600.5	X
2008	17A	49791.10	2738.35	614.21	15.0	2.0	12.0	10.0	599.2	602.2	X
2008	17B	49787.76	2679.77	614.27	12.0	2.0	12.0	10.0	602.3	602.3	X
2008	18	49887.71	2820.57	626.41	22.0	12.0	20.0	8.0	604.4	606.4	X

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Year	Test Pit/ Boring Number				Total Depth of Test Pit/ Boring (ft)	Top of Material (ft)/Cover Thickness		Thickness of Material (ft)	Bottom Pit Elevation	Bottom of Material	Type of Material  N=None, T=Trash, X=Ties
		Northing (ft)	Easting (ft)	Elevation (ft)		Bottom of Material (ft)					
2008	18A	49879.41	2767.64	623.65	18.0	12.0	15.0	3.0	605.6	608.6	X
2008	19	49968.90	2798.94	644.04	20.0	n/a	n/a	n/a	624.0	n/a	N
2008	20	49968.62	2637.16	647.26	18.0	n/a	n/a	n/a	629.3	n/a	N
2008	20A	49902.98	2638.32	631.18	19.0	8.0	16.0	8.0	612.2	615.2	X
2008	20B	49847.54	2641.56	618.68	13.0	n/a	n/a	n/a	605.7	n/a	N
2008	20C	49794.76	2633.45	615.01	11.0	n/a	n/a	n/a	604.0	n/a	N
2008	21	49968.74	2431.71	643.12	17.0	10.0	14.0	4.0	626.1	629.1	X
2008	21A	49910.03	2423.02	631.02	17.0	15.0	16.0	1.0	614.0	615.0	X
2008	21B	49858.84	2418.31	622.77	12.0	4.0	10.0	6.0	610.8	612.8	X
2008	21C	49810.96	2412.29	622.35	21.0	3.0	19.0	16.0	601.3	603.3	X
2008	22	49968.68	2245.84	633.39	11.0	0.0	6.0	6.0	622.4	627.4	X
2008	22A	49953.16	2185.93	625.30	16.0	1.0	7.0	6.0	609.3	618.3	X
2008	22B	49935.14	2129.22	628.72	23.5	4.0	22.0	18.0	605.2	606.7	X
2008	22C	49921.28	2088.12	626.54	26.0	8.0	26.0	18.0	600.5	600.5	X
2008	22D	49908.68	2041.86	624.98	25.0	8.0	25.0	17.0	600.0	600.0	X
2008	22E	49936.94	1985.74	622.54	12.0	4.0	9.0	5.0	610.5	613.5	X
2008	23	50108.87	2247.25	642.88	11.0	0.0	5.0	5.0	631.9	637.9	X
2008	23C	50088.58	2077.49	635.69	12.0	n/a	n/a	n/a	623.7	n/a	N
2008	23D	50065.07	2003.46	632.35	13.0	n/a	n/a	n/a	619.3	n/a	N
2008	24	50275.50	2247.13	642.54	13.0	2.0	4.0	2.0	629.5	638.5	X
2008	24A	50277.61	2214.63	639.85	7.5	2.0	3.0	1.0	632.3	636.8	X
2008	24B	50258.14	2156.71	638.54	14.0	4.0	8.0	4.0	624.5	630.5	X
2008	24C	50247.49	2093.19	639.14	15.0	3.0	5.0	2.0	624.1	634.1	T
2008	25	50546.80	2246.33	641.57	12.0	n/a	n/a	n/a	629.6	n/a	N
2008	26	50689.28	2246.39	645.75	14.0	6.0	8.0	2.0	631.7	637.7	X
2008	27	50856.19	2246.51	646.99	14.0	10.0	14.0	4.0	633.0	633.0	X
2008	27A	50836.93	2182.91	630.29	12.0	n/a	n/a	n/a	618.3	n/a	N
2008	28	50192.43	4406.94	576.11	12.0	n/a	n/a	n/a	564.1	n/a	N
2008	28A	50171.77	4242.80	578.33	18.0	2.0	18.0	16.0	560.3	560.3	X
2008	29	50392.47	4381.69	573.67	24.0	4.0	24.0	20.0	549.7	549.7	X

Shading indicates materials exceeded bottom of the trench.

Probe-trench locations shown in Figure 4.

NA Not applicable or information not available.

**Table 2**  
**Second Quarter 2013 Analytical Data**

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
A126	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
A126	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
A126	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
A126	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
A126	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
A126	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
A126	1,1-Dichloropropene	ug/L	1	G2	5			< 5
A126	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
A126	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
A126	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
A126	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
A126	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 10
A126	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 10
A126	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 2.5
A126	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
A126	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
A126	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
A126	1,3-Dichlorobenzene	ug/L	1	G2	10			< 2.5
A126	1,3-Dichloropropane	ug/L	1	G2	5			< 5
A126	1,3-Dichloropropene	ug/L	1	G2	5			< 5
A126	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 2.5
A126	2,2-Dichloropropane	ug/L	1	G2	5			< 5
A126	2,4,5-TP (Silvex)	ug/L	1		0.3		250	< 2
A126	2,4-D	ug/L	1		0.3		350	< 10
A126	2,4-Dimethylphenol	ug/L	1					< 10
A126	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
A126	2-Chlorotoluene	ug/L	1	G2	5			< 5
A126	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
A126	2-Methylnaphthalene	ug/L	1				140	< 10
A126	4,4'-DDT	ug/L	1		0.01			< 0.1
A126	4-Chlorotoluene	ug/L	1	G2	5			< 5
A126	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
A126	4-Methylphenol	ug/L	1		10			< 10
A126	Acenaphthene	ug/L	1				2100	< 10
A126	Acenaphthylene	ug/L	1					< 10
A126	Acetone	ug/L	1	G2	10		6300	< 10
A126	Acrolein	ug/L	1					< 5
A126	Acrylonitrile	ug/L	1	G2	100			< 5
A126	Alachlor	ug/L	1		0.5		10	< 2
A126	Aldicarb	ug/L	1		4		15	< 2
A126	Aldrin	ug/L	1		0.004			< 0.05
A126	Ammonia as N, Diss.	mg/L	1	G1	1.82	0.13		< 0.1
A126	Anthracene	ug/L	1		1.75		10500	< 10
A126	Anthracene	ug/L	1				10500	< 10
A126	Antimony, total	ug/L	1		10	10	24	< 3
A126	Arsenic, dissolved	ug/L	1	G1	19	7	200	< 2
A126	Arsenic, total	ug/L	1		27	198.32	200	< 2
A126	Atrazine	ug/L	1		0.5		15	< 3
A126	Barium, total	ug/L	1		1920	1013.31	2000	48
A126	Benzene	ug/L	1	G2	5		25	< 5
A126	Benzo(a)pyrene	ug/L	1		10		2	< 0.2
A126	Beryllium, total	ug/L	1		9.7	4	500	< 1
A126	bis(2-ethylhexyl)phthalate	ug/L	1				60	< 6
A126	Boron, dissolved	ug/L	1	G1	1901	40	2000	< 10
A126	Boron, total	ug/L	1		1200	174.42	2000	60
A126	Bromobenzene	ug/L	1	G2	5			< 5
A126	Bromochloromethane	ug/L	1	G2	5			< 5
A126	Bromodichloromethane	ug/L	1	G2	5			< 1
A126	Bromoform	ug/L	1	G2	5			< 1
A126	Bromomethane	ug/L	1	G2	5			< 5
A126	Butylbenzylphthalate	ug/L	1					< 10
A126	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
A126	Cadmium, total	ug/L	1		11	11	50	< 1
A126	Carbofuran	ug/L	1		4		200	< 5
A126	Carbon Disulfide	ug/L	1	G2	5		3500	< 5

## Notes:

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
A126	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
A126	Chlordane	ug/L	1		0.01		10	< 0.5
A126	Chloride, dissolved	mg/L	1	G1	276	24.36		18
A126	Chloride, total	mg/L	1		292	27.44		129
A126	Chlorobenzene	ug/L	1	G2	5		500	< 5
A126	Chloroethane	ug/L	1	G2	10			< 10
A126	Chloroform	ug/L	1	G2	5		350	< 1
A126	Chloromethane	ug/L	1	G2	10			< 10
A126	Chromium, dissolved	ug/L	1	G1	3	5	1000	< 1
A126	Chromium, total	ug/L	1		390	610.73	1000	< 1
A126	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	8.8
A126	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
A126	Cobalt, total	ug/L	1		45	233.28	1000	< 1
A126	Copper, total	ug/L	1		140	359	650	< 1
A126	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
A126	Dalapon	ug/L	1		1.5		2000	< 3
A126	Dibenzofuran	ug/L	1					< 10
A126	Dibromochloromethane	ug/L	1	G2	5			< 1
A126	Dibromomethane	ug/L	1	G2	5			< 5
A126	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
A126	Diechlorin	ug/L	1		0.02			< 0.1
A126	Diethylphthalate	ug/L	1				5600	< 10
A126	Dimethylphthalate	ug/L	1					< 10
A126	Di-n-butylphthalate	ug/L	1		10		3500	< 10
A126	Dinoseb	ug/L	1		1.5		70	< 1
A126	Endothall	ug/L	1		40		100	< 9
A126	Endrin	ug/L	1		0.006		10	< 0.1
A126	Ethylbenzene	ug/L	1	G2	5		1000	< 5
A126	Fluoranthene	ug/L	1				1400	< 10
A126	Fluorene	ug/L	1				1400	< 10
A126	Fluoride, total	mg/L	1		2.578	540	4	< 0.5
A126	gamma-BHC (Lindane)	ug/L	1		0.009		1	< 0.05
A126	Heptachlor	ug/L	1		0.003		2	< 0.05
A126	Heptachlor Epoxide	ug/L	1		0.24		1	< 0.05
A126	Hexachlorobutadiene	ug/L	1	G2	10			< 10
A126	Iodomethane	ug/L	1	G2	5			< 5
A126	Iron, total	ug/L	1		20654000	310397.4		1990
A126	Isophorone	ug/L	1		10			< 10
A126	Isopropylbenzene	ug/L	1	G2	5		3500	< 2
A126	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
A126	Lead, total	ug/L	1		105	489.32	100	< 2
A126	Magnesium, dissolved	mg/L	1	G1	30.9	189.7		117
A126	Manganese, total	ug/L	1		2150	5350.82		277
A126	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
A126	Mercury, total	ug/L	1		960	0.2	10	< 0.2
A126	Methoxychlor	ug/L	1		0.24		200	< 0.5
A126	Methylene Chloride	ug/L	1	G2	5		50	< 5
A126	Naphthalene	ug/L	1	G2	10		220	< 10
A126	n-Butylbenzene	ug/L	1	G2	5			< 5
A126	Nickel, total	ug/L	1		1410	645.92	2000	< 1
A126	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.15	100	< 0.1
A126	Nitrate as N, total	mg/L	1		0.88	0.28	100	< 0.1
A126	n-Propylbenzene	ug/L	1	G2	5			< 5
A126	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
A126	Parathion	ug/L	1		5			< 10
A126	Pentachlorophenol	ug/L	1		50		5	< 1
A126	pH (field)	SU	1	G1	7.56 - 8.21	6.39 - 7.07		6.57
A126	Phenanthrene	ug/L	1					< 10
A126	Phenolics	ug/L	1	G2	10	10	100	< 10
A126	Picloram	ug/L	1		0.8		5000	< 3
A126	p-Isopropyltoluene	ug/L	1	G2	5			< 2
A126	Polychlorinated Biphenyls(PCBs)	ug/L	1		1		2.5	< 0.5
A126	Pyrene	ug/L	1				1050	< 10
A126	sec-Butylbenzene	ug/L	1	G2	5			< 5
A126	Selenium, total	ug/L	1		9	2	50	< 2

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
A126	Silver, total	ug/L	1		1	1		< 1
A126	Simazine	ug/L	1		5		40	< 5
A126	Specific Conductance (field)	umhos/cm	1	G1	2578			778
A126	Styrene	ug/L	1	G2	5		500	< 5
A126	Sulfate, dissolved	mg/L	1	G1	79	503.6		155
A126	Sulfate, total	mg/L	1		79	469.36		139
A126	tert-Butylbenzene	ug/L	1	G2	5			< 5
A126	Tetrachloroethene	ug/L	1	G2	5		25	< 5
A126	Tetrahydrofuran	ug/L	1	G2	5			< 5
A126	Thallium, total	ug/L	1		10	10	20	< 2
A126	Tin, total	ug/L	1					< 20
A126	Toluene	ug/L	1	G2	5		2500	< 5
A126	Total Dissolved Solids	mg/L	1	G1	1421	1606.56	1200	1040
A126	Toxaphene	ug/L	1		0.24		15	< 1
A126	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
A126	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
A126	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 5
A126	Trichloroethene	ug/L	1	G2	5		25	< 5
A126	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
A126	Vanadium, total	ug/L	1		140	357.81	100	< 5
A126	Vinyl Acetate	ug/L	1	G2	10			< 5
A126	Vinyl Chloride	ug/L	1	G2	10		10	< 2
A126	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
A126	Zinc, dissolved	ug/L	1	G1	9	5	10000	< 5
A126	Zinc, total	ug/L	1		760	1500.61	10000	< 5
G125	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G125	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
G125	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G125	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
G125	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
G125	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
G125	1,1-Dichloropropene	ug/L	1	G2	5			< 5
G125	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
G125	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
G125	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
G125	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
G125	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 10
G125	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 10
G125	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 10
G125	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
G125	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
G125	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
G125	1,3-Dichlorobenzene	ug/L	1	G2	10			< 10
G125	1,3-Dichloropropane	ug/L	1	G2	5			< 5
G125	1,3-Dichloropropene	ug/L	1	G2	5			< 5
G125	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 10
G125	2,2-Dichloropropane	ug/L	1	G2	5			< 5
G125	2,4-Dimethylphenol	ug/L	1					< 10
G125	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
G125	2-Chlorotoluene	ug/L	1	G2	5			< 5
G125	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
G125	2-Methylnaphthalene	ug/L	1				140	< 10
G125	4-Chlorotoluene	ug/L	1	G2	5			< 5
G125	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
G125	Acenaphthene	ug/L	1				2100	< 10
G125	Acenaphthylene	ug/L	1					< 10
G125	Acetone	ug/L	1	G2	10		6300	< 100
G125	Acrylonitrile	ug/L	1	G2	100			< 5
G125	Aluminum, total	ug/L	1		162000	27406.2		< 50
G125	Ammonia as N, Diss.	mg/L	1	G1	1.82	5.04		16.2
G125	Ammonia as N, total	mg/L	1		1.75	3.92		16.9
G125	Anthracene	ug/L	1		10	10	10500	< 10
G125	Antimony, total	ug/L	1		19	48	200	24
G125	Arsenic, dissolved	ug/L	1	G1	27	135.1	200	24
G125	Arsenic, total	ug/L	1					30

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G125	Barium, total	ug/L	1		1920	391.54	2000	79
G125	Benzene	ug/L	1	G2	5		25	< 5
G125	Benzoic Acid	ug/L	1				28000	< 50
G125	Beryllium, total	ug/L	1		9.7	2	500	< 1
G125	Biochemical Oxygen Demand	mg/L	1		34.3	61.23		10
G125	bis(2-ethylhexyl)phthalate	ug/L	1				60	< 5
G125	Boron, dissolved	ug/L	1	G1	1901	546.3	2000	450
G125	Boron, total	ug/L	1		1200	758.76	2000	300
G125	Bromobenzene	ug/L	1	G2	5			< 5
G125	Bromochloromethane	ug/L	1	G2	5			< 5
G125	Bromodichloromethane	ug/L	1	G2	5			< 1
G125	Bromoform	ug/L	1	G2	5			< 1
G125	Bromomethane	ug/L	1	G2	5			< 5
G125	Cadmium, dissolved	ug/L	1	G1	68	62.82	50	< 1
G125	Cadmium, total	ug/L	1		11	36.39	50	< 1
G125	Calcium, total	mg/L	1		228	897.24		723
G125	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
G125	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
G125	Chemical Oxygen Demand	mg/L	1		97	50.54		56
G125	Chloride, dissolved	mg/L	1	G1	276	416.03		214
G125	Chloride, total	mg/L	1		292	364.96		209
G125	Chlorobenzene	ug/L	1	G2	5		500	< 5
G125	Chloroethane	ug/L	1	G2	10			< 10
G125	Chloroform	ug/L	1	G2	5		350	< 1
G125	Chloromethane	ug/L	1	G2	10			< 10
G125	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
G125	Chromium, total	ug/L	1		390	59.08	1000	4
G125	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
G125	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G125	Cobalt, total	ug/L	1		45	41.41	1000	4
G125	Copper, total	ug/L	1		140	175.1	650	12
G125	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
G125	Dibenzofuran	ug/L	1					< 10
G125	Dibromochloromethane	ug/L	1	G2	5			< 1
G125	Dibromomethane	ug/L	1	G2	5			< 5
G125	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
G125	Ethylbenzene	ug/L	1	G2	5		1000	< 5
G125	Fluoranthene	ug/L	1				1400	< 10
G125	Fluorene	ug/L	1				1400	< 10
G125	Hexachlorobutadiene	ug/L	1	G2	10			< 10
G125	Iodomethane	ug/L	1	G2	5			< 5
G125	Iron, total	ug/L	1		20654000	400682		54700
G125	Isophorone	ug/L	1		10			< 10
G125	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
G125	Lead, dissolved	ug/L	1	G1	16	34.98	100	< 2
G125	Lead, total	ug/L	1		105	118.25	100	13
G125	Magnesium, dissolved	mg/L	1	G1	30.9	145.7		137
G125	Magnesium, total	mg/L	1		43.52	226.99		251
G125	Manganese, total	ug/L	1		2150	3941.26		626
G125	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
G125	Methylene Chloride	ug/L	1	G2	5		50	< 5
G125	m-Xylene	ug/L	1		5			< 5
G125	Naphthalene	ug/L	1	G2	10		220	< 10
G125	n-Butylbenzene	ug/L	1	G2	5			< 5
G125	Nickel, total	ug/L	1		1410	126.41	2000	16
G125	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
G125	Nitrate as N, total	mg/L	1		0.88	0.46	100	< 0.1
G125	n-Propylbenzene	ug/L	1	G2	5			< 5
G125	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
G125	o-Xylene	ug/L	1		5			< 5
G125	pH (field)	SU	1	G1	7.56 - 8.21	4.4 - 8.37		6.47
G125	Phenanthrene	ug/L	1					< 10
G125	Phenolics	ug/L	1	G2	10	10	100	< 10
G125	p-Isopropyltoluene	ug/L	1	G2	5			< 5
G125	Potassium, total	mg/L	1		36	108.59		50

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G125	p-Xylene	ug/L	1		5			< 5
G125	Pyrene	ug/L	1				1050	< 10
G125	sec-Butylbenzene	ug/L	1	G2	5			< 5
G125	Selenium, total	ug/L	1		9	2	50	< 2
G125	Silver, total	ug/L	1		1	1		< 1
G125	Sodium, total	mg/L	1		479.8	280.96		313
G125	Specific Conductance (field)	umhos/cm	1	G1	2578			1016
G125	Styrene	ug/L	1	G2	5		500	< 5
G125	Sulfate, dissolved	mg/L	1	G1	79	3416.62		210
G125	Sulfate, total	mg/L	1		79	2932.55		290
G125	tert-Butylbenzene	ug/L	1	G2	5			< 5
G125	Tetrachloroethene	ug/L	1	G2	5		25	< 5
G125	Tetrahydrofuran	ug/L	1	G2	5			< 5
G125	Tin, total	ug/L	1					< 20
G125	Toluene	ug/L	1	G2	5		2500	< 5
G125	Total Dissolved Solids	mg/L	1	G1	1421	3720	1200	1650
G125	Total Organic Carbon	mg/L	1		11.9	36.6		18.8
G125	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
G125	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G125	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 5
G125	Trichloroethene	ug/L	1	G2	5		25	< 5
G125	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
G125	Vanadium, total	ug/L	1		140	102.86	100	< 10
G125	Vinyl Acetate	ug/L	1	G2	10			< 5
G125	Vinyl Chloride	ug/L	1	G2	10		10	< 2
G125	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
G125	Zinc, dissolved	ug/L	1	G1	9	36.46	10000	< 5
G125	Zinc, total	ug/L	1		760	422.82	10000	34
G130	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G130	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
G130	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G130	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
G130	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
G130	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
G130	1,1-Dichloropropene	ug/L	1	G2	5			< 5
G130	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
G130	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
G130	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
G130	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
G130	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
G130	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
G130	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
G130	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
G130	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
G130	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
G130	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
G130	1,3-Dichloropropane	ug/L	1	G2	5			< 5
G130	1,3-Dichloropropene	ug/L	1	G2	5			< 5
G130	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
G130	2,2-Dichloropropane	ug/L	1	G2	5			< 5
G130	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
G130	2-Chlorotoluene	ug/L	1	G2	5			< 5
G130	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
G130	4-Chlorotoluene	ug/L	1	G2	5			< 5
G130	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
G130	Acetone	ug/L	1	G2	10		6300	< 10
G130	Acrylonitrile	ug/L	1	G2	100			< 100
G130	Ammonia as N, Diss.	mg/L	1	G1	1.82			< 0.1
G130	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
G130	Benzene	ug/L	1	G2	5		25	< 5
G130	Boron, dissolved	ug/L	1	G1	1901	136.6	2000	30
G130	Bromobenzene	ug/L	1	G2	5			< 5
G130	Bromochloromethane	ug/L	1	G2	5			< 5
G130	Bromodichloromethane	ug/L	1	G2	5			< 5
G130	Bromoform	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G130	Bromomethane	ug/L	1	G2	5			< 5
G130	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
G130	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
G130	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
G130	Chloride, dissolved	mg/L	1	G1	276			7
G130	Chlorobenzene	ug/L	1	G2	5		500	< 5
G130	Chloroethane	ug/L	1	G2	10			< 10
G130	Chloroform	ug/L	1	G2	5		350	< 5
G130	Chloromethane	ug/L	1	G2	10			< 10
G130	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
G130	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
G130	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G130	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
G130	Dibromochloromethane	ug/L	1	G2	5			< 5
G130	Dibromomethane	ug/L	1	G2	5			< 5
G130	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
G130	Ethylbenzene	ug/L	1	G2	5		1000	< 5
G130	Hexachlorobutadiene	ug/L	1	G2	10			< 10
G130	Iodomethane	ug/L	1	G2	5			< 5
G130	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
G130	Lead, dissolved	ug/L	1	G1	16		100	< 2
G130	Magnesium, dissolved	mg/L	1	G1	30.9	32.92		11.5
G130	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
G130	Methylene Chloride	ug/L	1	G2	5		50	< 5
G130	Naphthalene	ug/L	1	G2	10		220	< 5
G130	n-Butylbenzene	ug/L	1	G2	5			< 5
G130	Nitrate as N, dissolved	mg/L	1	G1	1.37	1.37	100	< 0.1
G130	n-Propylbenzene	ug/L	1	G2	5			< 5
G130	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
G130	pH (field)	SU	1	G1	7.56 - 8.21			7.26
G130	Phenolics	ug/L	1	G2	10		100	< 10
G130	p-Isopropyltoluene	ug/L	1	G2	5			< 5
G130	sec-Butylbenzene	ug/L	1	G2	5			< 5
G130	Specific Conductance (field)	umhos/cm	1	G1	2578			368
G130	Styrene	ug/L	1	G2	5		500	< 5
G130	Sulfate, dissolved	mg/L	1	G1	79			21
G130	tert-Butylbenzene	ug/L	1	G2	5			< 5
G130	Tetrachloroethene	ug/L	1	G2	5		25	< 5
G130	Tetrahydrofuran	ug/L	1	G2	5			< 5
G130	Toluene	ug/L	1	G2	5		2500	< 5
G130	Total Dissolved Solids	mg/L	1	G1	1421		1200	267
G130	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
G130	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G130	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
G130	Trichloroethene	ug/L	1	G2	5		25	< 5
G130	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
G130	Vinyl Acetate	ug/L	1	G2	10			< 10
G130	Vinyl Chloride	ug/L	1	G2	10		10	< 2
G130	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
G130	Zinc, dissolved	ug/L	1	G1	9	17.99	10000	< 5
G131	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G131	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
G131	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G131	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
G131	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
G131	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
G131	1,1-Dichloropropene	ug/L	1	G2	5			< 5
G131	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
G131	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
G131	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
G131	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
G131	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
G131	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
G131	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
G131	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G131	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
G131	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
G131	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
G131	1,3-Dichloropropane	ug/L	1	G2	5			< 5
G131	1,3-Dichloropropene	ug/L	1	G2	5			< 5
G131	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
G131	2,2-Dichloropropane	ug/L	1	G2	5			< 5
G131	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
G131	2-Chlorotoluene	ug/L	1	G2	5			< 5
G131	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
G131	4-Chlorotoluene	ug/L	1	G2	5			< 5
G131	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
G131	Acetone	ug/L	1	G2	10		6300	< 10
G131	Acrylonitrile	ug/L	1	G2	100			< 100
G131	Ammonia as N, Diss.	mg/L	1	G1	1.82	0.82		0.29
G131	Arsenic, dissolved	ug/L	1	G1	19	3	200	< 2
G131	Benzene	ug/L	1	G2	5		25	< 5
G131	Boron, dissolved	ug/L	1	G1	1901	60	2000	100
G131	Bromobenzene	ug/L	1	G2	5			< 5
G131	Bromoform	ug/L	1	G2	5			< 5
G131	Bromoform	ug/L	1	G2	5			< 5
G131	Bromomethane	ug/L	1	G2	5			< 5
G131	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
G131	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
G131	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
G131	Chloride, dissolved	mg/L	1	G1	276	171.94		141
G131	Chlorobenzene	ug/L	1	G2	5		500	< 5
G131	Chloroethane	ug/L	1	G2	10			< 10
G131	Chloroform	ug/L	1	G2	5		350	< 5
G131	Chloromethane	ug/L	1	G2	10			< 10
G131	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
G131	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
G131	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G131	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
G131	Dibromochloromethane	ug/L	1	G2	5			< 5
G131	Dibromomethane	ug/L	1	G2	5			< 5
G131	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
G131	Ethylbenzene	ug/L	1	G2	5		1000	< 5
G131	Hexachlorobutadiene	ug/L	1	G2	10			< 10
G131	Iodomethane	ug/L	1	G2	5			< 5
G131	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
G131	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
G131	Magnesium, dissolved	mg/L	1	G1	30.9	138.5		98.6
G131	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
G131	Methylene Chloride	ug/L	1	G2	5		50	< 5
G131	Naphthalene	ug/L	1	G2	10		220	< 5
G131	n-Butylbenzene	ug/L	1	G2	5			< 5
G131	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	2.31
G131	n-Propylbenzene	ug/L	1	G2	5			< 5
G131	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
G131	pH (field)	SU	1	G1	7.56 - 8.21	6.16 - 7.8		6.79
G131	Phenolics	ug/L	1	G2	10	10	100	< 10
G131	p-Isopropyltoluene	ug/L	1	G2	5			< 5
G131	sec-Butylbenzene	ug/L	1	G2	5			< 5
G131	Specific Conductance (field)	umhos/cm	1	G1	2578			825
G131	Styrene	ug/L	1	G2	5		500	< 5
G131	Sulfate, dissolved	mg/L	1	G1	79	996.83		58
G131	tert-Butylbenzene	ug/L	1	G2	5			< 5
G131	Tetrachloroethene	ug/L	1	G2	5		25	< 5
G131	Tetrahydrofuran	ug/L	1	G2	5			< 5
G131	Toluene	ug/L	1	G2	5		2500	< 5
G131	Total Dissolved Solids	mg/L	1	G1	1421	2505.16	1200	1150
G131	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
G131	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G131	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
G131	Trichloroethene	ug/L	1	G2	5		25	< 5
G131	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
G131	Vinyl Acetate	ug/L	1	G2	10			< 10
G131	Vinyl Chloride	ug/L	1	G2	10		10	< 2
G131	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
G131	Zinc, dissolved	ug/L	1	G1	9	26	10000	< 5
G133	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G133	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
G133	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G133	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
G133	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
G133	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
G133	1,1-Dichloropropene	ug/L	1	G2	5			< 5
G133	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
G133	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
G133	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
G133	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
G133	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
G133	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
G133	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
G133	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
G133	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
G133	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
G133	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
G133	1,3-Dichloropropane	ug/L	1	G2	5			< 5
G133	1,3-Dichloropropene	ug/L	1	G2	5			< 5
G133	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
G133	2,2-Dichloropropane	ug/L	1	G2	5			< 5
G133	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
G133	2-Chlorotoluene	ug/L	1	G2	5			< 5
G133	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
G133	4-Chlorotoluene	ug/L	1	G2	5			< 5
G133	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
G133	Acetone	ug/L	1	G2	10		6300	< 10
G133	Acrylonitrile	ug/L	1	G2	100			< 100
G133	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.2
G133	Arsenic, dissolved	ug/L	1	G1	19		200	18
G133	Benzene	ug/L	1	G2	5		25	< 5
G133	Boron, dissolved	ug/L	1	G1	1901	2417	2000	620
G133	Bromobenzene	ug/L	1	G2	5			< 5
G133	Bromochloromethane	ug/L	1	G2	5			< 5
G133	Bromodichloromethane	ug/L	1	G2	5			< 5
G133	Bromoform	ug/L	1	G2	5			< 5
G133	Bromomethane	ug/L	1	G2	5			< 5
G133	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
G133	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
G133	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
G133	Chloride, dissolved	mg/L	1	G1	276			34
G133	Chlorobenzene	ug/L	1	G2	5		500	< 5
G133	Chloroethane	ug/L	1	G2	10			< 10
G133	Chloroform	ug/L	1	G2	5		350	< 5
G133	Chloromethane	ug/L	1	G2	10			< 10
G133	Chromium, dissolved	ug/L	1	G1	3	3	1000	< 1
G133	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
G133	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G133	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
G133	Dibromochloromethane	ug/L	1	G2	5			< 5
G133	Dibromomethane	ug/L	1	G2	5			< 5
G133	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
G133	Ethylbenzene	ug/L	1	G2	5		1000	< 5
G133	Hexachlorobutadiene	ug/L	1	G2	10			< 10
G133	Iodomethane	ug/L	1	G2	5			< 5
G133	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
G133	Lead, dissolved	ug/L	1	G1	16		100	< 2

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G133	Magnesium, dissolved	mg/L	1	G1	30.9	28.69		17.3
G133	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
G133	Methylene Chloride	ug/L	1	G2	5		50	< 5
G133	Naphthalene	ug/L	1	G2	10		220	< 5
G133	n-Butylbenzene	ug/L	1	G2	5			< 5
G133	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
G133	n-Propylbenzene	ug/L	1	G2	5			< 5
G133	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
G133	pH (field)	SU	1	G1	7.56 - 8.21			6.98
G133	Phenolics	ug/L	1	G2	10		100	< 10
G133	p-Isopropyltoluene	ug/L	1	G2	5			< 5
G133	sec-Butylbenzene	ug/L	1	G2	5			< 5
G133	Specific Conductance (field)	umhos/cm	1	G1	2578			721
G133	Styrene	ug/L	1	G2	5		500	< 5
G133	Sulfate, dissolved	mg/L	1	G1	79			89
G133	tert-Butylbenzene	ug/L	1	G2	5			< 5
G133	Tetrachloroethene	ug/L	1	G2	5		25	< 5
G133	Tetrahydrofuran	ug/L	1	G2	5			< 5
G133	Toluene	ug/L	1	G2	5		2500	< 5
G133	Total Dissolved Solids	mg/L	1	G1	1421		1200	563
G133	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
G133	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G133	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
G133	Trichloroethene	ug/L	1	G2	5		25	< 5
G133	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
G133	Vinyl Acetate	ug/L	1	G2	10			< 10
G133	Vinyl Chloride	ug/L	1	G2	10		10	< 2
G133	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
G133	Zinc, dissolved	ug/L	1	G1	9	9	10000	< 5
G134	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G134	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
G134	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
G134	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
G134	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
G134	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
G134	1,1-Dichloropropene	ug/L	1	G2	5			< 5
G134	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
G134	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
G134	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
G134	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
G134	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
G134	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
G134	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
G134	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
G134	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
G134	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
G134	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
G134	1,3-Dichloropropane	ug/L	1	G2	5			< 5
G134	1,3-Dichloropropene	ug/L	1	G2	5			< 5
G134	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
G134	2,2-Dichloropropane	ug/L	1	G2	5			< 5
G134	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
G134	2-Chlorotoluene	ug/L	1	G2	5			< 5
G134	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
G134	4-Chlorotoluene	ug/L	1	G2	5			< 5
G134	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
G134	Acetone	ug/L	1	G2	10		6300	< 10
G134	Acrylonitrile	ug/L	1	G2	100			< 100
G134	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.38
G134	Arsenic, dissolved	ug/L	1	G1	19		200	5
G134	Benzene	ug/L	1	G2	5		25	< 5
G134	Boron, dissolved	ug/L	1	G1	1901	2056	2000	130
G134	Bromobenzene	ug/L	1	G2	5			< 5
G134	Bromochloromethane	ug/L	1	G2	5			< 5
G134	Bromodichloromethane	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
G134	Bromoform	ug/L	1	G2	5			< 5
G134	Bromomethane	ug/L	1	G2	5			< 5
G134	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
G134	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
G134	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
G134	Chloride, dissolved	mg/L	1	G1	276			16
G134	Chlorobenzene	ug/L	1	G2	5		500	< 5
G134	Chloroethane	ug/L	1	G2	10			< 10
G134	Chloroform	ug/L	1	G2	5		350	< 5
G134	Chloromethane	ug/L	1	G2	10			< 10
G134	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
G134	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
G134	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G134	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
G134	Dibromochloromethane	ug/L	1	G2	5			< 5
G134	Dibromomethane	ug/L	1	G2	5			< 5
G134	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
G134	Ethylbenzene	ug/L	1	G2	5		1000	< 5
G134	Hexachlorobutadiene	ug/L	1	G2	10			< 10
G134	Iodomethane	ug/L	1	G2	5			< 5
G134	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
G134	Lead, dissolved	ug/L	1	G1	16		100	< 2
G134	Magnesium, dissolved	mg/L	1	G1	30.9	39.61		109
G134	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
G134	Methylene Chloride	ug/L	1	G2	5		50	< 5
G134	Naphthalene	ug/L	1	G2	10		220	< 5
G134	n-Butylbenzene	ug/L	1	G2	5			< 5
G134	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
G134	n-Propylbenzene	ug/L	1	G2	5			< 5
G134	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
G134	pH (field)	SU	1	G1	7.56 - 8.21			6.75
G134	Phenolics	ug/L	1	G2	10		100	< 10
G134	p-Isopropyltoluene	ug/L	1	G2	5			< 5
G134	sec-Butylbenzene	ug/L	1	G2	5			< 5
G134	Specific Conductance (field)	umhos/cm	1	G1	2578			883
G134	Styrene	ug/L	1	G2	5		500	< 5
G134	Sulfate, dissolved	mg/L	1	G1	79			335
G134	tert-Butylbenzene	ug/L	1	G2	5			< 5
G134	Tetrachloroethene	ug/L	1	G2	5		25	< 5
G134	Tetrahydrofuran	ug/L	1	G2	5			< 5
G134	Toluene	ug/L	1	G2	5		2500	< 5
G134	Total Dissolved Solids	mg/L	1	G1	1421		1200	1360
G134	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
G134	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
G134	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
G134	Trichloroethene	ug/L	1	G2	5		25	< 5
G134	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
G134	Vinyl Acetate	ug/L	1	G2	10			< 10
G134	Vinyl Chloride	ug/L	1	G2	10		10	< 2
G134	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
G134	Zinc, dissolved	ug/L	1	G1	9	5	10000	< 5
R103	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R103	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R103	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R103	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R103	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R103	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R103	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R103	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R103	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
R103	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R103	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R103	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
R103	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
R103	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
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Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R103	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R103	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R103	1,3,5-Trimethylbenzene	ug/L	1	G2	5		< 5	
R103	1,3-Dichlorobenzene	ug/L	1	G2	10		< 5	
R103	1,3-Dichloropropane	ug/L	1	G2	5		< 5	
R103	1,3-Dichloropropene	ug/L	1	G2	5		< 5	
R103	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
R103	2,2-Dichloropropane	ug/L	1	G2	5		< 5	
R103	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R103	2-Chlorotoluene	ug/L	1	G2	5		< 5	
R103	2-Hexanone (MBK)	ug/L	1	G2	5		< 10	
R103	4-Chlorotoluene	ug/L	1	G2	5		< 5	
R103	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5		< 10	
R103	Acetone	ug/L	1	G2	10		6300	< 10
R103	Acrylonitrile	ug/L	1	G2	100		< 100	
R103	Ammonia as N, Diss.	mg/L	1	G1	1.25		< 0.1	
R103	Arsenic, dissolved	ug/L	1	G1	4		200	< 2
R103	Benzene	ug/L	1	G2	5		25	< 5
R103	Boron, dissolved	ug/L	1	G1	179.1	179.1	2000	60
R103	Bromobenzene	ug/L	1	G2	5		< 5	
R103	Bromochloromethane	ug/L	1	G2	5		< 5	
R103	Bromodichloromethane	ug/L	1	G2	5		< 5	
R103	Bromoform	ug/L	1	G2	5		< 5	
R103	Bromomethane	ug/L	1	G2	5		< 5	
R103	Cadmium, dissolved	ug/L	1	G1	1		50	< 1
R103	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R103	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R103	Chloride, dissolved	mg/L	1	G1	19		200	9
R103	Chlorobenzene	ug/L	1	G2	5		500	< 5
R103	Chloroethane	ug/L	1	G2	10		< 10	
R103	Chloroform	ug/L	1	G2	5		350	< 5
R103	Chloromethane	ug/L	1	G2	10		< 10	
R103	Chromium, dissolved	ug/L	1	G1	2	2	1000	< 1
R103	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R103	cis-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
R103	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
R103	Dibromochloromethane	ug/L	1	G2	5		< 5	
R103	Dibromomethane	ug/L	1	G2	5		< 5	
R103	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R103	Ethylbenzene	ug/L	1	G2	5		1000	< 5
R103	Hexachlorobutadiene	ug/L	1	G2	10		< 10	
R103	Iodomethane	ug/L	1	G2	5		< 5	
R103	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
R103	Lead, dissolved	ug/L	1	G1	2000		100	< 2
R103	Magnesium, dissolved	mg/L	1	G1	185.9	185.9		123
R103	Mercury, dissolved	ug/L	1	G1	200		10	< 0.2
R103	Methylene Chloride	ug/L	1	G2	5		50	< 5
R103	Naphthalene	ug/L	1	G2	10		220	< 5
R103	n-Butylbenzene	ug/L	1	G2	5		< 5	
R103	Nitrate as N, dissolved	mg/L	1	G1	0.1	0.1	100	< 0.1
R103	n-Propylbenzene	ug/L	1	G2	5		< 5	
R103	Oil (Hexane Soluble)	mg/L	1	G2	3		< 1	
R103	pH (field)	SU	1	G1	7.38 - 7.61		6.5 - 9	6.73
R103	Phenolics	ug/L	1	G2	10	37.57	100	< 10
R103	p-Isopropyltoluene	ug/L	1	G2	5		< 5	
R103	sec-Butylbenzene	ug/L	1	G2	5		< 5	
R103	Specific Conductance (field)	umhos/cm	1	G1				745
R103	Styrene	ug/L	1	G2			500	< 5
R103	Sulfate, dissolved	mg/L	1	G1	293	943.2	400	570
R103	tert-Butylbenzene	ug/L	1	G2	5		< 5	
R103	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R103	Tetrahydrofuran	ug/L	1	G2	5		< 5	
R103	Toluene	ug/L	1	G2	5		2500	< 5
R103	Total Dissolved Solids	mg/L	1	G1	1470	1870	1200	1580
R103	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R103	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R103	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
R103	Trichloroethene	ug/L	1	G2	5		25	< 5
R103	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R103	Vinyl Acetate	ug/L	1	G2	10			< 10
R103	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R103	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R103	Zinc, dissolved	ug/L	1	G1	25	25	10000	< 5
R106	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R106	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R106	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R106	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R106	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R106	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R106	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R106	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R106	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
R106	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R106	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R106	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
R106	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
R106	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
R106	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R106	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R106	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
R106	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
R106	1,3-Dichloropropane	ug/L	1	G2	5			< 5
R106	1,3-Dichloropropene	ug/L	1	G2	5			< 5
R106	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
R106	2,2-Dichloropropane	ug/L	1	G2	5			< 5
R106	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R106	2-Chlorotoluene	ug/L	1	G2	5			< 5
R106	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
R106	4-Chlorotoluene	ug/L	1	G2	5			< 5
R106	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
R106	Acetone	ug/L	1	G2	10		6300	< 10
R106	Acrylonitrile	ug/L	1	G2	100			< 100
R106	Ammonia as N, Diss.	mg/L	1	G1	1.82	1.01		< 0.1
R106	Arsenic, dissolved	ug/L	1	G1	19	18	200	< 2
R106	Benzene	ug/L	1	G2	5		25	< 5
R106	Boron, dissolved	ug/L	1	G1	1901	244.7	2000	100
R106	Bromobenzene	ug/L	1	G2	5			< 5
R106	Bromochloromethane	ug/L	1	G2	5			< 5
R106	Bromodichloromethane	ug/L	1	G2	5			< 5
R106	Bromoform	ug/L	1	G2	5			< 5
R106	Bromomethane	ug/L	1	G2	5			< 5
R106	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
R106	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R106	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R106	Chloride, dissolved	mg/L	1	G1	276	69		12
R106	Chlorobenzene	ug/L	1	G2	5		500	< 5
R106	Chloroethane	ug/L	1	G2	10			< 10
R106	Chloroform	ug/L	1	G2	5		350	< 5
R106	Chloromethane	ug/L	1	G2	10			< 10
R106	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
R106	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R106	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R106	Cyanide, total	mg/L	1	G1	0.005	0.005	0.6	< 0.005
R106	Dibromochloromethane	ug/L	1	G2	5			< 5
R106	Dibromomethane	ug/L	1	G2	5			< 5
R106	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R106	Ethylbenzene	ug/L	1	G2	5		1000	< 5
R106	Hexachlorobutadiene	ug/L	1	G2	10			< 10
R106	Iodomethane	ug/L	1	G2	5			< 5
R106	Isopropylbenzene	ug/L	1	G2	5		3500	< 5

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R106	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
R106	Magnesium, dissolved	mg/L	1	G1	30.9	199.6		152
R106	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
R106	Methylene Chloride	ug/L	1	G2	5		50	< 5
R106	Naphthalene	ug/L	1	G2	10		220	< 5
R106	n-Butylbenzene	ug/L	1	G2	5			< 5
R106	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
R106	n-Propylbenzene	ug/L	1	G2	5			< 5
R106	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
R106	pH (field)	SU	1	G1	7.56 - 8.21	5.87 - 9.58		6.86
R106	Phenolics	ug/L	1	G2	10	10	100	< 10
R106	p-Isopropyltoluene	ug/L	1	G2	5			< 5
R106	sec-Butylbenzene	ug/L	1	G2	5			< 5
R106	Specific Conductance (field)	umhos/cm	1	G1	2578			2218
R106	Styrene	ug/L	1	G2	5		500	< 5
R106	Sulfate, dissolved	mg/L	1	G1	79	3289		1260
R106	tert-Butylbenzene	ug/L	1	G2	5			< 5
R106	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R106	Tetrahydrofuran	ug/L	1	G2	5			< 5
R106	Toluene	ug/L	1	G2	5		2500	< 5
R106	Total Dissolved Solids	mg/L	1	G1	1421	2989	1200	2200
R106	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
R106	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R106	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
R106	Trichloroethene	ug/L	1	G2	5		25	< 5
R106	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R106	Vinyl Acetate	ug/L	1	G2	10			< 10
R106	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R106	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R106	Zinc, dissolved	ug/L	1	G1	9	9	10000	15
R123	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R123	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R123	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R123	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R123	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R123	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R123	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R123	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R123	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
R123	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R123	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R123	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
R123	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
R123	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
R123	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R123	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R123	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
R123	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
R123	1,3-Dichloropropane	ug/L	1	G2	5			< 5
R123	1,3-Dichloropropene	ug/L	1	G2	5			< 5
R123	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
R123	2,2-Dichloropropane	ug/L	1	G2	5			< 5
R123	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R123	2-Chlorotoluene	ug/L	1	G2	5			< 5
R123	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
R123	4-Chlorotoluene	ug/L	1	G2	5			< 5
R123	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
R123	Acetone	ug/L	1	G2	10		6300	< 10
R123	Acrylonitrile	ug/L	1	G2	100			< 100
R123	Ammonia as N, Diss.	mg/L	1	G1	1.82	1.28		7.28
R123	Arsenic, dissolved	ug/L	1	G1	19	2	200	< 2
R123	Benzene	ug/L	1	G2	5		25	< 5
R123	Boron, dissolved	ug/L	1	G1	1901	984.3	2000	880
R123	Bromobenzene	ug/L	1	G2	5			< 5
R123	Bromochloromethane	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R123	Bromodichloromethane	ug/L	1	G2	5			< 5
R123	Bromoform	ug/L	1	G2	5			< 5
R123	Bromomethane	ug/L	1	G2	5			< 5
R123	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
R123	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R123	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R123	Chloride, dissolved	mg/L	1	G1	276	274.64		460
R123	Chlorobenzene	ug/L	1	G2	5		500	< 5
R123	Chloroethane	ug/L	1	G2	10			< 10
R123	Chloroform	ug/L	1	G2	5		350	< 5
R123	Chloromethane	ug/L	1	G2	10			< 10
R123	Chromium, dissolved	ug/L	1	G1	3	3	1000	3
R123	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R123	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R123	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
R123	Dibromochloromethane	ug/L	1	G2	5			< 5
R123	Dibromomethane	ug/L	1	G2	5			< 5
R123	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R123	Ethylbenzene	ug/L	1	G2	5		1000	< 5
R123	Hexachlorobutadiene	ug/L	1	G2	10			< 10
R123	Iodomethane	ug/L	1	G2	5			< 5
R123	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
R123	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
R123	Magnesium, dissolved	mg/L	1	G1	30.9	616.9		153
R123	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
R123	Methylene Chloride	ug/L	1	G2	5		50	< 5
R123	Naphthalene	ug/L	1	G2	10		220	< 5
R123	n-Butylbenzene	ug/L	1	G2	5			< 5
R123	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
R123	n-Propylbenzene	ug/L	1	G2	5			< 5
R123	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
R123	pH (field)	SU	1	G1	7.56 - 8.21	6.43 - 7.39		6.53
R123	Phenolics	ug/L	1	G2	10		100	< 10
R123	p-Isopropyltoluene	ug/L	1	G2	5			< 5
R123	sec-Butylbenzene	ug/L	1	G2	5			< 5
R123	Specific Conductance (field)	umhos/cm	1	G1	2578			1062
R123	Styrene	ug/L	1	G2	5		500	< 5
R123	Sulfate, dissolved	mg/L	1	G1	79	1076.03		460
R123	tert-Butylbenzene	ug/L	1	G2	5			< 5
R123	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R123	Tetrahydrofuran	ug/L	1	G2	5			< 5
R123	Toluene	ug/L	1	G2	5		2500	< 5
R123	Total Dissolved Solids	mg/L	1	G1	1421	3327.07	1200	2600
R123	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
R123	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R123	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
R123	Trichloroethene	ug/L	1	G2	5		25	< 5
R123	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R123	Vinyl Acetate	ug/L	1	G2	10			< 10
R123	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R123	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R123	Zinc, dissolved	ug/L	1	G1	9	25.51	10000	< 5
R124	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R124	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R124	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R124	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R124	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R124	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R124	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R124	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R124	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
R124	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R124	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R124	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 10
R124	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R124	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 10
R124	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R124	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R124	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
R124	1,3-Dichlorobenzene	ug/L	1	G2	10			< 10
R124	1,3-Dichloropropane	ug/L	1	G2	5			< 5
R124	1,3-Dichloropropene	ug/L	1	G2	5			< 5
R124	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 10
R124	2,2-Dichloropropane	ug/L	1	G2	5			< 5
R124	2,4-Dimethylphenol	ug/L	1					< 10
R124	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R124	2-Chlorotoluene	ug/L	1	G2	5			< 5
R124	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
R124	2-Methylnaphthalene	ug/L	1				140	< 10
R124	4-Chlorotoluene	ug/L	1	G2	5			< 5
R124	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
R124	Acenaphthene	ug/L	1				2100	< 10
R124	Acenaphthylene	ug/L	1					< 10
R124	Acetone	ug/L	1	G2	10		6300	< 10
R124	Acrylonitrile	ug/L	1	G2	100			< 100
R124	Aluminum, total	ug/L	1		162000	16134.75		< 50
R124	Ammonia as N, Diss.	mg/L	1	G1	1.82	64.04		62.4
R124	Ammonia as N, total	mg/L	1		1.75	53.5		60.9
R124	Anthracene	ug/L	1				10500	< 10
R124	Antimony, total	ug/L	1		10	10	24	< 6
R124	Arsenic, dissolved	ug/L	1	G1	19	5	200	< 2
R124	Arsenic, total	ug/L	1		27	57.82	200	< 2
R124	Barium, total	ug/L	1		1920	876.43	2000	174
R124	Benzene	ug/L	1	G2	5		25	< 5
R124	Benzoic Acid	ug/L	1				28000	< 50
R124	Beryllium, total	ug/L	1		9.7	1	500	< 1
R124	Biochemical Oxygen Demand	mg/L	1		34.3	70.12		12
R124	bis(2-ethylhexyl)phthalate	ug/L	1				60	< 10
R124	Boron, dissolved	ug/L	1	G1	1901	2125	2000	2620
R124	Boron, total	ug/L	1		1200	1230	2000	2450
R124	Bromobenzene	ug/L	1	G2	5			< 5
R124	Bromochloromethane	ug/L	1	G2	5			< 5
R124	Bromodichloromethane	ug/L	1	G2	5			< 5
R124	Bromoform	ug/L	1	G2	5			< 5
R124	Bromomethane	ug/L	1	G2	5			< 5
R124	Cadmium, dissolved	ug/L	1	G1	68	3	50	< 1
R124	Cadmium, total	ug/L	1		11	10.05	50	< 1
R124	Calcium, total	mg/L	1		228	279.16		555
R124	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R124	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R124	Chemical Oxygen Demand	mg/L	1		97	116		139
R124	Chloride, dissolved	mg/L	1	G1	276	379.2		280
R124	Chloride, total	mg/L	1		292	354.64		260
R124	Chlorobenzene	ug/L	1	G2	5		500	< 5
R124	Chloroethane	ug/L	1	G2	10			< 10
R124	Chloroform	ug/L	1	G2	5		350	< 1
R124	Chloromethane	ug/L	1	G2	10			< 10
R124	Chromium, dissolved	ug/L	1	G1	3	2	1000	< 1
R124	Chromium, total	ug/L	1		390	33.2	1000	< 1
R124	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R124	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R124	Cobalt, total	ug/L	1		45	33.24	1000	< 1
R124	Copper, total	ug/L	1		140	58.72	650	12
R124	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
R124	Dibenzofuran	ug/L	1					< 10
R124	Dibromochloromethane	ug/L	1	G2	5			< 1
R124	Dibromomethane	ug/L	1	G2	5			< 5
R124	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R124	Ethylbenzene	ug/L	1	G2	5		1000	< 5
R124	Fluoranthene	ug/L	1				1400	< 10

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Andrews Engineering, Inc.

**Table 2**  
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**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R124	Fluorene	ug/L	1				1400	< 10
R124	Hexachlorobutadiene	ug/L	1	G2	10			< 10
R124	Iodomethane	ug/L	1	G2	5			< 5
R124	Iron, total	ug/L	1		20654000	86866.43		30600
R124	Isophorone	ug/L	1		10			< 10
R124	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
R124	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
R124	Lead, total	ug/L	1		105	880.75	100	< 2
R124	Magnesium, dissolved	mg/L	1	G1	30.9	204.9		147
R124	Magnesium, total	mg/L	1		43.52	136.98		298
R124	Manganese, total	ug/L	1		2150	849.99		359
R124	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
R124	Methylene Chloride	ug/L	1	G2	5		50	< 5
R124	Naphthalene	ug/L	1	G2	10		220	< 10
R124	n-Butylbenzene	ug/L	1	G2	5			< 5
R124	Nickel, total	ug/L	1		1410	92.76	2000	17
R124	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
R124	Nitrate as N, total	mg/L	1		0.88	0.51	100	0.14
R124	n-Propylbenzene	ug/L	1	G2	5			< 5
R124	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
R124	pH (field)	SU	1	G1	7.56 - 8.21	6.13 - 7.34		6.56
R124	Phenanthrene	ug/L	1					< 10
R124	Phenolics	ug/L	1	G2	10	10	100	< 10
R124	p-Isopropyltoluene	ug/L	1	G2	5			< 5
R124	Potassium, total	mg/L	1		36	66.99		140
R124	Pyrene	ug/L	1				1050	< 10
R124	sec-Butylbenzene	ug/L	1	G2	5			< 5
R124	Selenium, total	ug/L	1		9	2	50	< 2
R124	Silver, total	ug/L	1		1	1		< 1
R124	Sodium, total	mg/L	1		479.8	510.95		476
R124	Specific Conductance (field)	umhos/cm	1	G1	2578			1382
R124	Styrene	ug/L	1	G2	5		500	< 5
R124	Sulfate, dissolved	mg/L	1	G1	79	420.89		262
R124	Sulfate, total	mg/L	1		79	430.26		253
R124	tert-Butylbenzene	ug/L	1	G2	5			< 5
R124	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R124	Tetrahydrofuran	ug/L	1	G2	5			< 5
R124	Thallium, total	ug/L	1		10	10	20	< 2
R124	Tin, total	ug/L	1					< 20
R124	Toluene	ug/L	1	G2	5		2500	< 5
R124	Total Dissolved Solids	mg/L	1	G1	1421	1904.15	1200	1920
R124	Total Organic Carbon	mg/L	1		11.9	128.33		62
R124	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
R124	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R124	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 5
R124	Trichloroethene	ug/L	1	G2	5		25	< 5
R124	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R124	Vanadium, total	ug/L	1		140	10	100	< 10
R124	Vinyl Acetate	ug/L	1	G2	10			< 10
R124	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R124	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R124	Zinc, dissolved	ug/L	1	G1	9	13	10000	< 5
R124	Zinc, total	ug/L	1		760	283.85	10000	< 5
R127	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R127	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R127	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R127	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R127	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R127	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R127	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R127	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R127	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
R127	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R127	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R127	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 10

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R127	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 10
R127	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 10
R127	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R127	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R127	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
R127	1,3-Dichlorobenzene	ug/L	1	G2	10			< 10
R127	1,3-Dichloropropane	ug/L	1	G2	5			< 5
R127	1,3-Dichloropropene	ug/L	1	G2	5			< 5
R127	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 10
R127	2,2-Dichloropropane	ug/L	1	G2	5			< 5
R127	2,4-Dimethylphenol	ug/L	1					< 10
R127	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R127	2-Chlorotoluene	ug/L	1	G2	5			< 5
R127	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
R127	2-Methylnaphthalene	ug/L	1				140	< 10
R127	4-Chlorotoluene	ug/L	1	G2	5			< 5
R127	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
R127	Acenaphthene	ug/L	1				2100	< 10
R127	Acenaphthylene	ug/L	1					< 10
R127	Acetone	ug/L	1	G2	10		6300	< 100
R127	Acrylonitrile	ug/L	1	G2	100			< 5
R127	Aluminum, total	ug/L	1		162000	6850.71		< 50
R127	Ammonia as N, Diss.	mg/L	1	G1	1.82	0.84		0.46
R127	Ammonia as N, total	mg/L	1		1.75	0.97		0.48
R127	Anthracene	ug/L	1				10500	< 10
R127	Antimony, total	ug/L	1		10	10	24	< 6
R127	Arsenic, dissolved	ug/L	1	G1	19	2	200	< 2
R127	Arsenic, total	ug/L	1		27	2	200	< 2
R127	Barium, total	ug/L	1		1920	1298.79	2000	317
R127	Benzene	ug/L	1	G2	5		25	< 5
R127	Benzoic Acid	ug/L	1				28000	< 50
R127	Beryllium, total	ug/L	1		9.7	1	500	< 1
R127	Biochemical Oxygen Demand	mg/L	1		34.3	50.18		14
R127	bis(2-ethylhexyl)phthalate	ug/L	1				60	< 5
R127	Boron, dissolved	ug/L	1	G1	1901	606.7	2000	280
R127	Boron, total	ug/L	1		1200	724.36	2000	340
R127	Bromobenzene	ug/L	1	G2	5			< 5
R127	Bromochloromethane	ug/L	1	G2	5			< 5
R127	Bromodichloromethane	ug/L	1	G2	5			< 1
R127	Bromoform	ug/L	1	G2	5			< 1
R127	Bromomethane	ug/L	1	G2	5			< 5
R127	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
R127	Cadmium, total	ug/L	1		11	1	50	< 1
R127	Calcium, total	mg/L	1		228	178.5		388
R127	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R127	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R127	Chemical Oxygen Demand	mg/L	1		97	51.44		49
R127	Chloride, dissolved	mg/L	1	G1	276	329.52		399
R127	Chloride, total	mg/L	1		292	326.6		418
R127	Chlorobenzene	ug/L	1	G2	5		500	< 5
R127	Chloroethane	ug/L	1	G2	10			< 10
R127	Chloroform	ug/L	1	G2	5		350	< 1
R127	Chloromethane	ug/L	1	G2	10			< 10
R127	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
R127	Chromium, total	ug/L	1		390	481.2	1000	< 1
R127	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R127	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R127	Cobalt, total	ug/L	1		45	1	1000	< 1
R127	Copper, total	ug/L	1		140	92.99	650	7
R127	Cyanide, total	mg/L	1	G1	0.005	0.01	0.6	< 0.005
R127	Dibenzofuran	ug/L	1					< 10
R127	Dibromochloromethane	ug/L	1	G2	5			< 1
R127	Dibromomethane	ug/L	1	G2	5			< 5
R127	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R127	Ethylbenzene	ug/L	1	G2	5		1000	< 5

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R127	Fluoranthene	ug/L	1				1400	< 10
R127	Fluorene	ug/L	1				1400	< 10
R127	Hexachlorobutadiene	ug/L	1	G2	10			< 10
R127	Iodomethane	ug/L	1	G2	5			< 5
R127	Iron, total	ug/L	1		20654000	13335.37		2570
R127	Isophorone	ug/L	1		10			< 10
R127	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
R127	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
R127	Lead, total	ug/L	1		105	8	100	< 2
R127	Magnesium, dissolved	mg/L	1	G1	30.9	148.8		158
R127	Magnesium, total	mg/L	1		43.52	122.44		237
R127	Manganese, total	ug/L	1		2150	2514.41		4000
R127	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
R127	Methylene Chloride	ug/L	1	G2	5		50	< 5
R127	m-Xylene	ug/L	1		5			< 5
R127	Naphthalene	ug/L	1	G2	10		220	< 10
R127	n-Butylbenzene	ug/L	1	G2	5			< 5
R127	Nickel, total	ug/L	1		1410	217.78	2000	428
R127	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	< 0.1
R127	Nitrate as N, total	mg/L	1		0.88	0.44	100	< 0.1
R127	n-Propylbenzene	ug/L	1	G2	5			< 5
R127	Oil (Hexane Soluble)	mg/L	1	G2	13	1		< 1
R127	o-Xylene	ug/L	1		5			< 5
R127	pH (field)	SU	1	G1	7.56 - 8.21	6 - 8.11		6.69
R127	Phenanthrene	ug/L	1					< 10
R127	Phenolics	ug/L	1	G2	10	10	100	< 10
R127	p-Isopropyltoluene	ug/L	1	G2	5			< 5
R127	Potassium, total	mg/L	1		36	6.09		2.5
R127	p-Xylene	ug/L	1		5			< 5
R127	Pyrene	ug/L	1				1050	< 10
R127	sec-Butylbenzene	ug/L	1	G2	5			< 5
R127	Selenium, total	ug/L	1		9	2	50	3
R127	Silver, total	ug/L	1		1	1		< 1
R127	Sodium, total	mg/L	1		479.8	271.69		178
R127	Specific Conductance (field)	umhos/cm	1	G1	2578			979
R127	Styrene	ug/L	1	G2	5		500	< 5
R127	Sulfate, dissolved	mg/L	1	G1	79	15		56
R127	Sulfate, total	mg/L	1		79	15		55
R127	tert-Butylbenzene	ug/L	1	G2	5			< 5
R127	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R127	Tetrahydrofuran	ug/L	1	G2	5			< 5
R127	Tin, total	ug/L	1					< 20
R127	Toluene	ug/L	1	G2	5		2500	< 5
R127	Total Dissolved Solids	mg/L	1	G1	1421	1399.28	1200	1210
R127	Total Organic Carbon	mg/L	1		11.9	21.55		21
R127	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
R127	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R127	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 5
R127	Trichloroethene	ug/L	1	G2	5		25	< 5
R127	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R127	Vanadium, total	ug/L	1		140	10	100	< 10
R127	Vinyl Acetate	ug/L	1	G2	10			< 5
R127	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R127	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R127	Zinc, dissolved	ug/L	1	G1	9	21.44	10000	< 5
R127	Zinc, total	ug/L	1		760	46	10000	< 5
R132	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R132	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
R132	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
R132	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
R132	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
R132	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
R132	1,1-Dichloropropene	ug/L	1	G2	5			< 5
R132	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
R132	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R132	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
R132	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
R132	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
R132	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
R132	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
R132	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
R132	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
R132	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
R132	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
R132	1,3-Dichloropropane	ug/L	1	G2	5			< 5
R132	1,3-Dichloropropene	ug/L	1	G2	5			< 5
R132	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
R132	2,2-Dichloropropane	ug/L	1	G2	5			< 5
R132	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
R132	2-Chlorotoluene	ug/L	1	G2	5			< 5
R132	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
R132	4-Chlorotoluene	ug/L	1	G2	5			< 5
R132	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
R132	Acetone	ug/L	1	G2	10		6300	< 10
R132	Acrylonitrile	ug/L	1	G2	100			< 100
R132	Ammonia as N, Diss.	mg/L	1	G1	1.82	0.81		< 0.1
R132	Arsenic, dissolved	ug/L	1	G1	19	5	200	< 2
R132	Benzene	ug/L	1	G2	5		25	< 5
R132	Boron, dissolved	ug/L	1	G1	1901	640	2000	510
R132	Bromobenzene	ug/L	1	G2	5			< 5
R132	Bromochloromethane	ug/L	1	G2	5			< 5
R132	Bromodichloromethane	ug/L	1	G2	5			< 5
R132	Bromoform	ug/L	1	G2	5			< 5
R132	Bromomethane	ug/L	1	G2	5			< 5
R132	Cadmium, dissolved	ug/L	1	G1	68	1	50	< 1
R132	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
R132	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
R132	Chloride, dissolved	mg/L	1	G1	276	68		218
R132	Chlorobenzene	ug/L	1	G2	5		500	< 5
R132	Chloroethane	ug/L	1	G2	10			< 10
R132	Chloroform	ug/L	1	G2	5		350	< 5
R132	Chloromethane	ug/L	1	G2	10			< 10
R132	Chromium, dissolved	ug/L	1	G1	3	1	1000	< 1
R132	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
R132	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R132	Cyanide, total	mg/L	1	G1	0.005	0.005	0.6	< 0.005
R132	Dibromochloromethane	ug/L	1	G2	5			< 5
R132	Dibromomethane	ug/L	1	G2	5			< 5
R132	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
R132	Ethylbenzene	ug/L	1	G2	5		1000	< 5
R132	Hexachlorobutadiene	ug/L	1	G2	10			< 10
R132	Iodomethane	ug/L	1	G2	5			< 5
R132	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
R132	Lead, dissolved	ug/L	1	G1	16	2	100	< 2
R132	Magnesium, dissolved	mg/L	1	G1	30.9	113.8		114
R132	Mercury, dissolved	ug/L	1	G1	0.2	0.2	10	< 0.2
R132	Methylene Chloride	ug/L	1	G2	5		50	< 5
R132	Naphthalene	ug/L	1	G2	10		220	< 5
R132	n-Butylbenzene	ug/L	1	G2	5			< 5
R132	Nitrate as N, dissolved	mg/L	1	G1	1.37	1.003	100	0.67
R132	n-Propylbenzene	ug/L	1	G2	5			< 5
R132	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
R132	pH (field)	SU	1	G1	7.56 - 8.21	5.87 - 9.58		6.91
R132	Phenolics	ug/L	1	G2	10	110	100	< 10
R132	p-Isopropyltoluene	ug/L	1	G2	5			< 5
R132	sec-Butylbenzene	ug/L	1	G2	5			< 5
R132	Specific Conductance (field)	umhos/cm	1	G1	2578			2008
R132	Styrene	ug/L	1	G2	5		500	< 5
R132	Sulfate, dissolved	mg/L	1	G1	79	299.3		230
R132	tert-Butylbenzene	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
R132	Tetrachloroethene	ug/L	1	G2	5		25	< 5
R132	Tetrahydrofuran	ug/L	1	G2	5		< 5	
R132	Toluene	ug/L	1	G2	5		2500	< 5
R132	Total Dissolved Solids	mg/L	1	G1	1421	941	1200	1370
R132	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
R132	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
R132	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
R132	Trichloroethene	ug/L	1	G2	5		25	< 5
R132	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
R132	Vinyl Acetate	ug/L	1	G2	10			< 10
R132	Vinyl Chloride	ug/L	1	G2	10		10	< 2
R132	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
R132	Zinc, dissolved	ug/L	1	G1	9	39.62	10000	< 5
T101	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T101	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T101	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T101	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T101	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T101	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T101	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T101	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T101	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T101	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T101	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T101	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T101	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T101	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T101	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T101	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T101	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T101	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T101	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T101	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T101	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T101	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T101	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T101	2-Chlorotoluene	ug/L	1	G2	5			< 5
T101	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T101	4-Chlorotoluene	ug/L	1	G2	5			< 5
T101	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T101	Acetone	ug/L	1	G2	10		6300	< 10
T101	Acrylonitrile	ug/L	1	G2	100			< 100
T101	Ammonia as N, Diss.	mg/L	1	G1	1.82			< 0.1
T101	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T101	Benzene	ug/L	1	G2	5		25	< 5
T101	Boron, dissolved	ug/L	1	G1	1901		2000	830
T101	Bromobenzene	ug/L	1	G2	5			< 5
T101	Bromochloromethane	ug/L	1	G2	5			< 5
T101	Bromodichloromethane	ug/L	1	G2	5			< 5
T101	Bromoform	ug/L	1	G2	5			< 5
T101	Bromomethane	ug/L	1	G2	5			< 5
T101	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T101	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T101	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T101	Chloride, dissolved	mg/L	1	G1	276			129
T101	Chlorobenzene	ug/L	1	G2	5		500	< 5
T101	Chloroethane	ug/L	1	G2	10			< 10
T101	Chloroform	ug/L	1	G2	5		350	< 5
T101	Chloromethane	ug/L	1	G2	10			< 10
T101	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T101	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T101	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T101	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T101	Dibromochloromethane	ug/L	1	G2	5			< 5
T101	Dibromomethane	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T101	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T101	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T101	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T101	Iodomethane	ug/L	1	G2	5			< 5
T101	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T101	Lead, dissolved	ug/L	1	G1	16		100	< 2
T101	Magnesium, dissolved	mg/L	1	G1	30.9			146
T101	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T101	Methylene Chloride	ug/L	1	G2	5		50	< 5
T101	Naphthalene	ug/L	1	G2	10		220	< 5
T101	n-Butylbenzene	ug/L	1	G2	5			< 5
T101	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T101	n-Propylbenzene	ug/L	1	G2	5			< 5
T101	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T101	pH (field)	SU	1	G1	7.56 - 8.21			6.84
T101	Phenolics	ug/L	1	G2	10		100	< 10
T101	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T101	sec-Butylbenzene	ug/L	1	G2	5			< 5
T101	Specific Conductance (field)	umhos/cm	1	G1	2578			1125
T101	Styrene	ug/L	1	G2	5		500	< 5
T101	Sulfate, dissolved	mg/L	1	G1	79			1340
T101	tert-Butylbenzene	ug/L	1	G2	5			< 5
T101	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T101	Tetrahydrofuran	ug/L	1	G2	5			< 5
T101	Toluene	ug/L	1	G2	5		2500	< 5
T101	Total Dissolved Solids	mg/L	1	G1	1421		1200	2980
T101	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T101	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T101	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T101	Trichloroethene	ug/L	1	G2	5		25	< 5
T101	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T101	Vinyl Acetate	ug/L	1	G2	10			< 10
T101	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T101	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T101	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T103	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T103	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T103	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T103	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T103	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T103	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T103	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T103	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T103	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T103	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T103	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T103	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T103	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T103	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T103	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T103	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T103	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T103	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T103	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T103	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T103	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T103	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T103	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T103	2-Chlorotoluene	ug/L	1	G2	5			< 5
T103	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T103	4-Chlorotoluene	ug/L	1	G2	5			< 5
T103	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T103	Acetone	ug/L	1	G2	10		6300	< 10
T103	Acrylonitrile	ug/L	1	G2	100			< 100
T103	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.49

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T103	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T103	Benzene	ug/L	1	G2	5		25	< 5
T103	Boron, dissolved	ug/L	1	G1	1901		2000	170
T103	Bromobenzene	ug/L	1	G2	5		< 5	
T103	Bromochloromethane	ug/L	1	G2	5		< 5	
T103	Bromodichloromethane	ug/L	1	G2	5		< 5	
T103	Bromoform	ug/L	1	G2	5		< 5	
T103	Bromomethane	ug/L	1	G2	5		< 5	
T103	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T103	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T103	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T103	Chloride, dissolved	mg/L	1	G1	276			57
T103	Chloride, total	mg/L	1		292			57
T103	Chlorobenzene	ug/L	1	G2	5		500	< 5
T103	Chloroethane	ug/L	1	G2	10		< 10	
T103	Chloroform	ug/L	1	G2	5		350	< 5
T103	Chloromethane	ug/L	1	G2	10		< 10	
T103	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T103	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T103	cis-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T103	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T103	Dibromochloromethane	ug/L	1	G2	5		< 5	
T103	Dibromomethane	ug/L	1	G2	5		< 5	
T103	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T103	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T103	Hexachlorobutadiene	ug/L	1	G2	10		< 10	
T103	Iodomethane	ug/L	1	G2	5		< 5	
T103	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T103	Lead, dissolved	ug/L	1	G1	16		100	< 2
T103	Magnesium, dissolved	mg/L	1	G1	30.9			49.8
T103	Manganese, total	ug/L	1		2150			1240
T103	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T103	Methylene Chloride	ug/L	1	G2	5		50	< 5
T103	Naphthalene	ug/L	1	G2	10		220	< 5
T103	n-Butylbenzene	ug/L	1	G2	5		< 5	
T103	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T103	n-Propylbenzene	ug/L	1	G2	5		< 5	
T103	Oil (Hexane Soluble)	mg/L	1	G2	13		< 1	
T103	pH (field)	SU	1	G1	7.56 - 8.21			7.07
T103	Phenolics	ug/L	1	G2	10		100	< 10
T103	p-Isopropyltoluene	ug/L	1	G2	5		< 5	
T103	sec-Butylbenzene	ug/L	1	G2	5		< 5	
T103	Specific Conductance (field)	umhos/cm	1	G1	2578			664
T103	Styrene	ug/L	1	G2	5		500	< 5
T103	Sulfate, dissolved	mg/L	1	G1	79			102
T103	Sulfate, total	mg/L	1		79			100
T103	tert-Butylbenzene	ug/L	1	G2	5		< 5	
T103	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T103	Tetrahydrofuran	ug/L	1	G2	5		< 5	
T103	Toluene	ug/L	1	G2	5		2500	< 5
T103	Total Dissolved Solids	mg/L	1	G1	1421		1200	639
T103	Total Organic Carbon	mg/L	1		11.9			5.9
T103	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T103	trans-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T103	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10		< 20	
T103	Trichloroethene	ug/L	1	G2	5		25	< 5
T103	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T103	Vinyl Acetate	ug/L	1	G2	10		< 10	
T103	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T103	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T103	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T104	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5		< 5	
T104	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T104	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5		< 5	
T104	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5

## Notes:

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T104	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T104	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T104	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T104	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T104	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T104	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T104	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T104	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T104	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T104	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T104	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T104	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T104	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T104	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T104	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T104	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T104	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T104	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T104	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T104	2-Chlorotoluene	ug/L	1	G2	5			< 5
T104	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T104	4-Chlorotoluene	ug/L	1	G2	5			< 5
T104	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T104	Acetone	ug/L	1	G2	10		6300	< 10
T104	Acrylonitrile	ug/L	1	G2	100			< 100
T104	Ammonia as N, Diss.	mg/L	1	G1	1.82			2.56
T104	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T104	Benzene	ug/L	1	G2	5		25	< 5
T104	Boron, dissolved	ug/L	1	G1	1901		2000	1980
T104	Bromobenzene	ug/L	1	G2	5			< 5
T104	Bromochloromethane	ug/L	1	G2	5			< 5
T104	Bromodichloromethane	ug/L	1	G2	5			< 5
T104	Bromoform	ug/L	1	G2	5			< 5
T104	Bromomethane	ug/L	1	G2	5			< 5
T104	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T104	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T104	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T104	Chloride, dissolved	mg/L	1	G1	276			86
T104	Chloride, total	mg/L	1		292			92
T104	Chlorobenzene	ug/L	1	G2	5		500	< 5
T104	Chloroethane	ug/L	1	G2	10			< 10
T104	Chloroform	ug/L	1	G2	5		350	< 5
T104	Chloromethane	ug/L	1	G2	10			< 10
T104	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T104	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T104	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T104	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T104	Dibromochloromethane	ug/L	1	G2	5			< 5
T104	Dibromomethane	ug/L	1	G2	5			< 5
T104	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T104	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T104	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T104	Iodomethane	ug/L	1	G2	5			< 5
T104	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T104	Lead, dissolved	ug/L	1	G1	16		100	< 2
T104	Magnesium, dissolved	mg/L	1	G1	30.9			158
T104	Manganese, total	ug/L	1		2150			670
T104	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T104	Methylene Chloride	ug/L	1	G2	5		50	< 5
T104	Naphthalene	ug/L	1	G2	10		220	< 5
T104	n-Butylbenzene	ug/L	1	G2	5			< 5
T104	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T104	n-Propylbenzene	ug/L	1	G2	5			< 5
T104	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T104	pH (field)	SU	1	G1	7.56 - 8.21			6.83

Notes:

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Andrews Engineering, Inc.

23 of 41

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T104	Phenolics	ug/L	1	G2	10		100	< 10
T104	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T104	sec-Butylbenzene	ug/L	1	G2	5			< 5
T104	Specific Conductance (field)	umhos/cm	1	G1	2578			1791
T104	Styrene	ug/L	1	G2	5		500	< 5
T104	Sulfate, dissolved	mg/L	1	G1	79			1920
T104	Sulfate, total	mg/L	1		79			1790
T104	tert-Butylbenzene	ug/L	1	G2	5			< 5
T104	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T104	Tetrahydrofuran	ug/L	1	G2	5			< 5
T104	Toluene	ug/L	1	G2	5		2500	< 5
T104	Total Dissolved Solids	mg/L	1	G1	1421		1200	4040
T104	Total Organic Carbon	mg/L	1		11.9			3.2
T104	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T104	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T104	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T104	Trichloroethene	ug/L	1	G2	5		25	< 5
T104	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T104	Vinyl Acetate	ug/L	1	G2	10			< 10
T104	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T104	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T104	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T110	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T110	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T110	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T110	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T110	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T110	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T110	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T110	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T110	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T110	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T110	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T110	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T110	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T110	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T110	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T110	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T110	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T110	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T110	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T110	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T110	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T110	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T110	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T110	2-Chlorotoluene	ug/L	1	G2	5			< 5
T110	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T110	4-Chlorotoluene	ug/L	1	G2	5			< 5
T110	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T110	Acetone	ug/L	1	G2	10		6300	< 10
T110	Acrylonitrile	ug/L	1	G2	100			< 100
T110	Ammonia as N, Diss.	mg/L	1	G1	1.82			< 0.1
T110	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T110	Benzene	ug/L	1	G2	5		25	< 5
T110	Boron, dissolved	ug/L	1	G1	1901		2000	170
T110	Bromobenzene	ug/L	1	G2	5			< 5
T110	Bromochloromethane	ug/L	1	G2	5			< 5
T110	Bromodichloromethane	ug/L	1	G2	5			< 5
T110	Bromoform	ug/L	1	G2	5			< 5
T110	Bromomethane	ug/L	1	G2	5			< 5
T110	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T110	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T110	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T110	Chloride, dissolved	mg/L	1	G1	276			10
T110	Chloride, total	mg/L	1		292			8

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T110	Chlorobenzene	ug/L	1	G2	5		500	< 5
T110	Chloroethane	ug/L	1	G2	10			< 10
T110	Chloroform	ug/L	1	G2	5		350	< 5
T110	Chloromethane	ug/L	1	G2	10			< 10
T110	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T110	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T110	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T110	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T110	Dibromochloromethane	ug/L	1	G2	5			< 5
T110	Dibromomethane	ug/L	1	G2	5			< 5
T110	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T110	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T110	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T110	Iodomethane	ug/L	1	G2	5			< 5
T110	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T110	Lead, dissolved	ug/L	1	G1	16		100	< 2
T110	Magnesium, dissolved	mg/L	1	G1	30.9			145
T110	Manganese, total	ug/L	1		2150			1760
T110	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T110	Methylene Chloride	ug/L	1	G2	5		50	< 5
T110	Naphthalene	ug/L	1	G2	10		220	< 5
T110	n-Butylbenzene	ug/L	1	G2	5			< 5
T110	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T110	n-Propylbenzene	ug/L	1	G2	5			< 5
T110	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T110	pH (field)	SU	1	G1	7.56 - 8.21			6.73
T110	Phenolics	ug/L	1	G2	10		100	< 10
T110	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T110	sec-Butylbenzene	ug/L	1	G2	5			< 5
T110	Specific Conductance (field)	umhos/cm	1	G1	2578			720
T110	Styrene	ug/L	1	G2	5		500	< 5
T110	Sulfate, dissolved	mg/L	1	G1	79			1240
T110	Sulfate, total	mg/L	1		79			1160
T110	tert-Butylbenzene	ug/L	1	G2	5			< 5
T110	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T110	Tetrahydrofuran	ug/L	1	G2	5			< 5
T110	Toluene	ug/L	1	G2	5		2500	< 5
T110	Total Dissolved Solids	mg/L	1	G1	1421		1200	2410
T110	Total Organic Carbon	mg/L	1		11.9			3.2
T110	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T110	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T110	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T110	Trichloroethene	ug/L	1	G2	5		25	< 5
T110	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T110	Vinyl Acetate	ug/L	1	G2	10			< 10
T110	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T110	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T110	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T111	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T111	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T111	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T111	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T111	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T111	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T111	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T111	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T111	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T111	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T111	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T111	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T111	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T111	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T111	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T111	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T111	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/ or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T111	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T111	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T111	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T111	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T111	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T111	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T111	2-Chlorotoluene	ug/L	1	G2	5			< 5
T111	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T111	4-Chlorotoluene	ug/L	1	G2	5			< 5
T111	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T111	Acetone	ug/L	1	G2	10		6300	< 10
T111	Acrylonitrile	ug/L	1	G2	100			< 100
T111	Ammonia as N, Diss.	mg/L	1	G1	1.82			1.82
T111	Arsenic, dissolved	ug/L	1	G1	19		200	8
T111	Benzene	ug/L	1	G2	5		25	< 5
T111	Boron, dissolved	ug/L	1	G1	1901		2000	220
T111	Bromobenzene	ug/L	1	G2	5			< 5
T111	Bromochloromethane	ug/L	1	G2	5			< 5
T111	Bromodichloromethane	ug/L	1	G2	5			< 5
T111	Bromoform	ug/L	1	G2	5			< 5
T111	Bromomethane	ug/L	1	G2	5			< 5
T111	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T111	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T111	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T111	Chloride, dissolved	mg/L	1	G1	276			21
T111	Chloride, total	mg/L	1		292			22
T111	Chlorobenzene	ug/L	1	G2	5		500	< 5
T111	Chloroethane	ug/L	1	G2	10			< 10
T111	Chloroform	ug/L	1	G2	5		350	< 5
T111	Chloromethane	ug/L	1	G2	10			< 10
T111	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T111	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T111	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T111	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T111	Dibromochloromethane	ug/L	1	G2	5			< 5
T111	Dibromomethane	ug/L	1	G2	5			< 5
T111	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T111	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T111	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T111	Iodomethane	ug/L	1	G2	5			< 5
T111	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T111	Lead, dissolved	ug/L	1	G1	16		100	< 2
T111	Magnesium, dissolved	mg/L	1	G1	30.9			147
T111	Manganese, total	ug/L	1		2150			8150
T111	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T111	Methylene Chloride	ug/L	1	G2	5		50	< 5
T111	Naphthalene	ug/L	1	G2	10		220	< 5
T111	n-Butylbenzene	ug/L	1	G2	5			< 5
T111	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T111	n-Propylbenzene	ug/L	1	G2	5			< 5
T111	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T111	pH (field)	SU	1	G1	7.56 - 8.21			5.92
T111	Phenolics	ug/L	1	G2	10		100	< 10
T111	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T111	sec-Butylbenzene	ug/L	1	G2	5			< 5
T111	Specific Conductance (field)	umhos/cm	1	G1	2578			1159
T111	Styrene	ug/L	1	G2	5		500	< 5
T111	Sulfate, dissolved	mg/L	1	G1	79			1920
T111	Sulfate, total	mg/L	1		79			2050
T111	tert-Butylbenzene	ug/L	1	G2	5			< 5
T111	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T111	Tetrahydrofuran	ug/L	1	G2	5			< 5
T111	Toluene	ug/L	1	G2	5		2500	< 5
T111	Total Dissolved Solids	mg/L	1	G1	1421		1200	3260
T111	Total Organic Carbon	mg/L	1		11.9			5.4

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/ or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T111	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T111	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T111	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T111	Trichloroethene	ug/L	1	G2	5		25	< 5
T111	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T111	Vinyl Acetate	ug/L	1	G2	10			< 10
T111	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T111	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T111	Zinc, dissolved	ug/L	1	G1	9		10000	146
T113	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T113	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T113	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T113	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T113	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T113	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T113	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T113	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T113	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T113	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T113	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T113	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T113	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T113	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T113	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T113	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T113	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T113	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T113	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T113	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T113	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T113	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T113	2-Chlorotoluene	ug/L	1	G2	5			< 5
T113	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T113	4-Chlorotoluene	ug/L	1	G2	5			< 5
T113	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T113	Acetone	ug/L	1	G2	10		6300	< 10
T113	Acrylonitrile	ug/L	1	G2	100			< 100
T113	Ammonia as N, Diss.	mg/L	1	G1	1.82			2.41
T113	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T113	Benzene	ug/L	1	G2	5		25	< 5
T113	Boron, dissolved	ug/L	1	G1	1901		2000	560
T113	Bromobenzene	ug/L	1	G2	5			< 5
T113	Bromochloromethane	ug/L	1	G2	5			< 5
T113	Bromodichloromethane	ug/L	1	G2	5			< 5
T113	Bromoform	ug/L	1	G2	5			< 5
T113	Bromomethane	ug/L	1	G2	5			< 5
T113	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T113	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T113	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T113	Chloride, dissolved	mg/L	1	G1	276			93
T113	Chloride, total	mg/L	1		292			98
T113	Chlorobenzene	ug/L	1	G2	5		500	< 5
T113	Chloroethane	ug/L	1	G2	10			< 10
T113	Chloroform	ug/L	1	G2	5		350	< 5
T113	Chloromethane	ug/L	1	G2	10			< 10
T113	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T113	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T113	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T113	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T113	Dibromochloromethane	ug/L	1	G2	5			< 5
T113	Dibromomethane	ug/L	1	G2	5			< 5
T113	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T113	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T113	Hexachlorobutadiene	ug/L	1	G2	10			< 10

## Notes:

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T113	Iodomethane	ug/L	1	G2	5			< 5
T113	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T113	Lead, dissolved	ug/L	1	G1	16		100	< 2
T113	Magnesium, dissolved	mg/L	1	G1	30.9			170
T113	Manganese, total	ug/L	1		2150			20600
T113	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T113	Methylene Chloride	ug/L	1	G2	5		50	< 5
T113	Naphthalene	ug/L	1	G2	10		220	< 5
T113	n-Butylbenzene	ug/L	1	G2	5			< 5
T113	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T113	n-Propylbenzene	ug/L	1	G2	5			< 5
T113	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T113	pH (field)	SU	1	G1	7.56 - 8.21			6.72
T113	Phenolics	ug/L	1	G2	10		100	< 10
T113	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T113	sec-Butylbenzene	ug/L	1	G2	5			< 5
T113	Specific Conductance (field)	umhos/cm	1	G1	2578			986
T113	Styrene	ug/L	1	G2	5		500	< 5
T113	Sulfate, dissolved	mg/L	1	G1	79			520
T113	Sulfate, total	mg/L	1		79			530
T113	tert-Butylbenzene	ug/L	1	G2	5			< 5
T113	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T113	Tetrahydrofuran	ug/L	1	G2	5			< 5
T113	Toluene	ug/L	1	G2	5		2500	< 5
T113	Total Dissolved Solids	mg/L	1	G1	1421		1200	1900
T113	Total Organic Carbon	mg/L	1		11.9			24
T113	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T113	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T113	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T113	Trichloroethene	ug/L	1	G2	5		25	< 5
T113	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T113	Vinyl Acetate	ug/L	1	G2	10			< 10
T113	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T113	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T113	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T114	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T114	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T114	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T114	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T114	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T114	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T114	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T114	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T114	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T114	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T114	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T114	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T114	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T114	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T114	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T114	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T114	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T114	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T114	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T114	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T114	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T114	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T114	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T114	2-Chlorotoluene	ug/L	1	G2	5			< 5
T114	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T114	4-Chlorotoluene	ug/L	1	G2	5			< 5
T114	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T114	Acetone	ug/L	1	G2	10		6300	< 10
T114	Acrylonitrile	ug/L	1	G2	100			< 100
T114	Ammonia as N, Diss.	mg/L	1	G1	1.82	25.42		11.7

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/ or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T114	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T114	Benzene	ug/L	1	G2	5		25	< 5
T114	Boron, dissolved	ug/L	1	G1	1901		2000	990
T114	Bromobenzene	ug/L	1	G2	5		< 5	
T114	Bromochloromethane	ug/L	1	G2	5		< 5	
T114	Bromodichloromethane	ug/L	1	G2	5		< 5	
T114	Bromoform	ug/L	1	G2	5		< 5	
T114	Bromomethane	ug/L	1	G2	5		< 5	
T114	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T114	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T114	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T114	Chloride, dissolved	mg/L	1	G1	276			202
T114	Chlorobenzene	ug/L	1	G2	5		500	< 5
T114	Chloroethane	ug/L	1	G2	10		< 10	
T114	Chloroform	ug/L	1	G2	5		350	< 5
T114	Chloromethane	ug/L	1	G2	10		< 10	
T114	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T114	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T114	cis-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T114	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T114	Dibromochloromethane	ug/L	1	G2	5			< 5
T114	Dibromomethane	ug/L	1	G2	5			< 5
T114	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T114	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T114	Hexachlorobutadiene	ug/L	1	G2	10		< 10	
T114	Iodomethane	ug/L	1	G2	5		< 5	
T114	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T114	Lead, dissolved	ug/L	1	G1	16		100	< 2
T114	Magnesium, dissolved	mg/L	1	G1	30.9	176.61		171
T114	Manganese, total	ug/L	1		2150			8340
T114	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T114	Methylene Chloride	ug/L	1	G2	5		50	< 5
T114	Naphthalene	ug/L	1	G2	10		220	< 5
T114	n-Butylbenzene	ug/L	1	G2	5		< 5	
T114	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	0.3
T114	n-Propylbenzene	ug/L	1	G2	5		< 5	
T114	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T114	pH (field)	SU	1	G1	7.56 - 8.21	6.16 - 7.31		6.62
T114	Phenolics	ug/L	1	G2	10	90.99	100	< 10
T114	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T114	sec-Butylbenzene	ug/L	1	G2	5			< 5
T114	Specific Conductance (field)	umhos/cm	1	G1	2578	3161.94		2389
T114	Styrene	ug/L	1	G2	5		500	< 5
T114	Sulfate, dissolved	mg/L	1	G1	79			27
T114	tert-Butylbenzene	ug/L	1	G2	5		< 5	
T114	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T114	Tetrahydrofuran	ug/L	1	G2	5			20.3
T114	Toluene	ug/L	1	G2	5		2500	< 5
T114	Total Dissolved Solids	mg/L	1	G1	1421	1736.63	1200	1410
T114	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T114	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T114	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T114	Trichloroethene	ug/L	1	G2	5		25	< 5
T114	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T114	Vinyl Acetate	ug/L	1	G2	10			< 10
T114	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T114	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T114	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T115	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T115	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T115	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T115	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T115	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T115	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T115	1,1-Dichloropropene	ug/L	1	G2	5			< 5

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T115	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T115	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T115	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T115	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T115	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T115	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T115	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T115	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T115	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T115	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T115	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T115	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T115	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T115	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T115	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T115	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T115	2-Chlorotoluene	ug/L	1	G2	5			< 5
T115	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T115	4-Chlorotoluene	ug/L	1	G2	5			< 5
T115	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T115	Acetone	ug/L	1	G2	10		6300	< 10
T115	Acrylonitrile	ug/L	1	G2	100			< 100
T115	Ammonia as N, Diss.	mg/L	1	G1	1.82	6.76		2.56
T115	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T115	Benzene	ug/L	1	G2	5		25	< 5
T115	Boron, dissolved	ug/L	1	G1	1901		2000	250
T115	Bromobenzene	ug/L	1	G2	5			< 5
T115	Bromochloromethane	ug/L	1	G2	5			< 5
T115	Bromodichloromethane	ug/L	1	G2	5			< 5
T115	Bromoform	ug/L	1	G2	5			< 5
T115	Bromomethane	ug/L	1	G2	5			< 5
T115	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T115	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T115	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T115	Chloride, dissolved	mg/L	1	G1	276			52
T115	Chlorobenzene	ug/L	1	G2	5		500	< 5
T115	Chloroethane	ug/L	1	G2	10			< 10
T115	Chloroform	ug/L	1	G2	5		350	< 5
T115	Chloromethane	ug/L	1	G2	10			< 10
T115	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T115	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T115	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T115	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T115	Dibromochloromethane	ug/L	1	G2	5			< 5
T115	Dibromomethane	ug/L	1	G2	5			< 5
T115	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T115	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T115	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T115	Iodomethane	ug/L	1	G2	5			< 5
T115	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T115	Lead, dissolved	ug/L	1	G1	16		100	< 2
T115	Magnesium, dissolved	mg/L	1	G1	30.9	126.66		119
T115	Manganese, total	ug/L	1		2150			5560
T115	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T115	Methylene Chloride	ug/L	1	G2	5		50	< 5
T115	Naphthalene	ug/L	1	G2	10		220	< 5
T115	n-Butylbenzene	ug/L	1	G2	5			< 5
T115	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T115	n-Propylbenzene	ug/L	1	G2	5			< 5
T115	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T115	pH (field)	SU	1	G1	7.56 - 8.21	5.18 - 8.86		6.91
T115	Phenolics	ug/L	1	G2	10		100	< 10
T115	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T115	sec-Butylbenzene	ug/L	1	G2	5			< 5
T115	Specific Conductance (field)	umhos/cm	1	G1	2578			904

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T115	Styrene	ug/L	1	G2	5		500	< 5
T115	Sulfate, dissolved	mg/L	1	G1	79	1394.52		480
T115	Sulfate, total	mg/L	1		79			480
T115	tert-Butylbenzene	ug/L	1	G2	5		< 5	
T115	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T115	Tetrahydrofuran	ug/L	1	G2	5		< 5	
T115	Toluene	ug/L	1	G2	5		2500	< 5
T115	Total Dissolved Solids	mg/L	1	G1	1421	2708.41	1200	1520
T115	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T115	trans-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T115	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10		< 20	
T115	Trichloroethene	ug/L	1	G2	5		25	< 5
T115	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T115	Vinyl Acetate	ug/L	1	G2	10		< 10	
T115	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T115	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T115	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T116	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5		< 5	
T116	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T116	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5		< 5	
T116	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T116	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T116	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T116	1,1-Dichloropropene	ug/L	1	G2	5		< 5	
T116	1,2,3-Trichlorobenzene	ug/L	1	G2	5		< 5	
T116	1,2,3-Trichloropropane	ug/L	1	G2	5		< 5	
T116	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T116	1,2,4-Trimethylbenzene	ug/L	1	G2	5		< 5	
T116	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T116	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T116	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T116	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T116	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T116	1,3,5-Trimethylbenzene	ug/L	1	G2	5		< 5	
T116	1,3-Dichlorobenzene	ug/L	1	G2	10		< 5	
T116	1,3-Dichloropropane	ug/L	1	G2	5		< 5	
T116	1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T116	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T116	2,2-Dichloropropane	ug/L	1	G2	5		< 5	
T116	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T116	2-Chlorotoluene	ug/L	1	G2	5		< 5	
T116	2-Hexanone (MBK)	ug/L	1	G2	5		< 10	
T116	4-Chlorotoluene	ug/L	1	G2	5		< 5	
T116	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5		< 10	
T116	Acetone	ug/L	1	G2	10		6300	< 10
T116	Acrylonitrile	ug/L	1	G2	100		< 100	
T116	Ammonia as N, Diss.	mg/L	1	G1	1.82		< 0.1	
T116	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T116	Benzene	ug/L	1	G2	5		25	< 5
T116	Boron, dissolved	ug/L	1	G1	1901		2000	320
T116	Bromobenzene	ug/L	1	G2	5		< 5	
T116	Bromochloromethane	ug/L	1	G2	5		< 5	
T116	Bromodichloromethane	ug/L	1	G2	5		< 5	
T116	Bromoform	ug/L	1	G2	5		< 5	
T116	Bromomethane	ug/L	1	G2	5		< 5	
T116	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T116	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T116	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T116	Chloride, dissolved	mg/L	1	G1	276			18
T116	Chlorobenzene	ug/L	1	G2	5		500	< 5
T116	Chloroethane	ug/L	1	G2	10		< 10	
T116	Chloroform	ug/L	1	G2	5		350	< 5
T116	Chloromethane	ug/L	1	G2	10		< 10	
T116	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T116	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T116	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T116	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T116	Dibromochloromethane	ug/L	1	G2	5			< 5
T116	Dibromomethane	ug/L	1	G2	5			< 5
T116	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T116	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T116	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T116	Iodomethane	ug/L	1	G2	5			< 5
T116	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T116	Lead, dissolved	ug/L	1	G1	16		100	< 2
T116	Magnesium, dissolved	mg/L	1	G1	30.9	112.58		87.5
T116	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T116	Methylene Chloride	ug/L	1	G2	5		50	< 5
T116	Naphthalene	ug/L	1	G2	10		220	< 5
T116	n-Butylbenzene	ug/L	1	G2	5			< 5
T116	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T116	n-Propylbenzene	ug/L	1	G2	5			< 5
T116	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T116	pH (field)	SU	1	G1	7.56 - 8.21	5.37 - 8.62		7.19
T116	Phenolics	ug/L	1	G2	10		100	< 10
T116	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T116	sec-Butylbenzene	ug/L	1	G2	5			< 5
T116	Specific Conductance (field)	umhos/cm	1	G1	2578			858
T116	Styrene	ug/L	1	G2	5		500	< 5
T116	Sulfate, dissolved	mg/L	1	G1	79	661.98		416
T116	tert-Butylbenzene	ug/L	1	G2	5			< 5
T116	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T116	Tetrahydrofuran	ug/L	1	G2	5			< 5
T116	Toluene	ug/L	1	G2	5		2500	< 5
T116	Total Dissolved Solids	mg/L	1	G1	1421		1200	1180
T116	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T116	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T116	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T116	Trichloroethene	ug/L	1	G2	5		25	< 5
T116	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T116	Vinyl Acetate	ug/L	1	G2	10			< 10
T116	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T116	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T116	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T117	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T117	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T117	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T117	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T117	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T117	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T117	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T117	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T117	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T117	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T117	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T117	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T117	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T117	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T117	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T117	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T117	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T117	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T117	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T117	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T117	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T117	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T117	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T117	2-Chlorotoluene	ug/L	1	G2	5			< 5
T117	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T117	4-Chlorotoluene	ug/L	1	G2	5			< 5

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T117	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T117	Acetone	ug/L	1	G2	10		6300	< 10
T117	Acrylonitrile	ug/L	1	G2	100			< 100
T117	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.54
T117	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T117	Benzene	ug/L	1	G2	5		25	< 5
T117	Boron, dissolved	ug/L	1	G1	1901		2000	80
T117	Bromobenzene	ug/L	1	G2	5			< 5
T117	Bromoform	ug/L	1	G2	5			< 5
T117	Bromochloromethane	ug/L	1	G2	5			< 5
T117	Bromodichloromethane	ug/L	1	G2	5			< 5
T117	Bromoform	ug/L	1	G2	5			< 5
T117	Bromomethane	ug/L	1	G2	5			< 5
T117	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T117	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T117	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T117	Chloride, dissolved	mg/L	1	G1	276			14
T117	Chlorobenzene	ug/L	1	G2	5		500	< 5
T117	Chloroethane	ug/L	1	G2	10			< 10
T117	Chloroform	ug/L	1	G2	5		350	< 5
T117	Chloromethane	ug/L	1	G2	10			< 10
T117	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T117	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T117	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T117	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T117	Dibromochloromethane	ug/L	1	G2	5			< 5
T117	Dibromomethane	ug/L	1	G2	5			< 5
T117	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T117	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T117	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T117	Iodomethane	ug/L	1	G2	5			< 5
T117	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T117	Lead, dissolved	ug/L	1	G1	16		100	< 2
T117	Magnesium, dissolved	mg/L	1	G1	30.9	80.41		63.8
T117	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T117	Methylene Chloride	ug/L	1	G2	5		50	< 5
T117	Naphthalene	ug/L	1	G2	10		220	< 5
T117	n-Butylbenzene	ug/L	1	G2	5			< 5
T117	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T117	n-Propylbenzene	ug/L	1	G2	5			< 5
T117	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T117	pH (field)	SU	1	G1	7.56 - 8.21	5.42 - 8.05		6.91
T117	Phenolics	ug/L	1	G2	10		100	< 10
T117	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T117	sec-Butylbenzene	ug/L	1	G2	5			< 5
T117	Specific Conductance (field)	umhos/cm	1	G1	2578			715
T117	Styrene	ug/L	1	G2	5		500	< 5
T117	Sulfate, dissolved	mg/L	1	G1	79	606.31		350
T117	tert-Butylbenzene	ug/L	1	G2	5			< 5
T117	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T117	Tetrahydrofuran	ug/L	1	G2	5			< 5
T117	Toluene	ug/L	1	G2	5		2500	< 5
T117	Total Dissolved Solids	mg/L	1	G1	1421		1200	885
T117	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T117	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T117	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T117	Trichloroethene	ug/L	1	G2	5		25	< 5
T117	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T117	Vinyl Acetate	ug/L	1	G2	10			< 10
T117	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T117	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T117	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T118	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T118	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T118	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T118	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T118	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T118	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T118	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T118	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T118	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T118	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T118	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T118	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T118	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T118	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T118	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T118	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T118	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T118	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T118	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T118	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T118	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T118	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T118	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T118	2-Chlorotoluene	ug/L	1	G2	5			< 5
T118	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T118	4-Chlorotoluene	ug/L	1	G2	5			< 5
T118	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T118	Acetone	ug/L	1	G2	10		6300	< 10
T118	Acrylonitrile	ug/L	1	G2	100			< 100
T118	Ammonia as N, Diss.	mg/L	1	G1	1.82	16.79		2.78
T118	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T118	Benzene	ug/L	1	G2	5		25	< 5
T118	Boron, dissolved	ug/L	1	G1	1901		2000	100
T118	Bromobenzene	ug/L	1	G2	5			< 5
T118	Bromochloromethane	ug/L	1	G2	5			< 5
T118	Bromodichloromethane	ug/L	1	G2	5			< 5
T118	Bromoform	ug/L	1	G2	5			< 5
T118	Bromomethane	ug/L	1	G2	5			< 5
T118	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T118	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T118	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T118	Chloride, dissolved	mg/L	1	G1	276			55
T118	Chlorobenzene	ug/L	1	G2	5		500	< 5
T118	Chloroethane	ug/L	1	G2	10			< 10
T118	Chloroform	ug/L	1	G2	5		350	< 5
T118	Chloromethane	ug/L	1	G2	10			< 10
T118	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T118	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T118	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T118	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T118	Dibromochloromethane	ug/L	1	G2	5			< 5
T118	Dibromomethane	ug/L	1	G2	5			< 5
T118	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T118	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T118	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T118	Iodomethane	ug/L	1	G2	5			< 5
T118	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T118	Lead, dissolved	ug/L	1	G1	16		100	< 2
T118	Magnesium, dissolved	mg/L	1	G1	30.9	114.7		39.3
T118	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T118	Methylene Chloride	ug/L	1	G2	5		50	< 5
T118	Naphthalene	ug/L	1	G2	10		220	< 5
T118	n-Butylbenzene	ug/L	1	G2	5			< 5
T118	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T118	n-Propylbenzene	ug/L	1	G2	5			< 5
T118	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T118	pH (field)	SU	1	G1	7.56 - 8.21	6.21 - 7.69		7.12
T118	Phenolics	ug/L	1	G2	10		100	< 10
T118	p-Isopropyltoluene	ug/L	1	G2	5			< 5

Notes:

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Andrews Engineering, Inc.

34 of 41

Brickyard Unit I - 2Q13-1.xlsx  
Table 2 - 2Q13 Unit I

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T118	sec-Butylbenzene	ug/L	1	G2	5			< 5
T118	Specific Conductance (field)	umhos/cm	1	G1	2578			641
T118	Styrene	ug/L	1	G2	5		500	< 5
T118	Sulfate, dissolved	mg/L	1	G1	79	4089.09		< 15
T118	tert-Butylbenzene	ug/L	1	G2	5			< 5
T118	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T118	Tetrahydrofuran	ug/L	1	G2	5			< 5
T118	Toluene	ug/L	1	G2	5		2500	< 5
T118	Total Dissolved Solids	mg/L	1	G1	1421	5107.68	1200	550
T118	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T118	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T118	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T118	Trichloroethene	ug/L	1	G2	5		25	< 5
T118	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T118	Vinyl Acetate	ug/L	1	G2	10			< 10
T118	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T118	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T118	Zinc, dissolved	ug/L	1	G1	9	178.98	10000	< 5
T119	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T119	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T119	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T119	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T119	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T119	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T119	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T119	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T119	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T119	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T119	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T119	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T119	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T119	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T119	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T119	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T119	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T119	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T119	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T119	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T119	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T119	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T119	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T119	2-Chlorotoluene	ug/L	1	G2	5			< 5
T119	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T119	4-Chlorotoluene	ug/L	1	G2	5			< 5
T119	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T119	Acetone	ug/L	1	G2	10		6300	< 10
T119	Acrylonitrile	ug/L	1	G2	100			< 100
T119	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.71
T119	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T119	Benzene	ug/L	1	G2	5		25	< 5
T119	Boron, dissolved	ug/L	1	G1	1901		2000	970
T119	Bromobenzene	ug/L	1	G2	5			< 5
T119	Bromochloromethane	ug/L	1	G2	5			< 5
T119	Bromodichloromethane	ug/L	1	G2	5			< 5
T119	Bromoform	ug/L	1	G2	5			< 5
T119	Bromomethane	ug/L	1	G2	5			< 5
T119	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T119	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T119	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T119	Chloride, dissolved	mg/L	1	G1	276			197
T119	Chlorobenzene	ug/L	1	G2	5		500	< 5
T119	Chloroethane	ug/L	1	G2	10			< 10
T119	Chloroform	ug/L	1	G2	5		350	< 5
T119	Chloromethane	ug/L	1	G2	10			< 10
T119	Chromium, dissolved	ug/L	1	G1	3		1000	< 1

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T119	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T119	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T119	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T119	Dibromochloromethane	ug/L	1	G2	5			< 5
T119	Dibromomethane	ug/L	1	G2	5			< 5
T119	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T119	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T119	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T119	Iodomethane	ug/L	1	G2	5			< 5
T119	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T119	Lead, dissolved	ug/L	1	G1	16		100	< 2
T119	Magnesium, dissolved	mg/L	1	G1	30.9	56.6		52.7
T119	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T119	Methylene Chloride	ug/L	1	G2	5		50	< 5
T119	Naphthalene	ug/L	1	G2	10		220	< 5
T119	n-Butylbenzene	ug/L	1	G2	5			< 5
T119	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	0.23
T119	n-Propylbenzene	ug/L	1	G2	5			< 5
T119	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T119	pH (field)	SU	1	G1	7.56 - 8.21	6.92 - 7.63		7.44
T119	Phenolics	ug/L	1	G2	10		100	< 10
T119	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T119	sec-Butylbenzene	ug/L	1	G2	5			< 5
T119	Specific Conductance (field)	umhos/cm	1	G1	2578			944
T119	Styrene	ug/L	1	G2	5		500	< 5
T119	Sulfate, dissolved	mg/L	1	G1	79			< 15
T119	tert-Butylbenzene	ug/L	1	G2	5			< 5
T119	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T119	Tetrahydrofuran	ug/L	1	G2	5			< 5
T119	Toluene	ug/L	1	G2	5		2500	< 5
T119	Total Dissolved Solids	mg/L	1	G1	1421		1200	936
T119	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T119	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T119	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T119	Trichloroethene	ug/L	1	G2	5		25	< 5
T119	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T119	Vinyl Acetate	ug/L	1	G2	10			< 10
T119	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T119	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T119	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T120	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T120	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T120	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T120	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T120	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T120	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T120	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T120	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T120	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T120	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T120	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T120	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T120	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T120	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T120	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T120	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T120	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T120	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T120	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T120	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T120	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T120	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T120	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T120	2-Chlorotoluene	ug/L	1	G2	5			< 5
T120	2-Hexanone (MBK)	ug/L	1	G2	5			< 10

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T120	4-Chlorotoluene	ug/L	1	G2	5			< 5
T120	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T120	Acetone	ug/L	1	G2	10		6300	< 10
T120	Acrylonitrile	ug/L	1	G2	100			< 100
T120	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.61
T120	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T120	Benzene	ug/L	1	G2	5		25	< 5
T120	Boron, dissolved	ug/L	1	G1	1901		2000	910
T120	Bromobenzene	ug/L	1	G2	5			< 5
T120	Bromochloromethane	ug/L	1	G2	5			< 5
T120	Bromodichloromethane	ug/L	1	G2	5			< 5
T120	Bromoform	ug/L	1	G2	5			< 5
T120	Bromomethane	ug/L	1	G2	5			< 5
T120	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T120	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T120	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T120	Chloride, dissolved	mg/L	1	G1	276			69
T120	Chlorobenzene	ug/L	1	G2	5		500	< 5
T120	Chloroethane	ug/L	1	G2	10			< 10
T120	Chloroform	ug/L	1	G2	5		350	< 5
T120	Chloromethane	ug/L	1	G2	10			< 10
T120	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T120	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T120	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T120	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T120	Dibromochloromethane	ug/L	1	G2	5			< 5
T120	Dibromomethane	ug/L	1	G2	5			< 5
T120	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T120	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T120	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T120	Iodomethane	ug/L	1	G2	5			< 5
T120	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T120	Lead, dissolved	ug/L	1	G1	16		100	< 2
T120	Magnesium, dissolved	mg/L	1	G1	30.9			13.8
T120	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T120	Methylene Chloride	ug/L	1	G2	5		50	< 5
T120	Naphthalene	ug/L	1	G2	10		220	< 5
T120	n-Butylbenzene	ug/L	1	G2	5			< 5
T120	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T120	n-Propylbenzene	ug/L	1	G2	5			< 5
T120	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T120	pH (field)	SU	1	G1	7.56 - 8.21			7.78
T120	Phenolics	ug/L	1	G2	10		100	< 10
T120	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T120	sec-Butylbenzene	ug/L	1	G2	5			< 5
T120	Specific Conductance (field)	umhos/cm	1	G1	2578			703
T120	Styrene	ug/L	1	G2	5		500	< 5
T120	Sulfate, dissolved	mg/L	1	G1	79			< 15
T120	tert-Butylbenzene	ug/L	1	G2	5			< 5
T120	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T120	Tetrahydrofuran	ug/L	1	G2	5			< 5
T120	Toluene	ug/L	1	G2	5		2500	< 5
T120	Total Dissolved Solids	mg/L	1	G1	1421		1200	547
T120	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T120	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T120	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T120	Trichloroethene	ug/L	1	G2	5		25	< 5
T120	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T120	Vinyl Acetate	ug/L	1	G2	10			< 10
T120	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T120	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T120	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T121	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T121	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T121	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T121	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T121	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T121	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T121	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T121	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T121	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T121	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T121	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T121	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T121	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T121	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T121	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T121	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T121	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T121	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T121	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T121	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T121	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T121	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T121	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T121	2-Chlorotoluene	ug/L	1	G2	5			< 5
T121	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T121	4-Chlorotoluene	ug/L	1	G2	5			< 5
T121	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T121	Acetone	ug/L	1	G2	10		6300	< 10
T121	Acrylonitrile	ug/L	1	G2	100			< 100
T121	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.41
T121	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T121	Benzene	ug/L	1	G2	5		25	< 5
T121	Boron, dissolved	ug/L	1	G1	1901		2000	1210
T121	Bromobenzene	ug/L	1	G2	5			< 5
T121	Bromochloromethane	ug/L	1	G2	5			< 5
T121	Bromodichloromethane	ug/L	1	G2	5			< 5
T121	Bromoform	ug/L	1	G2	5			< 5
T121	Bromomethane	ug/L	1	G2	5			< 5
T121	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T121	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T121	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T121	Chloride, dissolved	mg/L	1	G1	276	497.49		440
T121	Chlorobenzene	ug/L	1	G2	5		500	< 5
T121	Chloroethane	ug/L	1	G2	10			< 10
T121	Chloroform	ug/L	1	G2	5		350	< 5
T121	Chloromethane	ug/L	1	G2	10			< 10
T121	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T121	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T121	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T121	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T121	Dibromochloromethane	ug/L	1	G2	5			< 5
T121	Dibromomethane	ug/L	1	G2	5			< 5
T121	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T121	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T121	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T121	Iodomethane	ug/L	1	G2	5			< 5
T121	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T121	Lead, dissolved	ug/L	1	G1	16		100	< 2
T121	Magnesium, dissolved	mg/L	1	G1	30.9			3.3
T121	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T121	Methylene Chloride	ug/L	1	G2	5		50	< 5
T121	Naphthalene	ug/L	1	G2	10		220	< 5
T121	n-Butylbenzene	ug/L	1	G2	5			< 5
T121	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T121	n-Propylbenzene	ug/L	1	G2	5			< 5
T121	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T121	pH (field)	SU	1	G1	7.56 - 8.21	6.9 - 9.81		8.1
T121	Phenolics	ug/L	1	G2	10		100	< 10

Notes:

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/ or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

38 of 41

Brickyard Unit I - 2Q13-1.xlsx  
Table 2 - 2Q13 Unit I

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T121	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T121	sec-Butylbenzene	ug/L	1	G2	5			< 5
T121	Specific Conductance (field)	umhos/cm	1	G1	2578			1739
T121	Styrene	ug/L	1	G2	5		500	< 5
T121	Sulfate, dissolved	mg/L	1	G1	79			< 15
T121	tert-Butylbenzene	ug/L	1	G2	5			< 5
T121	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T121	Tetrahydrofuran	ug/L	1	G2	5			< 5
T121	Toluene	ug/L	1	G2	5		2500	< 5
T121	Total Dissolved Solids	mg/L	1	G1	1421		1200	1320
T121	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T121	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T121	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T121	Trichloroethene	ug/L	1	G2	5		25	< 5
T121	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T121	Vinyl Acetate	ug/L	1	G2	10			< 10
T121	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T121	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T121	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T122	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T122	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T122	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T122	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T122	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T122	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T122	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T122	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T122	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T122	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T122	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T122	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T122	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T122	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T122	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T122	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T122	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T122	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T122	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T122	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T122	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T122	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T122	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T122	2-Chlorotoluene	ug/L	1	G2	5			< 5
T122	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T122	4-Chlorotoluene	ug/L	1	G2	5			< 5
T122	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T122	Acetone	ug/L	1	G2	10		6300	< 10
T122	Acrylonitrile	ug/L	1	G2	100			< 100
T122	Ammonia as N, Diss.	mg/L	1	G1	1.82			0.72
T122	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T122	Benzene	ug/L	1	G2	5		25	< 5
T122	Boron, dissolved	ug/L	1	G1	1901		2000	1020
T122	Bromobenzene	ug/L	1	G2	5			< 5
T122	Bromochloromethane	ug/L	1	G2	5			< 5
T122	Bromodichloromethane	ug/L	1	G2	5			< 5
T122	Bromoform	ug/L	1	G2	5			< 5
T122	Bromomethane	ug/L	1	G2	5			< 5
T122	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T122	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T122	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T122	Chloride, dissolved	mg/L	1	G1	276			9
T122	Chlorobenzene	ug/L	1	G2	5		500	< 5
T122	Chloroethane	ug/L	1	G2	10			< 10
T122	Chloroform	ug/L	1	G2	5		350	< 5
T122	Chloromethane	ug/L	1	G2	10			< 10

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/ or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T122	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T122	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T122	cis-1,3-Dichloropropene	ug/L	1	G2	5		< 5	
T122	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T122	Dibromochloromethane	ug/L	1	G2	5		< 5	
T122	Dibromomethane	ug/L	1	G2	5		< 5	
T122	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T122	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T122	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T122	Iodomethane	ug/L	1	G2	5			< 5
T122	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T122	Lead, dissolved	ug/L	1	G1	16		100	< 2
T122	Magnesium, dissolved	mg/L	1	G1	30.9			8.4
T122	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T122	Methylene Chloride	ug/L	1	G2	5		50	< 5
T122	Naphthalene	ug/L	1	G2	10		220	< 5
T122	n-Butylbenzene	ug/L	1	G2	5			< 5
T122	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T122	n-Propylbenzene	ug/L	1	G2	5			< 5
T122	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T122	pH (field)	SU	1	G1	7.56 - 8.21			7.85
T122	Phenolics	ug/L	1	G2	10		100	< 10
T122	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T122	sec-Butylbenzene	ug/L	1	G2	5			< 5
T122	Specific Conductance (field)	umhos/cm	1	G1	2578			533
T122	Styrene	ug/L	1	G2	5		500	< 5
T122	Sulfate, dissolved	mg/L	1	G1	79			< 15
T122	tert-Butylbenzene	ug/L	1	G2	5			< 5
T122	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T122	Tetrahydrofuran	ug/L	1	G2	5			< 5
T122	Toluene	ug/L	1	G2	5		2500	< 5
T122	Total Dissolved Solids	mg/L	1	G1	1421		1200	347
T122	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T122	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T122	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T122	Trichloroethene	ug/L	1	G2	5		25	< 5
T122	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T122	Vinyl Acetate	ug/L	1	G2	10			< 10
T122	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T122	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T122	Zinc, dissolved	ug/L	1	G1	9		10000	< 5
T123	1,1,1,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T123	1,1,1-Trichloroethane	ug/L	1	G2	5		1000	< 5
T123	1,1,2,2-Tetrachloroethane	ug/L	1	G2	5			< 5
T123	1,1,2-Trichloroethane	ug/L	1	G2	5		50	< 5
T123	1,1-Dichloroethane	ug/L	1	G2	5		7000	< 5
T123	1,1-Dichloroethene	ug/L	1	G2	5		35	< 5
T123	1,1-Dichloropropene	ug/L	1	G2	5			< 5
T123	1,2,3-Trichlorobenzene	ug/L	1	G2	5			< 5
T123	1,2,3-Trichloropropane	ug/L	1	G2	5			< 5
T123	1,2,4-Trichlorobenzene	ug/L	1	G2	5		700	< 5
T123	1,2,4-Trimethylbenzene	ug/L	1	G2	5			< 5
T123	1,2-Dibromo-3-chloropropane	ug/L	1	G2	10		2	< 5
T123	1,2-Dibromoethane	ug/L	1	G2	10		0.5	< 5
T123	1,2-Dichlorobenzene	ug/L	1	G2	10		1500	< 5
T123	1,2-Dichloroethane	ug/L	1	G2	5		25	< 5
T123	1,2-Dichloropropane	ug/L	1	G2	5		25	< 5
T123	1,3,5-Trimethylbenzene	ug/L	1	G2	5			< 5
T123	1,3-Dichlorobenzene	ug/L	1	G2	10			< 5
T123	1,3-Dichloropropane	ug/L	1	G2	5			< 5
T123	1,3-Dichloropropene	ug/L	1	G2	5			< 5
T123	1,4-Dichlorobenzene	ug/L	1	G2	10		375	< 5
T123	2,2-Dichloropropane	ug/L	1	G2	5			< 5
T123	2-Butanone (MEK)	ug/L	1	G2	10		4200	< 10
T123	2-Chlorotoluene	ug/L	1	G2	5			< 5

**Notes:**

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Andrews Engineering, Inc.

**Table 2**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Analytical Data**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
T123	2-Hexanone (MBK)	ug/L	1	G2	5			< 10
T123	4-Chlorotoluene	ug/L	1	G2	5			< 5
T123	4-Methyl-2-pentanone (MIBK)	ug/L	1	G2	5			< 10
T123	Acetone	ug/L	1	G2	10		6300	< 10
T123	Acrylonitrile	ug/L	1	G2	100			< 100
T123	Ammonia as N, Diss.	mg/L	1	G1	1.82			1.02
T123	Arsenic, dissolved	ug/L	1	G1	19		200	< 2
T123	Benzene	ug/L	1	G2	5		25	< 5
T123	Boron, dissolved	ug/L	1	G1	1901		2000	1200
T123	Bromobenzene	ug/L	1	G2	5			< 5
T123	Bromochloromethane	ug/L	1	G2	5			< 5
T123	Bromodichloromethane	ug/L	1	G2	5			< 5
T123	Bromoform	ug/L	1	G2	5			< 5
T123	Bromomethane	ug/L	1	G2	5			< 5
T123	Cadmium, dissolved	ug/L	1	G1	68		50	< 1
T123	Carbon Disulfide	ug/L	1	G2	5		3500	< 5
T123	Carbon Tetrachloride	ug/L	1	G2	5		25	< 5
T123	Chloride, dissolved	mg/L	1	G1	276			22
T123	Chlorobenzene	ug/L	1	G2	5		500	< 5
T123	Chloroethane	ug/L	1	G2	10			< 10
T123	Chloroform	ug/L	1	G2	5		350	< 5
T123	Chloromethane	ug/L	1	G2	10			< 10
T123	Chromium, dissolved	ug/L	1	G1	3		1000	< 1
T123	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	< 5
T123	cis-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T123	Cyanide, total	mg/L	1	G1	0.005		0.6	< 0.005
T123	Dibromochloromethane	ug/L	1	G2	5			< 5
T123	Dibromomethane	ug/L	1	G2	5			< 5
T123	Dichlorodifluoromethane	ug/L	1	G2	5		7000	< 5
T123	Ethylbenzene	ug/L	1	G2	5		1000	< 5
T123	Hexachlorobutadiene	ug/L	1	G2	10			< 10
T123	Iodomethane	ug/L	1	G2	5			< 5
T123	Isopropylbenzene	ug/L	1	G2	5		3500	< 5
T123	Lead, dissolved	ug/L	1	G1	16		100	< 2
T123	Magnesium, dissolved	mg/L	1	G1	30.9			12.2
T123	Mercury, dissolved	ug/L	1	G1	0.2		10	< 0.2
T123	Methylene Chloride	ug/L	1	G2	5		50	< 5
T123	Naphthalene	ug/L	1	G2	10		220	< 5
T123	n-Butylbenzene	ug/L	1	G2	5			< 5
T123	Nitrate as N, dissolved	mg/L	1	G1	1.37		100	< 0.1
T123	n-Propylbenzene	ug/L	1	G2	5			< 5
T123	Oil (Hexane Soluble)	mg/L	1	G2	13			< 1
T123	pH (field)	SU	1	G1	7.56 - 8.21			7.56
T123	Phenolics	ug/L	1	G2	10		100	< 10
T123	p-Isopropyltoluene	ug/L	1	G2	5			< 5
T123	sec-Butylbenzene	ug/L	1	G2	5			< 5
T123	Specific Conductance (field)	umhos/cm	1	G1	2578			562
T123	Styrene	ug/L	1	G2	5		500	< 5
T123	Sulfate, dissolved	mg/L	1	G1	79			< 15
T123	tert-Butylbenzene	ug/L	1	G2	5			< 5
T123	Tetrachloroethene	ug/L	1	G2	5		25	< 5
T123	Tetrahydrofuran	ug/L	1	G2	5			< 5
T123	Toluene	ug/L	1	G2	5		2500	< 5
T123	Total Dissolved Solids	mg/L	1	G1	1421		1200	233
T123	trans-1,2-Dichloroethene	ug/L	1	G2	5		500	< 5
T123	trans-1,3-Dichloropropene	ug/L	1	G2	5			< 5
T123	trans-1,4-Dichloro-2-butene	ug/L	1	G2	10			< 20
T123	Trichloroethene	ug/L	1	G2	5		25	< 5
T123	Trichlorofluoromethane	ug/L	1	G2	5		10500	< 5
T123	Vinyl Acetate	ug/L	1	G2	10			< 10
T123	Vinyl Chloride	ug/L	1	G2	10		10	< 2
T123	Xylenes (Total)	ug/L	1	G2	5		10000	< 5
T123	Zinc, dissolved	ug/L	1	G1	9		10000	< 5

**Notes:**

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 3**  
**Second Quarter 2013 Exceedences**

**Table 3**  
**Brickyard Disposal and Recycling**  
**Second Quarter 2013 Exceedences**

Well	Parameter	Units	Unit	GW List	Interwell	Intrawell	Class IV	2Q13
A126	cis-1,2-Dichloroethene	ug/L	1	G2	5		200	8.8
G125	Ammonia as N, Diss.	mg/L	1	G1	1.82	5.04		16.2
G125	Ammonia as N, total	mg/L	1		1.75	3.92		16.9
G125	Magnesium, total	mg/L	1		43.52	226.99		251
G130	pH (field)	SU	1	G1	7.56 - 8.21			7.26
G131	Nitrate as N, dissolved	mg/L	1	G1	1.37	0.1	100	2.31
G133	pH (field)	SU	1	G1	7.56 - 8.21			6.98
G133	Sulfate, dissolved	mg/L	1	G1	79			89
G134	Magnesium, dissolved	mg/L	1	G1	30.9	39.61		109
G134	pH (field)	SU	1	G1	7.56 - 8.21			6.75
G134	Sulfate, dissolved	mg/L	1	G1	79			335
R103	pH (field)	SU	1	G1	7.38 - 7.61		6.5 - 9	6.73
R106	Zinc, dissolved	ug/L	1	G1	9	9	10000	15
R123	Ammonia as N, Diss.	mg/L	1	G1	1.82	1.28		7.28
R123	Chloride, dissolved	mg/L	1	G1	276	274.64		460
R124	Ammonia as N, total	mg/L	1		1.75	53.5		60.9
R124	Boron, dissolved	ug/L	1	G1	1901	2125	2000	2620
R124	Boron, total	ug/L	1		1200	1230	2000	2450
R124	Calcium, total	mg/L	1		228	279.16		555
R124	Chemical Oxygen Demand	mg/L	1		97	116		139
R124	Magnesium, total	mg/L	1		43.52	136.98		298
R124	Potassium, total	mg/L	1		36	66.99		140
R124	Total Dissolved Solids	mg/L	1	G1	1421	1904.15	1200	1920
R127	Calcium, total	mg/L	1		228	178.5		388
R127	Chloride, dissolved	mg/L	1	G1	276	329.52		399
R127	Chloride, total	mg/L	1		292	326.6		418
R127	Magnesium, dissolved	mg/L	1	G1	30.9	148.8		158
R127	Magnesium, total	mg/L	1		43.52	122.44		237
R127	Manganese, total	ug/L	1		2150	2514.41		4000
R132	Magnesium, dissolved	mg/L	1	G1	30.9	113.8		114
T101	Magnesium, dissolved	mg/L	1	G1	30.9			146
T101	pH (field)	SU	1	G1	7.56 - 8.21			6.84
T101	Sulfate, dissolved	mg/L	1	G1	79			1340
T101	Total Dissolved Solids	mg/L	1	G1	1421		1200	2980
T103	Magnesium, dissolved	mg/L	1	G1	30.9			49.8
T103	pH (field)	SU	1	G1	7.56 - 8.21			7.07
T103	Sulfate, dissolved	mg/L	1	G1	79			102
T103	Sulfate, total	mg/L	1		79			100
T104	Ammonia as N, Diss.	mg/L	1	G1	1.82			2.56
T104	Boron, dissolved	ug/L	1	G1	1901		2000	1980
T104	Magnesium, dissolved	mg/L	1	G1	30.9			158
T104	pH (field)	SU	1	G1	7.56 - 8.21			6.83
T104	Sulfate, dissolved	mg/L	1	G1	79			1920
T104	Sulfate, total	mg/L	1		79			1790
T104	Total Dissolved Solids	mg/L	1	G1	1421		1200	4040
T110	Magnesium, dissolved	mg/L	1	G1	30.9			145
T110	pH (field)	SU	1	G1	7.56 - 8.21			6.73
T110	Sulfate, dissolved	mg/L	1	G1	79			1240
T110	Sulfate, total	mg/L	1		79			1160
T110	Total Dissolved Solids	mg/L	1	G1	1421		1200	2410
T111	Magnesium, dissolved	mg/L	1	G1	30.9			147
T111	Manganese, total	ug/L	1		2150			8150
T111	pH (field)	SU	1	G1	7.56 - 8.21			5.92
T111	Sulfate, dissolved	mg/L	1	G1	79			1920
T111	Sulfate, total	mg/L	1		79			2050
T111	Total Dissolved Solids	mg/L	1	G1	1421		1200	3260
T111	Zinc, dissolved	ug/L	1	G1	9		10000	146
T113	Ammonia as N, Diss.	mg/L	1	G1	1.82			2.41
T113	Magnesium, dissolved	mg/L	1	G1	30.9			170
T113	Manganese, total	ug/L	1		2150			20600
T113	pH (field)	SU	1	G1	7.56 - 8.21			6.72
T113	Sulfate, dissolved	mg/L	1	G1	79			520
T113	Sulfate, total	mg/L	1		79			530
T113	Total Dissolved Solids	mg/L	1	G1	1421		1200	1900
T113	Total Organic Carbon	mg/L	1		11.9			24
T114	Manganese, total	ug/L	1		2150			8340
T114	Tetrahydrofuran	ug/L	1	G2	5			20.3
T115	Manganese, total	ug/L	1		2150			5560
T115	Sulfate, total	mg/L	1		79			480

## Notes:

A highlighted cell indicates an exceedence of the Interwell, Intrawell and/or Class IV standard per Permit Condition VIII.A.13 (Mod 98).

Andrews Engineering, Inc.

**Table 4**  
**Permit Modification History – Background Revisions**

**Table 4**  
**Brickyard Disposal and Recycling**  
**Permit Modification History - Background Revisions**

Modification No.	Issue Date	LOG #	DESCRIPTION
10	10/15/1997	1997-020	Approves AGQS and MAPC's for Unit II groundwater monitoring wells, approves the abandonment of 2 wells, added background values for Unit I wells to the permit, and added 2 additional Unit I, up-gradient wells.
13	7/23/1998	1998-067	Approved continued assessment monitoring, the addition of revised background values for the coal unit groundwater monitoring wells, and added introwell and interwell background values for the Sand Unit groundwater monitoring well G21S.
23	2/25/2000	1999-289	Approves introwell background values for inorganic parameters for coal unit wells which were submitted as required by special condition 12.A.17 of Modification No. 19.
27	9/12/2000	2000-242	Approves background values for wells R132, G33S and R106.
31	8/3/2001	2001-151	Approved the addition of 8 gas wells to Unit I, reduced the assessment monitoring constituents list and 2 introwell values at wells G115 and G118.
33	1/15/2002	2001-234	Approved introwell values proposed in Log No. 2001-378.
44	3/23/2004	2003-413	Approved inorganic introwell values for Unit I well G34S.
56	7/13/2006	2006-117	Approves: A) the ERA report, B) assessment of exceeding inorganic constituents in the Groundwater Management Zone (GMZ), C) return to detection monitoring at well G147, D)
		2006-118	and redevelopment of interwell values for dissolved zinc and boron.
58	8/2/2007	2007-146	Approved AGQS's and MAPC's for dissolved zinc and dissolved boron.
71	11/20/2009	2009-261	Approved a revised introwell background value for dissolved zinc at groundwater monitoring well G115.
72	2/4/2010	2009-326	Address Conditions VIII 21 and 22 and VIII.B.24 and 26 in Modification No. 65, dated March 4, 2009. Established new interwell prediction values.
78	12/17/2010	2010-465	Revising introwell background values as per Permit Condition VIII.A.21.

**Table 4**  
**Brickyard Disposal and Recycling**  
**Permit Modification History - Background Revisions**

Modification No.	Issue Date	LOG #	DESCRIPTION
82	7/27/2011	2010-472	Approved an Alternate Source Demonstration for 2nd quarter 2010 confirmed increases including introwell values at T117 and T118.
		2011-007	Approved an Alternate Source Demonstration for 3rd quarter 2010 confirmed increases including introwell values at T116, T119, and T121.
86	5/14/2012	2012-055	Approved application for significant permit modification to address permit condition VIII.24 Unit II, monitoring wells R046 and G047.
88	6/15/2012	2012-098	Approved application for significant permit modification to address permit condition VIII.21 Unit I, Monitoring Well G35S.
91	8/27/2012	2012-222	Approves application for significant permit modification to assess confirmed exceedences from 4th quarter 2011 sampling event.
92	12/3/2012	2012-428	Condition VIII.A.22 (Modification No. 44) and the development of introwell background values for select parameters at T114 and T115.
93	3/6/2013	2012-535	Application for significant modification to address permit condition VIII.23 Unit 1 Monitoring Well A126.
95	4/24/2013	2013-034	Alternate source demonstration for third quarter 2012 confirmed exceedences of total dissolved solids at wells T114 and T118.
96	5/22/2013	2012-575	Assessment monitoring plan for G34S.
97	7/10/2013	2013-143	Alternate Source Demonstration for Fourth Quarter 2012 confirmed exceedences, including development of introwell vlues for dissolved magnesium at R132 and dissolved zinc at G039.
		2013-154	Annual evaluation of remedial activities in accordance with Permit Condition IX.5 (Modification No. 92).
		2013-155	Assessment monitoring plan for G35S.
		2013-159	Alternate source demonstration for fourth quarter 2012 confirmed exceedence of phenolics at T114, including development of an introwell value.
98	8/19/2013	2013-147	Approved introwell value for dissolved magnesium at R046.
99	10/24/2013	2013-361	1Q13 alternate source demonstration, including revised interwell value for pH (sand seam) and proposal to revise interwell values for dissolved sulfate at Unit I and dissolved zinc at Unit II.
100	1/17/2014	2013-503	Approved introwell values for total manganese at T114 and T115 and total sulfate at T115.
101	2/5/2014	2013-527	Alternate source demonstration for second quarter 2013 confirmed exceedences, including development of a revised interwell value for pH at Unit I (coal seam).
102	5/28/2014	2014-032	Alternate source demonstration for dissolved magnesium at G34S, including development of a revised introwell value, and continued assessment monitoring plan for G35S.

**Table 5**  
**Cost to Implement Cover Plan**

**Table 5**  
**Brickyard Disposal and Recycling**  
**Cost to Implement the Cover Plan (Four Acres)**

Task No.	Item No.	Description	Item Sub Total	Item Total	Task Total
1	a	<b>Field Verification of Cover</b> Design of Cover Verification Plan General Project Management/Client Interface	\$1,800 \$770	\$2,570	\$18,104
	b	Surveying Investigation - Contractor (2 Days) Oversight (2 Days) Equipment Fees Travel Expenses for Oversight (Oversight) Documentation	\$8,000 \$3,000 \$1,584 \$250 \$700 \$2,000	\$15,534	
2	a	<b>Final Cover Augmentation Plan</b> Design of Cover Augmentation Construction Plans and Bid Specifications Health and Safety Plan Management Review/Client Communication	\$2,400 \$3,600 \$656 \$1,200	\$7,856	\$7,856
3	a	<b>Final Cover Augmentation</b> Selection of Contractor and Preconstruction Meeting	\$3,000	\$3,000	\$402,004
	b	Mobilization (Lump Sum) Surface Preparation (Grubbing) Backfill and Grading	\$18,000 \$8,800 \$147,000	\$173,800	
	c	Earthen Low Permeability Layer Placement (Load, Haul, Place and Compact) Final Protective Layer (Load, Haul, Place and Grade) Vegetation (Lime, Fertilize, Seed and Mulch) Turf Reinforcement (Slopes Near Swale)	\$90,342 \$19,362 \$10,500 \$105,000	\$225,204	
4	a	<b>Construction Quality Assurance (Oversight)</b> Junior Engineer Engineering Technician Professional Engineer Travel Expenses	\$6,708 \$10,920 \$9,240 \$4,000	\$30,868	\$41,551
	b	Equipment Fees	\$8,508	\$8,508	
	c	Materials Testing	\$2,175	\$2,175	
5	a	<b>Construction Quality Assurance Report</b> Construction Quality Assurance Report for Complete Project	\$8,000	\$8,000	\$8,000
			<b>Subtotal</b>	<b>\$477,515</b>	
			<b>Contingencies</b>	<b>20%</b>	
			<b>TOTAL</b>	<b>\$573,018</b>	

**Table 6**  
**Cost for Excavation and Backfill of Extraneous Materials**

**Table 6**  
**Brickyard Disposal and Recycling**  
**Cost for Excavation and Backfill of Extraneous Materials (18.6 Acres)**

Task No.	Item No.	Description	Item Sub Total	Item Total	Task Total
1	a	<b>Design and Implementation of Extraneous Materials Investigation</b> Design of Investigation Plan \$1,800 Bid Specifications and Contractor Acquisition \$1,300 General Project Management/Client Interface \$770	\$3,870		
	b	Surveying \$4,000 Travel Expenses \$350 Investigation - Contractor (10 Days) \$25,000 Oversight (10 Days) \$6,480 Travel Expenses for Oversight \$1,000 Documentation \$2,000	\$38,830		\$42,700
2	a	<b>Extraneous Materials Excavation Design</b> Materials Excavation Design/Plan \$24,000 Construction Plans and Bid Specifications \$15,600 Health and Safety Plan \$8,200 Management Review/Client Communication \$12,000	\$59,800		
	b	Identification of Permit Needs \$7,000	\$7,000		\$66,800
3	a	<b>Design and Permit Modifications</b> Design and Permit Applications for Gas System, Odor Control, Temporary Storage Areas, Leachate Conveyance Lines, and Stormwater Revisions \$36,000 Management Oversight \$11,250 Illinois EPA and Client Meetings \$6,000	\$53,250		
	b	Permit Revisions to Groundwater Monitoring Program \$5,700	\$5,700		
	c	Design Changes for Leachate Management within the Excavation Areas \$8,000	\$8,000		\$66,950
4	a	<b>Extraneous Material Excavation</b> Initial Field Preparation - Survey Layout \$3,456 Travel Expenses \$350 Equipment Fees \$250	\$4,056		
	b	Mobilization/Demobilization of Contractors \$30,000	\$30,000		
	c	Well/Gas Probe Abandonments within the Extraneous Materials and Documentation \$12,000	\$12,000		

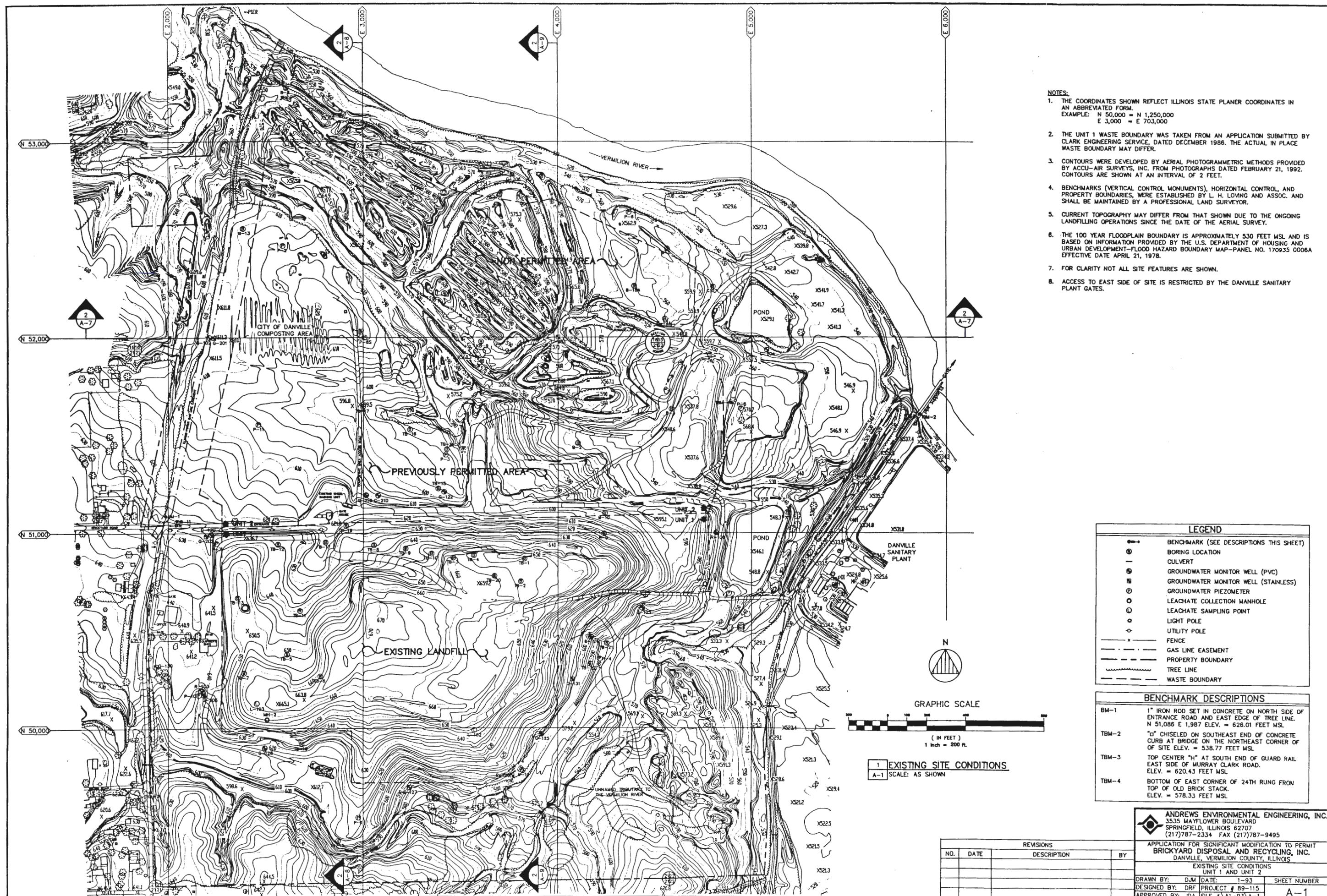
**Table 6**  
**Brickyard Disposal and Recycling**  
**Cost for Excavation and Backfill of Extraneous Materials (18.6 Acres)**

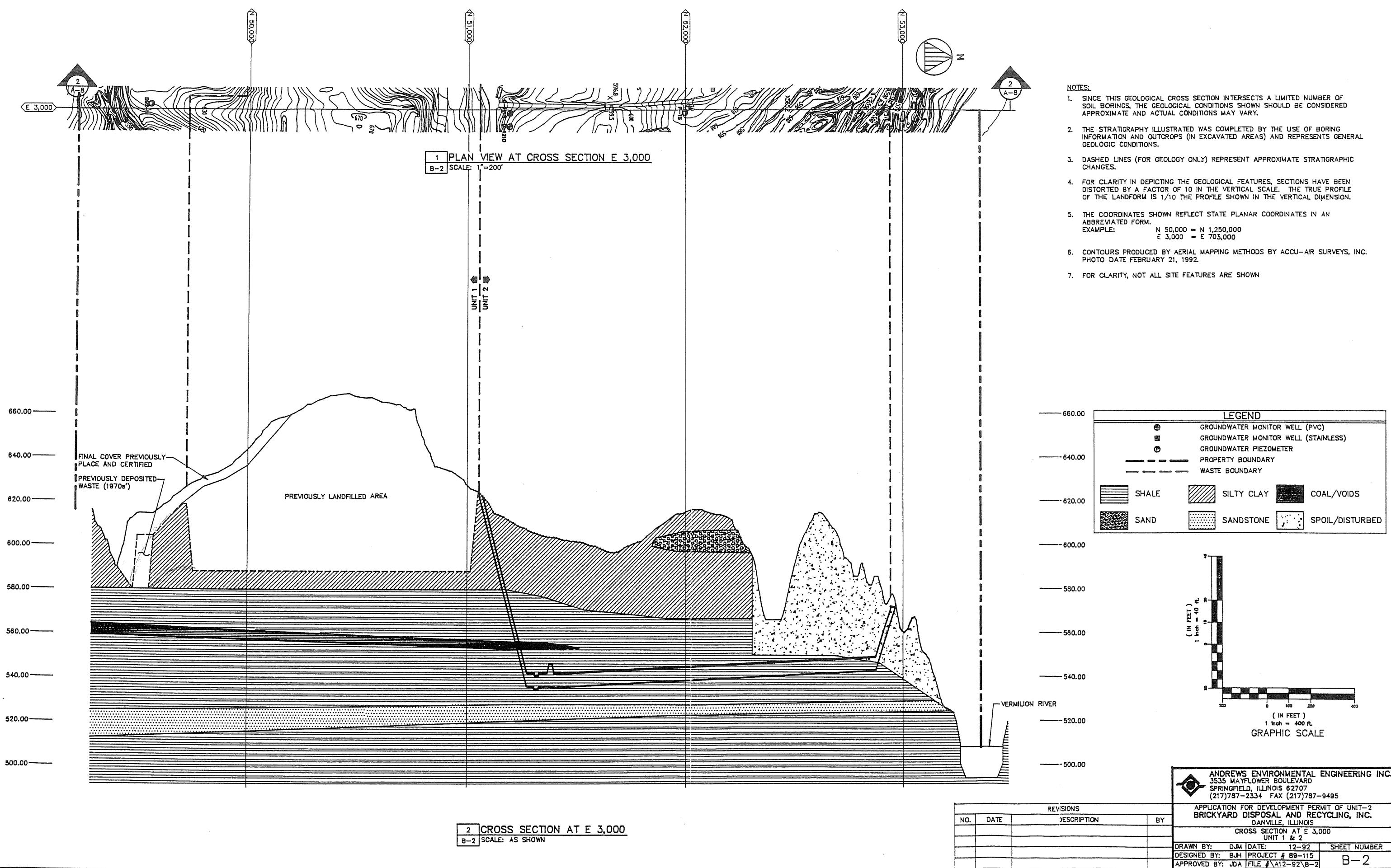
Task No.	Item No.	Description	Item Sub Total	Item Total	Task Total
4	d	Abandonment of Gas Wells within the Slope Stabilization Areas	\$8,000	\$8,000	
	e	Installation of New Gas Conveyance Line	\$55,500	\$55,500	
	f	Re-installation of the Leachate Conveyance Line	\$28,900	\$28,900	
	g	Slope Stabilization - Final Cover Removal and Stockpile	\$409,948		
		Unit I Waste Excavation and Stockpile	\$1,221,400		
		Temporary Cover to Waste Stockpile	\$15,680		
		Temporary Cover to Exposed Unit I Waste	\$24,280		
		Temporary Stormwater Diversion Berm Placement	\$1,400		
		Odor Control Measures for Stockpile	\$95,000		
		Air Monitoring Equipment	\$9,000		
		Health and Safety Plan Implementation	\$68,545	\$1,845,253	
	h	Surface Water Drainage Diversion Berm Placement	\$22,710		
		Removal and Stockpile Overburden from Extraneous Materials	\$907,742		
		Shoring for Sections Adjacent to Waste	\$228,760		
		Mass Excavation of Extraneous Materials	\$2,003,934		
		Placement, Handling and Compaction of Extraneous Materials at Working Face in Unit II	\$250,492		
5	a	Lost Revenue due to Placement of Extraneous Materials in Unit II, including Related Daily Cover	\$30,477,300		
		Groundwater/Liquids Control	\$95,150		
		Liquid Treatment and Disposal	\$17,300		
		Verification of Activities (Documentation)	\$46,500	\$34,049,888	<b>\$36,033,597</b>
		<b>Acquisition and Placement of Backfill Material in Extraneous Material Excavation</b>			
5	a	Haul, Place, Monitor and Document of Backfill Material	\$1,502,951		
	b	Acquisition and Placement of Vegetative Soil	\$106,528		
	c	Seed, Mulch, and Fertilize Vegetative Layer	\$30,690	\$1,640,169	<b>\$1,640,169</b>

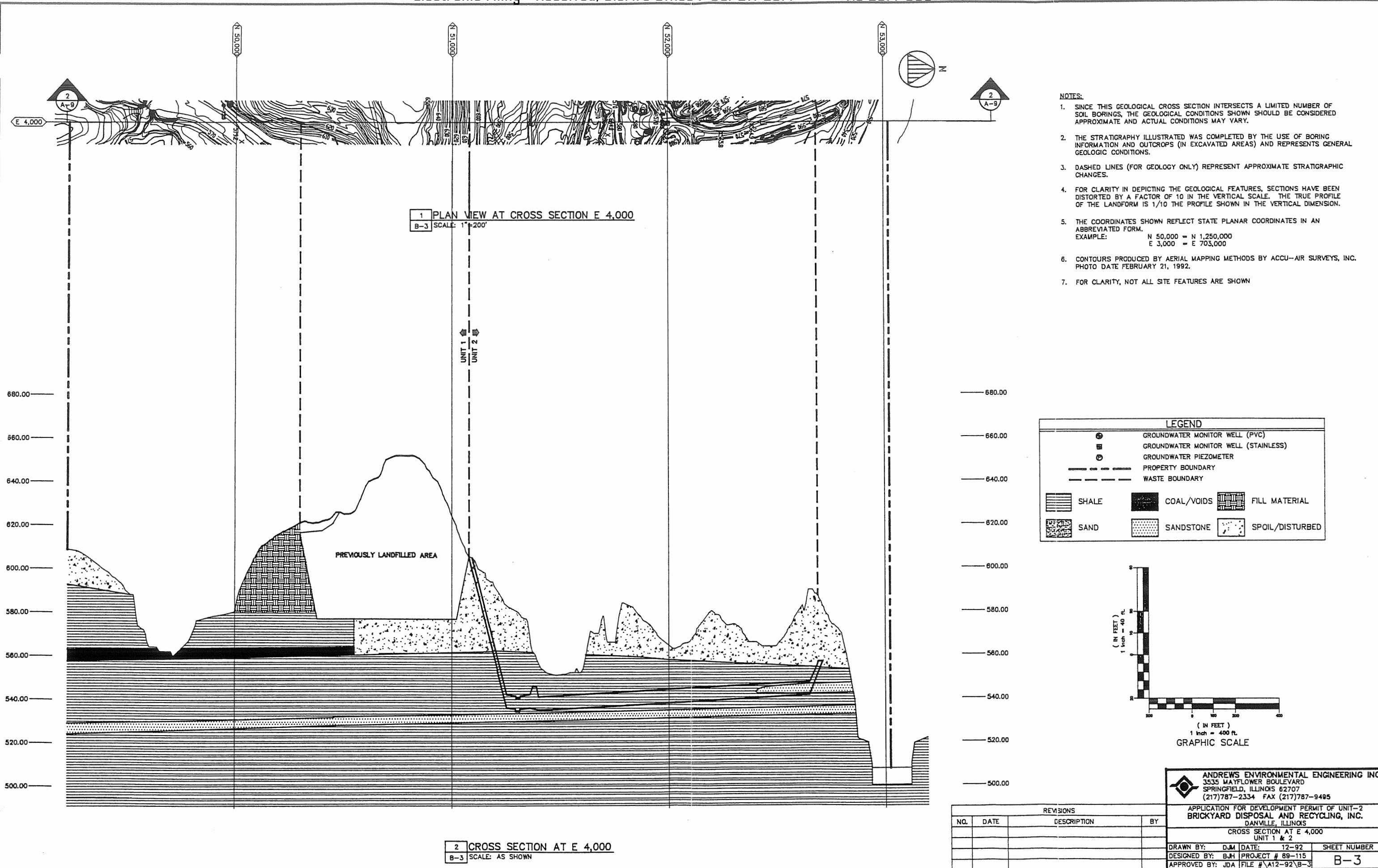
**Table 6**  
**Brickyard Disposal and Recycling**  
**Cost for Excavation and Backfill of Extraneous Materials (18.6 Acres)**

Task No.	Item No.	Description	Item Sub Total	Item Total	Task Total
6	a	<b>Replacement of Stockpiled Refuse</b> Relocate Unit I Waste Stockpile and Compact	\$1,083,500	\$1,083,500	\$1,108,340
	b	Placement of Daily Cover Prior to Reinstallation of Appurtenances	\$24,840	\$24,840	
7	a	<b>Replacement of Appurtenances in Unit 1 Prior to Final Cover</b> Reinstall and Connect 10 Gas Extraction Wells	\$100,000	\$100,000	\$100,000
8	a	<b>Reinstallation of Final Cover</b> Transport, Place, Grade and Compact Liner	\$139,757	\$139,757	\$330,883
	b	Transport, Place and Grade Vegetative Layer	\$93,171	\$93,171	
	c	Seed, Mulch, and Fertilize Vegetative Layer	\$20,955	\$20,955	
	d	Field Construction Quality Assurance for Final Cover Reinstallation	\$77,000	\$77,000	
9	a	<b>Construction Quality Assurance Report</b> Construction Quality Assurance Report for Complete Project	\$15,000	\$15,000	\$15,000
			<b>Subtotal</b>	<b>\$39,404,439</b>	
			<b>Contingencies</b>	<b>20%</b>	
			<b>TOTAL</b>	<b>\$47,285,326</b>	

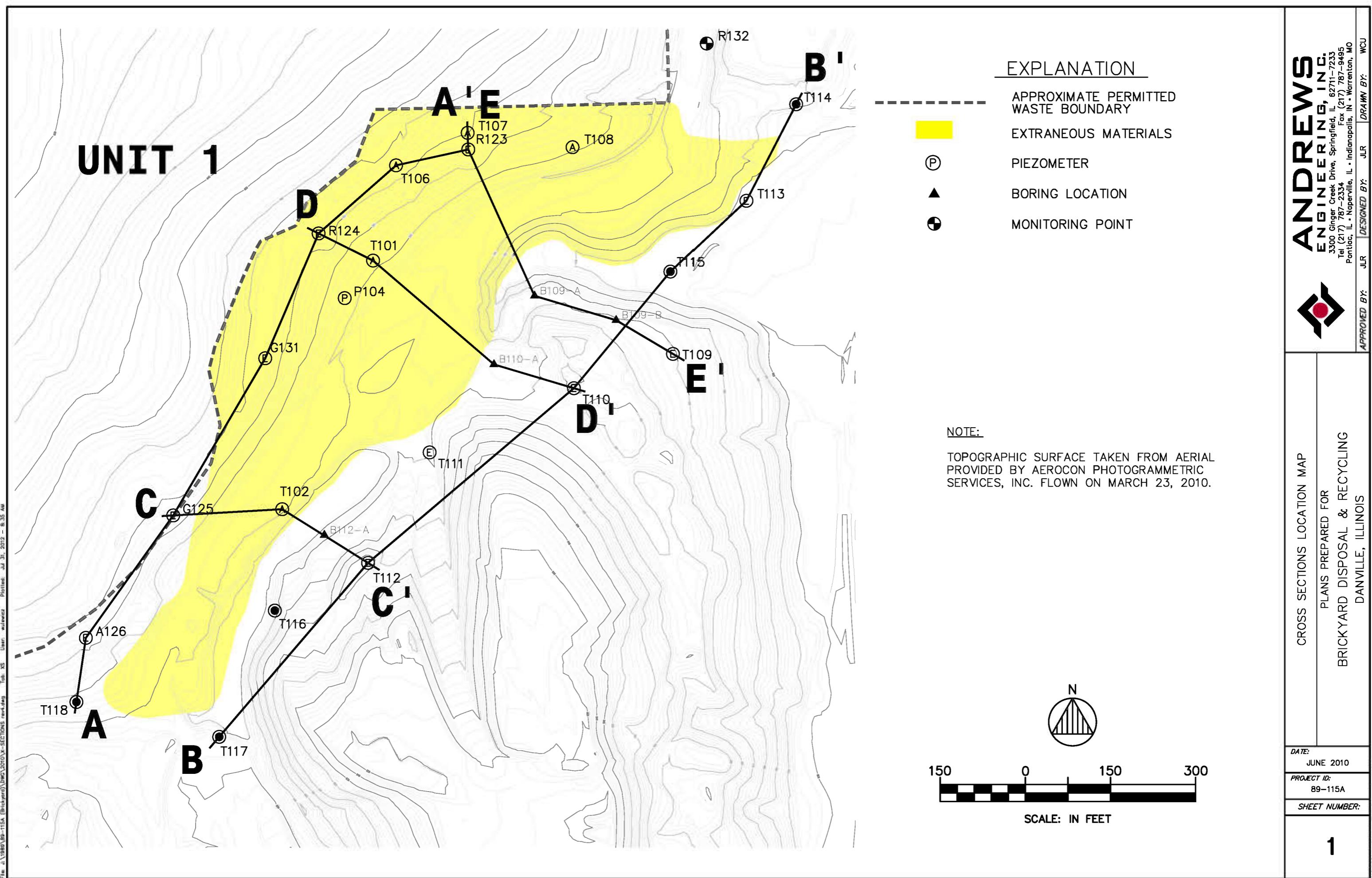
**ATTACHMENT 1**  
**Geologic Cross Sections (1993)**

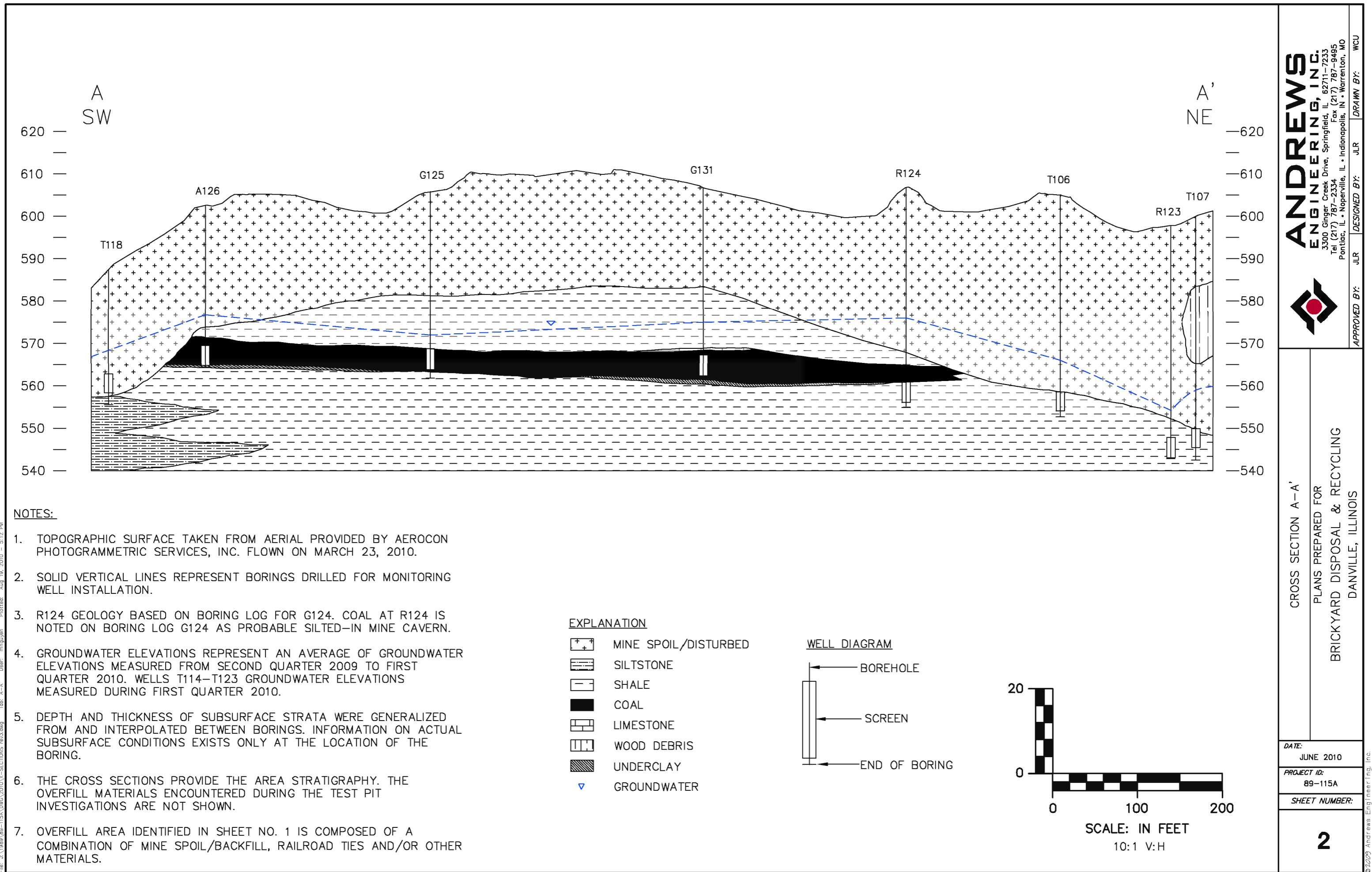


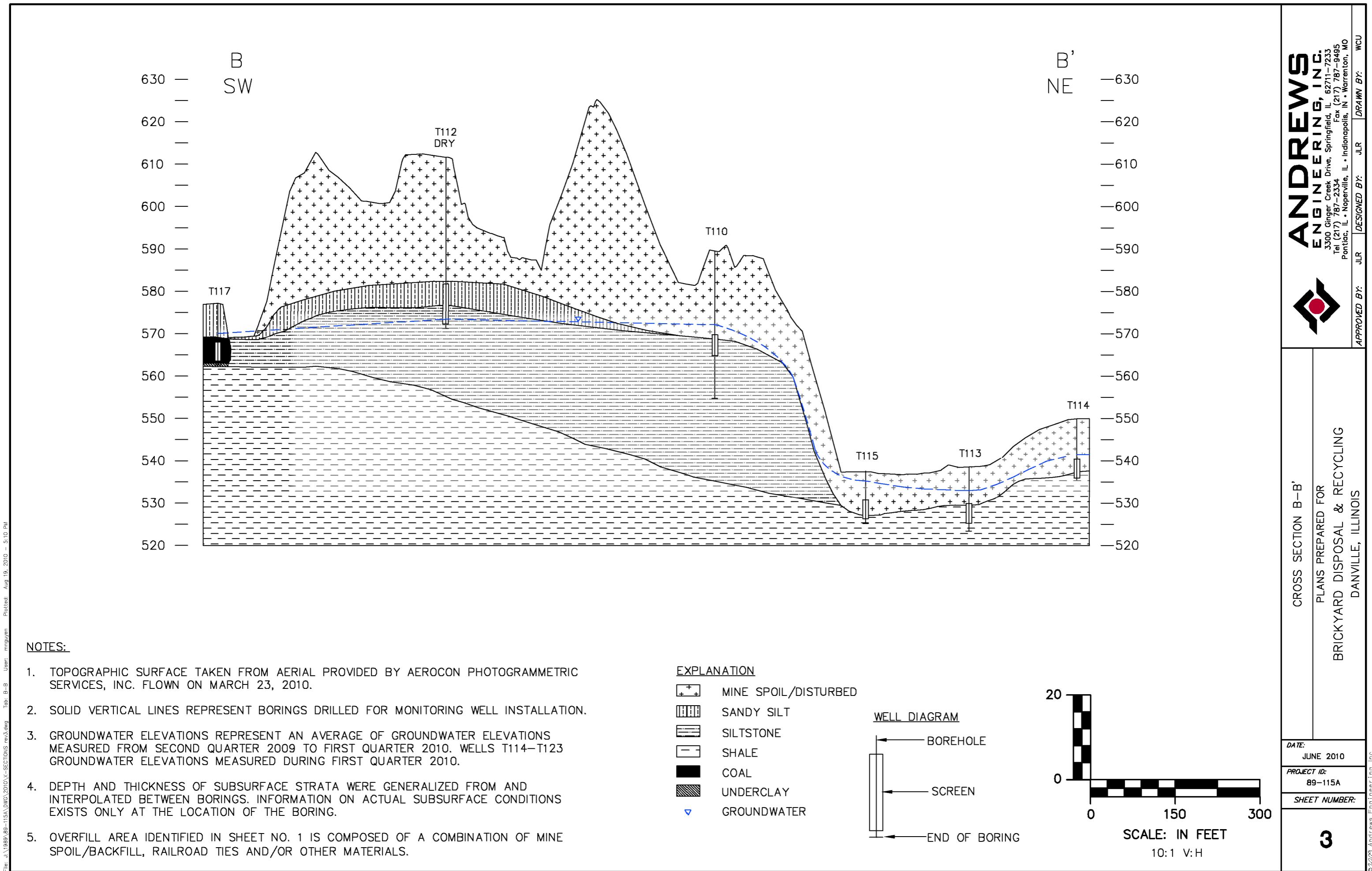


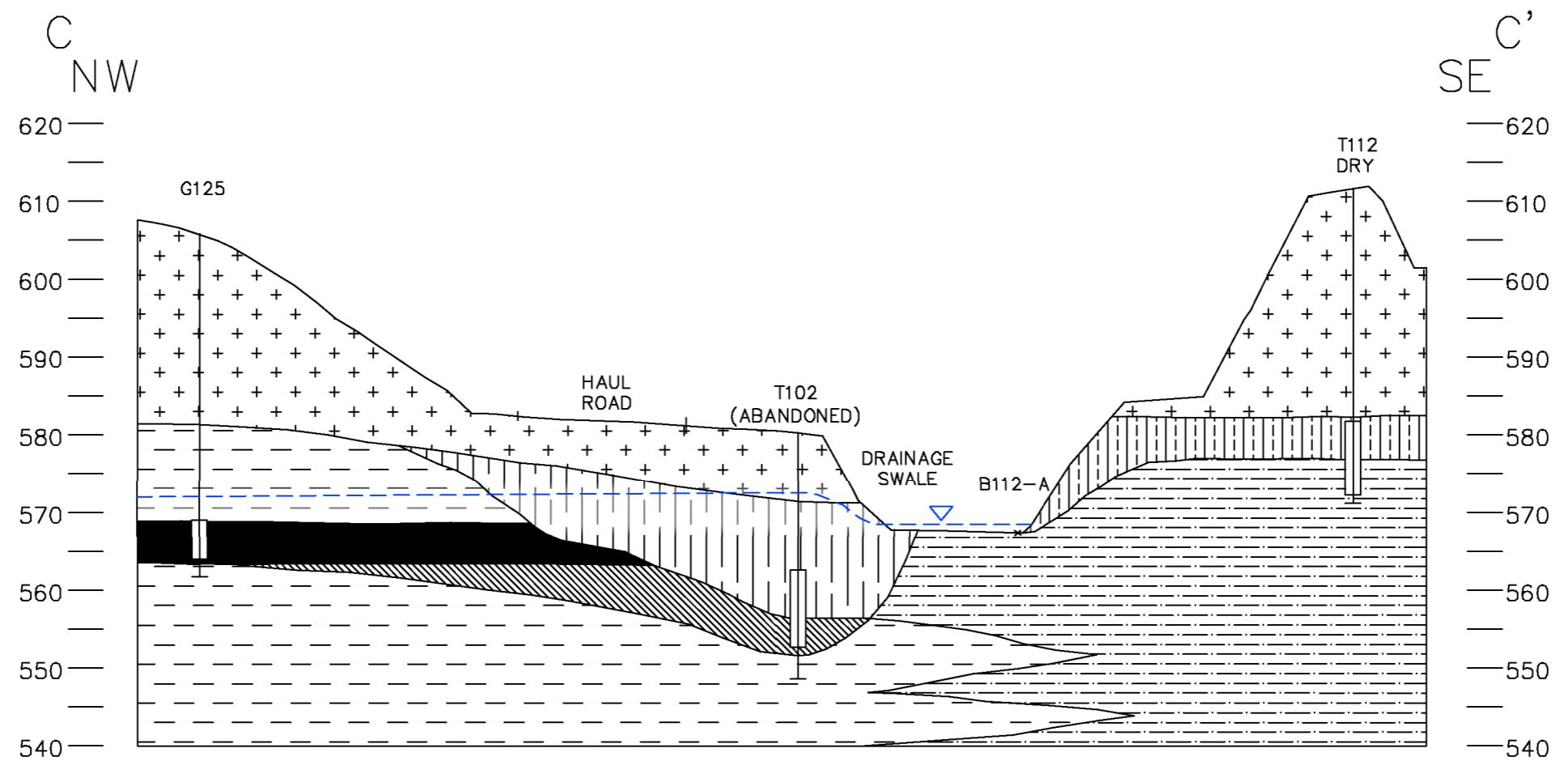


**ATTACHMENT 2**  
**Geologic Cross Sections (2010)**





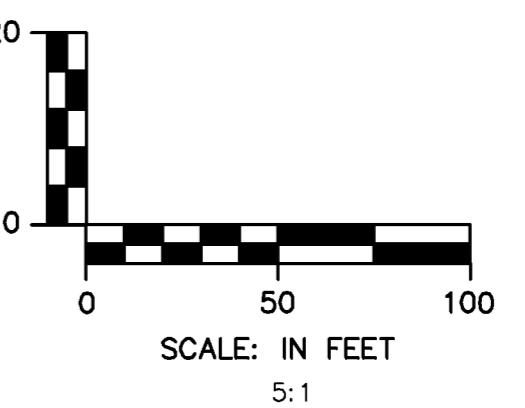
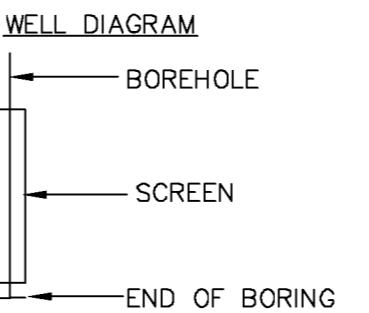


NOTES:

1. TOPOGRAPHIC SURFACE TAKEN FROM AERIAL PROVIDED BY AEROCON PHOTOGRAMMETRIC SERVICES, INC. FLOWN ON MARCH 23, 2010.
2. SOLID VERTICAL LINES REPRESENT BORINGS DRILLED FOR MONITORING WELL INSTALLATION.
3. GROUNDWATER ELEVATIONS REPRESENT AN AVERAGE OF GROUNDWATER ELEVATIONS MEASURED FROM SECOND QUARTER 2009 TO FIRST QUARTER 2010. WELLS T114-T123 GROUNDWATER ELEVATIONS MEASURED DURING FIRST QUARTER 2010.
4. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING.
5. OVERFILL AREA IDENTIFIED IN SHEET NO. 1 IS COMPOSED OF A COMBINATION OF MINE SPOIL/BACKFILL, RAILROAD TIES AND/OR OTHER MATERIALS.

EXPLANATION

[+]	MINE SPOIL/DISTURBED
---	SILTSTONE
-	SHALE
██	COAL
	WOOD DEBRIS
	SANDY SILT
████	UNDERCLAY
▽	GROUNDWATER



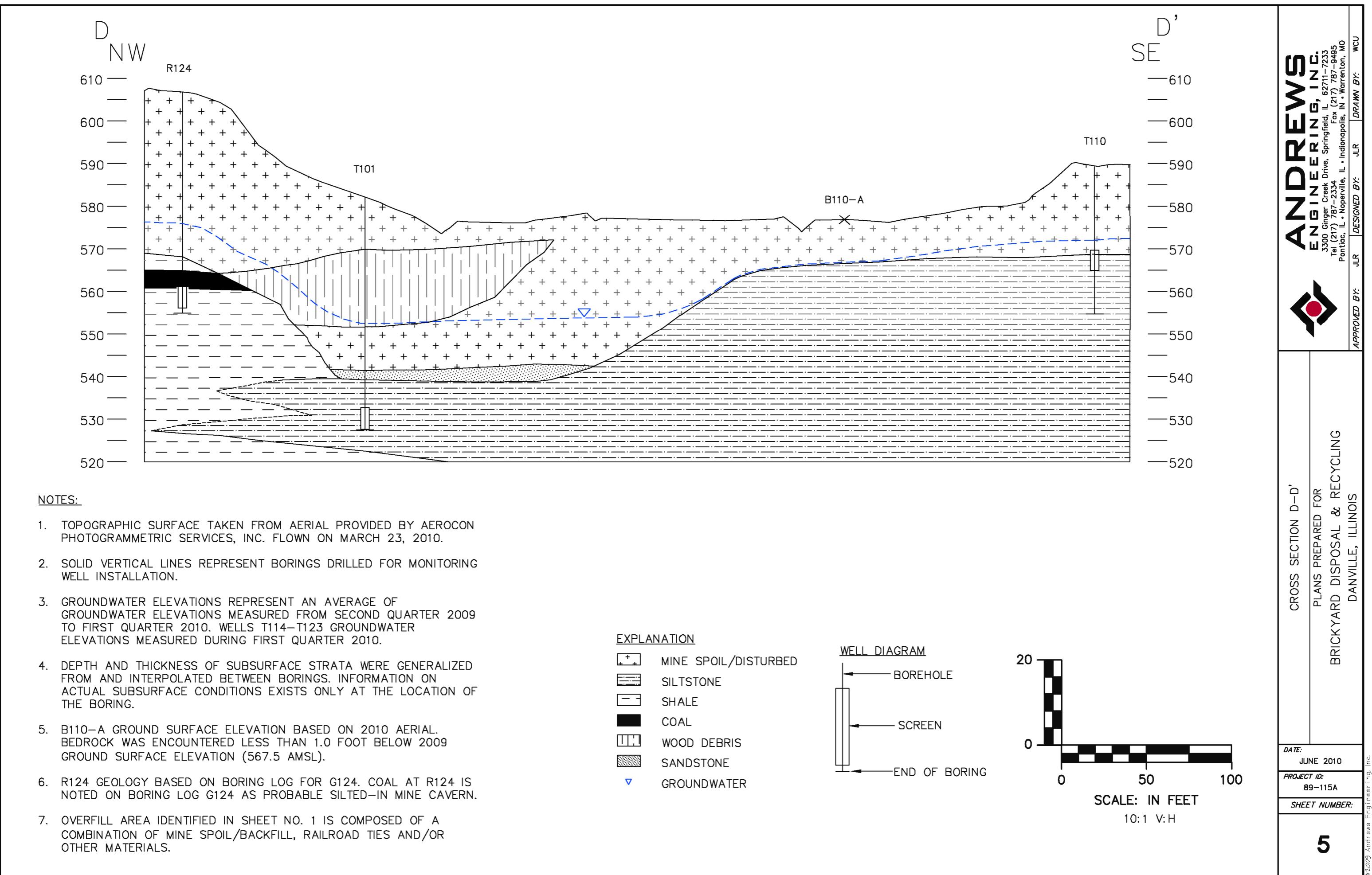
**ANDREWS**  
ENGINEERING, INC.  
3300 Ginger Creek Drive, Springfield, IL 62711-7233  
Tel (217) 787-2334, Pontiac, IL • Noperville, IL • Indianapolis, IN • Warren, MO

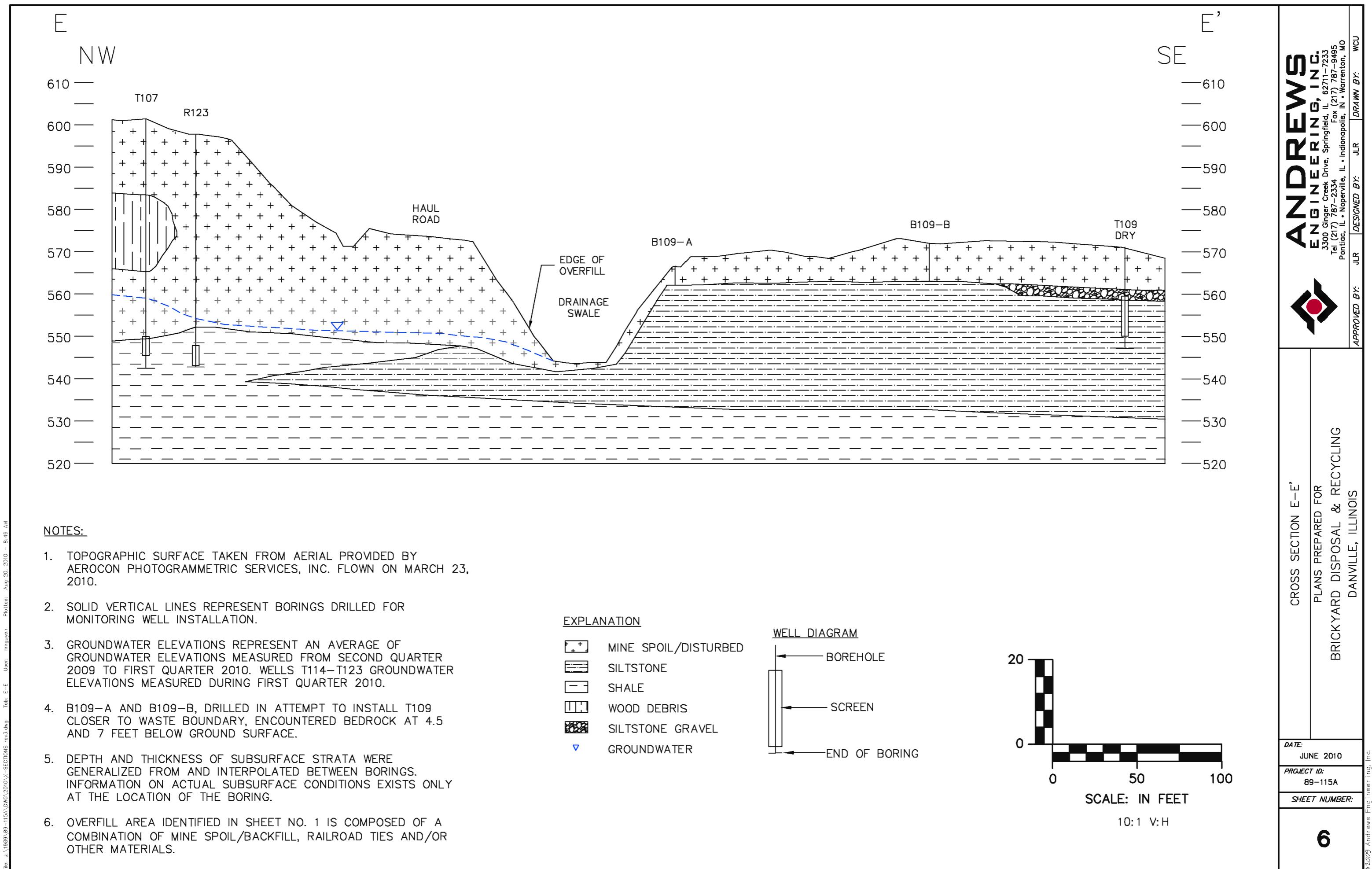


APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: WCU

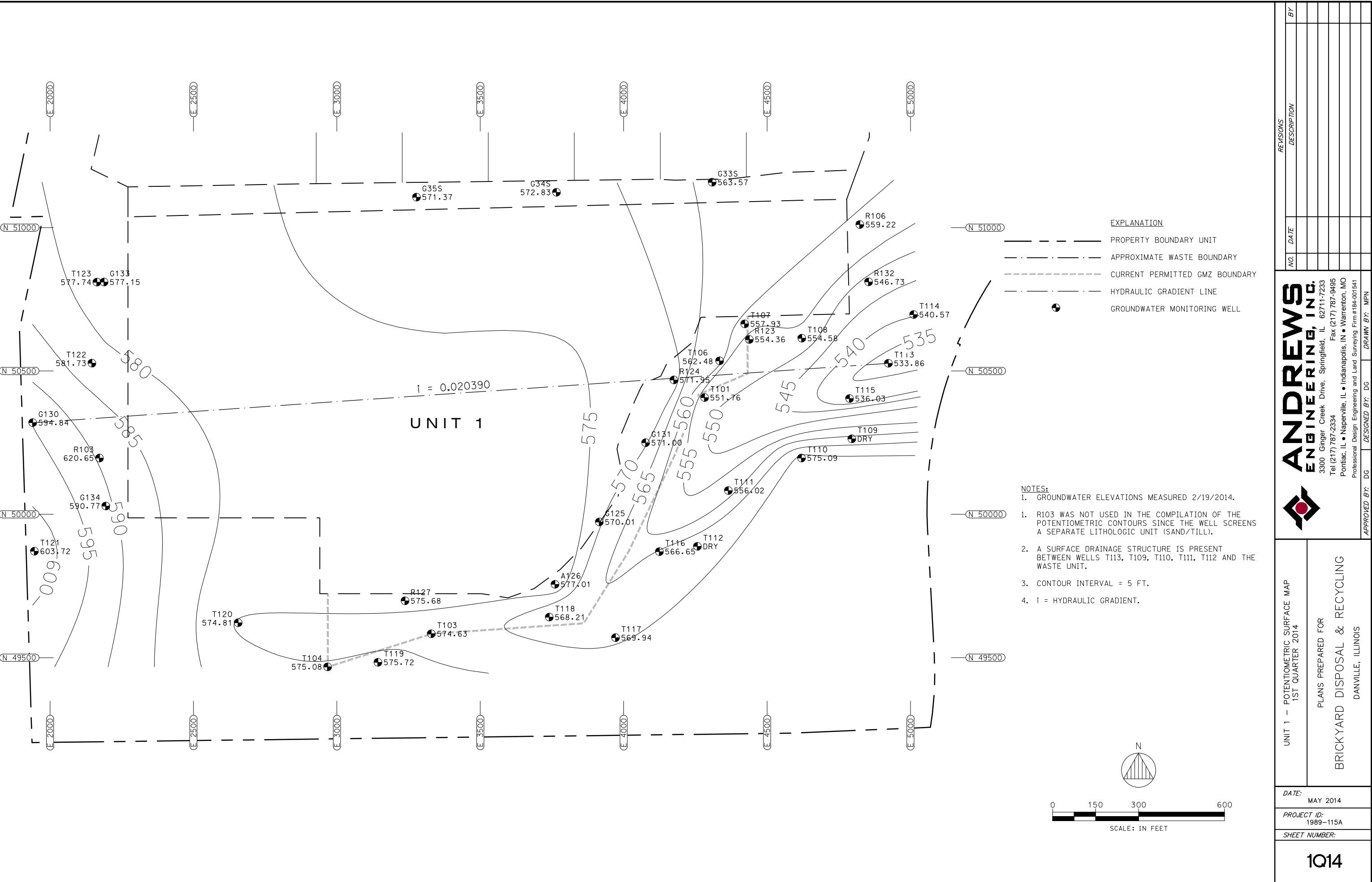
CROSS SECTION C-C'  
PLANS PREPARED FOR  
BRICKYARD DISPOSAL & RECYCLING  
DANVILLE, ILLINOIS

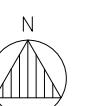
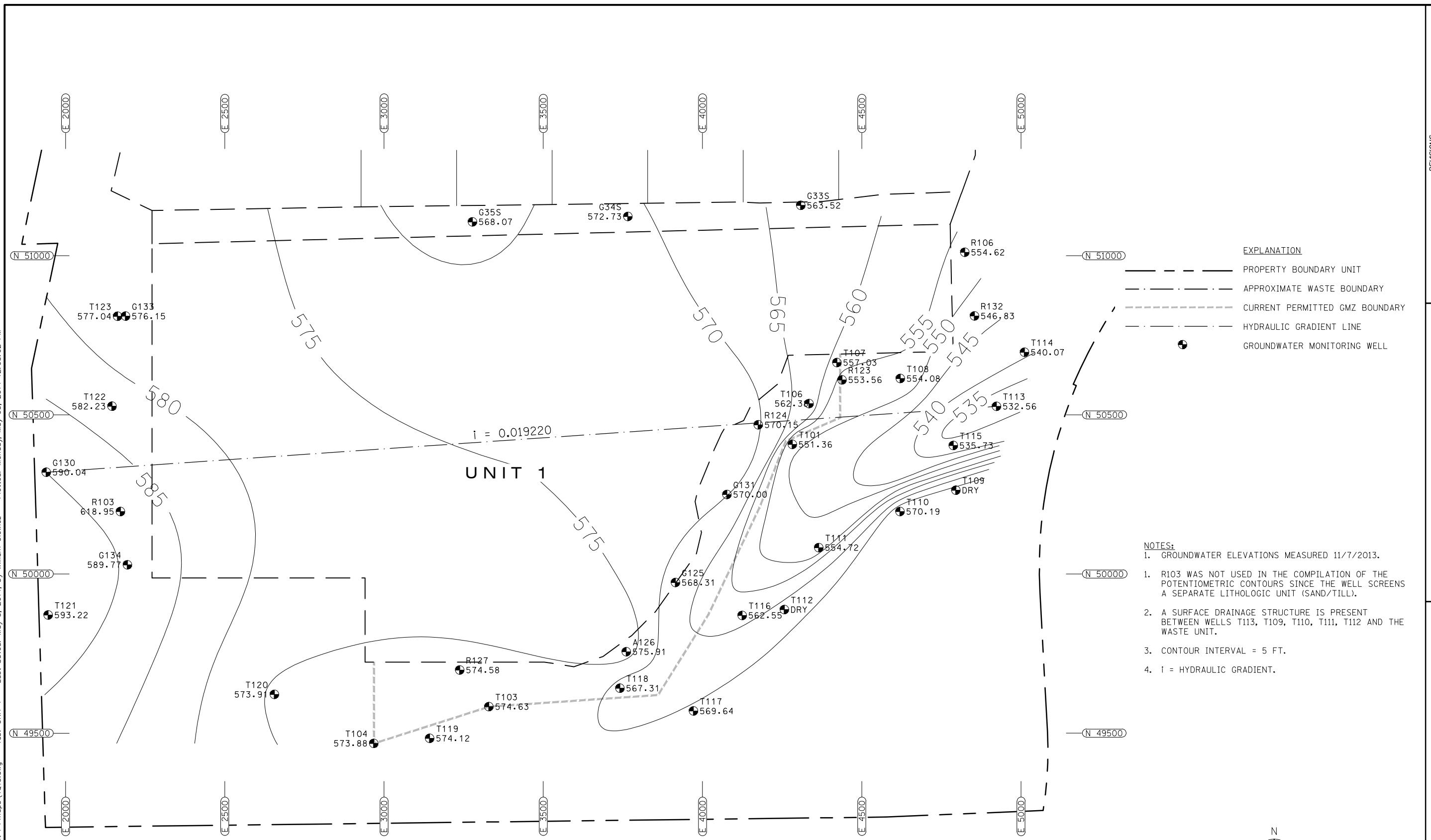
DATE: JUNE 2010  
PROJECT ID: 89-115A  
SHEET NUMBER: 4



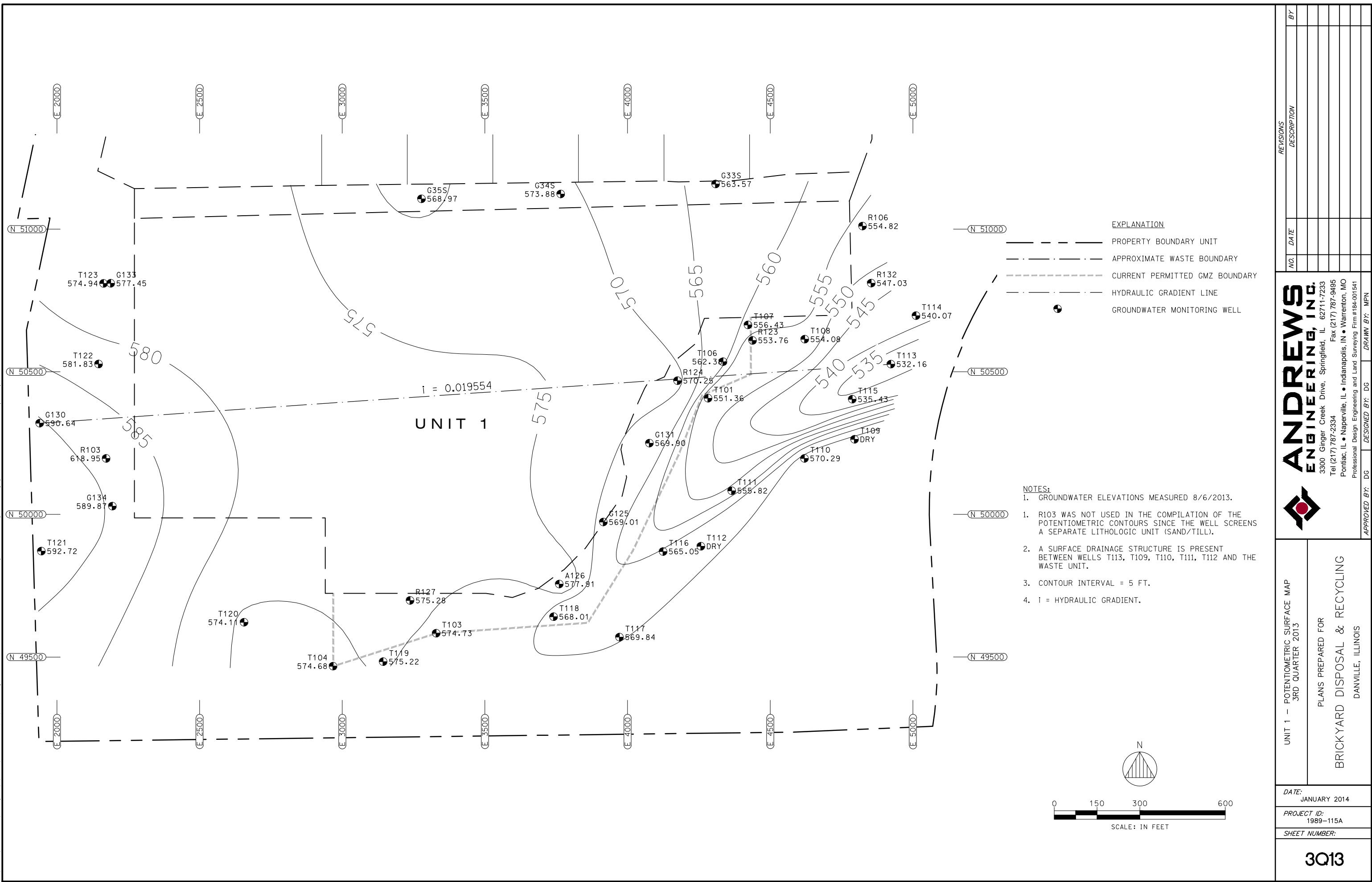


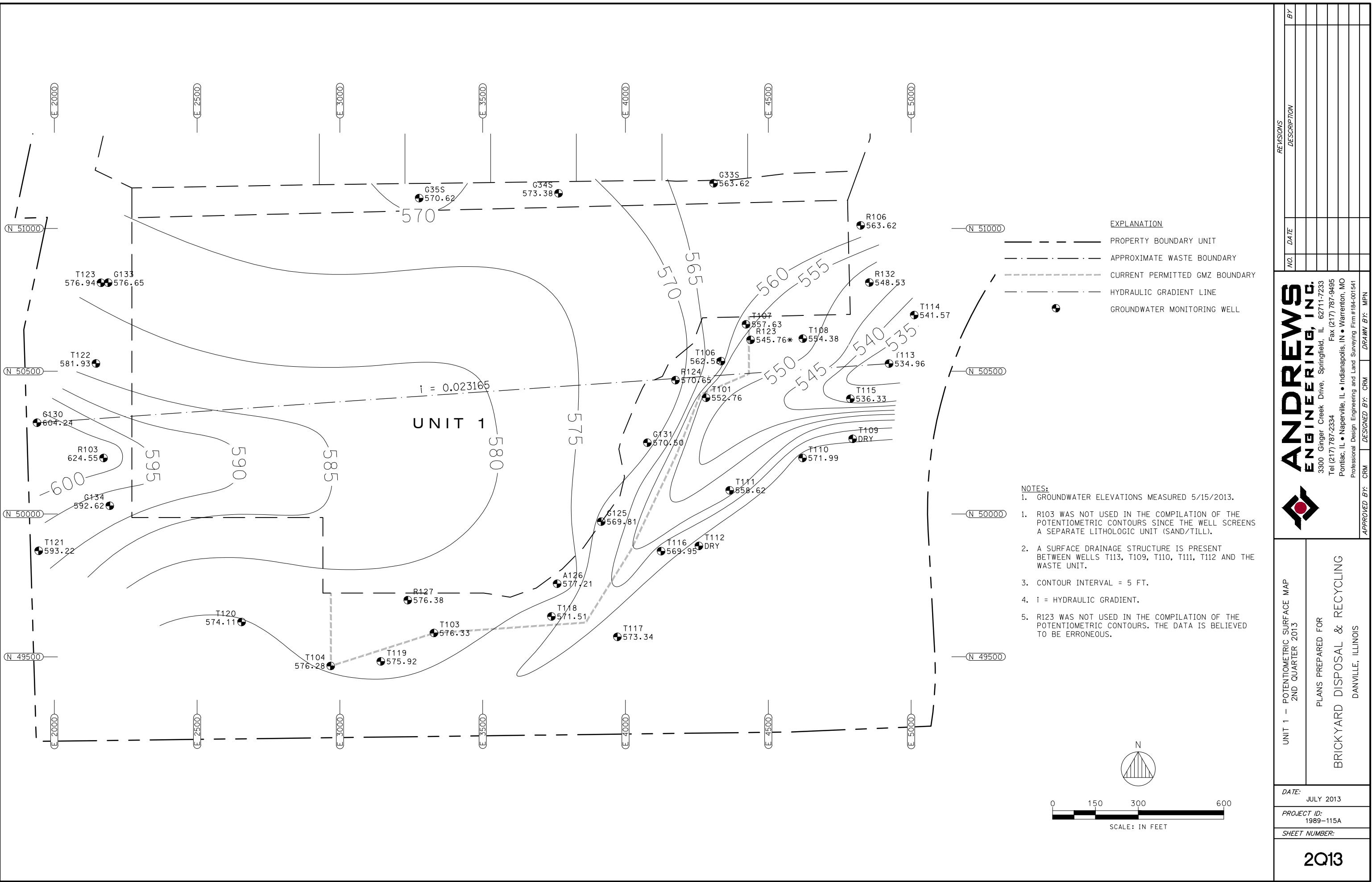
**ATTACHMENT 3**  
**Potentiometric Surface Maps**

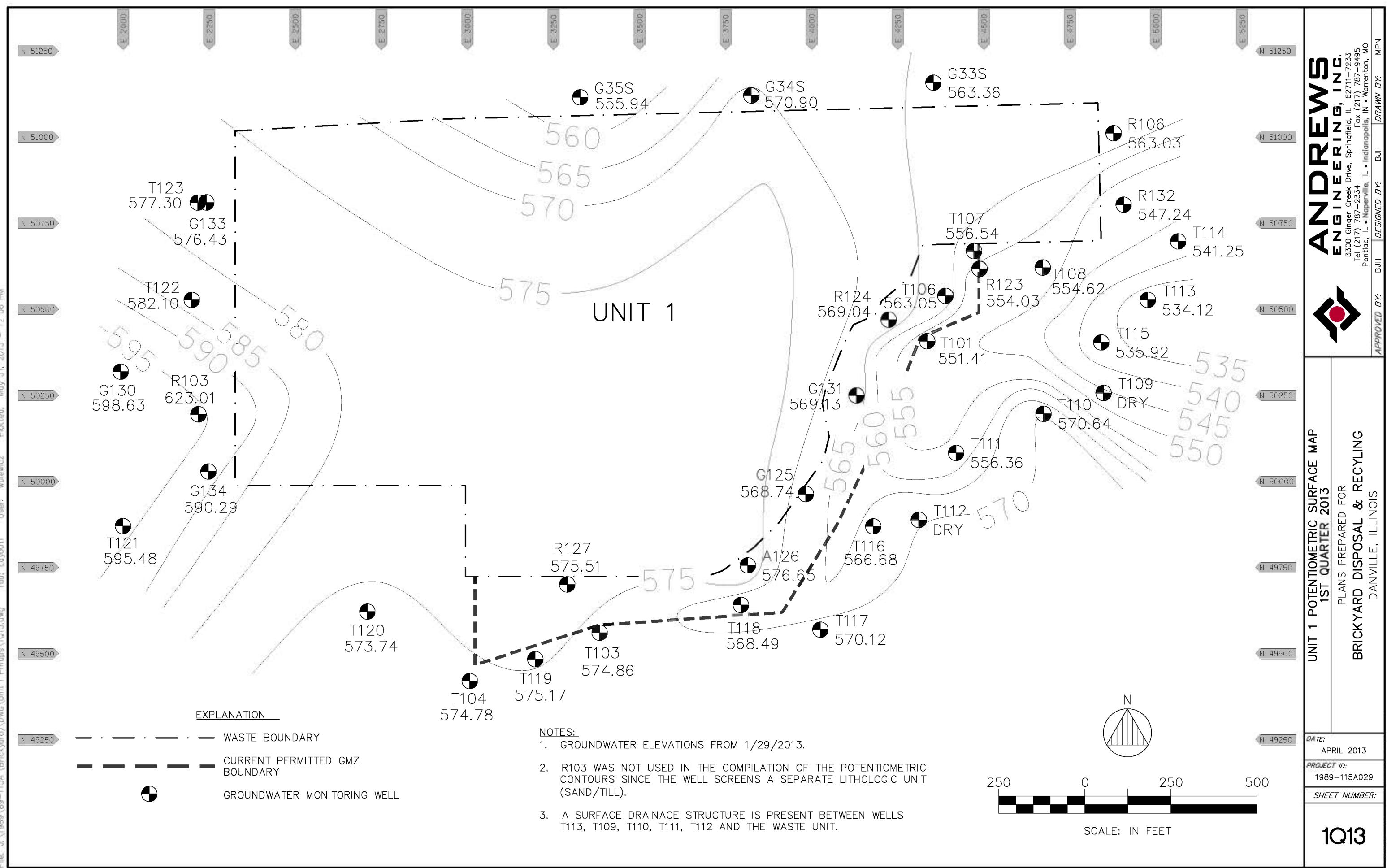


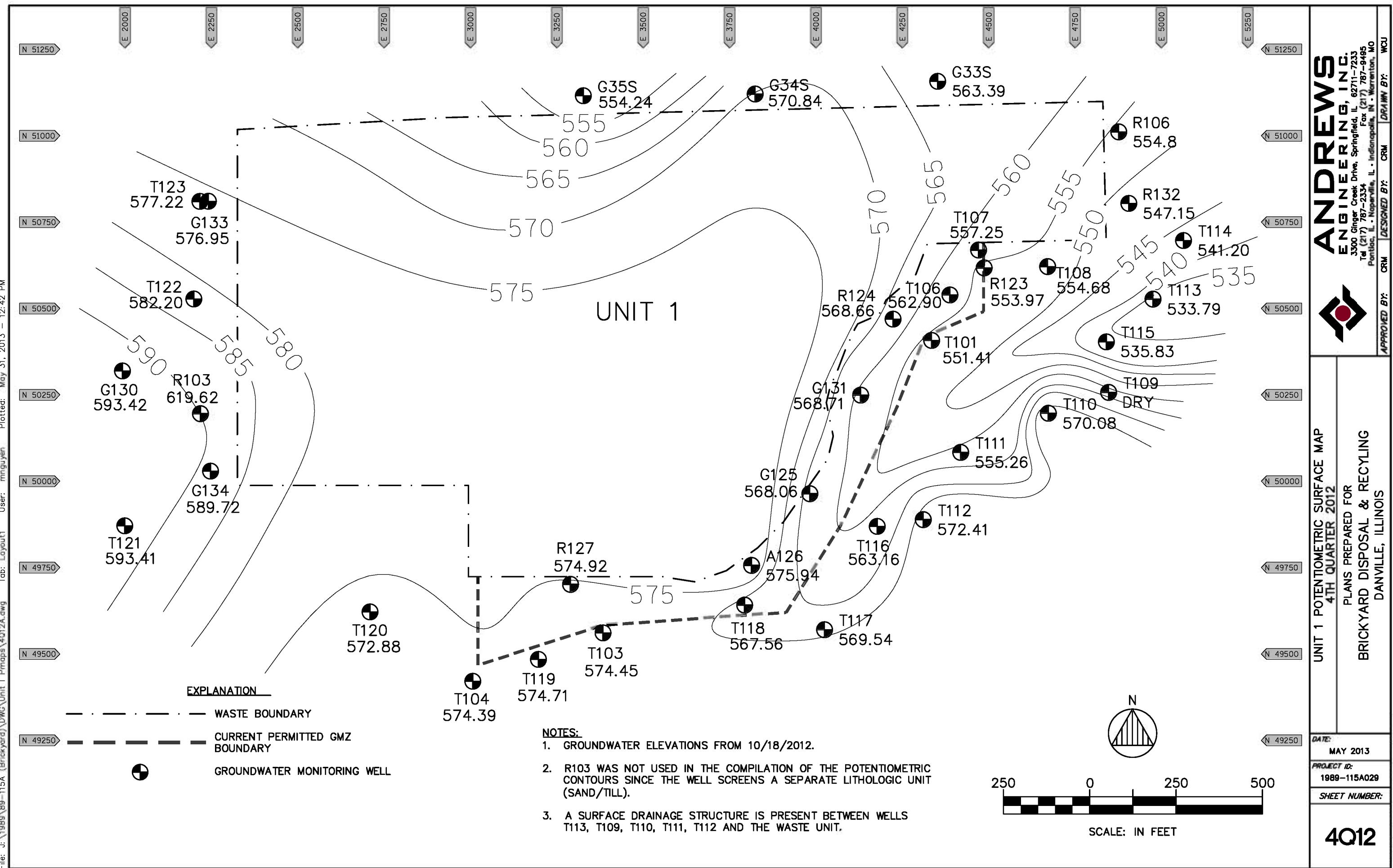


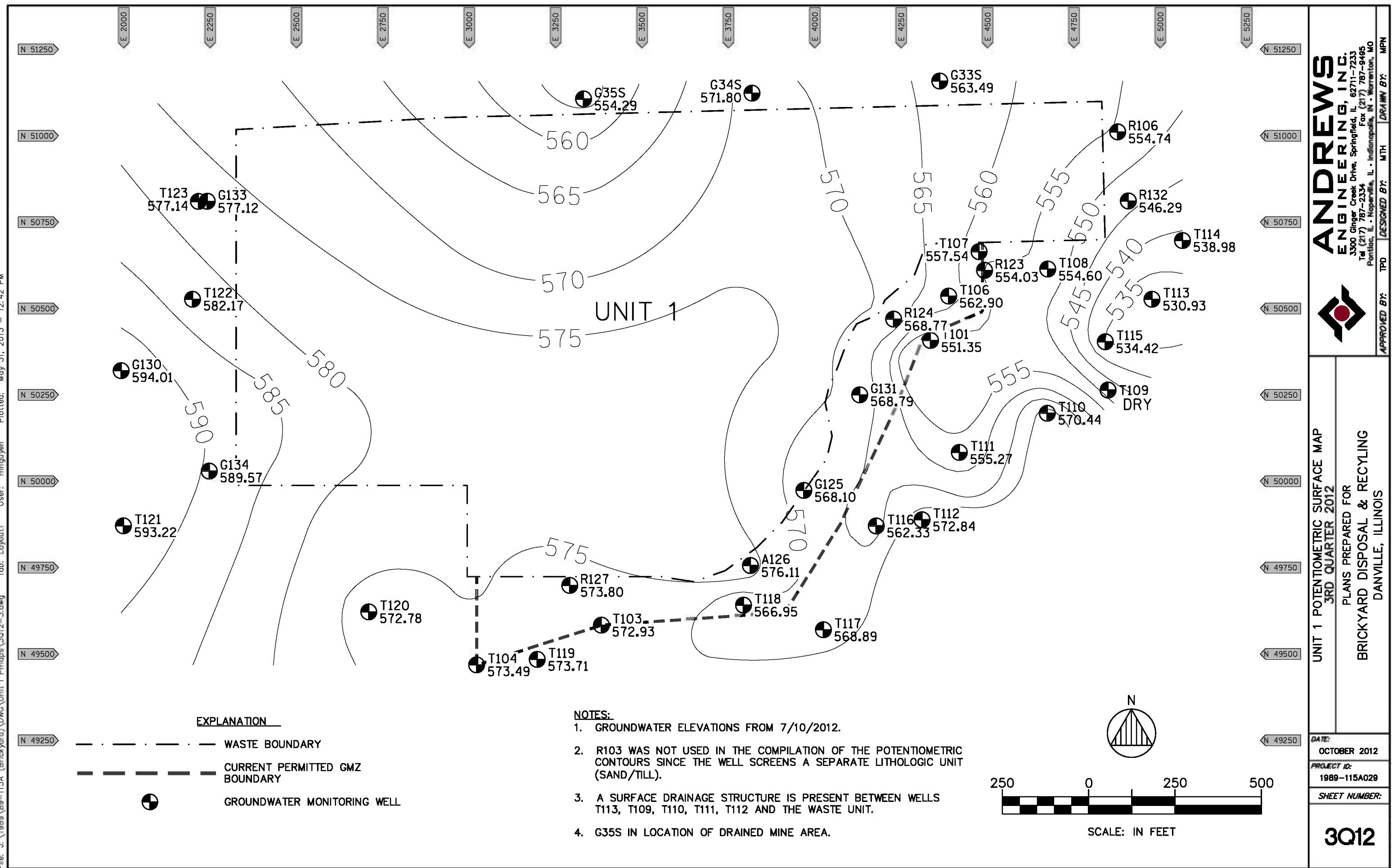
A horizontal scale bar representing distance in feet. It features a thick black segment from 0 to 150, a thinner black segment from 150 to 300, and a very thin black segment from 300 to 600. The numbers 0, 150, 300, and 600 are placed above the scale bar. Below the scale bar, the text "SCALE: IN FEET" is centered.

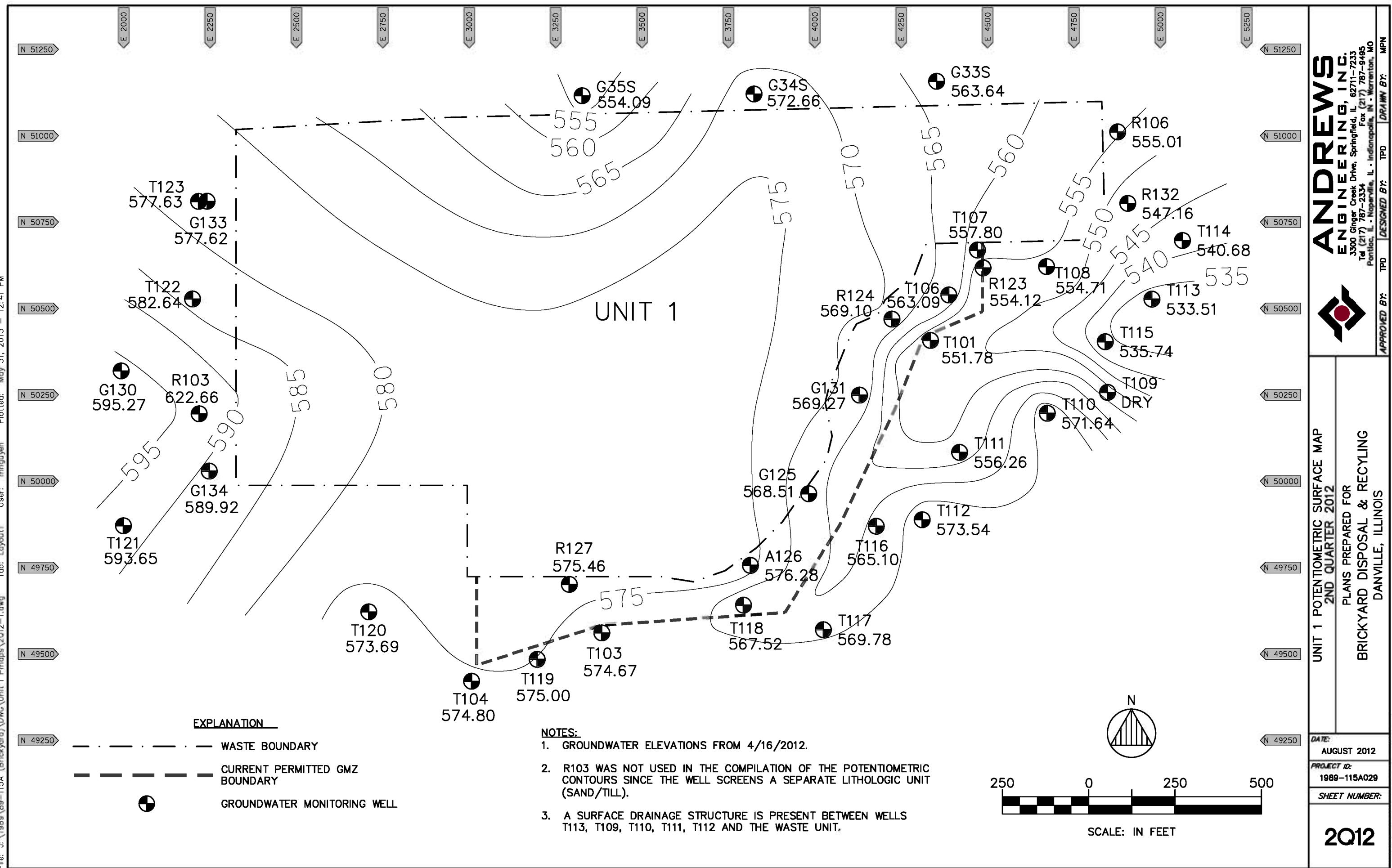


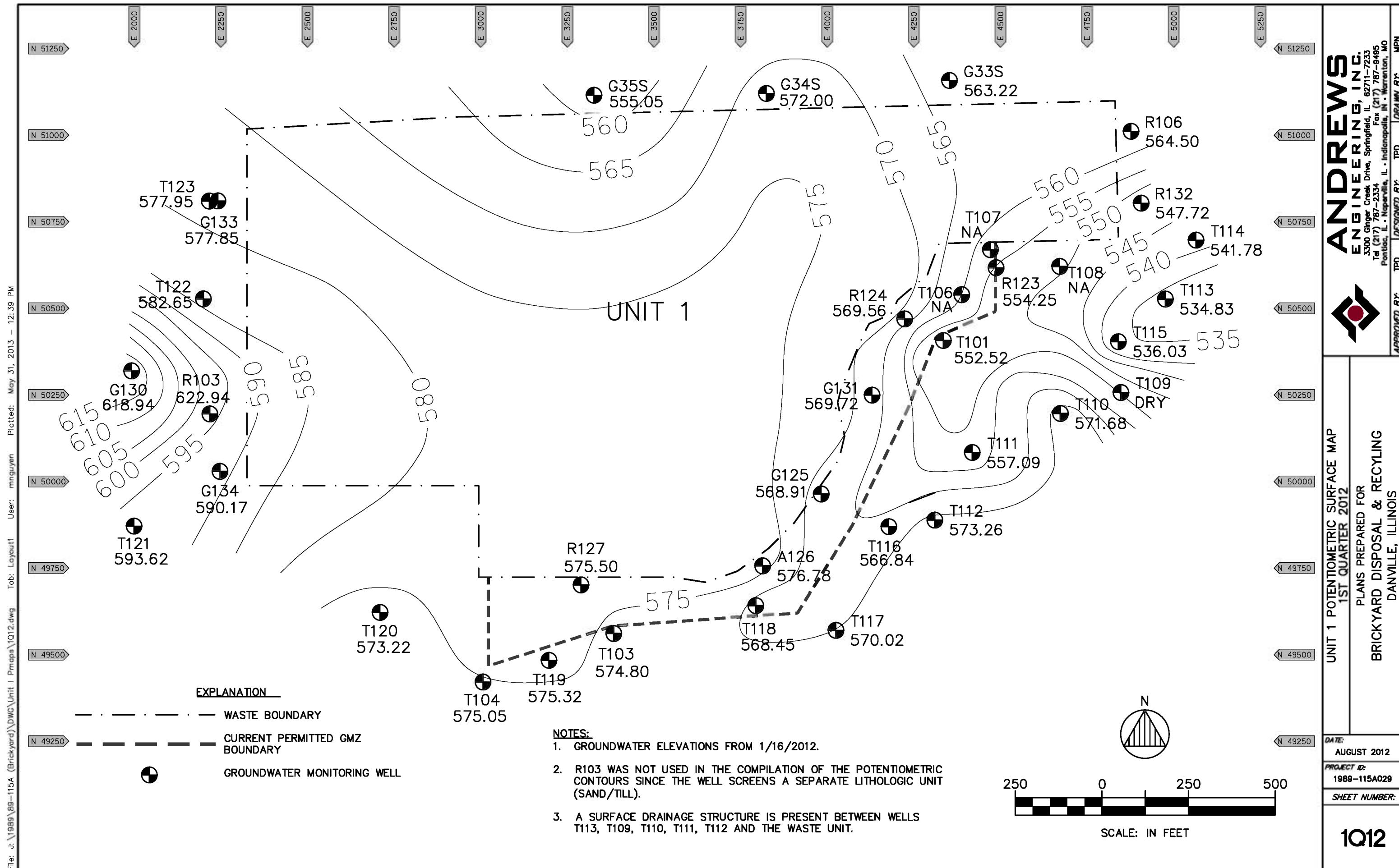












**ATTACHMENT 4**  
**1994 Soils Analyses**

**TABLE 2-6B**  
**SUMMARY OF LABORATORY TEST RESULTS FOR MINE SPOIL**

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (taf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
PZ-1-94	SS-2	2.0-4.0	CH	18.7				55	25	30				
PZ-1-94	SS-3	4.0-6.0	CH	29.2	0	5	52/43 <sup>1</sup>							
PZ-2-94	SS-2	4.0-4.7	CL	7.2	0	20	69/11 <sup>1</sup>	32	21	11				
B-2 <sup>2</sup>	S-2	5.0-6.5		10.5							131.9		3.1x10 <sup>-8</sup>	3.2
B-2 <sup>2</sup>	S-5	20.0-21.5		11.5							127.9			
B-4 <sup>2</sup>	S-2	5.0-6.5		11.5							111.6		1.3x10 <sup>-7</sup>	
Number of Tests				6	2	2	2	2	2	2	3	0	2	1
Minimum				7.2	0	5	80	32	21	11	111.6		3.1x10 <sup>-8</sup>	
Maximum				29.2	0	20	95	55	25	30	131.9		1.3x10 <sup>-7</sup>	
Average				14.7	0	12.5	87.5	43.5	23	20.5	123.8		8.05x10 <sup>-8</sup>	
Median				11.5	0	12.5	87.5	43.5	23	20.5	127.9		8.05x10 <sup>-8</sup>	

**TABLE 2-7**  
**SUMMARY OF LABORATORY TEST RESULTS FOR UPPER CLAY**

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf) (Rimac)	Hydraulic Conductivity (cm/sec)	Total Organic Carbon (TOC) mg/g	Cation Exchange Capacity (meq/100 gm)	
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI						
CB-1-94	Bag	2.0-10.0	CL-M	19.0-23.7											11.0	
CB-1-94	SS-2	4.0-6.0	CL-ML	17.0										10.0		
CB-1-94	SS-3	6.0-8.0	CL-ML	11.7				21	15	6						
CB-2-94A	SS-2	4.0-6.0	CL	13.3				24	15	9				9.8		
CB-3-94	SS-2	4.0-6.0	CL	9.2										13.0		
CB-3-94	Bag	8.0-15.0	SC	8.8-10.1	4	50	33/13 <sup>1</sup>								5.38	
PZ-6-94	SS-4	6.0-8.0	CL	15.0	0	22	48/30 <sup>1</sup>	36	22	14						
PZ-8-94	SS-1	2.0-4.0	CH	29.9				57	30	27		2.7				
PZ-8-94	SS-4	8.0-10.0	CL-ML	14.2								2.6				
PZ-8-94	SS-5	10.0-12.0	CL-ML	9.7								4.7				
B-11 <sup>2</sup>	S-3	10.0-11.5	CL	10.0							123.4				6.20	
B-16 <sup>2</sup>	S-2	5.0-6.5	CL	9.5							122.6		6.7x10 <sup>-8</sup>			
P-3 <sup>3</sup>		5.3	CL-ML		0	46	32/22 <sup>1</sup>	16	12	4						
P-3 <sup>3</sup>		7.2	ML		1	40	35/24 <sup>1</sup>	17	14	3						
P-4 <sup>3</sup>		0.6	CL-ML		3	32	39/25 <sup>1</sup>	24	18	6						
					MC	G	S	S/C	LL	PL	PI	DD	Rimac	HC	TOC	CEC
<b>Number of Tests</b>					12	5	5	5	7	7	7	2	3	1	3	3
<b>Minimum</b>					8.8	0	22	46	16	12	3	122.6	2.6	6.7x10 <sup>-8</sup>	9.8	5.38
<b>Maximum</b>					29.9	4	50	78	57	30	27	123.4	4.7	6.7x10 <sup>-8</sup>	13.0	11.0
<b>Average</b>					14.4	1.6	38	60	27.9	18	9.9	123.0	3.3	6.7x10 <sup>-8</sup>	10.9	7.5
<b>Median</b>					10.9	1	40	59	24	15	6	123.0	2.6	6.7x10 <sup>-8</sup>	9.8	6.20

**Notes:**<sup>1</sup> Represent percentages of silt and clay based on hydrometer analysis (clay < 0.002 mm).<sup>2</sup> Based on 1980 Bartholomew Engineering Report.<sup>3</sup> Based on 1991 Andrews Environmental Engineering Report.

**TABLE 2-8**  
**SUMMARY OF LABORATORY TEST RESULTS FOR GLACIAL SAND**

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (Rimac) (tsf)	Hydraulic Conductivity (cm/sec)	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI				
CB-1-94	SS-5	10.0-12.0	SP-SM		1	88	11							
CB-2-94A	SS-5	10.0-12.0	SC	8.8	13	52	24/11 <sup>1</sup>	19	12	7				
CB-2-94A	SS-10	20.0-22.0	SP-SM	15.0	2	89	9							
PZ-7-94	SS-5	10.0-12.0	SM	17.1	7	56	27/10 <sup>1</sup>							
PZ-7-94	SS-8	16.0-18.0	SW-SM	11.7	26	63	11							
PZ-8-94	3T-6	12.0-14.0	SM		14	49	27/10 <sup>1</sup>	18	14	4				
PZ-8-94	SS-14A	28.0-30.0	SP	11.0	1	95	4					3.25		
GB-2-94	SS-6	10.0-12.0	SP-SM		0	88	12							
P-3 <sup>2</sup>	3.2		SC-SM		2	50	26/22 <sup>1</sup>	20	14	6				
P-3 <sup>2</sup>	9.1		SM		0	51	32/17 <sup>1</sup>	13	11	2				
P-3 <sup>2</sup>	11.2		SM		5	48	30/17 <sup>1</sup>	14	11	3				
P-3 <sup>2</sup>	12.2		SM		16	54	19/11 <sup>1</sup>	NP	NP	NP				
P-6 <sup>2</sup>	4.5		SM		3	63	21/13 <sup>1</sup>	NP	NP	NP				
				MC	G	S	S/C	LL	PL	PI	DD	Rimac	HC	TOC
Number of Tests				5	13	13	13	7	7	7	0	1	0	0
Minimum				8.8	0	48	4	13	11	2		3.25		
Maximum				17.1	26	95	49	20	14	7		3.25		
Average				12.7	6.9	65	28	16.8	12.4	4.4		3.25		
Median				11.7	3	56	34	18	12	4		3.25		

Notes:

<sup>1</sup> Represents percentages of silt and clay based hydrometer analysis (clay < 0.002 mm).<sup>2</sup> Based on 1992 Andrews Environmental Engineering Report.

**TABLE 2-9**  
**SUMMARY OF LABORATORY TEST RESULTS FOR LOWER SILTY CLAY**

2-46

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf) (Rimac)	Uncompacted Hydraulic Conductivity (cm/sec)	Total Organic Carbon (TOC) mg/g	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI					
CB-1-94	SS-11	22.0-24.0	ML	12.7				38	22	16					
CB-1-94	SS-13	26.0-28.0	ML	12.0										1.6	
CB-1-94	SS-16	32.0-34.0	CL	12.3				34	15	19					
CB-1-94	SS-20	40.0-42.0	CL	24.4				33	20	13					
CB-2-94B	SS-15	30.0-32.0	ML	7.9				NP	NP	NP					
CB-2-94b	SS-16	32.0-34.0	ML	8.3										35.4	
CB-3-94	SS-7	14.0-16.0	CL-ML	10.1	3	45	38/41 <sup>1</sup>	17	12	5					
CB-3-94	SS-9	18.0-20.0	CL-ML	10.4										71.0	
CB-3-94	SS-11	22.0-24.0	CL-ML	10.8				14	13	1					
PZ-5-94	SS-4	6.0-8.0	CL	9.3				42	20	22					
PZ-6-94	SS-6	10.0-12.0	CL	22.7				31	22	9					
PZ-6-94	SS-8	14.0-18.0	CH	22.5				69	29	40					
PZ-6-94	SS-10	18.0-20.0	CL	14.2	0	0	76/24 <sup>1</sup>	40	23	17					
PZ-7-94	SS-10	20.0-22.0	CL	13.2				28	14	14					
PZ-7-94	SS-14	28.0-30.0	CL	12.5	2	18	51/29 <sup>1</sup>	34	18	16					
PZ-7-94	SS-23	46.0-48.0	CH	23.6	0	0	51/49 <sup>1</sup>	54	24	30					
PZ-7-94	SS-26B	52.0-54.0	CH	26.7				58	26	32					
PZ-7-94	SS-28	56.0-58.0	CL	23.0	3	23	60/14 <sup>1</sup>								

## Notes:

<sup>1</sup> Represents percentages of silt and clay based hydrometer analysis (clay < 0.002 mm).<sup>2</sup> Based on 1980 Bartholomew Engineering Report.<sup>3</sup> Based on 1991 Andrews Environmental Engineering Report.

**TABLE 2-9 (continued)**  
**SUMMARY OF LABORATORY TEST RESULTS FOR LOWER SILTY CLAY**

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf) (Rimac)	Uncompacted Hydraulic Conductivity (cm/sec)	Total Organic Carbon (TOC) mg/g	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI					
PZ-8-94	SS-10	20.0-22.0	ML	11.6				18	15	3		0.9			
PZ-8-94	SS-12	24.0-26.0	CL-ML	9.7	5	44	37/14 <sup>1</sup>	17	12	5					
PZ-8-94	SS-18	36.0-40.0	CL	17.6	1	1	50/48 <sup>1</sup>	49	26	23					
PZ-8-94	Bag	43.0-48.0	CL	17.2-13.2											6.4
GB-2-94	SS-16	30.0-32.0	CL	13.3	11	18	43/28 <sup>1</sup>	35	18	17					
GB-2-94	SS-25	48.0-50.0	CL	18.8				34	22	12					
GB-3-94	SS-13	24.0-26.0	CL	13.5	5	18	46/31 <sup>1</sup>	35	19	16					
GB-4-94	SS-15	28.0-30.0	CL	13.3				40	23	17					
B-11 <sup>2</sup>	S-7	30.0-31.5									112.6		1.42x10 <sup>-9</sup>		
B-11 <sup>2</sup>	S-11	50.0-51.5									101.3		1.62x10 <sup>-9</sup>		
B-12 <sup>2</sup>	S-12	55.0-56.5									105.1		8.38x10 <sup>-10</sup>		
B-122	S-5	20.0-21.5									125.5				
B-12 <sup>2</sup>	S-10	45.0-46.5									98.7				
B-13 <sup>2</sup>	S-3	10.0-11.5									104.7		7.24x10 <sup>-8</sup>		
B-13 <sup>2</sup>	S-7	30.0-31.5									109.1		8.5x10 <sup>-9</sup>		
B-13 <sup>2</sup>	S-9	40.0-41.5									103.6				19.0
B-14 <sup>2</sup>	S-4	15.0-16.5									126.4		1.7x10 <sup>-7</sup>		

**Notes:**<sup>1</sup> Represent percentages of silt and clay based hydrometer analysis.<sup>2</sup> Based on 1980 Bartholomew Engineering Report.<sup>3</sup> Based on 1991 Andrews Environmental Engineering Report.

**TABLE 2-9 (continued)**  
**SUMMARY OF LABORATORY TEST RESULTS FOR LOWER SILTY CLAY UNIT**

Boring/ Piezometer	Sample Number	Depth (ft)	USCS Symbol	Moisture Content (%)	Grain Size Analysis			Atterberg Limits			Dry Density (pcf)	Unconfined Compressive Strength (tsf) (Rimac)	Uncompacted Hydraulic Conductivity (cm/sec)	Total Organic Carbon (TOC) mg/g	Cation Exchange Capacity (meq/100 gm)
					Gravel (%)	Sand (%)	Silt or Clay (%)	LL	PL	PI					
B-14 <sup>2</sup>	S-6	25.0-26.5									119.4		1.1x10 <sup>-7</sup>		
B-14 <sup>2</sup>	S-10	45.0-46.5									118.9				
B-14 <sup>2</sup>	S-13	60.0-61.5									110.3		3.6x10 <sup>-9</sup>		
B-15 <sup>2</sup>	S-4	15.0-16.5									118.8				
B-15 <sup>2</sup>	S-6	25.0-26.5									103.1				27.0
B-17 <sup>2</sup>	S-4	15.0-16.5									109.2				8.8
B-17 <sup>2</sup>	S-9	40.0-41.5									113.5				
P-3 <sup>3</sup>		15.4	ML		1	47	33/18 <sup>1</sup>	14	11	3					
P-3 <sup>3</sup>		16.4	ML		2	44	35/20 <sup>1</sup>	13	11	2					
P-3 <sup>3</sup>		16.6	ML		1	30	48/21 <sup>1</sup>								
P-6 <sup>3</sup>		1.4	CL-ML		0	37	42/21 <sup>1</sup>	20	15	5					
P-6 <sup>3</sup>		2.5	CL		9	36	35/20 <sup>1</sup>	21	6	15			2.96x10 <sup>-8</sup>		
P-6 <sup>3</sup>		3.7	CL-ML		3	44	33/20 <sup>1</sup>	20	15	5					
P-6 <sup>3</sup>		6.5	CL		7	37	36/20 <sup>1</sup>	31	22	9					
				MC	G	S	S/C	LL	PL	PI	DD	Rimac	HC	TOC	CEC
<b>Number of Tests</b>				26	16	16	16	27	27	27	16	1	9	4	3
<b>Minimum</b>				7.9	0	0	51	13	6	1	98.7	0	8.38x10 <sup>-10</sup>	1.6	8.8
<b>Maximum</b>				26.7	11	47	100	69	29	40	126.4	0.9	1.7x10 <sup>-7</sup>	71.0	27.0
<b>Average</b>				15.5	3.3	28	72	31	17	14	111.3	0.9	1.42x10 <sup>-8</sup>	28.6	18.3
<b>Median</b>				13.3	2.5	33	66	34	22	14	109.7	0.9	1.42x10 <sup>-8</sup>	20.9	19.0

Notes:

<sup>1</sup> Represents percentages of silt and clay based hydrometer analysis (clay < 0.002 mm).<sup>2</sup> Based on 1980 Bartholomew Engineering Report.<sup>3</sup> Based on 1991 Andrews Environmental Engineering Report.

**ATTACHMENT 5**  
**Unit 1 Leachate Data**

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L101 - SECOND QUARTER 2012**

Parameter		Value	Units
1,1,1,2-Tetrachloroethane	<	5	ug/L
1,1,1-Trichloroethane	<	5	ug/L
1,1,2,2-Tetrachloroethane	<	5	ug/L
1,1,2-Trichloroethane	<	5	ug/L
1,1-Dichloroethane	<	5	ug/L
1,1-Dichloroethene	<	5	ug/L
1,1-Dichloropropene	<	5	ug/L
1,2,3-Trichlorobenzene	<	5	ug/L
1,2,3-Trichloropropane	<	5	ug/L
1,2,4-Trichlorobenzene	<	5	ug/L
1,2,4-Trimethylbenzene	<	5	ug/L
1,2-Dibromo-3-chloropropane	<	10	ug/L
1,2-Dibromoethane	<	10	ug/L
1,2-Dichlorobenzene	<	10	ug/L
1,2-Dichloroethane	<	5	ug/L
1,2-Dichloropropane	<	5	ug/L
1,3,5-Trimethylbenzene	<	5	ug/L
1,3-Dichlorobenzene	<	10	ug/L
1,3-Dichloropropane	<	5	ug/L
1,3-Dichloropropene	<	5	ug/L
1,4-Dichlorobenzene	<	10	ug/L
2,2-Dichloropropane	<	5	ug/L
2,4,5-TP (Silvex)	<	0.1	ug/L
2,4-D	<	0.2	ug/L
2-Butanone (MEK)	<	10	ug/L
2-Chlorotoluene	<	5	ug/L
2-Hexanone (MBK)	<	10	ug/L
4,4'-DDT	<	0.1	ug/L
4-Chlorotoluene	<	5	ug/L
4-Methyl-2-pentanone (MIBK)	<	10	ug/L
4-Methylphenol	<	10	ug/L
Acetone	<	100	ug/L
Acrolein	<	100	ug/L
Acrylonitrile	<	100	ug/L
Alachlor	<	5	ug/L
Aldicarb	<	10	ug/L
Aldrin	<	0.05	ug/L
alpha-BHC	<	0.1	ug/L
Aluminum, total		0.28	mg/L
Ammonia as N, Diss.		135	mg/L
Ammonia as N, total		119	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L101 - SECOND QUARTER 2012**

Parameter		Value	Units
Antimony, total	<	0.006	ug/L
Aroclor 1016	<	0.5	ug/L
Aroclor 1221	<	0.5	ug/L
Aroclor 1232	<	0.5	ug/L
Aroclor 1242	<	0.5	ug/L
Aroclor 1248	<	0.5	ug/L
Aroclor 1254	<	0.5	ug/L
Aroclor 1260	<	0.5	ug/L
Aroclor 1262	<	0.5	ug/L
Arsenic, total		0.004	mg/L
Atrazine	<	5	ug/L
Barium, total		0.629	mg/L
Benzene	<	5	ug/L
Benzo(a)pyrene	<	10	ug/L
Beryllium, total	<	0.001	mg/L
beta-BHC	<	0.1	ug/L
Biochemical Oxygen Demand		53	mg/L
bis(2-ethylhexyl)phthalate	<	10	ug/L
bis(chloromethyl)ether	ND		ug/L
Boron, total		1.07	ug/L
Bromobenzene	<	5	ug/L
Bromochloromethane	<	5	ug/L
Bromodichloromethane	<	5	ug/L
Bromoform	<	1	ug/L
Bromomethane	<	10	ug/L
Butylbenzylphthalate	<	10	ug/L
Cadmium, total		0.004	mg/L
Calcium, total		224	mg/L
Carbofuran	<	10	ug/L
Carbon Disulfide	<	5	ug/L
Carbon Tetrachloride	<	5	ug/L
Chemical Oxygen Demand		141	mg/L
Chlordane	<	1	ug/L
Chloride, total		194	mg/L
Chlorobenzene	<	5	ug/L
Chloroethane	<	10	ug/L
Chloroform	<	1	ug/L
Chloromethane	<	10	ug/L
Chromium, total		0.003	mg/L
cis-1,2-Dichloroethene	<	5	ug/L
cis-1,3-Dichloropropene	<	1	ug/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L101 - SECOND QUARTER 2012**

Parameter	Value	Units
Cobalt, total	0.004	mg/L
Copper, total	0.032	mg/L
Cyanide, total	< 0.005	mg/L
Dalapon	< 10	ug/L
delta-BHC	< 0.1	ug/L
Dibromochloromethane	< 1	ug/L
Dibromomethane	< 5	ug/L
Dichlorodifluoromethane	< 5	ug/L
Dieldrin	< 0.1	ug/L
Diethylphthalate	< 10	ug/L
Dimethylphthalate	< 10	ug/L
Di-n-butylphthalate	< 10	ug/L
Dinoseb	< 3	ug/L
Endrin	< 0.1	ug/L
Ethylbenzene	< 5	ug/L
Fecal Coliform Bacteria	< 2	cfu/100mL
Fluoride, total	< 0.5	mg/L
gamma-BHC (Lindane)	< 0.05	ug/L
Heptachlor	< 0.05	ug/L
Heptachlor Epoxide	< 0.05	ug/L
Hexachlorobutadiene	< 10	ug/L
Iodomethane	< 10	ug/L
Iron, total	34.6	mg/L
Isophorone	< 10	ug/L
Isopropylbenzene	< 5	ug/L
Lead, total	0.013	mg/L
m&p-Xylene	< 5	ug/L
Magnesium, total	162	mg/L
Manganese, total	2.3	mg/L
Mercury, total	< 0.0005	mg/L
Methoxychlor	< 0.5	ug/L
Methylene Chloride	< 5	ug/L
m-Xylene	< 5	ug/L
Naphthalene	< 10	ug/L
n-Butylbenzene	< 5	ug/L
Nickel, total	0.038	mg/L
Nitrate as N, total	0.1	mg/L
Oil (Hexane Soluble)	2	mg/L
o-Xylene	< 5	ug/L
Parathion	< 5	ug/L
Pentachlorophenol	< 10	ug/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L101 - SECOND QUARTER 2012**

Parameter		Value	Units
pH (field)		7.1	SU
Phenolics	<	50	ug/L
Picloram	<	3	ug/L
p-Isopropyltoluene	<	5	ug/L
Polychlorinated Biphenyls(PCBs)	<	0.5	ug/L
Potassium, total		30	mg/L
p-Xylene	<	5	ug/L
sec-Butylbenzene	<	5	ug/L
Selenium, total	<	0.002	mg/L
Silver, total	<	0.001	mg/L
Simazine	<	5	ug/L
Sodium, total		100	mg/L
Styrene	<	5	ug/L
Sulfate, total	<	75	mg/L
tert-Butylbenzene	<	5	ug/L
Tetrachloroethene	<	5	ug/L
Tetrahydrofuran	<	5	ug/L
Thallium, total	<	0.002	mg/L
Tin, total	<	0.02	mg/L
Toluene	<	5	ug/L
Total Dissolved Solids		1590	mg/L
Total Organic Carbon		96	mg/L
Total Suspended Solids		120	mg/L
Toxaphene	<	1	ug/L
trans-1,2-Dichloroethene	<	5	ug/L
trans-1,3-Dichloropropene	<	1	ug/L
trans-1,4-Dichloro-2-butene	<	5	ug/L
Trichloroethene	<	5	ug/L
Trichlorofluoromethane	<	5	ug/L
Vanadium, total	<	0.01	mg/L
Vinyl Acetate	<	10	ug/L
Vinyl Chloride	<	2	ug/L
Xylenes (Total)	<	5	ug/L
Zinc, total		0.197	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L102 - FOURTH QUARTER 2012**

Parameter		Value	Units
1,1,1,2-Tetrachloroethane	<	5	ug/L
1,1,1-Trichloroethane	<	5	ug/L
1,1,2,2-Tetrachloroethane	<	5	ug/L
1,1,2-Trichloroethane	<	5	ug/L
1,1-Dichloroethane	<	5	ug/L
1,1-Dichloroethene	<	5	ug/L
1,1-Dichloropropene	<	5	ug/L
1,2,3-Trichlorobenzene	<	5	ug/L
1,2,3-Trichloropropane	<	5	ug/L
1,2,4-Trichlorobenzene	<	5	ug/L
1,2,4-Trimethylbenzene		6	ug/L
1,2-Dibromo-3-chloropropane	<	10	ug/L
1,2-Dibromoethane	<	10	ug/L
1,2-Dichlorobenzene	<	10	ug/L
1,2-Dichloroethane	<	5	ug/L
1,2-Dichloropropane	<	5	ug/L
1,3,5-Trimethylbenzene		19.5	ug/L
1,3-Dichlorobenzene	<	10	ug/L
1,3-Dichloropropane	<	5	ug/L
1,3-Dichloropropene	<	5	ug/L
1,4-Dichlorobenzene	<	10	ug/L
2,2-Dichloropropane	<	5	ug/L
2,4,5-TP (Silvex)	<	0.1	ug/L
2,4-D	<	0.2	ug/L
2-Butanone (MEK)	<	10	ug/L
2-Chlorotoluene	<	5	ug/L
2-Hexanone (MBK)	<	10	ug/L
4-Methylphenol	<	10	ug/L
4,4'-DDT	<	0.1	ug/L
4-Chlorotoluene	<	5	ug/L
4-Methyl-2-pentanone (MIBK)	<	10	ug/L
Acetone	<	100	ug/L
Acrolein	<	100	ug/L
Acrylonitrile	<	100	ug/L
Alachlor	<	5	ug/L
Aldicarb	<	10	ug/L
Aldrin	<	0.05	ug/L
Alkalinity, bicarbonate	<	5	mg/L
alpha-BHC	<	0.1	ug/L
Aluminum, total		1.2	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L102 - FOURTH QUARTER 2012**

Parameter	Value	Units
Ammonia as N, Diss.	1920	mg/L
Ammonia as N, total	1820	mg/L
Antimony, total	0.126	mg/L
Aroclor 1016	< 0.5	ug/L
Aroclor 1221	< 0.5	ug/L
Aroclor 1232	< 0.5	ug/L
Aroclor 1242	< 0.5	ug/L
Aroclor 1248	< 0.5	ug/L
Aroclor 1254	< 0.5	ug/L
Aroclor 1260	< 0.5	ug/L
Aroclor 1262	< 0.5	ug/L
Arsenic, total	0.146	mg/L
Atrazine	< 5	ug/L
Barium, total	1.94	mg/L
Benzene	< 5	ug/L
Benzo(a)pyrene	< 10	ug/L
Beryllium, total	< 0.001	mg/L
beta-BHC	< 0.1	ug/L
Biochemical Oxygen Demand	55	mg/L
bis(2-ethylhexyl)phthalate	22	ug/L
bis(chloromethyl)ether	ND	ug/L
Boron, total	4.96	mg/L
Bromobenzene	< 5	ug/L
Bromochloromethane	< 5	ug/L
Bromodichloromethane	< 5	ug/L
Bromoform	< 1	ug/L
Bromomethane	< 10	ug/L
Butylbenzylphthalate	< 10	ug/L
Cadmium, total	0.004	mg/L
Calcium, total	132	mg/L
Carbofuran	< 10	ug/L
Carbon Disulfide	< 5	ug/L
Carbon Tetrachloride	< 5	ug/L
Chemical Oxygen Demand	3610	mg/L
Chlordane	< 1	ug/L
Chloride, total	4000	mg/L
Chlorobenzene	< 5	ug/L
Chloroethane	< 10	ug/L
Chloroform	< 1	ug/L
Chloromethane	< 10	ug/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L102 - FOURTH QUARTER 2012**

Parameter	Value	Units
Chromium, total	0.956	mg/L
cis-1,2-Dichloroethene	< 5	ug/L
cis-1,3-Dichloropropene	< 1	ug/L
Cobalt, total	0.046	mg/L
Copper, total	0.09	mg/L
Cyanide, total	0.015	mg/L
Dalapon	< 10	ug/L
delta-BHC	< 0.1	ug/L
Dibromochloromethane	< 1	ug/L
Dibromomethane	< 5	ug/L
Dichlorodifluoromethane	< 5	ug/L
Dieldrin	< 0.1	ug/L
Diethylphthalate	< 10	ug/L
Dimethylphthalate	< 10	ug/L
Di-n-butylphthalate	< 10	ug/L
Dinoseb	< 3	ug/L
Endrin	< 0.1	ug/L
Ethylbenzene	77.3	ug/L
Fecal Coliform Bacteria	10200	cfu/100mL
Fluoride, Total	1.05	mg/L
gamma-BHC (Lindane)	< 0.05	ug/L
Heptachlor	< 0.05	ug/L
Heptachlor Epoxide	< 0.05	ug/L
Hexachlorobutadiene	< 10	ug/L
Iodomethane	< 10	ug/L
Iron, total	16.7	mg/L
Isophorone	< 10	ug/L
Isopropylbenzene	5.1	ug/L
Lead, total	0.017	mg/L
m&p-Xylene	81.1	ug/L
Magnesium, total	123	mg/L
Manganese, total	0.155	mg/L
Mercury, total	< 0.0005	mg/L
Methoxychlor	< 0.5	ug/L
Methylene Chloride	< 5	ug/L
m-Xylene	81.1	ug/L
Naphthalene	< 10	ug/L
n-Butylbenzene	< 5	ug/L
Nickel, total	0.808	mg/L
Nitrate as N, total	< 0.5	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L102 - FOURTH QUARTER 2012**

Parameter	Value	Units
Oil (Hexane Soluble)	17	mg/L
o-Xylene	40.1	ug/L
Parathion	< 5	ug/L
Pentachlorophenol	< 10	ug/L
pH (field)	7.1	SU
Phenolics	280	ug/L
Picloram	< 3	ug/L
p-Isopropyltoluene	5.8	ug/L
Polychlorinated Biphenyls(PCBs)	< 0.5	ug/L
Potassium, total	1530	mg/L
p-Xylene	81.1	ug/L
sec-Butylbenzene	< 5	ug/L
Selenium, total	< 0.002	mg/L
Silver, total	< 0.001	mg/L
Simazine	< 5	ug/L
Sodium, total	1980	mg/L
Styrene	< 5	ug/L
Sulfate, total	168	mg/L
tert-Butylbenzene	< 5	ug/L
Tetrachloroethene	< 5	ug/L
Tetrahydrofuran	328	ug/L
Thallium, total	< 0.002	mg/L
Tin, total	0.18	mg/L
Toluene	9.3	ug/L
Total Dissolved Solids	10800	mg/L
Total Organic Carbon	1000	mg/L
Total Suspended Solids	860	mg/L
Toxaphene	< 1	ug/L
trans-1,2-Dichloroethene	< 5	ug/L
trans-1,3-Dichloropropene	< 1	ug/L
trans-1,4-Dichloro-2-butene	< 5	ug/L
Trichloroethene	< 5	ug/L
Trichlorofluoromethane	< 5	ug/L
Vanadium, total	0.04	mg/L
Vinyl Acetate	< 10	ug/L
Vinyl Chloride	2.8	ug/L
Xylenes (Total)	121	ug/L
Zinc, total	0.22	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L103 - SECOND QUARTER 2013**

Parameter	Value	Units
1,1,1,2-Tetrachloroethane	< 5	ug/L
1,1,1-Trichloroethane	< 5	ug/L
1,1,2,2-Tetrachloroethane	< 5	ug/L
1,1,2-Trichloroethane	< 5	ug/L
1,1-Dichloroethane	< 5	ug/L
1,1-Dichloroethene	< 5	ug/L
1,1-Dichloropropene	< 5	ug/L
1,2,3-Trichlorobenzene	< 5	ug/L
1,2,3-Trichloropropane	< 5	ug/L
1,2,4-Trichlorobenzene	< 5	ug/L
1,2,4-Trimethylbenzene	< 5	ug/L
1,2-Dibromo-3-chloropropane	< 10	ug/L
1,2-Dibromoethane	< 10	ug/L
1,2-Dichlorobenzene	< 10	ug/L
1,2-Dichloroethane	< 5	ug/L
1,2-Dichloropropane	< 5	ug/L
1,3,5-Trimethylbenzene	< 5	ug/L
1,3-Dichlorobenzene	< 10	ug/L
1,3-Dichloropropane	< 5	ug/L
1,3-Dichloropropene	< 5	ug/L
1,4-Dichlorobenzene	< 10	ug/L
2,2-Dichloropropane	< 5	ug/L
2,4,5-TP (Silvex)	< 0.1	ug/L
2,4-D	< 0.2	ug/L
2-Butanone (MEK)	< 10	ug/L
2-Chlorotoluene	< 5	ug/L
2-Hexanone (MBK)	< 10	ug/L
4,4'-DDT	< 0.1	ug/L
4-Chlorotoluene	< 5	ug/L
4-Methyl-2-pentanone (MIBK)	< 10	ug/L
4-Methylphenol	< 10	ug/L
Acetone	< 100	ug/L
Acrolein	< 100	ug/L
Acrylonitrile	< 100	ug/L
Alachlor	< 5	ug/L
Aldicarb	< 10	ug/L
Aldrin	< 0.05	ug/L
alpha-BHC	< 0.1	ug/L
Aluminum, total	0.08	mg/L
Ammonia as N, Diss.	0.58	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L103 - SECOND QUARTER 2013**

Parameter	Value	Units
Ammonia as N, total	0.49	mg/L
Antimony, total	< 0.006	mg/L
Aroclor 1016	< 0.5	ug/L
Aroclor 1221	< 0.5	ug/L
Aroclor 1232	< 0.5	ug/L
Aroclor 1242	< 0.5	ug/L
Aroclor 1248	< 0.5	ug/L
Aroclor 1254	< 0.5	ug/L
Aroclor 1260	< 0.5	ug/L
Aroclor 1262	< 0.5	ug/L
Arsenic, total	< 0.002	mg/L
Atrazine	< 5	ug/L
Barium, total	0.05	mg/L
Benzene	< 5	ug/L
Benzo(a)pyrene	< 10	ug/L
Beryllium, total	< 0.001	mg/L
beta-BHC	< 0.1	ug/L
Biochemical Oxygen Demand	7	mg/L
bis(2-ethylhexyl)phthalate	< 10	ug/L
bis(chloromethyl)ether	ND	ug/L
Boron, total	4.28	mg/L
Bromobenzene	< 5	ug/L
Bromoform	< 5	ug/L
Bromoform	< 1	ug/L
Bromomethane	< 10	ug/L
Butylbenzylphthalate	< 10	ug/L
Cadmium, total	< 0.001	mg/L
Calcium, total	291	mg/L
Carbofuran	< 10	ug/L
Carbon Disulfide	< 5	ug/L
Carbon Tetrachloride	< 5	ug/L
Chemical Oxygen Demand	46	mg/L
Chlordane	< 1	ug/L
Chloride, total	140	mg/L
Chlorobenzene	< 5	ug/L
Chloroethane	< 10	ug/L
Chloroform	< 1	ug/L
Chloromethane	< 10	ug/L
Chromium, total	0.016	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L103 - SECOND QUARTER 2013**

Parameter	Value	Units
cis-1,2-Dichloroethene	< 5	ug/L
cis-1,3-Dichloropropene	< 1	ug/L
Cobalt, total	< 0.001	mg/L
Copper, total	1.16	mg/L
Cyanide, total	< 0.005	mg/L
Dalapon	< 10	ug/L
delta-BHC	< 0.1	ug/L
Dibromochloromethane	< 1	ug/L
Dibromomethane	< 5	ug/L
Dichlorodifluoromethane	< 5	ug/L
Dieldrin	< 0.1	ug/L
Diethylphthalate	< 10	ug/L
Dimethylphthalate	< 10	ug/L
Di-n-butylphthalate	< 10	ug/L
Dinoseb	< 3	ug/L
Endrin	< 0.1	ug/L
Ethylbenzene	< 5	ug/L
Fecal Coliform Bacteria	< 50	cfu/100mL
Fluoride, total	< 0.5	mg/L
gamma-BHC (Lindane)	< 0.05	ug/L
Heptachlor	< 0.05	ug/L
Heptachlor Epoxide	< 0.05	ug/L
Hexachlorobutadiene	< 10	ug/L
Iodomethane	< 10	ug/L
Iron, total	3.48	mg/L
Isophorone	< 10	ug/L
Isopropylbenzene	< 5	ug/L
Lead, total	0.018	mg/L
m&p-Xylene	< 5	ug/L
Magnesium, total	184	mg/L
Manganese, total	0.411	mg/L
Mercury, total	< 5E-04	mg/L
Methoxychlor	< 0.5	ug/L
Methylene Chloride	< 5	ug/L
m-Xylene	< 5	ug/L
Naphthalene	< 10	ug/L
n-Butylbenzene	< 5	ug/L
Nickel, total	0.049	mg/L
Nitrate as N, total	0.55	mg/L
Oil (Hexane Soluble)	2	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING****LEACHATE WELL L103 - SECOND QUARTER 2013**

Parameter	Value	Units
o-Xylene	< 5	ug/L
Parathion	< 5	ug/L
Pentachlorophenol	< 10	ug/L
pH (field)	7.25	SU
Phenolics	< 50	ug/L
Picloram	< 3	ug/L
p-Isopropyltoluene	< 5	ug/L
Polychlorinated Biphenyls(PCBs)	< 0.5	ug/L
Potassium, total	41.6	mg/L
p-Xylene	< 5	ug/L
sec-Butylbenzene	< 5	ug/L
Selenium, total	0.002	mg/L
Silver, total	< 0.001	mg/L
Simazine	< 5	ug/L
Sodium, total	98.3	mg/L
Specific Conductance (field)	882	umhos/cm
Styrene	< 5	ug/L
Sulfate, total	1060	mg/L
Temperature	80.96	deg F
tert-Butylbenzene	< 5	ug/L
Tetrachloroethene	< 5	ug/L
Tetrahydrofuran	< 5	ug/L
Thallium, total	< 10	ug/L
Tin, total	< 20	ug/L
Toluene	< 5	ug/L
Total Dissolved Solids	2930	mg/L
Total Organic Carbon	15.6	mg/L
Total Suspended Solids	38	mg/L
Toxaphene	< 1	ug/L
trans-1,2-Dichloroethene	< 5	ug/L
trans-1,3-Dichloropropene	< 1	ug/L
trans-1,4-Dichloro-2-butene	< 5	ug/L
Trichloroethene	< 5	ug/L
Trichlorofluoromethane	< 5	ug/L
Vanadium, total	< 0.01	mg/L
Vinyl Acetate	< 10	ug/L
Vinyl Chloride	< 2	ug/L
Xylenes (Total)	< 5	ug/L
Zinc, total	0.285	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING****LEACHATE WELL L104 - FOURTH QUARTER 2013**

Parameter		Value	Units
1,1,1,2-Tetrachloroethane	<	5	ug/L
1,1,1-Trichloroethane	<	5	ug/L
1,1,2,2-Tetrachloroethane	<	5	ug/L
1,1,2-Trichloroethane	<	5	ug/L
1,1-Dichloroethane	<	5	ug/L
1,1-Dichloroethene	<	5	ug/L
1,1-Dichloropropene	<	5	ug/L
1,2,3-Trichlorobenzene	<	5	ug/L
1,2,3-Trichloropropane	<	5	ug/L
1,2,4-Trichlorobenzene	<	5	ug/L
1,2,4-Trimethylbenzene	<	5	ug/L
1,2-Dibromo-3-chloropropane	<	10	ug/L
1,2-Dibromoethane	<	10	ug/L
1,2-Dichlorobenzene	<	10	ug/L
1,2-Dichloroethane	<	5	ug/L
1,2-Dichloropropane	<	5	ug/L
1,3,5-Trimethylbenzene	<	5	ug/L
1,3-Dichlorobenzene	<	10	ug/L
1,3-Dichloropropane	<	5	ug/L
1,3-Dichloropropene	<	5	ug/L
1,4-Dichlorobenzene	<	10	ug/L
2,2-Dichloropropane	<	5	ug/L
2,4,5-TP (Silvex)	<	0.1	ug/L
2,4-D	<	0.2	ug/L
2-Butanone (MEK)	<	10	ug/L
2-Chlorotoluene	<	5	ug/L
2-Hexanone (MBK)	<	10	ug/L
4,4'-DDT	<	0.1	ug/L
4-Chlorotoluene	<	5	ug/L
4-Methyl-2-pentanone (MIBK)	<	10	ug/L
4-Methylphenol	<	10	ug/L
Acetone	<	100	ug/L
Acrolein	<	100	ug/L
Acrylonitrile	<	100	ug/L
Alachlor	<	5	ug/L
Aldicarb	<	10	ug/L
Aldrin	<	0.05	ug/L
alpha-BHC	<	0.1	ug/L
Aluminum, total		0.22	mg/L
Ammonia as N, Diss.		39.4	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L104 - FOURTH QUARTER 2013**

Parameter	Value	Units
Ammonia as N, total	43.2	mg/L
Antimony, total	< 0.006	mg/L
Aroclor 1016	< 0.5	ug/L
Aroclor 1221	< 0.5	ug/L
Aroclor 1232	< 0.5	ug/L
Aroclor 1242	< 0.5	ug/L
Aroclor 1248	< 0.5	ug/L
Aroclor 1254	< 0.5	ug/L
Aroclor 1260	< 0.5	ug/L
Aroclor 1262	< 0.5	ug/L
Arsenic, total	< 0.002	mg/L
Atrazine	< 5	ug/L
Barium, total	0.224	mg/L
Benzene	< 5	ug/L
Benzo(a)pyrene	< 10	ug/L
Beryllium, total	< 0.001	mg/L
beta-BHC	< 0.1	ug/L
Biochemical Oxygen Demand	9	mg/L
bis(2-ethylhexyl)phthalate	< 10	ug/L
bis(chloromethyl)ether	ND	ug/L
Boron, total	0.82	mg/L
Bromobenzene	< 5	ug/L
Bromochloromethane	< 5	ug/L
Bromodichloromethane	< 5	ug/L
Bromoform	< 1	ug/L
Bromomethane	< 10	ug/L
Butylbenzylphthalate	< 10	ug/L
Cadmium, total	< 0.001	mg/L
Calcium, total	211	mg/L
Carbofuran	< 10	ug/L
Carbon Disulfide	< 5	ug/L
Carbon Tetrachloride	< 5	ug/L
Chemical Oxygen Demand	89	mg/L
Chlordane	< 1	ug/L
Chloride, total	340	mg/L
Chlorobenzene	< 5	ug/L
Chloroethane	< 10	ug/L
Chloroform	< 1	ug/L
Chloromethane	< 10	ug/L
Chromium, total	< 0.001	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING**

**LEACHATE WELL L104 - FOURTH QUARTER 2013**

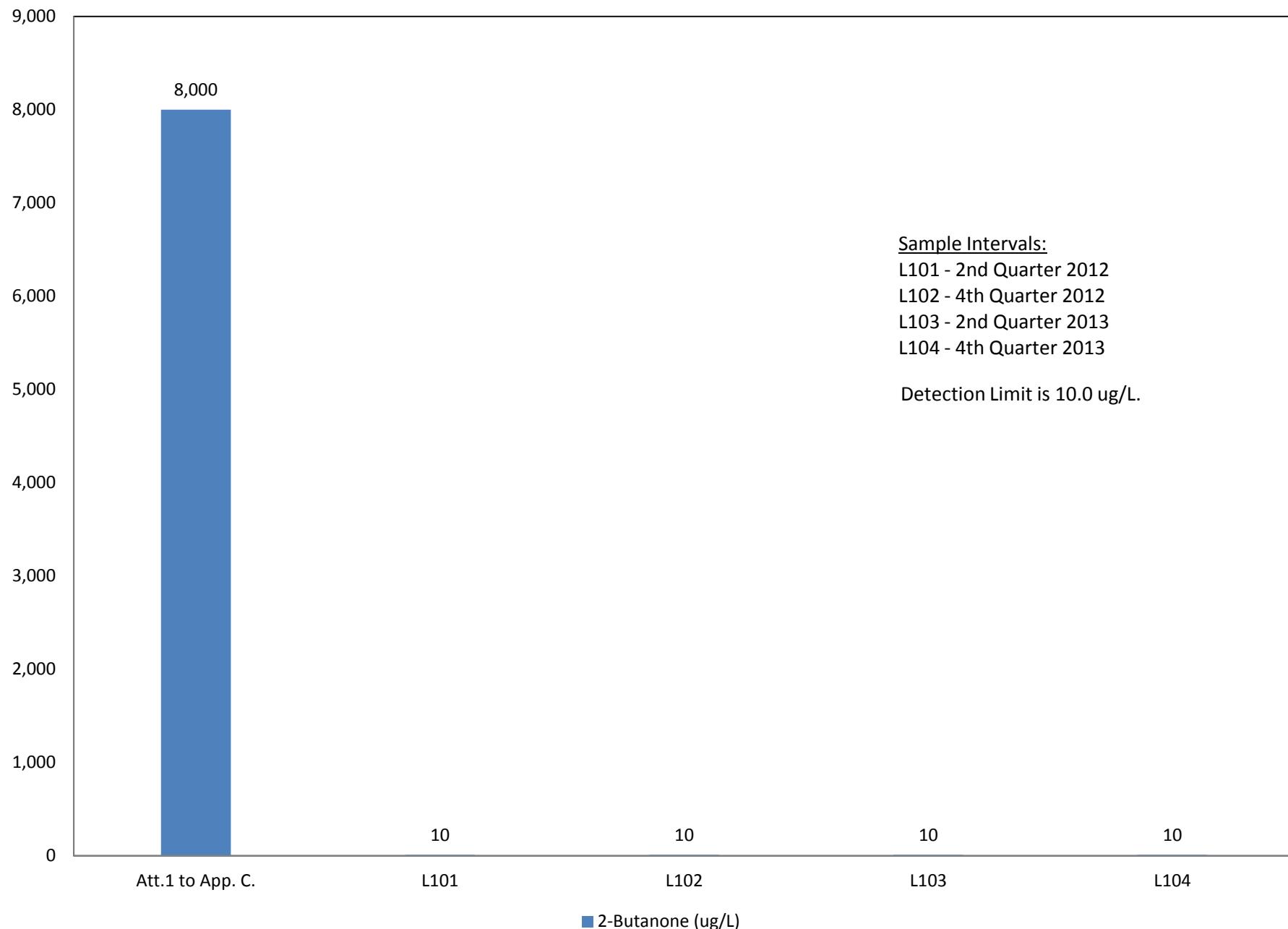
Parameter		Value	Units
cis-1,2-Dichloroethene	<	5	ug/L
cis-1,3-Dichloropropene	<	1	ug/L
Cobalt, total		0.002	mg/L
Copper, total	<	0.001	mg/L
Cyanide, total	<	0.005	mg/L
Dalapon	<	10	ug/L
delta-BHC	<	0.1	ug/L
Dibromochloromethane	<	1	ug/L
Dibromomethane	<	5	ug/L
Dichlorodifluoromethane	<	5	ug/L
Dieldrin	<	0.1	ug/L
Diethylphthalate	<	10	ug/L
Dimethylphthalate	<	10	ug/L
Di-n-butylphthalate	<	10	ug/L
Dinoseb	<	3	ug/L
Endrin	<	0.1	ug/L
Ethylbenzene	<	5	ug/L
Fecal Coliform Bacteria		500	cfu/100mL
Fluoride, total	<	0.5	mg/L
gamma-BHC (Lindane)	<	0.05	ug/L
Heptachlor	<	0.05	ug/L
Heptachlor Epoxide	<	0.05	ug/L
Hexachlorobutadiene	<	10	ug/L
Iodomethane	<	10	ug/L
Iron, total		0.94	mg/L
Isophorone	<	10	ug/L
Isopropylbenzene	<	5	ug/L
Lead, total		0.005	mg/L
m&p-Xylene	<	5	ug/L
Magnesium, total		156	mg/L
Manganese, total		0.215	mg/L
Mercury, total	<	5E-04	mg/L
Methoxychlor	<	0.5	ug/L
Methylene Chloride	<	5	ug/L
m-Xylene	<	5	ug/L
Naphthalene	<	10	ug/L
n-Butylbenzene	<	5	ug/L
Nickel, total		0.01	mg/L
Nitrate as N, total		3.66	mg/L
Oil (Hexane Soluble)	<	1	mg/L

**TABLE 5-1**  
**LEACHATE DATA**

**BRICKYARD DISPOSAL AND RECYCLING****LEACHATE WELL L104 - FOURTH QUARTER 2013**

Parameter	Value	Units
o-Xylene	< 5	ug/L
Parathion	< 5	ug/L
Pentachlorophenol	< 10	ug/L
pH (field)	7.33	SU
Phenolics	< 50	ug/L
Picloram	< 3	ug/L
p-Isopropyltoluene	< 5	ug/L
Polychlorinated Biphenyls(PCBs)	< 0.5	ug/L
Potassium, total	49.8	mg/L
p-Xylene	< 5	ug/L
sec-Butylbenzene	< 5	ug/L
Selenium, total	< 0.002	mg/L
Silver, total	< 0.001	mg/L
Simazine	< 5	ug/L
Sodium, total	254	mg/L
Specific Conductance (field)	1794	umhos/cm
Styrene	< 5	ug/L
Sulfate, total	99	mg/L
Temperature	56.66	deg F
tert-Butylbenzene	< 5	ug/L
Tetrachloroethene	< 5	ug/L
Tetrahydrofuran	< 5	ug/L
Thallium, total	< 0.01	mg/L
Tin, total	< 0.02	mg/L
Toluene	< 5	ug/L
Total Dissolved Solids	1990	mg/L
Total Organic Carbon	22	mg/L
Total Suspended Solids	15	mg/L
Toxaphene	< 1	ug/L
trans-1,2-Dichloroethene	< 5	ug/L
trans-1,3-Dichloropropene	< 1	ug/L
trans-1,4-Dichloro-2-butene	< 5	ug/L
Trichloroethene	< 5	ug/L
Trichlorofluoromethane	< 5	ug/L
Vanadium, total	< 0.01	mg/L
Vinyl Acetate	< 10	ug/L
Vinyl Chloride	< 2	ug/L
Xylenes (Total)	< 5	ug/L
Zinc, total	< 0.005	mg/L

## Brickyard Disposal and Recycling

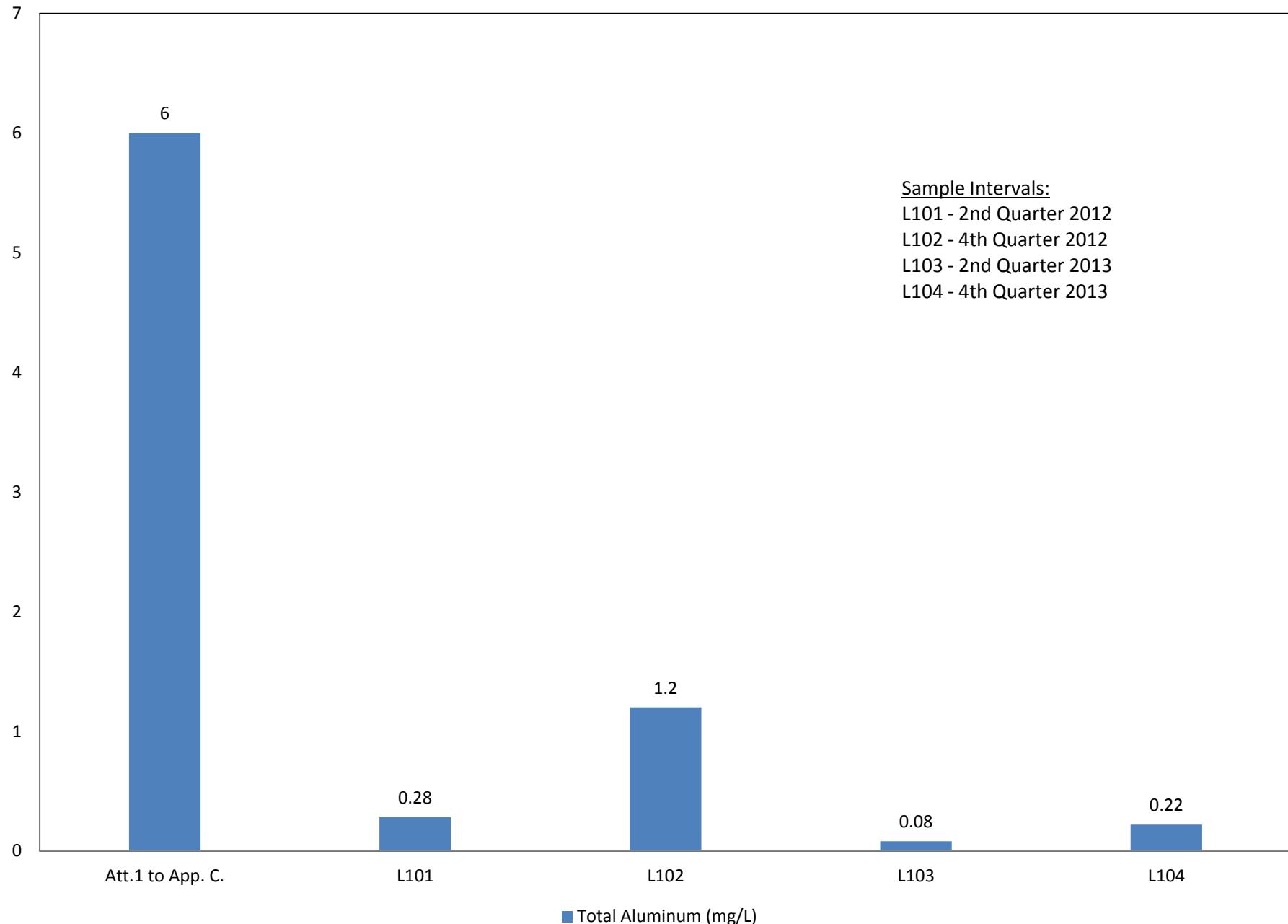


Detection Limit = 10 ug/L

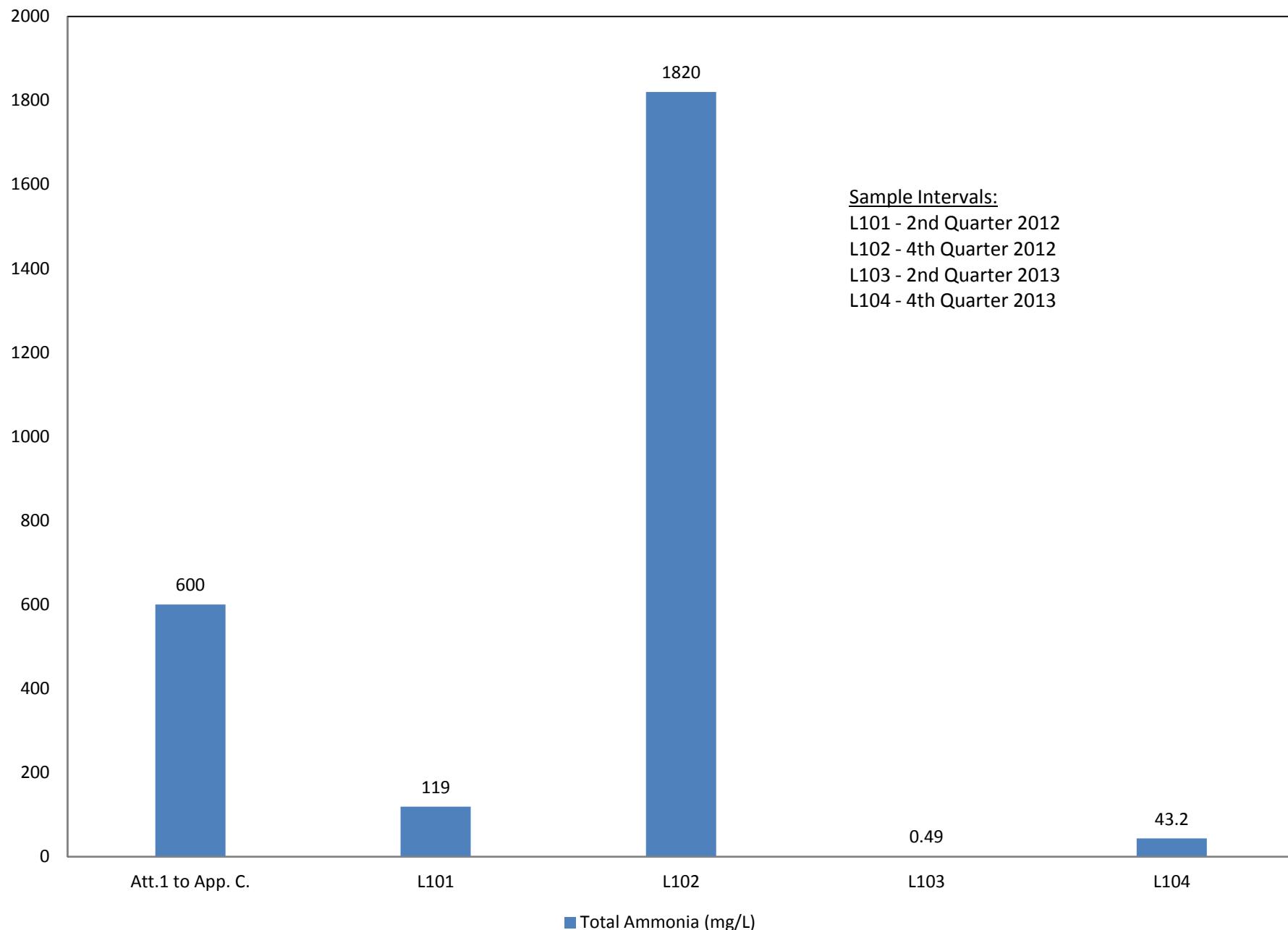
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
MEK

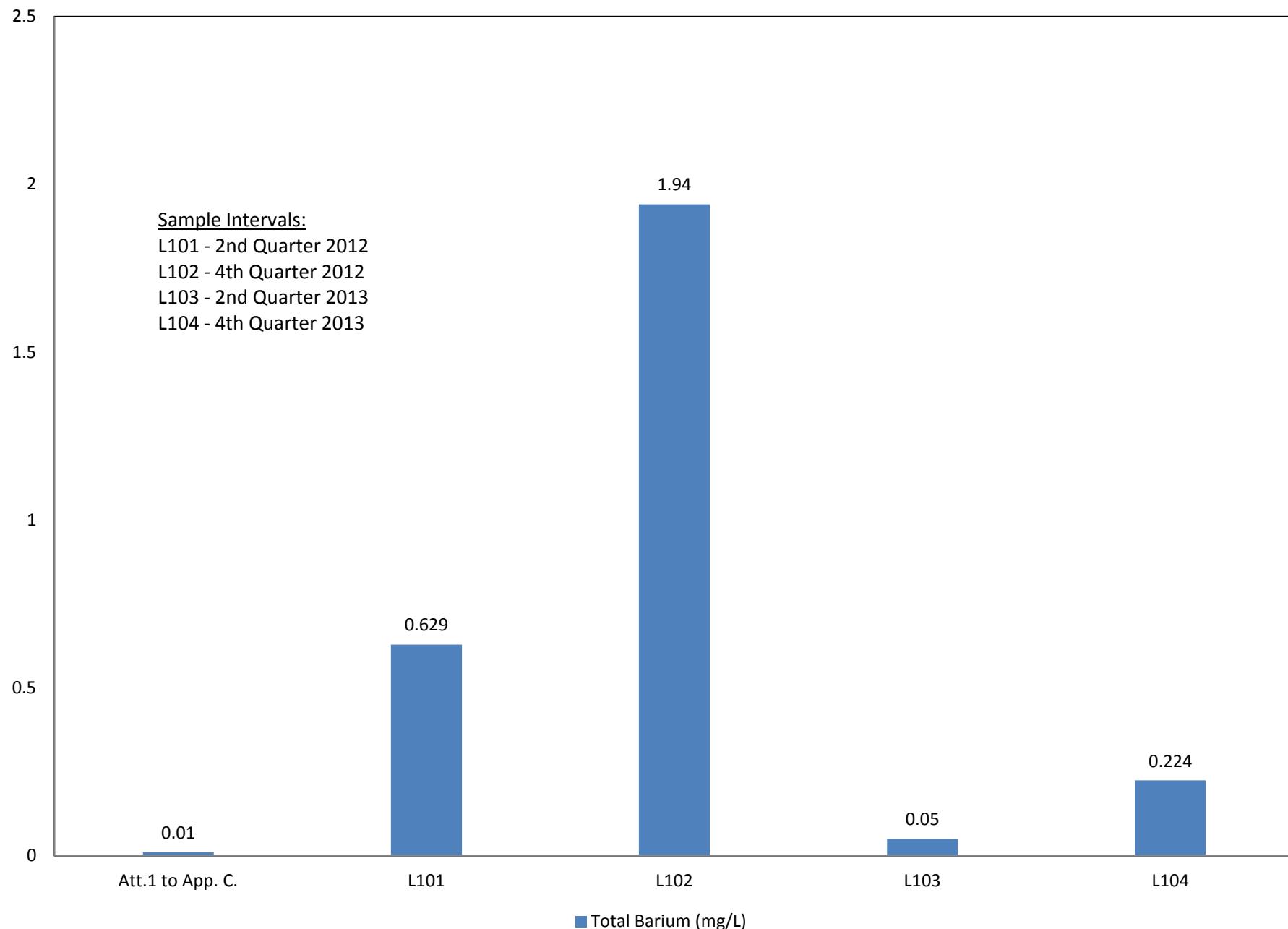
## Brickyard Disposal and Recycling



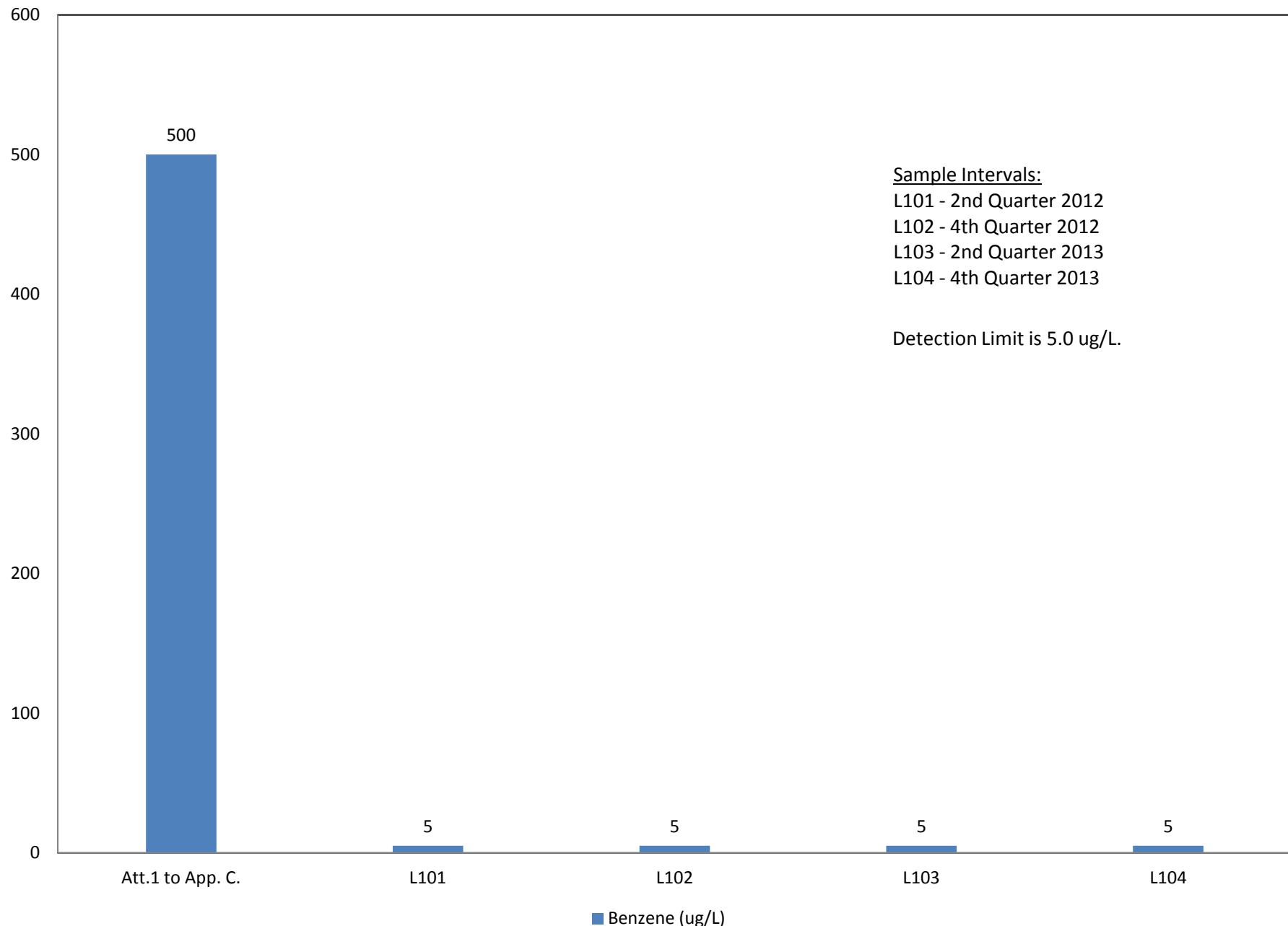
## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

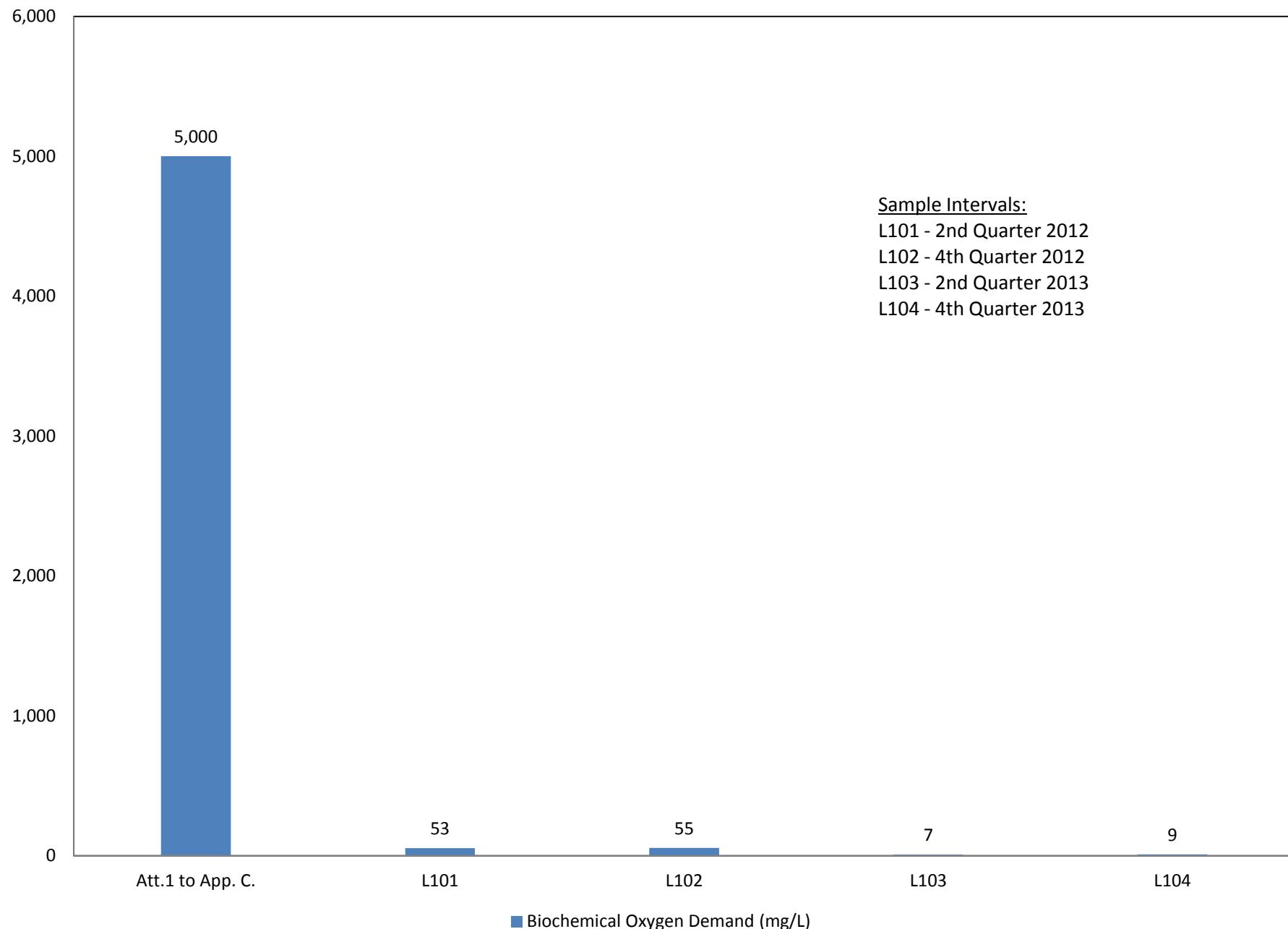


Detection Limit = 5 ug/L

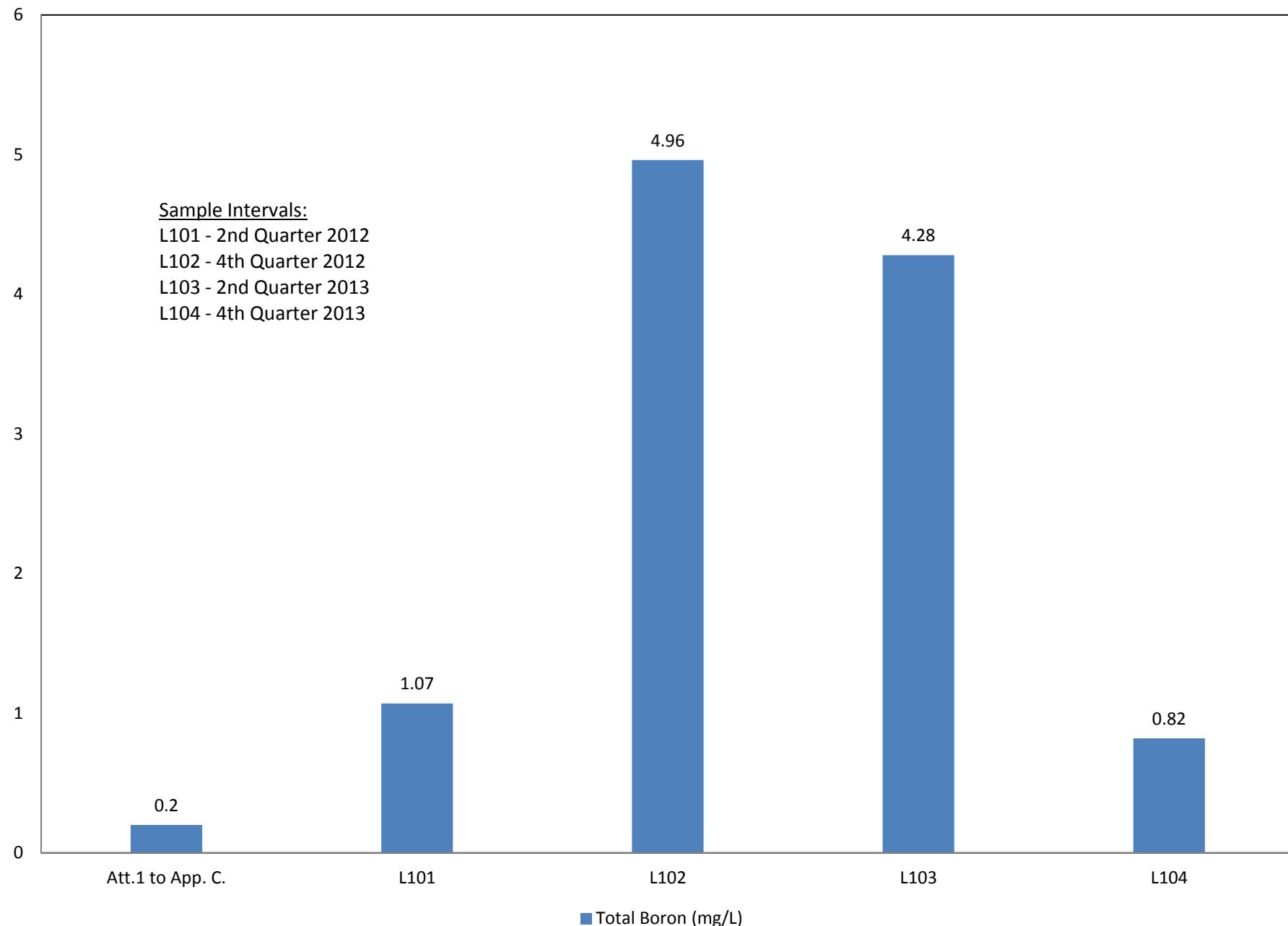
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Benzene

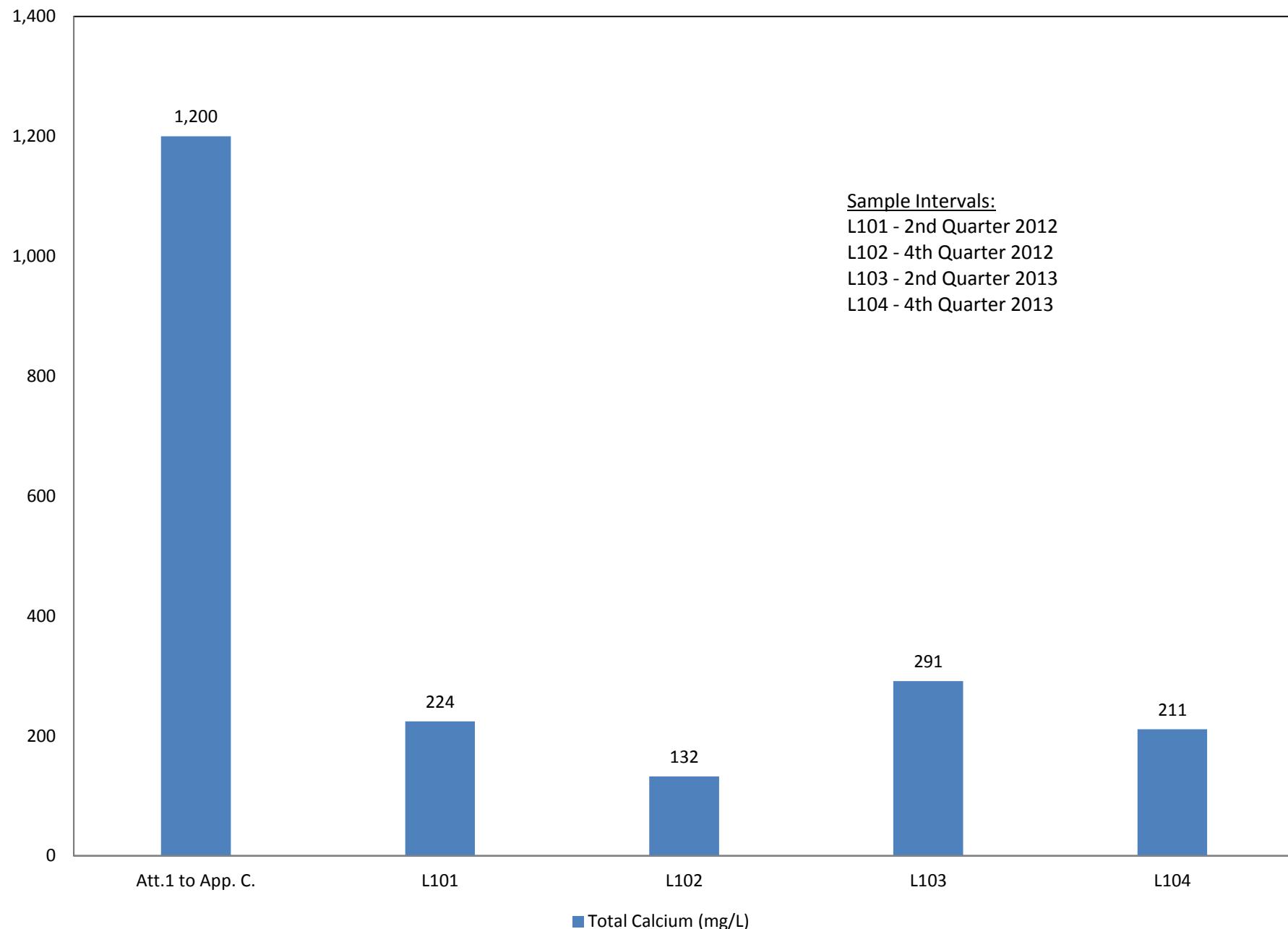
## Brickyard Disposal and Recycling



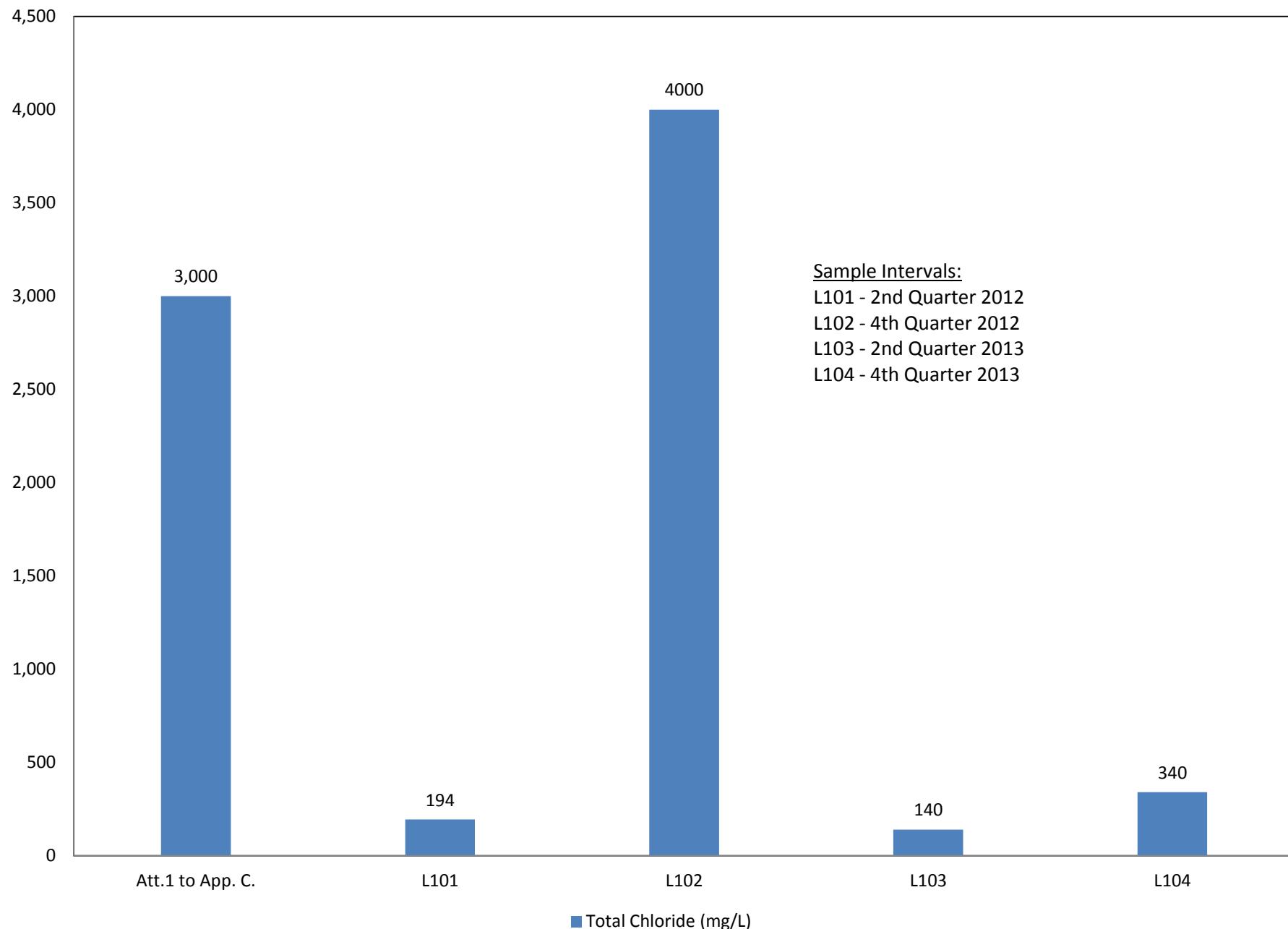
## Brickyard Disposal and Recycling



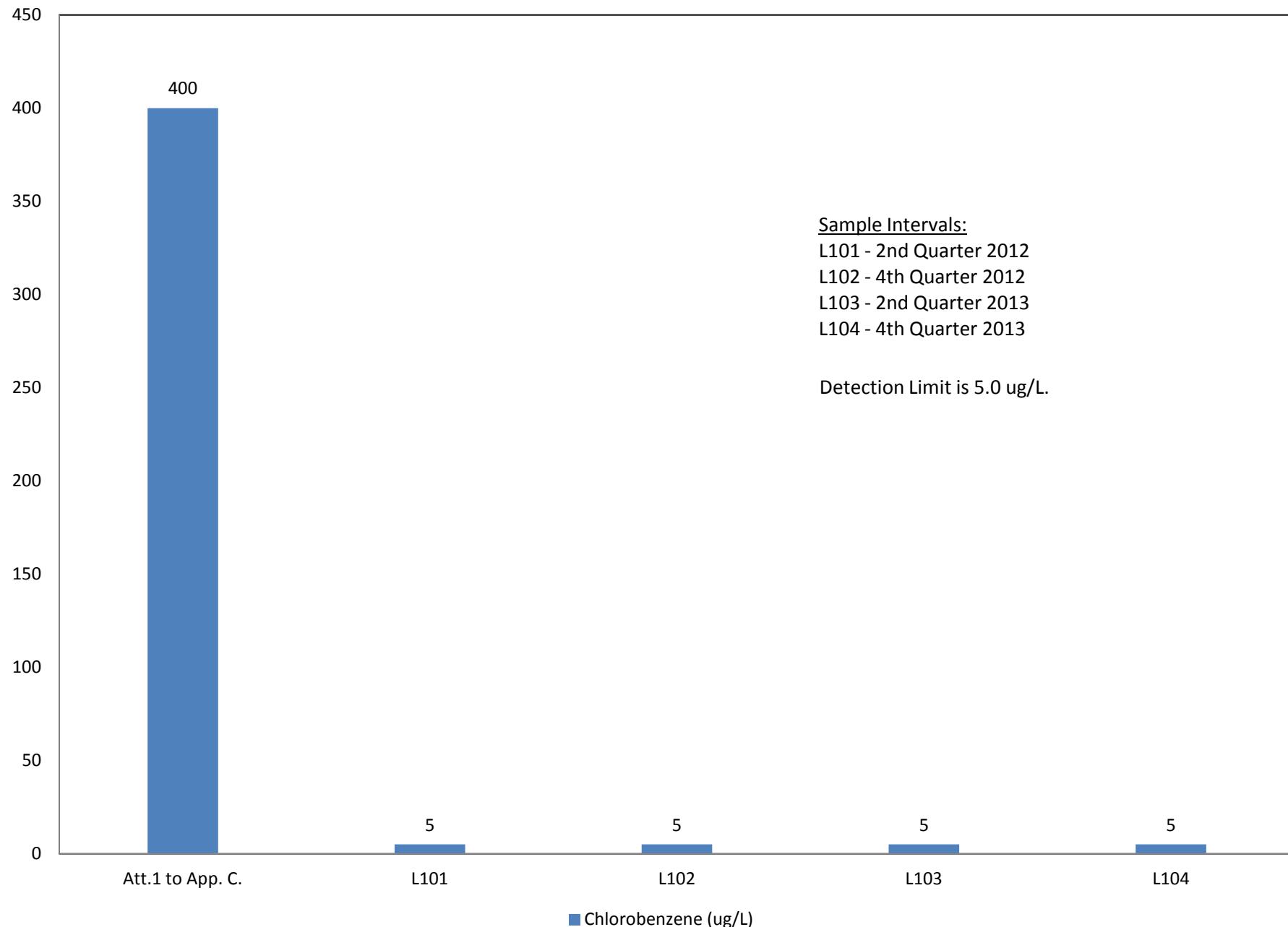
## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

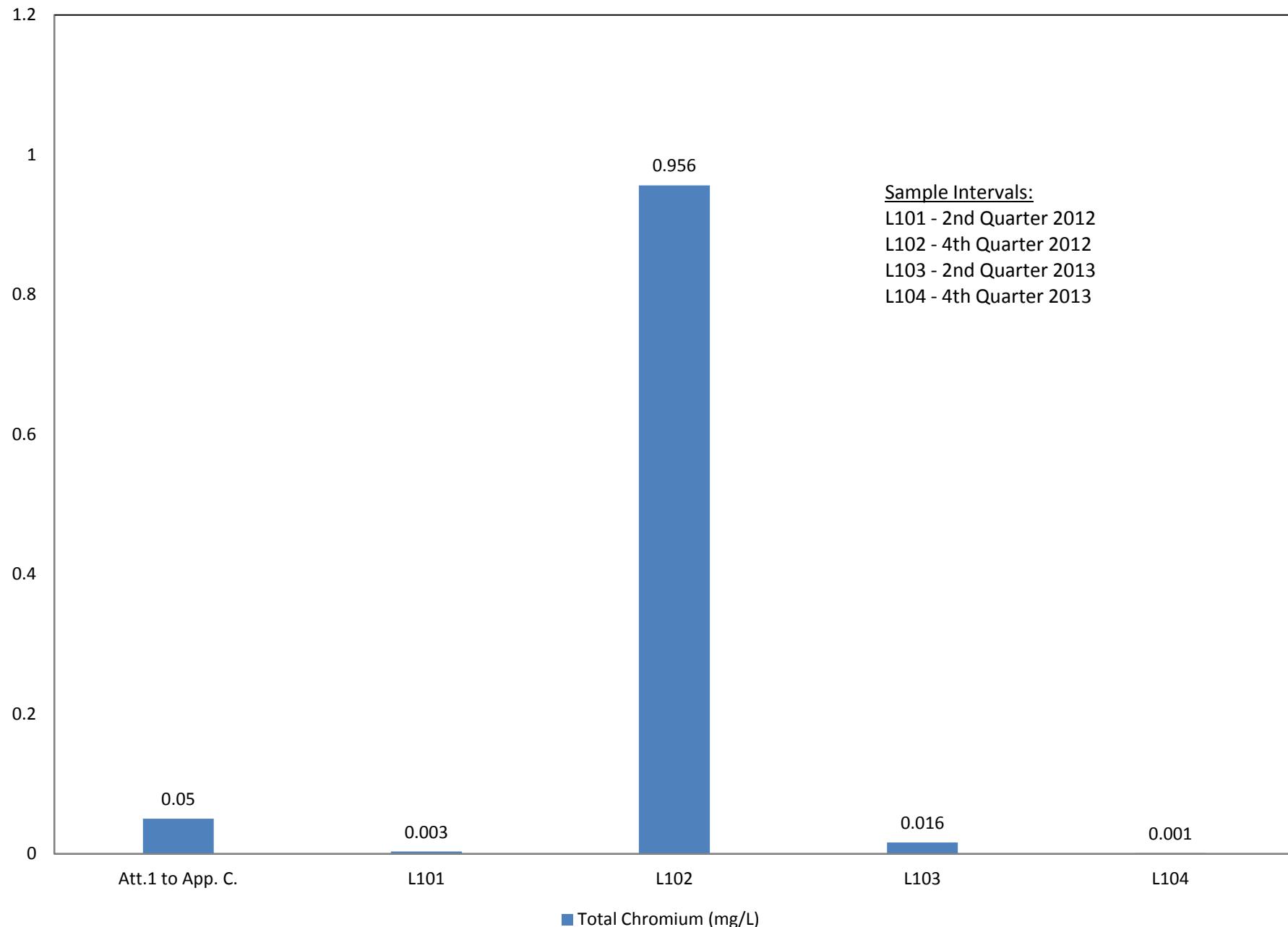


Detection Limit = 5 ug/L

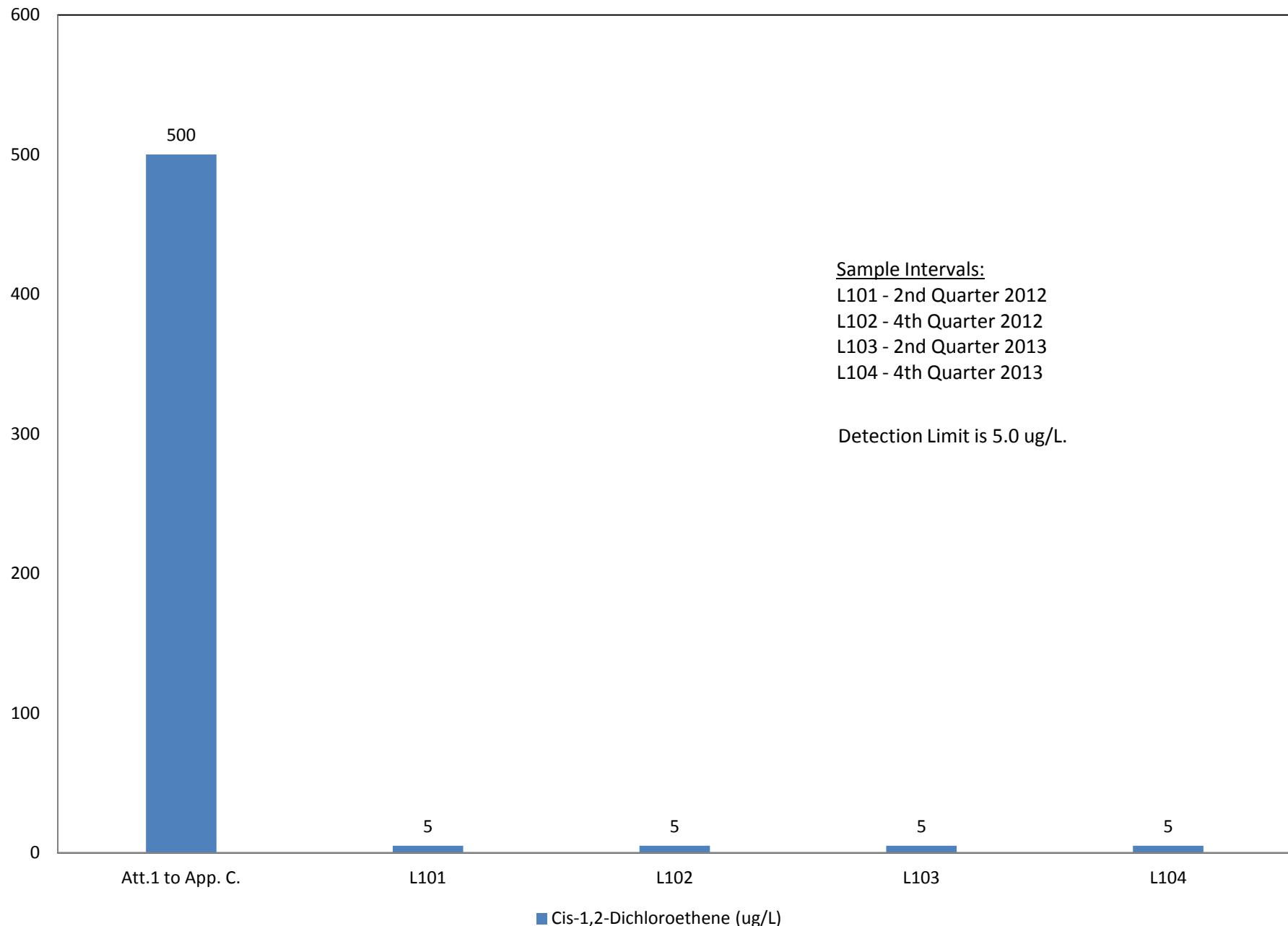
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Chlorobenzene

## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

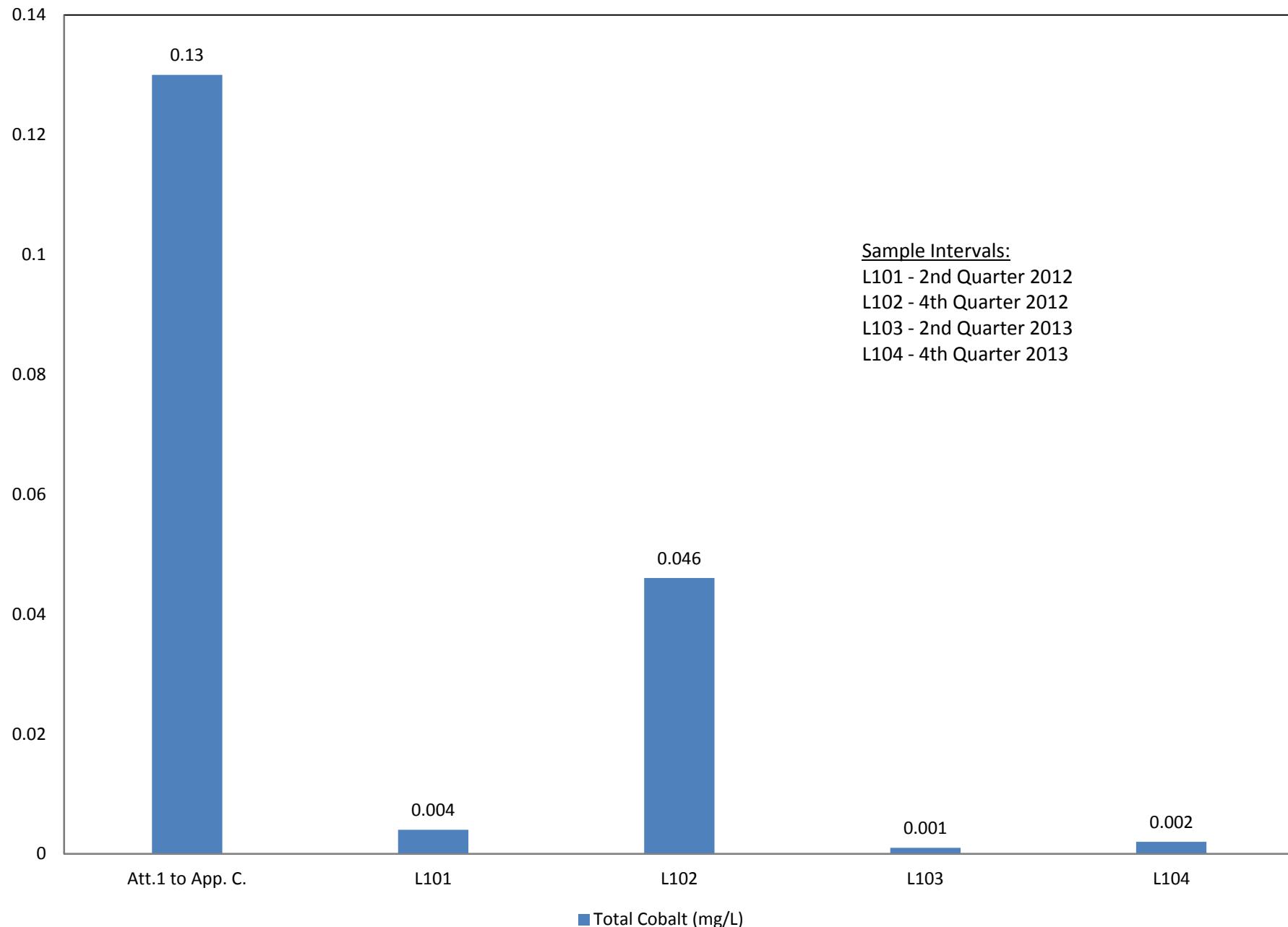


Detection Limit = 5 ug/L

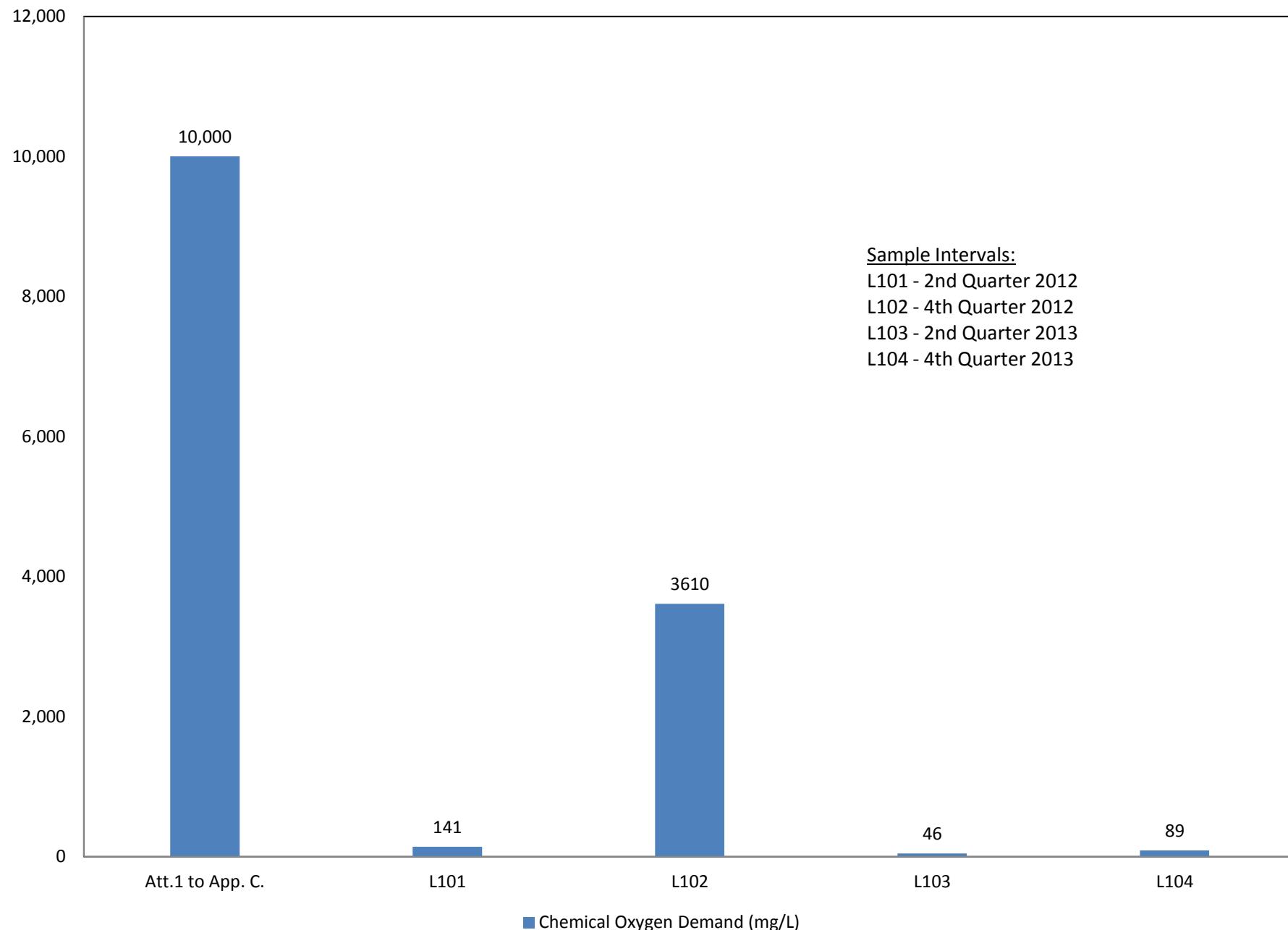
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
cis12dce

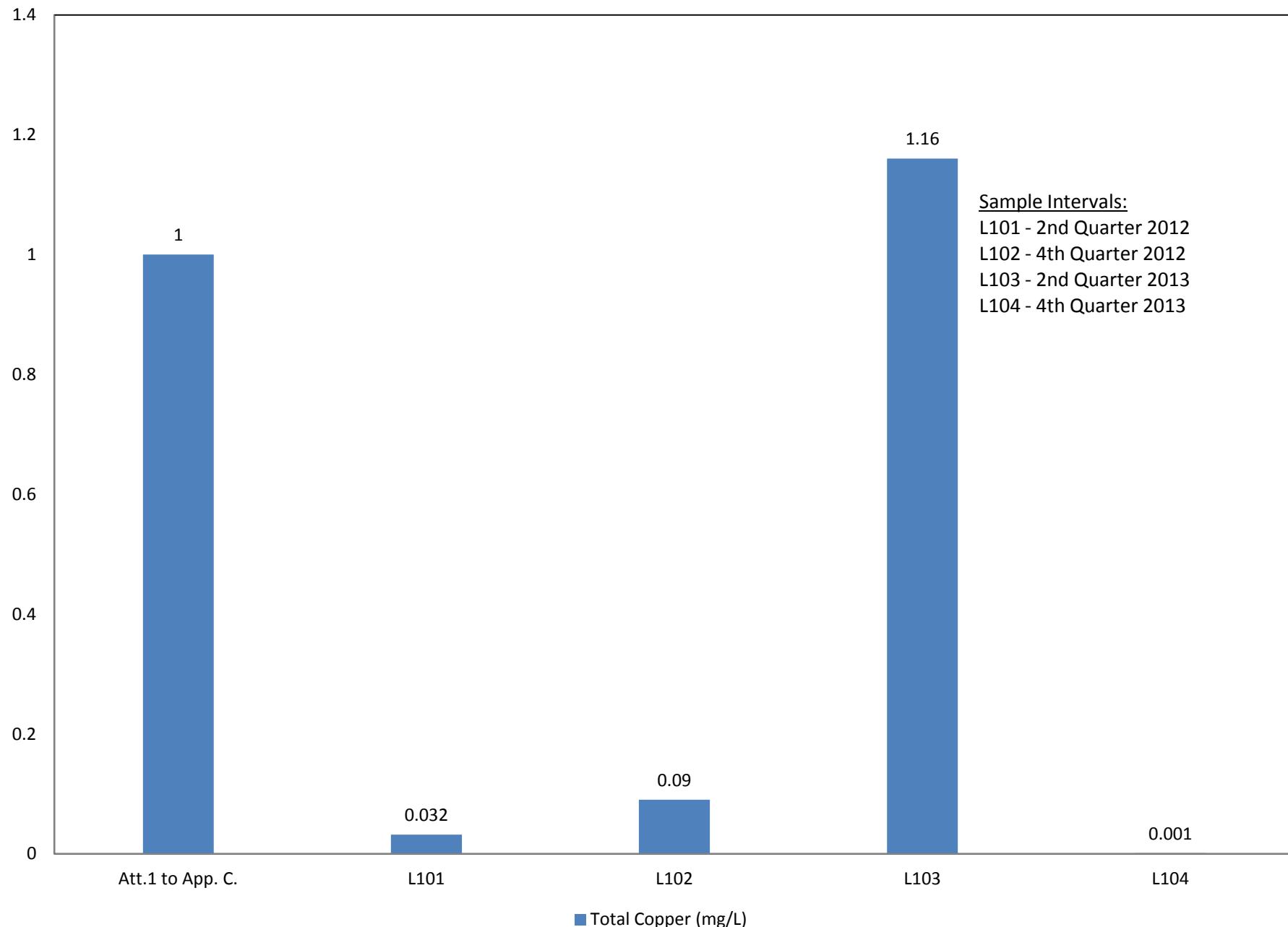
## Brickyard Disposal and Recycling



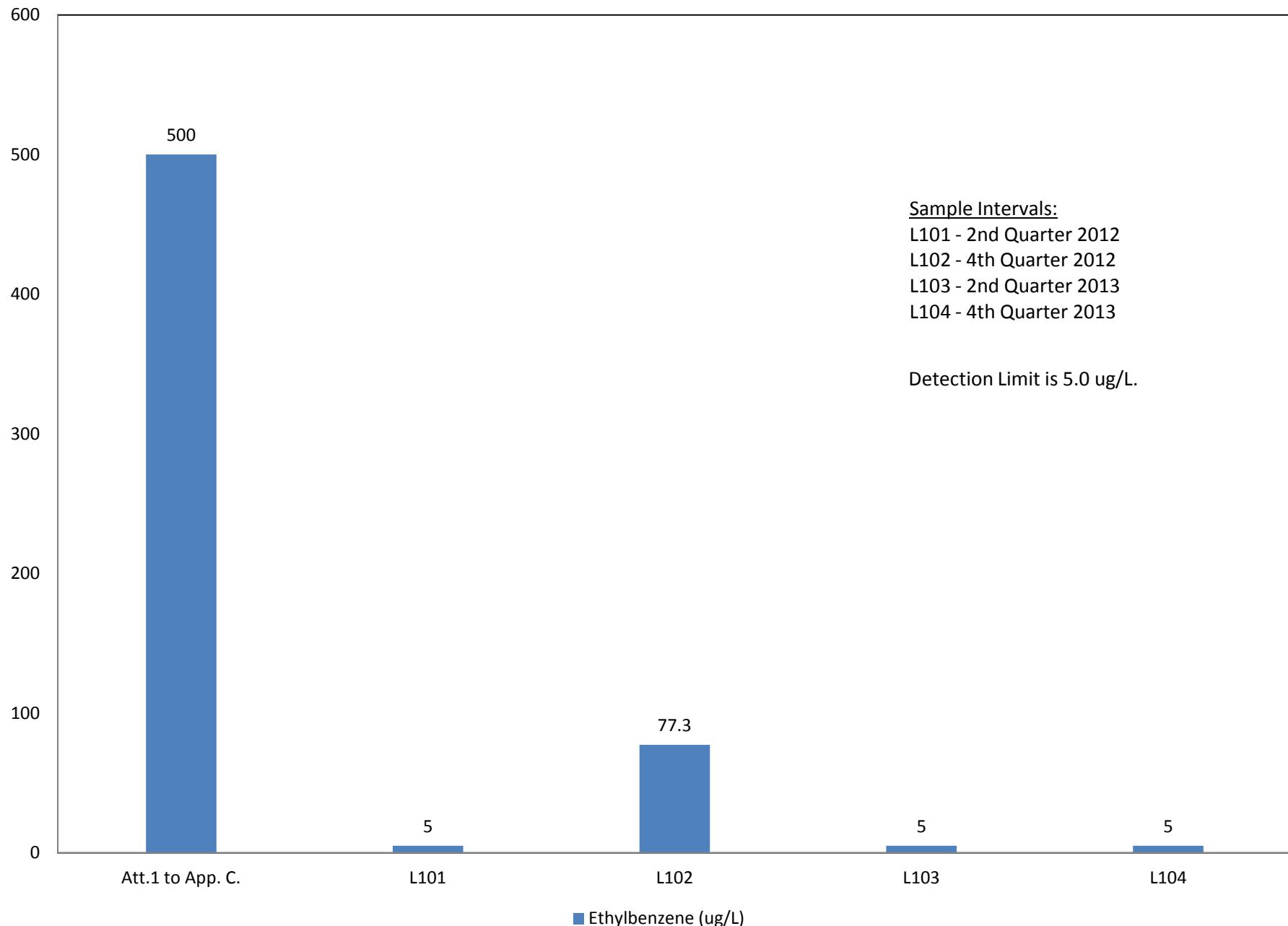
## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

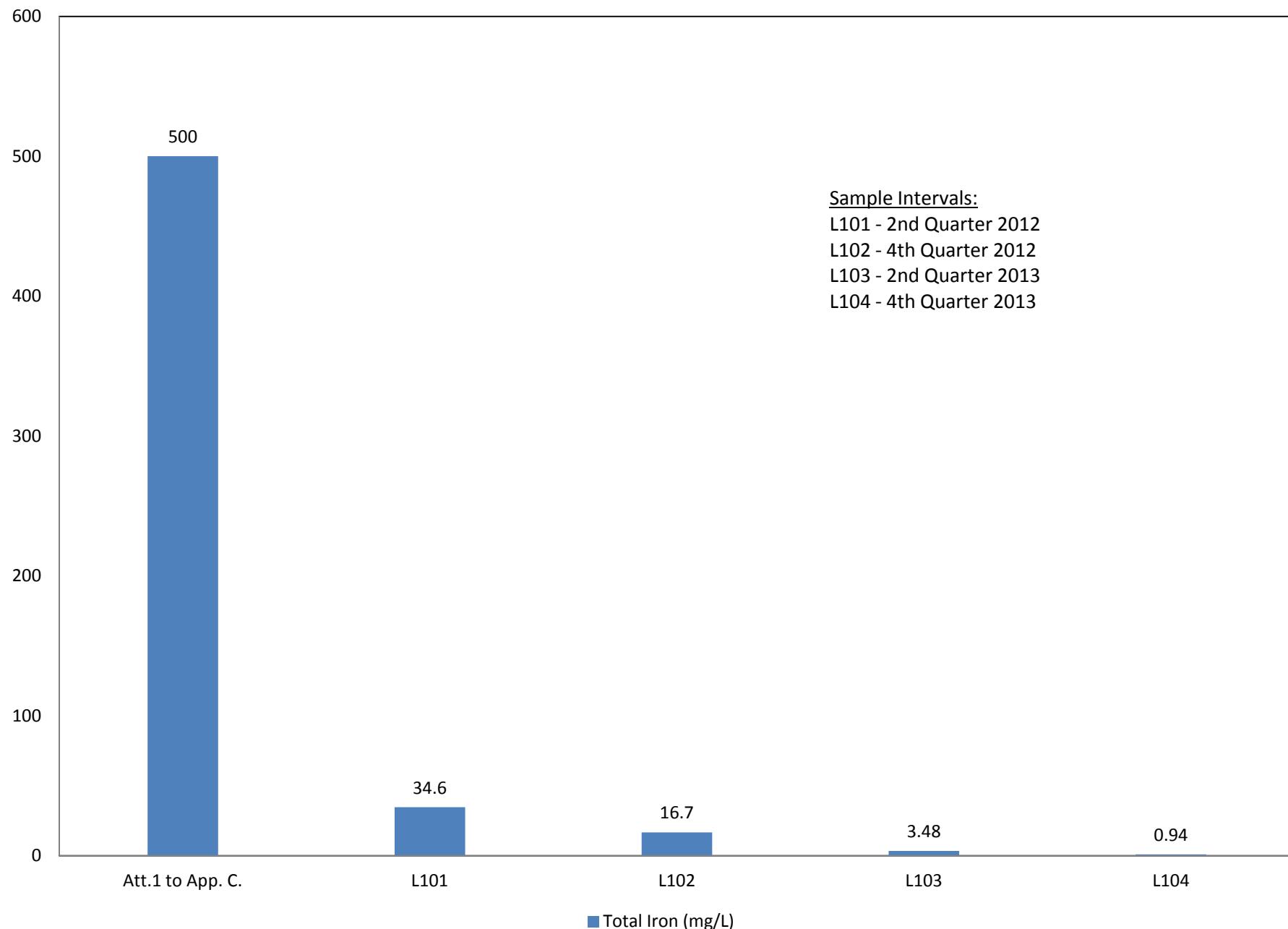


Detection Limit = 5 ug/L

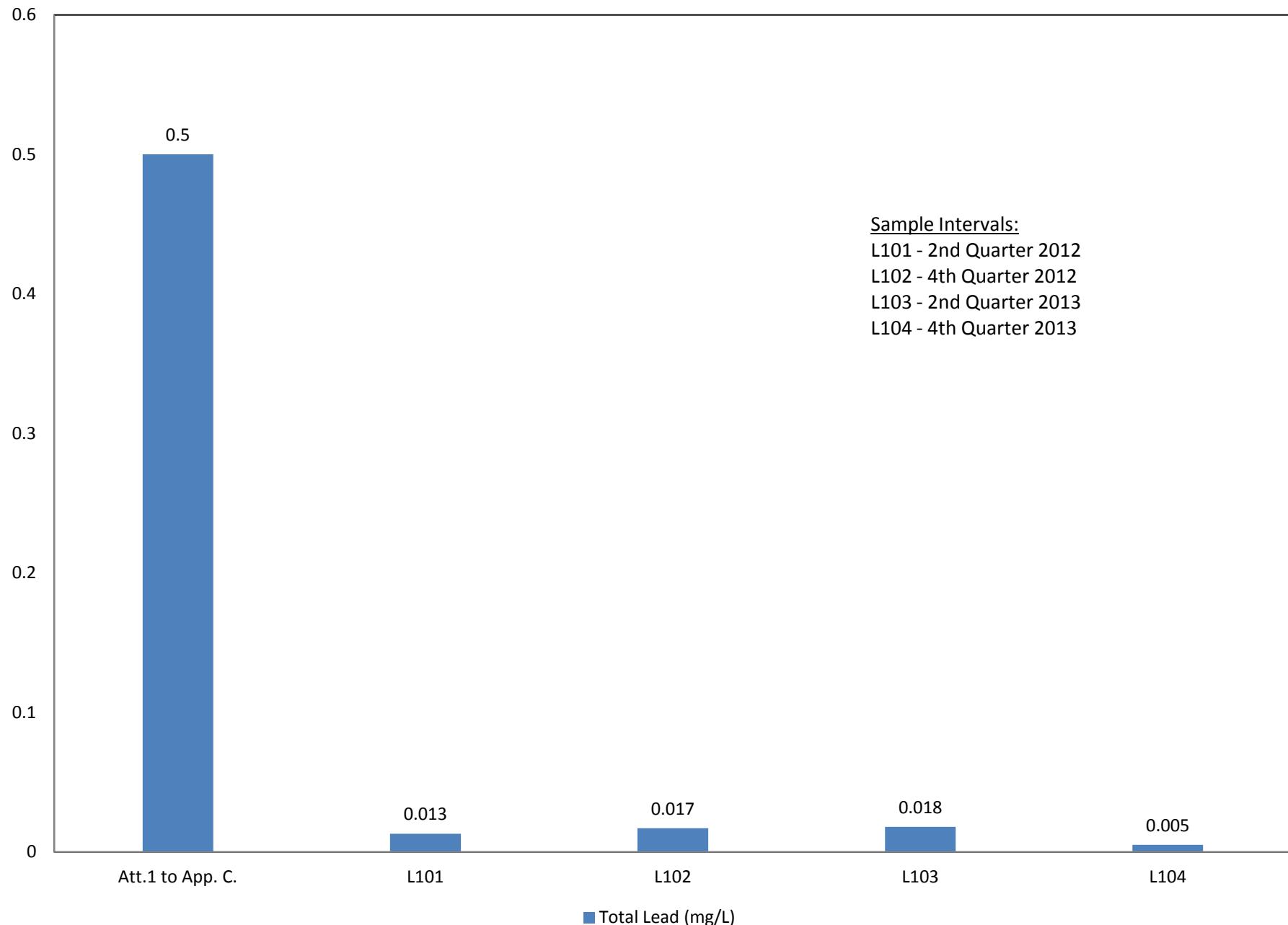
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Ethylbenzene

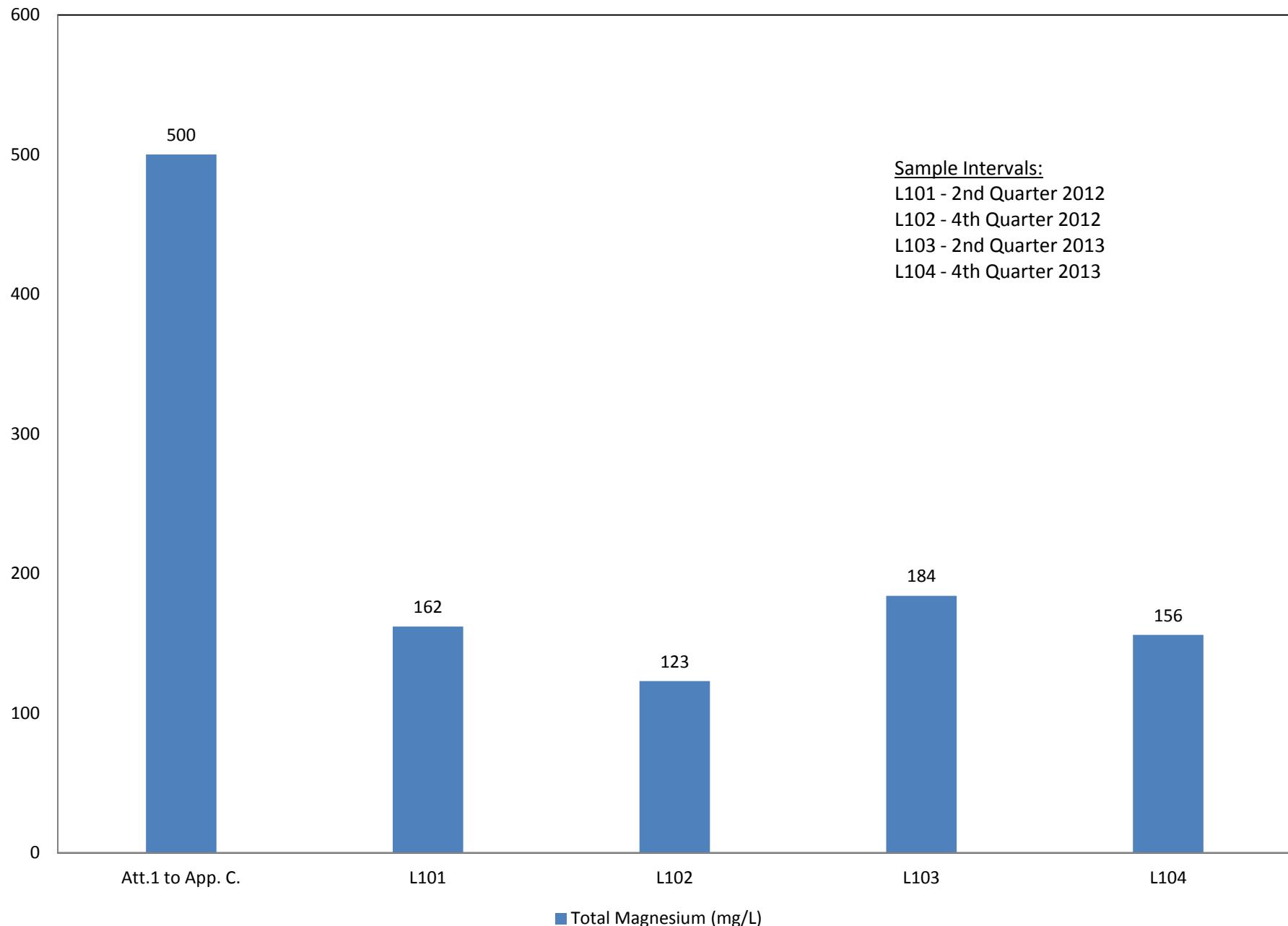
## Brickyard Disposal and Recycling



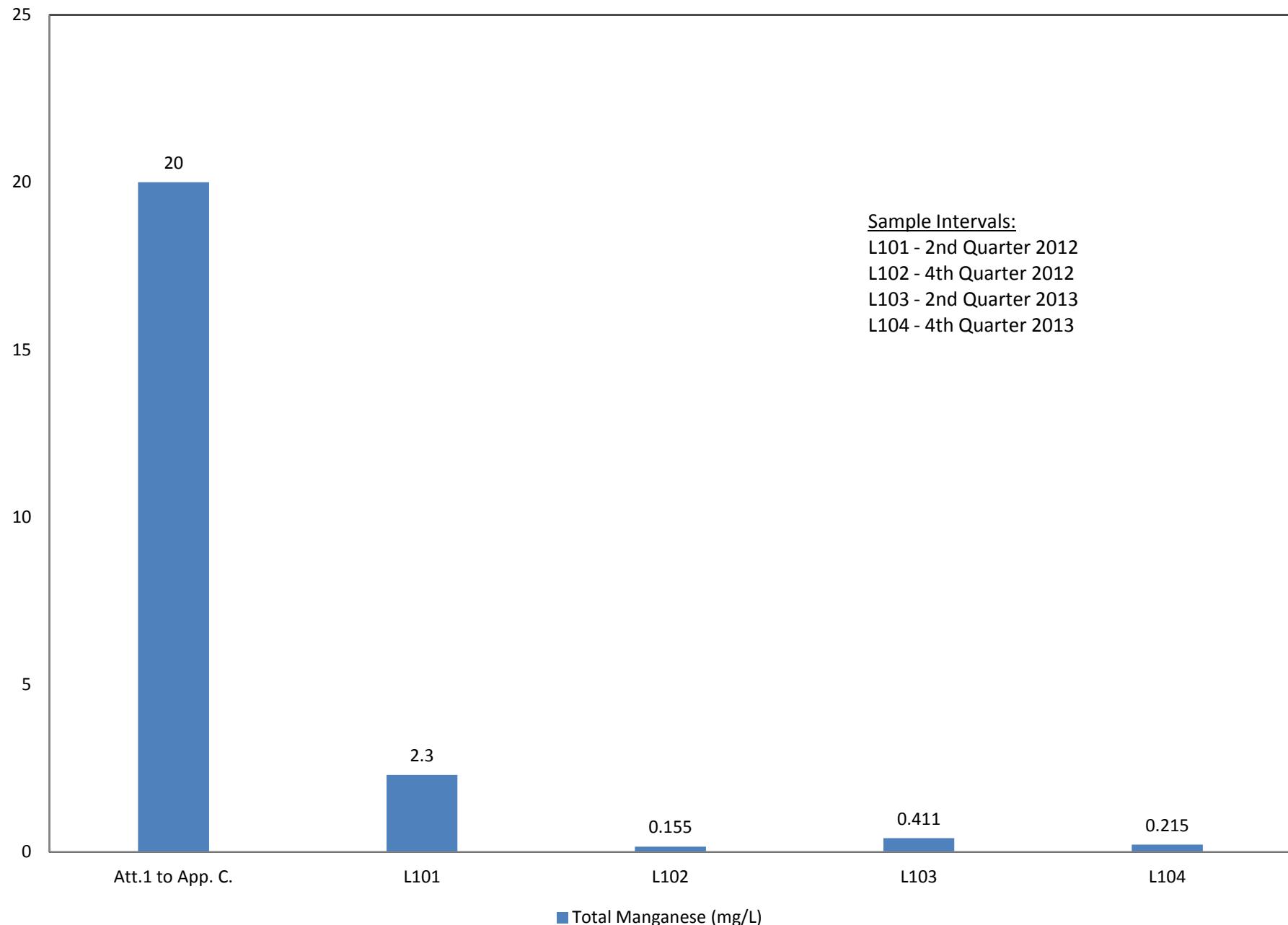
## Brickyard Disposal and Recycling



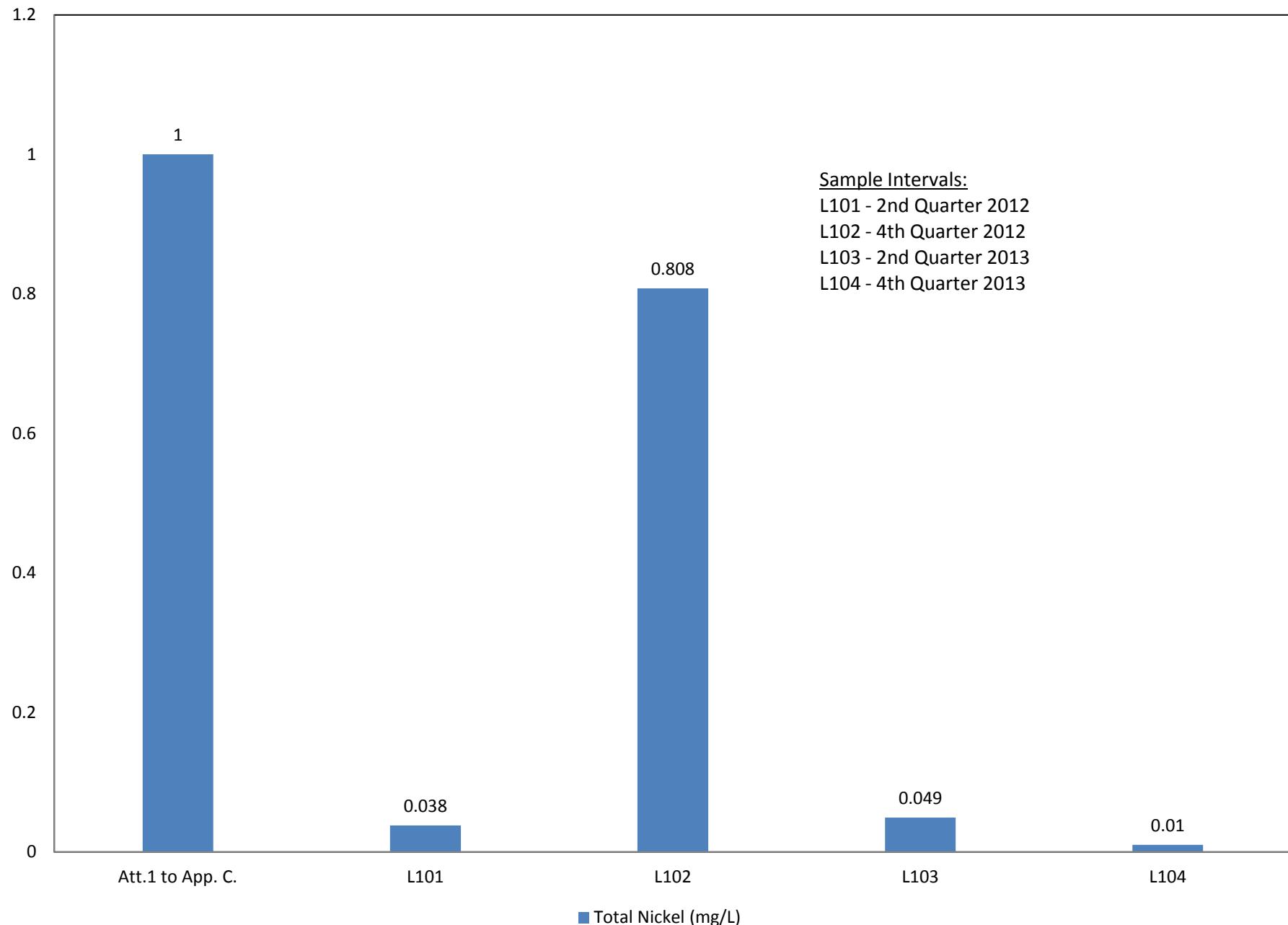
## Brickyard Disposal and Recycling



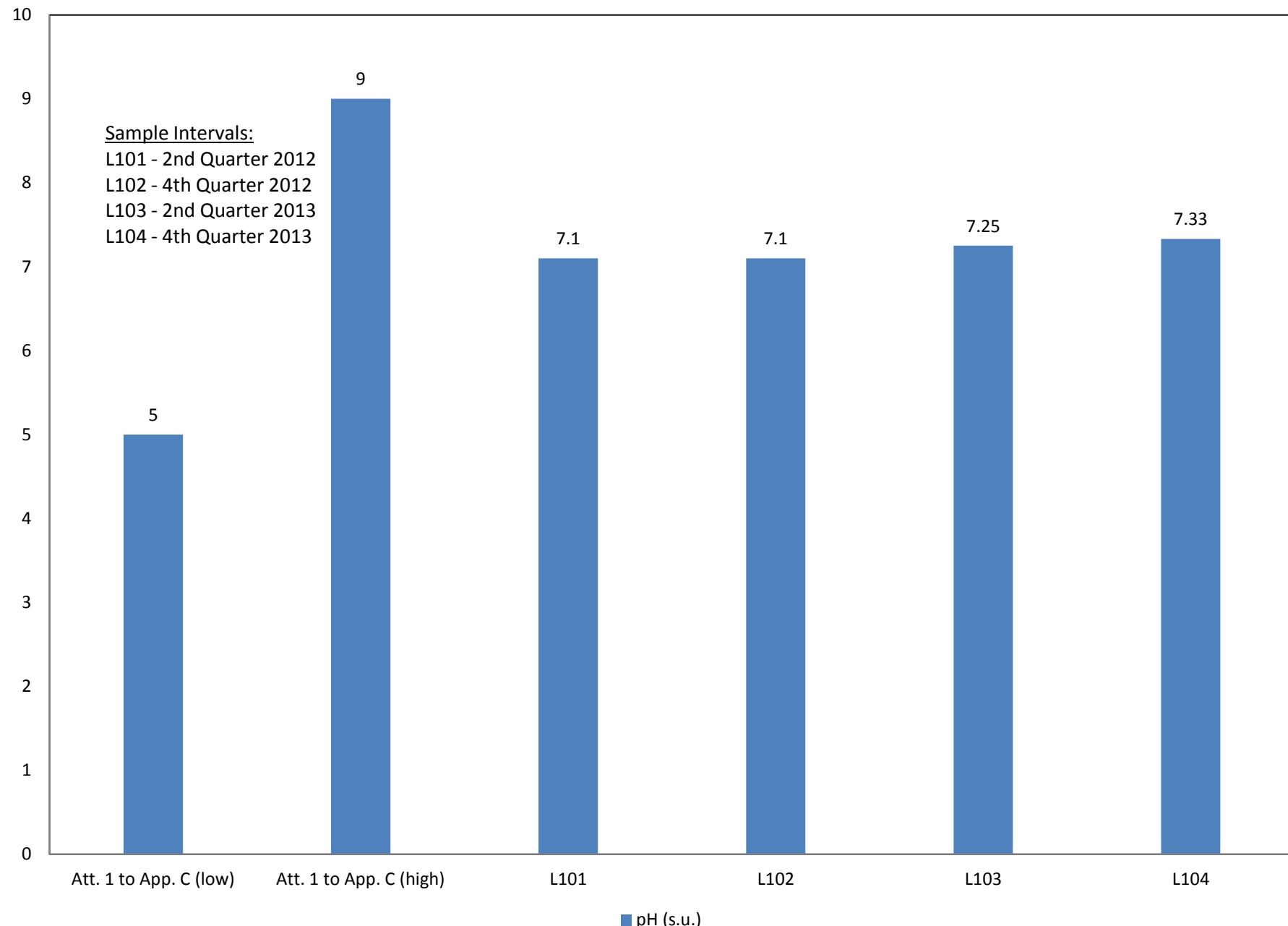
## Brickyard Disposal and Recycling



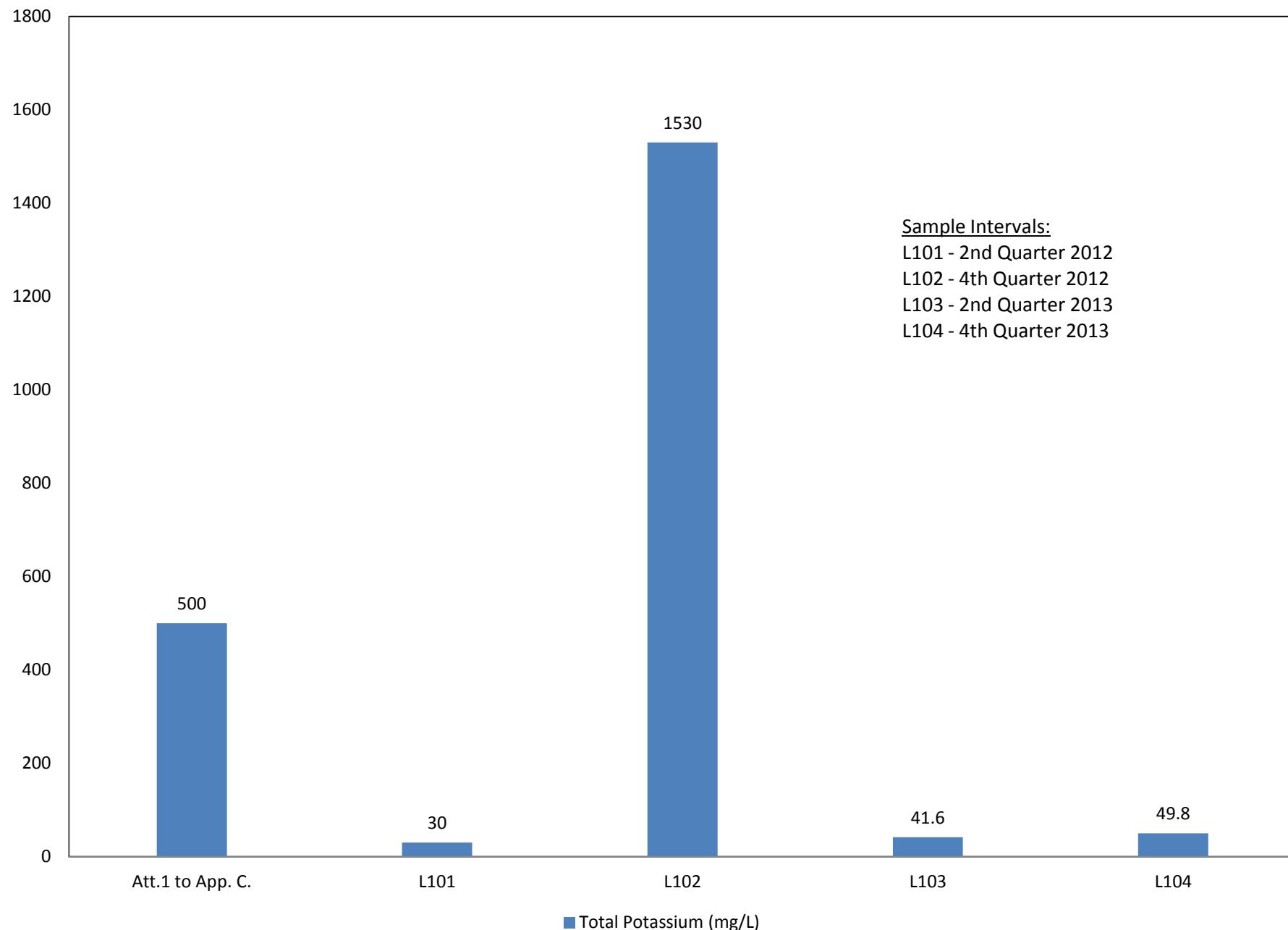
## Brickyard Disposal and Recycling



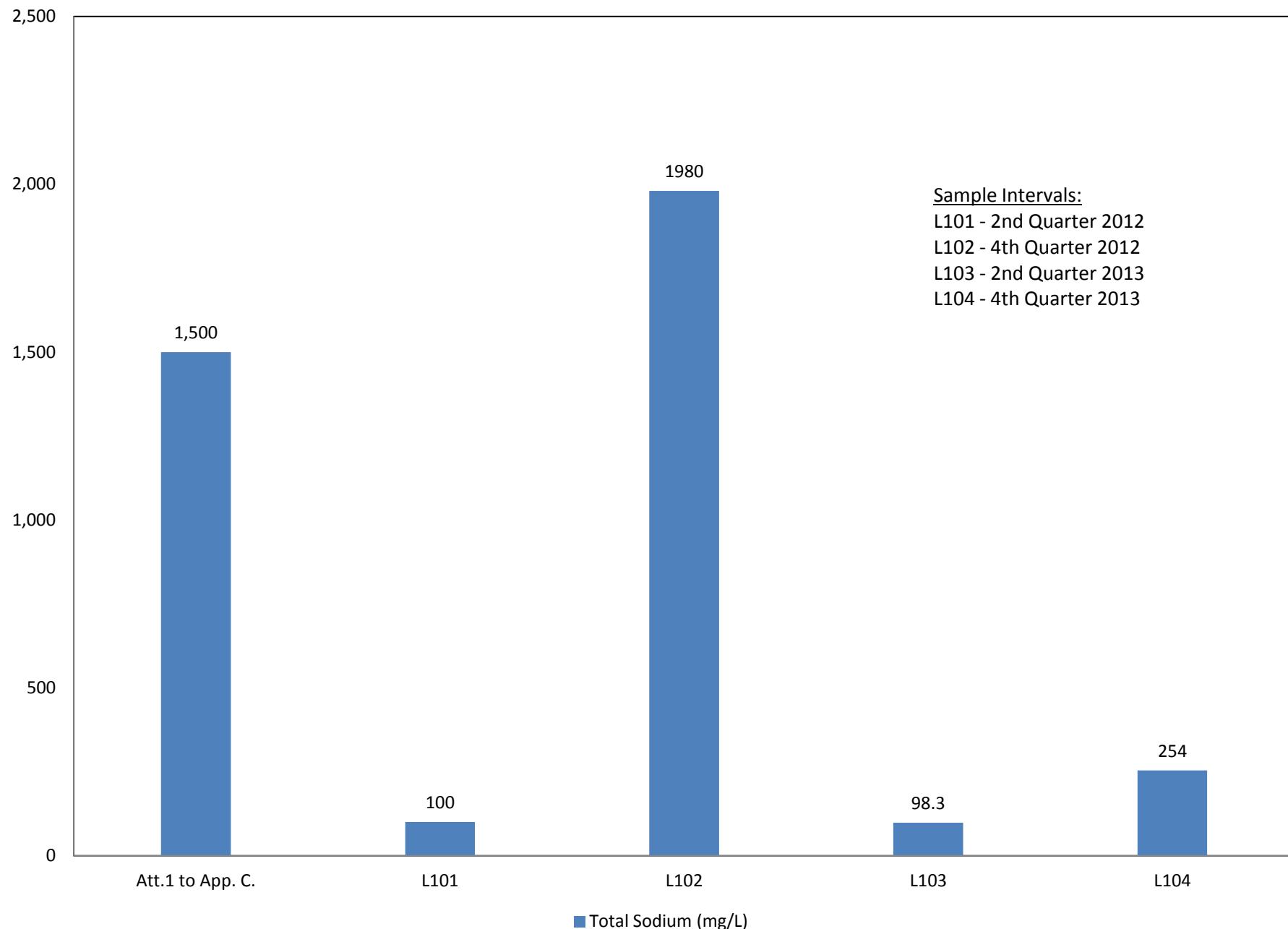
## Brickyard Disposal and Recycling



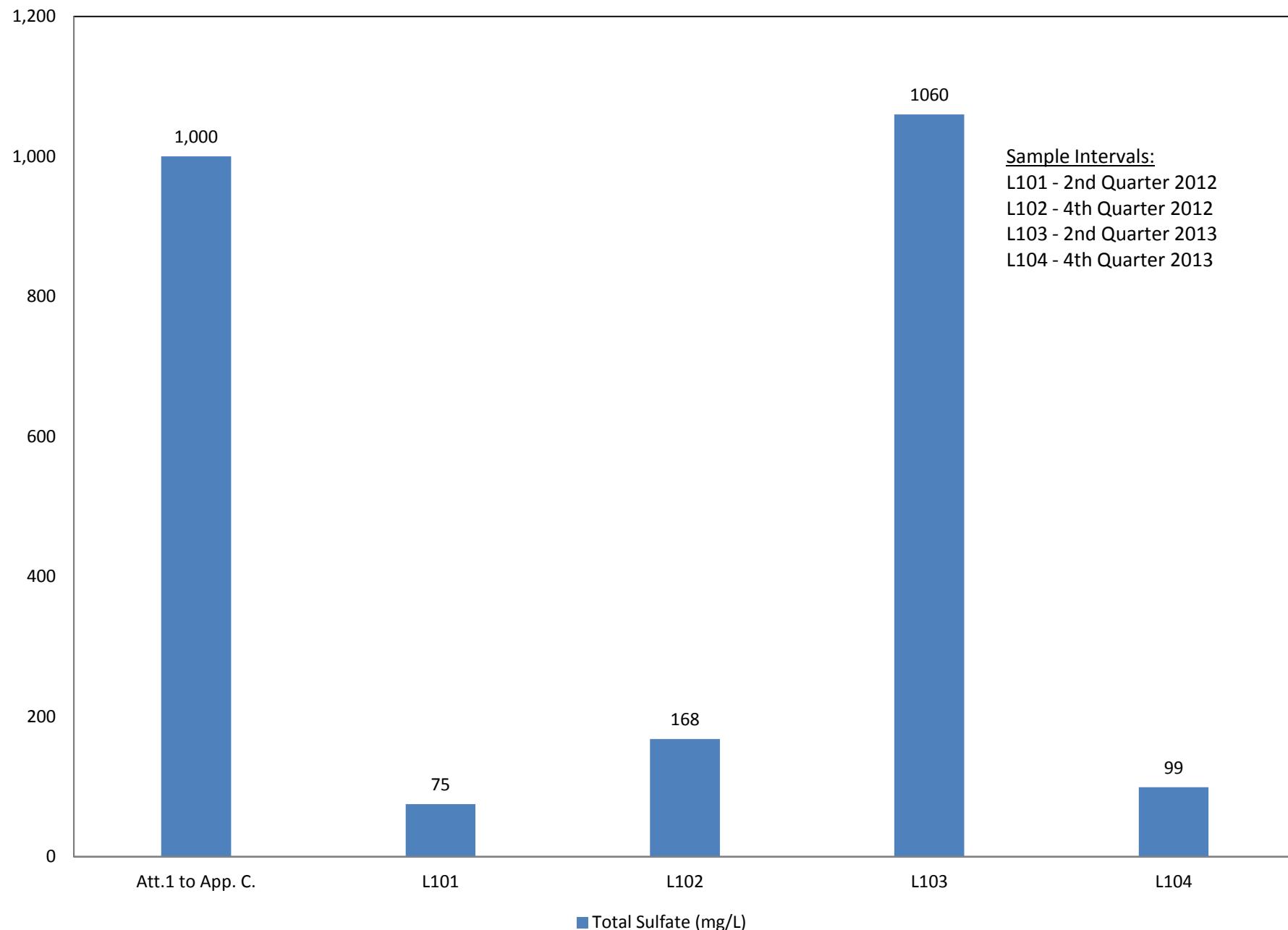
## Brickyard Disposal and Recycling



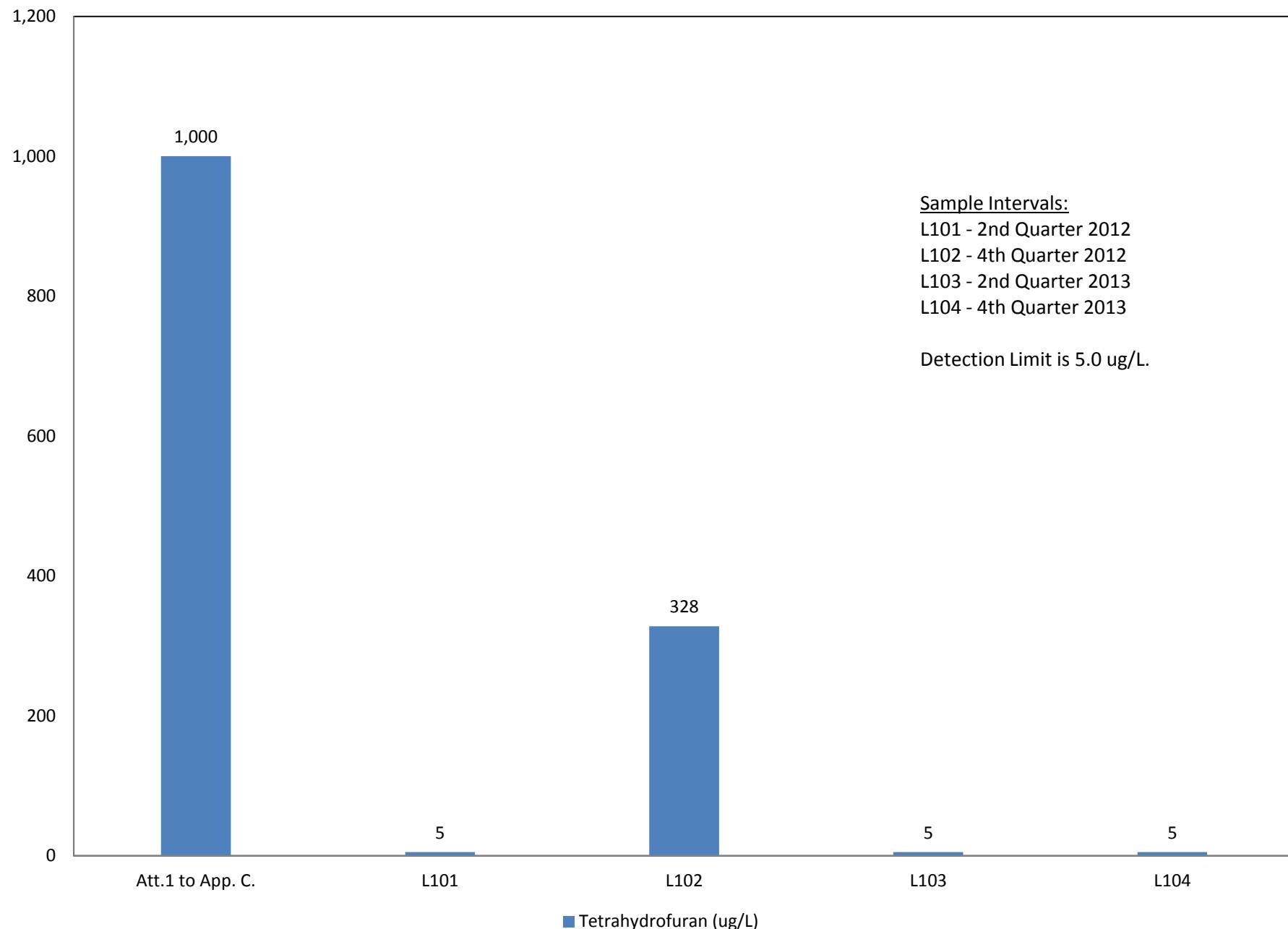
## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

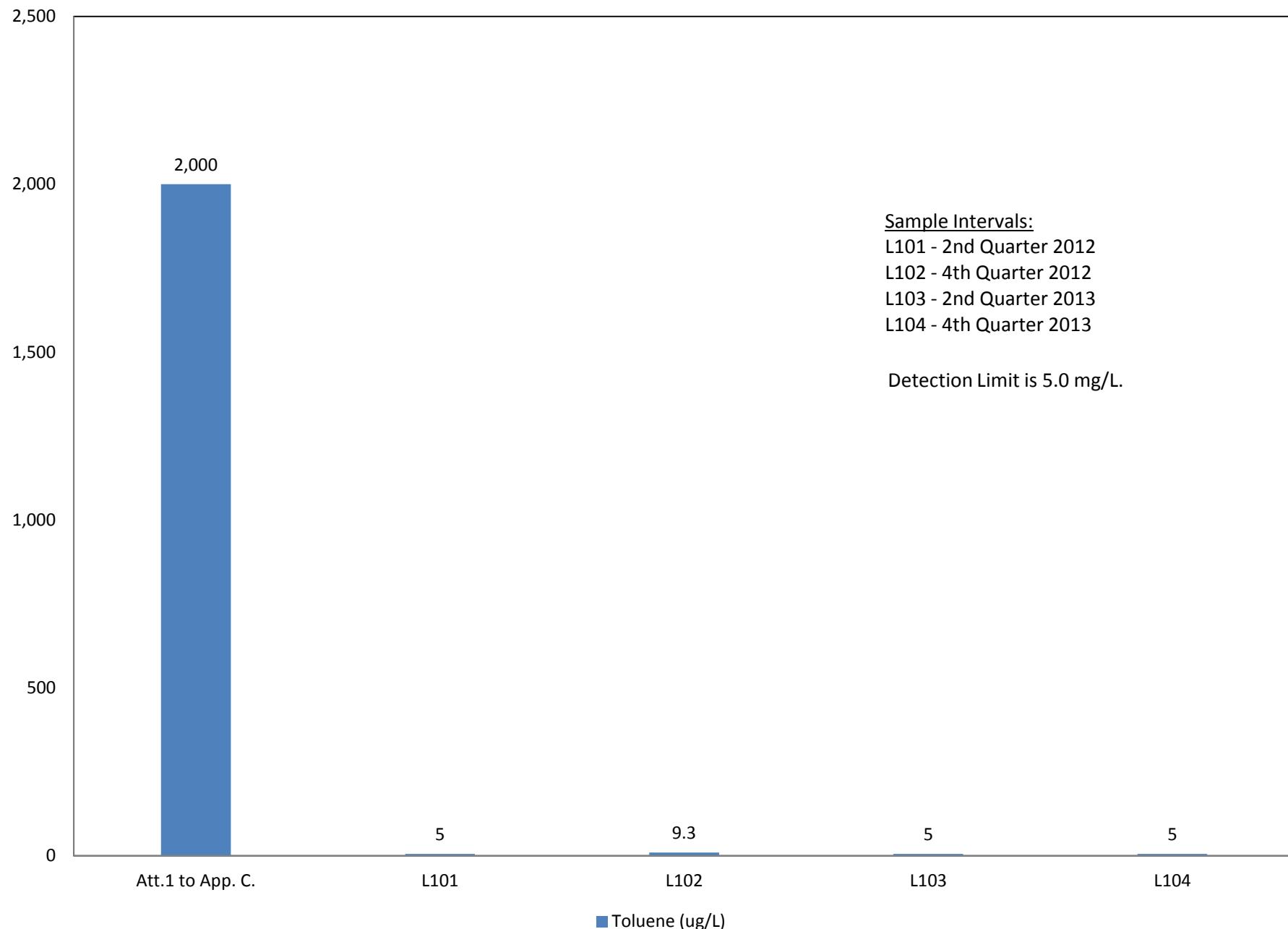


Detection Limit = 5 ug/L

Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Tetrahydrofuran

## Brickyard Disposal and Recycling

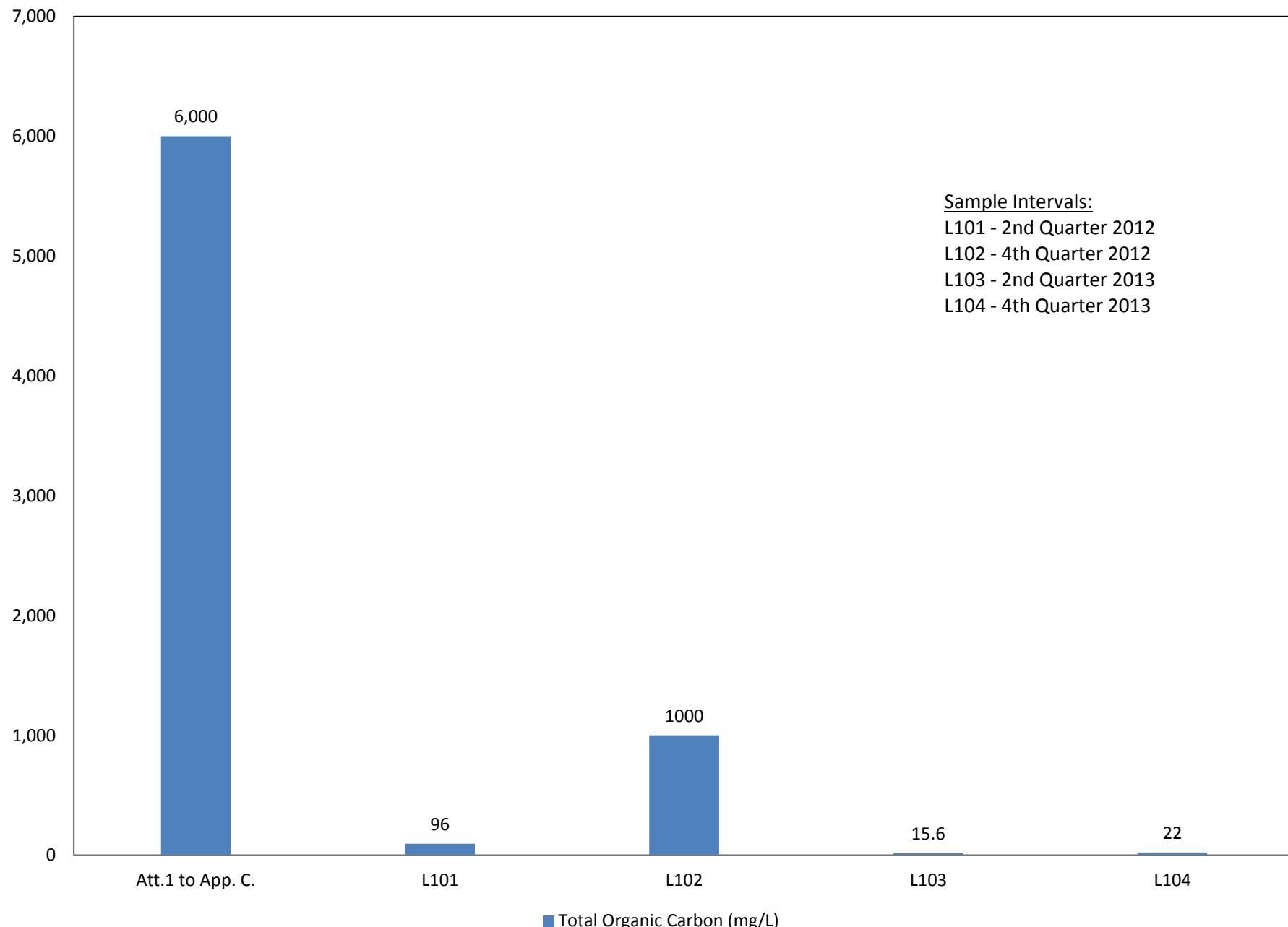


Detection Limit = 5 ug/L

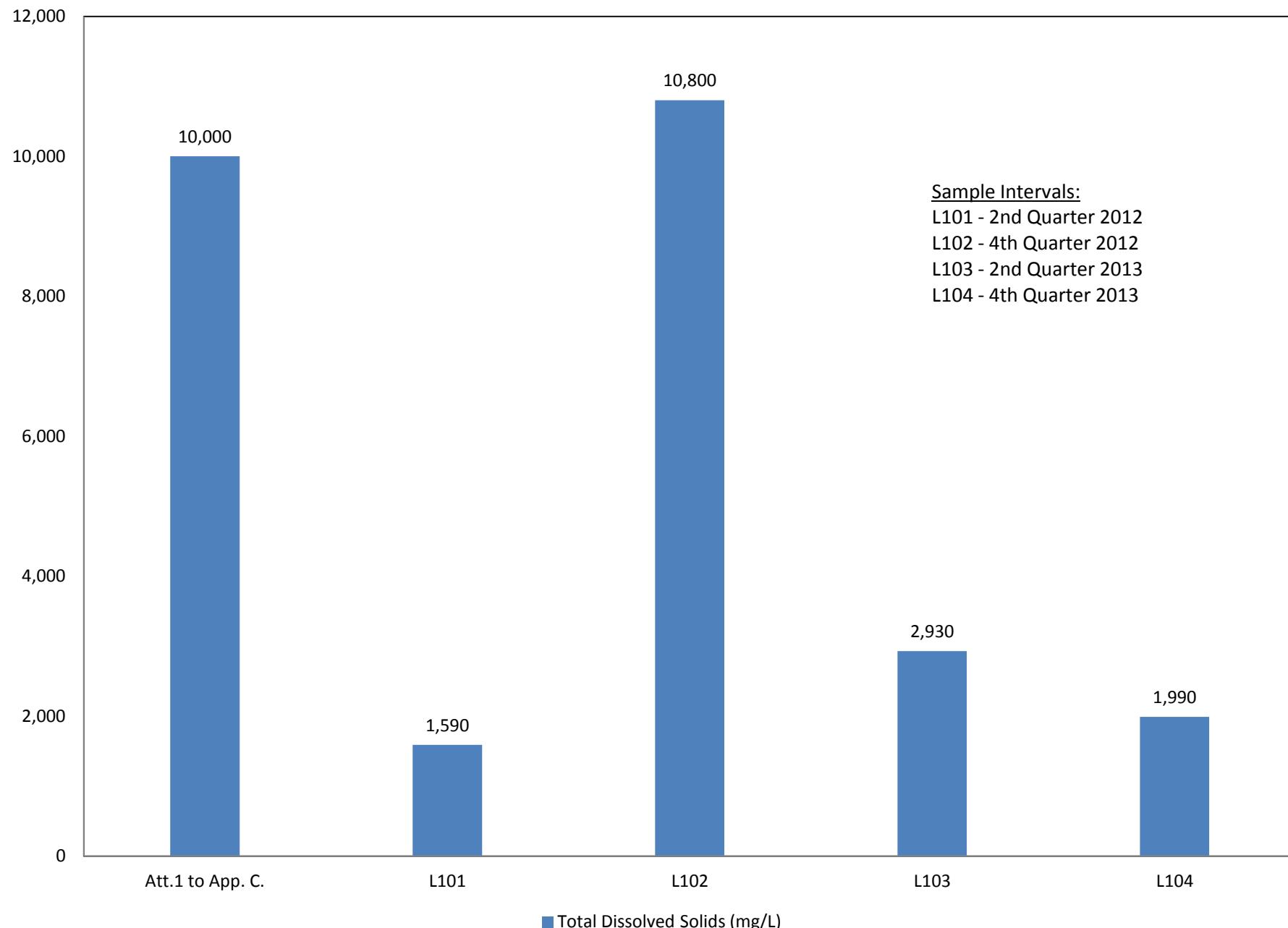
Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Toluene

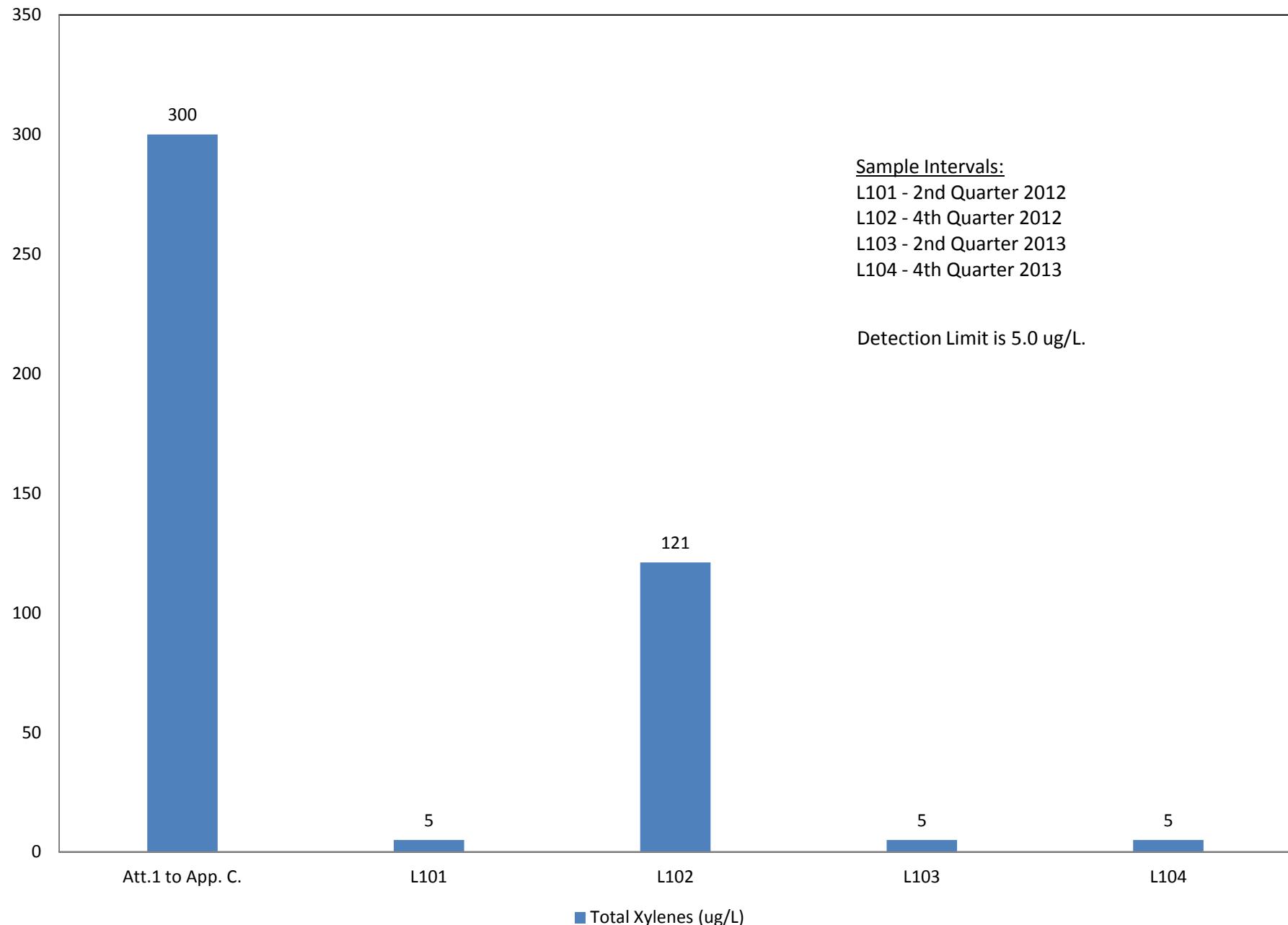
## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling



## Brickyard Disposal and Recycling

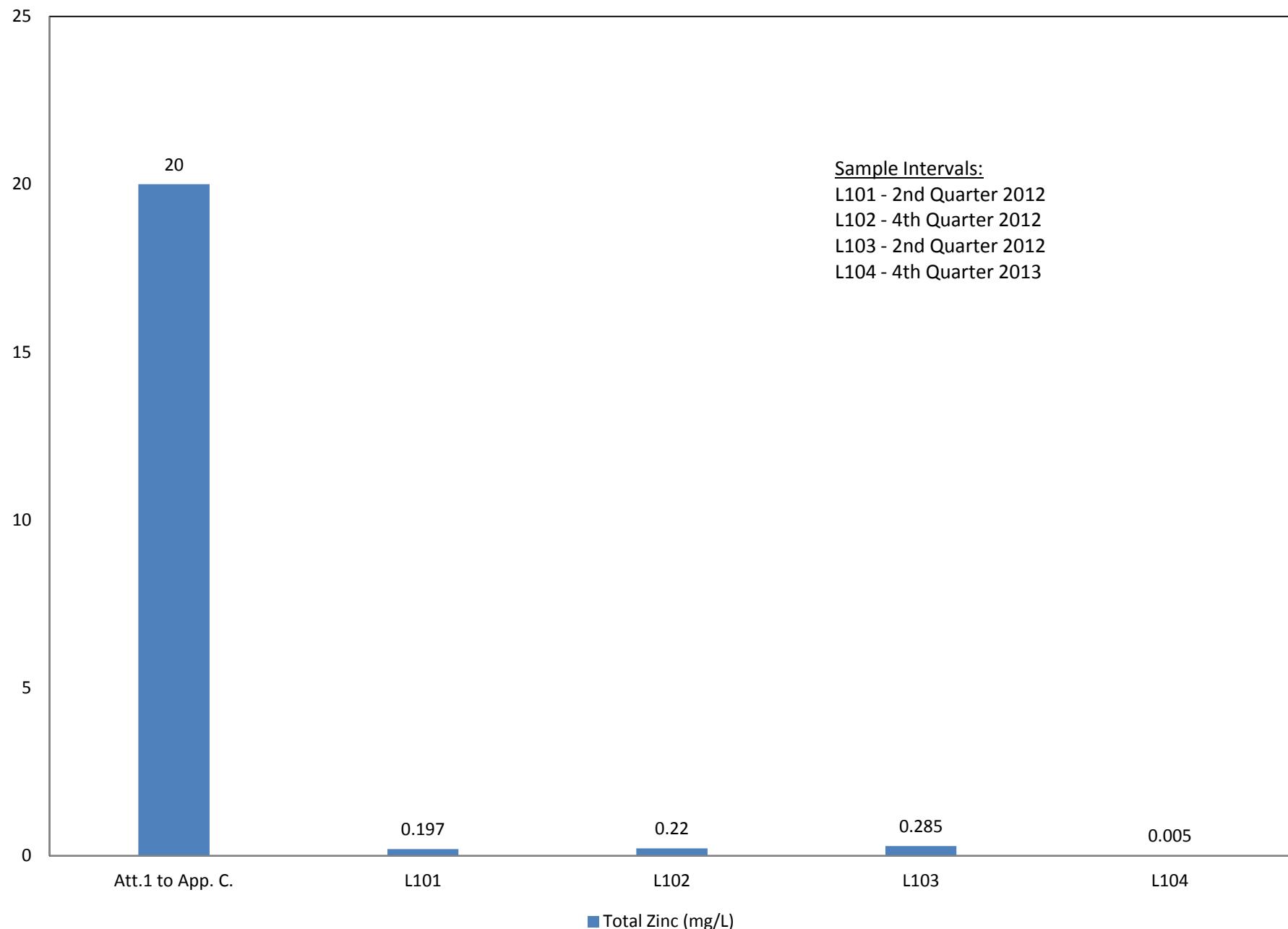


Detection Limit = 5 ug/L

Andrews Engineering, Inc.

\Aeei1\jobs\1989\89-115A (Brickyard)\MON\Requests\2011\Leachate Detections (05-2014).xlsx  
Xylenes

## Brickyard Disposal and Recycling



**ATTACHMENT 6**  
**Source Water Assessment Program Data**



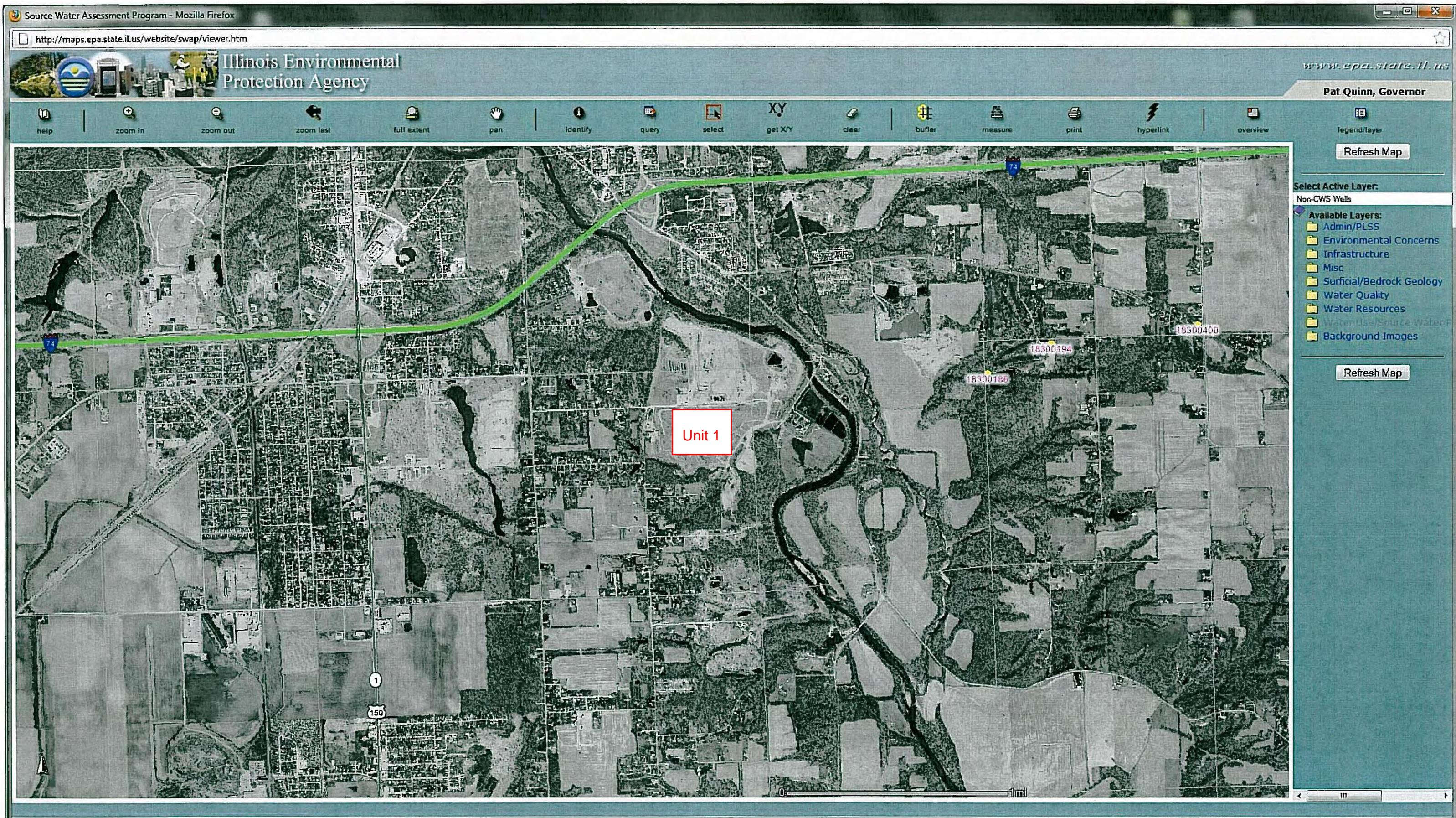




TABLE 6-1

Illinois EPA SWAP Database - ISGS Wells  
Brickyard Disposal Recycling, Danville, Illinois

Rec	base.sde.isgswells.API_NUMBER	base.sde.isgswells.TAL_DEPT	base.sde.isgswells.FARM_NAME	base.sde.isgswells.ELEVATION	base.sde.isgswells.STATUS	base.sde.isgswells.LAT_X	base.sde.isgswells.LAT_Y	base.sde.isgswells.LATITUDE	base.sde.isgswells.LONGITUDE	base.sde.isgswells.COUnty_no
1	121830154300	88	Rouse, John	0	WATER	3530571	2583920	40.109774	87.592965	1543
2	121830163500	76	Richardson Const. Co. 1	550	WATER	3531884	2585551	40.114198	87.588124	1635
3	121830164000	110	Richardson & Hegelar	445	WATER	3531994	2585603	40.114335	87.587725	1640
4	121830172100	47	Danville Municipal Land fil	621	WATER	3521442	2583025	40.107829	87.625834	1721
5	121830172200	12	Danville Municipal Land fil	578	WATER	3522391	2584626	40.112192	87.622306	1722
6	121830172300	47	H/L Landfill Co.	613	WATER	3521936	2584366	40.111501	87.62396	1723
7	121832203300	300	Thomas Sanitary Landfill	0	WATER	3523861	2582613	40.106554	87.617173	22033
8	121832205000	215	Lynch District Fire Dept.	0	WATER	3532403	2583291	40.107932	87.58643	22052
9	121830132100	48	Wengler,W. R.	0	WATER	3531834	2571436	40.075256	87.58937	1321
10	121830172400	31	Danville Municipal Land fil	600	WATER	3522545	2583889	40.11015	87.621807	1724
11	121830150400	57	Greer, Salvage	0	WATER	3528616	2584607	40.111783	87.599938	1504
12	121830150500	78	Hewes, Jim	0	WATER	3524704	2580279	40.100066	87.614318	1505
13	121832267700	200	Gilbreath, Vera	0	WATER	3533756	2583415	40.108196	87.581559	22677
14	121832267800	100	Rouse, Phil	0	WATER	3529846	2582803	40.106734	87.595654	22678
15	121832267900	105	Rouse, Phil	0	WATER	3529846	2582803	40.106734	87.595654	22679
16	121832292000	83	Danville Sanitary District	0	WATER	3530548	2580897	40.101434	87.593276	22920
17	121832304800	40	Hoaks, Paul	0	WATER	3524086	2572604	40.078925	87.61711	23048
18	121830136200	80	Vermilion Hills Country Club TH	575	WTST	3533520	2581065	40.101725	87.582585	1362
19	121832338900	48	Van Vuren, Don T.H.	0	WATER	3529430	2584213	40.110648	87.597043	23389
20	121832339000	78	Van Vuren, Don T.H.	0	WATER	3528966	2584070	40.110281	87.598721	23390
21	121832339100	55	Van Vuren, Don T.H.	0	WATER	3530115	2584177	40.110509	87.594584	23391
22	121832339200	118	Van Vuren, Don T.H.	0	WATER	3530696	2585167	40.113207	87.592422	23392
23	121832339300	90	Van Vuren, Don	0	WATER	3530799	2581596	40.103349	87.592321	23393
24	121832339400	138	Van Vuren, Don	550	WATER	3529376	2584194	40.110599	87.597238	23394
25	121832339500	125	Van Vuren, Don	0	WATER	3529376	2584194	40.110599	87.597238	23395
26	121832339600	40	Van Vuren, Don	0	WATER	3529376	2584194	40.110599	87.597238	23396
27	121832346100	50	Swider, Leroy	0	WATER	3532700	2575252	40.085734	87.585971	23461
28	121832399100	103	Brickyard Disp & Recycle #G103	0	MONIT	3525740	2579319	40.097358	87.610668	23991
29	121832402500	39	Brickyard Disp & Recycl. #R126	0	MONIT	3527082	2578700	40.095573	87.605893	24025
30	121832402700	30	Bennett, Loren	0	WATER	3528589	2574781	40.084673	87.600773	24027
31	121832402900	97	Williams, Essie #1	0	WATER	3530504	2578351	40.094412	87.593626	24029
32	121832403000	45	Brickyard Disp. & Recy.#G131	605	WATER	3527051	2579364	40.097406	87.605955	24030
33	121832230600	112	Van Burren, Don	0	WATER	3532530	2585943	40.115242	87.585773	22306
34	121832231300	90	Lapenag, David	0	WATER	3522147	2571201	40.075164	87.624178	22313
35	121832446300	61	Swider, Penny	0	WATER	3529959	2574938	40.085027	87.595984	24463
36	121832436800	41	FAS-505 Sta. 21+83 Boring	517	ENG	3531300	2575766	40.087234	87.590961	24368
37	121832436900	51	FAS-505 Sta. 25+95 Boring	532	ENG	3531300	2575766	40.087234	87.590961	24369
38	121832438200	0	Van Vuren, Don	0	WTST	3530515	2584215	40.110591	87.593144	24382
39	121830019900	188	Danville Belt Coal Co. Land	0	COAL	3526084	2578999	40.096455	87.609456	199
40	121830020000	89	Danville Belt Coal Co. Land	630	COAL	3523390	2580233	40.100014	87.619043	200
41	121830020100	86	Danville Belt Coal Co. Land	620	COAL	3524773	2578954	40.096406	87.614169	201
42	121830020200	119	Danville Belt Coal Co. Land	645	COAL	3523609	2576264	40.08905	87.618551	202
43	121830020300	350	Beatty, John	0	COAL	3525462	2578313	40.094598	87.611742	203
44	121830020400	391	Western Brick Company T.H.	545	COAL	3527960	2581061	40.102036	87.602562	204
45	121830020500	128	Robinson, Mrs.	656	COAL	3519438	2571777	40.076907	87.633865	205
46	121830020600	100		649	COAL	3522097	2572535	40.078848	87.624259	206
47	121832386200	46	FAI 74	629	ENG	3517963	2582638	40.106958	87.638364	23862
48	121832386300	33	SBI 1 14th St. Subway	639	ENG	3518655	2582006	40.105175	87.635924	23863
49	121832390900	82	White, Dave	0	WATER	3532619	2577263	40.091288	87.58611	23909
50	121832386400	26	SBI-1	629	ENG	3518774	2583488	40.109258	87.635387	23864
51	121832386500	21	SBI RT. 1	631	ENG	3518795	2578708	40.096068	87.635664	23865
52	121832469200	45	Bowman Ave. / FAI-74	575	ENG	3526103	2585402	40.114121	87.608909	24692
53	121832469400	45	Bowman Ave. & FAI-74	597	ENG	3526103	2585402	40.114121	87.608909	24694
54	121832469500	41	Bowman Ave. & FAI-74	595	ENG	3526103	2585402	40.114121	87.608909	24695
55	121832469600	40	Bowman Ave. & FAI-74	574	ENG	3526103	2585402	40.114121	87.608909	24696
56	121832469700	30	SBI-1	632	ENG	3518568	2584630	40.11242	87.636043	24697
57	121832469800	31	SBI-1	631	ENG	3518568	2584630	40.11242	87.636043	24698
58	121832469900	21	SBI-1 Sec. 47K-1	631	ENG	3518568	2584630	40.11242	87.636043	24699
59	121832470000	24	SBI-1 Sec.47K-1	630	ENG	3518568	2584630	40.11242	87.636043	24700

TABLE 6-1

## Illinois EPA SWAP Database - ISGS Wells

## Brickyard Disposal Recycling, Danville, Illinois

Rec	base.sde.isgswells.API_NUMBER	base.sde.isgswells.TO_TAL_DEPT	base.sde.isgswells.FARM_NAME	base.sde.isgswells.ELEVATION	base.sde.isgswells.STATUS	base.sde.isgswells.LAM_X	base.sde.isgswells.LAM_Y	base.sde.isgswells.LATITUDE	base.sde.isgswells.LONGITUDE	base.sde.isgswells.UNTY_NO
60	121832470100	16	SBI-1 Sec.47K-1	631	ENG	3518568	2584630	40.11242	87.636043	24701
61	121832470200	14	SBI-1 Sec 47K-1	628	ENG	3519556	2583362	40.108843	87.631149	24702
62	121832470300	17	SBI-1 Sec. 47K-1	632	ENG	3518568	2584630	40.11242	87.636043	24703
63	121832470400	16	SBI-1 Sec. 47K-1	633	ENG	3518568	2584630	40.11242	87.636043	24704
64	121832472800	51	FAP 411 over TR 325	522	ENG	3533799	2573678	40.081327	87.582143	24728
65	121832472900	51	FAP 411 over TR 325	522	ENG	3533799	2573678	40.081327	87.582143	24729
66	121832473000	51	FAP 411 over TR 325	521	ENG	3533799	2573678	40.081327	87.582143	24730
67	121832473100	29	FAP 411 over TR 325	538	ENG	3533799	2573678	40.081327	87.582143	24731
68	121832473200	29	FAP 411 over TR 325	537	ENG	3533799	2573678	40.081327	87.582143	24732
69	121832473300	55	FAP 411 over TR 325	529	ENG	3533799	2573678	40.081327	87.582143	24733
70	121832473400	45	FAP 411 over TR 325	529	ENG	3533799	2573678	40.081327	87.582143	24734
71	121832473500	41	FAS 505 Station 23+50	516	ENG	3528916	2575153	40.08568	87.599571	24735
72	121832469300	45	Bowman Ave. & FAI-74	574	ENG	3526103	2585402	40.114121	87.608909	24693
73	121832470500	18	SBI-1 Sec. 47K-1	633	ENG	3518568	2584630	40.11242	87.636043	24705
74	121832470600	36	Pedestrian Overpass	630	ENG	3519304	2582686	40.107015	87.633542	24706
75	121832470700	36	FAI-74 Pedestrian Overpass	629	ENG	3519304	2582686	40.107015	87.633542	24707
76	121832470900	35	FAI-74 Pedestrian Overpass	626	ENG	3519304	2582686	40.107015	87.633542	24709
77	121832471000	18	FAI-74 Pedestrian Overpass	628	ENG	3519304	2582686	40.107015	87.633542	24710
78	121832471200	26	FAI-74 Pedestrian Overpass	611	ENG	3519304	2582686	40.107015	87.633542	24712
79	121832474200	24	FAP 411 Sta.3566+60	512	ENG	3532488	2572181	40.077273	87.586965	24742
80	121832474300	26	FAP 411 Sta.3565+90	514	ENG	3532488	2572181	40.077273	87.586965	24743
81	121832474400	31	FAP 411 Sta. 3665+24	516	ENG	3532488	2572181	40.077273	87.586965	24744
82	121832474500	21	FAP 411 Sta. 3562+50	537	ENG	3532488	2572181	40.077273	87.586965	24745
83	121832474600	16	FAP 411 Sta.3562+21	524	ENG	3532488	2572181	40.077273	87.586965	24746
84	121832474700	26	FAP 411 Sta.3562+90	516	ENG	3532488	2572181	40.077273	87.586965	24747
85	121832474800	21	FAP-411 Sta.3563+25	517	ENG	3532488	2572181	40.077273	87.586965	24748
86	121832475000	21	FAP 411 Sta.3565+58	512	ENG	3532488	2572181	40.077273	87.586965	24750
87	121832475200	62	TR-325 Sta.9+28	93	ENG	3532044	2574500	40.083697	87.588384	24752
88	121832475300	47	Danville Township Sta.10+62	93	ENG	3532044	2574500	40.083697	87.588384	24753
89	121832475500	36	Danville Rd. Dist. Sec. 76-3	622	ENG	3522346	2574884	40.085315	87.62319	24755
90	121832472300	24	TR 818A (Kings Rd.) over Grape Crk.	100	ENG	3518558	2577383	40.092408	87.635535	24723
91	121832472500	36	FAS-505 Sec.77-05123-05-BR	568	ENG	3529401	2579893	40.098731	87.597472	24725
92	121832472600	66	FAP 411 over TR 325	523	ENG	3533799	2573678	40.081327	87.582143	24726
93	121832475400	40	Danville Rd. Dist. Sec.76-3	622	ENG	3522346	2574884	40.085315	87.62319	24754
94	121832497500	33	SBI 1 Sta. 62+36.5 Sec 47-K	640	ENG	3518655	2582006	40.105175	87.635924	24975
95	121832454100	32	Swider, Penny	0	WATER	3529274	2574859	40.084848	87.598307	24541
96	121832472400	22	SBI Rt. 1 over Grape Creek	631	ENG	3518795	2578708	40.096068	87.635664	24724
97	121832470800	21	FAI-74 Pedestrian Overpass	629	ENG	3519304	2582686	40.107015	87.633542	24708
98	121832475100	21	FAP 411 Sta.3564+91	511	ENG	3532488	2572181	40.077273	87.586965	24751
99	121832502900	39	Swider, Penny & LeRoy	0	WATER	3528620	2574115	40.082833	87.600712	25029
100	121832512400	43	Eller, Troy	0	WATER	3527208	2576042	40.088232	87.605639	25124
101	121832532700	35	Pollert, Brad	0	WATER	3533088	2583367	40.108102	87.583963	25327
102	121832521000	77	Brickyard Disp/Recyclin	0	MONIT	3527646	2580716	40.101103	87.603716	25210
103	121832521100	57	Brickyard Disp/Recyclin	0	MONIT	3527646	2580716	40.101103	87.603716	25211
104	121832521200	51	Brickyard Disp/Recyclin	0	MONIT	3527646	2580716	40.101103	87.603716	25212
105	121832543900	44	Byerly, Tracey	0	WATER	3527208	2576042	40.088232	87.605639	25439
106	121832553900	98	Valley Run Mobile Home Par	0	WATER	3529650	2583677	40.109157	87.596293	25539
107	121832474900	21	FAP 411 Sta.3566+28	512	ENG	3532488	2572181	40.077273	87.586965	24749
108	121832573600	0	Wolfcreek Country Club	0	WATER	3533834	2581391	40.102607	87.581432	25736
109	121832601700	40	Sanks, Bud	0	DRYP	3525395	2572648	40.078971	87.612405	26017
110	121832602600	43	Sanks, Bud	0	WATER	3525395	2572648	40.078971	87.612405	26026

Shading indicates a water supply well. Non-shaded entries are borings, monitor wells, or other borings not used for water supply purposes.

Wells indicated by the shading may or may not be used for human consumption.

TABLE 6-2

**Illinois EPA SWAP Database - CWS Wells**  
**Brickyard Disposal Recycling, Danville, Illinois**

Rec	bow.BOW.cws_wells.WELL_ID	bow.BOW.cws_wells.W_CWS_NUM	bow.BOW.cws_wells.W_CWS_NAME	bow.BOW.cws_wells.W_STATUS	bow.BOW.cws_wells.W_SUSCEPT	bow.BOW.cws_wells.W_POLICY	bow.BOW.cws_wells.W_MIN_SETB	bow.BOW.cws_wells.W_D_DEPTH	bow.BOW.cws_wells.W_AQUIFER	bow.BOW.cws_wells.AMB_WELL	bow.BOW.cws_wells.X_COORD	bow.BOW.cws_wells.Y_COORD	bow.BOW.cws_wells.PWS_STATUS	bow.BOW.cws_wells.SD_WIS_WELL	bow.BOW.cws_wells.SY_S_NUMBER	bow.BOW.cws_wells.PI
1	45228	1835268	VERMILION HLS ESTS	A	AX	U	400	0		0	-87.58292	40.11469	I	WL45228	IL1835268	1.2183E+11
2	45229	1835268	VERMILION HLS ESTS	I	AX	U	400	0		0	-87.5829	40.11474	I	WL45229	IL1835268	1.2183E+11
3	45226	1835245	VALLEY RUN MHP	I	AX	U	400	88	101	0	-87.59535	40.10951	I	WL45226	IL1835245	1.2183E+11
4	45227	1835245	VALLEY RUN MHP	I	AX	U	400	98	101	0	-87.59532	40.1092	I	WL45227	IL1835245	1.2183E+11
5	45224	1835285	GLENDALE MHP	I	AX	U	400	100	101	0	-87.59537	40.10738	S	WL45224	IL1835285	1.21832E+11
6	45225	1835285	GLENDALE MHP	I	AX	U	400	105	101	0	-87.59517	40.1074	S	WL45225	IL1835285	1.21832E+11

Status  
 A Active  
 I Inactive

Susceptibility Code  
 AX Alluvium, a mixture of gravel, sand, silt, and clay along streams,  
 variable in composition and thickness.

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

TABLE 6-3  
Illinois EPA SWAP Database - Non-CWS Wells  
Brickyard Disposal Recycling, Danville, Illinois

Rec	bow.BOW.noncws_wells.AREA_ell	bow.BOW.noncws_wells.PERIMETER	bow.BOW.noncws_wells.WELL_ID	bow.BOW.noncws_wells.X_COORD	bow.BOW.noncws_wells.Y_COORD	bow.BOW.noncws_wells.FACILITY_N	bow.BOW.noncws_wells.ADDR_ONE_T	bow.BOW.noncws_wells.ADDR_TWO_T	bow.BOW.noncws_wells.CITY_NAME	bow.BOW.noncws_wells.STATE_CODE	bow.BOW.noncws_wells.ZIP_CODE	bow.BOW.noncws_wells.FIPS_CNTY	bow.BOW.noncws_wells.STATUS_CD	bow.BOW.noncws_wells.FED_TYPE_C	bow.BOW.noncws_wells.B_NAME	bow.BOW.noncws_wells.POP_CNT	bow.BOW.noncws_wells.LAT_DEC_DE	bow.BOW.noncws_wells.MERIDIAN	bow.BOW.noncws_wells.TOWNSHIP	bow.BOW.noncws_wells.RANGE	bow.BOW.noncws_wells.SECTION	bow.BOW.noncws_wells.UPDT_TS		
1	0	0	18300186	3533590.5	2580945.75	WOLFCREEK COUNTRY CLUB	IL3014282	2521 PERRYSVILLE RD	DANVILLE	IL	61834	183	Vermillion	A	NC	RECREATION AREA	200	40.10139	-87.58222	2	19N	11W	23	Tue, 24 Oct 2006 00:00:00
2	0	0	18300194	3535107.75	2581658.25	WOLFCREEK COUNTRY CLUB	IL3014282	2521 PERRYSVILLE RD	DANVILLE	IL	61834	183	Vermillion	A	NC	RECREATION AREA	200	40.10333	-87.57694	2	19N	11W	23	Tue, 24 Oct 2006 00:00:00
3	0	0	18300400	3538570	2582105.75	MOON GLO	IL3123182	3124 PERRYSVILLE RD	DANVILLE	IL	61834	183	Vermillion	A	NC	RESTAURANT	50	40.10417	-87.56444	2	19N	11W	14	Tue, 26 Sep 2006 00:00:00

TABLE 6-4

## Illinois EPA SWAP Database - RTK Area

## Brickyard Disposal Recycling, Danville, Illinois

Rec	bow.BOW.RTKPoints.Id	bow.BOW.RTKPoints.N ame	bow.BOW.RTKPoints.Ci ty	bow.BOW.RTKPoints.St ate	bow.BOW.RTKPoints.Zi p	bow.BOW.RTKPoints.URL	bow.BOW.RTKPoints.Y ear	Shape.area	Shape.len
1	29	Valley Run MHP	Danville	IL	61832	<a href="http://www.idph.state.il.us/public/press08/4.4.08ValleyViewWaterTest.htm">http://www.idph.state.il.us/public/press08/4.4.08ValleyViewWaterTest.htm</a>	2008	0	0

**Illinois State Geological Survey (ISGS) Well Log Data**

API Number 01505

For IEPA and USGS use only, do not quote or release.

**CWS Well Id:****ISGS Header Table Data**

County_No	Farm Name	Status	Twp	Tdir	Rng	Section	Quarters	Comp Date
-----------	-----------	--------	-----	------	-----	---------	----------	-----------

**ISGS Well Log Table**

County_No	Formation	Thickness	Bottom
121830150500	yellow clay	13	13
121830150500	hard sandy gray clay	20	33
121830150500	fine sand	1	34
121830150500	hard gray clay	5	39
121830150500	soft gray sandy clay	28	67
121830150500	soft green clay	5	72
121830150500	gray clay	6	78

**ISGS Pump Test Data Table**

County_No	Pump gpm	Pump hrs	Stat lev1	Pump lev1	Wformation
121830150500	10	2	30	27	gray clay

**ISGS Well Casing Data Table**

County_No	Case diam	Case from	Case to	Case type
121830150500	4	0	77	BLACK IRON

**ISGS Open Interval Data Table**

County_No	Scrn diam	Scrn Lgth	Slot	Wfm from	Wfm to	Wformation
121830150500		0		77	78	gray clay

**Illinois State Geological Survey (ISGS) Well Log Data**

API Number 24029

For IEPA and USGS use only, do not quote or release.

**CWS Well Id:****ISGS Header Table Data**

County_No	Farm Name	Status	Twp	Tdir	Rng	Section	Quarters	Comp Date
-----------	-----------	--------	-----	------	-----	---------	----------	-----------

**ISGS Well Log Table**

County_No	Formation	Thickness	Bottom
121832402900	brown clay	27	27
121832402900	blue clay	37	64
121832402900	blue clay	19	92
121832402900	sand no water	9	73
121832402900	sand & gravel (water)	5	97

**ISGS Pump Test Data Table**

County_No	Pump gpm	Pump hrs	Stat lev1	Pump lev1	Wformation
121832402900	0	3	70	78	sand & gravel

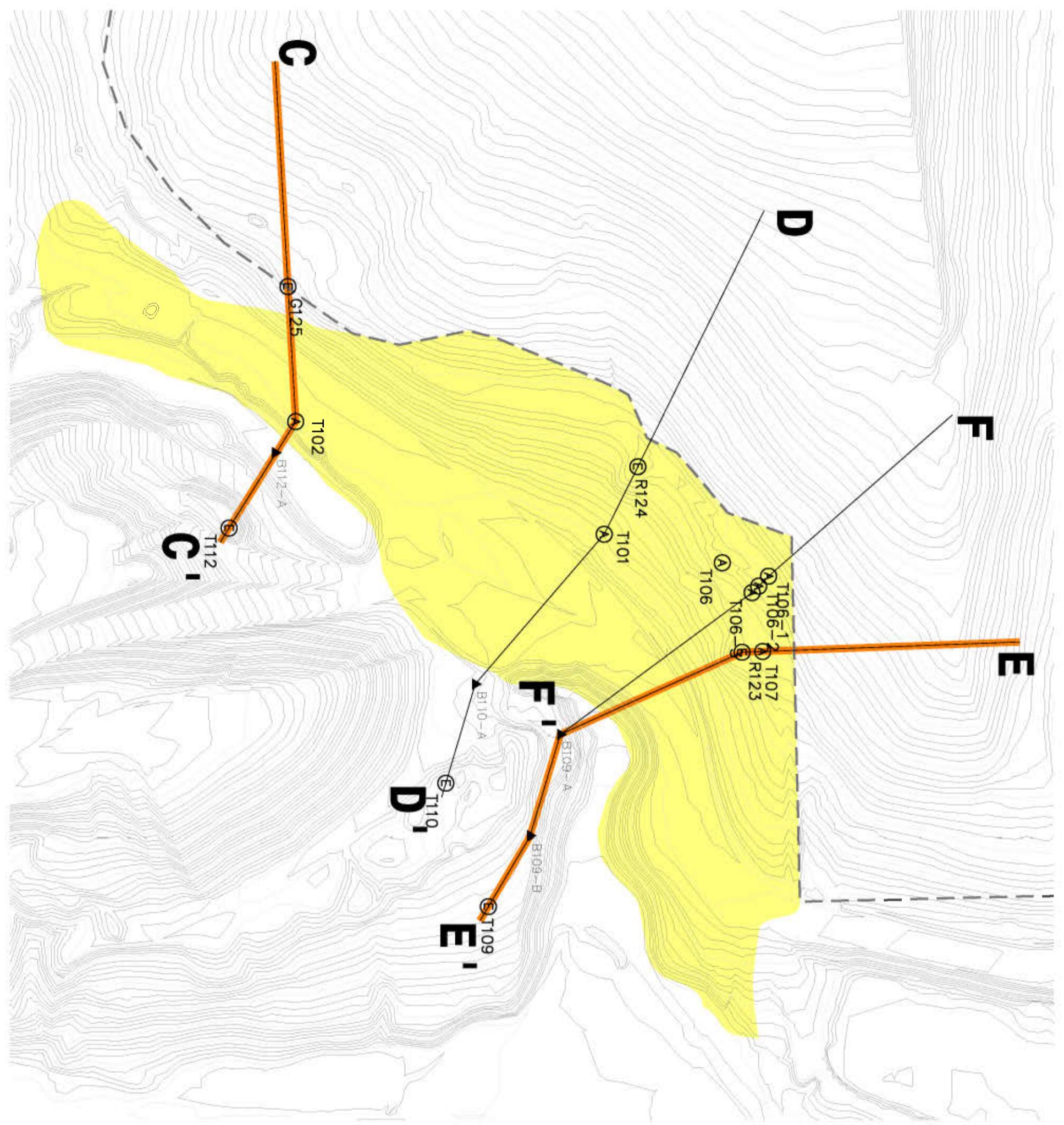
**ISGS Well Casing Data Table**

County_No	Case diam	Case from	Case to	Case type
121832402900	4	-1	93	STEEL 11#/FT

**ISGS Open Interval Data Table**

County_No	Scrn diam	Scrn Lgth	Slot	Wfm from	Wfm to	Wformation
121832402900	3	4	0	93	97	sand & gravel

**ATTACHMENT 7**  
**Slope Stability Evaluation**

**EXPLANATION**

APPROXIMATE PERMITTED  
WASTE BOUNDARY

AREA OF EXTRANEous  
MATERIALS

PIEZOMETER

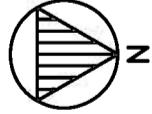
BORING LOCATION

MONITORING POINT

**NOTE:**

TOPOGRAPHIC SURFACE TAKEN FROM AERIAL  
PROVIDED BY AEROCON PHOTOGRAmmETRIC  
SERVICES, INC. FLOWN ON MARCH 23, 2010.

150  
0  
150  
300



SCALE: IN FEET

SLOPE STABILITY CROSS SECTION LOCATION MAP  
PLANS PREPARED FOR  
BRICKYARD DISPOSAL & RECYCLING  
DANVILLE, ILLINOIS

DATE:  
JUNE 2010  
PROJECT #:  
89-115A  
SHEET NUMBER:

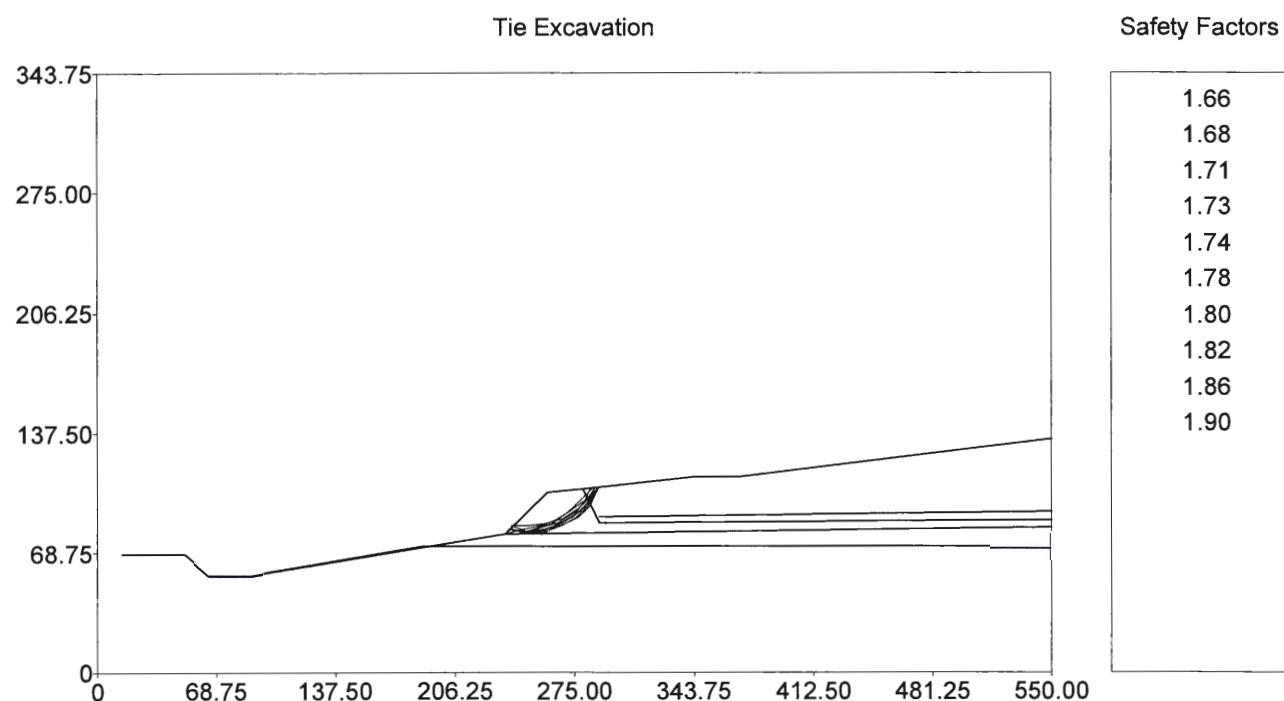


**ANDREWS**  
ENGINEERING, INC.  
3300 Ginger Creek Drive, Springfield, IL 62711-7233  
Tel (217) 787-2334 Fax (217) 787-9495  
Pontiac, IL • Naperville, IL • Indianapolis, IN • Warrenton, MO

APPROVED BY: JLR DESIGNED BY: JLR DRAWN BY: WCU

**FIG. 8-1**

**Section C-C'**



Profile.out  
\*\* PCSTABL6 \*\*  
by  
Purdue University  
modified by  
Peter J. Bosscher  
University of Wisconsin-Madison

	Profile.out						
1	145.0	145.0	3000.0	0.0	0.00	0.0	1
2	135.0	135.0	1200.0	0.0	0.00	0.0	1
3	70.0	70.0	200.0	26.0	0.00	0.0	2

2 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit weight of water = 62.40

Slope Stability Analysis--  
Simplified Janbu, Simplified Bishop  
or Spencer's Method of Slices

Piezometric Surface No. 1 Specified by 4 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	65.00	57.00
2	90.00	57.00
3	188.00	73.00
4	550.00	73.00

PROBLEM DESCRIPTION Tie Excavation

Piezometric Surface No. 2 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	290.00	90.00
2	550.00	92.00

BOUNDARY COORDINATES

9 Top Boundaries  
12 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	15.00	68.00	50.00	68.00	1
2	50.00	68.00	65.00	50.00	1
3	65.00	56.00	90.00	56.00	1
4	90.00	56.00	235.00	80.00	1
5	235.00	80.00	260.00	104.00	2
6	260.00	104.00	280.00	106.00	2
7	280.00	106.00	345.00	113.00	3
8	345.00	113.00	370.00	113.00	3
9	370.00	113.00	550.00	134.00	3
10	280.00	106.00	290.00	86.00	2
11	290.00	86.00	550.00	88.00	2
12	235.00	80.00	550.00	83.00	1

A Horizontal Earthquake Loading Coefficient Of 0.100 Has Been Assigned

A Vertical Earthquake Loading Coefficient Of 0.000 Has Been Assigned

Cavitation Pressure = 0.0 psf

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated.

ISOTROPIC SOIL PARAMETERS

3 Type(s) of soil

Soil Type	Total unit wt.	Saturated unit wt.	Cohesion	Friction Intercept	Pore Pressure Angle	Piez. Constant	Pressure surface No.
No. (pcf)	(pcf)	(pcf)	(psf)	(psf)	(deg)	(psf)	No.

10 Surfaces Initiate From Each of 10 Points Equally Spaced Along The Ground Surface Between X = 230.00 ft. and X = 240.00 ft.

Each Surface Terminates Between X = 275.00 ft. and X = 290.00 ft.

Page 1

Page 2

Profile.out  
Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00 ft.

10.00 ft. Line Segments Define Each Trial Failure Surface.

Following Are Displayed The Ten Most Critical of The Trial Failure Surfaces Examined. They Are Ordered - Most critical First.

\*\*\* 1.712 \*\*\*

\* \* Safety Factors Are Calculated By The Modified Janbu Method \* \*

Profile.out

1	237.78	82.67
2	247.69	81.32
3	257.65	82.23
4	267.15	83.55
5	276.71	90.51
6	282.90	97.46
7	288.34	105.85
8	288.74	106.94

\*\*\* 1.712 \*\*\*

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	236.67	81.60
2	246.66	81.27
3	256.53	82.89
4	265.89	86.40
5	274.40	91.66
6	281.71	98.48
7	287.56	106.59
8	287.66	106.83

\*\*\* 1.730 \*\*\*

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	238.89	83.73
2	248.61	81.38
3	258.61	81.57
4	268.23	84.28
5	276.86	89.33
6	283.93	96.41
7	288.98	105.04
8	289.53	107.03

\*\*\* 1.735 \*\*\*

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.56	80.53
2	245.54	80.06
3	255.45	81.45

Page 3

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	237.78	80.53
2	247.69	80.83
3	257.65	81.36
4	267.18	84.20
5	275.53	89.22
6	285.07	96.52
7	288.49	104.52
8	289.36	107.01

\*\*\* 1.682 \*\*\*

8

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.56	80.53
2	245.54	79.89
3	255.46	81.15

Page 4

2

Profile.out			Profile.out						
4	264.96	84.26							
5	273.70	89.11							
6	281.37	95.53							
7	287.69	103.28	***	1.860	***				
8	289.72	107.05							
*** 1.785 ***			Failure Surface Specified By 7 Coordinate Points						
Failure surface specified By 7 coordinate Points			Point No.	X-Surf (ft)	Y-Surf (ft)				
Point No.	X-Surf (ft)	Y-Surf (ft)	1	238.89	83.73				
1	237.78	82.67	2	248.89	83.72				
2	247.59	80.76	3	258.74	85.46				
3	257.56	81.57	4	268.12	88.91				
4	266.94	85.04	5	276.76	92.55				
5	275.03	90.91	6	284.38	100.43				
6	281.24	98.75	7	289.85	107.06				
7	284.48	106.48	*** 1.903 ***						
*** 1.801 ***			Y	A	X	I	S	F	T
Failure surface specified By 8 coordinate Points			0.00	68.75	137.50	206.25	275.00	343.75	
Point No.	X-surf (ft)	Y-surf (ft)	X	0.00	+-----+-----+-----+-----+-----+				
1	235.56	80.53		-	*-----+-----+-----+-----+-----+				
2	245.49	81.68		-	------+-----+-----+-----+-----+				
3	255.18	84.15		-	------+-----+-----+-----+-----+				
4	264.45	87.90		-	------+-----+-----+-----+-----+				
5	273.14	92.85		-	------+-----+-----+-----+-----+				
6	281.08	98.93		-	------+-----+-----+-----+-----+				
7	288.14	106.01		-	------+-----+-----+-----+-----+				
8	288.86	106.95		-	------+-----+-----+-----+-----+				
*** 1.818 ***			A	137.50	+-----+-----+-----+-----+-----+				
Failure surface specified By 7 coordinate Points			X	206.25	+-----+-----+-----+-----+-----+				
Point No.	X-surf (ft)	Y-Surf (ft)		-	------+-----+-----+-----+-----+				
1	234.44	79.91		-	------+-----+-----+-----+-----+				
2	244.42	80.62		-	------+-----+-----+-----+-----+				
3	254.14	82.98		-	------+-----+-----+-----+-----+				
4	263.53	85.31		-	------+-----+-----+-----+-----+				
5	271.75	92.31		-	------+-----+-----+-----+-----+				
6	279.16	99.02		-	------+-----+-----+-----+-----+				
7	285.10	106.55		-	------+-----+-----+-----+-----+				

Page 5

Profile.out			Profile.out		
-	-	*	-	-	
-	-		-	-	
-	-		-	-	
412.50	+		-	-	
-	-		-	-	
-	-		-	-	
F	481.25	+	-	-	
-	-		-	-	
-	-		-	-	
T	550.00	+	W**	*	

\*-----+-----+-----+-----+-----+

.9.

.1.

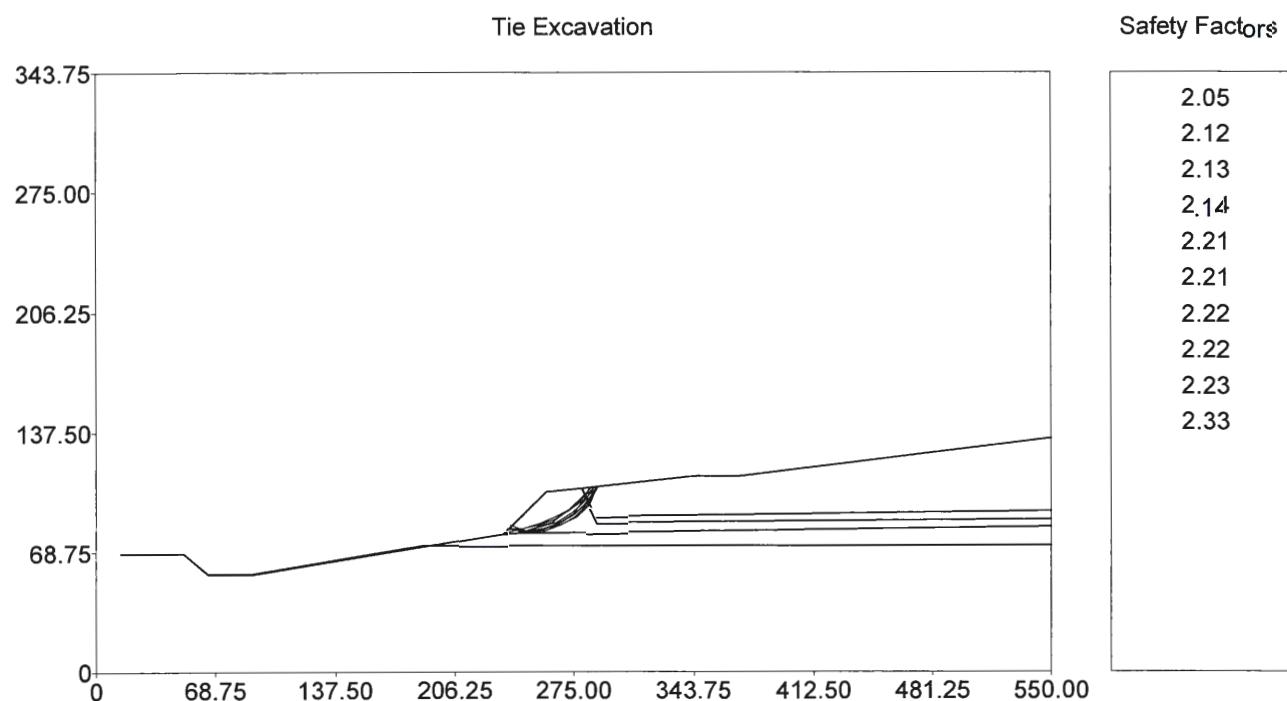
.14.\*

.18\*

\*111

\*-----+-----+-----+-----+-----+

Page 6



\*\* Profile.out  
 \*\* PCSTABLE6 \*\*  
 by  
 Purdue University  
 modified by  
 Peter J. Boscher  
 University of Wisconsin-Madison

Profile.out  
 1 145.0 145.0 3000.0 0.0 0.00 0.0 0.0 1  
 2 135.0 135.0 1200.0 0.0 0.00 0.0 0.0 1  
 3 70.0 70.0 200.0 26.0 0.00 0.0 0.0 2

2 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of water = 62.40

--Slope Stability Analysis--  
 simplified Janbu, Simplified Bishop  
 or Spencer's Method of Slices

Piezometric Surface No. 1 Specified by 4 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	65.00	57.00
2	90.00	57.00
3	188.00	73.00
4	550.00	73.00

PROBLEM DESCRIPTION Tie Excavation

Piezometric Surface No. 2 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	290.00	90.00
2	550.00	92.00

#### BOUNDARY COORDINATES

9 Top Boundaries  
 12 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type	Below Bnd
1	15.00	68.00	50.00	68.00		1
2	50.00	68.00	65.00	56.00		1
3	65.00	56.00	90.00	56.00		1
4	90.00	56.00	235.00	80.00		1
5	235.00	80.00	260.00	104.00		2
6	260.00	104.00	280.00	106.00		2
7	280.00	106.00	345.00	113.00		3
8	345.00	113.00	370.00	113.00		3
9	370.00	113.00	550.00	134.00		3
10	280.00	106.00	290.00	86.00		2
11	290.00	86.00	550.00	88.00		2
12	235.00	80.00	350.00	83.00		1

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated.

10 Surfaces Initiate From Each of 10 Points Equally Spaced Along The Ground Surface Between X = 230.00 ft.  
 and X = 240.00 ft.

Each Surface Terminates Between X = 275.00 ft.  
 and X = 290.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00 ft.

10.00 ft. Line Segments Define Each Trial Failure Surface.

#### ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Constant (psf)	Piez. surface NO.
1						
2						
3						
4						
5						
6						
7						
8						

Page 1

Following Are Displayed The Ten Most Critical of the Trial Page 2

Profile.out  
 Failure Surfaces Examined. They Are Ordered - Most critical First.

\*\*\* 2.125 \*\*\* Profile.out

\* \* Safety Factors Are Calculated By The Modified Janbu Method \* \*

Failure Surface Specified By 8 coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.56	80.53
2	245.54	80.06
3	255.45	81.45
4	264.92	84.64
5	273.65	89.53
6	281.31	95.96
7	287.65	103.69
8	289.48	107.02

\*\*\* 2.142 \*\*\*

Failure Surface Specified By 7 coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	237.78	82.67
2	247.69	81.32
3	257.65	82.23
4	267.15	85.35
5	275.71	90.51
6	282.90	97.46
7	288.34	105.85
8	288.74	106.94

\*\*\* 2.142 \*\*\*

Failure Surface Specified By 8 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	237.78	82.67
2	247.61	80.83
3	257.60	81.36
4	267.18	84.20
5	275.53	89.22
6	287.07	96.12
7	288.49	104.52
8	289.36	107.01

\*\*\* 2.209 \*\*\*

Failure Surface Specified By 8 coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	235.56	80.53
2	245.54	79.89
3	255.46	81.15
4	264.96	84.26
5	273.70	89.11
6	281.37	95.53
7	287.69	103.28
8	289.72	107.03

\*\*\* 2.210 \*\*\*

Failure Surface Specified By 8 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	236.67	81.60
2	246.66	81.27
3	256.53	82.89
4	265.99	86.40
5	274.40	91.66
6	281.71	98.48
7	287.56	106.59
8	287.66	106.83

\*\*\* 2.210 \*\*\*

**Profile.out**  
Failure Surface Specified By 8 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	235.56	80.53
2	245.49	81.68
3	255.18	84.15
4	264.45	87.90
5	273.14	92.85
6	281.08	98.59
7	288.14	106.01
8	288.86	106.95

\*\*\* 2.217 \*\*\*

**Profile.out**  
Failure Surface Specified By 8 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	238.89	83.73
2	248.61	81.38
3	258.61	81.57
4	268.33	84.28
5	276.86	89.53
6	283.93	96.41
7	288.98	105.04
8	289.53	107.03

\*\*\* 2.218 \*\*\*

**Profile.out**  
Failure surface Specified By 7 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	234.44	79.91
2	244.42	80.62
3	254.14	82.98
4	263.33	86.91
5	271.75	92.31
6	279.16	99.02
7	285.10	106.55

\*\*\* 2.232 \*\*\*

**Profile.out**  
Failure surface specified By 7 Coordinate Points

Point	X-surf	Y-surf
		Page 5

**Profile.out**  
(ft)

No.	(ft)
1	236.67
2	246.60
3	256.27
4	265.52
5	274.18
6	282.08
7	288.62

\*\*\* 2.331 \*\*\*

Y A X I S F T

0.00 68.75 137.50 206.25 275.00 343.75

X 0.00 +-----+-----+-----+-----+

68.75 +-----+-----+-----+

A 137.50 +-----+-----+-----+

W

X 206.25 +-----+-----+-----+

I 275.00 +-----+-----+-----+

S 343.75 +-----+-----+-----+

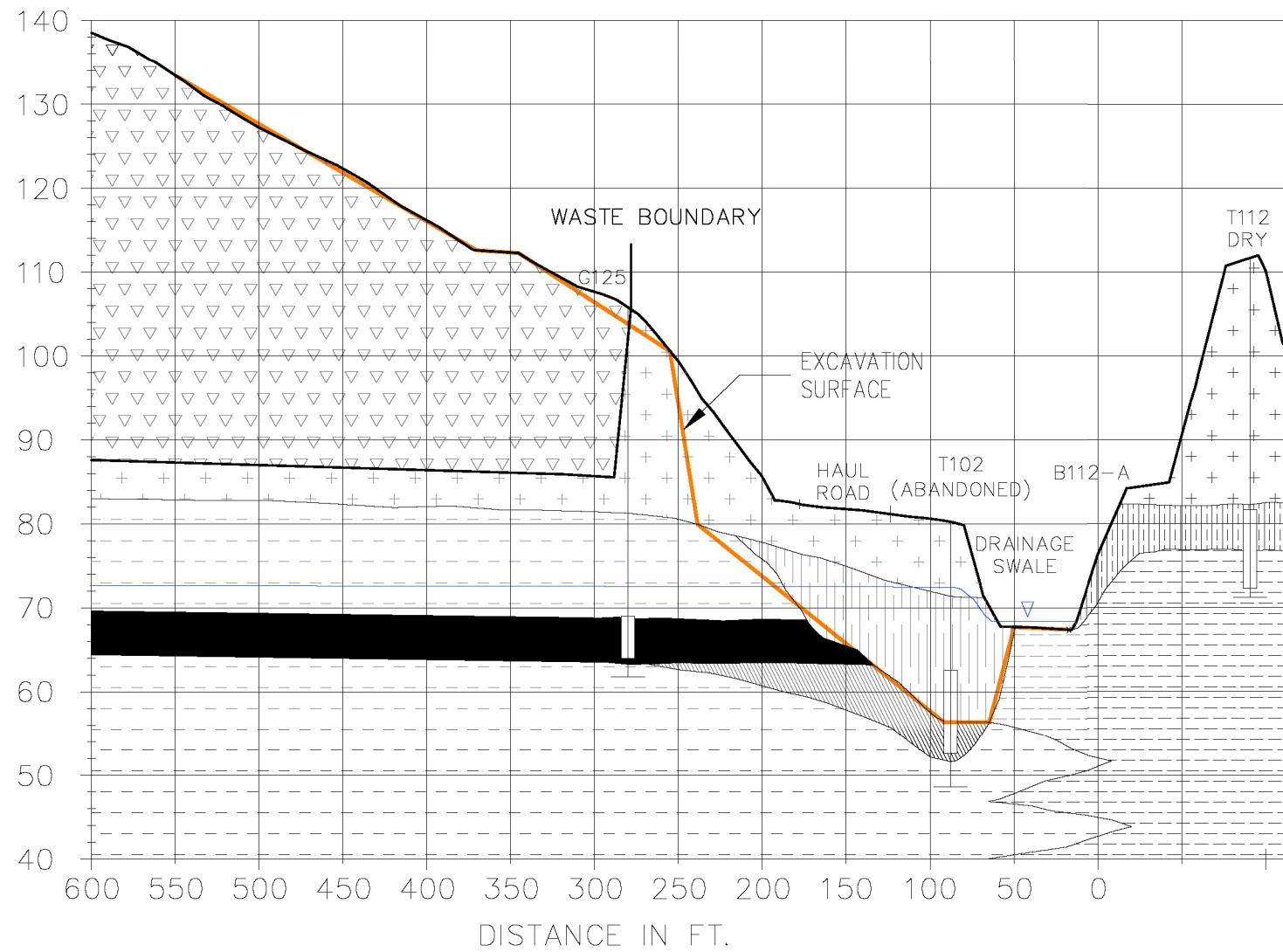
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Page 6

**Profile.out**

F	481.25
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-	-
-	-
-	-
T	550.00

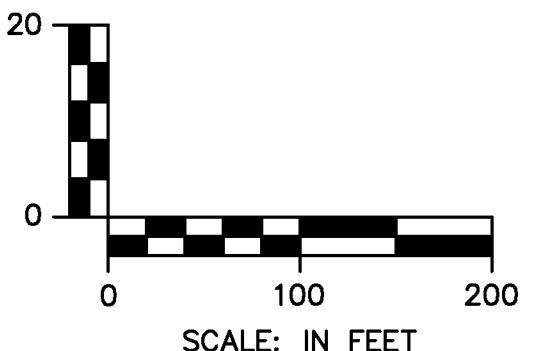
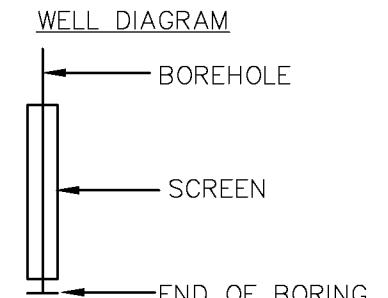
w\*\* \* \*

NOTES:

1. TOPOGRAPHIC SURFACE TAKEN FROM AERIAL PROVIDED BY AEROCON PHOTOGRAMMETRIC SERVICES, INC. FLOWN ON MARCH 23, 2010.
2. SOLID VERTICAL LINES REPRESENT BORINGS DRILLED FOR MONITORING WELL INSTALLATION.
3. GROUNDWATER ELEVATIONS REPRESENT AN AVERAGE OF GROUNDWATER ELEVATIONS MEASURED FROM SECOND QUARTER 2009 TO FIRST QUARTER 2010. WELLS T114-T123 GROUNDWATER ELEVATIONS MEASURED DURING FIRST QUARTER 2010.
4. DEPTH AND THICKNESS OF SUBSURFACE STRATA WERE GENERALIZED FROM AND INTERPOLATED BETWEEN BORINGS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE BORING.
5. B110-A GROUND SURFACE ELEVATION BASED ON 2010 AERIAL. BEDROCK WAS ENCOUNTERED LESS THAN 1.0 FOOT BELOW 2009 GROUND SURFACE ELEVATION (567.5 AMSL).
6. R124 GEOLOGY BASED ON BORING LOG FOR G124. COAL AT R124 IS NOTED ON BORING LOG G124 AS PROBABLE SILTED-IN MINE CAVERN.
7. OVERFILL AREA IDENTIFIED IN SHEET NO. 1 IS COMPOSED OF A COMBINATION OF MINE SPOIL/BACKFILL, RAILROAD TIES AND/OR OTHER MATERIALS.

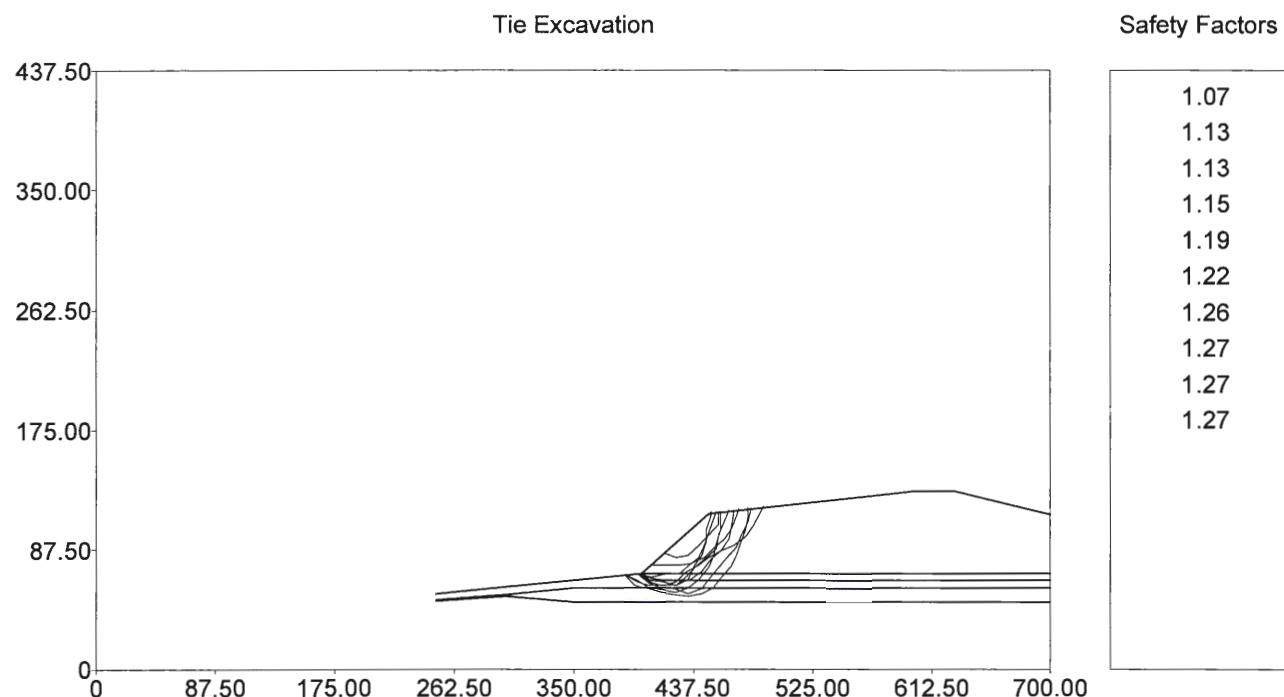
EXPLANATION

- [+ +] MINE SPOIL/DISTURBED
- [---] SILTSTONE
- [---] SHALE
- [■■■] COAL
- [|||] WOOD DEBRIS
- [||||] SANDY SILT
- [▨▨▨] UNDERCLAY
- [△△△] WASTE FILL
- [▽▽▽] GROUNDWATER



ANDREWS ENGINEERING, INC. 3300 Ginger Creek Drive, Springfield, IL 62711-7233 Tel (217) 787-2334 Pontiac, IL • Naperville, IL • Indianapolis, IN • Warren, MO		
APPROVED BY:	JLR	DESIGNED BY:
PLANS PREPARED FOR:	BRICKYARD DISPOSAL & RECYCLING DANVILLE, ILLINOIS	
DATE:	JUNE 2010	
PROJECT ID:	89-115A	
SHEET NUMBER:	C-C'	
©2009 Andrews Engineering, Inc.		

**Section E-E'**



Profile.out  
 \*\* PCSTAB6 \*\*  
 by  
 Purdue University  
 modified by  
 Peter J. Bosscher  
 University of Wisconsin-Madison

Profile.out  
 3 145.0 145.0 3000.0 0.0 0.0 0.0 1

2 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 4 Coordinate Points

--Slope Stability Analysis--  
 Simplified Janbu, Simplified Bishop  
 or Spencer's Method of Slices

Point No.	X-Water (ft)	Y-Water (ft)
1	250.00	52.00
2	300.00	54.00
3	350.00	60.00
4	700.00	60.00

PROBLEM DESCRIPTION Tie Excavation

Piezometric Surface No. 2 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	400.00	70.00
2	700.00	70.00

#### BOUNDARY COORDINATES

5 Top Boundaries  
 10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	250.00	56.00	400.00	70.00	1
2	400.00	70.00	450.00	115.00	2
3	450.00	115.00	600.00	130.00	2
4	600.00	130.00	620.00	130.00	2
5	630.00	130.00	700.00	114.00	2
6	400.00	70.00	405.00	65.00	2
7	405.00	65.00	700.00	65.00	2
8	250.00	51.00	300.00	53.00	3
9	300.00	53.00	350.00	50.00	3
10	350.00	50.00	700.00	50.00	3

A Horizontal Earthquake Loading Coefficient of 0.100 Has Been Assigned

A Vertical Earthquake Loading Coefficient of 0.000 Has Been Assigned

Cavitation Pressure = 0.0 psf

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Irregular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated.

#### ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	135.0	135.0	1200.0	0.0	0.00	0.0	1
2	70.0	70.0	200.0	26.0	0.00	0.0	2

Page 1

10 Surfaces Initiate From Each of 10 Points Equally Spaced Along The Ground Surface Between X = 350.00 ft. and X = 435.00 ft.

Each Surface Terminates Between X = 450.00 ft. and X = 500.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00 ft.  
 Page 2

Profile.out

10.00 ft. Line Segments Define Each Trial Failure Surface.

Profile.out

Failure Surface Specified By 12 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	397.22	69.74
2	405.05	63.52
3	414.93	62.00
4	424.92	62.51
5	433.38	67.85
6	440.55	74.82
7	447.28	82.22
8	454.45	89.19
9	456.33	98.97
10	460.11	108.31
11	464.74	116.47

\*\*\* 1.128 \*\*\*

Failure Surface Specified By 10 Coordinate Points

Point No.	X-surf (ft)	Y-surf (ft)
1	406.67	76.00
2	416.67	75.85
3	426.64	76.53
4	436.50	78.20
5	445.56	82.43
6	453.22	88.86
7	460.84	95.33
8	466.65	101.47
9	469.28	113.12
10	470.79	117.08

\*\*\* 1.149 \*\*\*

Failure Surface Specified By 10 Coordinate Points

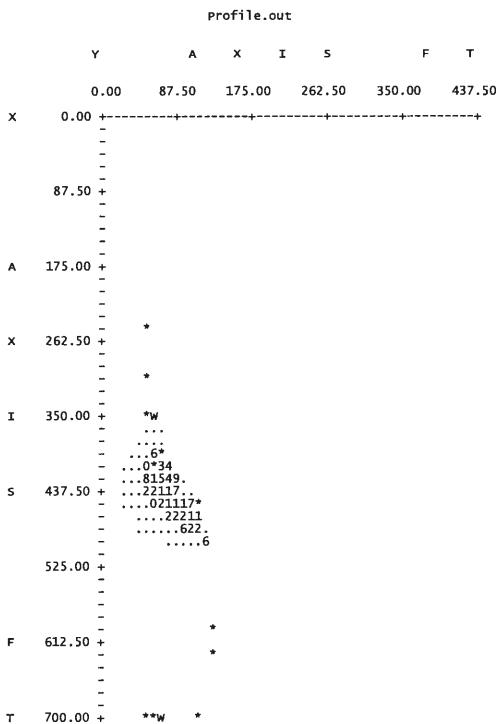
Point No.	X-surf (ft)	Y-surf (ft)
1	397.22	69.74
2	407.15	68.56
3	417.15	68.84
4	427.15	69.66
5	434.67	75.56
6	442.72	81.49
7	445.83	90.99
8	449.63	100.24
9	452.83	109.72
10	454.26	115.43

Page 4

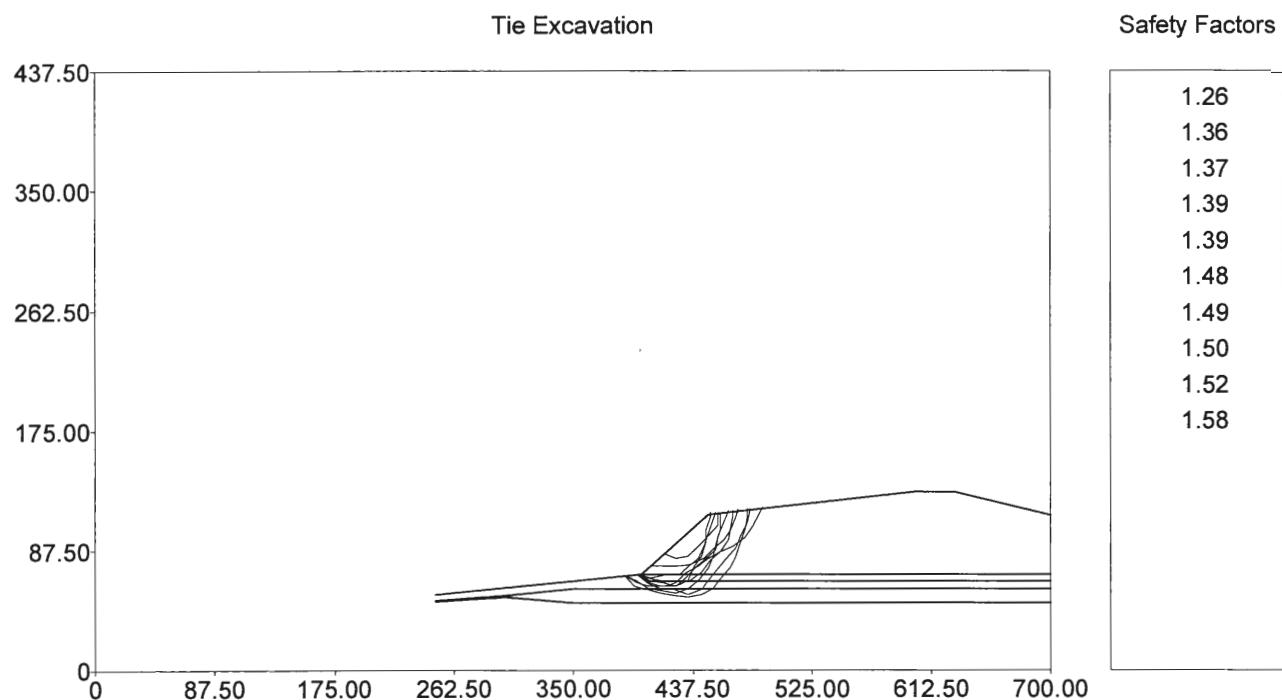
Page 3

Profile.out			Profile.out		
***	1.191	***	3	406.01	60.67
			4	415.61	57.89
			5	425.55	56.78
			6	435.06	59.89
			7	445.43	66.55
			8	449.17	70.03
			9	452.75	83.37
			10	455.37	93.02
			11	457.38	102.82
			12	458.48	112.76
			13	458.60	115.86
			***	1.270	***
<b>Failure Surface Specified By 14 Coordinate Points</b>					
<b>Point No.</b>	<b>X-Surf (ft)</b>	<b>Y-Surf (ft)</b>	<b>Point No.</b>	<b>X-Surf (ft)</b>	<b>Y-surf (ft)</b>
1	387.78	68.86	1	416.11	84.50
2	396.36	63.72	2	425.66	81.53
3	406.20	61.93	3	435.27	84.31
4	416.18	62.40	4	442.72	90.97
5	426.02	64.19	5	449.64	98.20
6	433.05	71.30	6	455.64	106.19
7	441.57	76.55	7	456.75	115.68
8	449.56	82.56			
9	458.61	86.81			
10	467.48	91.43			
11	475.77	96.47			
12	483.48	105.15			
13	486.64	113.72			
14	490.23	119.02			
***	1.216	***			
<b>Failure surface specified By 11 Coordinate Points</b>					
<b>Point No.</b>	<b>X-surf (ft)</b>	<b>Y-surf (ft)</b>	***	1.273	***
1	397.22	69.74			
2	405.92	64.80			
3	415.55	63.61			
4	425.76	61.39			
5	435.00	66.11			
6	439.19	75.19			
7	443.52	84.20			
8	446.96	93.59			
9	448.37	103.49			
10	450.93	113.16			
11	451.55	115.16			
***	1.259	***			
<b>Failure surface Specified By 13 Coordinate Points</b>					
<b>Point No.</b>	<b>X-Surf (ft)</b>	<b>Y-Surf (ft)</b>	***	1.275	***
1	387.78	68.86			
2	396.72	64.37			

Page 5



Page 7



```

** Profile.out
** PCSTAB16 **
by
Purdue University
modified by
Peter J. Bosscher
University of Wisconsin-Madison

```

--Slope Stability Analysis--  
Simplified Janbu, Simplified Bishop  
or Spencer's Method of Slices

Profile.out  
3 145.0 145.0 3000.0 0.0 0.0 0.0 1

2 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED

Unit Weight of Water = 62.40

Piezometric Surface No. 1 Specified by 4 Coordinate Points

Point No.	X-Water (ft)	Y-Water (ft)
1	250.00	52.00
2	300.00	54.00
3	350.00	60.00
4	700.00	60.00

#### PROBLEM DESCRIPTION Tie Excavation

Piezometric Surface No. 2 Specified by 2 Coordinate Points

Point No.	X-Water (ft)	Y-water (ft)
1	400.00	70.00
2	700.00	70.00

#### BOUNDARY COORDINATES

5 Top Boundaries  
10 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	250.00	56.00	400.00	70.00	1
2	400.00	70.00	450.00	115.00	2
3	450.00	115.00	600.00	130.00	2
4	600.00	130.00	650.00	130.00	2
5	630.00	130.00	700.00	114.00	2
6	400.00	70.00	405.00	65.00	2
7	405.00	65.00	700.00	65.00	2
8	250.00	51.00	300.00	53.00	3
9	300.00	53.00	350.00	50.00	3
10	350.00	50.00	700.00	50.00	3

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Irregular Surfaces, Has Been Specified.

100 Trial Surfaces Have Been Generated.

10 Surfaces Initiate From Each Of 10 Points Equally Spaced Along The Ground Surface Between X = 350.00 ft.  
and X = 435.00 ft.

Each Surface Terminates Between X = 450.00 ft.  
and X = 500.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = 0.00 ft.

10.00 ft. Line Segments Define Each Trial Failure Surface.

#### ISOTROPIC SOIL PARAMETERS

3 Type(s) of Soil

Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Pore Pressure Param.	Pressure Constant (psf)	Piez. Surface No.
1	135.0	135.0	1200.0	0.0	0.00	0.0	1
2	70.0	70.0	200.0	26.0	0.00	0.0	2

Page 1

Following Are Displayed The Ten Most Critical Of The Trial Failure Surfaces Examined. They Are Ordered - Most Critical First.

Page 2

#### Profile.out

\* \* Safety Factors Are Calculated By The Modified Janbu Method \* \*

#### Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	397.22	69.74
2	405.05	63.52
3	414.93	62.00
4	424.92	62.51
5	433.38	67.85
6	440.55	74.82
7	447.28	82.22
8	454.45	89.19
9	456.53	98.97
10	460.11	108.31
11	464.74	116.47

#### profile.out

6	443.27	58.92
7	449.42	66.81
8	455.66	74.62
9	461.00	82.35
10	468.63	89.84
11	473.24	98.71
12	477.82	107.60
13	479.22	117.50
14	479.28	117.93

#### Failure Surface Specified By 10 Coordinate Points

Point No.	X-Surf (ft)	Y-surf (ft)
1	397.22	69.74
2	407.15	68.56
3	417.15	68.84
4	427.15	68.96
5	434.67	75.56
6	442.72	81.49
7	445.83	90.99
8	449.63	100.24
9	452.83	109.72
10	454.26	115.43

#### Failure Surface Specified By 12 Coordinate Points

Point No.	X-Surf (ft)	Y-surf (ft)
1	397.22	69.74
2	406.95	67.43
3	416.48	64.40
4	426.47	64.99
5	436.36	65.41
6	444.44	72.70
7	450.71	80.23
8	458.06	87.02
9	463.93	95.11
10	466.76	104.71
11	467.89	114.64
12	467.94	116.79

#### Failure Surface Specified By 10 Coordinate Points

Point No.	X-surf (ft)	Y-Surf (ft)
1	406.67	76.00
2	416.67	75.85
3	426.64	76.53
4	436.50	82.20
5	445.36	82.43
6	452.32	88.86
7	460.84	95.13
8	466.65	103.47
9	469.28	113.12
10	470.79	117.08

#### Failure surface specified By 14 Coordinate Points

Point No.	X-Surf (ft)	Y-Surf (ft)
1	397.22	69.74
2	404.70	63.10
3	414.38	60.60
4	424.13	58.36
5	433.78	55.75

#### Failure Surface Specified By 11 Coordinate Points

Point No.	X-Surf	Y-Surf
1	397.22	69.74
2	407.15	68.56
3	417.15	68.84
4	427.15	68.96
5	434.67	75.56
6	442.72	81.49
7	445.83	90.99
8	449.63	100.24
9	452.83	109.72
10	454.26	115.43

Page 3

5

No.	(ft)	Profile.out (ft)
1	397.22	69.74
2	405.92	64.80
3	415.85	63.61
4	425.76	62.29
5	435.00	66.11
6	439.15	79.96
7	442.32	84.20
8	446.96	93.59
9	448.37	103.49
10	450.93	113.16
11	451.55	115.16

Failure Surface Specified By 13 Coordinate Points		
Point No.	X-Surf (ft)	Y-Surf (ft)
1	387.78	68.86
2	396.72	64.37
3	406.11	60.57
4	415.61	57.89
5	425.55	56.78
6	435.06	59.89
7	442.43	66.65
8	449.17	74.03
9	452.75	83.37
10	455.37	93.02
11	457.38	102.82
12	458.48	112.76
13	458.60	115.86

```

Failure Surface Specified By 14 Coordinate Points

Point      X-Surf      Y-Surf
No.        (ft)        (ft)

 1       387.78      68.86
 2       396.36      63.72
 3       406.20      61.93
 4       416.18      62.40
 5       426.02      64.19
 6       435.05      71.30
 7       444.07      76.55
 8       449.56      82.56
 9       458.61      86.81
10      467.48      91.43
11      475.87      96.87
12      481.48      105.15
13      486.64      113.72
14      490.23      119.02

***      1.491      ***

```

Failure Surface Specified By 15 Coordinate Points		
Point No.	X-surf (ft)	Y-surf (ft)
1	387.78	68.86
2	394.85	61.79
3	404.26	58.40
4	414.11	56.72
5	423.88	54.54
6	433.85	53.77
7	432.52	56.30
8	432.93	55.68
9	458.81	67.77
10	465.14	75.51
11	469.79	84.37
12	473.40	93.69
13	477.01	103.02
14	478.30	112.94
15	478.76	117.88

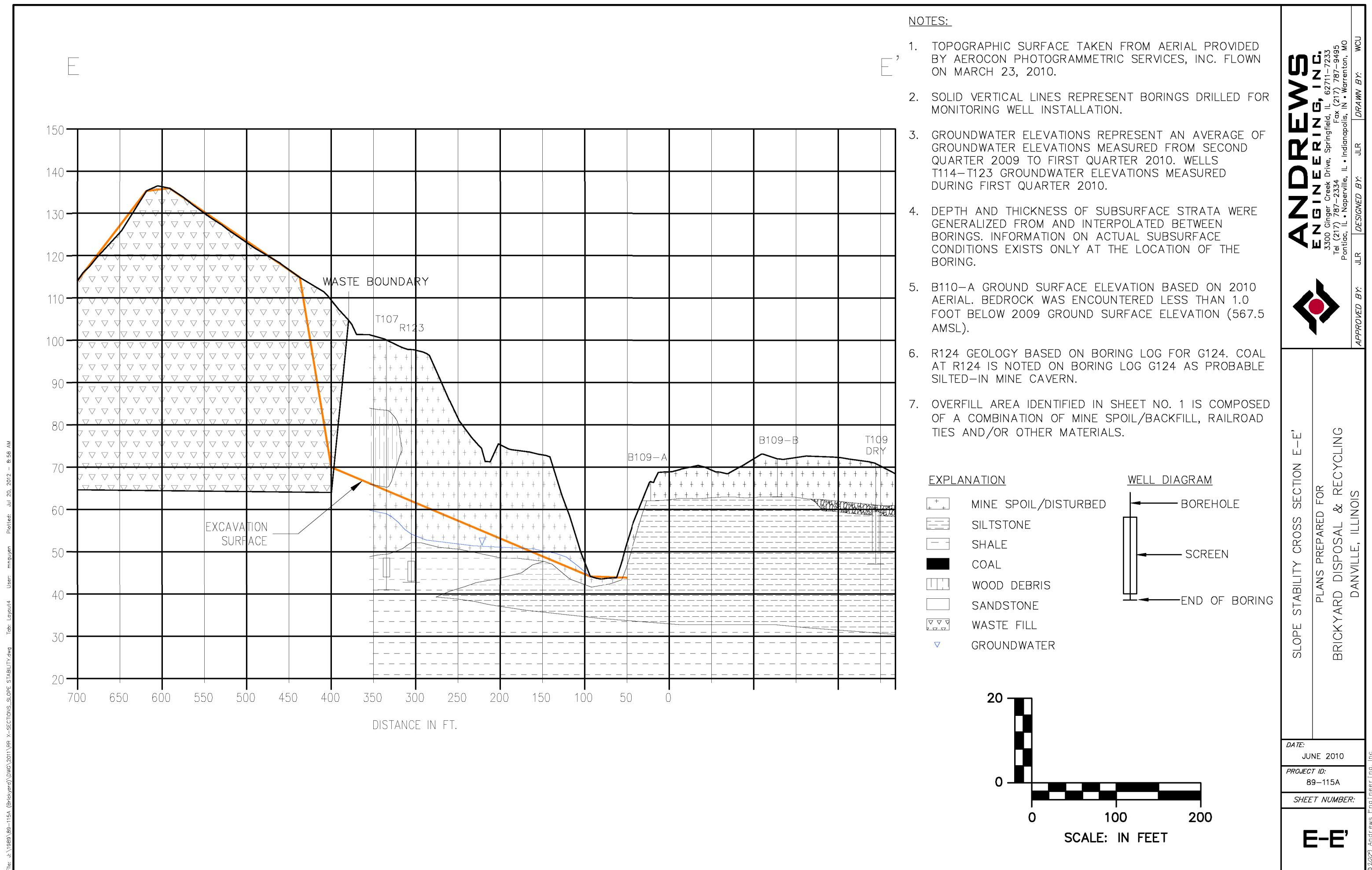
Failure Surface Specified By 7 Coordinate Points		
Point No.	X-Surf (ft)	Y-Surf (ft)
1	416.11	84.50
2	425.66	81.53
3	435.27	84.31
4	442.72	90.97
5	449.64	98.20
6	455.64	106.19
7	456.75	115.68

\*\*\*      1.504      \*\*\*

	Y	A	X	I	S	F	T
X	0.00	-----+-----+-----+-----+-----+-----+-----+	87.50	175.00	262.50	350.00	437.50

Page 5

Page 6



**ATTACHMENT 8**  
**USGS Gage Station Data**

Brickyard Disposal and Recycling  
Historical River Elevations  
Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	6/23/1960																		
523.06	Gage Height	19.32																		
	Elevation	523.06																		
Maximum Elevation	Date	4/21/1964																		
528.52	Gage Height	24.78																		
	Elevation	528.52																		
Maximum Elevation	Date	12/9/1966																		
523.19	Gage Height	19.45																		
	Elevation	523.19																		
Maximum Elevation	Date	8/5/1968	9/11/1968	10/11/1968	11/12/1968	12/2/1968														
520.86	Gage Height	17.12	2.52	2.46	2.41	4.36														
	Elevation	520.86	506.26	506.2	506.15	508.1														
Maximum Elevation	Date	1/21/1969	2/10/1969	3/13/1969	4/7/1969	5/16/1969	6/9/1969	7/8/1969	8/14/1969	9/9/1969	10/3/1969	10/6/1969	11/6/1969	11/6/1969	12/4/1969	12/5/1969				
512.54	Gage Height	5.2	8.8	3.4	8.2	4.24	3.31	3.26	2.44	2.3	2.09	2.39	3.39	4.4	3.71	4.16				
	Elevation	508.94	512.54	507.14	511.94	507.98	507.05	507	506.18	506.04	505.83	506.13	507.13	508.14	507.45	507.9				
Maximum Elevation	Date	1/12/1970	1/13/1970	2/11/1970	2/11/1970	3/11/1970	3/17/1970	4/14/1970	4/14/1970	5/20/1970	5/20/1970	6/11/1970	6/15/1970	7/7/1970	7/15/1970	8/6/1970				
510.63	Gage Height	3.28	2.8	3.46	4.34	3.61	4.02	6.89	5.5	4.87	4.96	3.79	4.21	3.25	2.66	3.03				
	Elevation	507.02	506.54	507.2	508.08	507.35	507.76	510.63	509.24	508.61	508.7	507.53	507.95	506.99	506.4	506.77				
Maximum Elevation	Date	8/13/1970	9/1/1970	9/3/1970	10/7/1970	10/7/1970	11/10/1970	11/10/1970	12/3/1970	12/9/1970										
	Gage Height	1.96	1.55	2.37	3.39	1.92	3.79	3.21	3.92	3.48										
	Elevation	505.7	505.29	506.11	507.13	505.66	507.53	506.95	507.66	507.22										
Maximum Elevation	Date	1/6/1971	1/7/1971	2/2/1971	2/5/1971	3/2/1971	3/4/1971	4/6/1971	4/8/1971	5/4/1971	5/13/1971	6/8/1971	6/9/1971	7/7/1971	7/19/1971	8/2/1971				
515.28	Gage Height	4.38	3.38	2.64	8.88	5.81	4.2	3.8	3.44	2.7	7.06	3.25	3.03	5.33	6.2	4.62				
	Elevation	508.12	507.12	506.38	512.62	509.55	507.94	507.54	507.18	506.44	510.8	506.99	506.77	509.07	509.94	508.36				
Maximum Elevation	Date	8/3/1971	9/10/1971	9/13/1971	10/5/1971	10/5/1971	11/2/1971	11/10/1971	12/1/1971	12/7/1971	12/16/1971									
	Gage Height	2.93	1.87	2.57	2.6	2.24	2.45	2.17	2.5	2.73	11.54									
	Elevation	506.67	505.61	506.31	506.34	505.98	506.19	505.91	506.24	506.47	515.28									
Maximum Elevation	Date	1/10/1972	1/12/1972	2/9/1972	2/17/1972	3/22/1972	4/4/1972	4/11/1972	4/20/1972	4/21/1972	5/8/1972	5/15/1972	6/1/1972	6/8/1972	7/10/1972	7/13/1972				
516.2	Gage Height	4.39	4.77	3.71	3.48	4.11	4.88	5.82	9.2	12.46	4.03	4.41	3.99	4.1	2.93	3.21				
	Elevation	508.13	508.51	507.45	507.22	507.85	508.62	509.56	512.94	516.2	507.77	508.15	507.73	507.84	506.67	506.95				
Maximum Elevation	Date	8/8/1972	8/16/1972	9/8/1972	9/11/1972	10/6/1972	10/10/1972	11/3/1972	11/20/1972	12/1/1972	12/14/1972									
	Gage Height	2.68	2.64	8.1	3.34	6.86	3.8	10.74	6.18	5.26	9.2									
	Elevation	506.42	506.38	511.84	507.08	510.6	507.54	514.48	509.92	509	512.94									
Maximum Elevation	Date	1/9/1973	1/12/1973	2/6/1973	2/7/1973	3/5/1973	3/19/1973	4/11/1973	4/17/1973	4/23/1973	5/14/1973	5/16/1973	6/6/1973	6/8/1973	7/11/1973	7/13/1973				
516.55	Gage Height	5.81	4.17	6.14	5.06	4.57	8.07	5.82	5.5	12.81	4.39	3.95	8.6	8.96	3.96	3.38				
	Elevation	509.55	507.91	509.88	508.8	508.31	511.81	509.56	509.24	516.55	508.13	507.69	512.34	512.7	507.7	507.12				
Maximum Elevation	Date	8/7/1973	8/13/1973	9/10/1973	9/11/1973	10/8/1973	10/9/1973	11/1/1973	11/5/1973	12/10/1973	12/12/1973									
	Gage Height	4.03	3.76	2.82	2.62	3.13	3.48	3.68	2.88	5.44	3.89									
	Elevation	507.77	507.5	506.56	506.36	506.87	507.22	507.42	506.62	509.18	507.63									
Maximum Elevation	Date	1/14/1974	1/21/1974	2/8/1974	2/11/1974	3/7/1974	3/8/1974	4/1/1974	4/5/1974	5/2/1974	5/8/1974	6/4/1974	6/6/1974	6/23/1974	6/23/1974	6/24/1974				
523.57	Gage Height	3.94	19.83	5.46	4.7	8.48	6.28	6.5	7.7	4.1	4.18	5.15	5.7	16.44	16.55	14.29				
	Elevation	507.68	523.57	509.2	508.44	512.22	510.02	510.24	511.44	507.84	507.92	508.89	509.44	520.18	520.29	518.03				
Maximum Elevation	Date	7/2/1974	7/3/1974	8/6/1974	8/9/1974	9/12/1974	9/13/1974	10/2/1974	10/4/1974	11/5/1974	11/5/1974	12/2/1974	12/4/1974							
	Gage Height	5.1	5.03	2.63	2.7	2.56	3.39	2.38	2.51	4.06	4.08	3.4	3.46							
	Elevation	508.84	508.77	506.37	506.44	506.3	507.13	506.12	506.25	507.8	507.82	507.14	507.2							

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	1/6/1975	1/7/1975	1/16/1975	2/4/1975	2/20/1975	3/18/1975	4/4/1975	5/1/1975	5/8/1975	6/9/1975	6/23/1975	8/5/1975	8/11/1975	9/26/1975	9/30/1975
	Gage Height	4.6	4.39	6.27	6.17	5.76	4.37	5.5	5.44	3.9	3.44	4.27	2.8	3.03	3.14	3.01
	Elevation	508.34	508.13	510.01	509.91	509.5	508.11	509.24	509.18	507.64	507.18	508.01	506.54	506.77	506.88	506.75
514.7	Date	11/7/1975	11/14/1975	12/16/1975	12/22/1975											
	Gage Height	2.88	3.24	10.96	5.46											
	Elevation	506.62	506.98	514.7	509.2											
517.6	Date	1/19/1976	1/30/1976	2/17/1976	2/20/1976	3/3/1976	3/23/1976	4/7/1976	5/6/1976	5/18/1976	6/18/1976	7/8/1976	7/29/1976	8/6/1976	9/7/1976	9/27/1976
	Gage Height	3.9	3.58	13.86	8.78	4.98	4.5	3.97	3.11	3.75	2.62	3.39	2.74	2.84	1.59	2.2
	Elevation	507.64	507.32	517.6	512.52	508.72	508.24	507.71	506.85	507.49	506.36	507.13	506.48	506.58	505.33	505.94
520	Date	10/13/1976	11/1/1976	11/30/1976	12/22/1976											
	Gage Height	1.95	2.24	2.1	2.2											
	Elevation	505.69	505.98	505.84	505.94											
515.58	Date	1/5/1978	1/17/1978	2/17/1978	2/27/1978	4/3/1978	4/11/1978	5/9/1978	5/15/1978	5/22/1978	5/22/1978	6/7/1978	6/21/1978	6/22/1978	7/28/1978	8/3/1978
	Gage Height	3.8	3.44	3.3	2.89	5.45	5.71	6.87	9.56	4.65	5.67	3.64	3.12	7.19	5.03	11.84
	Elevation	507.54	507.18	507.04	506.63	509.19	509.45	510.61	513.3	508.39	509.41	507.38	506.86	510.93	508.77	515.58
517.61	Date	8/15/1978	9/6/1978	9/20/1978	10/4/1978	10/31/1978	11/20/1978	12/13/1978								
	Gage Height	3.12	2.37	3.14	2.18	2.34	5	3.22								
	Elevation	506.86	506.11	506.88	505.92	506.08	508.74	506.96								
523.86	Date	1/8/1979	1/22/1979	1/30/1979	2/21/1979	3/8/1979	4/12/1979	4/17/1979	5/16/1979	6/5/1979	7/3/1979	8/7/1979	8/17/1979	9/13/1979	10/10/1979	10/24/1979
	Gage Height	3.94	2.87	3.11	3.25	11.75	13.87	7.98	4.39	3.42	2.28	4.81	2.49	3.03	1.91	2.57
	Elevation	507.68	506.61	506.85	506.99	515.49	517.61	511.72	508.13	507.16	506.02	508.55	506.23	506.77	505.65	506.31
514.59	Date	11/20/1979	12/10/1979													
	Gage Height	2.3	2.89													
	Elevation	506.04	506.63													
515.71	Date	1/3/1980	1/9/1980	2/3/1980	2/20/1980	3/20/1980	3/27/1980	5/8/1980	5/8/1980	6/4/1980	6/12/1980	6/19/1980	7/30/1980	8/12/1980	9/4/1980	10/3/1980
	Gage Height	3.22	3.02	2.41	2.8	6.61	6.31	3.48	3.33	20.12	3.6	4.22	1.7	2.39	1.98	2.25
	Elevation	506.96	506.76	506.15	506.54	510.35	510.05	507.22	507.07	523.86	507.34	507.96	505.44	506.13	505.72	505.99
527.28	Date	10/28/1980	11/13/1980	11/17/1980	11/24/1980											
	Gage Height	1.85	2.22	2.26	1.98											
	Elevation	505.59	505.96	506	505.72											
514.59	Date	1/7/1981	1/14/1981	2/18/1981	3/5/1981	3/18/1981	4/3/1981	4/30/1981	5/13/1981	7/1/1981	8/12/1981	8/20/1981	8/28/1981	9/3/1981	9/23/1981	10/15/1981
	Gage Height	2.24	2.39	7.75	3.82	2.94	2.44	10.85	8.41	4.84	7.75	4.74	6.8	7.9	2.63	4.16
	Elevation	505.98	506.13	511.49	507.56	506.68	506.18	514.59	512.15	508.58	511.49	508.48	510.54	511.64	506.37	507.9
515.71	Date	12/1/1981	12/22/1981													
	Gage Height	3.8	3.29													
	Elevation	507.54	507.03													
515.71	Date	2/8/1982	3/16/1982	4/27/1982	6/9/1982	7/20/1982	8/3/1982	10/13/1982	12/14/1982							
	Gage Height	4.94	11.97	4.54	4.95	10.48	2.76	2.62	5.23							
	Elevation	508.68	515.71	508.28	508.69	514.22	506.5	506.36	508.97							
527.28	Date	1/12/1983	3/3/1983	4/15/1983	5/3/1983	5/19/1983	6/27/1983	8/11/1983	9/13/1983	10/21/1983	12/5/1983					
	Gage Height	4.41	3.61	13.24	23.54	5.58	3.86	2.48	2.1	2.27	6.22					
	Elevation	508.15	507.35	516.98	527.28	509.32	507.6	506.22	505.84	506.01	509.96					

Base Elevation = 503.74'

All Units in Feet (')

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation 515.99	Date Gage Height Elevation	1/24/1984 3.34 507.08	2/23/1984 6.37 510.11	4/6/1984 7.88 511.62	5/23/1984 12.25 515.99	6/21/1984 3.12 506.86	8/8/1984 2.41 506.15	10/11/1984 2.11 505.85	11/6/1984 2.31 506.05	12/27/1984 3.73 507.47						
Maximum Elevation 508.85	Date Gage Height Elevation	2/14/1985 3.08 506.82	3/20/1985 5.11 508.85	5/2/1985 3.9 507.64	6/13/1985 3.06 506.8	7/24/1985 2.62 506.36	9/10/1985 2.94 506.68	10/10/1985 2.13 505.87								
Maximum Elevation 513.39	Date Gage Height Elevation	1/15/1986 3.22 506.96	2/25/1986 4.18 507.92	4/4/1986 3.71 507.45	5/8/1986 9.65 513.39	6/24/1986 3.46 507.2	9/23/1986 2.54 506.28	11/4/1986 2.88 506.62	11/8/1986 2.22 505.96	12/9/1986 5.14 508.88						
Maximum Elevation 515.64	Date Gage Height Elevation	1/22/1987 4.04 507.78	3/6/1987 3.92 507.66	4/20/1987 5.22 508.96	6/1/1987 3.5 507.24	7/10/1987 2.8 506.54	8/20/1987 2.12 505.86	10/2/1987 2.25 505.99	11/18/1987 2.09 505.83	12/22/1987 11.9 515.64						
Maximum Elevation 507.9	Date Gage Height Elevation	3/18/1988 4.16 507.9	5/4/1988 3.23 506.97	6/13/1988 2.22 505.63	7/13/1988 1.89 505.6	7/19/1988 1.86 505.26	7/27/1988 2.52 505.54	8/10/1988 1.8 505.49	9/2/1988 1.75 505.59	10/11/1988 1.85 505.52						
Maximum Elevation 512.94	Date Gage Height Elevation	1/26/1989 3.66 507.4	3/8/1989 4.35 508.09	4/5/1989 9.2 512.94	4/17/1989 4.35 508.09	5/30/1989 6.95 510.69	7/17/1989 2.1 505.84	8/14/1989 1.94 505.68	10/2/1989 2.3 506.04	11/8/1989 2.3 506.04						
Maximum Elevation 528.24	Date Gage Height Elevation	1/29/1990 3.13 506.87	3/12/1990 22.44 526.18	4/23/1990 4.75 508.49	5/17/1990 24.5 528.24	7/23/1990 7.41 511.15	10/4/1990 2.23 505.97	12/5/1990 6.58 510.32								
Maximum Elevation 511.31	Date Gage Height Elevation	3/20/1991 7.57 511.31	5/13/1991 4.59 508.33	7/22/1991 2.12 505.86	8/27/1991 1.95 505.69	10/10/1991 2.05 505.79	12/3/1991 4.65 508.39									
Maximum Elevation 518.8	Date Gage Height Elevation	1/21/1992 3.18 506.92	3/16/1992 3.62 507.36	5/8/1992 3.44 507.18	7/6/1992 2.97 506.71	7/27/1992 8.03 511.77	7/31/1992 15.06 518.8	10/5/1992 2.33 506.07	12/3/1992 4.93 508.67							
Maximum Elevation 518.72	Date Gage Height Elevation	1/25/1993 10.61 514.35	3/24/1993 11.63 515.37	6/2/1993 4.83 508.57	7/22/1993 5.26 509	9/14/1993 3.88 507.62	10/1/1993 5.76 509.5	10/2/1993 5.45 509.19	10/3/1993 5.1 508.84	10/4/1993 4.76 508.5	10/5/1993 4.5 508.24	10/6/1993 4.38 508.12	10/7/1993 4.22 507.96	10/8/1993 4.17 507.91	10/9/1993 5.34 509.08	10/10/1993 7.92 511.66
	Date Gage Height Elevation	10/11/1993 6.83 510.57	10/12/1993 5.85 509.59	10/13/1993 5.49 509.23	10/14/1993 4.85 508.59	10/15/1993 4.58 508.32	10/16/1993 4.82 508.56	10/17/1993 12.64 516.38	10/18/1993 14.98 518.72	10/19/1993 13.97 517.71	10/20/1993 11.74 515.48	10/21/1993 11.9 515.64	10/22/1993 10.67 514.41	10/23/1993 8.46 512.2	10/24/1993 7.2 510.94	10/25/1993 6.55 510.29
	Date Gage Height Elevation	10/26/1993 5.97 509.71	10/27/1993 5.73 509.47	10/28/1993 5.38 509.12	10/29/1993 5.1 508.84	10/30/1993 4.87 508.61	10/31/1993 4.62 508.36	11/1/1993 4.5 508.24	11/2/1993 4.38 508.12	11/3/1993 4.34 508.08	11/4/1993 4.33 508.07	11/5/1993 4.29 508.03	11/6/1993 4.21 507.95	11/7/1993 4.01 507.75	11/8/1993 3.83 507.57	11/9/1993 3.79 507.53
	Date Gage Height Elevation	11/10/1993 3.76 507.5	11/11/1993 3.74 507.48	11/12/1993 3.81 507.55	11/13/1993 3.93 507.67	11/14/1993 4.95 508.69	11/15/1993 8.83 512.57	11/16/1993 7.85 511.59	11/17/1993 9.78 513.52	11/18/1993 12.93 516.67	11/19/1993 11.11 514.85	11/20/1993 8.77 512.51	11/21/1993 7.24 510.98	11/22/1993 6.26 510	11/23/1993 5.85 509.59	11/24/1993 5.59 509.33
	Date Gage Height Elevation	11/25/1993 5.64 509.38	11/26/1993 9.96 513.7	11/27/1993 12.18 515.92	11/28/1993 9.29 513.03	11/29/1993 7.56 511.3	11/30/1993 6.79 510.53	12/1/1993 6.05 509.79	12/2/1993 6.54 510.28	12/3/1993 9.85 513.59	12/4/1993 9.13 512.87	12/5/1993 9.59 513.33	12/6/1993 8.21 511.95	12/7/1993 7.05 510.79	12/8/1993 6.16 509.9	12/9/1993 5.84 509.58
	Date Gage Height Elevation	12/10/1993 5.65 509.39	12/11/1993 5.32 509.06	12/12/1993 4.93 508.67	12/13/1993 4.84 508.58	12/14/1993 5.07 508.81	12/15/1993 5.59 509.33	12/16/1993 5.94 509.68	12/17/1993 5.49 509.23	12/18/1993 5.31 509.05	12/19/1993 5.42 509.16	12/20/1993 5.51 509.25	12/21/1993 5.84 509.25	12/22/1993 5.59 509.33	12/23/1993 5.23 508.97	12/24/1993 4.9 508.64
	Date Gage Height Elevation	12/25/1993 4.67 508.41	12/26/1993 4.55 508.29	12/27/1993 4.53 508.27	12/28/1993 4.53 508.27	12/29/1993 4.42 508.16	12/30/1993 4.14 508.16	12/31/1993 4.17 507.91								

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	1/1/1994	1/2/1994	1/3/1994	1/4/1994	1/5/1994	1/6/1994	1/7/1994	1/8/1994	1/9/1994	1/10/1994	1/11/1994	1/12/1994	1/13/1994	1/14/1994	1/15/1994
	Gage Height	4.56	4.43	4.23	4.04	3.92	3.86	3.84	3.45	3.41	3.88	3.73	3.72	3.69	3.54	3.2
	Elevation	508.3	508.17	507.97	507.78	507.66	507.6	507.58	507.19	507.15	507.62	507.47	507.46	507.43	507.28	506.94
	Date	1/16/1994	1/17/1994	1/18/1994	1/19/1994	1/20/1994	1/21/1994	1/26/1994	1/27/1994	1/28/1994	1/29/1994	1/30/1994	1/31/1994	2/1/1994	2/2/1994	2/3/1994
	Gage Height	3.42	3.71	3.7	3.68	3.61	3.71	7.19	6.96	14.35	13.14	8.19	5.49	4.31	4.3	4.4
	Elevation	507.16	507.45	507.44	507.42	507.35	507.45	510.93	510.7	518.09	516.88	511.93	509.23	508.05	508.04	508.14
	Date	2/4/1994	2/5/1994	2/6/1994	2/7/1994	2/8/1994	2/9/1994	2/10/1994	2/11/1994	2/12/1994	2/13/1994	2/14/1994	2/15/1994	2/16/1994	2/17/1994	2/18/1994
	Gage Height	4.18	3.94	3.75	3.85	3.84	3.71	3.49	3.62	3.44	3.35	3.32	4.42	6.12	5.99	5.81
	Elevation	507.92	507.68	507.49	507.59	507.58	507.45	507.23	507.36	507.18	507.09	507.06	508.16	509.86	509.73	509.55
	Date	2/19/1994	2/20/1994	2/21/1994	2/22/1994	2/23/1994	2/24/1994	2/25/1994	2/26/1994	2/27/1994	2/28/1994	3/1/1994	3/2/1994	3/3/1994	3/4/1994	3/5/1994
	Gage Height	6.06	6.13	6.15	5.47	4.9	4.58	3.91	3.66	3.42	3.71	3.73	3.65	3.65	4.03	5.71
	Elevation	509.8	509.87	509.89	509.21	508.64	508.32	507.65	507.4	507.45	507.45	507.39	507.39	507.77	509.45	
	Date	3/6/1994	3/7/1994	3/8/1994	3/9/1994	3/10/1994	3/11/1994	3/12/1994	3/13/1994	3/14/1994	3/15/1994	3/16/1994	3/17/1994	3/18/1994	3/19/1994	3/20/1994
	Gage Height	6.68	8.23	10.05	8.09	6.71	6.1	5.54	5.4	5.29	5.17	4.97	4.73	4.65	4.56	4.4
	Elevation	510.42	511.97	513.79	511.83	510.45	509.84	509.28	509.14	509.03	508.91	508.71	508.47	508.39	508.3	508.14
	Date	3/21/1994	3/22/1994	3/23/1994	3/24/1994	3/25/1994	3/26/1994	3/27/1994	3/28/1994	3/29/1994	3/30/1994	3/31/1994	4/1/1994	4/2/1994	4/3/1994	4/4/1994
	Gage Height	4.31	4.19	4.11	4.08	4.03	3.96	4.08	4.4	4.37	4.18	4.05	4.03	4.15	4.41	
	Elevation	508.05	507.93	507.85	507.82	507.77	507.7	507.82	508.14	508.11	507.92	507.79	507.77	507.89	508.15	
	Date	4/5/1994	4/6/1994	4/7/1994	4/8/1994	4/9/1994	4/10/1994	4/11/1994	4/12/1994	4/13/1994	4/14/1994	4/15/1994	4/16/1994	4/17/1994	4/18/1994	4/19/1994
	Gage Height	4.41	4.62	4.67	5.03	5.45	7.67	10.54	26.62	30.92	26.5	19.92	15.13	11.32	9.33	8.67
	Elevation	508.15	508.36	508.41	508.77	509.19	511.41	514.28	530.36	534.66	530.24	523.66	518.87	515.06	513.07	512.41
	Date	4/20/1994	4/21/1994	4/22/1994	4/23/1994	4/24/1994	4/25/1994	4/26/1994	4/27/1994	4/28/1994	4/29/1994	4/30/1994	5/1/1994	5/2/1994	5/3/1994	5/4/1994
	Gage Height	7.88	7.37	6.88	6.63	6.35	6.1	5.93	8.08	10.32	12.04	10.59	11.28	9.9	8.33	7.7
	Elevation	511.62	511.11	510.62	510.37	510.09	509.84	509.67	511.82	514.06	515.78	514.33	515.02	513.64	512.07	511.44
534.66	Date	5/5/1994	5/6/1994	5/7/1994	5/8/1994	5/9/1994	5/10/1994	5/11/1994	5/12/1994	5/13/1994	5/14/1994	5/15/1994	5/16/1994	5/17/1994	5/18/1994	5/19/1994
	Gage Height	6.94	6.87	8.85	10.36	8.98	7.91	6.94	6.67	6.41	6.21	6.09	5.81	5.56	5.19	5.05
	Elevation	510.68	510.61	512.59	514.1	512.72	511.65	510.68	510.41	510.15	509.95	509.83	509.55	509.3	508.93	508.79
	Date	5/20/1994	5/21/1994	5/22/1994	5/23/1994	5/24/1994	5/25/1994	5/26/1994	5/27/1994	5/28/1994	5/29/1994	5/30/1994	5/31/1994	6/1/1994	6/2/1994	6/3/1994
	Gage Height	5.07	5.08	5.01	4.91	4.85	6.86	6.43	5.62	5.05	4.84	4.71	4.64	4.89	4.45	4.35
	Elevation	508.81	508.82	508.75	508.65	508.59	510.6	510.17	509.36	508.79	508.58	508.45	508.38	508.63	508.19	508.09
	Date	6/4/1994	6/5/1994	6/6/1994	6/7/1994	6/8/1994	6/9/1994	6/10/1994	6/11/1994	6/12/1994	6/13/1994	6/14/1994	6/15/1994	6/16/1994	6/17/1994	6/18/1994
	Gage Height	4.3	4.22	4.14	4.1	4.08	4.27	4.45	4.26	4.19	4.14	4.18	5.65	4.77	4.37	4.1
	Elevation	508.04	507.96	507.88	507.84	507.82	508.01	508.19	508	507.93	507.88	507.92	509.39	508.51	508.11	507.84
	Date	6/19/1994	6/20/1994	6/21/1994	6/22/1994	6/23/1994	6/24/1994	6/25/1994	6/26/1994	6/27/1994	6/28/1994	6/29/1994	6/30/1994	7/1/1994	7/2/1994	7/3/1994
	Gage Height	4.02	3.86	4.15	4.15	3.82	3.99	4.39	4.23	3.96	3.72	3.59	3.76	3.57	3.51	3.66
	Elevation	507.76	507.6	507.89	507.89	507.56	507.73	508.13	507.97	507.7	507.46	507.33	507.5	507.31	507.25	507.4
	Date	7/4/1994	7/5/1994	7/6/1994	7/7/1994	7/8/1994	7/9/1994	7/10/1994	7/11/1994	7/12/1994	7/13/1994	7/14/1994	7/15/1994	7/16/1994	7/17/1994	7/18/1994
	Gage Height	3.82	3.69	4.03	4.61	4.12	3.97	3.62	3.47	3.33	3.2	3.16	3.09	3.08	3.08	3.04
	Elevation	507.56	507.43	507.77	508.35	507.86	507.71	507.36	507.21	507.07	506.94	506.83	506.82	506.82	506.78	
	Date	7/19/1994	7/20/1994	7/21/1994	7/22/1994	7/23/1994	7/24/1994	7/25/1994	7/26/1994	7/27/1994	7/28/1994	7/29/1994	7/30/1994	7/31/1994	8/1/1994	8/2/1994
	Gage Height	3.02	3.02	3.33	3.39	3.25	3.11	3.06	2.93	2.89	2.86	2.74	2.72	2.67	2.68	
	Elevation	506.76	506.76	507.07	507.13	506.99	506.85	506.8	506.67	506.63	506.6	506.48	506.46	506.41	506.42	506.42
	Date	8/3/1994	8/4/1994	8/5/1994	8/6/1994	8/7/1994	8/8/1994	8/9/1994	8/10/1994	8/11/1994	8/12/1994	8/13/1994	8/14/1994	8/15/1994	8/16/1994	8/17/1994
	Gage Height	2.76	2.7	2.77	2.93	2.82	2.71	2.65	2.63	2.86	2.68	2.69	2.81	3.1	2.97	2.79
	Elevation	506.5	506.44	506.51	506.67	506.56	506.45	506.39	506.37	506.6	506.42	506.43	506.55	506.84	506.71	506.53
	Date	8/23/1994	8/24/1994	8/25/1994	8/26/1994	8/27/1994	8/28/1994	8/29/1994	8/30/1994	8/31/1994	9/1/1994	9/2/1994	9/3/1994	9/4/1994	9/5/1994	9/6/1994
	Gage Height	3.32	3.2	2.66	2.62	2.63	2.65	2.74	3.02	2.96	2.97	3.09	2.79	2.68	2.8	2.72
	Elevation	507.06	506.94	506.4	506.36	506.37	506.39	506.48	506.76	506.7	506.71	506.83	506.53	506.42	506.54	506.46

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	9/7/1994	9/8/1994	9/9/1994	9/10/1994	9/11/1994	9/12/1994	9/13/1994	9/14/1994	9/15/1994	9/16/1994	9/17/1994	9/18/1994	9/19/1994	9/20/1994	10/6/1994
	Gage Height	2.86	2.75	2.64	2.64	2.6	2.56	2.6	2.61	2.59	2.59	2.77	2.88	2.87	2.64	2.54
	Elevation	506.6	506.49	506.38	506.38	506.34	506.3	506.34	506.35	506.33	506.33	506.51	506.62	506.61	506.38	506.28
	Date	10/7/1994	10/8/1994	10/9/1994	10/10/1994	10/11/1994	10/12/1994	10/13/1994	10/14/1994	10/15/1994	10/16/1994	10/17/1994	10/18/1994	10/19/1994	10/20/1994	10/27/1994
	Gage Height	2.54	2.6	2.74	3.11	3.04	2.83	2.77	2.8	2.72	2.66	2.63	2.62	2.64	2.64	2.76
	Elevation	506.28	506.34	506.48	506.85	506.78	506.57	506.51	506.54	506.46	506.4	506.37	506.36	506.38	506.38	506.5
	Date	11/5/1994	11/6/1994	11/7/1994	11/8/1994	11/9/1994	11/10/1994	11/11/1994	11/12/1994	11/13/1994	11/14/1994	11/15/1994	11/16/1994	11/17/1994	11/18/1994	11/19/1994
534.66	Gage Height	3.46	4.31	4.44	3.78	3.67	4.26	4.86	4.15	3.76	3.67	3.63	3.72	3.61	3.5	3.43
	Elevation	507.2	508.05	508.18	507.52	507.41	508	508.6	507.89	507.5	507.41	507.37	507.46	507.35	507.24	507.17
	Date	11/20/1994	11/21/1994	11/22/1994	11/23/1994	11/24/1994	11/25/1994	11/26/1994	11/27/1994	11/28/1994	11/29/1994	11/30/1994	12/1/1994	12/2/1994	12/3/1994	12/4/1994
	Gage Height	3.37	3.4	3.53	3.68	3.58	3.49	3.44	3.54	4.55	4.86	4.21	3.88	3.76	3.68	3.62
	Elevation	507.11	507.14	507.27	507.42	507.32	507.23	507.18	507.28	508.29	508.6	507.95	507.62	507.5	507.42	507.36
	Date	12/5/1994	12/6/1994	12/7/1994	12/8/1994	12/9/1994	12/10/1994	12/11/1994	12/12/1994	12/13/1994	12/14/1994	12/15/1994	12/16/1994	12/17/1994	12/18/1994	12/19/1994
	Gage Height	3.55	3.53	4.64	7.22	6.38	5.7	5.35	4.7	4.44	4.3	4.1	4.14	4.74	5.37	4.88
	Elevation	507.29	507.27	508.38	510.96	510.12	509.44	509.09	508.44	508.18	508.04	507.84	507.88	508.48	509.11	508.62
	Date	12/20/1994	12/21/1994	12/22/1994	12/23/1994	12/24/1994	12/25/1994	12/26/1994	12/27/1994	12/28/1994	12/29/1994	12/30/1994	12/31/1994			
	Gage Height	4.53	4.39	4.29	4.2	4.09	3.89	3.83	3.79	3.76	3.73	3.73	3.72			
	Elevation	508.27	508.13	508.03	507.94	507.83	507.63	507.57	507.53	507.5	507.47	507.46				
Maximum Elevation	Date	1/1/1995	1/2/1995	1/3/1995	1/4/1995	1/5/1995	1/6/1995	1/7/1995	1/8/1995	1/9/1995	1/10/1995	1/11/1995	1/12/1995	1/13/1995	1/14/1995	1/15/1995
	Gage Height	3.73	3.55	3.4	3.33	3.49	3.53	3.54	3.55	3.59	3.97	3.76	3.64	4.83	9.41	10.42
	Elevation	507.47	507.29	507.14	507.07	507.23	507.27	507.28	507.29	507.33	507.71	507.5	507.38	508.57	513.15	514.16
	Date	1/16/1995	1/17/1995	1/18/1995	1/19/1995	1/20/1995	1/21/1995	1/22/1995	1/23/1995	1/24/1995	1/30/1995	1/31/1995	2/1/1995	2/4/1995	2/10/1995	2/11/1995
	Gage Height	8.66	7.12	6.26	6.13	8.54	8.38	6.73	5.68	5.22	4.06	4.48	4.49	3.99	3.96	3.82
	Elevation	512.4	510.86	510	509.87	512.28	512.12	510.47	509.42	508.96	507.8	508.22	508.23	507.73	507.7	507.56
	Date	2/12/1995	2/13/1995	2/17/1995	2/18/1995	2/19/1995	2/27/1995	3/28/1995	3/29/1995	3/30/1995	3/31/1995	4/1/1995	4/2/1995	4/3/1995	4/4/1995	4/5/1995
	Gage Height	3.58	3.44	3.62	3.6	3.58	3.48	4.85	5.17	4.79	4.63	4.49	4.42	4.3	4.22	4.16
	Elevation	507.32	507.18	507.36	507.34	507.32	507.22	508.59	508.91	508.53	508.37	508.23	508.16	508.04	507.96	507.9
	Date	4/6/1995	4/7/1995	4/8/1995	4/9/1995	4/10/1995	4/11/1995	4/22/1995	4/23/1995	4/24/1995	4/25/1995	4/26/1995	4/27/1995	4/28/1995	4/29/1995	4/30/1995
	Gage Height	4.1	4.12	4.21	4.76	4.98	6.41	7.81	6.61	6.21	5.75	5.38	5.26	5.16	4.77	4.87
	Elevation	507.84	507.86	507.95	508.5	508.72	510.15	511.55	510.35	509.95	509.49	509.12	509	508.9	508.51	508.61
	Date	5/1/1995	5/2/1995	5/3/1995	5/4/1995	5/5/1995	5/6/1995	5/7/1995	5/8/1995	5/9/1995	5/10/1995	5/11/1995	5/12/1995	5/13/1995	5/14/1995	5/15/1995
	Gage Height	4.88	4.78	4.66	4.55	4.44	4.25	4.2	4.26	4.42	6.13	7.13	7.11	6.14	7.65	9.19
	Elevation	508.62	508.52	508.4	508.29	508.18	507.99	507.94	508	508.16	509.87	510.87	510.85	509.88	511.39	512.93
521.97	Date	5/16/1995	5/17/1995	5/18/1995	5/19/1995	5/20/1995	5/21/1995	5/22/1995	5/23/1995	5/24/1995	5/25/1995	5/26/1995	5/27/1995	5/28/1995	6/3/1995	6/4/1995
	Gage Height	7.59	16.49	16.6	18.23	15.56	12.03	8.89	7.55	9.06	13.25	13.67	12.26	12.44	5.96	5.63
	Elevation	511.33	520.23	520.34	521.97	519.3	515.77	512.63	511.29	512.8	516.99	517.41	516	516.18	509.7	509.37
	Date	6/5/1995	6/7/1995	6/8/1995	6/9/1995	6/15/1995	6/16/1995	6/17/1995	6/18/1995	6/19/1995	6/20/1995	6/21/1995	6/22/1995	6/23/1995	6/24/1995	6/25/1995
	Gage Height	5.37	5.15	5.04	4.81	4.64	4.49	4.33	4.24	4.18	4.15	4.22	4.26	4.1	4.12	5.39
	Elevation	509.11	508.89	508.78	508.55	508.38	508.23	508.07	507.98	507.92	507.89	507.96	508	507.84	507.86	509.13
	Date	6/26/1995	6/27/1995	6/28/1995	6/29/1995	6/30/1995	7/1/1995	7/2/1995	7/3/1995	7/4/1995	7/5/1995	7/6/1995	7/7/1995	7/8/1995	7/9/1995	7/10/1995
	Gage Height	4.85	5.94	4.97	4.68	5.17	4.69	4.28	4.04	3.97	3.99	3.9	3.76	3.61	3.55	3.95
	Elevation	508.59	509.68	508.71	508.42	508.91	508.43	508.02	507.78	507.71	507.73	507.64	507.5	507.35	507.29	507.69
	Date	7/11/1995	7/12/1995	7/13/1995	7/14/1995	7/15/1995	7/16/1995	7/17/1995	7/18/1995	7/19/1995	7/20/1995	7/21/1995	7/22/1995	7/23/1995	7/24/1995	7/25/1995
	Gage Height	3.7	3.55	3.42	3.34	3.27	3.22	3.17	3.1	3.04	3.02	3.03	3.01	3.14	3.01	3.02
	Elevation	507.44	507.29	507.16	507.08	507.01	506.96	506.91	506.84	506.78	506.76	506.77	506.75	506.88	506.75	506.76
	Date	7/26/1995	7/27/1995	7/28/1995	7/29/1995	7/30/1995	7/31/1995	8/1/1995	8/2/1995	8/3/1995	8/4/1995	8/5/1995	8/6/1995	8/7/1995	8/8/1995	8/9/1995
	Gage Height	2.87	2.76	2.75	2.7	2.93	2.76	2.68	2.95	2.93	2.82	3.01	3.36	3.99	5.28	4.6
	Elevation	506.61	506.5	506.49	506.44	506.67	506.5	506.42	506.69	506.67	506.56	506.75	507.1	507.73	509.02	508.34

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	8/10/1995	8/11/1995	8/12/1995	8/13/1995	8/14/1995	8/15/1995	8/16/1995	8/17/1995	8/18/1995	8/19/1995	8/20/1995	8/21/1995	8/22/1995	8/23/1995	8/24/1995
521.97	Gage Height	5.81	5.05	4.11	3.62	3.33	3.11	3.26	3.13	3.08	3.81	4.09	3.98	3.81	3.42	3.18
	Elevation	509.55	508.79	507.85	507.36	507.07	506.85	507	506.87	506.82	507.55	507.83	507.72	507.55	507.16	506.92
	Gage Height	3	2.87	2.8	2.71	2.67	2.65	2.61	2.58	2.52	2.51	2.48	2.42	2.4	2.39	2.5
	Elevation	506.74	506.61	506.54	506.45	506.41	506.39	506.35	506.32	506.26	506.25	506.22	506.16	506.14	506.13	506.24
	Gage Height	2.63	2.64	2.47	2.42	2.4	2.41	2.4	2.38	2.39	2.41	2.35	2.47	2.43	2.4	2.38
	Elevation	506.37	506.38	506.21	506.16	506.14	506.15	506.14	506.12	506.13	506.15	506.09	506.21	506.17	506.14	506.12
	Gage Height	2.41	2.39	2.36	2.35	2.33	2.31	2.29	2.25	2.21	2.62	2.56	2.64	2.68	2.49	2.39
	Elevation	506.15	506.13	506.1	506.09	506.07	506.05	506.03	505.99	505.95	506.36	506.3	506.38	506.42	506.23	506.13
	Gage Height	2.39	2.33	2.31	2.3	2.31	2.32	2.3	2.29	2.59	2.35	2.32	2.45	2.38	2.69	2.55
	Elevation	506.13	506.07	506.05	506.04	506.05	506.06	506.04	506.03	506.33	506.09	506.06	506.19	506.12	506.43	506.29
524.58	Date	10/24/1995	10/25/1995	10/26/1995	10/27/1995	10/28/1995	10/29/1995	10/30/1995	10/31/1995	11/1/1995	11/2/1995	11/3/1995	11/4/1995	11/5/1995	11/6/1995	11/7/1995
	Gage Height	2.41	2.42	2.46	2.62	2.47	2.94	2.74	2.77	2.75	3.34	3.71	3.98	3.48	3.54	3.19
	Elevation	506.15	506.16	506.2	506.36	506.21	506.68	506.48	506.51	506.49	507.08	507.45	507.72	507.22	507.28	506.93
	Date	11/8/1995	11/9/1995	11/10/1995	11/11/1995	11/12/1995	11/13/1995	11/14/1995	11/15/1995	11/16/1995	11/17/1995	11/18/1995	11/19/1995	11/20/1995	11/21/1995	11/22/1995
	Gage Height	3.04	3.03	2.92	3.14	3.93	4.5	4.15	3.89	3.65	3.56	3.75	3.9	3.72	3.55	3.39
	Elevation	506.78	506.77	506.66	506.88	507.67	508.24	507.89	507.63	507.39	507.3	507.49	507.64	507.46	507.29	507.13
	Date	11/23/1995	11/24/1995	11/25/1995	11/26/1995	11/27/1995	11/28/1995	11/29/1995	11/30/1995	12/1/1995	12/2/1995	12/3/1995	12/4/1995	12/5/1995	12/6/1995	12/7/1995
	Gage Height	3.27	3.2	3.13	3.04	3.04	3.03	3.03	2.99	2.93	2.93	2.88	2.82	2.79	2.7	2.76
	Elevation	507.01	506.94	506.87	506.78	506.78	506.77	506.77	506.73	506.67	506.67	506.62	506.56	506.53	506.5	
	Date	12/8/1995	12/9/1995	12/10/1995	12/11/1995	12/12/1995	12/13/1995	12/14/1995	12/15/1995	12/16/1995	12/17/1995	12/18/1995	12/19/1995	12/20/1995	12/21/1995	12/22/1995
	Gage Height	2.7	2.55	2.58	2.63	2.6	2.6	2.7	2.76	2.78	2.8	2.94	3.21	3.45	3.41	3.11
	Elevation	506.44	506.29	506.32	506.37	506.34	506.34	506.44	506.5	506.52	506.54	506.68	506.95	507.19	507.15	506.85
524.58	Date	12/23/1995	12/24/1995	12/25/1995	12/26/1995	12/27/1995	12/28/1995	12/29/1995	12/30/1995	12/31/1995						
	Gage Height	3.06	2.94	2.87	2.96	2.79	2.77	2.66	2.67	2.71						
	Elevation	506.8	506.68	506.61	506.7	506.53	506.51	506.4	506.41	506.45						
	Gage Height	2.76	3.02	2.95	2.94	2.78	2.76	2.77	2.73	2.7						
	Elevation	506.5	506.76	506.69	506.68	506.52	506.5	506.51	506.47	506.44						
	Date	1/16/1996	1/17/1996	1/18/1996	1/19/1996	1/20/1996	1/21/1996	1/22/1996	1/23/1996	1/24/1996	1/25/1996	1/26/1996	1/27/1996	1/28/1996	1/29/1996	1/30/1996
	Gage Height	3	3.21	6.2	9.14	6.53	5.32	4.96	4.76	5.32	5.28	4.72	4.82	4.38	4.47	4.18
	Elevation	506.74	506.95	509.94	512.88	510.27	509.06	508.7	508.5	509.06	509.02	508.46	508.56	508.12	508.21	507.92
	Date	1/31/1996	2/1/1996	2/2/1996	2/3/1996	2/4/1996	2/5/1996	2/6/1996	2/7/1996	2/8/1996	2/9/1996	2/10/1996	2/11/1996	2/12/1996	2/13/1996	2/14/1996
	Gage Height	3.78	4.3	4.41	3.86	3.61	3.47	3.38	3.4	3.56	3.72	3.96	3.9	3.76	3.51	3.37
	Elevation	507.52	508.04	508.15	507.6	507.35	507.21	507.12	507.14	507.3	507.46	507.7	507.64	507.5	507.25	507.11
524.58	Date	2/15/1996	2/16/1996	2/17/1996	2/18/1996	2/19/1996	2/20/1996	2/21/1996	2/22/1996	2/23/1996	2/24/1996	2/25/1996	2/26/1996	2/27/1996	2/28/1996	2/29/1996
	Gage Height	3.35	3.31	3.23	3.24	3.21	3.28	3.25	3.2	3.27	3.35	3.4	4.65	5.23	4.95	
	Elevation	507.09	507.05	506.97	506.98	506.95	507.02	506.99	506.94	507.01	507.09	507.14	508.39	508.97	508.69	
	Date	3/1/1996	3/2/1996	3/3/1996	3/4/1996	3/5/1996	3/6/1996	3/7/1996	3/8/1996	3/9/1996	3/10/1996	3/11/1996	3/12/1996	3/13/1996	3/14/1996	3/15/1996
	Gage Height	4.34	4.07	3.85	3.54	4.09	4.86	4.79	4.05	4.03	3.88	3.78	3.76	3.71	3.76	
	Elevation	508.08	507.81	507.59	507.28	507.83	508.6	508.53	507.79	507.77	508.04	507.62	507.52	507.5	507.45	507.5

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	3/16/1996	3/17/1996	3/18/1996	3/19/1996	3/20/1996	3/21/1996	3/22/1996	3/23/1996	3/24/1996	3/25/1996	3/26/1996	3/27/1996	3/28/1996	3/29/1996	3/30/1996
	Gage Height	3.69	3.68	3.69	3.65	3.72	3.63	3.56	3.63	3.85	4.61	4.5	3.86	3.75	3.69	3.63
	Elevation	507.43	507.42	507.43	507.39	507.46	507.37	507.3	507.37	507.59	508.35	508.24	507.6	507.49	507.43	507.37
	Date	3/31/1996	4/1/1996	4/2/1996	4/3/1996	4/4/1996	4/5/1996	4/6/1996	4/7/1996	4/8/1996	4/9/1996	4/10/1996	4/11/1996	4/12/1996	4/13/1996	4/14/1996
	Gage Height	3.99	5.56	5.57	5.17	4.81	4.44	4.12	4.03	3.97	3.84	3.7	3.65	3.65	3.68	3.64
	Elevation	507.73	509.3	509.31	508.91	508.55	508.18	507.86	507.77	507.71	507.58	507.44	507.39	507.39	507.42	507.38
	Date	4/15/1996	4/16/1996	4/17/1996	4/18/1996	4/19/1996	4/20/1996	4/21/1996	4/22/1996	4/23/1996	4/24/1996	4/25/1996	4/26/1996	4/27/1996	4/28/1996	4/29/1996
	Gage Height	3.58	3.68	3.56	3.45	3.47	3.86	4.28	5.34	7.33	6.5	5.77	5.38	4.84	4.69	7.25
	Elevation	507.32	507.42	507.3	507.19	507.21	507.6	508.02	509.08	511.07	510.24	509.51	509.12	508.58	508.43	510.99
	Date	4/30/1996	5/1/1996	5/2/1996	5/3/1996	5/4/1996	5/5/1996	5/6/1996	5/7/1996	5/8/1996	5/9/1996	5/10/1996	5/11/1996	5/12/1996	5/13/1996	5/14/1996
	Gage Height	7.63	6.52	5.78	5.35	5.86	6.86	7.9	7.2	7.43	10.14	14.32	20.84	17.07	13.03	9.17
	Elevation	511.37	510.26	509.52	509.09	509.6	510.6	511.64	510.94	511.17	513.88	518.06	524.58	520.81	516.77	512.91
	Date	5/15/1996	5/16/1996	5/20/1996	5/21/1996	5/22/1996	5/23/1996	5/24/1996	5/25/1996	5/26/1996	5/27/1996	5/28/1996	5/29/1996	5/30/1996	5/31/1996	6/1/1996
	Gage Height	8.36	8.26	5.86	5.56	5.23	5.22	5.07	5.73	6.15	10.18	12.37	12.18	10.22	7.7	6.72
	Elevation	512.1	512	509.6	509.3	508.97	508.96	508.81	509.47	509.89	513.92	516.11	515.92	513.96	511.44	510.46
	Date	6/2/1996	6/3/1996	6/4/1996	6/5/1996	6/6/1996	6/7/1996	6/8/1996	6/9/1996	6/10/1996	6/11/1996	6/21/1996	6/22/1996	6/23/1996	6/24/1996	6/25/1996
	Gage Height	6.54	7.71	7.13	6.23	6.02	6.01	5.63	5.99	8.56	5.59	5.3	5.2	5.17	5.12	
	Elevation	510.28	511.45	510.87	509.97	509.76	509.75	509.73	509.73	512.3	503.74	509.33	509.04	508.94	508.91	508.86
	Date	6/26/1996	6/27/1996	6/28/1996	6/29/1996	6/30/1996	7/1/1996	7/9/1996	7/10/1996	7/11/1996	7/12/1996	7/13/1996	7/14/1996	7/15/1996	7/16/1996	7/17/1996
	Gage Height	4.69	4.49	4.39	4.28	4.15	4.04	3.41	3.32	3.24	3.19	3.15	3.23	3.38	3.21	3.09
	Elevation	508.43	508.23	508.13	508.02	507.89	507.78	507.15	507.06	506.98	506.93	506.89	506.97	507.12	506.95	506.83
	Date	7/18/1996	7/19/1996	7/20/1996	7/21/1996	7/22/1996	7/23/1996	7/24/1996	7/25/1996	7/26/1996	7/27/1996	7/28/1996	7/29/1996	7/30/1996	7/31/1996	8/1/1996
	Gage Height	3.02	3.27	3.19	3.36	4.78	5.14	4.25	3.89	3.76	3.51	3.33	3.85	4.7	4.43	3.93
	Elevation	506.76	507.01	506.93	507.1	508.52	508.88	507.99	507.63	507.5	507.25	507.07	507.59	508.44	508.17	507.67
524.58	Date	8/2/1996	8/3/1996	8/4/1996	8/5/1996	8/6/1996	8/7/1996	8/8/1996	8/9/1996	8/10/1996	8/11/1996	8/12/1996	8/13/1996	8/14/1996	8/15/1996	8/16/1996
	Gage Height	3.61	3.41	3.18	3.06	2.99	2.95	3.27	3.11	2.98	2.78	2.67	2.6	2.57	2.62	2.52
	Elevation	507.35	507.15	506.92	506.8	506.73	506.69	507.01	506.85	506.72	506.52	506.41	506.34	506.31	506.36	506.26
	Date	8/17/1996	8/18/1996	8/19/1996	8/20/1996	8/21/1996	8/22/1996	8/23/1996	8/24/1996	8/25/1996	8/26/1996	8/27/1996	8/28/1996	8/29/1996	8/30/1996	8/31/1996
	Gage Height	2.49	2.8	4.07	3.66	3.17	2.95	2.81	2.71	2.64	2.57	2.51	2.5	2.73	2.64	2.53
	Elevation	506.23	506.54	507.81	507.4	506.91	506.69	506.55	506.45	506.38	506.31	506.25	506.24	506.47	506.38	506.27
	Date	9/1/1996	9/2/1996	9/3/1996	9/4/1996	9/5/1996	9/6/1996	9/7/1996	9/8/1996	9/9/1996	9/10/1996	9/11/1996	9/12/1996	9/13/1996	9/14/1996	9/15/1996
	Gage Height	2.46	2.43	2.39	2.38	2.35	2.34	2.46	2.43	2.43	2.51	2.46	2.4	2.33	2.31	2.3
	Elevation	506.2	506.17	506.13	506.12	506.09	506.08	506.2	506.17	506.25	506.2	506.14	506.07	506.05	506.04	
	Date	9/16/1996	9/17/1996	9/18/1996	9/19/1996	9/20/1996	9/21/1996	9/22/1996	9/23/1996	9/24/1996	9/25/1996	9/26/1996	9/27/1996	9/28/1996	9/29/1996	9/30/1996
	Gage Height	2.35	2.48	2.41	2.41	2.38	2.35	2.33	2.3	2.38	2.28	2.38	2.39	2.47	2.75	2.59
	Elevation	506.09	506.22	506.15	506.15	506.12	506.09	506.07	506.04	506.12	506.02	506.12	506.13	506.21	506.49	506.33
	Date	10/1/1996	10/2/1996	10/3/1996	10/4/1996	10/5/1996	10/6/1996	10/7/1996	10/8/1996	10/9/1996	10/10/1996	10/11/1996	10/12/1996	10/13/1996	10/14/1996	10/15/1996
	Gage Height	2.5	2.37	2.37	2.37	2.37	2.36	2.34	2.33	2.32	2.31	2.33	2.34	2.28	2.26	2.34
	Elevation	506.24	506.11	506.11	506.11	506.11	506.1	506.08	506.07	506.06	506.05	506.07	506.08	506.02	506	506.08
	Date	10/16/1996	10/17/1996	10/18/1996	10/19/1996	10/20/1996	10/21/1996	10/22/1996	10/23/1996	10/24/1996	10/25/1996	10/26/1996	10/27/1996	10/28/1996	10/29/1996	10/30/1996
	Gage Height	2.32	2.44	2.59	2.42	2.55	2.49	2.42	2.46	2.46	2.66	2.59	2.48	2.43	2.37	2.48
	Elevation	506.06	506.18	506.33	506.16	506.29	506.23	506.16	506.2	506.4	506.33	506.22	506.17	506.11	506.22	
	Date	10/31/1996	11/1/1996	11/2/1996	11/3/1996	11/4/1996	11/5/1996	11/6/1996	11/7/1996	11/8/1996	11/9/1996	11/10/1996	11/11/1996	11/12/1996	11/13/1996	11/14/1996
	Gage Height	2.35	2.39	2.44	2.39	2.36	2.34	2.37	3.03	3.48	3.57	3.19	2.96	2.79	2.68	2.64
	Elevation	506.09	506.13	506.18	506.13	506.1	506.08	506.11	506.77	507.22	507.31	506.93	506.7	506.53	506.42	506.38
	Date	11/15/1996	11/16/1996	11/17/1996	11/18/1996	11/19/1996	11/20/1996	11/21/1996	11/22/1996	11/23/1996	11/24/1996	11/25/1996	11/26/1996	11/27/1996	11/28/1996	11/29/1996
	Gage Height	2.59	2.54	2.59	2.57	2.62	2.67	2.6	2.56	2.52	2.56	2.75	2.99	3.05	3.02	2.98
	Elevation	506.33	506.28	506.33	506.31	506.36	506.41	506.34	506.3	506.26	506.3	506.49	506.73	506.79	506.76	506.72

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation  524.58	Date	11/30/1996	12/1/1996	12/2/1996	12/3/1996	12/4/1996	12/5/1996	12/6/1996	12/7/1996	12/8/1996	12/9/1996	12/10/1996	12/11/1996	12/12/1996	12/13/1996	12/14/1996
	Gage Height Elevation	3.41 507.15	4.39 508.13	4.72 508.46	4.43 508.17	4.11 507.85	3.96 507.7	3.7 507.44	3.47 507.21	3.43 507.17	3.43 507.17	3.4 507.14	3.64 507.38	5.31 509.05	5.17 508.91	4.52 508.26
	Date	12/15/1996	12/16/1996	12/17/1996	12/18/1996	12/19/1996	12/21/1996	12/22/1996	12/23/1996	12/24/1996	12/25/1996	12/26/1996	12/27/1996	12/28/1996	12/29/1996	12/30/1996
	Gage Height Elevation	4.21 507.95	4.29 508.03	4.54 508.28	4.26 508	3.63 507.37	3.78 507.52	3.81 507.55	3.84 507.58	4.4 508.14	4.47 508.21	4.26 508	4.13 507.87	4.19 507.93	4.05 507.79	3.88 507.62
	Date	12/31/1996														
	Gage Height Elevation	3.76 507.5														
Maximum Elevation  520.01	Date	1/1/1997	1/2/1997	1/3/1997	1/4/1997	1/5/1997	1/6/1997	1/7/1997	1/8/1997	1/9/1997	1/10/1997	1/11/1997	1/12/1997	1/13/1997	1/14/1997	1/15/1997
	Gage Height Elevation	3.72 507.46	3.77 507.51	3.94 507.68	4.07 507.81	4.68 508.42	4.79 508.53	4.36 508.1	3.78 507.52	3.91 507.65	3.88 507.62	3.35 507.09	3.9 507.64	3.85 507.59	3.98 507.72	3.97 507.71
	Date	1/16/1997	1/17/1997	1/18/1997	1/19/1997	1/20/1997	1/21/1997	1/22/1997	1/23/1997	1/24/1997	1/25/1997	1/26/1997	1/27/1997	1/28/1997	1/29/1997	1/30/1997
	Gage Height Elevation	3.92 507.66	3.81 507.55	3.63 507.37	3.53 507.27	3.53 507.27	3.71 507.45	5.9 509.64	9.89 513.63	8.52 512.26	6.78 510.52	5.53 509.27	5.21 508.95	4.73 508.47	4.59 508.33	4.58 508.32
	Date	1/31/1997	2/1/1997	2/2/1997	2/3/1997	2/4/1997	2/5/1997	2/6/1997	2/7/1997	2/8/1997	2/9/1997	2/10/1997	2/11/1997	2/12/1997	2/13/1997	2/14/1997
	Gage Height Elevation	4.57 508.31	4.44 508.18	4.61 508.35	6.33 510.07	8.21 511.95	9.47 511.21	7.37 511.11	5.97 509.71	5.31 509.05	4.93 508.67	4.67 508.41	4.52 508.26	4.46 508.2	4.27 508.01	4.14 507.88
	Date	2/15/1997	2/16/1997	2/17/1997	2/18/1997	2/19/1997	2/20/1997	2/21/1997	2/22/1997	2/23/1997	2/24/1997	2/25/1997	2/26/1997	2/27/1997	2/28/1997	3/1/1997
	Gage Height Elevation	4.11 507.85	4.01 507.75	3.89 507.63	3.93 507.67	4.79 508.53	6.49 510.23	11.28 515.02	12.48 516.22	11.08 514.82	8.51 512.25	6.88 510.62	6.99 510.73	16.25 519.99	16.27 520.01	13.68 517.42
	Date	3/2/1997	3/3/1997	3/4/1997	3/5/1997	3/6/1997	3/7/1997	3/8/1997	3/9/1997	3/10/1997	3/11/1997	3/12/1997	3/13/1997	3/22/1997	3/23/1997	3/24/1997
	Gage Height Elevation	9.8 513.54	8.17 511.91	7.28 511.02	6.69 510.43	6.16 509.9	5.7 509.44	5.41 509.15	6.19 509.93	9.25 512.99	8.22 511.96	6.92 510.66	6.26 510	5.37 509.11	5.05 508.79	4.94 508.68
	Date	3/25/1997	3/26/1997	3/27/1997	3/28/1997	3/29/1997	3/30/1997	3/31/1997	4/1/1997	4/2/1997	4/3/1997	4/4/1997	4/5/1997	4/6/1997	4/7/1997	4/8/1997
	Gage Height Elevation	4.81 508.55	4.83 508.57	4.71 508.45	4.7 508.44	4.85 508.59	4.59 508.33	4.46 508.2	4.5 508.24	4.43 508.17	4.41 508.15	4.39 508.13	4.47 508.21	4.6 508.34	4.5 508.24	4.26 508
	Date	4/9/1997	4/10/1997	4/11/1997	4/12/1997	4/13/1997	4/14/1997	4/15/1997	4/16/1997	4/17/1997	4/18/1997	4/19/1997	4/20/1997	4/21/1997	4/22/1997	4/23/1997
	Gage Height Elevation	4.17 507.91	4.13 507.87	4.09 507.83	4.11 507.85	4.19 507.93	4.17 507.91	3.97 507.66	3.92 507.64	3.9 507.63	3.89 507.83	4.09 507.86	4.12 507.82	4.08 507.75	4.01 507.69	3.95 507.69
	Date	4/24/1997	4/25/1997	4/26/1997	4/27/1997	4/28/1997	4/29/1997	4/30/1997	5/1/1997	5/2/1997	5/3/1997	5/4/1997	5/5/1997	5/6/1997	5/7/1997	5/11/1997
	Gage Height Elevation	3.87 507.61	3.76 507.5	3.67 507.41	3.62 507.36	3.73 507.47	3.76 507.5	3.74 507.48	3.73 507.47	3.77 507.51	4.26 508.97	5.23 508.62	4.88 508.62	4.67 508.41	4.38 508.12	4.23 507.97
	Date	5/12/1997	5/13/1997	5/14/1997	5/15/1997	5/16/1997	5/17/1997	5/18/1997	5/19/1997	5/20/1997	5/21/1997	5/22/1997	5/23/1997	5/24/1997	5/25/1997	5/26/1997
	Gage Height Elevation	4.25 507.99	4.2 507.94	4.12 507.86	4.05 507.79	3.92 507.66	3.79 507.53	3.77 507.51	3.94 507.68	4.17 507.91	4.19 507.93	3.82 507.56	3.65 507.39	3.61 507.35	3.85 507.59	5.99 509.73
	Date	5/27/1997	5/28/1997	5/29/1997	5/30/1997	5/31/1997	6/1/1997	6/2/1997	6/3/1997	6/4/1997	6/5/1997	6/6/1997	6/7/1997	6/8/1997	6/9/1997	6/10/1997
	Gage Height Elevation	7.2 510.94	7.63 511.37	6.6 510.34	6.25 509.99	5.84 509.58	5.88 509.62	6.64 510.38	7.27 511.01	6.52 510.26	5.74 509.48	5.46 509.2	7.63 511.37	9.27 513.01	4.67 513.73	4.38 512.43
	Date	6/11/1997	6/12/1997	6/13/1997	6/14/1997	6/15/1997	6/16/1997	6/17/1997	6/18/1997	6/19/1997	6/20/1997	6/21/1997	6/22/1997	6/23/1997	6/24/1997	6/25/1997
	Gage Height Elevation	6.78 510.52	6.1 509.84	8.65 512.39	10.81 514.55	7.85 511.59	6.3 510.04	5.79 509.53	5.4 509.14	5.05 508.79	4.72 508.46	4.6 508.34	4.45 508.19	4.23 507.97	4.08 507.94	5.08 508.82
	Date	6/28/1997	6/29/1997	6/30/1997	7/1/1997	7/2/1997	7/3/1997	7/4/1997	7/5/1997	7/6/1997	7/7/1997	7/8/1997	7/9/1997	7/10/1997	7/11/1997	7/12/1997
	Gage Height Elevation	4.58 508.32	4.19 507.93	4.03 507.77	5.19 508.93	7.26 511	5.68 509.42	4.33 508.07	4.09 507.83	3.94 507.68	3.84 507.58	3.71 507.45	4.09 507.83	6.25 509.99	4.95 508.69	4.1 507.84
	Date	7/13/1997	7/14/1997	7/15/1997	7/16/1997	7/17/1997	7/18/1997	7/19/1997	7/20/1997	7/21/1997	7/22/1997	7/23/1997	7/24/1997	7/25/1997	7/26/1997	7/27/1997
	Gage Height Elevation	3.8 507.54	3.63 507.37	3.76 507.5	3.86 507.6	3.51 507.25	3.29 507.03	3.23 506.97	3.19 506.93	3.06 506.8	3.06 506.94	3.2 507.07	3.33 507.31	3.26 507	3.06 506.8	2.93 506.67

Base Elevation = 503.74'

All Units in Feet (')

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	7/28/1997	7/29/1997	7/30/1997	7/31/1997	8/1/1997	8/2/1997	8/3/1997	8/4/1997	8/5/1997	8/6/1997	8/7/1997	8/8/1997	8/9/1997	8/10/1997	8/11/1997
	Gage Height	2.84	2.74	2.67	2.62	2.58	2.56	2.53	2.51	2.49	2.47	2.44	2.45	2.48	2.46	2.46
	Elevation	506.58	506.48	506.41	506.36	506.32	506.3	506.27	506.25	506.23	503.74	506.21	506.18	506.19	506.22	506.2
520.01	Date	8/12/1997	8/13/1997	8/14/1997	8/15/1997	8/16/1997	8/17/1997	8/18/1997	8/19/1997	8/20/1997	8/21/1997	8/22/1997	8/23/1997	8/24/1997	8/25/1997	8/26/1997
	Gage Height	2.48	2.47	2.61	2.54	2.45	2.99	5.11	5.01	3.93	3.53	3.25	3.02	2.91	2.85	3.13
	Elevation	506.22	506.21	506.35	506.28	506.19	506.73	508.85	508.75	507.67	507.27	506.99	506.76	506.65	506.59	506.87
	Date	8/27/1997	8/28/1997	8/29/1997	8/30/1997	8/31/1997	9/1/1997	9/2/1997	9/3/1997	9/4/1997	9/5/1997	9/6/1997	9/7/1997	9/8/1997	9/9/1997	9/10/1997
	Gage Height	2.94	2.79	2.69	2.66	2.59	2.55	2.53	2.73	3.59	3.04	2.81	2.65	2.6	2.68	2.83
	Elevation	506.68	506.53	506.43	506.4	506.33	506.29	506.27	506.47	507.33	506.78	506.55	506.39	506.34	506.42	506.57
	Date	9/11/1997	9/12/1997	9/13/1997	9/14/1997	9/15/1997	9/16/1997	9/17/1997	9/18/1997	9/19/1997	9/20/1997	9/21/1997	9/22/1997	9/23/1997	9/24/1997	9/25/1997
	Gage Height	2.99	2.87	2.71	2.6	2.52	2.48	2.46	2.43	2.52	2.64	2.7	2.57	2.52	2.55	2.55
	Elevation	506.73	506.61	506.45	506.34	506.26	506.22	506.2	506.17	506.26	506.38	506.44	506.31	506.26	506.29	506.29
	Date	9/26/1997	9/27/1997	9/28/1997	9/29/1997	9/30/1997	10/1/1997	10/2/1997	10/3/1997	10/4/1997	10/5/1997	10/6/1997	10/7/1997	10/8/1997	10/9/1997	10/10/1997
	Gage Height	2.51	2.44	2.44	2.42	2.38	2.35	2.36	2.4	2.36	2.34	2.32	2.3	2.36	2.37	2.37
	Elevation	506.25	506.18	506.18	506.16	506.12	506.09	506.1	506.14	506.08	506.06	506.04	506.1	506.11	506.11	506.09
520.38	Date	10/11/1997	10/12/1997	10/13/1997	10/14/1997	10/15/1997	10/16/1997	10/17/1997	10/18/1997	10/19/1997	10/20/1997	10/21/1997	10/22/1997	10/23/1997	10/24/1997	10/25/1997
	Gage Height	2.35	2.47	2.4	2.36	2.37	2.52	2.37	2.42	2.43	2.4	2.35	2.34	2.34	2.37	2.35
	Elevation	506.09	506.21	506.14	506.1	506.11	506.26	506.11	506.16	506.14	506.09	506.08	506.08	506.11	506.11	506.09
	Date	10/26/1997	10/27/1997	10/28/1997	10/29/1997	10/30/1997	10/31/1997	11/1/1997	11/2/1997	11/3/1997	11/4/1997	11/5/1997	11/6/1997	11/7/1997	11/8/1997	11/9/1997
	Gage Height	2.43	2.5	2.59	2.66	2.54	2.46	2.5	2.46	2.53	2.55	2.46	2.49	2.45	2.62	2.68
	Elevation	506.17	506.24	506.33	506.4	506.28	506.2	506.24	506.2	506.27	506.29	506.2	506.23	506.19	506.36	506.42
	Date	11/10/1997	11/11/1997	11/12/1997	11/13/1997	11/14/1997	11/15/1997	11/16/1997	11/17/1997	11/18/1997	11/19/1997	11/20/1997	11/21/1997	11/22/1997	11/23/1997	11/24/1997
	Gage Height	2.6	2.56	2.52	2.5	2.52	2.53	2.53	2.51	2.52	2.5	2.47	2.49	2.51	2.49	2.49
	Elevation	506.34	506.3	506.26	506.24	506.26	506.27	506.27	506.25	506.26	506.24	506.21	506.23	506.25	506.23	506.23
	Date	11/25/1997	11/26/1997	11/27/1997	11/28/1997	11/29/1997	11/30/1997	12/1/1997	12/2/1997	12/3/1997	12/4/1997	12/5/1997	12/6/1997	12/7/1997	12/8/1997	12/9/1997
	Gage Height	2.49	2.45	2.42	2.62	2.61	2.91	3.23	3.36	3.17	3.02	2.93	2.86	2.79	2.73	2.72
	Elevation	506.23	506.19	506.16	506.36	506.35	506.65	506.97	507.1	506.91	506.76	506.6	506.53	506.47	506.46	506.46
520.38	Date	12/10/1997	12/11/1997	12/12/1997	12/13/1997	12/14/1997	12/15/1997	12/16/1997	12/17/1997	12/18/1997	12/19/1997	12/20/1997	12/21/1997	12/22/1997	12/23/1997	12/24/1997
	Gage Height	2.85	3.05	3.24	3.11	3.01	2.96	2.91	2.89	2.85	2.8	2.78	2.77	2.81	2.8	3.13
	Elevation	506.59	506.79	506.98	506.85	506.75	506.7	506.65	506.63	506.59	506.54	506.52	506.51	506.55	506.54	506.87
	Date	12/25/1997	12/26/1997	12/27/1997	12/28/1997	12/29/1997	12/30/1997	12/31/1997								
	Gage Height	3.23	4.1	3.88	3.59	3.42	3.34	3.26								
	Elevation	506.97	507.84	507.62	507.33	507.16	507.08	507								

Base Elevation = 503.74'

All Units in Feet (')

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	3/25/1998	3/26/1998	3/27/1998	3/28/1998	3/29/1998	3/30/1998	3/31/1998	4/1/1998	4/2/1998	4/3/1998	4/4/1998	4/5/1998	4/6/1998	4/7/1998	4/8/1998
Gage Height		7.56	6.83	6.22	11.24	15.03	11.84	8.72	8.51	8.14	7.2	7.24	6.96	6.36	6.05	7.2
Elevation		511.3	510.57	509.96	514.98	518.77	515.58	512.46	512.25	511.88	510.94	510.98	510.7	510.1	509.79	510.94
Gage Height		7.77	6.4	6.02	5.65	5.82	6.45	5.92	5.6	5.27	5.05	4.94	4.94	5.1	4.98	4.73
Elevation		511.51	510.14	509.76	509.39	509.56	510.19	509.66	509.34	509.01	508.79	508.68	508.68	508.84	508.72	508.47
Gage Height		4.64	4.6	4.49	4.31	4.65	7.88	9.27	8.55	12.2	16.64	14.84	11.87	9.55	12.02	13.1
Elevation		508.38	508.34	508.23	508.05	508.39	511.62	513.01	512.29	515.94	520.38	518.58	515.61	513.29	515.76	516.84
Gage Height		12.31	8.99	7.19	6.64	6.39	5.76	5.42	5.18	5.01	10.2	7.54	6.16	7.37	9.1	
Elevation		516.05	512.73	510.93	510.38	510.13	509.5	509.16	508.92	508.75	508.85	513.94	511.28	509.9	511.11	512.84
Gage Height		9.36	7.7	6.36	5.76	5.38	5.65	5.47	5.07	4.77	4.67	4.55	4.5	4.34	4.15	4.2
Elevation		513.1	511.44	510.1	509.5	509.12	509.39	509.21	508.81	508.51	508.29	508.24	508.08	507.89	507.94	
Gage Height		4.8	6.1	11.19	7.54	7.83	6.58	5.98	5.55	5.26	5.47	6.44	6.69	5.4	5.02	6.73
Elevation		508.54	509.84	514.93	511.28	511.57	510.32	509.72	509.29	509	509.21	510.18	510.43	509.14	508.76	510.47
Gage Height		7.64	7.61	11.29	10.25	8.13	6.47	5.74	5.31	4.92	4.68	3.74	4.17	6.53	5.92	4.7
Elevation		511.38	511.35	515.03	513.99	511.87	510.21	509.48	509.05	508.66	508.42	507.48	507.91	510.27	509.66	508.44
Gage Height		4.15	3.97	3.81	3.72	3.63	3.5	3.44	3.41	3.4	10.78	8.66	8.26	8.5	9.46	7.96
Elevation		507.89	507.71	507.55	507.46	507.37	507.24	507.18	507.15	507.14	514.52	512.4	512	512.24	513.2	511.7
Gage Height		8.08	5.86	5.16	4.68	4.2	3.94	3.84	3.9	3.78	3.6	3.44	3.26	3.08	2.86	
Elevation		510.82	509.6	508.9	508.42	507.94	507.68	507.58	507.64	507.52	507.34	507.18	507	506.82	506.74	506.6
Gage Height		2.8	2.73	2.71	2.7	2.73	2.65	2.59	2.56	2.52	2.5	2.48	2.45	2.41	2.37	
Elevation		506.54	506.47	506.45	506.44	506.47	506.39	506.33	506.3	506.27	506.26	506.24	506.22	506.19	506.15	506.11
Gage Height		2.52	2.41	2.39	2.37	2.4	2.43	2.45	2.43	2.44	2.43	2.43	2.42	2.41	2.39	2.55
Elevation		506.26	506.15	506.13	506.11	506.14	506.17	506.19	506.17	506.18	506.17	506.36	506.67	506.46	506.43	506.29
Gage Height		2.52	2.52	2.56	2.47	2.41	2.42	2.41	2.37	2.41	2.43	2.48	2.45	2.41	2.37	
Elevation		506.26	506.26	506.3	506.21	506.15	506.16	506.15	506.11	506.15	506.17	506.22	507.94	507.85	507.43	507.16
Gage Height		3.04	2.73	2.6	2.55	2.68	2.68	2.56	2.52	2.63	2.62	2.65	2.61	2.52	2.51	2.49
Elevation		506.78	506.47	506.34	506.29	506.42	506.42	506.3	506.26	506.37	506.36	506.39	506.35	506.26	506.25	506.23
Gage Height		2.48	2.49	2.5	2.59	3.25	3.24	4.27	4.96	4.44	3.86	3.67	3.57	3.44	3.26	3.16
Elevation		506.22	506.23	506.24	506.33	506.99	506.98	508.01	508.7	508.18	507.6	507.41	507.31	507.18	507	506.9
Gage Height		3.13	3.08	3.01	2.91	2.88	2.87	2.92	3.04	3.12	3.04	2.88	2.87	2.85	2.8	2.81
Elevation		506.87	506.82	506.75	506.65	506.62	506.61	506.66	506.78	506.86	506.78	506.62	506.61	506.59	506.54	506.55

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	12/4/1998	12/5/1998	12/6/1998	12/7/1998	12/8/1998	12/9/1998	12/10/1998	12/11/1998	12/12/1998	12/13/1998	12/14/1998	12/15/1998	12/16/1998	12/17/1998	12/18/1998
	Gage Height	2.78	2.81	2.95	3.31	3.04	2.91	2.82	2.78	2.75	2.75	2.73	2.89	2.71	2.7	2.7
	Elevation	506.52	506.55	506.69	507.05	506.78	506.65	506.56	506.52	506.49	506.49	506.47	506.63	506.45	506.44	506.44
520.38	Date	12/19/1998	12/20/1998	12/21/1998	12/22/1998	12/25/1998	12/26/1998	12/27/1998	12/28/1998	12/29/1998						
	Gage Height	2.73	2.72	2.78	2.7	2.73	2.73	2.71	2.69	2.72						
	Elevation	506.47	506.46	506.52	506.44	506.47	506.47	506.45	506.43	506.46						
520.38	Date	1/2/1999	1/6/1999	1/8/1999	1/12/1999	1/13/1999	1/14/1999	1/15/1999	1/16/1999	1/17/1999	1/18/1999	1/19/1999	1/20/1999	1/21/1999	1/22/1999	1/23/1999
	Gage Height	2.83	2.81	2.85	2.87	2.97	2.96	2.94	2.95	3.04	5.53	6.48	5.94	5.58	12.14	16.57
	Elevation	506.57	506.55	506.59	506.61	506.71	506.7	506.68	506.69	506.78	509.27	510.22	509.68	509.32	515.88	520.31
	Date	1/24/1999	1/25/1999	1/26/1999	1/27/1999	1/28/1999	1/29/1999	1/30/1999	1/31/1999	2/1/1999	2/2/1999	2/3/1999	2/4/1999	2/5/1999	2/6/1999	2/7/1999
	Gage Height	16.35	13.47	9.91	8.2	7.75	6.94	6.23	5.86	6.87	7.41	7.02	6.45	5.71	5.21	8.39
	Elevation	520.09	517.21	513.65	511.94	511.49	510.68	509.97	509.6	510.61	511.15	510.76	510.19	509.45	508.95	512.13
	Date	2/8/1999	2/9/1999	2/10/1999	2/11/1999	2/12/1999	2/14/1999	2/15/1999	2/16/1999	2/17/1999	2/18/1999	2/19/1999	2/20/1999	2/21/1999	2/22/1999	2/23/1999
	Gage Height	12.73	10.87	8.62	7.43	7.44	6.02	5.68	5.64	5.45	5.26	5.07	4.9	4.72	4.61	4.49
	Elevation	516.47	514.61	512.36	511.17	511.18	509.76	509.42	509.19	509	508.81	508.64	508.46	508.35	508.23	
	Date	2/24/1999	2/25/1999	2/26/1999	2/27/1999	2/28/1999	3/1/1999	3/2/1999	3/3/1999	3/4/1999	3/5/1999	3/6/1999	3/7/1999	3/8/1999	3/9/1999	3/10/1999
	Gage Height	4.4	4.51	4.41	4.36	4.52	4.96	4.66	6.07	6.99	6.1	6.45	6.82	6	5.68	5.44
	Elevation	508.14	508.25	508.15	508.1	508.26	508.7	508.4	509.81	510.73	509.84	510.56	509.74	509.42	509.18	
	Date	3/11/1999	3/12/1999	3/13/1999	3/14/1999	3/15/1999	3/16/1999	3/17/1999	3/18/1999	3/19/1999	3/20/1999	3/21/1999	3/22/1999	3/23/1999	3/24/1999	3/25/1999
	Gage Height	5.06	4.85	5	5.15	5.14	5.09	6	5.73	4.98	4.88	4.81	4.67	4.4	4.35	4.38
	Elevation	508.8	508.59	508.74	508.89	508.88	508.83	509.74	509.47	508.72	508.62	508.55	508.41	508.14	508.09	508.12
	Date	3/26/1999	3/27/1999	3/28/1999	3/29/1999	3/30/1999	3/31/1999	4/1/1999	4/2/1999	4/3/1999	4/4/1999	4/5/1999	4/6/1999	4/7/1999	4/8/1999	4/9/1999
	Gage Height	4.27	4.07	4.17	4.22	3.97	3.93	4	4.07	4	4.22	3.97	3.84	3.86	3.9	4.32
	Elevation	508.01	507.81	507.91	507.96	507.71	507.67	507.74	507.81	507.74	507.96	507.71	507.58	507.6	507.64	508.06
	Date	4/10/1999	4/11/1999	4/12/1999	4/13/1999	4/14/1999	4/15/1999	4/16/1999	4/17/1999	4/18/1999	4/19/1999	4/20/1999	4/21/1999	4/22/1999	4/23/1999	4/24/1999
	Gage Height	4.58	5	5.67	4.95	4.6	5.31	10.77	13.71	12.86	10.22	8.04	7.6	7.92	7.1	6.41
	Elevation	508.32	508.74	509.41	508.69	508.34	509.05	514.51	517.45	516.6	513.96	511.78	511.34	511.66	510.84	510.15
	Date	4/25/1999	4/26/1999	4/27/1999	4/28/1999	4/29/1999	4/30/1999	5/1/1999	5/2/1999	5/3/1999	5/4/1999	5/5/1999	5/6/1999	5/7/1999	5/8/1999	5/9/1999
	Gage Height	5.92	5.65	5.5	5.29	5.2	5.11	4.86	4.76	4.68	4.57	4.51	4.64	5.49	5.1	4.63
	Elevation	509.66	509.39	509.24	509.03	508.94	508.85	508.6	508.5	508.42	508.31	508.25	508.38	509.23	508.84	508.37
	Date	5/10/1999	5/11/1999	5/12/1999	5/13/1999	5/14/1999	5/15/1999	5/16/1999	5/17/1999	5/18/1999	5/19/1999	5/20/1999	5/21/1999	5/22/1999	5/23/1999	5/24/1999
	Gage Height	4.44	4.31	4.27	5.8	7.48	6.48	5.72	5.29	5.06	5.01	4.73	4.61	5.64	6.18	5.53
	Elevation	508.18	508.05	508.01	509.54	511.22	510.22	509.46	509.03	508.8	508.75	508.47	508.35	509.38	509.92	509.27
	Date	5/25/1999	5/26/1999	5/27/1999	5/28/1999	5/29/1999	5/30/1999	5/31/1999	6/1/1999	6/2/1999	6/3/1999	6/4/1999	6/5/1999	6/6/1999	6/7/1999	6/8/1999
	Gage Height	5.13	4.86	4.57	4.34	4.25	4.18	4.16	4.37	7.48	8.25	6.53	6.21	6.42	5.45	5.08
	Elevation	508.87	508.6	508.31	508.08	507.99	507.92	507.9	508.11	511.99	510.22	510.27	509.95	510.16	509.19	508.82
	Date	6/9/1999	6/10/1999	6/11/1999	6/12/1999	6/13/1999	6/14/1999	6/15/1999	6/16/1999	6/18/1999	6/19/1999	6/20/1999	6/21/1999	6/22/1999	6/23/1999	6/24/1999
	Gage Height	4.79	4.57	4.72	4.59	5.43	7.66	6.02	4.97	4.26	4.1	4.04	3.96	3.88	3.74	3.86
	Elevation	508.53	508.31	508.46	508.33	509.17	511.4	509.76	508.71	508	507.84	507.78	507.7	507.62	507.48	507.6
	Date	6/25/1999	6/26/1999	6/27/1999	6/28/1999	6/29/1999	6/30/1999	7/1/1999	7/2/1999	7/3/1999	7/4/1999	7/5/1999	7/6/1999	7/7/1999	7/8/1999	7/11/1999
	Gage Height	4.1	4.28	4.19	4.59	4.04	3.71	3.53	3.72	3.94	3.62	3.4	3.2	3.04	2.92	2.79
	Elevation	507.84	508.02	507.93	508.33	507.78	507.45	507.27	507.46	507.68	507.36	507.14	506.94	506.78	506.66	506.53
	Date	7/15/1999	7/16/1999	7/17/1999	7/18/1999	7/19/1999	7/20/1999	7/21/1999	7/22/1999	7/23/1999	7/24/1999	7/25/1999	7/26/1999	7/27/1999	7/28/1999	7/31/1999
	Gage Height	2.59	2.56	2.62	2.6	2.62	3.39	2.92	2.86	2.76	2.87	2.93	2.59	2.48	2.4	2.36
	Elevation	506.33	506.3	506.36	506.34	506.36	507.13	506.66	506.6	506.5	506.61	506.67	506.33	506.22	506.14	506.1
	Date	8/4/1999	8/5/1999	8/6/1999	8/7/1999	8/8/1999	8/9/1999	8/10/1999	8/11/1999	8/12/1999	8/13/1999	8/14/1999	8/15/1999	8/16/1999	8/17/1999	8/18/1999
	Gage Height	2.33	2.31	2.3	2.3	2.32	2.3	2.35	2.3	2.28	2.71	3.37	2.88	2.56	2.42	2.35
	Elevation	506.07	506.05	506.04	506.04	506.06	506.04	506.09	506.04	506.02	506.45	507.11	506.62	506.3	506.16	506.09

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	8/19/1999	8/20/1999	8/21/1999	8/22/1999	8/23/1999	8/24/1999	8/25/1999	8/26/1999	8/27/1999	8/28/1999	8/29/1999	8/30/1999	8/31/1999	9/1/1999	9/2/1999
	Gage Height	2.32	2.28	2.26	2.27	2.26	2.25	2.26	2.39	2.43	2.39	2.4	2.36	2.29	2.23	2.23
	Elevation	506.06	506.02	506	506.01	506	505.99	506	506.13	506.17	506.13	506.14	506.1	506.03	505.97	505.97
520.31	Date	9/3/1999	9/4/1999	9/5/1999	9/6/1999	9/7/1999	9/8/1999	9/9/1999	9/10/1999	9/11/1999	9/12/1999	9/13/1999	9/14/1999	9/15/1999	9/16/1999	9/17/1999
	Gage Height	2.22	2.22	2.23	2.22	2.19	2.17	2.15	2.16	2.29	2.36	2.25	2.19	2.19	2.19	2.18
	Elevation	505.96	505.96	505.97	505.96	505.93	505.91	505.89	505.9	506.03	506.1	505.99	505.93	505.93	505.93	505.92
	Date	9/18/1999	9/19/1999	9/20/1999	9/21/1999	9/22/1999	9/23/1999	9/24/1999	9/25/1999	9/26/1999	9/27/1999	9/28/1999	9/29/1999	9/30/1999	10/1/1999	10/2/1999
	Gage Height	2.18	2.17	2.16	2.16	2.15	2.16	2.13	2.11	2.11	2.11	2.19	2.39	2.63	2.75	2.45
	Elevation	505.92	505.91	505.9	505.9	505.89	505.9	505.87	505.85	505.85	505.93	506.13	506.37	506.49	506.19	
	Date	10/3/1999	10/4/1999	10/5/1999	10/6/1999	10/7/1999	10/8/1999	10/9/1999	10/10/1999	10/11/1999	10/12/1999	10/13/1999	10/14/1999	10/15/1999	10/16/1999	10/17/1999
	Gage Height	2.41	2.4	2.37	2.54	2.4	2.4	2.45	2.55	2.62	2.47	2.38	2.35	2.31	2.3	2.34
	Elevation	506.15	506.14	506.11	506.28	506.14	506.14	506.19	506.29	506.36	506.21	506.12	506.09	506.05	506.04	506.08
	Date	10/18/1999	10/19/1999	10/20/1999	10/21/1999	10/22/1999	10/23/1999	10/24/1999	10/25/1999	10/26/1999	10/27/1999	10/28/1999	10/29/1999	10/30/1999	10/31/1999	11/1/1999
	Gage Height	2.3	2.28	2.28	2.27	2.24	2.22	2.22	2.22	2.22	2.19	2.2	2.23	2.23	2.24	2.27
	Elevation	506.04	506.02	506.02	506.01	505.98	505.96	505.96	505.96	505.96	505.93	505.94	505.97	505.97	505.98	506.01
	Date	11/2/1999	11/3/1999	11/4/1999	11/5/1999	11/6/1999	11/7/1999	11/8/1999	11/9/1999	11/10/1999	11/11/1999	11/12/1999	11/13/1999	11/14/1999	11/15/1999	11/16/1999
	Gage Height	2.44	2.34	2.31	2.37	2.28	2.23	2.23	2.25	2.25	2.21	2.21	2.23	2.25	2.24	2.23
	Elevation	506.18	506.08	506.05	506.11	506.02	505.97	505.97	505.99	505.99	505.95	505.95	505.97	505.99	505.98	505.97
	Date	11/17/1999	11/18/1999	11/19/1999	11/20/1999	11/21/1999	11/22/1999	11/23/1999	11/24/1999	11/25/1999	11/26/1999	11/27/1999	11/28/1999	11/29/1999	11/30/1999	12/1/1999
	Gage Height	2.23	2.22	2.23	2.23	2.23	2.24	2.26	2.29	2.26	2.29	2.33	2.25	2.21	2.19	2.19
	Elevation	505.97	505.96	505.97	505.97	505.97	505.98	506	506.03	506	506.03	506.07	505.99	505.95	505.93	505.93
515.43	Date	12/2/1999	12/3/1999	12/4/1999	12/5/1999	12/6/1999	12/7/1999	12/8/1999	12/9/1999	12/10/1999	12/11/1999	12/12/1999	12/13/1999	12/14/1999	12/15/1999	12/16/1999
	Gage Height	2.19	2.19	2.2	2.29	2.37	2.64	2.56	2.4	2.36	2.31	2.34	2.29	2.46	2.38	2.52
	Elevation	505.93	505.93	505.94	506.03	506.11	506.38	506.3	506.14	506.1	506.05	506.08	506.03	506.2	506.12	506.26
	Date	12/17/1999	12/18/1999	12/19/1999	12/20/1999	12/21/1999	12/22/1999	12/23/1999	12/26/1999	12/27/1999	12/28/1999	12/29/1999	12/30/1999	12/31/1999		
	Gage Height	2.45	2.41	2.35	2.31	2.21	2.19	2.2	2.18	2.17	2.14	2.18	2.19	2.21		
	Elevation	506.19	506.15	506.09	506.05	505.95	505.93	505.94	505.92	505.91	505.88	505.92	505.93	505.95		
	Date	1/1/2000	1/2/2000	1/3/2000	1/4/2000	1/5/2000	1/6/2000	1/7/2000	1/8/2000	1/9/2000	1/10/2000	1/11/2000	1/12/2000	1/13/2000	1/14/2000	1/15/2000
	Gage Height	2.21	2.25	2.39	2.42	2.46	2.73	2.4	2.37	2.38	2.31	2.26	2.23	2.2	2.16	2.13
	Elevation	505.95	505.99	506.13	506.16	506.2	506.47	506.14	506.11	506.12	506.05	506	505.97	505.94	505.9	505.87
	Date	1/16/2000	1/17/2000	1/18/2000	1/19/2000	1/22/2000	1/23/2000	1/26/2000	1/29/2000	1/30/2000	1/31/2000	2/1/2000	2/2/2000	2/3/2000	2/4/2000	2/5/2000
	Gage Height	2.19	2.12	2.2	2.11	2.17	2.18	2.21	2.22	2.28	2.28	2.3	2.32	2.35	2.37	2.36
	Elevation	505.93	505.86	505.94	505.85	505.91	505.92	505.95	505.96	506.02	506.04	506.06	506.09	506.11	506.1	506.1
	Date	2/6/2000	2/7/2000	2/8/2000	2/9/2000	2/10/2000	2/11/2000	2/12/2000	2/13/2000	2/14/2000	2/15/2000	2/16/2000	2/17/2000	2/18/2000	2/19/2000	2/20/2000
	Gage Height	2.36	2.4	2.36	2.35	2.46	2.52	2.63	2.85	2.72	2.65	2.63	2.69	3.1	4.27	4.5
	Elevation	506.1	506.14	506.1	506.09	506.2	506.26	506.37	506.59	506.46	506.39	506.37	506.43	506.84	508.01	508.24
	Date	2/21/2000	2/22/2000	2/23/2000	2/24/2000	2/25/2000	2/26/2000	2/27/2000	2/28/2000	2/29/2000	3/1/2000	3/2/2000	3/3/2000	3/4/2000	3/5/2000	3/6/2000
	Gage Height	3.97	3.5	3.46	3.41	3.31	3.28	3.56	3.94	3.59	3.41	3.29	3.14	3.05	3	2.93
	Elevation	507.71	507.24	507.2	507.15	507.05	507.02	507.3	507.68	507.33	507.15	507.03	506.88	506.79	506.74	506.67
	Date	3/7/2000	3/8/2000	3/9/2000	3/10/2000	3/11/2000	3/12/2000	3/13/2000	3/14/2000	3/15/2000	3/16/2000	3/17/2000	3/18/2000	3/19/2000	3/20/2000	3/21/2000
	Gage Height	2.87	2.93	2.94	2.92	2.83	2.81	2.78	2.83	2.9	2.89	2.88	2.79	2.86	4.09	5.03
	Elevation	506.61	506.67	506.68	506.66	506.57	506.55	506.52	506.57	506.64	506.63	506.62	506.53	506.6	507.83	508.77
	Date	3/22/2000	3/23/2000	3/24/2000	3/25/2000	3/26/2000	3/27/2000	3/28/2000	3/29/2000	3/30/2000	3/31/2000	4/1/2000	4/2/2000	4/3/2000	4/4/2000	4/5/2000
	Gage Height	4.48	4.01	3.8	3.67	3.53	3.57	3.58	3.42	3.21	3.11	3.02	2.96	2.98	2.97	3.03
	Elevation	508.22	507.75	507.54	507.41	507.27	507.31	507.32	507.16	506.95	506.85	506.76	506.7	506.72	506.71	506.77
	Date	4/6/2000	4/7/2000	4/8/2000	4/9/2000	4/10/2000	4/11/2000	4/12/2000	4/13/2000	4/14/2000	4/15/2000	4/16/2000	4/17/2000	4/18/2000	4/19/2000	4/20/2000
	Gage Height	2.95	2.97	3	3.03	2.96	3	3.03	2.93	2.8	2.74	2.76	3.43	4.4	4.08	3.78
	Elevation	506.69	506.71	506.74	506.77	506.7	506.77	506.74	506.67	506.54	506.48	506.5	507.17	508.14	507.82	507.52

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	4/21/2000	4/22/2000	4/23/2000	4/24/2000	4/25/2000	4/26/2000	4/27/2000	4/28/2000	4/29/2000	4/30/2000	5/1/2000	5/2/2000	5/3/2000	5/4/2000	5/5/2000
	Gage Height	3.75	3.99	3.85	3.7	3.62	3.55	3.42	3.34	3.27	3.21	3.17	3.32	3.37	3.36	3.26
	Elevation	507.49	507.73	507.59	507.44	507.36	507.29	507.16	507.08	507.01	506.95	506.91	507.06	507.11	507.1	507
	Date	5/6/2000	5/7/2000	5/8/2000	5/9/2000	5/10/2000	5/11/2000	5/12/2000	5/13/2000	5/14/2000	5/15/2000	5/16/2000	5/17/2000	5/18/2000	5/19/2000	5/20/2000
	Gage Height	3.18	3.12	3.1	3.5	3.74	3.56	3.57	3.83	3.3	3.16	3.07	3.08	3.36	3.71	4.04
	Elevation	506.92	506.86	506.84	507.24	507.48	507.3	507.31	507.57	507.04	506.9	506.81	506.82	507.1	507.45	507.78
	Date	5/21/2000	5/22/2000	5/23/2000	5/24/2000	5/27/2000	5/28/2000	5/29/2000	5/30/2000	5/31/2000	6/1/2000	6/2/2000	6/3/2000	6/4/2000	6/5/2000	6/6/2000
	Gage Height	4.1	3.73	3.55	3.48	5.76	11.69	9.39	7.11	6.05	5.38	4.94	4.62	4.33	4.39	4.43
	Elevation	507.84	507.47	507.29	507.22	509.5	515.43	513.13	510.85	509.79	509.12	508.68	508.36	508.07	508.13	508.17
	Date	6/7/2000	6/8/2000	6/9/2000	6/10/2000	6/11/2000	6/12/2000	6/13/2000	6/14/2000	6/15/2000	6/16/2000	6/17/2000	6/18/2000	6/19/2000	6/20/2000	6/21/2000
	Gage Height	4.08	3.89	3.79	3.76	3.82	3.66	3.66	4.45	4.65	4.39	3.99	3.74	3.53	3.43	5.48
	Elevation	507.82	507.63	507.53	507.5	507.56	507.4	507.4	508.19	508.39	508.13	507.73	507.48	507.27	507.17	509.22
	Date	6/22/2000	6/23/2000	6/24/2000	6/25/2000	6/26/2000	6/27/2000	6/28/2000	6/29/2000	6/30/2000	7/1/2000	7/2/2000	7/3/2000	7/4/2000	7/5/2000	7/6/2000
	Gage Height	6.89	6.04	5.62	7.6	6.5	5.38	4.69	4.4	4.17	3.92	3.73	3.63	3.56	4.2	5.42
	Elevation	510.63	509.78	509.36	511.34	510.24	509.12	508.43	508.14	507.91	507.66	507.47	507.37	507.3	507.94	509.16
	Date	7/7/2000	7/8/2000	7/9/2000	7/10/2000	7/21/2000	7/22/2000	7/23/2000	7/26/2000	7/27/2000	7/28/2000	7/29/2000	7/30/2000	7/31/2000	8/1/2000	8/2/2000
	Gage Height	4.65	4	3.63	3.53	2.6	2.57	2.48	2.25	2.42	2.38	2.35	2.27	2.93	3.25	2.92
	Elevation	508.39	507.74	507.37	507.27	506.34	506.31	506.22	505.99	506.16	506.12	506.09	506.01	506.67	506.99	506.66
	Date	8/3/2000	8/4/2000	8/5/2000	8/6/2000	8/7/2000	8/8/2000	8/9/2000	8/10/2000	8/11/2000	8/12/2000	8/13/2000	8/14/2000	8/15/2000	8/16/2000	8/17/2000
	Gage Height	2.75	2.66	2.67	2.74	2.62	2.31	2.28	2.22	2.19	2.16	2.15	2.12	2.11	2.11	2.11
	Elevation	506.49	506.4	506.41	506.48	506.36	506.05	506.02	505.96	505.93	505.9	505.9	505.89	505.86	505.85	505.85
	Date	8/18/2000	8/19/2000	8/20/2000	8/21/2000	8/22/2000	8/23/2000	8/24/2000	8/25/2000	8/26/2000	8/27/2000	8/28/2000	8/29/2000	8/30/2000	8/31/2000	9/1/2000
	Gage Height	2.16	2.12	2.19	2.21	2.14	2.14	2.69	2.73	2.45	2.3	2.24	2.22	2.19	2.19	2.14
	Elevation	505.9	505.86	505.93	505.95	505.88	505.88	506.43	506.47	506.19	506.04	505.98	505.96	505.93	505.93	505.88
515.43	Date	9/2/2000	9/3/2000	9/4/2000	9/5/2000	9/6/2000	9/7/2000	9/8/2000	9/9/2000	9/10/2000	9/11/2000	9/12/2000	9/13/2000	9/14/2000	9/15/2000	9/16/2000
	Gage Height	2.12	2.11	2.15	2.1	2.03	2.03	2.04	2.12	2.18	2.17	2.5	2.49	2.62	2.34	2.22
	Elevation	505.86	505.85	505.89	505.84	505.77	505.77	505.78	505.86	505.92	505.91	506.24	506.23	506.36	506.08	505.96
	Date	9/18/2000	9/19/2000	9/20/2000	9/21/2000	9/22/2000	9/23/2000	9/24/2000	9/25/2000	9/26/2000	9/27/2000	9/28/2000	9/29/2000	9/30/2000	10/1/2000	10/2/2000
	Gage Height	2.16	2.11	2.08	2.08	2.11	2.16	2.23	2.4	2.42	2.68	2.41	2.27	2.26	2.22	2.17
	Elevation	505.9	505.85	505.82	505.82	505.85	505.9	505.97	506.14	506.16	506.42	506.15	506.01	506	505.96	505.91
	Date	10/3/2000	10/4/2000	10/5/2000	10/7/2000	10/8/2000	10/9/2000	10/10/2000	10/11/2000	10/12/2000	10/13/2000	10/14/2000	10/15/2000	10/16/2000	10/17/2000	10/18/2000
	Gage Height	2.14	2.16	2.4	2.79	2.53	2.37	2.31	2.28	2.26	2.23	2.21	2.25	2.23	2.43	2.34
	Elevation	505.88	505.9	506.14	506.53	506.27	506.11	506.05	506.02	506	505.97	505.95	505.99	505.97	506.17	506.08
	Date	10/19/2000	10/20/2000	10/21/2000	10/22/2000	10/23/2000	10/24/2000	10/25/2000	10/26/2000	10/27/2000	10/29/2000	10/30/2000	10/31/2000	11/1/2000	11/2/2000	11/3/2000
	Gage Height	2.27	2.22	2.19	2.17	2.18	2.17	2.16	2.17	2.16	2.17	2.18	2.17	2.17	2.18	2.23
	Elevation	506.01	505.96	505.93	505.91	505.92	505.91	505.9	505.91	505.9	505.92	505.91	505.91	505.92	505.97	505.97
	Date	11/4/2000	11/5/2000	11/6/2000	11/7/2000	11/8/2000	11/9/2000	11/10/2000	11/11/2000	11/12/2000	11/13/2000	11/14/2000	11/15/2000	11/16/2000	11/17/2000	11/18/2000
	Gage Height	2.18	2.14	2.18	2.28	2.31	2.75	2.8	3.89	3.84	3.55	3.22	3.42	3.23	3.04	2.98
	Elevation	505.92	505.88	505.92	506.02	506.05	506.49	506.54	507.63	507.58	507.29	506.96	507.16	506.97	506.78	506.72
	Date	11/19/2000	11/20/2000	11/21/2000	11/22/2000	11/23/2000	11/24/2000	11/25/2000	11/26/2000	11/27/2000	11/28/2000	11/29/2000	11/30/2000	12/1/2000	12/2/2000	12/3/2000
	Gage Height	2.92	2.83	2.72	2.48	2.45	2.5	2.64	3.09	2.84	2.8	2.73	2.69	2.7	2.76	2.75
	Elevation	506.66	506.57	506.46	506.22	506.19	506.24	506.38	506.83	506.58	506.54	506.47	506.43	506.44	506.5	506.49
	Date	12/4/2000	12/5/2000	12/6/2000	12/7/2000	12/8/2000	12/9/2000	12/10/2000	12/11/2000	12/12/2000	12/13/2000	12/14/2000	12/15/2000	12/16/2000	12/17/2000	12/18/2000
	Gage Height	2.7	2.62	2.52	2.54	2.53	2.68	2.77	2.9	3.09	3.33	3.39	3.26	3.27	3.14	3.08
	Elevation	506.44	506.36	506.26	506.28	506.27	506.42	506.51	506.64	506.83	507.07	507.13	507	507.01	506.88	506.82
	Date	12/19/2000	12/20/2000	12/21/2000	12/22/2000	12/23/2000	12/24/2000	12/25/2000	12/26/2000	12/27/2000	12/28/2000	12/29/2000	12/30/2000	12/31/2000		
	Gage Height	2.85	2.91	2.85	2.66	2.65	2.58	2.64	2.84	2.85	2.83	2.75	2.8	2.8	2.74	
	Elevation	506.59	506.65	506.59	506.4	506.39	506.32	506.38	506.59	506.57	506.49	506.54	506.54	506.48		

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	1/1/2001	1/2/2001	1/3/2001	1/4/2001	1/5/2001	1/6/2001	1/7/2001	1/8/2001	1/9/2001	1/10/2001	1/11/2001	1/12/2001	1/13/2001	1/14/2001	1/15/2001
	Gage Height	2.75	2.73	2.71	2.7	2.69	2.73	2.75	2.75	2.73	2.6	2.57	2.58	2.62	2.66	2.93
	Elevation	506.49	506.47	506.45	506.44	506.43	506.47	506.49	506.49	506.47	506.34	506.31	506.32	506.36	506.4	506.67
	Date	1/16/2001	1/17/2001	1/18/2001	1/19/2001	1/31/2001	2/1/2001	2/2/2001	2/3/2001	2/4/2001	2/5/2001	2/6/2001	2/7/2001	2/8/2001	2/9/2001	2/10/2001
	Gage Height	3.54	3.96	3.67	3.3	9.8	8.39	6.73	5.69	4.9	4.76	4.8	4.53	5.03	7.94	11.44
	Elevation	507.28	507.7	507.41	507.04	513.54	512.13	510.47	509.43	508.64	508.5	508.54	508.27	508.77	511.68	515.18
	Date	2/11/2001	2/12/2001	2/14/2001	2/15/2001	2/16/2001	2/17/2001	2/18/2001	2/19/2001	2/20/2001	2/21/2001	2/22/2001	2/23/2001	2/24/2001	2/25/2001	2/26/2001
	Gage Height	9.93	7.33	6.45	9.56	8.28	6.92	5.82	5.23	4.77	4.59	4.49	4.42	4.6	12.97	14.69
	Elevation	513.67	511.07	510.19	513.3	512.02	510.66	509.56	508.97	508.51	508.33	508.23	508.16	508.34	516.71	518.43
	Date	2/27/2001	2/28/2001	3/1/2001	3/2/2001	3/3/2001	3/4/2001	3/5/2001	3/6/2001	3/7/2001	3/8/2001	3/9/2001	3/10/2001	3/11/2001	3/12/2001	3/13/2001
	Gage Height	13.3	9.68	7.12	6.24	5.75	5.39	5.07	4.77	4.5	4.37	4.28	4.11	3.97	3.94	3.98
	Elevation	517.04	513.42	510.86	509.98	509.49	509.13	508.81	508.51	508.24	508.11	508.02	507.85	507.71	507.68	507.72
	Date	3/14/2001	3/15/2001	3/16/2001	3/17/2001	3/18/2001	3/19/2001	3/20/2001	3/21/2001	3/22/2001	3/23/2001	3/24/2001	3/25/2001	3/26/2001	3/27/2001	3/28/2001
	Gage Height	3.96	3.79	4.14	4.79	5.32	5.18	4.87	4.71	4.57	4.42	4.22	4.08	3.95	3.9	3.83
	Elevation	507.7	507.53	507.88	508.53	509.06	508.92	508.61	508.45	508.31	508.16	507.96	507.82	507.69	507.64	507.57
	Date	3/30/2001	3/31/2001	4/1/2001	4/2/2001	4/3/2001	4/4/2001	4/5/2001	4/6/2001	4/7/2001	4/11/2001	4/12/2001	4/13/2001	4/14/2001	4/15/2001	4/16/2001
	Gage Height	3.84	3.8	3.88	3.73	3.57	3.52	3.46	3.62	5.97	5.4	6.96	5.82	4.99	4.65	4.59
	Elevation	507.58	507.54	507.62	507.47	507.31	507.26	507.36	509.71	509.14	510.7	509.56	508.73	508.39	508.33	
	Date	4/17/2001	4/18/2001	4/19/2001	4/20/2001	4/21/2001	4/22/2001	4/23/2001	4/24/2001	4/25/2001	4/26/2001	4/27/2001	4/28/2001	4/29/2001	4/30/2001	5/1/2001
	Gage Height	4.37	4.11	3.98	3.92	3.92	3.87	3.76	3.82	3.71	3.56	3.55	3.49	3.37	3.3	3.37
	Elevation	508.11	507.85	507.72	507.66	507.66	507.61	507.5	507.56	507.45	507.3	507.29	507.23	507.11	507.04	507.11
	Date	5/2/2001	5/3/2001	5/4/2001	5/5/2001	5/6/2001	5/7/2001	5/8/2001	5/9/2001	5/10/2001	5/11/2001	5/12/2001	5/13/2001	5/14/2001	5/15/2001	5/16/2001
	Gage Height	3.39	3.28	3.13	3.07	3.24	3.27	3.18	3.17	3.06	3.04	3.23	3.17	2.96	2.95	2.82
	Elevation	507.13	507.02	506.87	506.81	506.98	507.01	506.92	506.91	506.8	506.78	506.97	506.91	506.7	506.69	506.56
518.43	Date	5/17/2001	5/18/2001	5/19/2001	5/20/2001	5/21/2001	5/22/2001	5/23/2001	5/24/2001	5/25/2001	5/26/2001	5/27/2001	5/28/2001	5/29/2001	5/30/2001	5/31/2001
	Gage Height	2.93	3.73	4.55	4.42	3.92	3.7	3.58	3.41	3.37	3.36	3.53	4.19	3.96	3.54	3.47
	Elevation	506.67	507.47	508.29	508.16	507.66	507.44	507.32	507.15	507.11	507.1	507.27	507.93	507.7	507.28	507.21
	Date	6/1/2001	6/2/2001	6/3/2001	6/4/2001	6/5/2001	6/6/2001	6/15/2001	6/16/2001	6/17/2001	6/18/2001	6/19/2001	7/3/2001	7/4/2001	7/5/2001	7/6/2001
	Gage Height	3.66	3.98	4.07	4.24	4.41	5.47	3.88	3.76	3.61	3.4	3.35	2.85	3.73	3.93	3.62
	Elevation	507.4	507.72	507.81	507.98	508.15	509.21	507.62	507.5	507.35	507.14	507.09	506.59	507.47	507.67	507.36
	Date	7/7/2001	7/8/2001	7/9/2001	7/10/2001	7/11/2001	7/12/2001	7/13/2001	7/14/2001	7/15/2001	7/16/2001	7/17/2001	7/18/2001	7/19/2001	7/20/2001	7/21/2001
	Gage Height	3.2	3.18	3.22	3.88	3.71	3.28	2.95	2.78	2.7	2.64	2.52	2.45	2.42	2.52	2.55
	Elevation	506.94	506.92	506.96	507.62	507.45	507.02	506.69	506.52	506.44	506.38	506.26	506.19	506.16	506.26	506.29
	Date	7/22/2001	7/23/2001	7/24/2001	7/25/2001	7/26/2001	7/27/2001	7/28/2001	7/29/2001	7/30/2001	7/31/2001	8/1/2001	8/2/2001	8/3/2001	8/4/2001	8/5/2001
	Gage Height	2.45	2.58	2.61	2.7	2.81	2.56	2.88	3.42	3.03	2.84	2.73	2.66	2.59	2.78	2.79
	Elevation	506.19	506.32	506.35	506.44	506.55	506.3	506.62	507.16	506.77	506.58	506.47	506.4	506.33	506.52	506.53
	Date	8/6/2001	8/7/2001	8/8/2001	8/9/2001	8/10/2001	8/11/2001	8/12/2001	8/13/2001	8/14/2001	8/15/2001	8/16/2001	8/17/2001	8/18/2001	8/19/2001	8/20/2001
	Gage Height	2.6	2.5	2.46	2.52	2.47	2.45	2.46	2.45	2.44	2.44	2.45	2.48	2.49	2.5	2.49
	Elevation	506.34	506.24	506.2	506.26	506.21	506.19	506.2	506.19	506.18	506.18	506.19	506.22	506.23	506.24	506.23
	Date	8/21/2001	8/22/2001	8/23/2001	8/24/2001	8/25/2001	8/26/2001	8/27/2001	8/28/2001	8/29/2001	8/30/2001	8/31/2001	9/1/2001	9/2/2001	9/3/2001	9/4/2001
	Gage Height	2.61	2.54	2.57	2.5	2.84	2.64	2.85	2.57	2.37	2.35	4.08	4.42	3.68	3.02	2.51
	Elevation	506.35	506.28	506.31	506.24	506.24	506.58	506.38	506.59	506.31	506.11	506.09	507.82	508.16	507.42	506.25
	Date	9/5/2001	9/6/2001	9/7/2001	9/8/2001	9/9/2001	9/10/2001	9/11/2001	9/12/2001	9/13/2001	9/14/2001	9/15/2001	9/16/2001	9/17/2001	9/18/2001	9/19/2001
	Gage Height	2.57	2.53	2.5	2.92	3.63	4.19	3.78	3.26	2.98	2.68	2.61	2.57	2.5	2.42	2.81
	Elevation	506.31	506.27	506.24	506.66	507.37	507.93	507.52	507	506.72	506.42	506.35	506.31	506.24	506.16	506.55
	Date	9/20/2001	9/21/2001	9/22/2001	9/23/2001	9/24/2001	9/25/2001	9/26/2001	9/27/2001	9/28/2001	9/29/2001	9/30/2001	10/1/2001	10/2/2001	10/3/2001	10/4/2001
	Gage Height	2.78	2.86	2.68	2.48	2.44	2.39	2.29	2.19	2.21	2.2	2.21	2.38	2.46	2.12	2.09
	Elevation	506.52	506.6	506.42	506.22	506.18	506.13	506.03	505.93	505.95	505.94	505.95	506.12	505.86	505.86	

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

518.43	Maximum Elevation	Date	10/5/2001	10/6/2001	10/7/2001	10/8/2001	10/9/2001	10/10/2001	10/11/2001	10/12/2001	10/13/2001	10/14/2001	10/15/2001	10/16/2001	10/17/2001	10/18/2001	10/19/2001
	Gage Height	2.48	2.6	3.48	3.12	2.7	2.72	2.88	4.2	6.05	12.61	12.86	10.54	9.57	7.75	6.47	
	Elevation	506.22	506.34	507.22	506.86	506.44	506.46	506.62	507.94	509.79	516.35	516.6	514.28	513.31	511.49	510.21	
	Gage Height	5.61	5.31	5.03	5.2	7.6	11.41	10.29	8.66	6.37	5.77	5.37	4.85	4.73	4.64	4.44	
	Elevation	509.35	509.05	508.77	508.94	511.34	515.15	514.03	512.4	510.11	509.51	508.59	508.47	508.38	508.18		
	Gage Height	4.33	4.25	4.09	3.94	3.96	3.88	3.81	3.82	3.6	3.54	3.56	3.53	3.41	3.4	3.46	
	Elevation	508.07	507.99	507.83	507.68	507.7	507.62	507.55	507.56	507.34	507.28	507.3	507.27	507.15	507.14	507.2	
521.95	Maximum Elevation	Date	11/19/2001	11/20/2001	11/21/2001	11/22/2001	11/23/2001	11/24/2001	11/25/2001	11/26/2001	11/27/2001	11/28/2001	11/29/2001	11/30/2001	12/1/2001	12/2/2001	12/3/2001
	Gage Height	3.29	3.41	3.25	3.21	3.31	3.38	3.32	3.74	3.58	3.45	3.67	3.61	5.7	6.89	5.84	5.1
	Elevation	507.03	507.15	506.99	507.05	507.12	507.06	507.48	507.32	507.19	507.41	507.35	509.44	510.63	509.58	508.84	
	Gage Height	4.85	4.53	4.43	4.31	4.11	3.92	3.82	3.79	3.73	3.92	4.56	5.94	5.85	8.25	9.86	
	Elevation	508.59	508.27	508.17	508.05	507.85	507.66	507.56	507.53	507.47	507.66	508.3	509.68	509.59	511.99	513.6	
	Gage Height	8.03	6.68	5.84	5.49	5.33	5.29	4.98	4.69	4.61	4.47	4.3	4.01	4.03			
	Elevation	511.77	510.42	509.58	509.23	509.07	509.03	508.72	508.43	508.35	508.21	508.04	507.75	507.77			
521.95	Maximum Elevation	Date	1/1/2002	1/3/2002	1/4/2002	1/5/2002	1/6/2002	1/7/2002	1/8/2002	1/9/2002	1/10/2002	1/11/2002	1/12/2002	1/13/2002	1/14/2002	1/15/2002	1/16/2002
	Gage Height	4	4.08	3.99	3.79	3.84	3.72	3.5	3.7	3.64	3.61	3.46	3.51	3.53	3.49	3.34	
	Elevation	507.74	507.82	507.73	507.53	507.58	507.46	507.24	507.44	507.38	507.35	507.2	507.25	507.27	507.23	507.08	
	Gage Height	3.26	3.2	3.2	3.25	3.34	3.3	3.18	3.25	3.23	3.16	3.08	3.1	3.32	3.74	9.57	
	Elevation	507	506.94	506.94	506.99	507.08	507.04	506.92	506.99	506.97	506.9	506.82	506.84	507.06	507.48	513.31	
	Gage Height	14.96	13.64	10.08	7.65	6.51	5.83	5.32	5.32	4.68	4.78	4.68	4.79	4.59	4.36	4.27	
	Elevation	518.7	517.38	513.82	511.39	510.25	509.57	509.06	508.83	508.42	508.52	508.42	508.53	508.33	508.1	508.01	
	Gage Height	4.26	4.03	3.92	5.34	13.19	13.42	10.64	8.02	7	6.44	6.1	5.82	5.39	5.3	5.63	
	Elevation	508	507.77	507.66	509.08	516.93	517.16	514.38	511.76	510.74	510.18	509.84	509.56	509.13	509.04	509.37	
	Gage Height	8.61	6.87	6.65	6.4	7.05	6.98	8.54	10.63	8.35	6.82	6.46	6.03	5.86	5.6	5.41	
521.95	Maximum Elevation	Date	3/3/2002	3/4/2002	3/5/2002	3/6/2002	3/7/2002	3/8/2002	3/9/2002	3/10/2002	3/11/2002	3/12/2002	3/13/2002	3/14/2002	3/15/2002	3/16/2002	3/17/2002
	Gage Height	5.32	5.08	5	4.91	4.65	4.55	4.57	4.79	4.94	4.75	4.89	7.14	10.72	10.78	8.52	
	Elevation	509.06	508.82	508.74	508.65	508.39	508.29	508.31	508.53	508.68	508.49	508.63	510.88	514.46	514.52	512.26	
	Gage Height	7.3	6.7	6.08	5.6	5.39	5.2	5.56	7.09	6.65	6.04	6	6.26	5.69	5.41	5.11	
	Elevation	511.04	510.44	509.82	509.34	509.13	508.94	509.3	510.83	510.39	509.78	509.74	510	509.43	509.15	508.85	
	Gage Height	4.95	4.73	4.68	4.65	5.26	6.56	6.06	5.53	5.61	5.44	6.56	13.1	12.29	9.75	7.62	
	Elevation	508.69	508.47	508.42	508.39	509	510.3	509.8	509.27	509.35	509.18	510.3	516.84	516.03	513.49	511.36	
	Gage Height	6.81	6.41	5.93	5.55	5.54	6.88	7.68	8.87	9.53	7.93	13.07	18.21	15.99	12.25	8.94	
521.95	Maximum Elevation	Date	5/2/2002	5/3/2002	5/4/2002	5/5/2002	5/6/2002	5/7/2002	5/8/2002	5/9/2002	5/10/2002	5/11/2002	5/12/2002	5/13/2002	5/14/2002	5/15/2002	5/16/2002
	Gage Height	8.82	8.51	6.29	5.92	5.65	5.48	5.32	5.07	4.85	4.88	5.68	5.43	5.14	4.84	4.64	
	Elevation	512.56	512.25	510.03	509.66	509.39	509.22	509.06	508.81	508.59	508.62	509.42	509.17	508.88	508.58	508.38	

Base Elevation = 503.74'

All Units in Feet (')

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

## Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	6/3/2002	6/4/2002	6/5/2002	6/6/2002	6/7/2002	6/8/2002	6/9/2002	6/10/2002	6/11/2002	6/12/2002	6/13/2002	6/14/2002	6/15/2002	6/16/2002	6/17/2002
	Gage Height	4.52	4.32	4.77	5.52	5.1	4.68	4.55	4.35	5.33	8.12	7.6	7.97	7.38	6.68	5.93
	Elevation	508.26	508.06	508.51	509.26	508.84	508.42	508.29	508.09	509.07	511.86	511.34	511.71	511.12	510.42	509.67
521.95	Date	6/18/2002	6/19/2002	6/20/2002	6/21/2002	6/22/2002	6/23/2002	6/24/2002	6/25/2002	6/26/2002	6/27/2002	6/28/2002	6/29/2002	6/30/2002	7/1/2002	7/2/2002
	Gage Height	5.25	4.9	4.64	4.45	4.24	4.3	4.08	4.25	4.55	4.84	4.68	4.44	3.92	3.78	3.66
	Elevation	508.99	508.64	508.38	508.19	507.98	508.04	507.82	507.99	508.29	508.58	508.42	508.18	507.66	507.52	507.4
	Date	7/3/2002	7/4/2002	7/5/2002	7/6/2002	7/7/2002	7/8/2002	7/9/2002	7/10/2002	7/11/2002	7/12/2002	7/13/2002	7/14/2002	7/15/2002	7/16/2002	7/17/2002
	Gage Height	3.48	3.36	3.49	3.13	3	2.92	2.85	2.83	2.86	2.93	2.79	2.68	2.58	2.46	2.41
	Elevation	507.22	507.1	507.23	506.87	506.74	506.66	506.59	506.57	506.6	506.67	506.53	506.42	506.32	506.2	506.15
	Date	7/18/2002	7/19/2002	7/20/2002	7/21/2002	7/23/2002	7/24/2002	7/25/2002	7/26/2002	7/27/2002	7/28/2002	7/29/2002	7/30/2002	7/31/2002	8/1/2002	8/2/2002
	Gage Height	2.41	2.81	3.35	2.89	3.59	3.67	3.39	2.8	3.21	3.69	4.06	3.89	3.11	2.94	2.86
	Elevation	506.15	506.55	507.09	506.63	507.33	507.41	507.13	506.54	506.95	507.43	507.8	507.63	506.85	506.68	506.6
	Date	8/3/2002	8/5/2002	8/6/2002	8/7/2002	8/8/2002	8/9/2002	8/10/2002	8/11/2002	8/12/2002	8/13/2002	8/14/2002	8/15/2002	8/16/2002	8/17/2002	8/18/2002
	Gage Height	2.7	2.82	2.42	2.38	2.31	2.29	2.3	2.31	2.28	2.2	2.19	2.29	2.44	2.64	2.76
	Elevation	506.44	506.56	506.16	506.12	506.05	506.04	506.05	506.02	505.94	505.93	506.03	506.18	506.38	506.5	
	Date	8/19/2002	8/20/2002	8/21/2002	8/22/2002	8/23/2002	8/24/2002	8/25/2002	8/26/2002	8/27/2002	8/28/2002	8/29/2002	8/30/2002	8/31/2002	9/1/2002	9/2/2002
	Gage Height	8.65	14.52	11.38	6.56	13.24	13.41	11.26	9.24	6.26	5.19	4.6	4.11	3.73	3.56	3.32
	Elevation	512.39	518.26	515.12	510.3	516.98	517.15	515	512.98	510	508.93	508.34	507.85	507.47	507.3	507.06
	Date	9/3/2002	9/4/2002	9/5/2002	9/6/2002	9/7/2002	9/8/2002	9/9/2002	9/10/2002	9/11/2002	9/12/2002	9/13/2002	9/14/2002	9/15/2002	9/16/2002	9/17/2002
	Gage Height	3.12	3.06	2.88	2.82	2.79	2.74	2.68	2.55	2.43	2.39	2.36	2.35	2.38	2.49	2.53
	Elevation	506.86	506.8	506.62	506.56	506.53	506.48	506.42	506.29	506.17	506.13	506.1	506.09	506.12	506.23	506.27
	Date	9/18/2002	9/19/2002	9/20/2002	9/21/2002	9/22/2002	9/23/2002	9/24/2002	9/25/2002	9/26/2002	9/27/2002	9/28/2002	9/29/2002	9/30/2002	10/1/2002	10/2/2002
	Gage Height	2.54	2.62	2.92	3.2	2.84	2.54	2.39	2.33	2.41	2.35	2.4	2.37	2.34	2.3	2.25
	Elevation	506.28	506.36	506.66	506.94	506.58	506.28	506.13	506.07	506.15	506.09	506.14	506.11	506.08	506.07	505.99
	Date	10/3/2002	10/4/2002	10/5/2002	10/6/2002	10/7/2002	10/8/2002	10/9/2002	10/10/2002	10/11/2002	10/12/2002	10/13/2002	10/14/2002	10/15/2002	10/16/2002	10/17/2002
	Gage Height	2.37	2.46	2.45	2.47	2.47	2.36	2.29	2.3	2.26	2.34	2.35	2.4	2.27	2.27	2.26
	Elevation	506.11	506.2	506.19	506.21	506.21	506.1	506.03	506.04	506	506.08	506.09	506.14	506.01	506.01	506
	Date	10/18/2002	10/19/2002	10/20/2002	10/21/2002	10/22/2002	10/23/2002	10/24/2002	10/25/2002	10/26/2002	10/27/2002	10/28/2002	10/29/2002	10/30/2002	10/31/2002	11/1/2002
	Gage Height	2.26	2.48	2.45	2.59	2.33	2.35	2.33	2.43	2.49	2.6	2.56	2.5	2.49	2.59	2.58
	Elevation	506	506.22	506.19	506.33	506.07	506.09	506.07	506.17	506.23	506.34	506.3	506.24	506.23	506.33	506.32
	Date	11/2/2002	11/3/2002	11/4/2002	11/5/2002	11/6/2002	11/7/2002	11/8/2002	11/9/2002	11/10/2002	11/11/2002	11/12/2002	11/13/2002	11/14/2002	11/15/2002	11/16/2002
	Gage Height	2.51	2.44	2.4	2.46	2.62	2.66	2.57	2.48	2.52	2.69	2.61	2.43	2.44	2.46	2.4
	Elevation	506.25	506.18	506.14	506.2	506.36	506.4	506.31	506.22	506.26	506.43	506.35	506.17	506.18	506.2	506.14
	Date	11/17/2002	11/18/2002	11/19/2002	11/20/2002	11/21/2002	11/22/2002	11/23/2002	11/24/2002	11/25/2002	11/26/2002	11/27/2002	11/28/2002	11/29/2002	11/30/2002	12/1/2002
	Gage Height	2.37	2.37	2.34	2.34	2.35	2.36	2.35	2.38	2.61	2.35	2.38	2.35	2.31	2.28	2.27
	Elevation	506.11	506.11	506.08	506.08	506.09	506.1	506.09	506.12	506.35	506.09	506.12	506.09	506.05	506.02	506.01
	Date	12/2/2002	12/3/2002	12/4/2002	12/5/2002	12/6/2002	12/7/2002	12/8/2002	12/9/2002	12/10/2002	12/11/2002	12/12/2002	12/13/2002	12/14/2002	12/15/2002	12/16/2002
	Gage Height	2.27	2.24	2.21	2.29	2.28	2.29	2.29	2.28	2.28	2.29	2.28	2.28	2.28	2.28	2.29
	Elevation	506.01	505.98	505.95	506.03	506.02	506.03	506.03	506.02	506.02	506.03	506.02	506.02	506.02	506.02	506.03
	Date	12/17/2002	12/18/2002	12/19/2002	12/20/2002	12/21/2002	12/22/2002	12/23/2002	12/24/2002	12/25/2002	12/26/2002	12/27/2002	12/28/2002	12/29/2002	12/30/2002	12/31/2002
	Gage Height	2.28	2.38	2.65	2.98	3.23	2.95	2.74	2.62	2.51	2.69	2.75	2.59	2.54	3	
	Elevation	506.02	506.12	506.39	506.72	506.97	506.69	506.48	506.36	506.25	506.43	506.49	506.33	506.28	506.74	
Maximum Elevation	Date	1/1/2003	1/2/2003	1/3/2003	1/4/2003	1/5/2003	1/6/2003	1/7/2003	1/8/2003	1/9/2003	1/10/2003	1/11/2003	1/12/2003	1/13/2003	1/14/2003	1/15/2003
519.56	Gage Height	3.95	3.6	3.47	3.14	3.1	2.97	2.94	2.91	3.29	3.65	3.29	3.13	3.41	3.15	3.12
	Elevation	507.69	507.34	507.21	506.88	506.84	506.71	506.68	506.65	507.39	507.03	506.87	507.15	506.89	506.86	
	Date	1/16/2003	1/17/2003	1/18/2003	1/19/2003	1/20/2003	1/21/2003	1/22/2003	1/23/2003	1/24/2003	1/25/2003	1/26/2003	1/27/2003	1/28/2003	1/29/2003	1/30/2003
	Gage Height	3.05	3.1	2.99	2.92	3.03	2.95	2.84	2.79	2.69	2.67	2.85	2.92	2.84	2.91	3.08
	Elevation	506.79	506.84	506.73	506.66	506.77	506.69	506.58	506.53	506.43	506.41	506.59	506.66	506.58	506.65	506.82

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	2/3/2003	2/4/2003	2/5/2003	2/6/2003	2/7/2003	2/8/2003	2/9/2003	2/10/2003	2/11/2003	2/12/2003	2/13/2003	2/14/2003	2/15/2003	2/16/2003	2/17/2003
	Gage Height	3.31	3.91	4.12	3.8	3.33	3.19	2.97	2.94	3	2.91	2.89	2.8	2.96	3.01	3.07
	Elevation	507.05	507.65	507.86	507.54	507.07	506.93	506.71	506.68	506.74	506.65	506.63	506.54	506.7	506.75	506.81
	Date	2/18/2003	2/19/2003	2/20/2003	2/21/2003	2/22/2003	2/23/2003	2/24/2003	2/26/2003	2/27/2003	2/28/2003	3/1/2003	3/2/2003	3/3/2003	3/5/2003	3/6/2003
	Gage Height	2.62	2.71	2.88	3.21	3.9	4.75	4.45	3.42	3.29	3.14	3.12	3.16	3.23	3.43	3.93
	Elevation	506.36	506.45	506.62	506.95	507.64	508.49	508.19	507.16	507.03	506.88	506.9	506.97	507.17	507.67	
	Date	3/7/2003	3/8/2003	3/9/2003	3/10/2003	3/11/2003	3/12/2003	3/13/2003	3/14/2003	3/15/2003	3/16/2003	3/17/2003	3/18/2003	3/19/2003	3/20/2003	3/21/2003
	Gage Height	3.96	4.16	4.79	4.43	3.81	3.7	4.7	5.63	4.92	4.6	4.37	4.28	4.16	4.02	3.9
	Elevation	507.7	507.9	508.53	508.17	507.55	507.44	508.44	509.37	508.66	508.34	508.11	508.02	507.9	507.76	507.64
	Date	3/22/2003	3/23/2003	3/24/2003	3/25/2003	3/26/2003	3/27/2003	3/28/2003	4/1/2003	4/2/2003	4/3/2003	4/4/2003	4/5/2003	4/6/2003	4/7/2003	4/8/2003
	Gage Height	3.87	3.92	3.68	3.52	3.57	3.43	3.4	3.08	3.12	3.2	3.19	3.59	5	4.58	5.41
	Elevation	507.61	507.66	507.42	507.26	507.31	507.17	507.14	506.82	506.86	506.94	506.93	507.33	508.74	508.32	509.15
	Date	4/9/2003	4/10/2003	4/11/2003	4/12/2003	4/13/2003	4/14/2003	4/15/2003	4/16/2003	4/17/2003	4/18/2003	4/19/2003	4/20/2003	4/21/2003	4/22/2003	4/23/2003
	Gage Height	5.17	4.69	4.26	4.11	3.9	3.65	3.58	3.52	3.62	3.41	3.37	3.52	3.37	3.51	3.23
	Elevation	508.91	508.43	508	507.85	507.64	507.39	507.32	507.26	507.36	507.15	507.11	507.26	507.11	507.25	506.97
	Date	4/24/2003	4/25/2003	4/26/2003	4/27/2003	4/28/2003	4/29/2003	4/30/2003	5/1/2003	5/2/2003	5/3/2003	5/4/2003	5/5/2003	5/6/2003	5/7/2003	5/8/2003
	Gage Height	3.31	3.67	4.16	4.06	3.86	3.87	3.64	3.63	3.52	3.51	3.38	5.89	6.81	5.93	5.17
	Elevation	507.05	507.41	507.9	507.8	507.6	507.61	507.38	507.37	507.26	507.25	507.12	509.63	510.55	509.67	508.91
	Date	5/9/2003	5/10/2003	5/11/2003	5/12/2003	5/13/2003	5/14/2003	5/15/2003	5/16/2003	5/17/2003	5/18/2003	5/19/2003	5/20/2003	5/21/2003	5/22/2003	5/23/2003
	Gage Height	5.93	7.75	9.43	7.97	6.37	5.65	5.69	5.64	5.1	4.67	4.47	4.52	4.38	4.33	4.11
	Elevation	509.67	511.49	513.17	511.71	510.11	509.39	509.43	509.38	508.84	508.41	508.21	508.26	508.12	508.07	507.85
	Date	5/24/2003	5/25/2003	5/26/2003	5/27/2003	5/28/2003	5/29/2003	5/30/2003	5/31/2003	6/1/2003	6/2/2003	6/3/2003	6/4/2003	6/5/2003	6/6/2003	6/7/2003
	Gage Height	3.97	3.88	3.78	3.67	3.64	4.29	4.08	4.63	4.95	4.38	4.09	3.94	3.76	3.6	3.55
	Elevation	507.71	507.62	507.52	507.41	507.38	508.03	507.82	508.37	508.69	508.12	507.83	507.68	507.5	507.34	507.29
519.56	Date	6/8/2003	6/9/2003	6/10/2003	6/11/2003	6/12/2003	6/13/2003	6/14/2003	6/15/2003	6/16/2003	6/17/2003	6/18/2003	6/19/2003	6/20/2003	6/21/2003	6/22/2003
	Gage Height	3.51	3.41	3.21	3.34	6.28	7.78	9.71	8.38	6.12	5.22	4.82	4.52	4.17	3.94	3.79
	Elevation	507.25	507.15	506.95	507.08	510.02	511.52	513.45	512.12	509.86	508.96	508.56	508.26	507.91	507.68	507.53
	Date	6/23/2003	6/24/2003	6/25/2003	6/26/2003	6/27/2003	6/28/2003	6/29/2003	6/30/2003	7/1/2003	7/2/2003	7/3/2003	7/4/2003	7/5/2003	7/6/2003	7/7/2003
	Gage Height	3.72	3.59	3.53	3.32	3.4	3.23	3.18	3.25	2.99	3.18	3.18	3.04	2.99	4.36	7.14
	Elevation	507.46	507.33	507.27	507.06	507.14	506.97	506.92	506.73	506.92	506.92	506.78	506.73	508.1	510.88	
	Date	7/8/2003	7/9/2003	7/10/2003	7/11/2003	7/12/2003	7/13/2003	7/14/2003	7/15/2003	7/16/2003	7/17/2003	7/18/2003	7/19/2003	7/20/2003	7/21/2003	7/22/2003
	Gage Height	6.22	7.54	13.41	13.28	12.75	9.75	6.6	5.97	5.73	4.95	8.1	10.74	8.67	6.82	6.97
	Elevation	509.96	511.28	517.15	517.02	516.49	513.49	510.34	509.71	508.69	511.84	514.48	512.41	510.56	510.71	
	Date	7/23/2003	7/24/2003	7/25/2003	7/26/2003	7/27/2003	7/28/2003	7/29/2003	7/30/2003	7/31/2003	8/1/2003	8/2/2003	8/3/2003	8/4/2003	8/5/2003	8/6/2003
	Gage Height	5.96	5.12	4.64	4.3	4.03	3.97	3.74	3.73	3.43	3.46	3.22	3.34	5.32	5.3	4.28
	Elevation	509.7	508.86	508.38	508.04	507.77	507.71	507.48	507.47	507.17	507.2	506.96	507.08	509.06	509.04	508.02
	Date	8/7/2003	8/8/2003	8/9/2003	8/10/2003	8/11/2003	8/12/2003	8/13/2003	8/14/2003	8/15/2003	8/16/2003	8/17/2003	8/18/2003	8/19/2003	8/20/2003	8/21/2003
	Gage Height	3.9	3.78	3.76	3.52	3.21	3.05	3.05	3.04	3.01	3.02	2.76	2.66	2.6	2.54	2.63
	Elevation	507.64	507.52	507.5	507.26	507.65	506.79	506.78	506.75	506.76	506.5	506.4	506.34	506.28	506.37	
	Date	8/22/2003	8/23/2003	8/24/2003	8/25/2003	8/26/2003	8/27/2003	8/28/2003	8/29/2003	8/30/2003	8/31/2003	9/1/2003	9/3/2003	9/4/2003	9/5/2003	9/6/2003
	Gage Height	2.5	2.43	2.4	2.37	2.36	2.34	2.31	3.69	9.41	6.31	15.03	15.82	10.83	8	6.47
	Elevation	506.24	506.17	506.14	506.11	506.1	506.08	506.05	507.43	513.15	510.05	518.77	519.56	514.57	511.74	510.21
	Date	9/7/2003	9/8/2003	9/9/2003	9/10/2003	9/11/2003	9/12/2003	9/13/2003	9/14/2003	9/15/2003	9/16/2003	9/17/2003	9/18/2003	9/19/2003	9/20/2003	9/21/2003
	Gage Height	5.79	5.22	4.79	4.44	4.16	4.01	3.87	3.84	3.67	3.49	3.53	3.32	3.39	3.26	3.1
	Elevation	509.53	508.96	508.53	508.18	507.9	507.75	507.61	507.58	507.41	507.23	507.27	507.06	507.13	507	506.84
	Date	9/22/2003	9/23/2003	9/24/2003	9/25/2003	9/26/2003	9/27/2003	9/28/2003	9/29/2003	9/30/2003	10/1/2003	10/2/2003	10/3/2003	10/4/2003	10/5/2003	10/6/2003
	Gage Height	3.41	3.34	3.95	4.82	4.85	10.72	10.37	7.3	6.15	5.49	5.05	4.81	4.68	4.42	4.17
	Elevation	507.15	507.08	507.69	508.56	508.59	514.46	514.11	511.04	509.89	509.23	508.79	508.55	508.42	508.16	507.91

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation		Date	10/7/2003	10/8/2003	10/9/2003	10/10/2003	10/11/2003	10/12/2003	10/13/2003	10/14/2003	10/15/2003	10/16/2003	10/17/2003	10/18/2003	10/19/2003	10/20/2003	10/21/2003
519.56	Gage Height	Date	4.01	3.94	3.89	3.84	3.8	3.78	3.65	3.91	4.31	4.52	4.21	4.02	3.98	3.75	3.74
	Elevation		507.75	507.68	507.63	507.58	507.54	507.52	507.39	507.65	508.05	508.26	507.95	507.76	507.72	507.49	507.48
	Gage Height	Date	3.71	3.66	3.55	3.57	3.54	3.45	3.74	3.54	3.56	3.41	3.41	3.22	3.39	3.2	3.56
	Elevation		507.45	507.4	507.29	507.31	507.28	507.19	507.48	507.28	507.3	507.15	507.15	506.96	507.13	506.94	507.3
	Gage Height	Date	3.48	3.62	3.61	3.29	3.38	3.28	3.49	3.92	3.82	3.57	3.49	3.37	5.41	13.21	12.87
	Elevation		507.22	507.36	507.35	507.03	507.12	507.02	507.23	507.66	507.56	507.31	507.23	507.11	509.15	516.95	516.61
524.14	Gage Height	Date	10.25	7.66	7.11	10.71	10.33	8.1	7.12	6.57	6.03	5.78	5.45	5.04	4.84	4.85	4.91
	Elevation		513.99	511.4	510.85	514.45	514.07	511.84	510.86	510.31	509.77	509.52	509.19	508.78	508.58	508.59	508.65
	Gage Height	Date	4.95	4.98	5.04	5	5.1	5.48	5.36	4.93	4.85	4.63	4.7	4.49	4.38	4.28	4.09
	Elevation		508.69	508.72	508.78	508.74	508.84	509.22	509.1	508.67	508.59	508.37	508.44	508.23	508.12	508.02	507.83
	Gage Height	Date	4.04	4.09	6.42	9.31	7.44	6.2	5.58	5.38	9.34	10.87	8.38				
	Elevation		507.78	507.83	510.16	513.05	511.18	509.94	509.32	509.12	513.08	514.61	512.12				
Maximum Elevation		Date	1/1/2004	1/2/2004	1/3/2004	1/4/2004	1/5/2004	1/7/2004	1/8/2004	1/9/2004	1/10/2004	1/11/2004	1/12/2004	1/13/2004	1/14/2004	1/15/2004	1/16/2004
524.14	Gage Height	Date	6.98	6.36	6.15	11.06	15.33	7.95	6.66	5.97	5.54	5.28	5.24	4.98	4.87	4.84	4.62
	Elevation		510.72	510.1	509.89	514.8	519.07	511.69	510.4	509.71	509.28	509.02	508.98	508.72	508.61	508.58	508.36
	Gage Height	Date	4.61	4.74	4.59	4.31	4.36	4.22	4.05	4.11	4.26	3.96	4.1	4.11	3.83	3.79	3.73
	Elevation		508.35	508.48	508.33	508.05	508.1	507.96	507.79	507.85	508	507.7	507.84	507.85	507.57	507.53	507.47
	Gage Height	Date	3.69	3.8	3.67	3.54	3.64	3.52	3.62	3.36	3.37	3.54	3.42	3.43	3.42	3.35	3.3
	Elevation		507.43	507.54	507.41	507.28	507.38	507.26	507.36	507.1	507.11	507.28	507.16	507.17	507.16	507.09	507.04
524.14	Gage Height	Date	3.64	4.88	5.66	4.93	4.16	4.09	4.14	3.94	3.8	3.78	3.67	4.05	4.79	4.5	4.9
	Elevation		507.38	508.62	509.4	508.67	507.9	507.83	507.88	507.68	507.54	507.52	507.41	507.79	508.53	508.24	508.64
	Gage Height	Date	9.86	9.99	7.76	6.51	5.78	5.21	5	4.7	4.45	4.44	4.28	4.25	4.18	4.07	
	Elevation		513.6	513.73	511.5	510.25	509.52	508.95	508.74	508.44	508.19	508.18	508.02	508.02	507.99	507.92	507.81
	Gage Height	Date	4.02	3.91	3.71	3.79	3.79	3.92	9.59	17.99	15.48	13.58	10.86	9.9	9.78	8.25	7.11
	Elevation		507.76	507.65	507.45	507.53	507.53	507.66	513.33	521.73	519.22	517.32	514.6	513.64	513.52	511.99	510.85
524.14	Gage Height	Date	6.37	5.81	5.27	5.02	4.82	4.54	4.48	4.37	4.29	4.18	4.02	3.99	4.01	3.83	
	Elevation		510.11	509.55	509.01	508.76	508.56	508.28	508.22	508.11	508.03	507.92	507.76	507.73	507.75	507.57	507.57
	Gage Height	Date	4.04	4.13	4.34	4.43	4.33	4.25	4.25	4.08	3.81	3.88	3.81	3.88	3.81	4.08	3.96
	Elevation		507.78	507.87	508.08	508.17	508.07	507.99	507.99	507.82	507.55	507.62	507.55	507.89	507.9	507.82	507.7
	Gage Height	Date	3.95	3.85	3.78	3.52	3.55	3.59	3.98	4.26	4.2	4.16	5.73	5.87	5.12	4.77	6.13
	Elevation		507.69	507.59	507.52	507.26	507.29	507.33	507.72	507.94	507.9	509.47	509.61	508.86	508.51	509.87	
524.14	Gage Height	Date	6.47	4.99	5.12	5.12	5	6.24	5.84	5.03	4.54	4.36	6.33	7.7	7.59	5.62	4.87
	Elevation		510.21	508.73	508.86	508.86	508.74	509.98	509.58	508.77	508.28	508.1	510.07	511.44	511.33	509.36	508.61

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

18 of 30

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Average Annual Max

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

524.14	Maximum Elevation	Date	6/5/2004	6/6/2004	6/7/2004	6/8/2004	6/9/2004	6/10/2004	6/11/2004	6/12/2004	6/13/2004	6/14/2004	6/15/2004	6/16/2004	6/17/2004	6/18/2004	6/19/2004
	Gage Height	4.51	4.25	3.99	3.94	3.81	3.92	13.87	20.4	19.97	17.55	10.81	10.18	12.81	13.58	9.82	
	Elevation	508.25	507.99	507.73	507.68	507.55	507.66	517.61	524.14	523.71	521.29	514.55	513.92	516.55	517.32	513.56	
	Gage Height	7.16	6.3	5.91	5.46	5.15	4.96	4.84	4.6	4.43	4.17	4.05	3.98	3.9	3.98	4.87	
	Elevation	510.9	510.04	509.65	509.2	508.89	508.7	508.58	508.34	508.17	507.91	507.79	507.72	507.64	507.72	508.61	
	Gage Height	5.06	4.41	5.2	5.05	4.56	11.81	12.43	9.37	6.67	7	6.71	5.74	4.94	4.91	4.85	
	Elevation	508.8	508.15	508.94	508.79	508.3	515.55	516.17	513.11	510.41	510.45	509.48	508.68	508.65	508.59		
	Gage Height	4.34	4.09	3.92	3.75	3.51	3.41	3.23	3.16	3.12	3.09	3.12	2.99	2.9	2.92		
	Elevation	508.08	507.83	507.66	507.49	507.25	507.15	507.15	506.97	506.9	506.86	506.85	506.83	506.86	506.73	506.66	
	Gage Height	3.15	3.14	3.19	2.93	2.72	2.66	2.68	2.89	2.82	2.64	2.58	2.54	2.48	2.46	2.45	
	Elevation	506.89	506.88	506.93	506.67	506.46	506.4	506.42	506.63	506.56	506.38	506.32	506.28	506.22	506.2	506.19	
	Gage Height	2.5	2.51	2.53	2.53	2.44	2.49	3.81	5.18	5.24	5.96	6.6	5.13	4.34	3.47	3.26	
	Elevation	506.24	506.25	506.27	506.27	506.18	506.23	507.55	508.92	508.98	509.7	510.34	508.87	508.08	507.21	507	
	Gage Height	3.17	2.88	2.98	2.71	2.69	2.69	2.74	2.69	2.64	2.47	2.44	2.86	2.69	2.59	2.42	
	Elevation	506.91	506.62	506.72	506.45	506.43	506.43	506.48	506.43	506.38	506.21	506.18	506.6	506.43	506.33	506.16	
	Gage Height	2.34	2.3	2.34	2.46	2.28	2.38	2.25	2.28	2.38	2.3	2.33	2.24	2.32	2.32	2.32	
	Elevation	506.08	506.04	506.08	506.2	506.02	506.12	505.99	506.02	506.12	506.04	506.07	505.98	506.06	506.06	506.06	
	Gage Height	2.25	2.22	2.22	2.24	2.23	2.26	2.31	2.46	2.55	2.62	2.4	2.62	3.37	4.06	3.64	
	Elevation	505.99	505.96	505.96	505.98	505.97	506	506.05	506.2	506.29	506.36	506.14	506.36	507.11	507.8	507.38	
	Gage Height	3.42	3.21	4.82	4.51	3.81	4.02	4.36	4.46	4.84	5.54	5.03	7.27	8.28	8.07	7.72	
	Elevation	507.16	506.95	508.56	508.25	507.55	507.76	508.1	508.2	508.58	509.28	508.77	511.01	512.02	511.81	511.46	
	Gage Height	6.5	5.86	5.2	4.81	4.5	4.61	4.35	4.13	3.99	3.89	3.89	3.95	4.26	4.4	4.07	
	Elevation	510.24	509.6	508.94	508.55	508.24	508.35	508.09	507.87	507.73	507.63	507.63	507.69	508	508.14	507.81	
	Gage Height	5.35	10.68	10.23	10.19	12.21	10.69	12.77	12.11	10.17	8.17	7.32	11.2/2004	11/3/2004	11/4/2004	11/5/2004	
	Elevation	509.09	514.42	513.97	513.93	515.95	514.43	516.51	515.85	513.91	511.91	511.06	510.7	515.1	517.79	516.36	
	Gage Height	10.68	8.19	7.15	6.58	5.94	5.55	5.37	4.83	4.65	4.58	4.5	4.09	4.09	4.44	4.38	
	Elevation	514.42	511.93	510.89	510.32	509.68	509.29	509.11	508.57	508.39	508.32	508.24	507.83	507.83	508.18	508.12	
	Gage Height	4.23	4.19	4.12	4.16	4.16	507.9	507.86	507.9								
	Gage Height	507.97	507.93	507.86													
523.57	Maximum Elevation	Date	1/1/2005	1/2/2005	1/3/2005	1/4/2005	1/5/2005	1/6/2005	1/7/2005	1/8/2005	1/9/2005	1/10/2005	1/11/2005	1/12/2005	1/13/2005	1/15/2005	1/19/2005
	Gage Height	4.06	4.03	4.78	9.5	13.78	17.72	16.25	11.87	8.45	7.83	9.29	17.57	19.62	19.83	6.78	
	Elevation	507.8	507.77	508.52	513.24	517.52	521.46	519.99	515.61	512.19	511.57	513.03	521.31	523.36	523.57	510.52	
	Gage Height	6.3	5.89	5.61	5.2	5.08	5.13	5.27	5.3	4.8	4.78	4.71	4.49	4.39	4.3	4.22	
	Elevation	510.04	509.63	509.35	508.94	508.82	508.87	509.01	509.04	508.54	508.52	508.45	508.23	508.13	508.04	507.96	

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	2/4/2005	2/5/2005	2/6/2005	2/7/2005	2/8/2005	2/9/2005	2/10/2005	2/11/2005	2/12/2005	2/13/2005	2/14/2005	2/15/2005	2/16/2005	2/17/2005	2/18/2005
	Gage Height	4.18	4.3	5.01	6.08	8.46	8.85	7.61	6.62	6.22	6.65	13.01	12.48	11.49	9.09	7.62
	Elevation	507.92	508.04	508.75	509.82	512.2	512.59	511.35	510.36	509.96	510.39	516.75	516.22	515.23	512.83	511.36
	Date	2/19/2005	2/20/2005	2/21/2005	2/22/2005	2/23/2005	2/24/2005	2/25/2005	2/26/2005	2/27/2005	2/28/2005	3/1/2005	3/2/2005	3/3/2005	3/4/2005	3/5/2005
	Gage Height	6.6	6.21	6.2	6.29	5.94	5.68	5.55	5.28	5.05	5.1	4.92	4.76	4.49	4.57	4.49
	Elevation	510.34	509.95	509.94	510.03	509.68	509.42	509.29	509.02	508.79	508.84	508.66	508.5	508.23	508.31	508.23
	Date	3/6/2005	3/8/2005	3/9/2005	3/10/2005	3/11/2005	3/12/2005	3/13/2005	3/14/2005	3/15/2005	3/16/2005	3/17/2005	3/18/2005	3/19/2005	3/20/2005	3/21/2005
	Gage Height	4.36	4.35	4.16	4	4.16	4.15	4.01	3.82	3.82	3.85	3.76	3.76	3.8	3.79	3.59
	Elevation	508.1	508.09	507.9	507.74	507.9	507.89	507.75	507.56	507.56	507.59	507.5	507.5	507.54	507.53	507.33
	Date	3/22/2005	3/23/2005	3/24/2005	3/25/2005	3/26/2005	3/27/2005	3/28/2005	3/29/2005	3/30/2005	3/31/2005	4/1/2005	4/2/2005	4/3/2005	4/4/2005	4/5/2005
	Gage Height	3.75	3.74	3.98	4.43	5.19	5.17	4.79	4.59	4.31	4.32	4.24	4.27	4.34	4.21	4.11
	Elevation	507.49	507.48	507.72	508.17	508.93	508.91	508.53	508.33	508.05	508.06	507.98	508.01	508.08	507.95	507.85
	Date	4/6/2005	4/7/2005	4/8/2005	4/9/2005	4/10/2005	4/12/2005	4/13/2005	4/14/2005	4/15/2005	4/16/2005	4/17/2005	4/18/2005	4/19/2005	4/20/2005	4/21/2005
	Gage Height	4.14	4.07	3.87	3.87	3.82	3.95	4.38	4.59	4.32	4.15	3.98	3.96	3.79	3.97	5.44
	Elevation	507.88	507.81	507.61	507.61	507.56	507.69	508.12	508.33	508.06	507.89	507.72	507.7	507.53	507.71	509.18
	Date	4/22/2005	4/23/2005	4/24/2005	4/25/2005	4/26/2005	4/27/2005	4/28/2005	4/29/2005	4/30/2005	5/1/2005	5/2/2005	5/3/2005	5/4/2005	5/5/2005	5/6/2005
	Gage Height	8.09	7.9	6.91	6.06	5.65	5.28	4.83	4.66	4.55	4.43	4.3	4.17	4.08	3.97	3.84
	Elevation	511.83	511.64	510.65	509.8	509.39	509.02	508.57	508.4	508.29	508.17	508.04	507.91	507.82	507.71	507.58
	Date	5/7/2005	5/8/2005	5/9/2005	5/10/2005	5/11/2005	5/12/2005	5/13/2005	5/14/2005	5/15/2005	5/16/2005	5/17/2005	5/18/2005	5/19/2005	5/20/2005	5/21/2005
	Gage Height	3.98	3.85	3.85	3.78	3.83	3.71	3.73	3.75	3.64	3.53	3.47	3.44	3.79	3.93	4.31
	Elevation	507.72	507.59	507.59	507.52	507.57	507.45	507.47	507.49	507.38	507.27	507.21	507.18	507.53	507.67	508.05
	Date	5/22/2005	5/23/2005	5/24/2005	5/25/2005	5/26/2005	5/27/2005	5/28/2005	5/29/2005	5/30/2005	5/31/2005	6/1/2005	6/2/2005	6/4/2005	6/5/2005	6/6/2005
	Gage Height	3.86	3.72	3.62	3.51	3.45	3.39	3.35	3.32	3.23	3.13	3.1	3.16	3.1	3.01	3.03
	Elevation	507.6	507.46	507.36	507.25	507.19	507.13	507.09	507.06	506.97	506.87	506.84	506.9	506.84	506.75	506.77
523.57	Date	6/7/2005	6/8/2005	6/9/2005	6/10/2005	6/11/2005	6/12/2005	6/13/2005	6/14/2005	6/15/2005	6/16/2005	6/17/2005	6/18/2005	6/19/2005	6/20/2005	6/21/2005
	Gage Height	3.07	4.15	5.27	4.24	3.9	3.8	3.55	4.57	5.39	4.6	4.06	3.7	3.47	3.36	3.17
	Elevation	506.81	507.89	509.01	507.98	507.64	507.54	507.29	508.31	509.13	508.34	507.8	507.44	507.21	507.1	506.91
	Date	6/22/2005	6/23/2005	6/24/2005	6/25/2005	6/26/2005	6/27/2005	6/28/2005	6/29/2005	6/30/2005	7/1/2005	7/2/2005	7/3/2005	7/4/2005	7/5/2005	7/6/2005
	Gage Height	3.23	3.01	2.97	2.91	2.95	3.03	3.02	3.49	3.39	3.18	2.91	2.77	2.67	2.46	2.41
	Elevation	506.97	506.75	506.71	506.65	506.69	506.77	506.76	507.23	507.13	506.92	506.65	506.51	506.41	506.2	506.15
	Date	7/7/2005	7/8/2005	7/9/2005	7/10/2005	7/11/2005	7/12/2005	7/13/2005	7/14/2005	7/15/2005	7/16/2005	7/17/2005	7/18/2005	7/19/2005	7/20/2005	7/21/2005
	Gage Height	2.46	2.47	2.56	2.31	2.22	2.33	2.42	3.24	2.95	2.82	2.77	3.02	3.21	3.36	3.64
	Elevation	506.2	506.21	506.3	506.05	505.96	506.07	506.16	506.98	506.69	506.56	506.51	506.76	506.95	507.1	507.38
	Date	7/22/2005	7/23/2005	7/24/2005	7/25/2005	7/26/2005	7/27/2005	7/28/2005	7/29/2005	7/30/2005	7/31/2005	8/1/2005	8/2/2005	8/3/2005	8/4/2005	8/5/2005
	Gage Height	6.73	7.44	6.27	4.3	3.76	3.88	4.52	3.97	3.49	3.16	2.87	2.83	2.74	2.69	2.65
	Elevation	510.47	511.18	510.01	508.04	507.5	507.62	508.26	507.71	507.23	506.9	506.61	506.57	506.48	506.43	506.39
	Date	8/6/2005	8/7/2005	8/8/2005	8/9/2005	8/10/2005	8/11/2005	8/12/2005	8/13/2005	8/14/2005	8/15/2005	8/16/2005	8/17/2005	8/18/2005	8/19/2005	8/20/2005
	Gage Height	2.61	2.52	2.45	2.42	2.36	2.36	2.69	2.51	2.64	2.78	2.69	2.48	2.38	2.38	2.41
	Elevation	506.35	506.26	506.19	506.16	506.1	506.1	506.43	506.25	506.38	506.52	506.43	506.22	506.12	506.12	506.15
	Date	8/21/2005	8/22/2005	8/23/2005	8/24/2005	8/25/2005	8/26/2005	8/27/2005	8/28/2005	8/29/2005	8/30/2005	8/31/2005	9/1/2005	9/2/2005	9/3/2005	9/5/2005
	Gage Height	2.72	2.71	2.42	2.31	2.27	2.23	2.23	2.22	2.21	2.2	2.18	2.15	2.14	2.13	2.11
	Elevation	506.46	506.45	506.16	506.05	506.01	505.97	505.97	505.96	505.95	505.94	505.92	505.89	505.88	505.87	505.85
	Date	9/6/2005	9/7/2005	9/8/2005	9/9/2005	9/10/2005	9/11/2005	9/12/2005	9/13/2005	9/14/2005	9/15/2005	9/16/2005	9/17/2005	9/18/2005	9/19/2005	9/20/2005
	Gage Height	2.1	2.13	2.1	2.12	2.1	2.09	2.07	2.08	2.11	2.14	2.39	2.65	2.55	2.41	2.4
	Elevation	505.84	505.87	505.84	505.86	505.84	505.83	505.81	505.82	505.85	505.88	506.13	506.39	506.29	506.15	506.14
	Date	9/21/2005	9/22/2005	9/23/2005	9/24/2005	9/25/2005	9/26/2005	9/27/2005	9/28/2005	9/29/2005	9/30/2005	10/1/2005	10/2/2005	10/3/2005	10/4/2005	10/5/2005
	Gage Height	2.35	2.44	2.3	2.3	2.45	2.6	3.41	3.3	3.11	3.2	3.14	3.17	4.07	3.9	3.09
	Elevation	506.09	506.18	506.04	506.04	506.19	506.34	507.15	507.04	506.85	506.94	506.88	506.91	507.81	507.64	506.83

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	10/6/2005	10/7/2005	10/8/2005	10/9/2005	10/10/2005	10/11/2005	10/12/2005	10/13/2005	10/14/2005	10/15/2005	10/20/2005	10/21/2005	10/22/2005	10/23/2005	10/24/2005
	Gage Height	3.14	3.11	2.61	2.6	2.58	2.56	2.53	2.52	2.34	2.3	2.46	2.67	3.1	3.03	2.92
	Elevation	506.88	506.85	506.35	506.34	506.32	506.3	506.27	506.26	506.08	506.04	506.2	506.41	506.84	506.77	506.66
	Date	10/25/2005	10/26/2005	10/27/2005	11/4/2005	11/5/2005	11/6/2005	11/7/2005	11/8/2005	11/9/2005	11/10/2005	11/11/2005	11/12/2005	11/13/2005	11/14/2005	11/15/2005
	Gage Height	2.73	2.65	2.44	3.71	3.3	3.43	3.22	3.59	3.48	3.19	3.04	2.92	2.86	2.89	3.17
	Elevation	506.47	506.39	506.18	507.45	507.04	507.17	506.96	507.33	507.22	506.93	506.78	506.66	506.6	506.63	506.91
523.57	Date	11/16/2005	11/17/2005	11/18/2005	11/19/2005	11/20/2005	11/21/2005	11/22/2005	11/23/2005	11/24/2005	11/25/2005	11/26/2005	11/27/2005	11/28/2005	11/29/2005	11/30/2005
	Gage Height	4.03	4.6	4.27	3.69	3.56	3.42	3.36	3.11	3.36	2.99	2.83	3.04	3.05	4.91	5.37
	Elevation	507.77	508.34	508.01	507.43	507.3	507.16	507.1	506.85	507.1	506.73	506.57	506.78	506.79	508.65	509.11
	Date	12/1/2005	12/2/2005	12/3/2005	12/4/2005	12/5/2005	12/6/2005	12/7/2005	12/8/2005	12/9/2005	12/10/2005	12/11/2005	12/12/2005	12/13/2005	12/14/2005	12/15/2005
	Gage Height	4.68	4.24	3.82	3.82	3.38	3.19	3.53	3.22	3.21	3.43	3.24	3.22	3.18	3.1	3.07
	Elevation	508.42	507.98	507.56	507.56	507.12	506.93	507.27	506.96	507.17	506.98	506.96	506.92	506.84	506.81	
	Date	12/16/2005	12/17/2005	12/18/2005	12/19/2005	12/20/2005	12/21/2005	12/22/2005	12/23/2005	12/24/2005	12/25/2005	12/27/2005	12/28/2005	12/29/2005	12/30/2005	12/31/2005
	Gage Height	3.3	3.17	3.2	3.19	2.98	3.01	3.05	2.98	2.99	3.34	4.57	4.99	6.76	6.53	6.19
	Elevation	507.04	506.91	506.94	506.93	506.72	506.75	506.79	506.72	506.73	507.08	508.31	508.73	510.5	510.27	509.93
518.73	Date	1/1/2006	1/2/2006	1/3/2006	1/4/2006	1/5/2006	1/6/2006	1/7/2006	1/8/2006	1/9/2006	1/10/2006	1/11/2006	1/12/2006	1/13/2006	1/14/2006	1/15/2006
	Gage Height	6.32	5.8	5.64	5.18	4.92	4.56	4.39	4.16	4.19	3.97	3.87	3.78	3.96	3.99	4.34
	Elevation	510.06	509.54	509.38	508.92	508.66	508.3	508.13	507.9	507.93	507.71	507.61	507.52	507.7	507.73	508.08
	Date	1/16/2006	1/17/2006	1/18/2006	1/19/2006	1/20/2006	1/21/2006	1/22/2006	1/23/2006	1/24/2006	1/25/2006	1/26/2006	1/27/2006	1/28/2006	1/29/2006	1/30/2006
	Gage Height	4.52	4.61	5.06	4.98	4.7	5.43	6.52	6.08	5.54	5.1	4.63	4.35	4.25	5.27	7.02
	Elevation	508.26	508.35	508.8	508.72	508.44	509.17	510.26	509.82	508.84	508.37	508.09	507.99	509.01	510.76	
	Date	1/31/2006	2/1/2006	2/2/2006	2/3/2006	2/4/2006	2/5/2006	2/6/2006	2/7/2006	2/8/2006	2/9/2006	2/10/2006	2/11/2006	2/12/2006	2/13/2006	2/14/2006
	Gage Height	6.45	5.78	5.25	4.98	4.79	4.6	4.37	4.14	4.07	3.99	3.9	3.85	3.87	3.6	3.65
	Elevation	510.19	509.52	508.99	508.72	508.53	508.34	508.11	507.88	507.81	507.73	507.64	507.59	507.61	507.34	507.39
	Date	2/15/2006	2/16/2006	2/17/2006	2/18/2006	2/19/2006	2/20/2006	2/21/2006	2/22/2006	2/23/2006	2/24/2006	2/25/2006	2/26/2006	2/27/2006	2/28/2006	3/1/2006
	Gage Height	3.67	3.72	5.1	5.68	4.58	4.43	4.92	4.37	4.18	3.94	3.87	3.63	3.59	3.7	3.68
	Elevation	507.41	507.46	508.84	509.42	508.32	508.17	508.66	508.11	507.92	507.68	507.61	507.37	507.33	507.44	507.42
	Date	3/2/2006	3/3/2006	3/4/2006	3/5/2006	3/6/2006	3/7/2006	3/8/2006	3/9/2006	3/10/2006	3/11/2006	3/12/2006	3/13/2006	3/14/2006	3/15/2006	3/16/2006
	Gage Height	3.54	3.6	3.42	3.37	3.4	3.34	3.6	4.88	9.32	9.11	12.87	13.85	11.72	9.96	8.4
	Elevation	507.28	507.34	507.16	507.11	507.14	507.08	507.34	508.62	513.06	512.85	516.61	517.59	515.46	513.7	512.14
	Date	3/17/2006	3/18/2006	3/19/2006	3/20/2006	3/21/2006	3/22/2006	3/23/2006	3/24/2006	3/25/2006	3/26/2006	3/27/2006	3/28/2006	3/29/2006	3/30/2006	3/31/2006
	Gage Height	6.92	6.16	5.59	5.39	5.25	4.99	4.81	4.67	4.65	4.43	4.23	4.38	4.35	4.2	4.27
	Elevation	510.66	509.9	509.33	509.13	508.99	508.73	508.55	508.41	508.39	508.17	507.97	508.12	508.09	507.94	508.01
	Date	4/1/2006	4/2/2006	4/3/2006	4/4/2006	4/5/2006	4/6/2006	4/7/2006	4/8/2006	4/9/2006	4/10/2006	4/11/2006	4/12/2006	4/13/2006	4/14/2006	4/15/2006
	Gage Height	4.3	4.37	4.6	5.63	5.57	5.51	7.69	8.34	6.81	5.92	5.41	5.1	4.87	6.55	7.97
	Elevation	508.04	508.11	508.34	509.37	509.31	509.25	511.43	512.08	510.55	509.66	509.15	508.84	508.61	510.29	511.71
	Date	4/16/2006	4/17/2006	4/18/2006	4/19/2006	4/20/2006	4/22/2006	4/23/2006	4/24/2006	4/25/2006	4/26/2006	4/27/2006	4/28/2006	4/29/2006	4/30/2006	5/1/2006
	Gage Height	7.56	10.94	12.62	11.67	9.45	6.62	6.05	5.53	5.33	4.99	4.8	4.56	4.44	4.52	4.57
	Elevation	511.3	514.68	516.36	515.41	513.19	510.36	509.79	509.27	508.73	508.54	508.3	508.18	508.26	508.31	
	Date	5/2/2006	5/3/2006	5/4/2006	5/5/2006	5/6/2006	5/7/2006	5/8/2006	5/9/2006	5/10/2006	5/11/2006	5/12/2006	5/13/2006	5/14/2006	5/15/2006	5/16/2006
	Gage Height	4.86	5.39	5.15	4.73	4.56	4.36	4.22	3.97	4.24	5.66	5.74	5.56	5.37	5.57	6.04
	Elevation	508.6	509.13	508.89	508.47	508.3	508.1	507.96	507.71	507.98	509.4	509.48	509.3	509.11	509.31	509.78
	Date	5/17/2006	5/18/2006	5/19/2006	5/20/2006	5/21/2006	5/22/2006	5/23/2006	5/24/2006	5/25/2006	5/26/2006	5/27/2006	5/28/2006	5/29/2006	5/30/2006	5/31/2006
	Gage Height	5.61	5.59	5.24	4.72	4.54	4.14	4.1	4.03	4.36	6.4	5.5	4.79	4.3	5.26	6.65
	Elevation	509.35	509.33	508.98	508.46	508.28	507.88	507.84	507.77	508.1	510.14	509.24	508.53	508.04	509	510.39
	Date	6/1/2006	6/2/2006	6/3/2006	6/4/2006	6/5/2006	6/6/2006	6/7/2006	6/8/2006	6/9/2006	6/10/2006	6/11/2006	6/12/2006	6/13/2006	6/14/2006	6/15/2006
	Gage Height	7.44	6.07	5.34	4.81	4.5	4.2	4.07	3.81	3.71	3.77	3.74	3.64	3.51	3.5	3.19
	Elevation	511.18	509.81	509.08	508.55	508.24	507.94	507.81	507.55	507.45	507.51	507.48	507.38	507.25	507.24	506.93

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	6/16/2006	6/17/2006	6/18/2006	6/19/2006	6/20/2006	6/21/2006	6/22/2006	6/23/2006	6/24/2006	6/25/2006	6/26/2006	6/27/2006	6/29/2006	6/30/2006	7/1/2006
	Gage Height	3.26	3.03	3.29	4.05	4.27	3.77	3.58	3.33	3.29	3.17	3.1	3.39	3.39	2.81	2.77
	Elevation	507	506.77	507.03	507.79	508.01	507.51	507.32	507.07	507.03	506.91	506.84	507.13	507.13	506.55	506.51
	Date	7/2/2006	7/3/2006	7/4/2006	7/5/2006	7/6/2006	7/7/2006	7/8/2006	7/9/2006	7/10/2006	7/11/2006	7/12/2006	7/13/2006	7/14/2006	7/15/2006	7/16/2006
	Gage Height	2.77	2.67	4.24	5	4.07	3.42	3.02	2.87	2.76	3.74	4.12	6.66	6.72	4.78	3.98
	Elevation	506.51	506.41	507.98	508.74	507.81	507.16	506.76	506.61	506.5	507.48	507.86	510.4	510.46	508.52	507.72
	Date	7/17/2006	7/18/2006	7/19/2006	7/20/2006	7/21/2006	7/22/2006	7/23/2006	7/24/2006	7/25/2006	7/26/2006	7/27/2006	7/28/2006	7/29/2006	7/30/2006	7/31/2006
	Gage Height	3.51	3.18	2.96	2.85	3.16	3.23	2.92	2.66	2.47	2.37	2.59	4.67	6.08	4.84	4.31
	Elevation	507.25	506.92	506.7	506.59	506.9	506.97	506.66	506.4	506.21	506.11	506.33	508.41	509.82	508.58	508.05
	Date	8/1/2006	8/2/2006	8/3/2006	8/4/2006	8/5/2006	8/6/2006	8/7/2006	8/8/2006	8/9/2006	8/10/2006	8/11/2006	8/12/2006	8/13/2006	8/14/2006	8/15/2006
	Gage Height	3.68	3.26	2.99	2.78	2.61	2.47	2.45	2.41	2.39	2.42	2.66	3.77	3.09	3.05	2.58
	Elevation	507.42	507	506.73	506.52	506.35	506.21	506.19	506.15	506.13	506.16	506.4	507.51	506.83	506.79	506.32
	Date	8/16/2006	8/17/2006	8/18/2006	8/19/2006	8/20/2006	8/21/2006	8/22/2006	8/23/2006	8/24/2006	8/25/2006	8/26/2006	8/27/2006	8/28/2006	8/29/2006	8/30/2006
	Gage Height	2.73	2.36	2.48	2.65	2.68	2.39	2.31	2.22	2.18	2.15	2.13	2.11	2.66	2.82	2.96
	Elevation	506.47	506.1	506.22	506.39	506.42	506.13	506.05	505.96	505.89	505.87	505.85	506.4	506.56	506.7	
	Date	8/31/2006	9/1/2006	9/2/2006	9/3/2006	9/4/2006	9/5/2006	9/7/2006	9/8/2006	9/9/2006	9/10/2006	9/11/2006	9/12/2006	9/13/2006	9/14/2006	9/15/2006
	Gage Height	2.61	2.49	2.39	2.23	2.18	2.15	2.65	2.77	2.55	2.35	2.33	2.52	5.57	5.59	3.86
	Elevation	506.35	506.23	506.13	505.97	505.92	506.39	506.51	506.29	506.09	506.07	506.26	509.31	509.33	507.6	
	Date	9/16/2006	9/17/2006	9/18/2006	9/19/2006	9/20/2006	9/21/2006	9/22/2006	9/23/2006	9/24/2006	9/25/2006	9/26/2006	9/27/2006	9/28/2006	9/29/2006	9/30/2006
	Gage Height	3.45	2.98	3.26	2.98	2.92	2.5	2.64	2.46	2.66	2.51	2.36	2.34	2.69	2.42	2.33
	Elevation	507.19	506.72	507	506.72	506.66	506.24	506.38	506.2	506.4	506.25	506.1	506.08	506.43	506.16	506.07
518.73	Date	10/1/2006	10/2/2006	10/3/2006	10/4/2006	10/5/2006	10/6/2006	10/7/2006	10/8/2006	10/9/2006	10/10/2006	10/11/2006	10/12/2006	10/13/2006	10/14/2006	10/15/2006
	Gage Height	2.33	2.15	2.66	3.08	3.66	2.73	2.52	2.4	2.7	2.27	2.59	2.72	2.43	2.41	2.35
	Elevation	506.07	505.89	506.4	506.82	507.4	506.47	506.26	506.14	506.44	506.01	506.33	506.46	506.17	506.15	506.09
	Date	10/16/2006	10/17/2006	10/18/2006	10/19/2006	10/20/2006	10/21/2006	10/22/2006	10/23/2006	10/24/2006	10/25/2006	10/26/2006	10/27/2006	10/28/2006	10/29/2006	10/30/2006
	Gage Height	2.62	4.89	6.96	6.49	5.15	4.52	4.15	3.82	3.59	3.37	3.44	3.94	5.03	4.95	4.37
	Elevation	506.36	508.63	510.7	510.23	508.89	508.26	507.89	507.56	507.33	507.11	507.18	507.68	508.77	508.69	508.11
	Date	10/31/2006	11/1/2006	11/2/2006	11/3/2006	11/4/2006	11/5/2006	11/6/2006	11/7/2006	11/8/2006	11/9/2006	11/10/2006	11/11/2006	11/12/2006	11/13/2006	11/14/2006
	Gage Height	4.23	3.78	3.63	3.25	3.73	2.97	3.15	3.4	3.04	3.26	3.26	3.35	3.49	3.79	3.64
	Elevation	507.97	507.52	507.37	506.99	507.47	506.71	506.89	507.14	506.78	507	507	507.09	507.23	507.53	507.38
	Date	11/15/2006	11/16/2006	11/17/2006	11/18/2006	11/19/2006	11/20/2006	11/21/2006	11/22/2006	11/23/2006	11/24/2006	11/25/2006	11/26/2006	11/27/2006	11/28/2006	11/29/2006
	Gage Height	3.55	5.03	8.88	7.59	6.42	5.45	5.13	4.57	4.66	4.11	4.17	4.06	3.96	3.57	3.86
	Elevation	507.29	508.77	512.62	511.33	510.16	509.19	508.87	508.31	508.4	507.85	507.91	507.8	507.7	507.31	507.6
	Date	11/30/2006	12/1/2006	12/2/2006	12/3/2006	12/4/2006	12/5/2006	12/6/2006	12/7/2006	12/8/2006	12/9/2006	12/10/2006	12/11/2006	12/12/2006	12/13/2006	12/14/2006
	Gage Height	4.46	11.42	12.97	10.83	7.75	6.44	5.51	5.1	4.61	4.53	4.3	4.06	4.41	6.61	6.92
	Elevation	508.2	515.16	516.71	514.57	511.49	510.18	509.25	508.84	508.35	508.27	508.04	507.8	508.15	510.35	510.66
	Date	12/15/2006	12/16/2006	12/17/2006	12/18/2006	12/19/2006	12/20/2006	12/21/2006	12/22/2006	12/23/2006	12/24/2006	12/25/2006	12/26/2006	12/27/2006	12/28/2006	12/29/2006
	Gage Height	6.17	5.29	4.91	4.86	4.91	4.71	6.18	12.8	14.99	12.93	9.55	7.62	6.56	5.96	5.45
	Elevation	509.91	509.03	508.65	508.6	508.65	508.45	509.92	516.54	518.73	516.67	513.29	511.36	510.3	509.7	509.19
	Date	12/30/2006	12/31/2006													
	Gage Height	5.11	6.5													
	Elevation	508.85	510.24													
517.09	Date	1/1/2007	1/2/2007	1/3/2007	1/4/2007	1/5/2007	1/6/2007	1/7/2007	1/8/2007	1/9/2007	1/10/2007	1/11/2007	1/12/2007	1/13/2007	1/14/2007	1/15/2007
	Gage Height	10.56	9.48	7.58	6.95	8.43	9.16	7.58	6.92	6.46	6.05	5.73	5.31	12.66	8.27	6.94
	Elevation	514.3	513.22	511.32	510.69	512.17	512.9	511.32	510.66	510.2	509.79	509.47	509.05	516.4	512.01	510.68
	Date	1/20/2007	1/21/2007	1/22/2007	1/23/2007	1/24/2007	1/25/2007	1/26/2007	1/27/2007	1/28/2007	1/29/2007	1/30/2007	1/31/2007	2/1/2007	2/2/2007	2/3/2007
	Gage Height	6.29	5.84	5.63	5.31	5.13	4.88	4.73	4.72	4.73	4.28	4.44	4.27	4.31	4.39	4.21
	Elevation	510.03	509.58	509.37	509.05	508.87	508.62	508.47	508.46	508.47	508.02	508.18	508.01	508.05	508.13	507.95

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	2/4/2007	2/5/2007	2/6/2007	2/7/2007	2/8/2007	2/9/2007	2/10/2007	2/11/2007	2/12/2007	2/13/2007	2/14/2007	2/15/2007	2/16/2007	2/17/2007	2/18/2007
	Gage Height	3.98	4.01	4.13	4.2	4.17	4.07	3.87	3.82	3.71	3.98	3.75	3.56	3.82	3.77	4.14
	Elevation	507.72	507.75	507.87	507.94	507.91	507.81	507.61	507.56	507.45	507.72	507.49	507.3	507.56	507.51	507.88
	Date	2/19/2007	2/20/2007	2/21/2007	2/22/2007	2/23/2007	2/24/2007	2/25/2007	2/26/2007	2/27/2007	2/28/2007	3/1/2007	3/2/2007	3/3/2007	3/4/2007	3/5/2007
	Gage Height	4.11	3.81	3.63	3.77	4.03	4.19	6.1	10.04	9.73	7.61	8.12	13.35	11.61	8.1	6.3
	Elevation	507.85	507.55	507.37	507.51	507.77	507.93	509.84	513.78	513.47	511.35	511.86	517.09	515.35	511.84	510.04
	Date	3/6/2007	3/7/2007	3/8/2007	3/9/2007	3/10/2007	3/11/2007	3/12/2007	3/13/2007	3/14/2007	3/15/2007	3/16/2007	3/17/2007	3/18/2007	3/19/2007	3/20/2007
	Gage Height	5.72	5.4	4.96	4.99	5.61	6.34	5.85	5.62	5.47	5.53	5.32	4.94	4.66	4.76	5.33
	Elevation	509.46	509.14	508.7	508.73	509.35	510.08	509.59	509.36	509.21	509.27	509.06	508.68	508.4	508.5	509.07
	Date	3/21/2007	3/22/2007	3/23/2007	3/24/2007	3/25/2007	3/26/2007	3/27/2007	3/28/2007	3/29/2007	3/30/2007	3/31/2007	4/1/2007	4/2/2007	4/3/2007	4/4/2007
	Gage Height	5.14	5.08	8.05	11.78	12.64	10.95	8.26	7.03	6.52	6.01	5.67	5.42	5.44	5.37	5.23
	Elevation	508.88	508.82	511.79	515.52	516.38	514.69	512	510.77	510.26	509.75	509.41	509.16	509.18	509.11	508.97
	Date	4/5/2007	4/6/2007	4/7/2007	4/8/2007	4/9/2007	4/10/2007	4/11/2007	4/12/2007	4/13/2007	4/14/2007	4/15/2007	4/16/2007	4/17/2007	4/18/2007	4/19/2007
	Gage Height	4.89	4.67	4.49	4.35	4.25	4.22	4.38	5.27	5.33	5.18	5.4	5.34	4.99	4.82	4.6
	Elevation	508.63	508.41	508.23	508.09	507.99	507.96	508.12	509.01	509.07	508.92	509.14	509.08	508.73	508.56	508.34
	Date	4/20/2007	4/21/2007	4/22/2007	4/23/2007	4/24/2007	4/25/2007	4/26/2007	4/27/2007	4/28/2007	4/29/2007	4/30/2007	5/1/2007	5/2/2007	5/3/2007	5/4/2007
	Gage Height	4.43	4.24	4.21	4.14	4.07	4.77	8.76	9.27	8.03	6.52	5.81	5.37	5.03	4.78	4.61
	Elevation	508.17	507.98	507.95	507.88	507.81	508.51	512.5	513.01	511.77	510.26	509.55	509.11	508.77	508.52	508.35
	Date	5/5/2007	5/6/2007	5/7/2007	5/8/2007	5/9/2007	5/10/2007	5/11/2007	5/12/2007	5/13/2007	5/14/2007	5/15/2007	5/16/2007	5/17/2007	5/18/2007	5/19/2007
	Gage Height	4.48	4.36	4.09	4	4.05	3.97	3.92	3.79	3.73	3.54	3.67	3.69	3.66	3.52	3.45
	Elevation	508.22	508.1	507.83	507.74	507.79	507.71	507.66	507.53	507.47	507.28	507.41	507.43	507.4	507.26	507.19
	Date	5/20/2007	5/21/2007	5/22/2007	5/23/2007	5/24/2007	5/25/2007	5/26/2007	5/27/2007	5/28/2007	5/29/2007	5/30/2007	5/31/2007	6/1/2007	6/2/2007	6/3/2007
	Gage Height	3.36	3.26	3.23	3.43	3.12	3.08	3.37	3.78	4.89	4.43	4	3.75	3.65	3.55	3.5
	Elevation	507.1	507	506.97	507.17	506.86	506.82	507.11	507.52	508.63	508.17	507.74	507.49	507.39	507.29	507.24
517.09	Date	6/4/2007	6/5/2007	6/6/2007	6/7/2007	6/8/2007	6/9/2007	6/10/2007	6/11/2007	6/12/2007	6/13/2007	6/14/2007	6/15/2007	6/16/2007	6/17/2007	6/18/2007
	Gage Height	3.55	3.62	3.62	3.39	3.4	3.11	3.14	3.05	3	2.8	3.02	2.7	2.63	2.61	2.57
	Elevation	507.29	507.36	507.36	507.13	507.14	506.85	506.88	506.79	506.74	506.54	506.76	506.44	506.37	506.35	506.31
	Date	6/19/2007	6/20/2007	6/21/2007	6/22/2007	6/23/2007	6/24/2007	6/25/2007	6/26/2007	6/27/2007	6/28/2007	6/29/2007	6/30/2007	7/1/2007	7/2/2007	7/3/2007
	Gage Height	2.8	3.04	2.83	2.92	3.02	3.39	3.56	3.25	3.17	3.98	4.03	4.08	3.52	3.19	2.99
	Elevation	506.54	506.78	506.57	506.66	506.76	507.13	507.3	506.99	506.91	507.72	507.77	507.82	507.26	506.93	506.73
	Date	7/4/2007	7/5/2007	7/6/2007	7/7/2007	7/8/2007	7/9/2007	7/10/2007	7/11/2007	7/12/2007	7/13/2007	7/14/2007	7/15/2007	7/16/2007	7/17/2007	7/18/2007
	Gage Height	2.86	2.78	2.72	2.65	2.57	2.54	2.5	2.43	2.42	2.37	2.31	2.29	2.27	2.34	2.67
	Elevation	506.6	506.52	506.46	506.39	506.31	506.28	506.24	506.17	506.16	506.11	506.05	506.03	506.01	506.08	506.41
	Date	7/19/2007	7/20/2007	7/21/2007	7/22/2007	7/23/2007	7/24/2007	7/25/2007	7/26/2007	7/27/2007	7/28/2007	7/29/2007	7/30/2007	7/31/2007	8/1/2007	8/2/2007
	Gage Height	3.23	4.63	4.38	3.43	2.97	2.7	2.56	2.44	2.42	2.38	2.51	2.38	2.23	2.26	2.23
	Elevation	506.97	508.37	508.12	507.17	506.71	506.44	506.3	506.18	506.16	506.12	506.25	506.12	506.07	506	505.97
	Date	8/3/2007	8/4/2007	8/5/2007	8/6/2007	8/7/2007	8/8/2007	8/9/2007	8/10/2007	8/11/2007	8/12/2007	8/13/2007	8/14/2007	8/15/2007	8/16/2007	8/17/2007
	Gage Height	2.2	2.15	2.16	2.22	2.23	2.12	2.11	2.05	2.02	2	1.99	2	1.98	2.04	2.14
	Elevation	505.94	505.89	505.9	505.96	505.97	505.86	505.85	505.79	505.76	505.74	505.73	505.74	505.72	505.78	505.88
	Date	8/18/2007	8/19/2007	8/20/2007	8/21/2007	8/22/2007	8/23/2007	8/24/2007	8/25/2007	8/26/2007	8/27/2007	8/28/2007	8/29/2007	8/30/2007	8/31/2007	9/1/2007
	Gage Height	2.05	2.01	2.26	2.22	2.35	2.41	2.33	2.28	2.29	2.39	2.24	2.14	2.1	2.06	2.02
	Elevation	505.79	505.75	506	505.96	506.09	506.15	506.07	506.02	506.03	506.13	505.98	505.88	505.84	505.8	505.76
	Date	9/2/2007	9/3/2007	9/4/2007	9/5/2007	9/6/2007	9/7/2007	9/11/2007	9/12/2007	9/13/2007	9/14/2007	9/15/2007	9/16/2007	9/17/2007	9/18/2007	9/19/2007
	Gage Height	2.01	2.02	1.96	1.94	1.9	1.93	2.38	2.2	2.15	2.08	2.12	2.04	1.98	1.97	1.96
	Elevation	505.75	505.76	505.7	505.68	505.64	505.67	506.12	505.94	505.89	505.82	505.86	505.78	505.72	505.71	505.7
	Date	9/20/2007	9/21/2007	9/22/2007	9/23/2007	9/24/2007	9/25/2007	9/26/2007	9/27/2007	9/28/2007	9/29/2007	9/30/2007	10/1/2007	10/2/2007	10/3/2007	10/4/2007
	Gage Height	1.92	1.93	1.91	1.91	1.93	1.96	2.07	1.99	2.06	2.11	1.95	1.92	1.98	2.03	
	Elevation	505.66	505.67	505.65	505.65	505.67	505.7	505.81	505.73	505.8	505.85	505.79	505.69	505.66	505.72	

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	10/5/2007	10/6/2007	10/7/2007	10/8/2007	10/9/2007	10/10/2007	10/11/2007	10/12/2007	10/13/2007	10/14/2007	10/15/2007	10/16/2007	10/17/2007	10/18/2007	10/19/2007
	Gage Height	2.32	2.17	2.07	2.02	2	2	2.02	2.05	1.98	1.97	1.95	1.96	1.94	2.23	2.33
	Elevation	506.06	505.91	505.81	505.76	505.74	505.74	505.76	505.79	505.72	505.71	505.69	505.7	505.68	505.97	506.07
	Gage Height	2.61	2.4	2.28	2.38	2.3	2.28	2.26	2.24	2.2	2.33	2.27	2.22	2.18	2.17	2.14
	Elevation	506.35	506.14	506.02	506.12	506.04	506.02	506	505.98	505.94	506.07	506.01	505.96	505.92	505.91	505.88
	Gage Height	2.12	2.13	2.25	2.12	2.05	2.04	2.16	2.65	2.82	2.42	2.49	2.35	2.07	2.78	7.79
	Elevation	505.86	505.87	505.99	505.86	505.79	505.78	505.9	506.39	506.56	506.16	506.23	506.09	505.81	506.52	511.53
517.09	Gage Height	7.55	5.42	4.55	4.34	5.02	4.56	4.27	3.77	3.58	3.63	3.97	4.35	4.22	3.78	3.69
	Elevation	511.29	509.16	508.29	508.08	508.76	508.3	508.01	507.51	507.32	507.37	507.71	508.09	507.96	507.52	507.43
	Gage Height	3.45	3.72	4.45	5.33	9.24	10.07	9.17	7.53	6.14	5.41	4.89	4.74	4.57	4.67	6.26
	Elevation	507.19	507.46	508.19	509.07	512.98	513.81	512.91	511.27	509.88	509.15	508.63	508.48	508.31	508.41	510
	Gage Height	8.41	7.93	6.23	5.26	4.98	4.98	5.83	5.75	5.34						
	Elevation	512.15	511.67	509.97	509	508.72	508.72	509.57	509.49	509.08						
Maximum Elevation	Date	1/1/2008	1/2/2008	1/3/2008	1/4/2008	1/5/2008	1/6/2008	1/7/2008	1/9/2008	1/10/2008	1/11/2008	1/12/2008	1/13/2008	1/14/2008	1/15/2008	1/16/2008
	Gage Height	5.17	4.46	4.19	4.67	4.72	5.01	5.99	14.9	16.06	13.56	10.83	8.13	6.85	6.09	5.51
	Elevation	508.91	508.2	507.93	508.41	508.46	508.75	509.73	518.64	519.8	517.3	514.57	511.87	510.59	509.83	509.25
	Gage Height	5.27	5.03	4.57	4.02	4.07	4.58	4.39	4.23	3.86	3.72	3.75	3.92	4.05	4	4.1
	Elevation	509.01	508.77	508.31	507.76	507.81	508.32	508.13	507.97	507.6	507.46	507.49	507.66	507.79	507.74	507.84
	Gage Height	3.55	3.76	3.97	4.82	14.65	23.68	25.26	20.61	14.68	10.43	8.2	7.11	6.48	5.9	5.51
	Elevation	507.29	507.5	507.71	508.56	518.39	527.42	529	524.35	518.42	514.17	511.94	510.85	510.22	509.64	509.25
	Gage Height	5.07	6.4	9.75	8.16	6.15	5.35	5.15	5.01	4.67	4.57	4.7	4.45	4.42	4.37	4.71
	Elevation	508.81	510.14	513.49	511.9	509.89	509.09	508.89	508.75	508.41	508.31	508.44	508.19	508.16	508.11	508.45
529	Gage Height	6.56	11.09	11.56	8.53	6.89	6.48	5.91	5.43	5.15	5.12	5.26	5.49	5.91	5.84	5.46
	Elevation	510.3	514.83	515.3	512.27	510.63	510.22	509.65	509.17	508.89	508.86	509	509.23	509.65	509.58	509.2
	Gage Height	5.3	6.65	10.25	10.09	8.1	6.98	6.2	5.76	5.42	5.26	5.22	7.53	7.34	6.33	6.36
	Elevation	509.04	510.39	513.99	513.83	511.84	510.72	509.94	509.5	509.16	509	508.96	511.27	511.08	510.07	510.1
	Gage Height	8.89	7.61	6.55	6.21	5.77	5.44	5.18	4.99	5	5.08	8.81	9.16	7.27	6.44	5.89
	Elevation	512.63	511.35	510.29	509.95	509.51	509.18	508.92	508.73	508.74	508.82	512.55	512.9	511.01	510.18	509.63
	Gage Height	5.57	5.37	5.12	5.13	4.94	4.85	4.65	4.6	4.37	4.4	4.51	4.39	4.45	4.26	4.17
	Elevation	509.31	509.11	508.86	508.87	508.68	508.59	508.39	508.34	508.11	508.14	508.25	508.13	508.19	508	507.91
	Gage Height	4.09	4.11	4.49	4.25	4.18	3.9	3.95	4.37	5.49	5.12	5.76	7.87	7.45	6.43	6.08
	Elevation	507.83	507.85	508.23	507.99	507.92	507.64	507.69	508.11	509.23	508.86	509.5	511.61	511.19	510.17	509.82
	Gage Height	9.12	8.69	7.12	6.32	5.93	5.64	5.37	5.14	5.49	5.59	5.37	5.18	4.94	4.78	9.3
	Elevation	512.86	512.43	510.86	510.06	509.67	509.38	509.11	508.88	509.23	509.33	509.11	508.92	508.68	508.52	513.04

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	6/6/2008	6/7/2008	6/8/2008	6/9/2008	6/10/2008	6/11/2008	6/12/2008	6/13/2008	6/14/2008	6/15/2008	6/16/2008	6/17/2008	6/18/2008	6/19/2008	6/20/2008
	Gage Height	15.07	17.52	20.75	15.39	10.72	7.48	6.4	6.58	5.93	5.37	4.97	4.67	4.51	4.33	4.24
	Elevation	518.81	521.26	524.49	519.13	514.46	511.22	510.14	510.32	509.67	509.11	508.71	508.41	508.25	508.07	507.98
529	Date	6/21/2008	6/22/2008	6/23/2008	6/24/2008	6/25/2008	6/26/2008	6/27/2008	6/28/2008	6/29/2008	6/30/2008	7/1/2008	7/10/2008	7/11/2008	7/12/2008	7/13/2008
	Gage Height	4.24	4.3	4.37	4.24	4.32	4.19	4.33	8.22	6.27	5.08	4.56	7.26	5.51	5.72	8.05
	Elevation	507.98	508.04	508.11	507.98	508.06	507.93	508.07	511.96	510.01	508.82	508.3	511	509.25	509.46	511.79
	Date	7/14/2008	7/15/2008	7/16/2008	7/17/2008	7/18/2008	7/19/2008	7/20/2008	7/21/2008	7/22/2008	7/23/2008	7/24/2008	7/25/2008	7/26/2008	8/5/2008	8/6/2008
	Gage Height	6.92	5.24	4.46	3.99	3.75	3.46	3.63	3.7	4.97	5.2	4.27	3.65	3.53	3.23	3.24
	Elevation	510.66	508.98	508.2	507.73	507.49	507.2	507.37	507.44	508.71	508.94	508.01	507.39	507.27	506.97	506.98
	Date	8/7/2008	8/8/2008	8/9/2008	8/10/2008	8/11/2008	8/12/2008	8/13/2008	8/14/2008	8/15/2008	8/16/2008	8/17/2008	8/18/2008	8/19/2008	8/20/2008	8/21/2008
	Gage Height	3.04	2.96	2.84	2.74	2.68	2.63	2.59	2.59	2.61	2.55	2.52	2.59	2.53	2.45	
	Elevation	506.78	506.7	506.58	506.48	506.42	506.37	506.33	506.35	506.34	506.29	506.26	506.33	506.27	506.19	
	Date	8/22/2008	8/23/2008	8/24/2008	8/25/2008	8/26/2008	8/27/2008	8/28/2008	8/29/2008	8/30/2008	8/31/2008	9/1/2008	9/2/2008	9/3/2008	9/4/2008	9/5/2008
	Gage Height	2.66	2.72	2.52	2.47	2.42	2.41	2.41	2.47	2.48	2.48	2.42	2.37	2.36	2.52	2.78
	Elevation	506.4	506.46	506.26	506.21	506.16	506.15	506.15	506.22	506.22	506.16	506.11	506.1	506.26	506.52	
	Date	9/6/2008	9/7/2008	9/8/2008	9/9/2008	9/10/2008	9/11/2008	9/12/2008	9/13/2008	9/14/2008	9/15/2008	9/16/2008	9/17/2008	9/18/2008	9/19/2008	9/20/2008
	Gage Height	4.12	3.54	3.18	3.01	2.77	2.7	2.78	2.78	4.39	11.03	11.75	12.12	9.25	5.69	4.83
	Elevation	507.86	507.28	506.92	506.75	506.51	506.44	506.52	506.52	508.13	514.77	515.49	515.86	512.99	509.43	508.57
	Date	9/21/2008	9/22/2008	9/23/2008	9/24/2008	9/25/2008	9/26/2008	9/27/2008	9/28/2008	9/29/2008	9/30/2008	10/1/2008	10/2/2008	10/3/2008	10/4/2008	10/5/2008
	Gage Height	4.65	4.31	3.95	3.72	3.49	3.5	3.36	3.26	3.12	3.05	3	2.97	3.04	2.89	2.93
	Elevation	508.39	508.05	507.69	507.46	507.23	507.24	507.1	507	506.86	506.79	506.74	506.71	506.78	506.63	506.67
	Date	10/6/2008	10/7/2008	10/10/2008	10/11/2008	10/12/2008	10/13/2008	10/14/2008	10/15/2008	10/16/2008	10/17/2008	10/18/2008	10/19/2008	10/20/2008	10/21/2008	10/22/2008
	Gage Height	2.83	2.83	3.25	3.08	2.99	2.93	2.81	2.84	3.12	2.98	2.95	2.9	2.87	2.92	2.84
	Elevation	506.57	506.57	506.99	506.82	506.73	506.67	506.55	506.58	506.86	506.72	506.69	506.64	506.61	506.66	506.58
	Date	10/23/2008	10/24/2008	10/25/2008	10/26/2008	10/27/2008	10/28/2008	10/29/2008	10/30/2008	10/31/2008	11/1/2008	11/2/2008	11/3/2008	11/4/2008	11/5/2008	11/6/2008
	Gage Height	2.82	2.92	3.4	4.43	4.06	3.66	3.41	3.29	3.24	3.16	3.11	3.34	3.04	3.02	3.02
	Elevation	506.56	506.66	507.14	508.17	507.8	507.4	507.15	507.03	506.98	506.9	506.85	507.08	506.78	506.76	506.76
	Date	11/7/2008	11/8/2008	11/9/2008	11/10/2008	11/11/2008	11/12/2008	11/13/2008	11/17/2008	11/18/2008	11/19/2008	11/20/2008	11/21/2008	11/22/2008	11/23/2008	11/24/2008
	Gage Height	3.04	3.05	3.06	2.98	2.92	2.89	2.87	3.07	3.14	2.92	3.04	2.87	2.93	2.8	2.84
	Elevation	506.78	506.79	506.8	506.72	506.66	506.63	506.61	506.81	506.88	506.66	506.78	506.61	506.67	506.54	506.58
	Date	11/25/2008	11/26/2008	11/27/2008	11/28/2008	11/29/2008	11/30/2008	12/1/2008	12/2/2008	12/3/2008	12/4/2008	12/5/2008	12/6/2008	12/7/2008	12/8/2008	12/9/2008
	Gage Height	2.83	2.88	2.85	2.79	2.76	2.78	2.8	2.85	2.89	2.85	2.81	2.78	2.75	2.83	3.01
	Elevation	506.57	506.62	506.59	506.53	506.5	506.52	506.54	506.59	506.63	506.59	506.55	506.52	506.49	506.57	506.75
	Date	12/10/2008	12/11/2008	12/12/2008	12/13/2008	12/14/2008	12/15/2008	12/16/2008	12/17/2008	12/18/2008	12/19/2008	12/20/2008	12/21/2008	12/22/2008	12/23/2008	12/24/2008
	Gage Height	3.58	4.82	4.34	4.07	3.62	3.75	3.5	3.48	3.37	4.74	7.76	6.8	5.14	4.93	7.59
	Elevation	507.32	508.56	508.08	507.81	507.36	507.49	507.24	507.22	507.11	508.48	511.5	510.54	508.88	508.67	511.33
	Date	12/25/2008	12/26/2008	12/27/2008	12/28/2008	12/29/2008	12/30/2008	12/31/2008								
	Gage Height	9.33	7.23	9.78	17.11	18.25	15.48	10.85								
	Elevation	513.07	510.97	513.52	520.85	521.99	519.22	514.59								
524.12	Date	1/1/2009	1/2/2009	1/3/2009	1/4/2009	1/5/2009	1/6/2009	1/7/2009	1/8/2009	1/9/2009	1/10/2009	1/11/2009	1/12/2009	1/13/2009	1/17/2009	1/18/2009
	Gage Height	8.07	7.04	6.26	5.75	5.52	5.17	5.16	4.86	4.48	4.52	4.27	4.19	4.12	4.27	4.11
	Elevation	511.81	510.78	510	509.49	509.26	508.91	508.9	508.6	508.22	508.26	508.01	507.93	507.86	508.01	507.85
	Date	1/22/2009	1/23/2009	1/24/2009	1/25/2009	1/26/2009	1/27/2009	1/28/2009	1/29/2009	1/30/2009	1/31/2009	2/1/2009	2/7/2009	2/8/2009	2/9/2009	2/10/2009
	Gage Height	3.84	3.84	3.94	3.67	3.6	3.68	3.7	3.67	3.73	3.6	3.59	3.9	5.08	5.26	5.16
	Elevation	507.58	507.58	507.68	507.41	507.34	507.42	507.44	507.41	507.47	507.34	507.33	507.64	508.82	509	508.9
	Date	2/11/2009	2/12/2009	2/13/2009	2/14/2009	2/15/2009	2/16/2009	2/17/2009	2/18/2009	2/19/2009	2/20/2009	2/21/2009	2/22/2009	2/23/2009	2/24/2009	2/25/2009
	Gage Height	9.53	14	11.8	8.3	7.13	6.37	5.72	5.58	5.42	5.25	4.94	4.66	4.3	4.34	4.18
	Elevation	513.27	517.74	515.54	512.04	510.87	510.11	509.46	509.32	509.16	508.99	508.68	508.4	508.04	508.08	507.92

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

25 of 30

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Average Annual Max

Brickyard Disposal and Recycling  
Historical River Elevations

Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	2/26/2009	2/27/2009	2/28/2009	3/1/2009	3/2/2009	3/3/2009	3/4/2009	3/5/2009	3/6/2009	3/7/2009	3/8/2009	3/9/2009	3/10/2009	3/11/2009	3/12/2009
	Gage Height	4.27	4.87	5.95	5.52	4.81	4.55	4.48	4.23	4.35	4.28	4.97	7.42	6.99	10.76	12.39
	Elevation	508.01	508.61	509.69	509.26	508.55	508.29	508.22	507.97	508.09	508.02	508.71	511.16	510.73	514.5	516.13
	Date	3/13/2009	3/14/2009	3/15/2009	3/16/2009	3/17/2009	3/18/2009	3/19/2009	3/20/2009	3/21/2009	3/22/2009	3/23/2009	3/24/2009	3/25/2009	3/26/2009	3/27/2009
	Gage Height	10.42	7.28	6.48	5.96	5.57	5.32	5.08	4.72	4.57	4.52	4.36	4.31	4.45	4.49	4.28
	Elevation	514.16	511.02	510.22	509.7	509.31	509.06	508.82	508.46	508.31	508.26	508.1	508.05	508.19	508.23	508.02
	Date	3/28/2009	3/29/2009	3/30/2009	3/31/2009	4/1/2009	4/2/2009	4/3/2009	4/4/2009	4/5/2009	4/6/2009	4/7/2009	4/8/2009	4/9/2009	4/10/2009	4/11/2009
	Gage Height	4.23	4.91	5.66	5.39	6.96	6.74	7.47	7.93	7.13	9.52	9.12	7.72	6.74	6.26	6.03
	Elevation	507.97	508.65	509.4	509.13	510.7	510.48	511.21	511.67	510.87	513.26	512.86	511.46	510.48	510	509.77
	Date	4/12/2009	4/13/2009	4/14/2009	4/15/2009	4/16/2009	4/17/2009	4/18/2009	4/19/2009	4/20/2009	4/21/2009	4/22/2009	4/23/2009	4/24/2009	4/25/2009	4/26/2009
	Gage Height	5.68	6.32	8.84	8.58	7.24	6.43	6.02	5.88	6.59	7.82	7.22	6.48	6.01	5.61	5.32
	Elevation	509.42	510.06	512.58	512.32	510.98	510.17	509.76	509.62	510.33	511.56	510.96	510.22	509.75	509.35	509.06
	Date	4/27/2009	4/28/2009	4/29/2009	4/30/2009	5/1/2009	5/2/2009	5/3/2009	5/4/2009	5/5/2009	5/6/2009	5/7/2009	5/8/2009	5/9/2009	5/10/2009	5/11/2009
	Gage Height	5.23	6.34	8.45	8.9	12.95	12.66	10.15	7.91	6.9	6.36	5.93	6.43	6.57	5.93	5.55
	Elevation	508.97	510.08	512.19	512.64	516.69	516.4	513.89	511.65	510.64	510.1	509.67	510.17	510.31	509.67	509.29
	Date	5/12/2009	5/13/2009	5/14/2009	5/15/2009	5/16/2009	5/17/2009	5/18/2009	5/19/2009	5/20/2009	5/21/2009	5/22/2009	5/23/2009	5/24/2009	5/25/2009	5/26/2009
	Gage Height	5.23	6.79	13.63	13.57	517.37	517.31	522.05	524.12	520.01	514.93	511.84	510.78	510.26	509.73	509.41
	Elevation	508.97	510.53													
	Date	5/27/2009	5/28/2009	5/29/2009	5/30/2009	5/31/2009	6/1/2009	6/2/2009	6/3/2009	6/4/2009	6/5/2009	6/6/2009	6/7/2009	6/8/2009	6/9/2009	6/10/2009
	Gage Height	5.13	4.99	4.77	4.63	4.53	4.39	4.87	6.23	6.43	5.8	5.09	4.83	4.61	4.42	4.35
	Elevation	508.87	508.73	508.51	508.37	508.27	508.13	508.61	509.97	510.17	509.54	508.83	508.57	508.35	508.16	508.09
	Date	6/11/2009	6/12/2009	6/13/2009	6/14/2009	6/15/2009	6/16/2009	6/17/2009	6/18/2009	6/19/2009	6/20/2009	6/21/2009	6/22/2009	6/23/2009	6/24/2009	6/25/2009
	Gage Height	4.6	5.61	4.75	4.58	4.23	4.32	4.16	4.3	6.05	7.7	8.08	6.79	6.67	5.79	5.14
	Elevation	508.34	509.35	508.49	508.32	507.97	508.06	507.9	508.04	509.79	511.44	511.82	510.53	510.41	509.53	508.88
524.12	Date	6/26/2009	6/27/2009	6/28/2009	6/29/2009	6/30/2009	7/1/2009	7/2/2009	7/3/2009	7/4/2009	7/5/2009	7/6/2009	7/7/2009	7/8/2009	7/9/2009	7/10/2009
	Gage Height	4.84	4.54	4.39	4.2	3.99	3.97	3.84	3.72	3.93	4.4	4.49	3.99	4.02	4.86	5.03
	Elevation	508.58	508.28	508.13	507.94	507.73	507.71	507.58	507.46	507.67	508.14	508.23	507.73	507.76	508.6	508.77
	Date	7/11/2009	7/12/2009	7/13/2009	7/14/2009	7/15/2009	7/16/2009	7/17/2009	7/18/2009	7/19/2009	7/20/2009	7/21/2009	7/22/2009	7/23/2009	7/24/2009	7/25/2009
	Gage Height	4.72	4.77	4.63	4.06	4.13	4.62	4.31	3.9	3.65	3.58	3.37	3.24	3.23	3.24	3.31
	Elevation	508.46	508.51	508.37	507.8	507.87	508.36	508.05	507.64	507.39	507.32	507.11	506.98	506.97	506.98	507.05
	Date	7/26/2009	7/27/2009	7/28/2009	7/29/2009	7/30/2009	7/31/2009	8/1/2009	8/2/2009	8/3/2009	8/4/2009	8/5/2009	8/6/2009	8/7/2009	8/8/2009	8/9/2009
	Gage Height	3.48	3.25	3.13	3.18	4.16	3.37	3.06	2.94	2.85	2.99	3.09	3.03	2.96	2.8	2.71
	Elevation	507.22	506.99	506.87	506.92	507.9	507.11	506.8	506.68	506.59	506.73	506.83	506.77	506.7	506.54	506.45
	Date	8/10/2009	8/11/2009	8/12/2009	8/13/2009	8/14/2009	8/15/2009	8/16/2009	8/17/2009	8/18/2009	8/19/2009	8/20/2009	8/21/2009	8/22/2009	8/23/2009	8/24/2009
	Gage Height	2.66	2.6	2.54	2.52	2.45	2.44	2.41	2.5	2.81	3.3	3.65	3.59	3.25	2.94	2.78
	Elevation	506.4	506.34	506.28	506.26	506.19	506.18	506.15	506.24	506.55	507.04	507.39	507.33	506.99	506.68	506.52
	Date	8/25/2009	8/26/2009	8/27/2009	8/28/2009	8/29/2009	8/30/2009	8/31/2009	9/1/2009	9/2/2009	9/3/2009	9/4/2009	9/5/2009	9/6/2009	9/7/2009	9/8/2009
	Gage Height	2.67	2.59	2.53	2.75	5.95	5.06	4.05	3.53	3.22	3.02	2.9	2.79	2.72	2.64	2.59
	Elevation	506.41	506.33	506.27	506.49	509.69	508.8	507.79	507.27	506.96	506.76	506.64	506.53	506.46	506.38	506.33
	Date	9/9/2009	9/10/2009	9/11/2009	9/12/2009	9/13/2009	9/14/2009	9/15/2009	9/16/2009	9/17/2009	9/18/2009	9/19/2009	9/20/2009	9/21/2009	9/22/2009	9/23/2009
	Gage Height	2.55	2.52	2.5	2.47	2.43	2.39	2.38	2.38	2.37	2.36	2.31	2.35	2.4	2.51	2.5
	Elevation	506.29	506.26	506.24	506.21	506.17	506.13	506.12	506.12	506.11	506.1	506.05	506.09	506.14	506.25	506.24
	Date	9/24/2009	9/25/2009	9/26/2009	9/27/2009	9/28/2009	9/29/2009	9/30/2009	10/1/2009	10/2/2009	10/3/2009	10/4/2009	10/5/2009	10/6/2009	10/7/2009	10/8/2009
	Gage Height	2.58	2.54	2.46	2.43	2.39	2.34	2.32	2.36	2.3	2.51	2.63	2.66	2.49	2.47	2.46
	Elevation	506.32	506.28	506.2	506.17	506.13	506.08	506.06	506.1	506.25	506.37	506.4	506.23	506.21	506.2	506.45
	Date	10/9/2009	10/10/2009	10/11/2009	10/12/2009	10/13/2009	10/14/2009	10/15/2009	10/16/2009	10/17/2009	10/18/2009	10/19/2009	10/20/2009	10/21/2009	10/22/2009	10/23/2009
	Gage Height	3.83	6.1	5.74	4.81	4.32	3.97	4.04	4.25	4.2	3.95	3.73	3.6	3.5	3.41	6.42
	Elevation	507.57	509.84	509.48	508.55	508.06	507.71	507.78	507.99	507.94	507.69	507.47	507.34	507.24	507.15	510.16

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	10/24/2009	10/25/2009	10/26/2009	10/27/2009	10/28/2009	10/29/2009	10/30/2009	10/31/2009	11/1/2009	11/2/2009	11/3/2009	11/4/2009	11/5/2009	11/6/2009	11/7/2009
	Gage Height	9.88	9.32	7.38	6.01	5.69	5.82	7.27	12.17	11.82	11.03	8.03	6.43	5.77	5.28	5.13
	Elevation	513.62	513.06	511.12	509.75	509.43	509.56	511.01	515.91	515.56	514.77	511.77	510.17	509.51	509.02	508.87
524.12	Date	11/8/2009	11/9/2009	11/10/2009	11/11/2009	11/12/2009	11/13/2009	11/14/2009	11/15/2009	11/16/2009	11/17/2009	11/18/2009	11/19/2009	11/20/2009	11/21/2009	11/22/2009
	Gage Height	4.89	4.78	4.38	4.38	4.3	4.19	4.25	5.24	5.89	10.06	12.76	11.77	10.25	8.06	7.04
	Elevation	508.63	508.52	508.12	508.12	508.04	507.93	507.99	508.98	509.63	513.8	516.5	515.51	513.99	511.8	510.78
	Date	11/23/2009	11/24/2009	11/25/2009	11/26/2009	11/27/2009	11/28/2009	11/29/2009	11/30/2009	12/1/2009	12/2/2009	12/3/2009	12/4/2009	12/5/2009	12/6/2009	12/7/2009
	Gage Height	6.41	5.92	6.25	7.21	6.66	6.04	5.74	5.46	5.14	5.11	5.55	5.42	5.07	4.79	4.72
	Gage Height	510.15	509.66	509.99	510.95	510.4	509.78	509.48	509.2	508.88	508.85	509.29	509.16	508.81	508.53	508.46
	Date	12/8/2009	12/11/2009	12/12/2009	12/13/2009	12/14/2009	12/15/2009	12/16/2009	12/17/2009	12/18/2009	12/19/2009	12/20/2009	12/21/2009	12/22/2009	12/23/2009	12/24/2009
	Gage Height	4.6	5.86	5.3	6.05	6.74	6.4	5.79	5.3	5.1	4.91	4.75	4.48	4.39	4.5	6.04
	Elevation	508.34	509.6	509.04	509.79	510.48	510.14	509.53	509.04	508.84	508.65	508.49	508.22	508.13	508.24	509.78
	Date	12/25/2009	12/26/2009	12/27/2009	12/28/2009	12/30/2009	12/31/2009									
Maximum Elevation	Date	1/1/2010	1/2/2010	1/3/2010	1/4/2010	1/5/2010	1/6/2010	1/7/2010	1/8/2010	1/9/2010	1/10/2010	1/11/2010	1/12/2010	1/13/2010	1/14/2010	1/15/2010
	Gage Height	5.26	4.75	4.52	4.91	5.18	5.12	4.64	4.27	4.11	4.12	4.23	4.15	4	4.01	4
	Elevation	509	508.49	508.26	508.65	508.92	508.86	508.38	508.01	507.85	507.86	507.97	507.89	507.74	507.75	507.74
519.39	Date	1/16/2010	1/17/2010	1/18/2010	1/19/2010	1/20/2010	1/21/2010	1/22/2010	1/23/2010	1/24/2010	1/25/2010	1/26/2010	1/27/2010	1/28/2010	1/29/2010	1/30/2010
	Gage Height	4.05	4.03	3.95	4.05	3.94	4.09	5.88	7.15	10.6	12.24	10.96	7.97	6.39	5.53	5.19
	Elevation	507.79	507.77	507.69	507.79	507.68	507.83	509.62	510.89	514.34	515.98	514.7	511.71	510.13	509.27	508.93
	Date	1/31/2010	2/1/2010	2/2/2010	2/3/2010	2/4/2010	2/5/2010	2/6/2010	2/7/2010	2/8/2010	2/9/2010	2/10/2010	2/11/2010	2/12/2010	2/13/2010	2/14/2010
	Gage Height	5.23	4.98	4.7	4.51	4.3	4.33	4.35	4.16	4.02	4.09	3.96	3.7	3.82	3.91	3.99
	Elevation	508.97	508.72	508.44	508.25	508.04	508.07	508.09	507.9	507.76	507.83	507.7	507.44	507.56	507.65	507.73
	Date	2/15/2010	2/16/2010	2/17/2010	2/18/2010	2/19/2010	2/20/2010	2/21/2010	2/22/2010	2/23/2010	2/24/2010	2/25/2010	2/26/2010	2/27/2010	2/28/2010	3/1/2010
	Gage Height	3.91	3.78	3.74	3.66	3.57	3.63	3.66	6.41	9.65	8.32	6.57	5.65	5.23	4.91	5.02
	Elevation	507.65	507.52	507.48	507.4	507.31	507.37	507.4	510.15	513.39	512.06	510.31	509.39	508.97	508.65	508.76
	Date	3/2/2010	3/3/2010	3/4/2010	3/5/2010	3/6/2010	3/7/2010	3/8/2010	3/9/2010	3/10/2010	3/11/2010	3/12/2010	3/13/2010	3/16/2010	3/17/2010	3/18/2010
	Gage Height	5.44	5.44	5.25	5.3	5.38	5.32	5.66	6	6.14	6.63	7.38	8.64	7.81	6.83	6.21
	Elevation	509.18	509.18	508.99	509.04	509.12	509.06	509.4	509.74	509.88	510.37	511.12	512.38	511.55	510.57	509.95
	Date	3/19/2010	3/20/2010	3/21/2010	3/22/2010	3/23/2010	3/24/2010	3/25/2010	3/26/2010	3/27/2010	3/28/2010	3/29/2010	3/30/2010	3/31/2010	4/1/2010	4/2/2010
	Gage Height	5.86	5.45	5.13	4.93	4.81	4.62	4.78	5.64	5.88	7.47	10.64	8.79	7.06	6.32	5.75
	Elevation	509.6	509.19	508.87	508.67	508.55	508.36	508.52	509.38	509.62	511.21	514.38	512.53	510.8	510.06	509.49
	Date	4/3/2010	4/4/2010	4/5/2010	4/6/2010	4/7/2010	4/8/2010	4/9/2010	4/10/2010	4/11/2010	4/12/2010	4/13/2010	4/14/2010	4/15/2010	4/16/2010	4/17/2010
	Gage Height	5.63	5.94	5.75	5.41	5.39	5.38	5.25	4.8	4.66	4.53	4.49	4.32	4.24	4.26	4.15
	Elevation	509.37	509.68	509.49	509.15	509.13	508.99	508.54	508.4	508.27	508.23	508.06	507.98	508	507.89	
	Date	4/18/2010	4/19/2010	4/20/2010	4/21/2010	4/22/2010	4/23/2010	4/24/2010	4/25/2010	4/26/2010	4/27/2010	4/28/2010	4/29/2010	4/30/2010	5/1/2010	5/2/2010
	Gage Height	3.97	4	3.92	3.9	3.87	3.83	3.96	4.24	4.92	5.11	4.57	4.14	4.11	4.11	4.13
	Elevation	507.71	507.74	507.66	507.64	507.61	507.57	507.7	507.98	508.66	508.31	507.88	507.85	507.85	507.85	507.87
	Date	5/3/2010	5/4/2010	5/5/2010	5/6/2010	5/7/2010	5/8/2010	5/9/2010	5/10/2010	5/11/2010	5/12/2010	5/13/2010	5/14/2010	5/15/2010	5/16/2010	5/17/2010
	Gage Height	4.23	4.28	4.44	4.09	3.98	3.87	3.76	3.69	4.4	6.75	6.17	5.37	4.88	4.62	4.96
	Elevation	507.97	508.02	508.18	507.83	507.72	507.61	507.5	507.43	508.14	510.49	509.91	509.11	508.62	508.36	508.7
	Date	5/18/2010	5/19/2010	5/20/2010	5/21/2010	5/22/2010	5/23/2010	5/24/2010	5/25/2010	5/26/2010	5/27/2010	5/28/2010	5/29/2010	5/30/2010	5/31/2010	6/1/2010
	Gage Height	8.1	7.98	6.54	6.68	11.1	9.95	6.99	6.09	5.53	5.81	5.92	5.12	4.83	5.29	5.83
	Elevation	511.84	511.72	510.28	510.42	514.84	513.69	510.73	509.83	509.27	509.55	509.66	508.86	508.57	509.03	509.57
	Date	6/2/2010	6/3/2010	6/4/2010	6/5/2010	6/6/2010	6/7/2010	6/8/2010	6/9/2010	6/10/2010	6/11/2010	6/12/2010	6/13/2010	6/14/2010	6/15/2010	6/16/2010
	Gage Height	5.73	5.76	5.2	4.85	4.83	4.97	4.5	6.69	8.53	7.31	7.6	7.42	9.69	15.14	15.65
	Elevation	509.47	509.5	508.94	508.59	508.57	508.71	508.24	510.43	512.27	511.05	511.34	511.16	513.43	518.88	519.39

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

27 of 30

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Average Annual Max

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	6/17/2010	6/18/2010	6/19/2010	6/20/2010	6/21/2010	6/22/2010	6/23/2010	6/24/2010	6/25/2010	6/26/2010	6/27/2010	6/28/2010	6/29/2010	6/30/2010	7/1/2010
519.39	Gage Height	13.79	12.07	13.53	12.1	10.68	9.55	11.09	10.24	8.76	7.32	6.5	5.9	5.4	5.09	4.72
	Elevation	517.53	515.81	517.27	515.84	514.42	513.29	514.83	513.98	512.5	511.06	510.24	509.64	509.14	508.83	508.46
	Gage Height	4.55	4.41	4.3	4.12	4.05	3.79	4.07	4.18	3.87	3.69	3.77	3.59	3.71	3.58	4.06
	Elevation	508.29	508.15	508.04	507.86	507.79	507.53	507.81	507.92	507.61	507.43	507.51	507.33	507.45	507.32	507.8
	Gage Height	4.01	3.58	3.41	3.48	3.69	3.46	3.36	3.25	3.21	3.22	3.08	2.92	2.77	2.71	2.7
	Elevation	507.75	507.32	507.15	507.22	507.43	507.2	507.1	506.99	506.95	506.96	506.82	506.66	506.51	506.45	506.44
	Gage Height	2.64	2.56	2.64	2.84	2.97	2.72	2.58	2.45	2.41	2.5	2.74	2.68	2.6	2.38	2.33
	Elevation	506.38	506.3	506.38	506.58	506.71	506.46	506.32	506.19	506.15	506.24	506.48	506.42	506.34	506.12	506.07
	Gage Height	2.33	2.31	2.25	2.23	2.21	2.31	2.29	2.5	2.32	2.22	2.17	2.16	2.12	2.21	2.19
	Elevation	506.07	506.05	505.99	505.97	505.95	506.05	506.03	506.24	506.06	505.96	505.91	505.9	505.86	505.95	505.93
522.64	Gage Height	8.48	6.97	5.46	5.07	4.34	3.75	5.16	9.56	12.32	9.91	7.65	8.13	9.33	7.82	6.91
	Elevation	512.22	510.71	509.2	508.81	508.08	507.49	508.9	513.3	516.06	513.65	511.39	511.87	513.07	511.56	510.65
	Gage Height	6.62	6.14	6.1	8.8	9.53	7.74	6.55	5.99	7.75	9.72	8.23	7.17	7.29	8.19	7.31
	Elevation	510.36	509.88	509.84	512.54	513.27	511.48	510.29	509.73	511.49	513.46	511.97	510.91	511.03	511.93	511.05
	Gage Height	6.49	5.85	5.45	5.62	6.34	5.99	5.61	5.13	4.86	4.86	4.72	4.69	4.55	4.26	4.18
	Elevation	510.23	509.59	509.19	509.36	510.08	509.73	509.35	508.87	508.6	508.6	508.46	508.43	508.29	508	507.92
	Gage Height	4.08	3.96	3.89	3.84	3.84	3.84	3.84	3.55	3.9	3.86	3.6	3.63	3.88	4.44	4.33
	Elevation	507.82	507.7	507.63	507.58	507.58	507.58	507.58	507.29	507.64	507.6	507.34	507.37	507.62	508.18	508.07
	Gage Height	3.25	3.26	4.27	3.84	3.47	3.32	3.11	3.17	6.97						
	Elevation	506.99	507	508.01	507.58	507.21	507.06	506.85	506.91	510.71						

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

**Brickyard Disposal and Recycling**  
**Historical River Elevations**

**Average Annual Maximum Elevation 519.14 '**

Maximum Elevation	Date	4/11/2011	4/12/2011	4/13/2011	4/14/2011	4/15/2011	4/16/2011	4/17/2011	4/18/2011	4/19/2011	4/20/2011	4/21/2011	4/22/2011	4/23/2011	4/24/2011	4/25/2011
	Gage Height	4.62	5.24	5.05	4.59	4.33	4.36	4.31	4.12	5.65	12.05	11.61	10.54	13.25	12.85	10.76
	Elevation	508.36	508.98	508.79	508.33	508.07	508.1	508.05	507.86	509.39	515.79	515.35	514.28	516.99	516.59	514.5
	Gage Height	15.45	18.9	17.6	11.63	8.82	7.69	6.94	6.33	5.9	5.7	5.82	7.27	6.6	5.82	5.35
	Elevation	519.19	522.64	521.34	515.37	512.56	511.43	510.68	510.07	509.64	509.56	511.01	510.34	509.56	509.09	
	Gage Height	5.06	4.9	5.16	6.62	7.26	6.76	5.85	5.29	4.97	4.79	4.62	4.56	4.48	4.88	9.55
	Elevation	508.8	508.64	508.9	510.36	511	510.5	509.59	509.03	508.71	508.53	508.36	508.3	508.22	508.62	513.29
	Gage Height	11.41	10.97	14.44	12.53	9.43	7.41	6.55	5.99	5.62	5.49	5.73	5.54	5.07	4.75	4.68
	Elevation	515.15	514.71	518.18	516.27	513.17	511.15	510.29	509.73	509.36	509.23	509.47	509.28	508.81	508.49	508.42
	Gage Height	5.09	4.96	4.56	4.31	4.7	5.94	5.78	4.98	4.67	4.54	4.93	4.59	4.46	4.16	3.95
	Elevation	508.83	508.7	508.3	508.05	508.44	509.68	509.52	508.72	508.41	508.28	508.67	508.33	508.2	507.9	507.69
	Gage Height	3.85	4.11	4.61	4.31	3.92	3.91	4.13	4.11	3.74	3.52	3.46	3.91	3.32	3.27	3
	Elevation	507.59	507.85	508.35	508.05	507.66	507.65	507.87	507.85	507.48	507.26	507.2	507.65	507.06	507.01	506.74
	Gage Height	3.01	2.83	2.76	2.73	2.66	2.61	2.58	2.52	2.44	2.34	2.36	2.31	2.31	2.36	2.68
	Elevation	506.75	506.57	506.5	506.47	506.4	506.35	506.32	506.26	506.18	506.08	506.1	506.05	506.05	506.1	506.42
	Gage Height	2.44	2.35	2.28	2.26	2.23	2.21	2.18	2.11	2.1	2.07	2.07	2.1	2.07	2.06	2.04
	Elevation	506.18	506.09	506.02	506	505.97	505.95	505.92	505.85	505.84	505.81	505.81	505.84	505.81	505.8	505.78
522.64	Date	8/11/2011	8/12/2011	8/13/2011	8/14/2011	8/15/2011	8/16/2011	8/17/2011	8/18/2011	8/19/2011	8/20/2011	8/21/2011	8/22/2011	8/23/2011	8/24/2011	8/25/2011
	Gage Height	2.13	2.04	2.03	2.06	2.06	2.1	2.08	2.01	1.97	1.99	2.03	1.99	2.1	2.47	
	Elevation	505.87	505.78	505.77	505.8	505.8	505.84	505.82	505.75	505.71	505.73	505.77	505.73	505.84		506.21
	Date	8/26/2011	8/27/2011	8/28/2011	8/29/2011	8/30/2011	8/31/2011	9/1/2011	9/2/2011	9/3/2011	9/4/2011	9/5/2011	9/6/2011	9/7/2011	9/8/2011	9/9/2011
	Gage Height	2.29	2.1	2.05	2.02	1.97	1.93	1.92	1.9	1.91	1.93	1.92	1.89	1.86	1.85	1.97
	Elevation	506.03	505.84	505.79	505.76	505.71	505.67	505.66	505.64	505.65	505.67	505.66	505.63	505.6	505.59	505.71
	Date	9/10/2011	9/11/2011	9/12/2011	9/13/2011	9/14/2011	9/15/2011	9/16/2011	9/17/2011	9/18/2011	9/19/2011	9/20/2011	9/21/2011	9/22/2011	9/23/2011	9/24/2011
	Gage Height	1.97	2.08	2.08	1.97	1.92	2.03	2.03	2.05	2.06	2.01	2	2.04	2.03	1.99	1.98
	Elevation	505.71	505.82	505.82	505.71	505.66	505.77	505.77	505.79	505.8	505.75	505.74	505.78	505.77	505.73	505.72
	Date	9/25/2011	9/26/2011	9/27/2011	9/28/2011	9/29/2011	9/30/2011	10/1/2011	10/2/2011	10/3/2011	10/4/2011	10/5/2011	10/6/2011	10/7/2011	10/8/2011	10/9/2011
	Gage Height	1.99	2.14	2.2	2.28	2.45	2.17	2.12	2.12	2.07	2.04	2.03	1.99	1.98	1.96	1.97
	Elevation	505.73	505.88	505.94	506.02	506.19	505.91	505.86	505.86	505.81	505.78	505.77	505.73	505.72	505.7	505.71
	Date	10/10/2011	10/11/2011	10/12/2011	10/13/2011	10/14/2011	10/15/2011	10/16/2011	10/17/2011	10/18/2011	10/19/2011	10/20/2011	10/21/2011	10/22/2011	10/23/2011	10/24/2011
	Gage Height	1.97	1.96	1.96	1.98	1.97	1.94	1.94	2.2	2.16	2.08	2.16	2.35	2.41	2.53	2.27
	Elevation	505.71	505.7	505.7	505.72	505.71	505.68	505.94	505.9	505.82	505.9	506.09	506.15	506.27	506.01	505.9
	Date	10/25/2011	10/26/2011	10/27/2011	10/28/2011	10/29/2011	10/30/2011	10/31/2011	11/1/2011	11/2/2011	11/3/2011	11/4/2011	11/5/2011	11/6/2011	11/7/2011	11/8/2011
	Gage Height	2.09	2.06	2.04	2.05	2.03	2.02	2.03	2.01	1.98	2.09	2.18	2.52	2.38	2.26	2.2
	Elevation	505.83	505.8	505.78	505.79	505.77	505.76	505.77	505.72	505.83	505.92	506.26	506.12	506	505.94	
	Date	11/9/2011	11/10/2011	11/11/2011	11/12/2011	11/13/2011	11/14/2011	11/15/2011	11/16/2011	11/17/2011	11/18/2011	11/19/2011	11/20/2011	11/21/2011	11/22/2011	11/23/2011
	Gage Height	2.23	2.34	2.27	2.24	2.13	2.25	2.3	2.25	2.42	2.26	2.17	2.22	2.16	2.25	2.37
	Elevation	505.97	506.08	506.01	505.98	505.87	505.99	506.04	505.99	506.16	506	505.91	505.96	505.9	505.99	506.11
	Date	11/24/2011	11/25/2011	11/26/2011	11/27/2011	11/28/2011	11/29/2011	11/30/2011	12/1/2011	12/2/2011	12/3/2011	12/4/2011	12/5/2011	12/6/2011	12/7/2011	12/8/2011
	Gage Height	2.54	2.53	2.34	2.5	2.45	3.29	4.1	3.76	3.33	2.91	3.1	3.16	3.02	2.86	2.83
	Elevation	506.28	506.27	506.08	506.24	506.19	507.03	507.84	507.5	507.07	506.65	506.84	506.9	506.76	506.6	506.57

Base Elevation = 503.74'

All Units in Feet (' )

From USGS Station 03339000

# Electronic Filing - Received, Clerk's Office : 06/27/2014 - \* \* \* AS 2014-003 \* \* \*

## Brickyard Disposal and Recycling Historical River Elevations

### Average Annual Maximum Elevation 519.14 '

Maximum Elevation	Date	12/9/2011	12/10/2011	12/11/2011	12/12/2011	12/13/2011	12/14/2011	12/15/2011	12/16/2011	12/17/2011	12/18/2011	12/19/2011	12/20/2011	12/21/2011	12/22/2011	12/23/2011	
	Gage Height	2.81	2.71	2.5	2.49	2.51	2.61	4.43	5.69	4.82	4.04	3.78	4.14	5.16	4.73	4.23	
	Elevation	506.55	506.45	506.24	506.23	506.25	506.35	508.17	509.43	508.56	507.78	507.52	507.88	508.9	508.47	507.97	
522.64	Date	12/24/2011	12/25/2011	12/26/2011	12/27/2011	12/28/2011	12/29/2011	12/30/2011	12/31/2011								
	Gage Height	3.87	3.64	3.57	3.47	3.46	3.63	3.72	4.09								
513.65	Elevation	507.61	507.38	507.31	507.21	507.2	507.37	507.46	507.83								
	Date	1/1/2012	1/3/2012	1/4/2012	1/5/2012	1/6/2012	1/7/2012	1/8/2012	1/9/2012	1/10/2012	1/11/2012	1/12/2012	1/13/2012	1/14/2012	1/15/2012	1/16/2012	
	Gage Height	4.36	3.47	3.51	3.54	3.41	3.41	3.14	3.17	2.99	3.18	3.1	2.92	2.89	2.85	2.96	
	Elevation	508.1	507.21	507.25	507.28	507.15	507.15	506.88	506.91	506.73	506.92	506.84	506.66	506.63	506.59	506.7	
	Date	1/17/2012	1/18/2012	1/19/2012	1/20/2012	1/21/2012	1/22/2012	1/23/2012	1/24/2012	1/25/2012	1/26/2012	1/27/2012	1/28/2012	1/29/2012	1/30/2012	1/31/2012	
	Gage Height	7.15	8.1	6.11	4.96	4.35	4.37	6.64	8.4	6.66	7.03	9.91	8.59	7.14	6.06	5.59	
	Elevation	510.89	511.84	509.85	508.7	508.09	508.11	510.38	512.14	510.4	510.77	513.65	512.33	510.88	509.8	509.33	
	Date	2/1/2012	2/2/2012	2/3/2012	2/4/2012	2/5/2012	2/6/2012	2/7/2012	2/8/2012	2/11/2012	2/12/2012	2/13/2012	2/14/2012	2/15/2012	2/16/2012	2/17/2012	
	Gage Height	5.31	4.99	4.68	4.59	4.78	4.96	4.81	4.54	4.25	3.88	3.96	4.21	3.97	3.94	3.98	
	Elevation	509.05	508.73	508.42	508.33	508.52	508.7	508.55	508.28	507.99	507.62	507.7	507.95	507.71	507.68	507.72	
	Date	2/18/2012	2/19/2012	2/20/2012	2/21/2012	2/22/2012	2/23/2012	2/24/2012	2/25/2012	2/26/2012	2/27/2012	2/28/2012	2/29/2012	3/1/2012	3/2/2012	3/3/2012	
	Gage Height	3.95	3.82	3.76	3.79	3.86	3.87	3.81	3.64	3.42	3.41	3.38	3.44	3.62	3.89	3.97	
	Elevation	507.69	507.56	507.5	507.53	507.6	507.61	507.55	507.38	507.16	507.12	507.18	507.36	507.63	507.71		
	Date	3/4/2012	3/5/2012	3/6/2012	3/7/2012	3/8/2012	3/9/2012	3/10/2012	3/11/2012	3/12/2012	3/13/2012	3/14/2012	3/15/2012	3/16/2012	3/17/2012	3/18/2012	3/19/2012
	Gage Height	3.97	3.74	3.45	3.46	3.69	3.44	3.38	3.32	3.51	3.34	3.3	3.34	3.33	3.28	3.25	
	Elevation	507.71	507.48	507.19	507.2	507.43	507.18	507.12	507.06	507.25	507.08	507.08	507.07	507.02	506.99		
	Date	3/20/2012	3/21/2012	3/22/2012	3/23/2012	3/24/2012	3/25/2012	3/26/2012	3/27/2012	3/28/2012	3/29/2012	3/30/2012	3/31/2012	4/1/2012	4/2/2012	4/3/2012	
	Gage Height	3.23	3.2	3.17	3.4	3.6	4.13	3.67	3.48	3.52	3.31	3.41	3.29	3.27	3.59	3.45	
	Elevation	506.97	506.94	506.91	507.14	507.34	507.87	507.41	507.22	507.26	507.05	507.15	507.03	507.01	507.33	507.19	
	Date	4/4/2012	4/5/2012	4/6/2012	4/7/2012	4/8/2012	4/9/2012	4/10/2012	4/11/2012	4/12/2012	4/13/2012	4/14/2012	4/15/2012	4/16/2012	4/17/2012	4/18/2012	
	Gage Height	3.25	3.17	3.07	3.02	3.06	2.95	2.93	2.67	2.75	2.96	2.97	3.21	3.36	3.29		
	Elevation	506.99	506.91	506.81	506.76	506.8	506.69	506.67	506.65	506.49	506.7	506.71	506.95	507.1	507.03		
	Date	4/19/2012	4/20/2012	4/21/2012	4/22/2012	4/23/2012	4/24/2012	4/25/2012	4/26/2012	4/27/2012	4/28/2012	4/29/2012	4/30/2012	5/1/2012	5/2/2012	5/3/2012	
	Gage Height	3.1	3.22	3.08	3.06	2.92	2.84	2.83	2.86	2.72	2.71	2.91	3.74	5.45	5.41		
	Elevation	506.84	506.96	506.82	506.8	506.66	506.58	506.57	506.76	506.6	506.46	506.45	506.65	507.48	509.19	509.15	
	Date	5/4/2012	5/5/2012	5/6/2012	5/7/2012	5/8/2012	5/9/2012	5/10/2012	5/11/2012	5/12/2012	5/13/2012	5/14/2012	5/15/2012	5/16/2012	5/17/2012	5/18/2012	
	Gage Height	4.69	4.26	4.04	4.81	6.39	5.89	5	4.39	4.05	3.81	3.73	3.52	3.49	3.38	3.19	
	Elevation	508.43	508	507.78	508.55	510.13	509.63	508.74	508.13	507.79	507.55	507.47	507.26	507.23	507.12	506.93	
	Date	5/19/2012	5/20/2012	5/21/2012	5/22/2012	5/23/2012	5/24/2012	5/25/2012	5/26/2012	5/27/2012	5/28/2012	5/29/2012	5/30/2012	5/31/2012	6/1/2012	6/2/2012	
	Gage Height	3.32	3.12	3.58	4.18	3.87	3.64	3.42	3.27	3.09	2.96	3.12	3.16	3.1	3.08	3.21	
	Elevation	507.06	506.86	507.32	507.92	507.61	507.38	507.16	507.01	506.83	506.7	506.86	506.9	506.84	506.82	506.95	
	Date	6/3/2012	6/4/2012	6/5/2012	6/6/2012	6/7/2012	6/8/2012	6/9/2012	6/10/2012	6/11/2012	6/12/2012	6/13/2012	6/14/2012	6/15/2012	6/16/2012	6/17/2012	
	Gage Height	3.12	3	2.79	2.72	2.65	2.71	2.65	2.58	2.46	2.42	2.39	2.29	2.25	2.38		
	Elevation	506.86	506.74	506.53	506.46	506.39	506.45	506.39	506.32	506.2	506.16	506.13	506.03	505.99	506.12		
	Date	6/18/2012	6/19/2012	6/20/2012	6/21/2012	6/22/2012	6/23/2012	6/24/2012	6/25/2012	6/26/2012	6/27/2012	6/28/2012	6/29/2012	6/30/2012	7/1/2012	7/2/2012	
	Gage Height	2.64	3.01	2.61	2.41	2.35	2.29	2.19	2.13	2.22	2.07	2	1.97	1.96	1.95	1.95	
	Elevation	506.38	506.75	506.35	506.15	506.09	506.03	505.93	505.87	505.96	505.81	505.74	505.71	505.7	505.69	505.69	
	Date	7/3/2012	7/4/2012	7/5/2012	7/6/2012	7/7/2012	7/8/2012	7/9/2012	7/10/2012	7/11/2012	7/12/2012	7/13/2012	7/14/2012	7/15/2012	7/16/2012	7/17/2012	
	Gage Height	1.94	1.92	1.89	1.95	1.9	2.12	1.95	1.9	1.95	1.9	1.85	1.84	1.84	1.99		
	Elevation	505.68	505.66	505.63	505.69	505.64	505.86	505.69	505.64	505.69	505.66	505.59	505.57	505.58	505.58	505.73	
	Date	7/18/2012															
	Gage Height	1.89															
	Elevation	505.63															

Base Elevation = 503.74'

All Units in Feet (' )

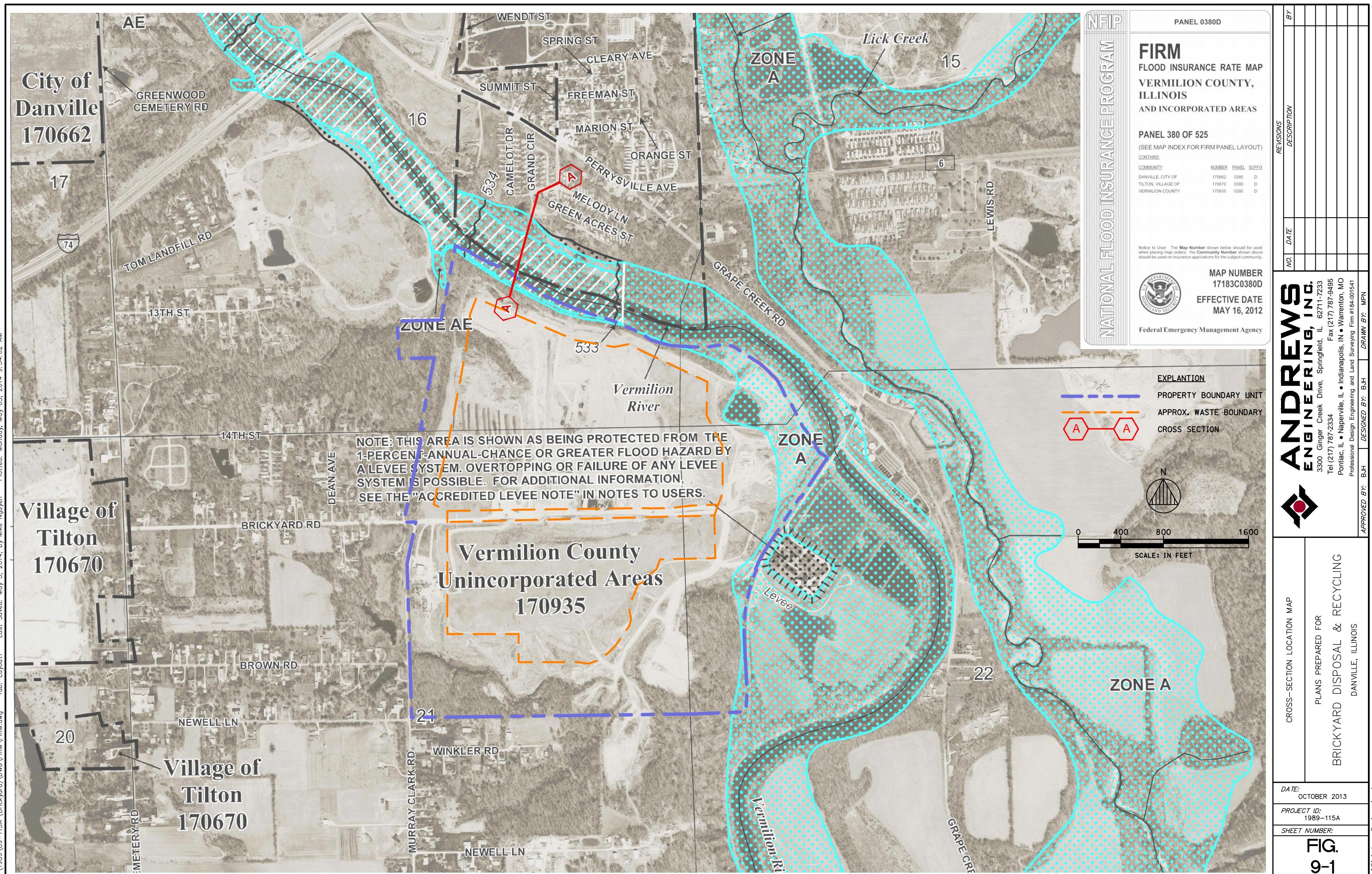
From USGS Station 03339000

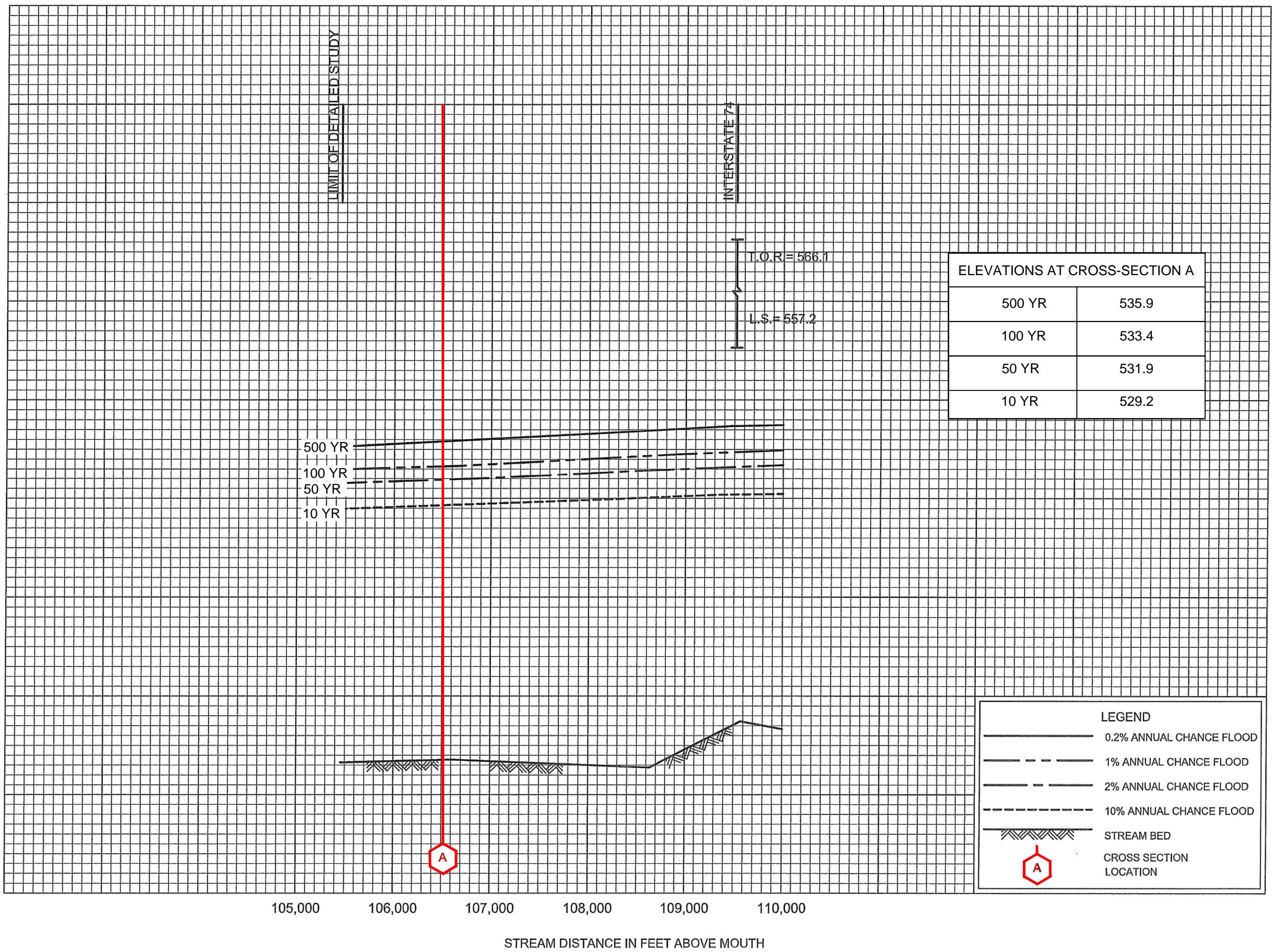
30 of 30

\Aee1\jobs\1989\89-115A (Brickyard)\DOC\2011\Adjusted Standard\Average Annual Max.xlsx  
Average Annual Max

**ATTACHMENT 9**

**FEMA Study**



10P  
**FIG.  
9-2**

**FEDERAL EMERGENCY MANAGEMENT AGENCY**  
**VERMILION COUNTY, IL**  
**AND INCORPORATED AREAS**

**FLOOD PROFILES**  
**VERMILION RIVER**



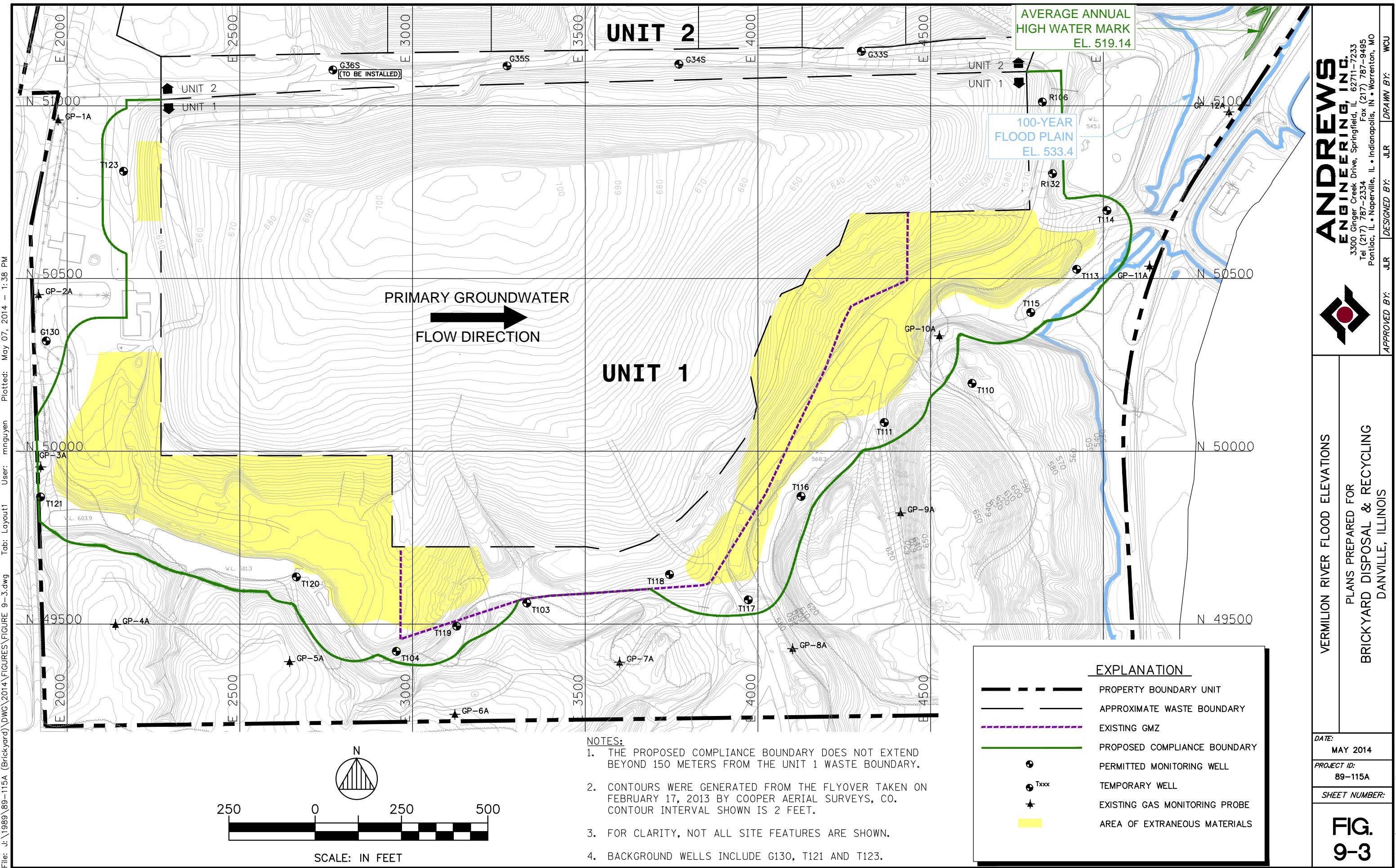
3300 Ginger Creek Drive, Springfield, IL 62711-7233  
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Professional Design Engineering and Land Surveying Firm #184-001541

APPROVED BY: BJH DESIGNED BY: BJH DRAWN BY: MFN

CROSS-SECTION A  
PLANS PREPARED FOR  
BRICKYARD DISPOSAL & RECYCLING  
DANVILLE, ILLINOIS

DATE: OCTOBER 2013  
PROJECT ID: 1989-115A  
SHEET NUMBER:

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FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
Vermilion River								
A	106,526 <sup>1</sup>	460	8,326	5.0	533.4	533.4	533.5	0.1
B	112,266 <sup>1</sup>	458	8,008	5.2	535.3	535.3	535.4	0.1
C	113,856 <sup>1</sup>	493	6,531	6.3	535.7	535.7	535.8	0.1
D	114,896 <sup>1</sup>	495	8,506	4.9	536.6	536.6	536.7	0.1
E	116,386 <sup>1</sup>	621	9,330	4.4	537.1	537.1	537.2	0.1
F	117,806 <sup>1</sup>	450	7,021	5.9	537.4	537.4	537.5	0.1
G	119,737 <sup>1</sup>	338	4,487	7.4	538.6	538.6	538.7	0.1
H	120,507 <sup>1</sup>	873	13,260	2.5	539.3	539.3	539.4	0.1
I	121,987 <sup>1</sup>	822	8,086	4.0	540.4	540.4	540.5	0.1
J	124,097 <sup>1</sup>	555	8,147	3.9	540.9	540.9	541.0	0.1
K	124,407 <sup>1</sup>	479	7,845	4.1	541.0	541.0	541.1	0.1
L	125,147 <sup>1</sup>	616	9,272	3.4	541.3	541.3	541.4	0.1
M	126,457 <sup>1</sup>	648	8,364	3.8	541.6	541.6	541.7	0.1
West Branch Koehn Creek								
A	677 <sup>2</sup>	510	906	0.6	644.4	644.4	644.5	0.1
B	927 <sup>2</sup>	333	274	2.0	644.8	644.8	644.9	0.1
C	1,509 <sup>2</sup>	43	100	5.4	648.6	648.6	648.7	0.1
D	2,569 <sup>2</sup>	164	208	2.6	653.8	653.8	653.9	0.1

<sup>1</sup> Feet above mouth<sup>2</sup> Feet above confluence with Koehn Creek

TABLE 8	FEDERAL EMERGENCY MANAGEMENT AGENCY  VERMILION COUNTY, IL AND INCORPORATED AREAS	FLOODWAY DATA  VERMILION RIVER – WEST BRANCH KOEHN CREEK

**ATTACHMENT 10**

**Curriculum Vitae**

**Bradley J. Hunsberger, L.P.G.**  
**Director of Hydrogeological Services**  
**Project Director II**

**Years with Andrews Engineering:** 27

**Education**

Bachelor of Science - Geology, Illinois State University, Normal, Illinois

**Professional Registrations / Certifications**

Licensed Professional Geologist – Illinois  
Registered Geologist – Missouri  
Professional Geologist – Tennessee  
Professional Geologist – Wisconsin  
Professional Geologist – Indiana  
Certified Professional Geologist (AIPG)  
OSHA Hazardous Waste Site Worker Certification – IL (40 hr)  
OSHA Hazardous Waste Site Worker Refresher – IL (8 hr)

**Specialties**

Hydrogeologic Investigations  
Public Testimony/Expert Witness  
Regulatory Affairs  
Solid Waste Management

**Professional Summary**

Mr. Hunsberger has over 27 years of experience in environmental consulting. He is responsible for design and implementation of hydrogeologic site investigations and studies at environmentally sensitive sites. These sites include solid waste disposal facilities, CCDD facilities, compost facilities, CCB sites, Leaking Underground Storage Tank (LUST) sites, industrial facilities and agri-chemical facilities. The subject criteria includes design of subsurface investigations, field classification of soil and rock, oversight of monitoring wells and other subsurface detection devices, aquifer characterization, and design and implementation of various types of monitoring programs.

Mr. Hunsberger utilizes various computer models to determine groundwater movement and chemical fate transport. Although this type of modeling is primarily associated with solid waste disposal facilities, contaminant transport models are also used to determine plume migration at agrichemical facilities and LUST sites. He has also used flow models for dewatering design for excavations and cell development related to waste disposal and for remediation design.

Mr. Hunsberger has prepared descriptive reports, boring logs, fence diagrams, cross sections, potentiometric surface maps, flow nets and statistical studies of groundwater and soil characteristics for submittal to private and governmental entities. Mr. Hunsberger has extensive experience in project management. His responsibilities under this role include planning, budgeting and scheduling, oversight of site investigations, groundwater studies and modeling. He has also provided expert testimony for various projects regarding geologic and hydrogeologic issues relating to public health, safety and welfare.

## Representative Project Experience

### **Five Oaks Recycling & Disposal Facility, Taylorville, Illinois.**

#### *Project Manager*

Mr. Hunsberger provided project management for all aspects of the soil and groundwater investigation associated with a former sludge pond located adjacent to an operating landfill facility. The project included phased design and implementation of drilling programs to identify areas affected by groundwater migration from a former sludge pond containing fly ash. Soil and groundwater samples were obtained and analyzed for boron. The use of a groundwater flow and contaminant transport model (MODFLOW/MT3D) aided in the determination of rate and extent of ash parameters, location of a groundwater management zone, and with the design of corrective action.

### **Brickyard Disposal and Recycling, Danville, Illinois.**

#### *Project Hydrogeologist/Project Manager*

Brickyard Disposal and Recycling is a municipal solid waste disposal facility which consists of two units separated by a haul road, which allows independent groundwater and gas monitoring systems. Mr. Hunsberger designed the boring program, provided field oversight for boring and piezometer installation, and review for the initial permit application pursuant to the new solid waste rules. Mr. Hunsberger responsibilities now include oversight for quarterly groundwater evaluations, groundwater assessment, and annual corrective action assessments.

### **Proppant Specialists, LLC, Arcadia, Wisconsin.**

#### *Project Manager*

Mr. Hunsberger provided technical assistance, assisted with the coordination of meeting logistics and provided on-site technical support for two public meetings with the Town of Arcadia, Wisconsin, in support of a proposed sand mine. He prepared the overall zoning application for the proposed sand mine related to the hydrogeology of the proposed facility to assist in the demonstration that no potential for contamination to the underlying aquifer located on site. He also participated in the public hearing held by Trempealeau County, Wisconsin, for the zoning application and provided information for lay persons on both the County Board and from the community related to the hydrogeological aspects of the application. The zoning application was subsequently approved.

### **Winnebago Landfill, Rockford, Illinois**

#### *Project Hydrogeologist/Project Manager*

Mr. Hunsberger has provided hydrogeologic related services for Winnebago Landfill since 1990. Responsibilities included design and implementation of the subsurface investigation for an expansion of the Northern Unit which had been designated as a CERCLA site by the US EPA. The subsurface investigation included the installation of monitor wells and piezometers and aquifer characterization testing. Mr. Hunsberger provided peer review of the Groundwater Impact Assessment and completed the Groundwater Monitoring Plan. He also provided test liner oversight and subsequent documentation/reporting. He has assisted in two subsequent facility expansions by providing peer review of draft applications and related materials. Mr. Hunsberger provides oversight for groundwater and leachate quality review and regulatory reporting, including review of residential well analyses. He completed/provided oversight of the five-year corrective action status reports and assists with the evaluation of the draft US EPA's Five-Year Review Report prior to publishing.

### **Livingston Landfill, Pontiac, Illinois.**

#### *Project Hydrogeologist*

Mr. Hunsberger provided oversight and review for all hydrogeological aspects of the county siting application for the initial facility expansion on behalf of Enviro Corporation. Subsequent to the siting approval, Mr. Hunsberger was the project hydrogeologist for the initial significant modification application, including design of the groundwater monitoring program and review and oversight of the groundwater impact assessment. He also designed the Groundwater Monitoring Program for the Parcel D expansion and provided assistance with the Parcel D groundwater impact assessment. Mr. Hunsberger designed and supervised drilling operations for a 50 million cubic yard expansion, which included the installation of 54 wells and piezometers. Other responsibilities at the facility have included monitor well installation oversight, field hydraulic conductivity tests, methane migration investigations,

slurry wall design, and groundwater quality evaluations and related documentation and reporting in accordance with regulatory requirements.

**ADS/McLean County Landfill, Bloomington, Illinois.**

*Project Hydrogeologist*

Responsibilities included conducting site hydrogeologic investigations and reports for regulatory permitting requirements and facility development. The investigations included boring and well/piezometer installation oversight for revisions to the groundwater monitor well network and the proposed expansion of the facility, and test pit evaluations for liner construction planning. Mr. Hunsberger conducted the initial liner evaluation including identification of useable soils for liner construction in the South Fill Area. He was also the on-site quality control representative for construction of the Initial Fill Area (first cell), which included oversight of the cell excavation, and placement of the clay liner, leachate collection pipe and sand drainage layer. Mr. Hunsberger has conducted work at the facility since 1987, providing continuity (hydrogeologically) with three facility owners.

**Dixon/GROP Landfill No. 2, Lee County, Illinois.**

*Project Hydrogeologist*

Responsibilities included regulatory permit applications for an approximately 40-acre fill area containing four separate units and 30 wells. This work included subsurface investigations and a report of the hydrogeologic investigation, groundwater impact assessment (peer review), groundwater monitoring program, and dewatering feasibility studies of a confined aquifer (affecting design and construction activities). This was done using MIGRATE and two-dimensional flow equations. He designed the remedial investigation that resulted in the installation of a slurry wall around an old waste unit.

**Envirofil of Illinois Recycling and Disposal Facility, McDonough County, Illinois.**

*Project Hydrogeologist/Project Manager*

Mr. Hunsberger was responsible for site hydrogeologic investigation and reports for local siting requests and regulatory permit applications of an approximately 75.6-acre area containing 28 wells. This included a Report of Hydrogeologic Investigation and Groundwater Monitoring Program. Additional investigations included aquifer analysis for potential offsite contaminant source with the utilization of an electromagnetic survey.

Mr. Hunsberger provides project management for on-going activities at the facility, which include quarterly groundwater evaluations, routine assessments, annual evaluations of remedial activities, revision to the contaminant transport model and current groundwater investigations.

**Upper Rock Island County Landfill, Rock Island County, Illinois.**

*Project Manager*

Mr. Hunsberger was responsible for oversight of all aspects of site geology and hydrogeology studies for this active municipal solid waste landfill. This includes two expansion applications and continued regulatory compliance and permitting. His other specific duties at the facility included oversight of flow and contaminant transport modeling, preparation of annual reports and assessments of potential groundwater impact, remedial investigations of the site including field classification and oversight, groundwater and leachate quality testing, soils and gas testing, and assessments of potential groundwater impact.

**Sangamon Valley Landfill, Sangamon County, Illinois.**

*Project Hydrogeologist/Project Management*

Responsibilities included regulatory permit applications consisting of subsurface investigations, peer review of the groundwater impact assessment, groundwater monitoring program, and groundwater flow studies for two separate solid waste units that were approximately 75 acres that contain in excess of 55 wells. Mr. Hunsberger was responsible for the installation and augmentation of monitoring well networks for both disposal units. Responsibilities also include design and oversight of groundwater management zone investigations and augmentation of the existing remediation systems that included installation and operation of a reactive barrier.