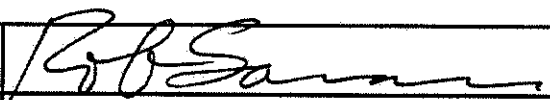


## Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	General Chemicals LLC				
CONTACT PERSON/TITLE	Rob Savarese				
ADDRESS	90 East Halsey Road, Parsippany, NJ 07054				
PHONE	(973) 515-1839	FAX		E-MAIL	RSavarese@gentek-global.com
GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	Brian D. Jacobson	GA PE/PG NUMBER	23332		
COMPANY	Geosyntec Consultants				
ADDRESS	1255 Roberts Blvd, Suite 200, Kennesaw, GA 30144				
PHONE	(678) 202-9500	FAX	(675) 202-9501	E-MAIL	bjacobson@geosyntec.com
APPLICANT'S CERTIFICATION					
<p>In order to be considered a qualifying property for the VRP:</p> <p>(1) The property must have a release of regulated substances into the environment;</p> <p>(2) The property shall not be:</p> <p style="margin-left: 20px;">(A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.</p> <p style="margin-left: 20px;">(B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or</p> <p style="margin-left: 20px;">(C) A facility required to have a permit under Code Section 12-8-66.</p> <p>(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.</p> <p>(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.</p> <p>In order to be considered a participant under the VRP:</p> <p>(1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.</p> <p>(2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.</p> <p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p> <p>I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.</p>					
APPLICANT'S SIGNATURE					
APPLICANT'S NAME/TITLE (PRINT)	Rob Savarese, Director EHS			DATE	1/10/13

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)			
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)			
HSI Number	10498	Date HSI Site listed	20 February 1998
HSI Facility Name	General Chemical Corporation	NAICS CODE	
PROPERTY INFORMATION			
TAX PARCEL ID	14 013100010176	PROPERTY SIZE (ACRES)	5.03
PROPERTY ADDRESS	1427 Central Ave.		
CITY	East Point	COUNTY	Fulton
STATE	Georgia	ZIPCODE	30344
LATITUDE (decimal format)	33.671366	LONGITUDE (decimal format)	84.436871
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	General Chemicals LLC	PHONE #	(973) 515-1839
MAILING ADDRESS	90 East Halsey Road		
CITY	Parsippany	STATE/ZIPCODE	NJ, 07054
ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)
1.	\$5,000 APPLICATION FEE IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES. (PLEASE LIST CHECK DATE AND CHECK NUMBER IN COLUMN TITLED "LOCATION IN VRP." PLEASE DO NOT INCLUDE A SCANNED COPY OF CHECK IN ELECTRONIC COPY OF APPLICATION.)	1/10/2013 Check #13621	
2.	WARRANTY DEED(S) FOR QUALIFYING PROPERTY.	Attachment B	
3.	TAX PLAT OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	Figure 1	
4.	ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	Attached	
5.	The VRP participant's initial plan and application must include, using all reasonably available current information to the extent known at the time of application, a graphic three-dimensional preliminary conceptual site model (CSM) including a preliminary remediation plan with a table of delineation standards, brief supporting text, charts, and figures (no more than 10 pages, total) that illustrates the site's surface and subsurface setting, the known or suspected source(s) of contamination, how contamination might move within the environment, the potential human health and ecological receptors, and the complete or incomplete exposure pathways that may exist at the site; the preliminary CSM must be updated as the investigation and remediation progresses and an up-to-date CSM must be included in each semi-annual status report submitted to the director by the participant; a <b>PROJECTED MILESTONE SCHEDULE</b> for investigation and remediation of the site, and after enrollment as a participant, must update the schedule in each semi-annual status report to the director describing implementation of the plan	Sections 1 through 6. Tables 1 through 5 and Figures 1 through 12. Attachments C and D.	



**ADDITIONAL QUALIFYING PROPERTIES (COPY THIS PAGE AS NEEDED)**

PROPERTY INFORMATION			
TAX PARCEL ID	14 013100010184	PROPERTY SIZE (ACRES)	10.086
PROPERTY ADDRESS	Martin Street		
CITY	East Point	COUNTY	Fulton
STATE	Georgia	ZIPCODE	30344
LATITUDE (decimal format)	33.671335	LONGITUDE (decimal format)	84.435245
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	Martin Street Property	PHONE #	(404) 766-1621
MAILING ADDRESS	1359 Central Ave.		
CITY	East Point	STATE/ZIPCODE	GA, 30344

PROPERTY INFORMATION			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
STATE		ZIPCODE	
LATITUDE (decimal format)		LONGITUDE (decimal format)	
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIPCODE	

PROPERTY INFORMATION			
TAX PARCEL ID		PROPERTY SIZE (ACRES)	
PROPERTY ADDRESS			
CITY		COUNTY	
STATE		ZIPCODE	
LATITUDE (decimal format)		LONGITUDE (decimal format)	
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)		PHONE #	
MAILING ADDRESS			
CITY		STATE/ZIPCODE	



*Prepared for*

**General Chemical LLC**  
90 East Halsey Road  
Parsippany, New Jersey 07054

**VOLUNTARY REMEDIATION PLAN  
APPLICATION  
GENERAL CHEMICAL SITE  
EAST POINT, GEORGIA  
HIS#10498**

*Prepared by*

**Geosyntec**   
consultants

engineers | scientists | innovators

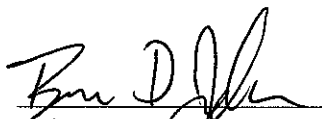
1255 Roberts Boulevard, Suite 200  
Kennesaw, Georgia 30144

Project Number GR5060

January 2013

## PROFESSIONAL ENGINEER CERTIFICATION

I certify that I am a qualified engineer who has received a baccalaureate or post-graduate degree in the natural science or engineering, and have sufficient training and experience in environmental assessment and corrective measures, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments. I further certify that this report was prepared by myself or by a subordinate working under my direction.

 10 JAN 2013  
Brian D. Jacobson, P.E.  
Registered Professional Engineer  
Georgia Registration #23332



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## 1. INTRODUCTION

On behalf of General Chemicals LLC (GCL), Geosyntec Consultants (Geosyntec) has prepared this Voluntary Remediation Plan Application (VRPA) for the facility located at 1427 Central Avenue, in the City of East Point, Fulton County, Georgia (hereafter referred to as “the site”). The approximate site location corresponds to latitude of 33.67 and longitude of 84.44 and has an approximately 15.1-acre parcel of land, identified on the Fulton County Tax Assessor’s website as Tax Parcel IDs 14 013100010176 (owned by GCL) and 14 013100010184 (owned by Martin Street Property, LLC). The site property is bounded by North Martin Street and the Charles A. Green Recreational Facilities on the north side, Randall and Bayard Streets and the East Point Sanitation facility on the east side, Central Avenue and an industrial (metal recycling) facility on the south side, and Central Avenue on the west side. The general area surrounding the GCC facility consists of industrial land uses bordered by some residential properties toward the north and northeast directions. Another industrial site is located on the adjacent property to the northwest of the GCL facility. The tax parcel identification map is provided as **Figure 1**.

### 1.1 Background

The Site was first owned and operated by the Hercules Corporation (Hercules) from 1927 to 1934 and was used for sulfuric acid production. Allied Chemical Corporation (Allied) acquired the property and facility in 1934, and developed the property as an aluminum sulfate (alum) production plant. The by-product of the alum production operations was Hi-Clay Alumina (HCA) which typically has a pH of approximately 3.5 and consists of silica, titanium dioxide, and other minerals.

The site was acquired by GCL in 1986 and continued the production of alum using a continuous process that involved the reaction of bauxite, water, and sulfuric acid. The bauxite process was used through 1999. Since 1999, GCL modified the process to eliminate HCA production and implemented various waste minimization measures to recycle process water at the facility. Since 1999 GCL has sent any process waste generated offsite for reuse or disposal in a permitted landfill.

Throughout the manufacturing operations at the site, i.e., from 1934 to 1999, HCA was stored in four on-site HCA cells. The locations of the former HCA cells are shown on **Figure 2**. These HCA cells were excavated from 2003 through 2005, as part of source

removal activities carried out as a voluntary remedial action at the site. The excavated area was backfilled to the current elevations in 2006. The site was brought to design grades with general fill then capped with six inches of low permeability clay ( $1 \times 10^{-6}$  cm/s) and a three-inch thick vegetative cover soil. A 500-ft long French drain, functioning as a collection system for groundwater was used for recycling groundwater in the manufacturing plant activities. This was located on the northeast corner of the site prior to excavation of HCA. Based on observations made during the removal activities, the sumps were not collecting significant groundwater at the time of abandonment and were considered ineffective. During the removal of the source material from the HCA cells, the sumps for the French drain system were backfilled with clean soil.

The property has been the subject of a number of environmental assessments conducted between 1996 and 2012, which revealed the presence of sulfate and aluminum in soil, groundwater and stormwater and low pH stormwater and groundwater. The property was listed on the Georgia Environmental Protection Division (EPD) Hazardous Site Inventory (HSI) in February 1998 as site number 10498 for the release of aluminum sulfate in soil and groundwater.

Based on historical land use information obtained from Sanborn Fire Insurance Maps, the facilities on the adjoining parcels northwest and southeast of the site are shown to have a long period of acid usage and storage (Parsons 1996). These facilities include:

- Northwest of the site was Furman Farm Improvement Fertilizer Works. This facility is located upgradient of the site and includes an acid pit and tanks.
- Southeast of the site was Old Dominion Guano Co., The American Agricultural Chemical Co., and the ULIN Mattieson Chemical Co. The facilities included sulfuric acid tanks, an “acid dump” and “acid pits” according to 1925 Sanborn Map. Up to 12,000 cubic yards of material from Allied operations were reportedly used to fill a ravine at the site.
- Regulatory records revealed that Allied Signal (former GCL property owner) has disposed acidic silica wastes at Crosby Stevens Co. and Atlanta Utility Works, located 0.22 miles and 0.39 miles northwest of the site, respectively.

- The City of East Point may have used HCA from the Allied Signal Facility to level the ball field adjacent to the GCL site. The HCA may be a potential source of low pH discharge through groundwater infiltration to the storm drain system.

A site vicinity map showing the location of these adjoining parcels that could potentially release sulfate to groundwater is provided on **Figure 3**.

## **1.2 Property Eligibility**

Based on our review of the provisions of the Georgia Voluntary Remediation Program Act, Part 3, Code Section 12-8-105, the property meets the eligibility criteria for the VRP.

- The property was listed on HSI in 1998;
- The property is not listed on the National Priority List;
- The property is not currently undergoing response activities required by an order of the regional administrator of the United States Environmental Protection Agency (EPA);
- The property is not required to have a permit under Code Section 12-8-66;
- Qualifying the property would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the EPA;
- There are no liens filed against the property pursuant to Code Section 12-8-96 or 12-13-12;
- Part of the site (Parcel ID: 14 013100010176) is owned by GCL and the remaining part of the site (Parcel ID: 14 013100010184) is owned by Martin Street Property. Martin Street Property purchased this parcel from GCL on 2 August 2007. GCL has express permission to enter the property along an easement adjacent to the property boundary and to the location of GCW-05 to perform corrective action including, to the extent applicable, implementing controls for the site pursuant to the Corrective Action Plan (Geosyntec, 2007).

Copies of the Temporary easement agreements are provided in **Attachment A**; and

- GCL is not in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the EPA or the Georgia EPD.

### **1.3 Previous Documents**

This VRPA is prepared based on information obtained primarily from the following environmental investigation reports and correspondence letters with EPD. The reports or letters are organized in chronological order:

- Evaluation of Discharges at GCL, East Point, GA Facility , prepared by Parsons Engineering Science, Inc., dated January 1996.
- Letter from EPD to GCL listing the site on the Hazardous Site Inventory, dated 13 February 1998.
- Compliance Status Report, prepared by Geosyntec Consultants for GCL and submitted to EPD in February 1999.
- Revised Corrective Action Plan, prepared by Geosyntec Consultants for GCL and submitted to EPD in September 2002.
- Letter by EPD to GCL, Proposed Approach to Soils Confirmation Testing, 12 dated 12 September 2005.
- Revised Corrective Action Plan, prepared by Geosyntec Consultants for GCL and submitted to EPD in March 2007.
- Engineering Report, Prepared by Geosyntec Consultants for GCL and submitted to EPD in January 2011.
- Letter from EPD to GCL requesting a Compliance Status Report or a VRPA no later than 11 January 2013.

The 1996 Parsons report indicated potential releases of low-pH water to groundwater or municipal storm sewers from the GCL facility and off-site sources. In a letter, dated 13

February 1998 the Georgia EPD notified GCL that the site was to be listed on the HSI pursuant to the Georgia Hazardous Substance Response Act (HSRA). GCL submitted a Compliance Status Report (CSR) and a Corrective Action Plan (CAP) for the site in February 1999 and April 2000, respectively. The CAP proposed to mitigate potential impacts to groundwater and the unnamed tributary by deepening the existing French drain system bordering the HCA cells on the north and east sides.

Following several communications between GCL and EPD between 2000 and 2002, a revised conceptual CAP was prepared and presented to EPD during a June 7, 2002 meeting. The revised conceptual CAP included the potential for excavation and off-site beneficial use of the HCA. Based on the EPD's favorable verbal comments on the conceptual CAP presented on 7 June 2002, GCL voluntarily excavated all four HCA cells (1A, 1B, 2 and 3) in several phases from 13 June 2003 to 24 October 2005. The implementation of excavation as a voluntary measure was to provide source removal from the site, thereby reducing the potential for future impacts to the site soil and groundwater. A total area of approximately six acres was excavated. The total volume of material removed was 237,184 tons (165,124 cubic yards), which consists of both HCA and HCA-impacted soil, up to an approximate depth of 20 - 25 ft below ground surface (bgs).

The depth of each excavation area was based on visual removal of HCA material. This visual criterion was considered reasonable since HCA is easily distinguished from native soils. To document the removal of the HCA material from the site, 64 soil confirmation samples were collected and analyzed for sulfate. 11 samples were analyzed for synthetic precipitation leaching procedure (SPLP) sulfate. The sampling procedure was designed by establishing a 75 feet by 75 feet grid pattern where a floor sample from each grid and a sidewall sample from the perimeter were collected. The 75 feet grid was approved by EPD in a letter dated 12 September 2005. Of the 64 confirmation samples, 15 were collected from sidewall of the excavation and the remaining 49 samples were collected from the excavation floor (approximately 8 samples per acre).

Analytical results of the confirmation samples indicated that the sulfate concentrations (dry weight basis) ranged from 136 to 10,300 mg/kg (**Figure 4**). The mean value was 2,680 mg/kg with an upper 95 percent confidence limit value of 3,143 mg/kg (**Table 1**). SPLP sulfate concentrations ranged from 37 mg/L to 661 mg/L.

Following the excavation of the HCA cells, GCL submitted a revised CAP in March 2007. The revised CAP proposed an enhanced monitoring program, which consists of the installation of additional monitoring wells at pre-selected locations and the implementation of a five year quarterly monitoring program. EPD issued a conditional approval of the revised CAP on 4 September 2007. Between 2007 and 2012, GCL installed 18 monitoring wells to characterize the change in site conditions because of the removal of the HCA. Monitoring wells screened in the shallow zone (saprolite) are labeled with a suffix “S” or “M”, while wells screened in the intermediate zone (partially weathered rock) are labeled with a suffix “D”. Monitoring wells labeled with a suffix “V” were installed in the fractured bedrock to delineate the vertical extent of sulfate releases to groundwater. The location of the monitoring wells is shown in Figure 2. Well cluster GWC-01 is located upgradient of the former HCA cells and represents background. Well clusters GCW-02, GCW-03, and GCW-04 are located outside the foot print of the former HCA cells. These wells monitor the property boundary. Well GCW-05 is located within the foot print of the former HCA and is referred as the former source area well. In addition, one existing up gradient on-site well (OW-1A) installed prior to HCA removal and five off-site wells installed on the City of East Point property (labeled “EPW” for East Point Well) are used to evaluate groundwater quality. The monitoring wells were sampled quarterly for aluminum and sulfate analysis.

## 2. PROPERTY SETTING

### 2.1 Physical Setting

The site is located in the Piedmont Physiographic Province of Georgia, which is characterized by gently rolling hills separated by small to moderately sized streams. The site is located within the United States Geologic Survey (USGS) Southwest Atlanta, GA topographic quadrangle (**Figure 5**). A review of Figure 5 indicates that the site topography is relatively steep sloping towards east with elevations ranging between 1030 and 975 feet above mean sea level. To the east of the property boundary is a small intermittent unnamed stream that discharges to the South River.

### 2.2 Site Geology and Hydrogeology

The geology of the Piedmont Physiographic Province is characterized by Pre-Cambrian to Paleozoic age metamorphic and igneous rocks that have been weathered into a distinctive residual soil known as saprolite near ground surface. Saprolite has the texture and appearance of the parent rock but has been decomposed by chemical and physical weathering. Beneath the saprolite is generally a transition zone of partially weathered rock (PWR) underlain by fractured bedrock.

The numerous investigative borings completed at the site identified the shallow subsurface material as clayey fill material to an approximate depth of 5 feet below ground surface (bgs) underlain by saprolite and PWR to an approximate depth of 70 feet bgs. **Figures 6, 7 and 8** illustrate geologic cross-sections along the east-west and north-south transects of the site. The fill material, which varies in thickness, covers most of the site and consists of sandy to gravelly red micaceous clay. The saprolite, as encountered in all monitoring wells drilled at the site, consists of highly weathered schist consisting of orange to red clay with kaolinite and mica. Foliation and other relict rock texture are still well preserved and were visible in the saprolite samples, but the material comprises mostly clay and mica. Beneath the saprolite is a PWR which has an approximate thickness of 10 feet. The competent bedrock was generally located at 75 feet bgs.

The occurrence and movement of groundwater in the Piedmont is generally within two hydrogeologic units. A shallow hydrogeologic unit is the saprolite and PWR whereas a deeper hydrogeologic unit is the fractured bedrock. Groundwater usually occurs under



water table (i.e., unconfined) or semi-confined conditions. Groundwater flow is controlled by local topographic features, where recharge occurs in upland areas and discharge occurs in drainage features such as streams, rivers, or lakes. Recharge to the shallow hydrogeologic unit is primarily the result of infiltrating precipitation. Groundwater in the deeper water-bearing zone is associated with secondary porosity (fractures or open spaces) within the crystalline bedrock and flow is controlled by the distribution and degree of interconnection of these openings in the rock. The shallow and the deeper hydrogeologic units are usually interconnected and can be characterized as a single unconfined aquifer.

Based on the results of the field investigation, the saprolite and PWR can be conceptualized as an unconfined, homogeneous, and isotropic deposit of sandy clay with a hydraulic conductivity of approximately  $4 \times 10^{-5}$  to  $2 \times 10^{-4}$  cm/s, a horizontal hydraulic gradient of approximately 0.003 to 0.03, and an effective porosity of about 20 percent. Groundwater is believed to generally flow at about 16.4 ft per year from west to east across the site and advection is believed to be the dominant contaminant transport mechanism. The vertical hydraulic gradient calculated between the wells installed in the shallow and deeper hydrogeologic units are variable (**Table 2**), which suggests mixing of groundwater between the shallow saprolite/PWR and fractured bedrock as the gradient periodically reverses from upward to downward.

The water table at the site mimics surface topography. Depth to groundwater is variable, depending on factors such as the amount of precipitation. Based on historical water level measurements, groundwater flow at the site is to the east. Refer to **Table 3** for the most recent (November 2012) depth to groundwater measurements. A potentiometric surface map, developed based on the November 2012 water level measurements, is presented in **Figure 9**.

### 3. REGULATED CONSTITUENTS

Aluminum Sulfate is the regulated constituent at the site. Aluminum and sulfate are analyzed for individually. Previous site investigations indicate the presence of aluminum and sulfate in soil, groundwater and stormwater. Low-pH groundwater and stormwater also exist at the site.

#### 3.1 Source

Manufacturing activities occupy a relatively small portion of the south-central portion of the site. Within this area, sulfuric acid has been stored over the operational life of the facility. The production of alum involves handling of the product in a dry powder and liquid form. As HCA had been stored on site, surface water and groundwater which infiltrated the HCA ponds might have contributed to dissolved sulfate as well as depressed pH in groundwater within the site boundary. The HCA material was removed from the on-site cells to mitigate impacts to soils and groundwater by eliminating the potential source material. The occurrence of aluminum in groundwater is primarily a function of groundwater pH interacting with naturally occurring aluminum in soils. Groundwater data indicates that as pH rises above 5.5 s.u., the aluminum becomes immobile.

Other potential off-site sources of sulfate and low-pH groundwater are listed in **Section 1.1**. GCL is relying upon historical reports in terms of identification of these potential source areas and does not have access to sampling data. The other potential sources may be contributing the elevated sulfate concentrations at the site including the upgradient well.

#### 3.2 Constituents in Soil

Aluminum is naturally occurring and the second most abundant metal in the earth's crust. The aluminum concentrations observed in the site soil during the course of the CSR investigations are within the range typically seen in Piedmont soils (i.e., 70,000 to 100,000 mg/kg). Therefore, based on detected concentrations of aluminum in soil samples, industrial activities at the site have not resulted in a significant increase in aluminum concentrations in the soil (Geosyntec, 1999).

Following removal of the HCA between 2003 and 2005, residual soil confirmation samples were collected that indicate the residual sulfate concentrations in soil ranged

from 136 to 10,300 mg/kg. Of the 64 confirmation samples, 63 samples were below the proposed Type 1 RRS of 7,370 mg/kg (Figure 4 and Table 1). The mean value of post exaction samples is 2,680 mg/kg and the 95 percent upper confidence limit value is 3,143 mg/kg.

### **3.3 Constituents in Groundwater**

The results of the groundwater laboratory analysis from the 2011 quarterly and 2012 semi-annual sampling events are summarized in **Table 4** and discussed below.

Aluminum was detected at most groundwater monitoring wells during the 2011 and 2012 sampling events. In general, aluminum concentrations were low or non-detect at the off-site wells, ranging from <0.1 mg/L at EPW-02, EPW-03M and EPW-03D to 21 mg/L in monitoring well EPW-01. Aluminum concentrations in the background monitoring wells (GCW-01S, -01M, and -01D) at the upgradient edge of the site varied between 6 to 35 mg/L. Aluminum concentrations along the northern property boundary at GCW-4S, -04M, -04D, and -04V varied between 145 to 1,040 mg/L with concentrations increasing with depth. Aluminum concentrations at the eastern boundary at GCW-02S, -02D, and -02V varied between 25 and 328 mg/L with concentrations decreasing with depth. Aluminum concentrations in monitoring wells GCW-03S and -03D, located at the northeast corner of the property ranges between 108 mg/L to 385 mg/L, and concentrations appear to be increasing with depth. The source area monitoring well (GCW-05) contains aluminum below the detection limit of 0.1 mg/L to 0.4 mg/L. **Figure 10** presents the results aluminum concentrations during the November 2012 monitoring event.

Aluminum concentrations and pH measured in groundwater provide evidence that aluminum in groundwater is a function of groundwater pH interacting with the naturally occurring aluminum in soils (Table 4). As the pH decreases, aluminum becomes mobile and its concentration increases in groundwater. As the pH recovers, aluminum becomes immobile and its concentration decreases in groundwater. The low or non-detect aluminum concentration in the off-site wells is attributed to the rise in groundwater pH in these wells. Also note that the measured groundwater pH at GCW-05, located under a former HCA cell, ranges from 5.8 to 6.4 s.u. and the aluminum concentration ranges from <0.1 to 0.4.

Sulfate was detected at most monitoring wells during the 2011 and 2012 sampling events. The measured sulfate concentrations were low in the off-site wells, ranging from non-detect at EPW-02 to 130 mg/L at EPW-01. The background monitoring wells, GCW-01S, -01M, and -01D contain sulfate ranging between 290 to 460 mg/L and concentrations appeared to be highest in the intermediate zone (GWC-01M). Sulfate concentrations along the northern property boundary at GCW-4S, -04M, -04D, and 04V varied from 2,200 to 9,900 mg/L. Sulfate concentration in the eastern boundary wells GCW-02S, -02D and -02V varied between 1,900 mg/L and 3,200 mg/L. Sulfate concentrations in monitoring wells GCW-03S and -03D were 1,200 mg/L and 4,000 mg/L, respectively. Sulfate concentration increases with depth in all well clusters. The source area monitoring well (GCW-05) has 1,700 mg/L sulfate during the most recent monitoring event. **Figure 11** presents sulfate concentrations during the November 2012 monitoring event.

The pH measurements were generally consistent across the site. The off-site wells EPW-01, -02, and -03 ranged from 3.8 to 6.2 standard units (s.u.). The upgradient wells GCW-01S, -01M, and -01D and OW-1A ranged from 3.4 to 4.2 s.u. The northern and eastern wells were similar and ranged between 3.2 and 4.4 s.u. The pH for source area monitoring well (GCW-05) was measured at 6.4 s.u. in November 2012.

### **3.4 Constituents in Stormwater**

The topography of the site is characterized by high relief with surface elevations ranging from approximately 1030 ft above mean sea level upgradient (west) of the site to elevation of 975 ft east of the property. As a result, surface water flows from west to east toward the unnamed tributary of the South River.

Geosyntec collected stormwater samples from one on-site and three off-site storm drains during the 2012 quarterly monitoring events. The purpose of the stormwater sampling program was to evaluate potential impacts to the storm drain system as requested by EPD. The stormwater samples were analyzed for sulfate using EPA Method 9056A and aluminum using EPA Method 6010C. The pH of the stormwater was measured in the field using EPA Method 150.1. The stormwater sampling locations are shown on Figure 3. The stormwater sampling results are presented in **Table 5** and discussed below:

Aluminum was detected at stormwater monitoring locations during the 2011 and 2012 sampling events. The upgradient sampling point (SW-09) has between <0.1 mg/L and 1.1 mg/L. Samples collected cross gradient (SW-06 in the Charles A. Green Recreational Facilities) contained 76 mg/L to 218 mg/L. At the downstream and on-site location (SW-02) aluminum was measured between 52 mg/L 383 mg/L. The discharge of the storm drain to surface water was sampled at SW-07. SW-07 is located approximately 3000 ft downstream from the site. The aluminum concentrations at SW-07 ranged between 18 mg/L and 55 mg/L. Similar to the groundwater, aluminum concentration in stormwater correlates with pH. As the pH rises, the concentration of aluminum decreases.

Sulfate was detected at stormwater monitoring locations, including the location upgradient from the site. The upgradient (SW-09) sulfate concentrations ranged between at 62 mg/L and 170 mg/L. Samples collected from cross gradient (SW-06) had between 790 mg/L and 2,100 mg/L. At the downstream and on-site location (SW-02) sulfate was measured between 500 mg/L and 3,100 mg/L. SW-07 sampled from the discharge of the storm drain to surface water had sulfate concentrations ranging between 190 mg/L and 590 mg/L.

#### **4. POTENTIAL RECEPTORS**

There are three potential exposure pathways to receptors at the site via exposure to soils, groundwater, and surface water impacted by soils or groundwater.

The common fill, low permeability cover and vegetative soil cover over the former HCA cells provide engineering controls to eliminate potential direct exposure pathways (i.e., direct contact and fugitive dust). The cover system also improves storm water management, erosion protection and sediment control. Furthermore, the low permeability cover system reduces the rainwater infiltration over the former HCA cells.

A direct groundwater pathway does not exist since East Point Development Regulations (Sec. 10-4034) requires use of the existing public water supply system where public supply is available within 300 feet, as is the case at the site. If at the completion of delineation groundwater exceeds the Type 4 RRS, institutional controls, including restrictive covenants under the VRP, will be placed on the site properties to prevent future groundwater use and effectively eliminate any potential pathways for on-site receptors.

If the groundwater delineation results indicate site-produced high sulfate concentration groundwater may intersect with the storm drain system that crosses the Charles A. Green Recreation facility and the corner of the site, the area of the storm drain potentially impacted (e.g., between SW-02 and SW-06) will be repaired. The repairs to prevent groundwater from entering the storm drain will eliminate the pathway for sulfate to ultimately discharge to surface water at the downstream SW-07 location.

## 5. RISK REDUCTION STANDARDS

HSRA Chapter 391-3-19-.07(9) provides for the development of site-specific risk reduction standards (RRS) for soil and groundwater at non-residential sites. Aluminum sulfate is the HSRA regulated substance at the site. As there is no analytical procedure for measurement of aluminum sulfate, both aluminum and sulfate must be analyzed for individually. Aluminum and sulfate are not listed as regulated substances. As discussed previously, per EPD requirements, GCL has been monitoring for aluminum and sulfate. As such, the development of Type 1 (default residential) and Type 4 (site-specific non-residential) RRS for aluminum and sulfate for soil and groundwater is presented below. The Type 1 RRS were developed for use in evaluating and demonstrating delineation as required under the VRP. The Type 4 RRS were developed for use as corrective action objectives.

### 5.1 Groundwater Risk Reduction Standards

#### 5.1.1 Aluminum

Since aluminum is not listed in HSRA Table 1 of Appendix III, the Type 1 RRS is background which is approximately 35 mg/L. The background value is based on data from monitoring well GCW-01M which is located on the upgradient side of the site. Equations 1 and 2 from the USEPA Risk Assessment Guidance for Superfund (RAGS), Part B (USEPA, 1991), were used to calculate the Type 4 RRS for aluminum using the default, non-residential exposure parameters obtained from Table 3 of Appendix III in the HSRA rule. Inputs and supporting calculations are provided in **Attachment C**. The proposed groundwater Type 4 RRS for aluminum is 102 mg/L.

#### 5.1.2 Sulfate

Since there is no toxicity data available for sulfate, risk-based equations were not used to calculate the Type 1 and Type 4 RRS. Several other sources were considered in developing the Type 1 and Type 4 RRS for sulfate: (i) secondary maximum contaminant level (MCL); (ii) 1999 Center for Disease Control (CDC) Study; and (iii) background concentrations and EPD correspondence.

A non-enforceable National Secondary Drinking Water Regulation (NSDWR) standard for sulfate is 250 mg/L and was established on the basis of aesthetic properties. Sulfate in drinking water produces a strong odor and taste, but is common in public water

supplies in certain parts of the U.S. Therefore, the NSDWR standard does not represent a level posing significant human health risk, and the NSDWR cannot be considered risk-based.

The CDC and USEPA published a study of drinking water, which concluded that levels of sulfate must be substantially higher than 250 mg/L to produce even the most sensitive effect (diarrhea) in human populations (CDC, 1999). The 1999 CDC study identifies 1,200 mg/L sulfate as a level that did not produce adverse human effects in human volunteers consuming sulfate-enriched water. Therefore, the 1,200 mg/L value represents a No Observable Adverse Effects Level (NOAEL).

Groundwater data from GCW-01M on the upgradient side of the site represents background. The historic sulfate concentration in GCW-01M has been approximately 500 mg/L. The 500 mg/L background sulfate concentration is consistent with the target concentration suggested by EPD in previous correspondence.

Based on the information presented above, the proposed groundwater Type 1 RRS for sulfate is 500 mg/L and the Type 4 RRS for sulfate is 1,200 mg/L.

## **5.2 Soil Risk Reduction Standards**

### **5.2.1 Aluminum**

Equations 6 and 7 from RAGS, Part B (USEPA, 1991), were used to calculate the Type 1 RRS for aluminum using the default, child and adult residential exposure parameters obtained from Table 3 of Appendix III in the HSRA rule. Inputs and supporting calculations are provided in Attachment C. The proposed soil Type 1 RRS for aluminum is 77,000 mg/kg.

The soil Type 4 RRS standard considers both the protection of groundwater and the protection of human health. RRS for the protection of groundwater were calculated using a fate and transport equation and soil-water partition coefficient from the USEPA Soil Screening Guidance (USEPA, 1996). Equations 6 and 7 from RAGS Part B (USEPA, 1991), were used to calculate the risk-based Type 4 RRS for aluminum using the default, non-residential exposure parameters obtained from Table 3 of Appendix III in the HSRA rule. Inputs and supporting calculations are provided in Attachment C. The proposed soil Type 4 RRS for aluminum is  $1.53 \times 10^5$  mg/kg. The soil RRS is



based on protection of groundwater, which is also protective of human health. Also note that the calculated health-based value would exceed one million mg/kg.

### 5.2.2 Sulfate

As mentioned previously, there are no standard USEPA toxicity values for sulfate. Based on regulatory correspondence with EPD, the sulfate RRS should be developed for soil that is protective of groundwater. Per HSRA 391-3-19-.07(6)(c) 1(iii) and 391-3-19-.07(9)(d) 1, soil concentrations which will not cause contamination of groundwater at levels which exceed the Type 1 and Type 4 groundwater RRS may be determined by a laboratory test and/or fate and transport model recognized by EPA.

In 2005/2006, 11 soil samples were collected and analyzed for total and SPLP sulfate. Total sulfate concentrations ranged from 869 mg/kg to 9,940 mg/kg and SPLP concentrations ranged from 37 mg/L to 661 mg/L (Table 1). The data and a plot of total sulfate vs. SPLP sulfate are provided in **Attachment D**. Based on the data, the total soil concentration that yields an SPLP value of 500 mg/L is approximately 9,823 mg/kg. To be conservative and applying a 25% safety factor, GCL proposes a total sulfate concentration of 7,370 mg/kg for the soil Type 1 and Type 4 RRS.

## 5.3 Delineation to Type 1 RRS

### 5.3.1 Groundwater

As shown on **Figure 1**, based on the most recent (November 2012) measurements of sulfate, groundwater concentrations are below the Type 1 RRS of 500 mg/L downgradient (to the east) of the site (EPW-02 and EPW-03). Since sulfate concentrations in the north (GCW-04) and northeast (GCW-03) of the site are above the Type 1 RRS for groundwater, additional delineation work will be performed to the north of GCW-04 and north of GCW-03. GCL will install a series of Geoprobe borings in the north-south alignment starting near the North Martin Street and progressing north between the baseball fields to near the concession stands. The estimated location of the borings is shown on **Figure 12**. The borings will be performed with continuous core collection from the ground surface to refusal or 20 feet bgs, whichever is shallower. Soil samples will be collected at two locations in each boring. One sample will be collected below the water table and the second sample will be collected at an intermediate depth. The samples will be analyzed for total sulfate using Method 9056A. A monitoring well (EPW-04) will be installed at the location of the highest sulfate sample collected below

the water table unless soils containing high sulfate concentrations are present in the intermediate samples. The presence of high sulfate in offsite soils would make installation of a well for delineation impractical due to the potential offsite source of contamination. Another monitoring well (EPW-05) will be installed directly north of GCW-03 and will be screened in the 10 feet above auger refusal. Following installation, monitoring wells EPW-04 and EPW-05, will be developed and groundwater samples will be collected for sulfate analysis. The measured sulfate concentrations will be used to refine the site conceptual model and delineate sulfate in the groundwater.

Similar to sulfate, aluminum concentrations are below the Type 1 RRS downgradient (to the east) of the site **Figure 10**. However, aluminum concentrations in monitoring wells located north (GCW-04) and northeast (GCW-03) of the site are above the Type 1 RRS. Groundwater samples from monitoring wells EPW-04 and EPW-05 will be analyzed for aluminum to delineate the lateral extent of aluminum in groundwater. The presence of aluminum in groundwater is also attributed to dissolution of naturally occurring aluminum in site soils due to depressed groundwater pH.

Although sulfate concentrations appear to increase with depth in on-site wells, there is no trend in the concentration of aluminum with depth as the concentration of aluminum depends on the groundwater pH. GCL installed bedrock wells (GCW-02V and GCW-04V) to delineate the vertical extent of sulfate in groundwater. Since there is no exposure or receptor to the groundwater in the bedrock, vertical delineation for sulfate and aluminum is not practical. Furthermore, as shown in Table 2, the vertical hydraulic gradient varies over time diluting the groundwater in the bedrock with groundwater in the saprolite/PWR.

### 5.3.2 Soil

Analytical results of the soil sampling program, presented in detail in the CSR submitted to EPD in 1999, show that aluminum concentrations at the site ranged from 3,500 to 70,000 mg/kg with no consistent trends relative to location at the site. Since these concentrations are below the Type 1 RRS of 77,000 mg/kg, no further delineation of aluminum is necessary.

Analytical results of the soil confirmation samples collected after HCA removal indicates that the residual sulfate concentrations in soil ranged from 136 to 10,300 mg/kg. Of the 64 confirmation samples, 63 samples were below the Type 1 RRS of

7,370 mg/kg (Figure 4). The one sample elevated above the RRS is bounded on four sides by sulfate concentrations that are below RRS. Additionally, the mean value of post excavation samples is 2,680 mg/kg and the 95 percent upper confidence limit value is 3,143 mg/kg. These values are below the Type 4 Soil RRS so they will not leach to groundwater at a level that exceeds the groundwater RRS; therefore, no additional delineation is required.

## **6. PROPOSED REMEDIATION PLAN**

The current delineation to Type 1 RRS suggests no further action is required for soil on or off site since average site soil concentrations are less than RRS and areas with residual sulfate concentrations were covered with general fill, a low-permeability clay layer and a vegetative cover soil isolating them from potential contact.

### **6.1 Groundwater Remediation**

The proposed horizontal delineation of groundwater sulfate to Type 1 RRS, outlined in Section 4.3.1 will allow delineation of areas with elevated groundwater sulfate concentrations. If at the completion of delineation groundwater exceeds the Type 4 RRS, institutional controls, including uniform environmental covenants under the VRP, will be placed on the site properties to prevent future groundwater use or soil disturbance. A direct groundwater pathway does not exist since East Point Development Regulations (Sec. 10-4034) require use of the existing public water supply system where public supply is available within 300 feet, as is the case at the site.

### **6.2 Surface Water Pathway Elimination**

If the groundwater delineation results indicate site-produced sulfate impacted groundwater may intersect with the storm drain system that crosses the Charles A. Green Recreation facility and the corner of the site, the area of the storm drain potentially impacted (e.g., between SW-02 and SW-06) will be inspected for infiltration and deterioration using remote controlled cameras. The storm drain will be repaired using similar materials or relined using cured-in-place pipe (CIPP) technology in the target section(s). The repairs to prevent groundwater from entering the storm drain will eliminate the pathway for sulfate to ultimately discharge to surface water at the downstream SW-07 location.

### **6.3 Groundwater Monitoring Plan**

Groundwater monitoring will be continued for up to 5 years or until all wells in a well cluster reach the Type 4 RRS for sulfate or aluminum. GCL proposes to reduce the sampling schedule to only sample the PWR wells at each well cluster location. PWR wells were selected since they are located in the layer exhibiting the highest mass of site constituents of concern, and will track progress with only limited influence from rainfall infiltration. The proposed groundwater sampling locations are GCW-01D, GCW-02D,

GCW-03D, GCW-04D, EPW-01, EPW-02, and EPW-03D and any additional delineation wells. After the PWR wells reach the Type 4 RRS, the entire well cluster will be sampled to confirm remediation progress. If other wells in the cluster do not meet Type 4 RRS, sampling will be continued on the highest concentration well in the cluster.

#### **6.4 Surface Water Monitoring Plan**

Surface water sampling will be performed at the one location at the GCL property corner (SW-02) after the sewer repairs are complete to confirm elimination of the groundwater to surface water pathway. If off-site sources are located that obscure the site contribution then sampling may be discontinued.

**7. MILESTONE SCHEDULE**

January 11, 2013	Submit VRP Application, Enrollment in the VRP Program
January 11, 2014	Complete horizontal delineation of sulfate impacted groundwater on the Charles A. Green property
January 11, 2015	Complete revised groundwater model, Investigate storm sewer for infiltration if potential impacts are found
July 11, 2015	Submit updated CSM and update remediation plan, provide cost estimate
January 11, 2017	Complete implementation of remediation plan
January 11, 2018	Submit Compliance Status Report

## 8. REFERENCES

- USEPA. 1991. Risk Assessment Guidance for Superfund: Volume I – Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals). Interim. Office of Emergency and Remedial Response. EPA/540/R-92/003. December 1991.
- Parsons (1996), Evaluation of Discharges at General Chemical Corporation, East Point, Georgia Facility, Prepared by Parsons Engineering Sciences, January 1996.
- USEPA. 1996. Soil Screening Guidance: Technical Background Document. Office of Emergency and Remedial Response. EPA/540/R95/128. May 1996.
- CDC (1999), Health Effects From Exposure to High Levels of Sulfate in Drinking Water Study Office of Water, EPA/815/R099/001. January 1999.
- Geosyntec (1999), Compliance Status Report”, General Chemical Corporation, East Point, Georgia, prepared by Geosyntec Consultants, February 1999.
- Geosyntec (2002), Revised Corrective Action Plan, General Chemical Corporation, East Point, Georgia, prepared by Geosyntec Consultants, February 2002.
- Geosyntec (2007), Revised Corrective Action Plan, General Chemical Corporation, East Point, Georgia, prepared by Geosyntec Consultants, February 2007.
- Geosyntec (2011), Engineering Report, General Chemical Corporation, East Point, Georgia, prepared by Geosyntec Consultants, January 2011.

# TABLES



**Table 1**  
**Soil Confirmation Sampling Results**  
**General Chemical**  
**East Point, Georgia**

Grid Location	Sample ID	Date Sampled	Sample Depth (ft)	Moisture Content (%)	Extractable Sulfate (Total Sulfate) (EPA 9056M) (mg/kg dry weight basis)	Laboratory Leachate Concentration for Sulfate (SPLP Sulfate) (EPA 1312/9056M) (mg/l)	Laboratory Leachate Concentration for Aluminum (SPLP Aluminum) (EPA 1312/6010) (mg/l)	Notes
				<i>MC</i>	<i>C<sub>DRY</sub></i>	<i>C<sub>SPLP lab</sub></i>		
<b>PROFILE SAMPLES</b>								
D3	SPS_01_0115	10/11/2005	0-1.5	15	1,560			
D3	SPS_01_1535	10/11/2005	1.5-3.5	12.2	1,710	107	11	
D3	SPS_01_3505	10/11/2005	3.5-5.0	17.5	1,720			
H4	SPS_02_0001	10/11/2005	0-1.0	27.3	792			
H4	SPS_02_0102	10/11/2005	1.0-2.0	29.8	1,120			
H4	SPS_02_0203	10/11/2005	2.0-3.0	34.4	3,150			
H4	SPS_02_0304	10/11/2005	3.0-4.0	28.6	6,400	213	20	
H4	SPS_02_0405	10/11/2005	4.0-5.0	29	4,710			
<b>CONFIRMATION SAMPLES</b>								
A2	SC_A2_101105	10/11/2005	0-1	16.1	1,820			
A3	SC_A3_101105	10/11/2005	0-1	18.9	1,030	66	4.1	
B1W	SC_B1W_110705	11/7/2005	SW	1.3	368			
B2	SC_B2_101105	10/11/2005	0-1	18.9	981			
B3	SC_B3_101105	10/11/2005	0-1	17.4	1,210			
B4	SC_B4_101105	10/11/2005	0-1	18.4	1,290	46	10	
C1W	SC_C1W_110705	11/7/2005	SW	1.5	1,690			
C2	SC_C2_101105	10/11/2005	0-1	13.0	3,640			
C3	SC_C3_101105	10/11/2005	0-1	11.8	1,680			
C4	SC_C4_101105	10/11/2005	0-1	17.7	3,120			
C5	SC_C5_101105	10/11/2005	0-1	20.1	1,600			
D1W	SC_D1W_110705	11/7/2005	SW	0.6	562			
D2	SC_D2_101105	10/11/2005	0-1	12.7	869	37	4.3	
D3	SC_D3_101105	10/11/2005	0-1	23.7	3,290	131	13	
D4	SC_D4_101105	10/11/2005	0-1	15.8	1,770			
D5	SC_D5_101105	10/11/2005	0-1	24.6	3,270			
E2B	SC_E2B_101105	10/11/2005	0-1	17.4	673			Stockpile
E2	SC_E2_102105	10/21/2005	0-1	13.0	1,880			
E3	SC_E3_102105	10/21/2005	0-1	20.7	1,450			
E4	SC_E4_102105	10/21/2005	0-1	23.3	7,100			
E5	SC_E5_102105	10/21/2005	0-1	21.2	2,660			
F2	SC_F2_102105	10/21/2005	0-1	10.8	136			
F3	SC_F3_102105	10/21/2005	0-1	13.6	1,180			
F4	SC_F4_102105	10/21/2005	0-1	15.2	883			
F5	SC_F5_102105	10/21/2005	0-1	16.3	4,150			
F6	SC_F6_102105	10/21/2005	0-1	17.1	2,440			
F7	SC_F7_102105	10/21/2005	0-1	15.8	1,880			
G2W	SC_G2W_110705	11/7/2005	SW	2.5	4,910			
G3	SC_G3_102105	10/21/2005	0-1	23.9	1,570			
G4	SC_G4_102105	10/21/2005	0-1	35.5	10,300			
G5	SC_G5_102105	10/21/2005	0-1	24.7	7,350			
G6	SC_G6_110705	11/7/2005	0-1	17.8	1,990			
G7W	SC_G7W_110705	11/7/2005	SW	10.5	4,540	219	23	
H2W	SC_H2W_110705	11/7/2005	SW	2.3	3,930			
H3	SC_H3_102105	10/21/2005	0-1	34.4	5,430			
H4	SC_H4_102105	10/21/2005	0-1	24.9	3,360			
H5	SC_H5_102105	10/21/2005	0-1	20.8	4,190			
H6	SC_H6_110705	11/7/2005	0-1	26.3	2,670	92	8	
H7W	SC_H7W_110705	11/7/2005	SW	19.2	5,190			
I3W	SC_I3W_110705	11/7/2005	SW	2.6	2,290			
I3	SC_I3_102105	10/21/2005	0-1	21.7	2,190			
I4	SC_I4_102105	10/21/2005	0-1	30.1	2,340			
I5	SC_I5_102105	10/21/2005	0-1	26.3	2,420			
I6	SC_I6_110705	11/7/2005	0-1	29.7	1,580			
I7W	SC_I7W_110705	11/7/2005	SW	10.8	3,870			
J3W	SC_J3W_110705	11/7/2005	SW	5.9	3,120			
J3	SC_J3_102105	10/21/2005	0-1	9.6	2,540			
J4	SC_J4_102105	10/21/2005	0-1	24.3	2,110			
J5	SC_J5_110705	11/7/2005	0-1	26.4	4,080			
J6	SC_J6_110705	11/7/2005	0-1	21.4	2,810			
J7	SC_J7_102105	10/21/2005	0-1	13.1	3,110			
K3W	SC_K3W_110705	11/7/2005	0-1	4.3	1,570			
K3	SC_K3_110705	11/7/2005	0-1	19.1	1,650			
K4	SC_K4_102105	10/21/2005	0-1	18.7	1,460			
K5	SC_K5_102105	10/21/2005	0-1	23.8	3,150			
K6	SC_K6_110705	11/7/2005	0-1	21.7	2,130			
K7	SC_K7_102105	10/21/2005	0-1	12.9	1,150			
L3W	SC_L3W_110705	11/7/2005	SW	14.1	1,780			
L4W	SC_L4W_110705	11/7/2005	SW	7.7	5,540	184	20	
L5W	SC_L5W_110705	11/7/2005	SW	6.9	9,940	661	77	
L5W	SC_L5W_011206	1/12/2006	SW	10.8	1,100	41		
L5	SC_L5_102105	10/21/2005	0-1	19.4	1,460			
L6W	SC_L6W_110705	11/7/2005	SW	7.0	1,340			
L6	SC_L6_102105	10/21/2005	0-1	16.1	1,250			
L7	SC_L7_102105	10/21/2005	0-1	13.4	479			

N= 73  
 Min= 136  
 Max= 10,300  
**Mean= 2,680**  
 Median= 1,990  
 Std. Dev.= 2,015  
 Mean+(2\*Std. Dev.)= 6,710  
**UCL95= 3,143**

**Notes:**

1. SW=Collected along vertical face of sidewall.
2. SPLP Blank Concentrations = 2.849 and 7.272 mg/l due to acidified extraction fluid
3. Profile soils were native soils collected under the HCA cells to confirm excavation.

**Table 2**  
**Evaluation of Vertical Hydraulic Gradient**  
**General Chemical**  
**East Point, Georgia**

Location	Well Casing Elevation	Adjacent Soil Elevation	Screen Interval (ft bgs)	Groundwater Elevation (ft msl) and vertical hydraulic gradient (ft/ft)							
				1st Qtr 2010 (2/24/10)		2nd Qtr 2010 (4/15/10)		3rd Qtr 2010 (8/10/10)		4th Qtr 2010 (11/22/10)	
				Head	i	Head	i	Head	i	Head	i
GCW-04D	996.8	997.1	50-60	988.9	0.002	988.1	0.093	987.1	0.015	986.9	0.004
GCW-04V	996.7	997.0	114-124	989.0		982.1		988.1		986.7	

Location	Well Casing Elevation	Adjacent Soil Elevation	Screen Interval (ft bgs)	Groundwater Elevation (ft msl) and vertical hydraulic gradient (ft/ft)							
				1st Qtr 2011 (3/8/11)		2nd Qtr 2011 (5/23/11)		3rd Qtr 2011 (8/31/2011)		4th Qtr 2011	
				Head	i	Head	i	Head	i	Head	i
GCW-04D	996.8	997.1	50-60	987.8	0.012	987.1	0.007	984.9	0.010	986.8	0.010
GCW-04V	996.7	997.0	114-124	987.0		986.7		985.5		986.2	

Location	Well Casing Elevation	Adjacent Soil Elevation	Screen Interval (ft bgs)	Groundwater Elevation (ft msl) and vertical hydraulic gradient (ft/ft)							
				1st Qtr 2012 (2/20/12)		2nd Qtr 2012 (4/11/12)		3rd Qtr 2012		4th Qtr 2012 (11/17/12)	
				Head*	i	Head	i	Head	i	Head	i
GCW-04D	996.8	997.1	50-60	986.8	0.010	986.9	0.011	NA	NA	984.75	0.00031
GCW-04V	996.7	997.0	114-124	986.2		986.2		NA	NA	984.77	

Notes:

i = Vertical hydraulic gradient (ft/ft)

Indicates upward hydraulic gradient

Indicates downward hydraulic gradient

NA= Data not available

\* = Groundwater elevation obtained from transducer data on 2/20/12 at 22:25

**Table 3**  
**Groundwater Elevations**  
**7 November 2012**  
**General Chemical**  
**East Point, Georgia**

Location	Well Casing Elevation	Adjacent Soil Elevation	Screen Interval (ft bgs)	Depth to Water (ft)	Groundwater Elevation (ft msl)
				11/7/2012	11/7/2012
GCW-01S	1023.6	1024.0	15-25	17.8	1005.8
GCW-01M	1023.8	1024.1	34-44	17.8	1006.0
GCW-01D	1023.9	1024.2	58-68	17.0	1006.9
GCW-02S	983.6	983.9	16-26	6.9	976.7
GCW-02D	983.4	983.8	34-44	6.5	976.9
GCW-02V	984.7	985.0	85.5-95.5	6.8	977.9
GCW-03S	981.3	981.6	11-21	5.9	975.4
GCW-03D	981.2	981.6	28-38	5.8	975.4
GCW-04S	996.6	997.0	13-23	12.6	984.0
GCW-04M	997.0	997.4	30-40	12.6	984.4
GCW-04D	996.8	997.1	50-60	12.1	984.7
GCW-04V	996.7	997.0	114-124	11.9	984.8
GCW-05	995.1	994.9	80-90	9.6	985.5
EPW-01	1017.5	1017.7	24.51 <sup>(1)</sup>	22.9	994.6
EPW-02	980.0	980.3	19.41 <sup>(1)</sup>	12.0	968.0
EPW-03S	984.5	984.8	12-22	11.2	973.3
EPW-03M	984.3	984.6	29-39	11.0	973.3
EPW-03D	984.6	984.9	46-56	10.8	973.8
OW-1A <sup>(2)</sup>	1030.6	1027.9	34.5 <sup>(3)</sup>	20.0	1010.6

Notes:

1. "Screen Interval" measurements indicate total well depth below ground surface. Well was installed by others and screen length not available.
2. Well OW-1A has a casing extending above ground surface 2.7 ft.
3. Screen interval measured 7 November 2012.

**Table 4**  
**Groundwater Sampling Results**  
**2011 and 2012**  
**General Chemical**  
**East Point, Georgia**

Location	Screen Interval (ft bgs)	pH EPA 150.1					Sulfate (mg/l) EPA 9056A					Aluminum (mg/l) EPA6010C				
		3/10/2011	5/24/2011	9/1/2011	4/11/2012	11/7/2012	3/10/2011	5/24/2011	9/1/2011	4/11/2012	11/7/2012	3/10/2011	5/24/2011	9/1/2011	4/11/2012	11/7/2012
GCW-01S	15-25	4.0	3.5	3.7	3.5	3.9	400	390	410	440	400	8.4	8.3	9.5	7.7	8.2
GCW-01M	34-44	3.9	3.4	3.4	3.4	3.8	460	470	520	500	460	34.3	33.6	34.6	34.1	33.7
GCW-01D	58-68	4.2	3.7	3.9	3.7	4.1	280	260	260	280	290	7.6	9.6	7.6	6.9	5.9
GCW-02S	16-26	3.7	3.5	3.3	3.2	3.6	1400	1400	1700	2200	1900	214	214	161.0	328	277
GCW-02D	34-44	3.7	3.4	3.2	3.2	3.5	2100	2200	2100	2300	2400	196	205	199.0	135	212
GCW-02V	85.5-95.5	4.4	4.2	4.1	4.1	4.3	2700	3100	3000	3000	3200	25.1	28.7	31.5	32.8	34.9
GCW-03S	11-21	3.6	3.4	3.2	3.3	3.6	1900	1900	960	860	1200	312	161	114.0	108	148
GCW-03D	38-28	3.4	3.2	3.1	3.1	3.4	3600	3700	3500	3500	4000	350	343	363.0	340	385
GCW-04S	13-23	3.7	3.4	3.3	3.3	3.5	1900	1800	2000	1700	2200	229	153	156.0	145	263
GCW-04M	30-40	3.1	3.4	3.3	3.3	3.5	3000	2600	2500	3500	4400	407	386	355.0	524	610
GCW-04D	50-60	3.6	3.4	3.3	3.3	3.5	3900	4000	3900	3700	3900	593	575	561.0	546	550
GCW-04V	114-124	3.9	3.7	3.6	3.6	3.9	11000	10000	10000	9400	9900	1030	1020	1040.0	887	884
GCW-05	80-90	5.8	6.1	6.1	6.0	6.4	2500	2500	2600	1400	1700	<0.1	<0.1	<0.1	<0.1	0.4
EPW-01	24.51 <sup>(1)</sup>	4.5	4.1	4.0	3.8	4.3	92	96	130	110	130	12.8	12.9	16.9	13.4	21.4
EPW-02	19.41 <sup>(1)</sup>	5.9	5.5	5.5	5.3	5.3	28	16	<5	9.3	<5	<0.1	0.1	<0.1	<0.1	<0.1
EPW-03S	12-22	5.2	5.2	5.8	5.4	5.6	37	37	36	34	28	<0.1	0.1	<0.1	<0.1	0.2
EPW-03M	29-39	6.2	5.6	6.2	5.5	6.0	28	29	27	25	23	0.2	0.1	0.2	0.1	<0.1
EPW-03D	46-56	6.1	5.6	6.1	5.4	5.9	37	34	39	30.0	30.0	<0.1	<0.1	<0.1	<0.1	<0.1
OW-1A <sup>(2)</sup>	34.5 <sup>(3)</sup>	4.5	4.0	4.3	4.1	3.6	53	55	56	56	53	0.7	0.7	0.7	0.6	0.9

Notes:

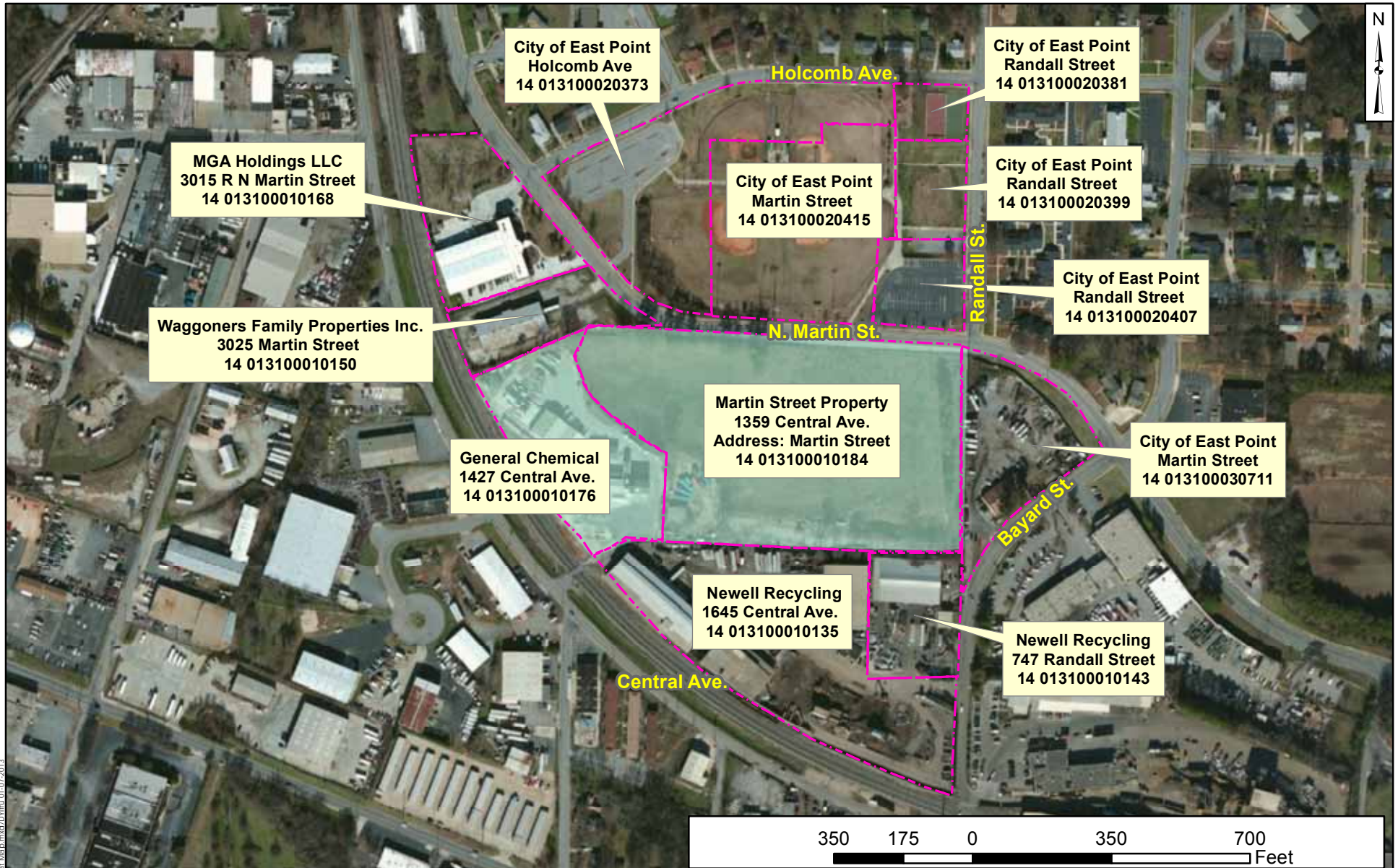
1. "Screen Interval" measurements indicate total well depth below ground surface.  
Well installed by others and screen length not determined.
2. Well OW-1A has a casing extending above ground surface 2.7 ft.
3. Screen interval measured 7 November 2012.


N/A = Not Applicable


**Table 5**  
**Stormwater Sampling Results**  
**2011 and 2012**  
**General Chemical**  
**East Point, Georgia**

Location	Description	pH EPA 150.1					Sulfate (mg/l) EPA 9056A					Aluminum (mg/l) EPA6010C				
		3/10/2011	5/25/2011	9/1/2011	4/13/2012	11/8/2012	3/10/2011	5/25/2011	9/1/2011	4/13/2012	11/8/2012	3/10/2011	5/25/2011	9/1/2011	4/13/2012	11/8/2012
SW-02	On-site	4.3	4.0	3.8	3.8	3.8	500	1000	1300	1200	3100	52.5	97.8	124	110	383
SW-06	Cross-Gradient	4.2	3.8	3.6	3.7	3.5	790	1700	1800	1700	2100	76.3	192	210	170.0	218
SW-07	Downgradient	4.3	4.2	4.7	4.0	4.1	190	500	390	570	590	17.9	41.5	18.8	47.1	55
SW-09	Upgradient	6.6	6.2	6.5	6.1	6.0	<5.0	97	170	130	62	1.13	0.212	0.728	<0.1	0.1

# FIGURES



 Parcels (Fulton County Tax Assessor (accessed online))

 Site Tax Parcels

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Kennesaw, GA




JANUARY 2013

**TAX PLAT MAP**  
General Chemicals, East Point, GA

Figure  
1

N:\gpc\chem\GIS\MXD\2013\281e\_Plot\_Map.mxd/DX/fig\_01\_07\_2013



 Monitoring Well  
 HCA Storage Cells  
 Approximate Site Boundary  
**Note:** Wells with screen interval in the saprolite are labeled in black; wells with screen interval in the PWR are labeled in blue; and wells with screen interval in the competent bedrock are labeled in green.

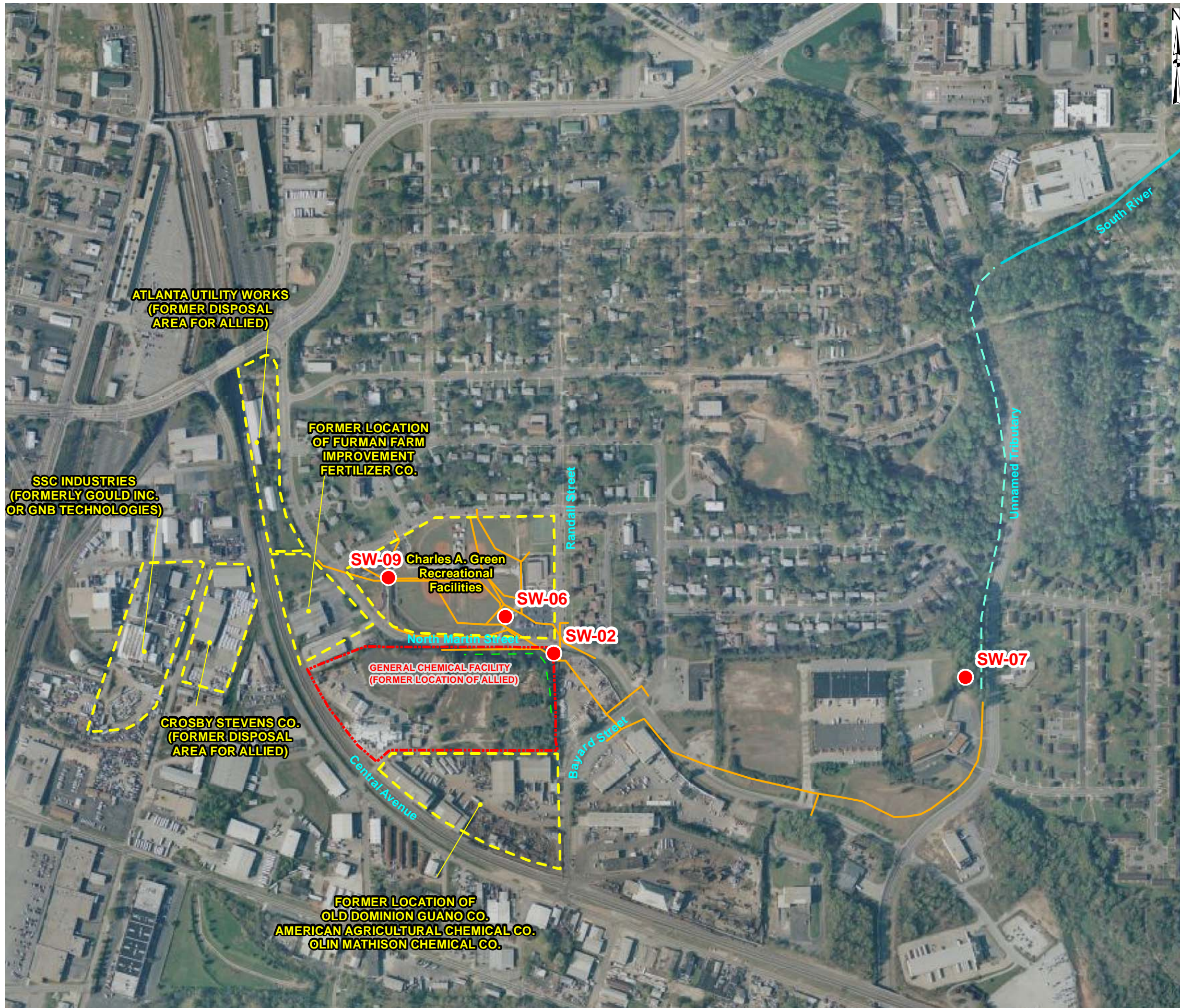
**Geosyntec**  
 consultants  
 Kennesaw, GA  
 JANUARY 2013

**LOCATION OF HCA STORAGE CELLS  
 AND MONITORING WELLS**  
 General Chemicals, East Point, GA

Figure  
 2

N:\projects\chem\GIS\MXD\2013\2141\CA\_GCS.mxd\DWfiro.01.07.2013



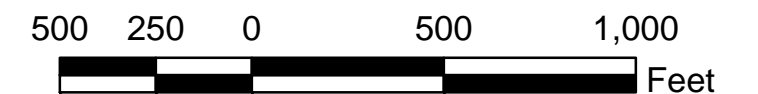


## SITE VICINITY MAP

### GENERAL CHEMICALS EAST POINT, GEORGIA

#### Legend

- Surface Water Sample
- - - Approximate Property Line
- - - Approximate Site Property
- Storm Drain
- - - Unnamed Tributary
- South River
- - - French Drain



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JANUARY 2013      SCALE: 1" = 500'

PROJECT NO. GR5060      FIGURE NO. 3

DOCUMENT NO.      FILE NO. Site Vicinity Map.mxd



N:\projects\chem\GIS\MXD\2013\2D\Fig 01.04.2013

- ▲ Confirmation Sidewall Sample (Extractable Sulfate mg/kg)
  - Confirmation Floor Sample (Extractable Sulfate mg/kg)
  - Extent of Excavation
  - Approximate Property Boundary
- Note: Confirmation sample locations are approximate.

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**SULFATE CONCENTRATIONS IN CONFIRMATION SAMPLES**  
 General Chemicals, East Point, GA

Figure 4



N:\projects\chem\GIS\MXD\2013\2013\topographic Map.mxd/D:\frn\01\_07\_2013

..... Tributary

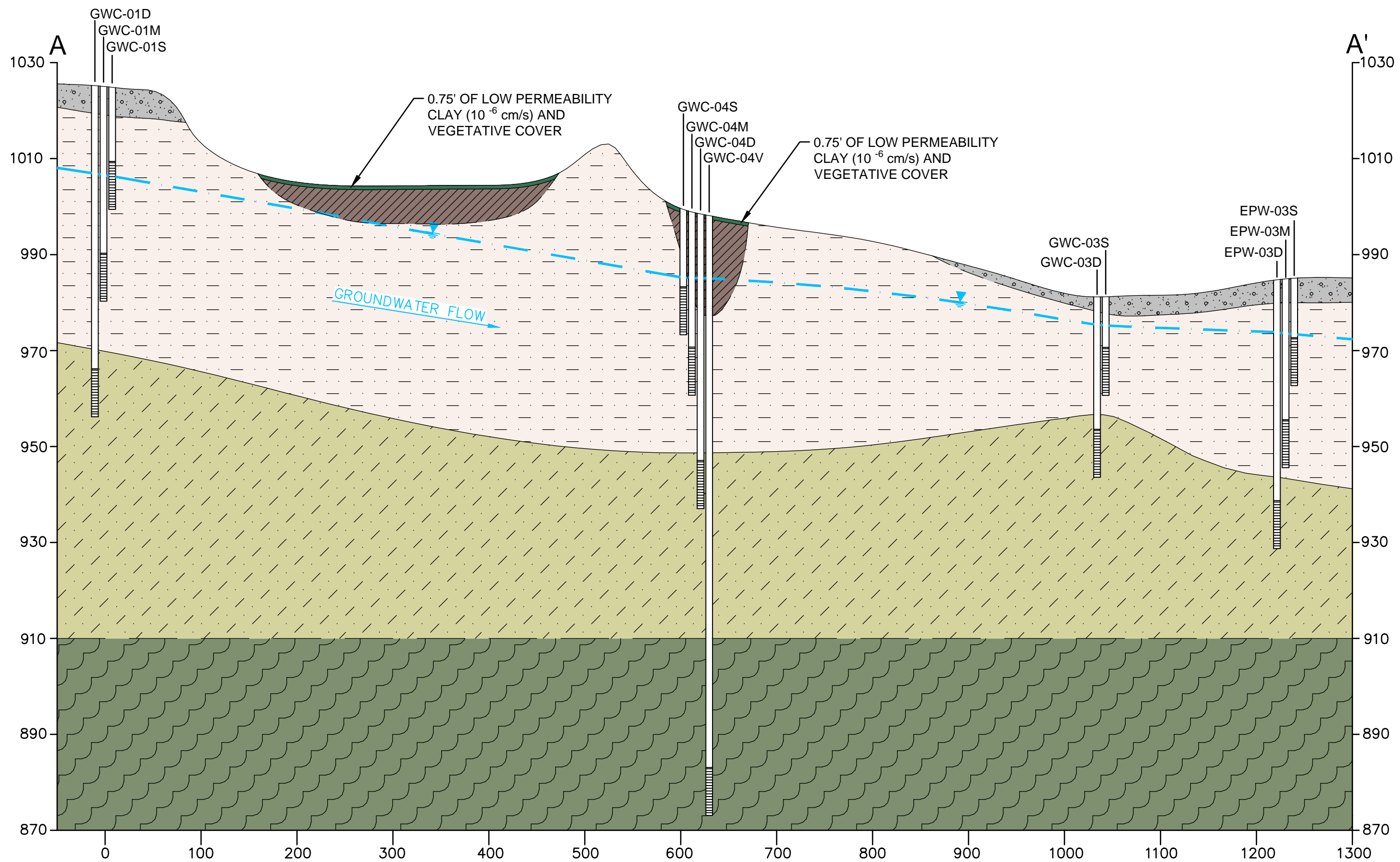
Approximate Site Boundary  
 Topographic map obtained from USGS  
 South Atlanta Quadrangle (2011)  
 Contour Interval 10 ft

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 Kennesaw, GA  
 JANUARY 2013

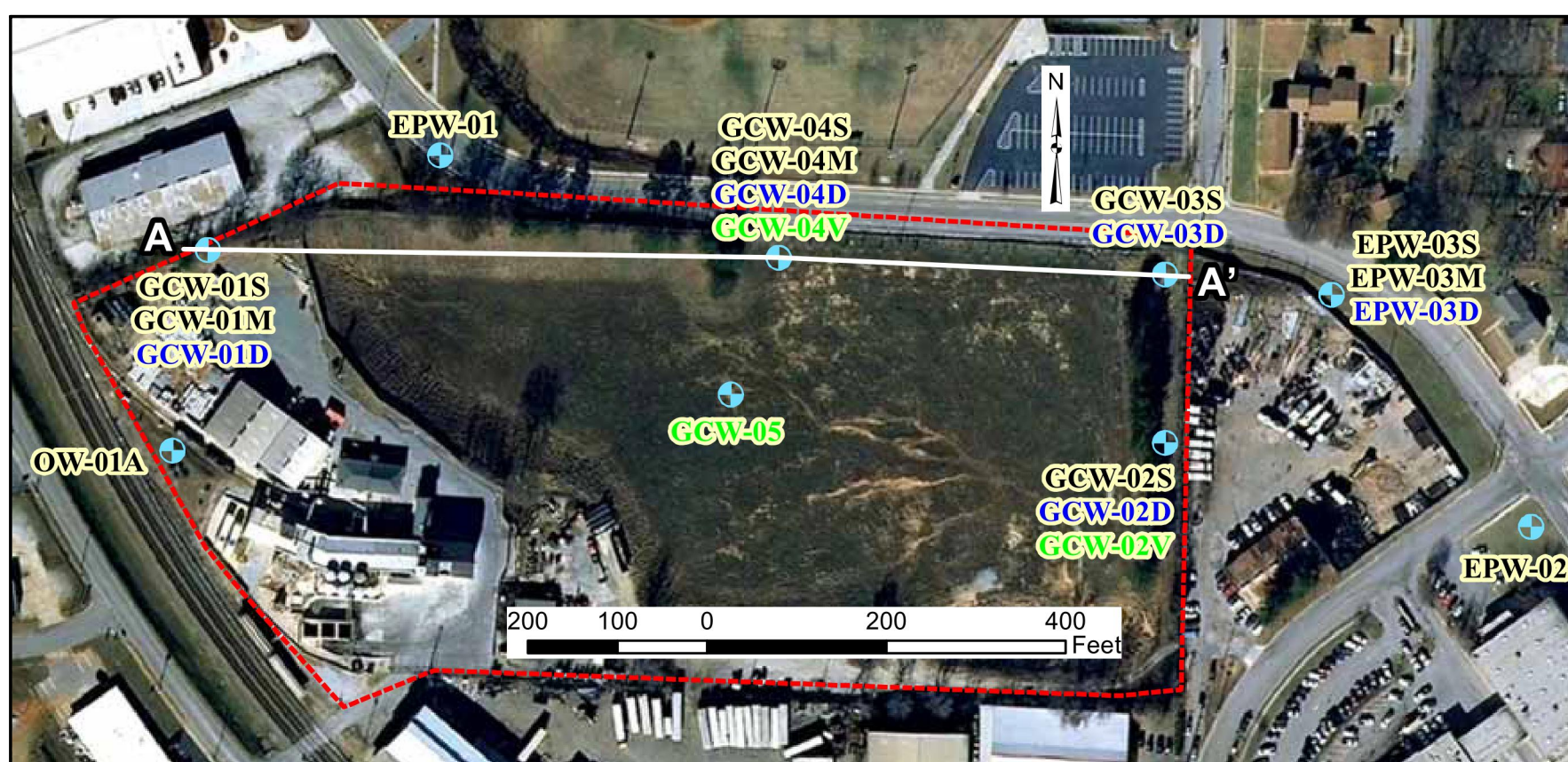
**SITE TOPOGRAPHIC MAP**  
 General Chemicals, East Point, GA

Figure  
**5**

# GEOLOGIC AND HYDROGEOLOGIC CROSS SECTION ALONG A-A'



## KEY MAP



## LEGEND

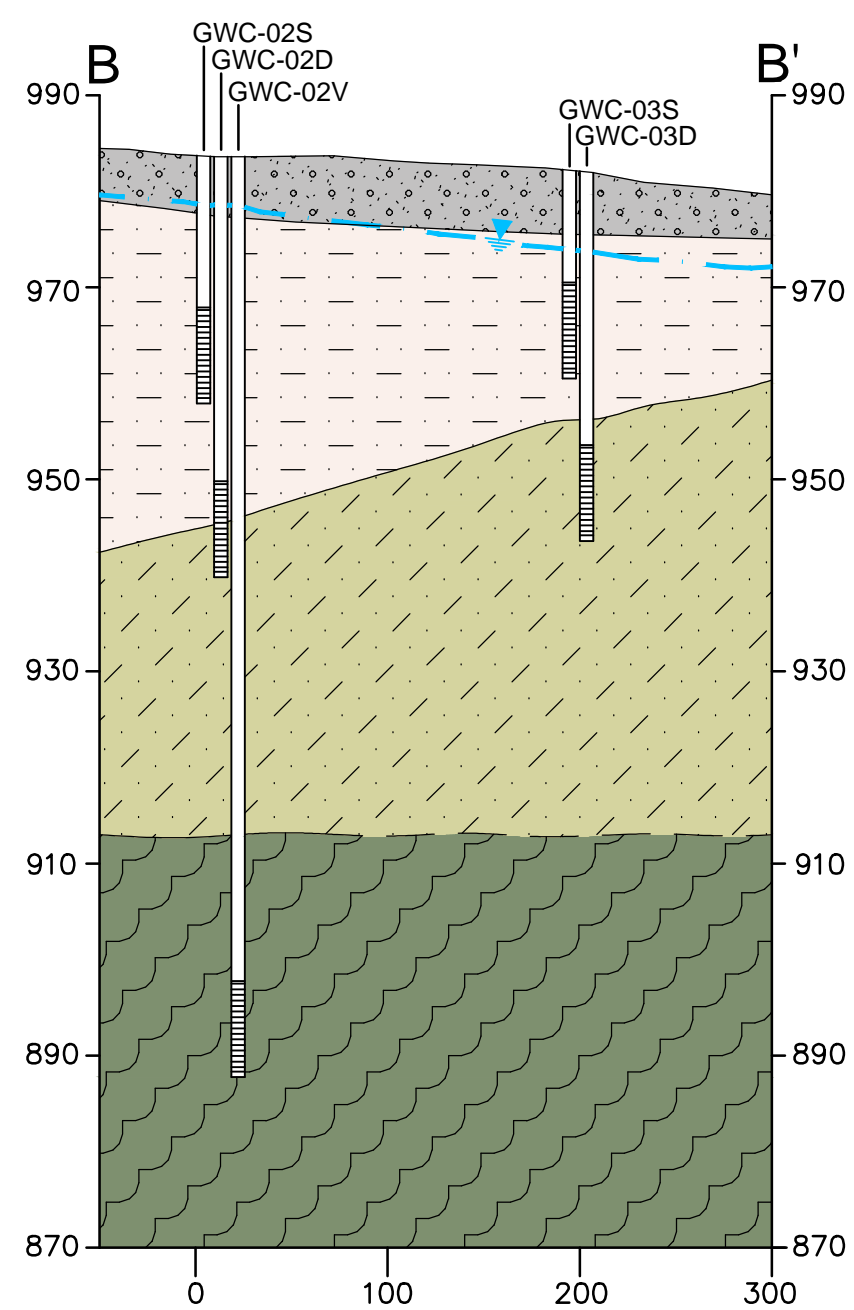
- 0.75' THICK LOW PERMEABILITY CLAY ( $10^{-6}$  cm/s) AND VEGETATIVE COVER
- GRAVELLY CLAY, FILL
- CLAY, FILL AFTER EXCAVATION
- SILTY SAND, RELICT SCHISTOCITY, MICACEOUS (SAPROLITE)
- PARTIALLY WEATHERED SCHIST
- BEDROCK (SCHIST)
- LITHOLOGIC CONTACT, DASHED WHERE INFERRED
- MONITORING WELL SCREEN ZONE WITH WATER ELEVATION (FEET MSL), NOVEMBER, 2012

0      100'      200'  
 HORIZONTAL SCALE IN FEET  
 VERTICAL EXAGGERATION = 5X

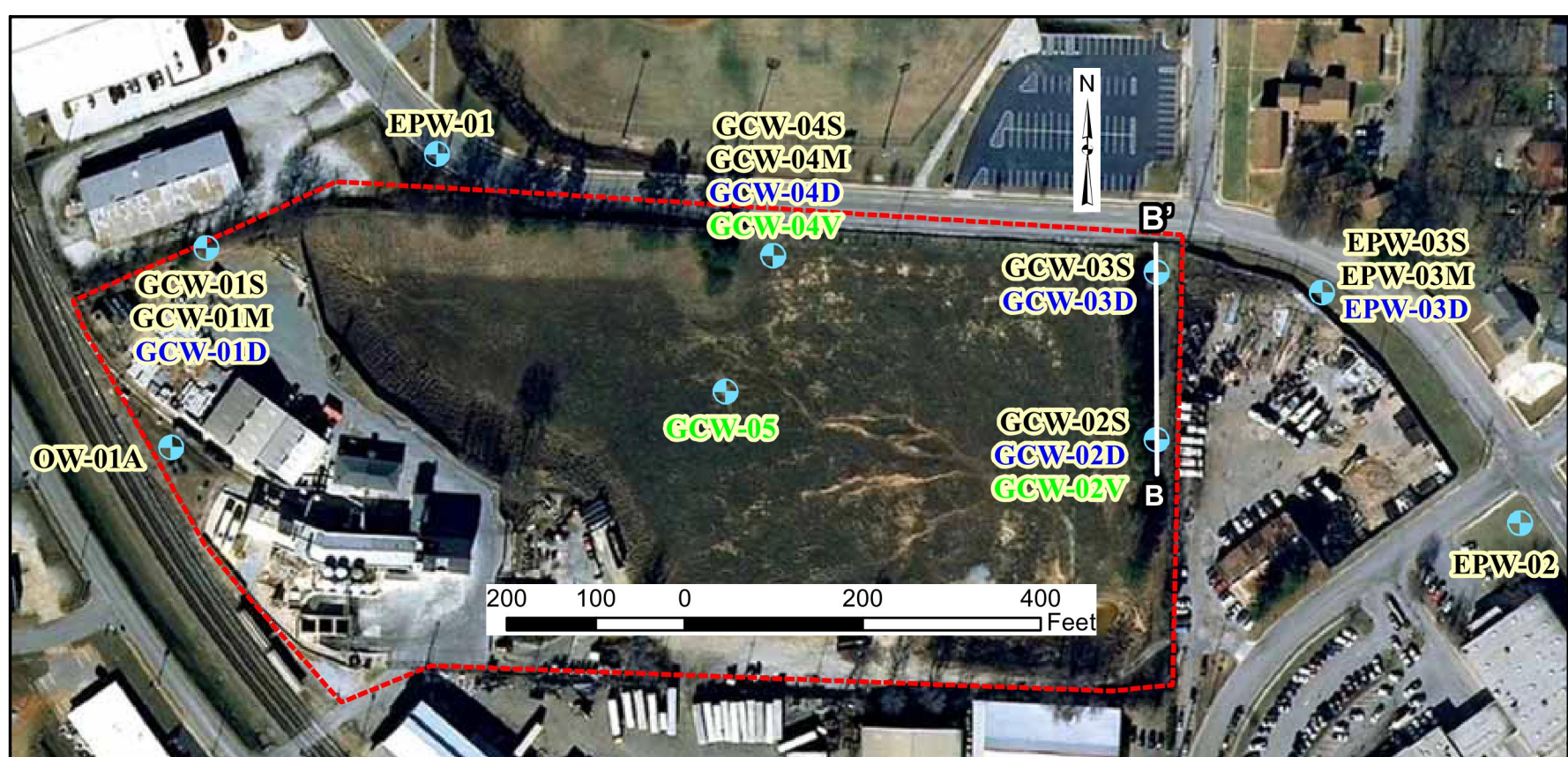
**Geosyntec**  
consultants

DATE:	JAN-13	SCALE:	AS SHOWN
PROJECT NO.	GR5060/12	FILE NO.	5060F001
DOCUMENT NO.	GA 130020	FIGURE NO.	6

# GEOLOGIC AND HYDROGEOLOGIC CROSS SECTION ALONG B-B'



## KEY MAP



## LEGEND

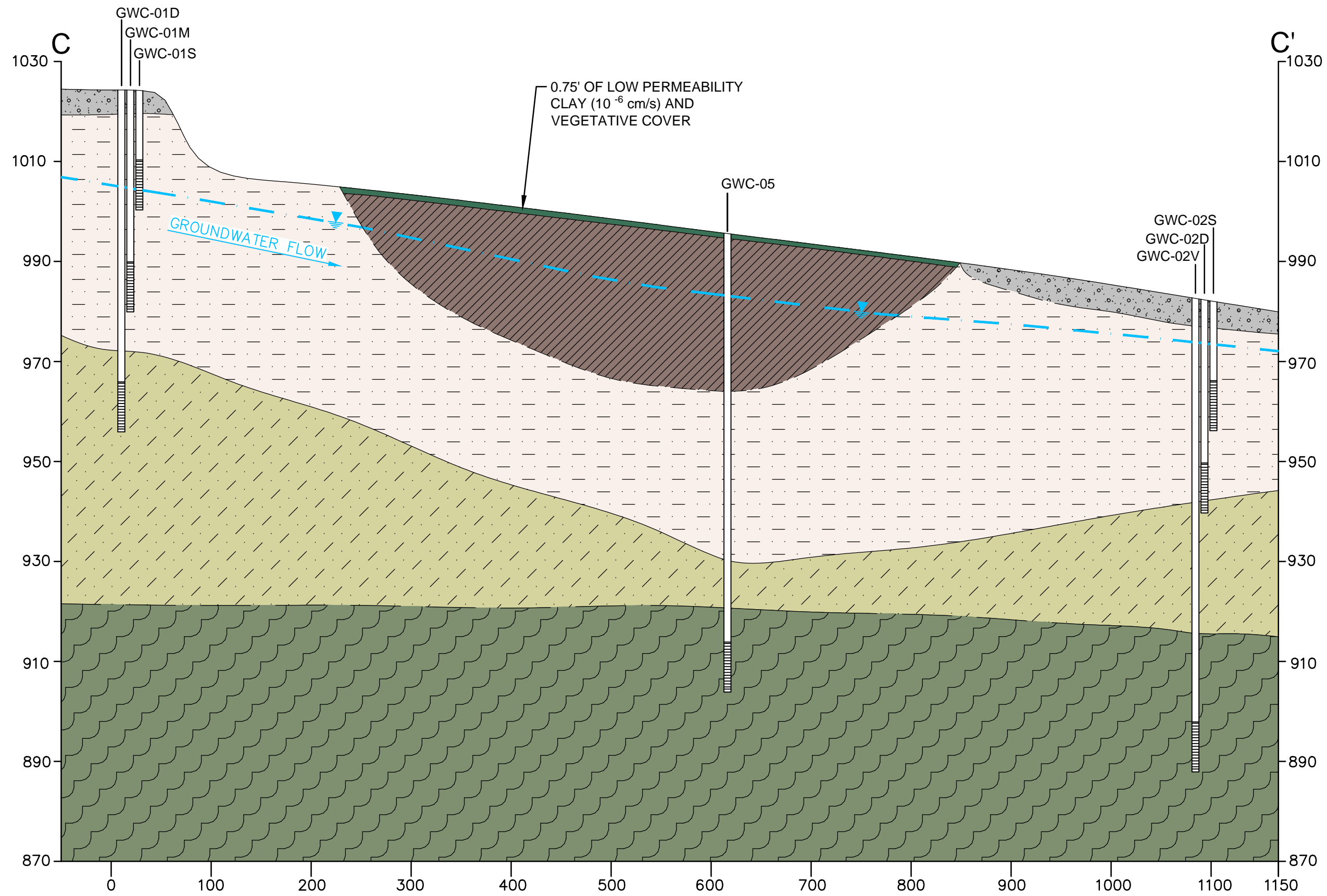
- GRAVELLY CLAY, FILL
- SILTY SAND, RELICT SCHISTOCITY, MICACEOUS (SAPROLITE)
- PARTIALLY WEATHERED SCHIST
- BEDROCK (SCHIST)
- LITHOLOGIC CONTACT, DASHED WHERE INFERRED
- MONITORING WELL SCREEN ZONE WITH WATER ELEVATION (FEET MSL), NOVEMBER, 2012

0      100'      200'  
 ───────────  
 HORIZONTAL SCALE IN FEET  
 VERTICAL EXAGGERATION = 5X

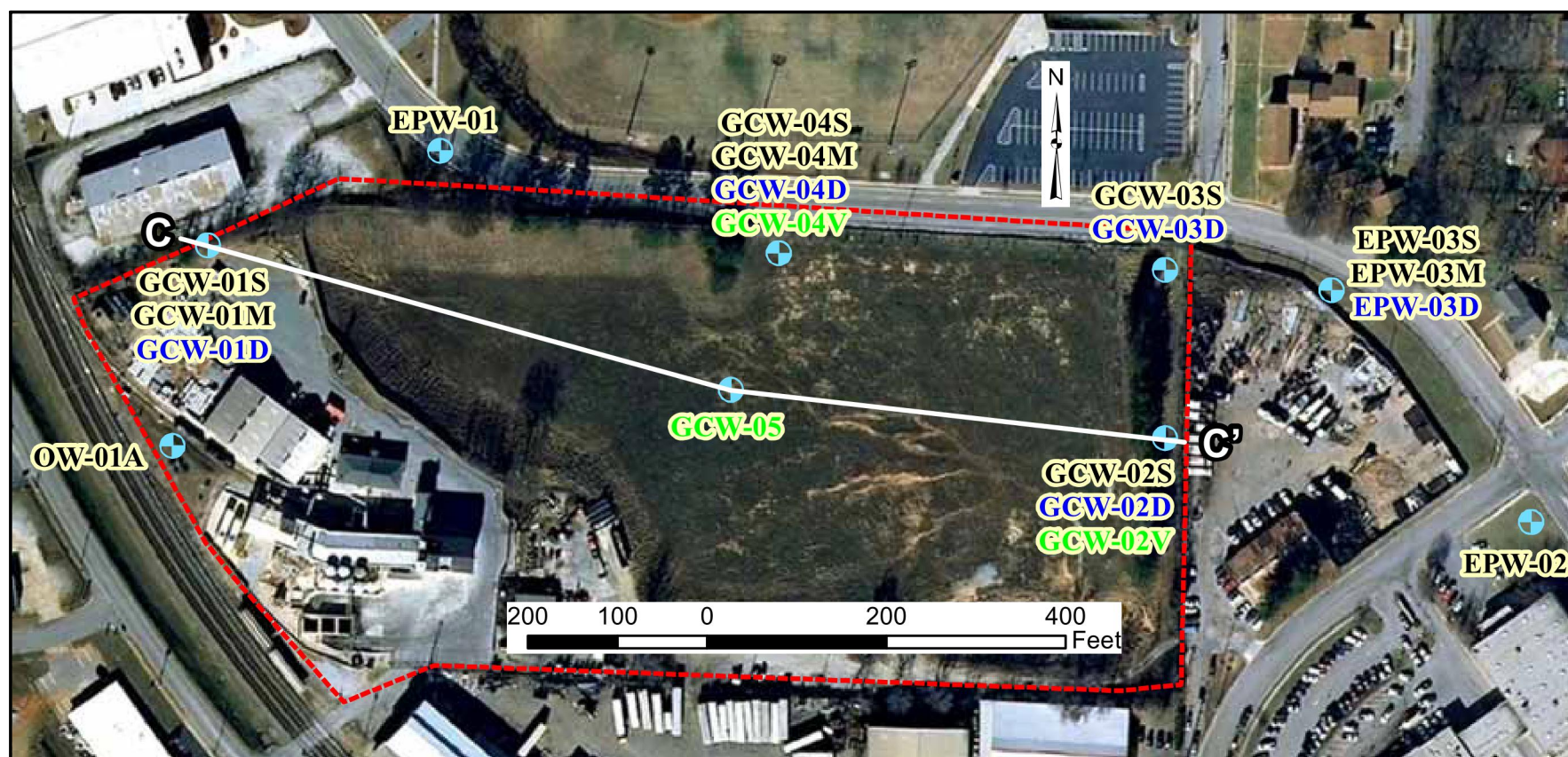
**Geosyntec**  
 consultants

DATE:	JAN-13	SCALE:	AS SHOWN
PROJECT NO.	GR5060/12	FILE NO.	5060F001
DOCUMENT NO.	GA 130020	FIGURE NO.	7

# GEOLOGIC AND HYDROGEOLOGIC CROSS SECTION ALONG C-C'



## KEY MAP



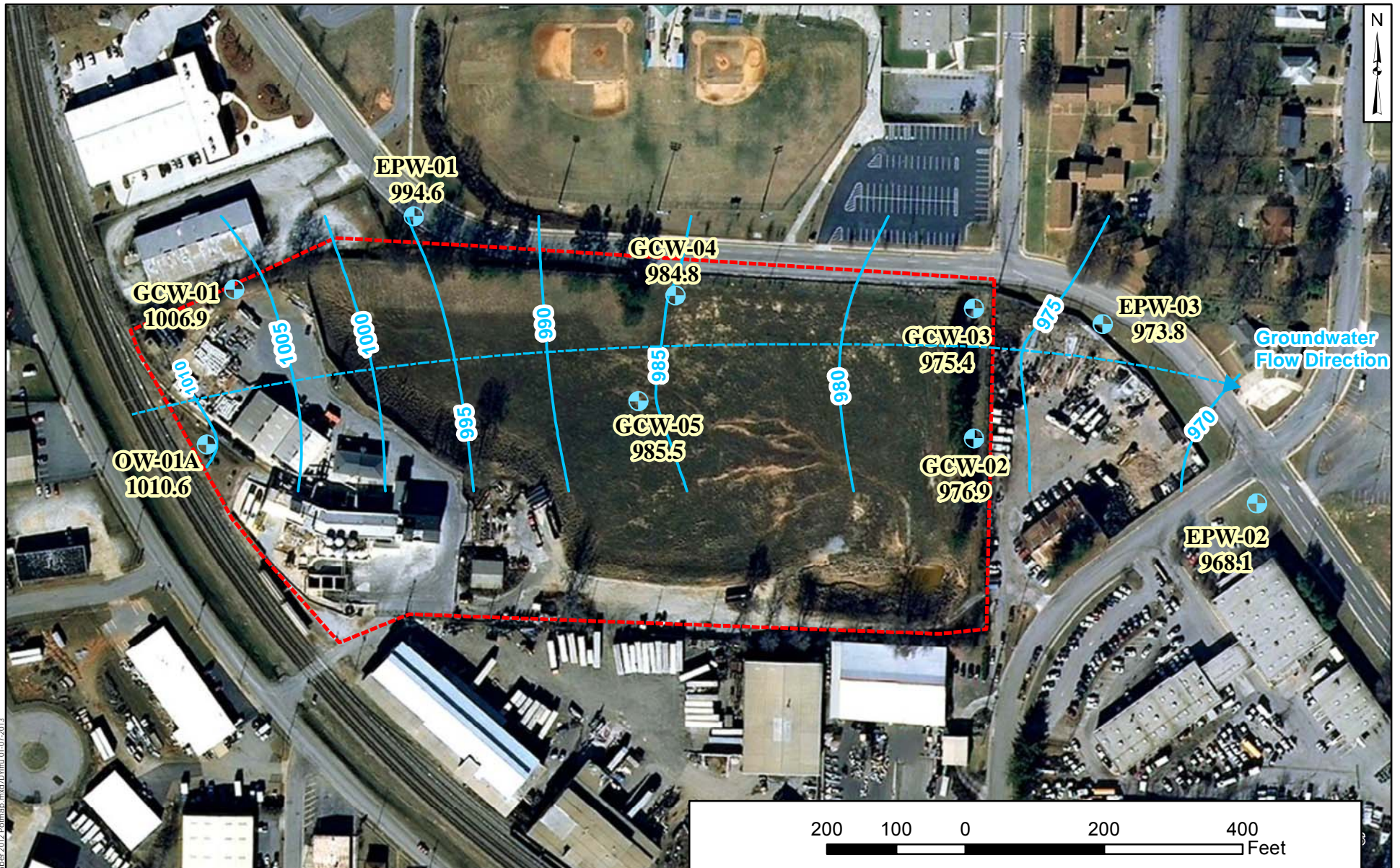
## LEGEND

- 0.75' THICK LOW PERMEABILITY CLAY ( $10^{-6}$  cm/s) AND VEGETATIVE COVER
- GRAVELLY CLAY, FILL
- CLAY, FILL AFTER EXCAVATION
- SILTY SAND, RELICT SCHISTOCITY, MICACEOUS (SAPROLITE)
- PARTIALLY WEATHERED SCHIST
- BEDROCK (SCHIST)
- LITHOLOGIC CONTACT, DASHED WHERE INFERRED
- MONITORING WELL SCREEN ZONE WITH WATER ELEVATION (FEET MSL), NOVEMBER, 2012

0    100'    200'  
 HORIZONTAL SCALE IN FEET  
 VERTICAL EXAGGERATION = 5X

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DATE:	JAN-13	SCALE:	AS SHOWN
PROJECT NO.	GR5060/12	FILE NO.	5060F001
DOCUMENT NO.	GA 130020	FIGURE NO.	8



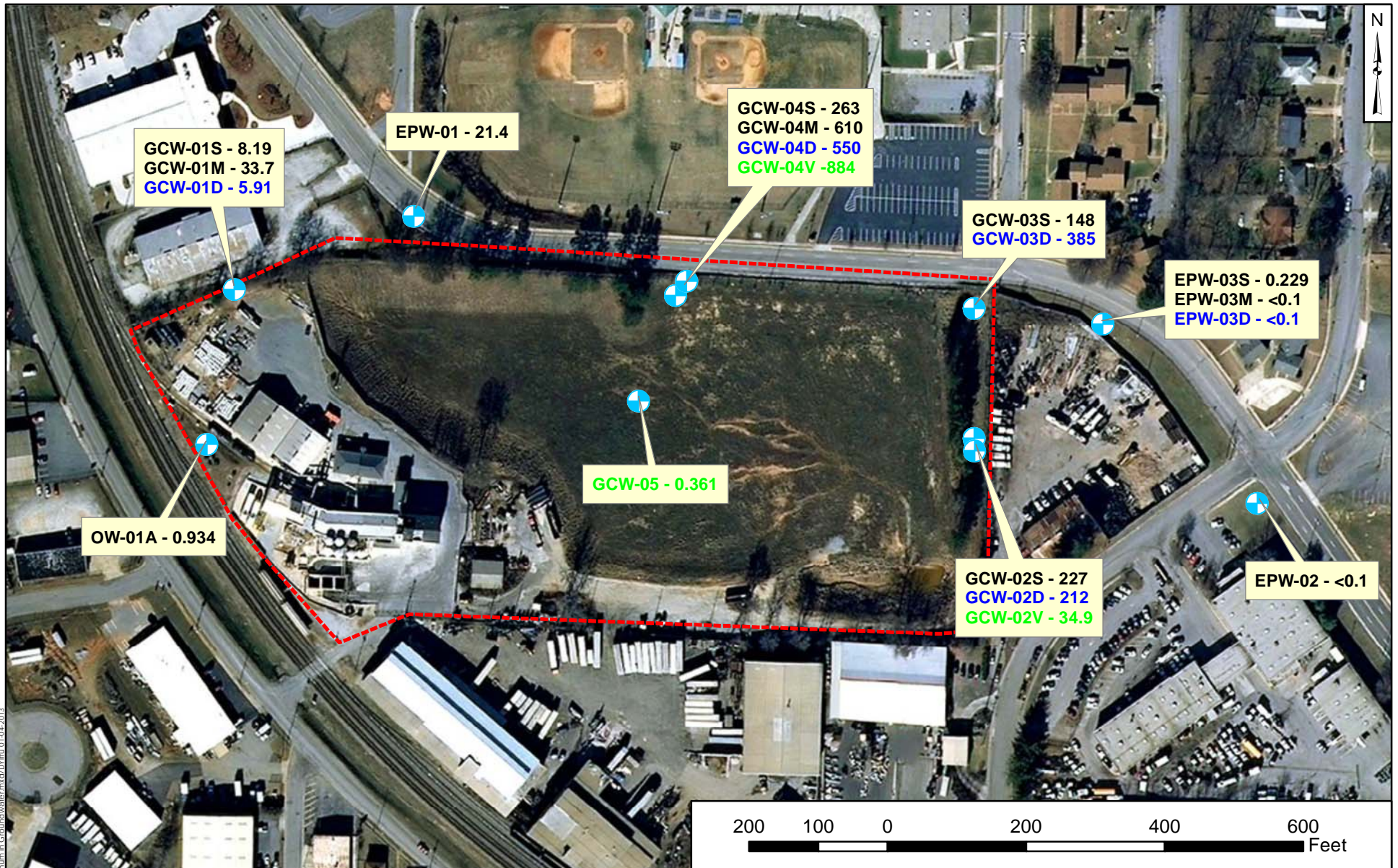
N:\projects\chem\GIS\MXD\2013\November 2012 Potmap.mxd\DTM\_01\_07\_2013

- Monitoring Wells (Elevation in ft MSL)
- Groundwater Elevation (07 November 2012)
- Approximate Site Boundary

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 JANUARY 2013

**POTENTIOMETRIC SURFACE MAP**  
**NOVEMBER 2012**  
 General Chemicals, East Point, GA

Figure  
 9



N:\projects\chem\GIS\MXD\2013\2\Aluminum in Groundwater.mxd/D:\mfr\_01\_04\_2013

Monitoring Well (Sulfate Concentration in mg/L)

Approximate Property Boundary

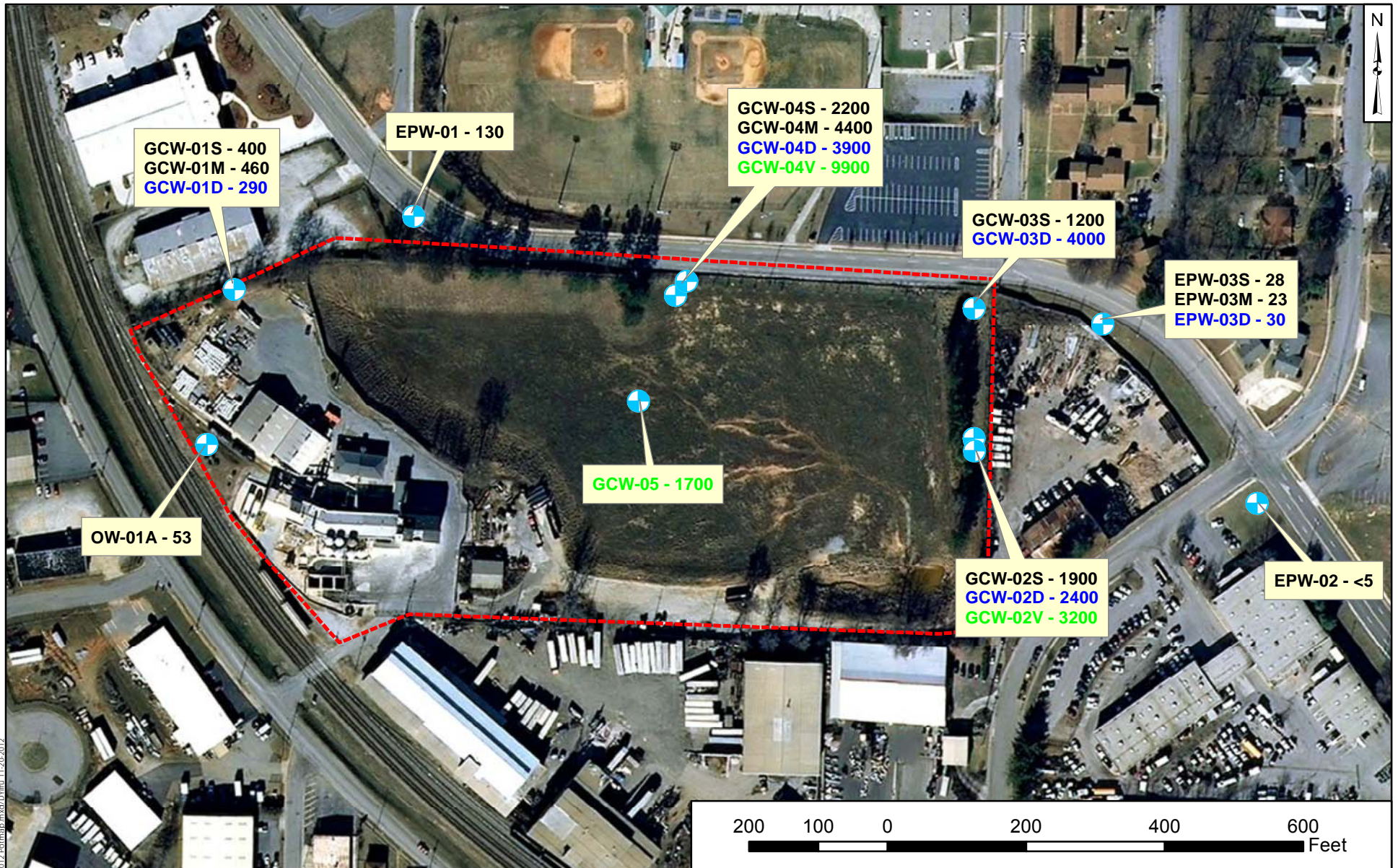
**Note:** Wells with screen interval in the saprolite are labeled in black; wells with screen interval in the PWR are labeled in blue; and wells with screen interval in the competent bedrock are labeled in green.

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**ALUMINUM CONCENTRATIONS IN GROUNDWATER  
 NOVEMBER 2012**  
 General Chemicals, East Point, GA

Figure  
 10





N:\projects\chem\GIS\MXD\November 2012 Polymap.mxd/DVW/11-20-2012

Monitoring Well (Sulfate Concentration in mg/L)

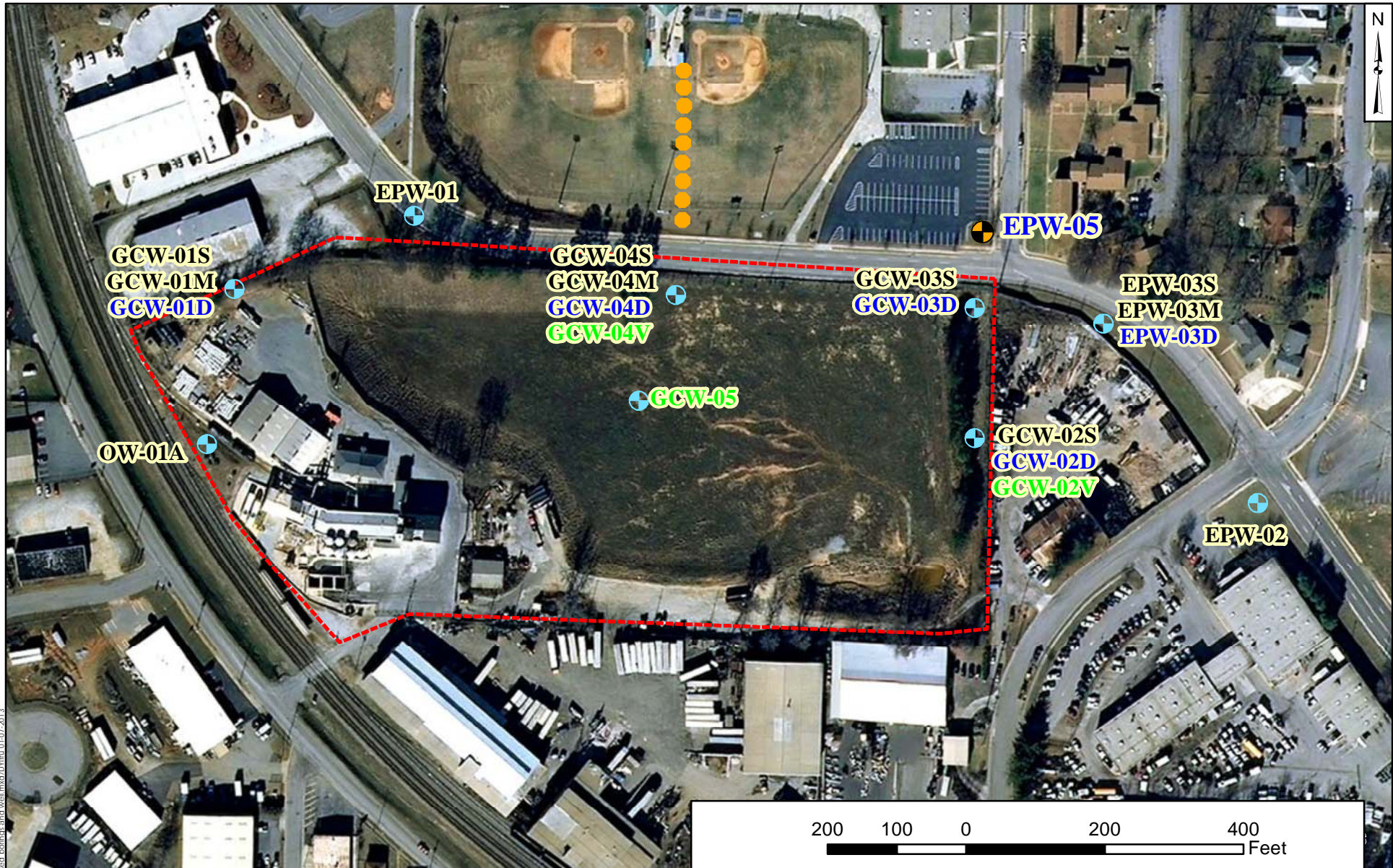
Approximate Property Boundary

**Note:** Wells with screen interval in the saprolite are labeled in black; wells with screen interval in the PWR are labeled in blue; and wells with screen interval in the competent bedrock are labeled in green.





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JANUARY 2013

**SULFATE CONCENTRATIONS IN GROUNDWATER  
NOVEMBER 2012**  
General Chemicals, East Point, GA

Figure  
11



N:\projects\chem\GIS\MXD\2013\Proposed borings and well.mxd\DWInu\_01.07.2013

-  Proposed Monitoring Well
-  Proposed Delineation Boring
-  Existing Monitoring Well
-  Approximate Site Boundary

**Note:** Wells with screen interval in the saprolite are labeled in black; wells with screen interval in the PWR are labeled in blue; and wells with screen interval in the competent bedrock are labeled in green.

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 Kennesaw, GA  
 JANUARY 2013

**LOCATIONS OF PROPOSED BORINGS AND MONITORING WELL**  
 General Chemicals, East Point, GA

Figure 12

# ATTACHMENT A

Temporary Easement Agreement Between  
General Chemical LLC and Martin Street Property

[ABOVE SPACE RESERVED FOR RECORDING USE]

**AFTER RECORDING, RETURN TO:**

James Imbriaco, Esq.  
GenTek Inc.  
90 East Halsey Road  
Parsippany, New Jersey 07054

STATE OF GEORGIA

COUNTY OF FULTON

**TEMPORARY EASEMENT AGREEMENT**

THIS TEMPORARY EASEMENT AGREEMENT (the "Agreement") is made and entered into this \_\_\_ day of December 2009 by and between MARTIN STREET PROPERTY, LLC, a Georgia limited liability company ("Grantor"), and GENERAL CHEMICAL LLC, a Delaware limited liability company ("Grantee");

**WITNESSETH:**

WHEREAS, Grantor owns that certain real property more particularly described on Exhibit "A" attached hereto and made a part hereof (the "Grantor Property");

WHEREAS, Grantee owns that certain real property more particularly described on Exhibit "B" attached hereto and made a part hereof (the "Grantee Property");

WHEREAS, Grantee requests limited access across a portion of the Grantor Property in order to install, monitor, sample and maintain one groundwater monitoring well (the "Well") required by the State of Georgia Environmental Protection Division pursuant to the Plan (as hereinafter defined), which Well is to be installed, monitored and maintained by Grantee; and

WHEREAS, Grantor is willing to grant Grantee a non-exclusive temporary easement under, through, upon and across a portion of the Grantor Property for the purpose of accessing,

monitoring, sampling and maintaining the Well, pursuant to the terms and conditions of this Agreement.

NOW, THEREFORE, for and in consideration of Ten and No/100 Dollars (\$10.00) and other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged by the parties hereto, intending to be legally bound, agree as follows:

1. **Grant of Easement for the Benefit of Grantee.** Grantor does hereby grant, bargain, sell and convey to Grantee a non-exclusive temporary easement under, through, upon and across that certain portion of the Grantor Property as more particularly described on **Exhibit C** attached hereto and made a part hereof and labeled "30-FT TEMPORARY EASEMENT" (the "Easement Area") for the following purposes: installing, monitoring, sampling and maintaining the Well; installing soil borings to obtain soil and/or water samples; conducting other environmental samplings of soil, water, air and biota; and installing, operating and maintaining any environmental remediation equipment, all in accordance with Georgia law as set forth in that certain revised Corrective Action Plan Project Number: GR3712-03, dated March 2007 (the "Plan") for the Grantor Property as approved by the Georgia Environmental Protection Division; together with access on and across the Easement Area for the purposes set forth herein. This Agreement and the rights of Grantee under this Agreement shall terminate on December 31, 2020 (the "Easement Expiration Date"); provided, however, that Grantor may terminate this Agreement and the rights granted by this Agreement with respect to the Easement Area prior to such Easement Expiration Date upon sixty (60) days prior written notice from Grantor to Grantee in the event that Grantor is ready to commence development of, or improvements on, the Grantor Property, or any portion thereof (each, a "Construction Project"), and the continued operation of the Well interferes with the ability of Grantor to undertake the Construction Project, as determined in Grantor's sole but reasonable discretion. Notwithstanding anything to the contrary contained in this Agreement, in the event that Grantor terminates this Agreement and the rights granted under this Agreement with respect to the Easement Area as aforesaid prior to the Easement Expiration Date, then Grantor hereby agrees to relocate the easement granted hereunder under, through, upon and across a portion of the Grantor Property mutually acceptable to Grantor and Grantee and, if necessary, agreed to in writing by the Georgia Environmental Protection Division, and such easement shall be deemed to be relocated to such new location and the terms and conditions of this Agreement shall continue to control; provided, however, that Grantor and Grantee shall execute and deliver any necessary documentation to effectuate any such termination and relocation. Notwithstanding the foregoing, in no event shall this Agreement or any of the rights granted under this Agreement extend beyond the Easement Expiration Date, unless an extension of the term of this Agreement is required by the Georgia Environmental Protection Division in writing provided to Grantor and Grantee.

2. **Performance of Work.** Any work performed pursuant to this Agreement shall be performed (a) in a good, diligent and workmanlike manner, (b) in a manner which minimizes interference or disruption with the business operations of Grantor, and (c) in compliance with all applicable laws, rules, regulations and ordinances. Subject to Grantor's rights of termination and relocation as set forth in Section 1 of this Agreement, and provided that Grantee is not in default under this Agreement, Grantor hereby covenants and agrees not to interfere, damage or move in any manner the Well or any remediation or investigation equipment located on the Easement

Area unless expressly permitted in the Plan or unless otherwise expressly approved by Grantee in writing. After expiration or earlier termination of this Agreement, Grantee agrees, at its sole cost and expense, to promptly (i) remove all equipment and materials from the Easement Area, (ii) close the Well in accordance with all applicable laws, rules, regulations and ordinances, (iii) certify, represent and warrant in writing to Grantor that, to Grantee's best knowledge, the closure described in clause (ii) above was satisfactorily completed in accordance with all applicable laws, rules, regulations and ordinances, (iv) provide Grantor with satisfactory written evidence from Grantee's environmental consultant (as determined in Grantor's reasonable discretion) that the closure described in clause (ii) above was satisfactorily completed in accordance with all applicable laws, rules, regulations and ordinances, and (v) repair any damage to the Grantor Property, including, without limitation, the Easement Area, and restore the Easement Area to a comparable condition that exists on the date of this Agreement.

3. **Remedies.** In the event either party fails to perform any work or obligations required by this Agreement in accordance with the requirements of this Agreement or otherwise breaches the terms of this Agreement, the other party may notify such party and shall specify the deficiencies in the work or the breach. If such deficiencies are not corrected, or the breach not cured, within thirty (30) days after receipt of such notice, then the non-defaulting party shall have the right to correct such deficiencies or perform the work or cure the breach, and recover all costs and expenses related thereto from the other party. In the event of a default under this Agreement, the non-defaulting party shall have all other rights and remedies at law or in equity, including, without limitation, the right to injunctive relief or specific performance.

4. **Binding Effect; Appurtenance.** This Agreement shall be binding upon and inure to the benefit of Grantee and Grantor and their respective successors and assigns. The rights, privileges and easements granted and conveyed hereunder shall run with title to the Grantor Property.

5. **Notices.**

(a) Any notice, request or other communication required or permitted herein shall be in writing and shall be deemed to be given upon the earlier of personal delivery (including professional overnight courier service), by recognized overnight courier service or three (3) days after the same shall have been deposited in the United States mail, by certified or registered mail, return receipt required, postage prepaid. Such notice, request or other communication shall be addressed to the party at the address set forth under the signature of such party to this Agreement, however, a party may change its address for notices by giving notice to the other party in the manner provided in this Section.

(b) Grantee shall promptly provide Grantor with copies of any and all notices, reports, evaluations, test results and other communications provided to or at the direction of the Georgia Environmental Protection Division with respect to or pursuant to the Plan or otherwise.

6. **Authority.** Each party hereto represents and warrants to the other that it has full power and authority to enter into this Agreement and has obtained all necessary consents and approvals to enter into this Agreement and be bound by the terms and provisions hereof.

7. **Indemnification.** Grantee agrees to indemnify and hold harmless and defend Grantor from and against any and all claims, damages, losses, liabilities and costs and expenses (including, without limitation, reasonable attorney's fees and expenses) whatsoever (collectively, the "Liabilities and Costs") that Grantor may incur (or which may be claimed against Grantor by any person or entity whatsoever) in connection with or relating to the Plan, the Well and/or this Agreement. Grantor agrees to indemnify and hold harmless and defend Grantee from and against any and all Liabilities and Costs that Grantee may incur (or which may be claimed against Grantee by any person or entity whatsoever) to the extent such Liabilities and Costs arise out of an act or omission of Grantor, in connection with or relating to the Plan, the Well and/or this Agreement.

8. **Miscellaneous.** Time is of the essence of this Agreement. If any section, provision, term or clause of this Agreement shall be held invalid, void or illegal by a court of competent jurisdiction, all other sections, provisions, terms and clauses of this Agreement shall not be affected or invalidated thereby. All headings contained herein are for convenience only and shall not affect, modify, limit or expand any of the provisions of this Agreement. This Agreement may be modified or amended only by a written instrument intended for that purpose and executed by the party against which enforcement thereof is asserted. This Agreement sets forth the entire agreement between Grantee and Grantor concerning the easements, rights and privileges set forth herein; there are no other agreements or understandings between Grantee and Grantor with respect to these matters. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Georgia. In the event time for delivery of any notice, demand or request hereunder or the time for compliance with any covenant or requirement hereof falls on a Saturday, Sunday or legal holiday, the deadline for delivery of such notice, demand or request or for compliance with such requirement or covenant shall automatically be extended until 5:00 p.m. on the next succeeding business day. Each party hereto acknowledges that it has participated in the negotiation and preparation of this Agreement with the advice and assistance of legal counsel. No provision of this Agreement shall be construed against or interpreted to the disadvantage of any party by reason of such party having, or being deemed to have, structured, dictated or drafted such provision. The failure of any party to insist upon strict compliance of any covenant, agreement, term, provision or condition of this Agreement shall not constitute, or be deemed, a waiver thereof. Nothing contained herein shall be used or construed as a grant of any rights to any public or governmental authority or agency.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

**[SIGNATURES CONTINUED FROM PRECEDING PAGE]**

Signed, sealed, and delivered in  
the presence of:

Wendy R. Resic  
Unofficial Witness

Mary F. Culver  
Notary Public  
Mary F. Culver  
Notary Public  
State of NJ  
Commission Expiration Date: 10-21-11

[AFFIX NOTARIAL SEAL]

GENERAL CHEMICAL LLC,  
a Delaware limited liability company

By: Michael A. Wake (SEAL)  
Print: MICHAEL A. WAKE  
Title: V.P. MFG/ENG.

**ADDRESS FOR GRANTEE:**

General Chemical LLC  
90 East Halsey Road  
Parsippany, New Jersey 07054



**EXHIBIT "A"**

**LEGAL DESCRIPTION OF THE GRANTOR PROPERTY**

**PARCELS ONE AND TWO COMBINED**

ALL THAT PARCEL OR TRACT OF LAND BEING SITUATED IN LAND LOT 131, 14<sup>th</sup> DISTRICT, CITY OF EAST POINT, FULTON COUNTY, GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF NORTH MARTIN STREET (60'R/W) AND THE PROJECTED WESTERN RIGHT OF WAY OF RANDALL STREET (50'R/W); THENCE SOUTH 00 DEGREES 27 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 515.55 FEET TO A 1/2" REBAR FOUND; THENCE SOUTH 00 DEGREES 27 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 2.64 FEET TO A POINT; THENCE NORTH 87 DEGREES 46 MINUTES 22 SECONDS WEST FOR A DISTANCE OF 220.11 FEET TO A POINT; THENCE NORTH 87 DEGREES 34 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 541.38 FEET TO A POINT; THENCE NORTH 02 DEGREES 16 MINUTES 32 SECONDS EAST FOR A DISTANCE OF 216.32 FEET TO A POINT; THENCE NORTH 60 DEGREES 41 MINUTES 12 SECONDS WEST FOR A DISTANCE OF 51.02 FEET TO A POINT; THENCE NORTH 53 DEGREES 51 MINUTES 15 SECONDS WEST FOR A DISTANCE OF 120.90 FEET TO A POINT; THENCE NORTH 40 DEGREES 06 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 90.30 FEET TO A POINT; THENCE NORTH 16 DEGREES 31 MINUTES 59 SECONDS WEST FOR A DISTANCE OF 104.50 FEET TO A POINT; THENCE NORTH 02 DEGREES 54 MINUTES 09 SECONDS EAST FOR A DISTANCE OF 33.59 FEET TO A POINT; THENCE NORTH 69 DEGREES 19 MINUTES 21 SECONDS EAST FOR A DISTANCE OF 17.48 FEET TO A POINT; THENCE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST FOR A DISTANCE OF 311.57 FEET TO A POINT ON THE AFOREMENTIONED SOUTHERN RIGHT OF WAY LINE OF NORTH MARTIN STREET; THENCE CONTINUE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST ALONG SAID SOUTHERN RIGHT OF WAY LINE FOR A DISTANCE OF 437.27 FEET TO A POINT; THENCE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST ALONG SAID SOUTHERN RIGHT OF WAY LINE FOR A DISTANCE OF 216.15 FEET TO A POINT; THENCE ALONG SAID SOUTHERN RIGHT OF WAY LINE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 405.30 FEET FOR AN ARC DISTANCE OF 3.94 FEET, SAID ARC HAVING A CHORD BEARING OF SOUTH 87 DEGREES 40 MINUTES 01 SECONDS EAST FOR 3.94 FEET TO THE POINT OF BEGINNING.

CONTAINING 439,382 SQ.FT. OR 10.0868 ACRES, MORE OR LESS, AND BEING SHOWN AND DEPICTED AS "PARCEL ONE" AND "PARCEL TWO" ON THAT CERTAIN BOUNDARY AND SUBDIVISION PLAT FOR NEWELL RECYCLING, LLC, PREPARED FOR NEWELL RECYCLING, LLC, GENERAL CHEMICAL, LLC & GENTEK, INC., PREPARED BY PRIME ENGINEERING INCORPORATED, BEARING THE SEAL OF DAVID A. BLOUNT, GEORGIA REGISTERED LAND SURVEYOR NO. 2917, DATED SEPTEMBER 1, 2006, LAST REVISED MAY 21, 2007.

**EXHIBIT "B"**

**LEGAL DESCRIPTION OF THE GRANTEE PROPERTY**

**PARCEL THREE**

ALL THAT PARCEL OR TRACT OF LAND BEING SITUATED IN LAND LOT 131, 14TH DISTRICT, CITY OF EAST POINT, FULTON COUNTY, GEORGIA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE POINT OF INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF NORTH MARTIN STREET (HAVING A 60 FOOT RIGHT OF WAY) AND THE PROJECTED WESTERN RIGHT OF WAY OF RANDALL STREET (HAVING A 50 FOOT RIGHT OF WAY); THENCE ALONG SAID SOUTHERN RIGHT OF WAY LINE OF NORTH MARTIN STREET ALONG A CURVE TO THE LEFT WITH A RADIUS OF 405.30 FEET FOR AN ARC DISTANCE OF 3.94 FEET, SAID ARC HAVING A CHORD BEARING OF NORTH 87 DEGREES 40 MINUTES 01 SECONDS WEST FOR 3.94 FEET TO A POINT; THENCE CONTINUE ALONG SAID SOUTHERN RIGHT OF WAY LINE OF NORTH MARTIN STREET NORTH 87 DEGREES 56 MINUTES 45 SECONDS WEST FOR A DISTANCE OF 216.15 FEET TO A POINT; THENCE CONTINUE ALONG SAID SOUTHERN RIGHT OF WAY LINE OF NORTH MARTIN STREET NORTH 87 DEGREES 56 MINUTES 45 SECONDS WEST FOR A DISTANCE OF 437.27 FEET TO A POINT; THENCE NORTH 87 DEGREES 56 MINUTES 45 SECONDS WEST A DISTANCE OF 311.57 FEET TO A POINT; THENCE SOUTH 69 DEGREES 19 MINUTES 21 SECONDS WEST A DISTANCE OF 17.48 FEET TO A POINT, SAID POINT BEING THE POINT OF BEGINNING; THENCE SOUTH 69 DEGREES 19 MINUTES 21 SECONDS WEST A DISTANCE OF 274.55 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1801.86 FEET FOR AN ARC DISTANCE OF 203.55 FEET, SAID ARC HAVING A CHORD BEARING OF SOUTH 27 DEGREES 33 MINUTES 06 SECONDS EAST FOR 203.44 FEET TO A POINT; THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 1838.70 FEET FOR AN ARC DISTANCE OF 111.71 FEET, SAID ARC HAVING A CHORD BEARING OF SOUTH 32 DEGREES 28 MINUTES 56 SECONDS EAST FOR 111.69 FEET TO A POINT; THENCE SOUTH 40 DEGREES 21 MINUTES 59 SECONDS EAST A DISTANCE OF 98.02 FEET TO A POINT; THENCE SOUTH 45 DEGREES 46 MINUTES 16 SECONDS EAST A DISTANCE OF 32.45 FEET TO A POINT; THENCE SOUTH 48 DEGREES 15 MINUTES 01 SECONDS EAST A DISTANCE OF 32.53 FEET TO A POINT; THENCE SOUTH 66 DEGREES 58 MINUTES 09 SECONDS EAST A DISTANCE OF 13.48 FEET TO A POINT; THENCE SOUTH 70 DEGREES 51 MINUTES 43 SECONDS EAST A DISTANCE OF 38.51 FEET TO A POINT; THENCE SOUTH 87 DEGREES 34 MINUTES 09 SECONDS EAST A DISTANCE OF 162.67 FEET TO A POINT; THENCE NORTH 02 DEGREES 16 MINUTES 32 SECONDS EAST A DISTANCE OF 216.32 FEET TO A POINT; THENCE NORTH 60 DEGREES 41 MINUTES 12 SECONDS WEST A DISTANCE OF 51.02 FEET TO A POINT; THENCE NORTH 53 DEGREES 51 MINUTES 15 SECONDS WEST A DISTANCE OF 120.90 FEET TO A POINT; THENCE NORTH 40 DEGREES 06 MINUTES 09 SECONDS WEST A DISTANCE OF 90.30 FEET TO A

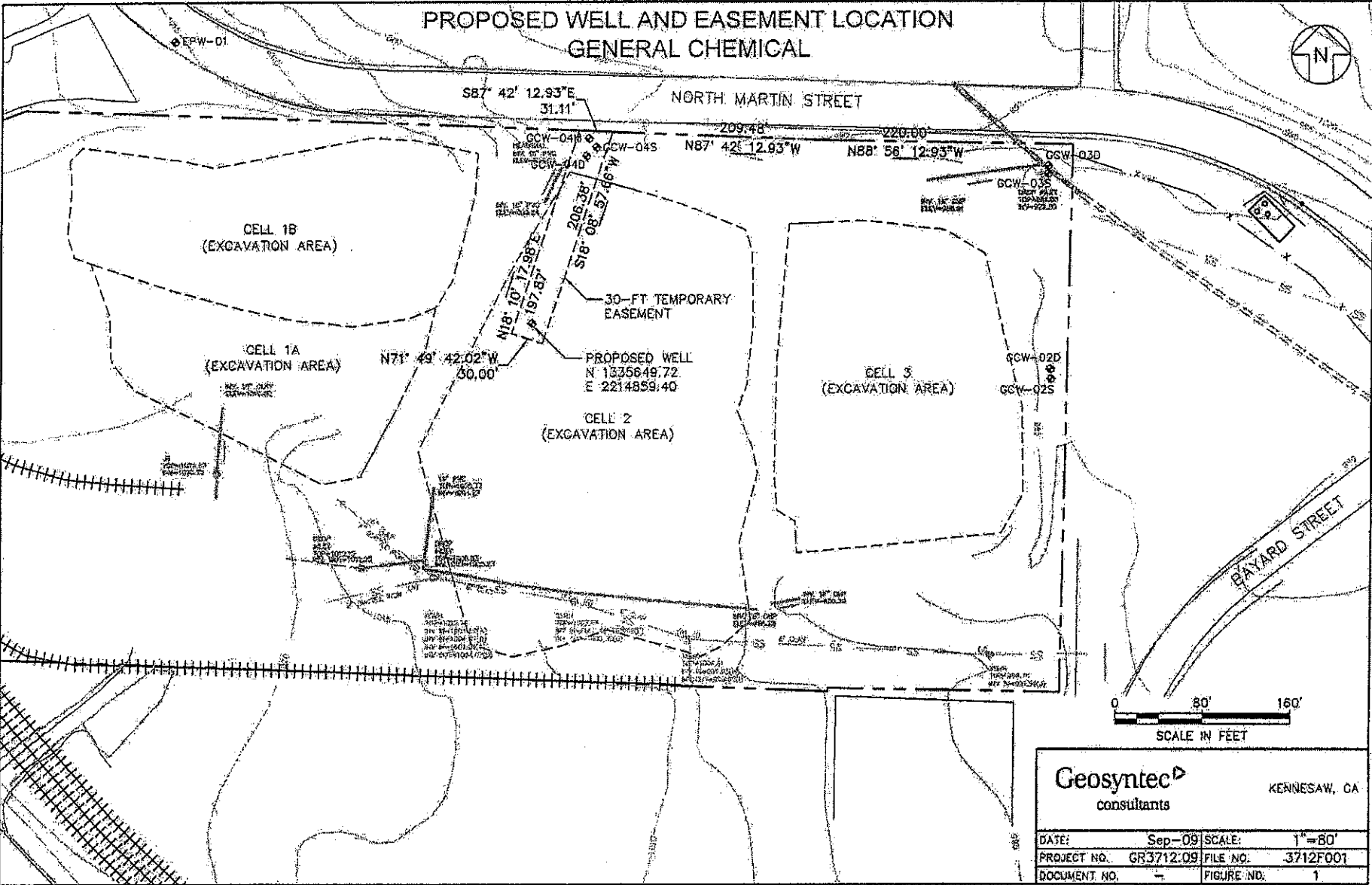
POINT; THENCE NORTH 16 DEGREES 31 MINUTES 59 SECONDS WEST A DISTANCE OF 104.50 FEET TO A POINT; THENCE NORTH 02 DEGREES 54 MINUTES 09 SECONDS EAST A DISTANCE OF 33.59 FEET TO A POINT, SAID BEING THE POINT OF BEGINNING.

SAID TRACT OR PARCEL OF LAND CONTAINING 3.1242 ACRES, MORE OR LESS, AND BEING SHOWN AND DEPICTED AS "PARCEL THREE" ON THAT CERTAIN BOUNDARY AND SUBDIVISION PLAT FOR NEWELL RECYCLING, LLC, PREPARED FOR NEWELL RECYCLING, LLC, GENERAL CHEMICAL, LLC & GENTEK, INC., PREPARED BY PRIME ENGINEERING INCORPORATED, BEARING THE SEAL OF DAVID A. BLOUNT, GEORGIA REGISTERED LAND SURVEYOR NO. 2917, DATED SEPTEMBER 1, 2006, LAST REVISED MAY 21, 2007.

**EXHIBIT "C"**

**DESCRIPTION OF THE EASEMENT AREA**

PROPOSED WELL AND EASEMENT LOCATION  
GENERAL CHEMICAL



L:\DRAWING\GENERAL CHEMICAL\MONITORING WELL LOCATION AND EASEMENT\GR3712.DWG (3/12/09)

Geosyntec <sup>®</sup>		KENNESAW, GA	
consultants			
DATE:	Sep-09	SCALE:	1"=80'
PROJECT NO.	GR3712.09	FILE NO.	3712F001
DOCUMENT NO.	-	FIGURE NO.	1

**CLOSURE NOTE:**

The field data upon which this plot is based has a closure precision of one foot in 21,351 feet and an angular error of 0.5" per angle point and was adjusted by the compass rule. A Trimble S6 Robotic Total Station was used to obtain the linear and angular measurements used in the preparation of this plot. This plot has been calculated for closure and is found to be accurate to within one foot in 100,000± feet.

**FLOOD PLAIN STATEMENT:**

BY GRAPHIC PLOTTING ONLY, THIS SITE IS NOT WITHIN THE LIMITS OF A 100 YEAR FLOOD HAZARD AREA AS PER F.L.R.M. FULTON COUNTY, GEORGIA AND INCORPORATED AREAS, COMMUNITY PANEL NO. 13121C0366 E. PANEL BEARS AN EFFECTIVE DATE OF JUNE 22, 1998. THIS SITE FALLS WITHIN ZONES X.

**DATES OF FIELD WORK:**

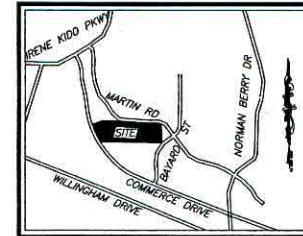
THE FIELD WORK USED TO RESOLVE AND PRODUCE THIS SURVEY WAS OBTAINED IN THE FIELD BETWEEN THE DATE OF JULY 30TH AND AUGUST 2ND, 2006 AND AGAIN ON MARCH 28, 2007.

**SANITARY SEWER DESCRIPTION**

THE SANITARY SEWER EASEMENT SHALL BE DEFINED AS BEING LOCATED 10-FOOT LEFT AND RIGHT OF THE CENTERLINE OF THE EXISTING SEWER LINE AND SHALL BE 20-FOOT IN WIDTH

**PBR EASEMENT ACCESS**

ALL ACCESS TO AND FROM THE MAINTENANCE EASEMENT IN FAVOR OF GENERAL CHEMICAL, L.L.C. AND GENTEK, INC. SHALL BE FROM N. MARTIN STREET. NO DIRECT ACCESS IS PROVIDED TO THE EASEMENT FROM GENERAL CHEMICALS PROPERTY.



VICINITY MAP  
N.T.S.

**PRIME ENGINEERING**  
INCORPORATED  
1885 BERRY STREET, SUITE 300  
ATLANTA, GEORGIA 30318  
404-423-7100

PREPARED FOR:  
**NEWELL RECYCLING, LLC,  
GENERAL CHEMICAL, LLC,  
& GENTEK, INC.**

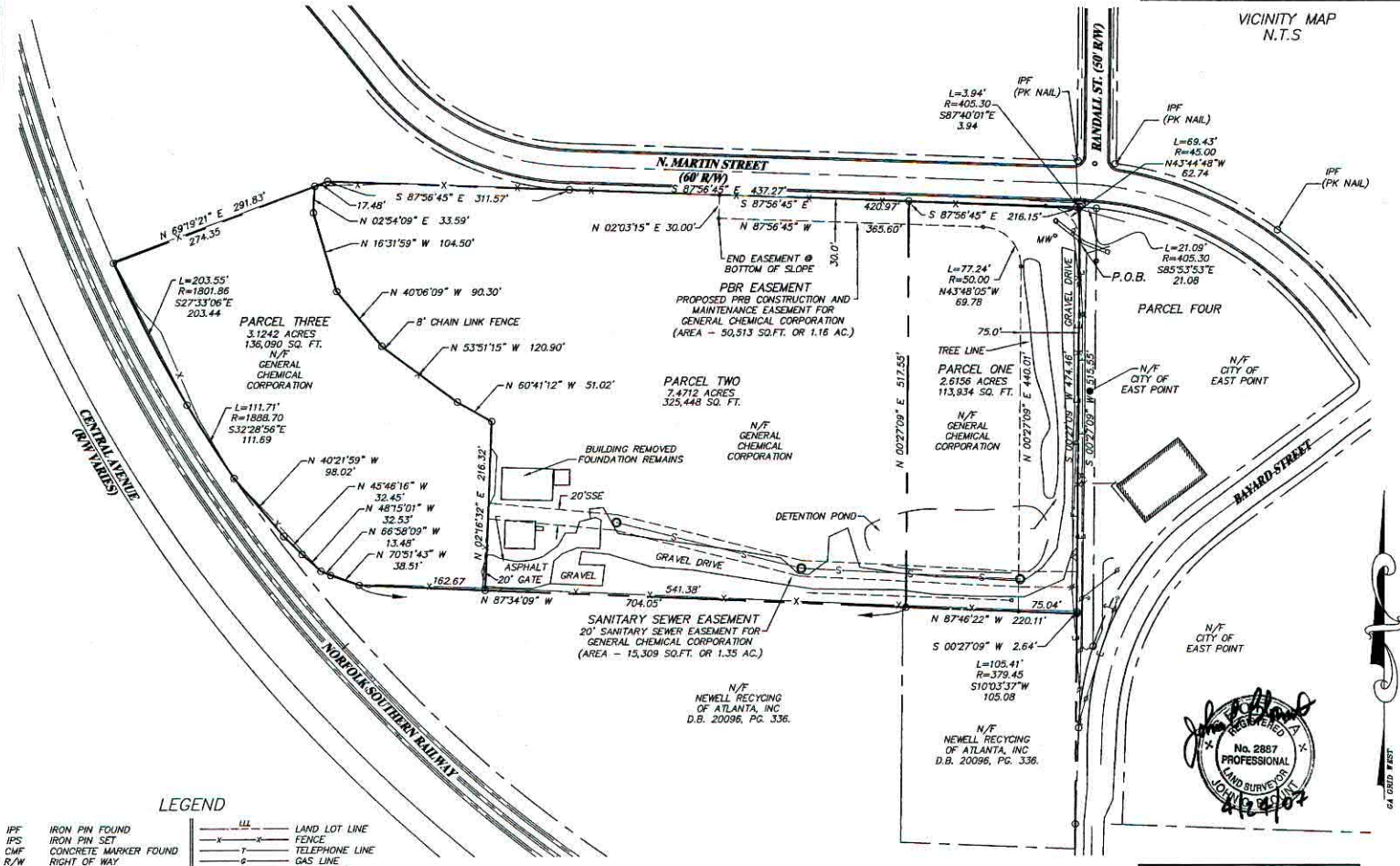
NO.	DATE	DESCRIPTION
#1	1/20/07	JCB REVISED BOUNDARY CALLS
#2	1/09/07	SBP REVISE EASEMENT
#3	1/18/07	SBP LABEL EASEMENT
#4	1/24/07	JCB REVISE EASEMENT, ADD 20' SEE

**BOUNDARY AND SUBDIVISION PLAT FOR NEWELL RECYCLING, LLC**  
ILL 131, 14TH DISTRICT  
CITY OF EAST POINT  
FULTON CO., GEORGIA

DRAWN BY: SBP  
CHECKED BY: JCB  
SCALE: 1" = 100'  
DRAWING DATE: 09/01/06  
PROJECT NUMBER: 1241-061

© 2006 PRIME ENGINEERING, INC. All rights reserved. This plat was prepared for the exclusive use of the person, persons, or entity named in the certificate or title herein. Said certificate does not extend to any unnamed person, persons, or entity without an express recertification by the surveyor naming said person, persons, or entity.

DRAWING NUMBER  
**1-2**



**LEGEND**

IPF	IRON PIN FOUND	LLL	LAND LOT LINE
IPS	IRON PIN SET	---	FENCE
CMF	CONCRETE MARKER FOUND	- - -	TELEPHONE LINE
R/W	RIGHT OF WAY	- - -	GAS LINE
C	CENTER LINE	- - -	WATER LINE
P	PROPERTY LINE	- - -	SANITARY SEWER LINE
STA	STATION	- - -	POWER LINE
LL	LAND LOT	CB	CATCH BASIN
BM	BENCH MARK	JB	JUNCTION BOX
INV.	INVERT ELEVATION	DI	DROP INLET
MANHOLE	MANHOLE	YI	YARD INLET
OC	PROPERTY CORNER	WI	WEIR INLET
OP	POWER POLE	SMH	SAN. SEWER MANHOLE
OS	FIRE HYDRANT	CO	CLEANOUT
OS	LIGHT POLE	GP	GUY POLE
OS	IRRIGATION CONTROL VALVE	GW	GUY WIRE
OS	WATER VALVE	EM	ELECTRICITY METER
OS	WATER METER		



**IF YOU DIG GEORGIA...  
CALL US FIRST!  
UTILITIES PROTECTION CENTER  
1-800-282-7411  
(404) 325-5000  
(metro Atlanta only)  
IT'S THE LAW**

In my opinion, this plat is a correct representation of the land platted and has been prepared in conformity with the minimum standards and requirements of law.  
*John C. Blount*  
JOHN C. BLOUNT GA R.L.S. #2887  
Member Surveying and Mapping Society of Georgia

THIS PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY NAMED IN THE CERTIFICATE OR TITLE HEREIN. SAID CERTIFICATE DOES NOT EXTEND TO ANY UNNAMED PERSON, PERSONS, OR ENTITY WITHOUT AN EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING SAID PERSON, PERSONS, OR ENTITY.

R:\1241-001\_GOPP\_Easement\_Plat\_Ven\Prime\_Survey\Ven Chem Easement\_Rev.042407.dwg Tue, 04/24/07 1:43 PM XXX

# ATTACHMENT B

## Warranty Deeds

[ABOVE SPACE RESERVED FOR RECORDING DATA]

AFTER RECORDING, RETURN TO:  
Taylor, Busch, Slipakoff & Duma, LLP  
1600 Parkwood Circle, Suite 200  
Atlanta, Georgia 30339  
Attn: Marc D. Glenn, Esq.

STATE OF New Jersey  
COUNTY OF MOORE

### LIMITED WARRANTY DEED

THIS LIMITED WARRANTY DEED, made this \_\_\_\_ day of \_\_\_\_\_, 2007, by and between **GENERAL CHEMICAL, LLC**, a Delaware limited liability company ("**Grantor**"), and **MARTIN STREET PROPERTY, LLC**, a Georgia limited liability company ("**Grantee**") (the terms Grantor and Grantee to include their respective heirs, successors and assigns where the context hereof requires or permits),

WITNESSETH THAT: Grantor, for and in consideration of the sum of TEN AND NO/100 DOLLARS (\$10.00), and other good and valuable consideration, in hand paid at and before the sealing and delivery of these presents, the receipt, adequacy and sufficiency of which being hereby acknowledged by Grantor, has granted, bargained, sold and conveyed, and by these presents does hereby grant, bargain, sell and convey unto Grantee, the real property described on **Exhibit "A"** attached hereto and made a part hereof (the "**Property**").

TO HAVE AND TO HOLD the Property, together with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of Grantee, forever in FEE SIMPLE.



AND, SUBJECT TO the title matters expressly set forth on Exhibit "B" attached hereto and made a part hereof, Grantor will warrant and forever defend the right and title to the Property unto the Grantee against the claims of all persons claiming, owing or holding by, through or under Grantor.

**[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]**

IN WITNESS WHEREOF, Grantor has signed and sealed this Deed the day and year first above written.

Signed, sealed and delivered in the presence of:

**GENERAL CHEMICAL LLC,**  
a Delaware limited liability company

Maria Stachura  
Unofficial Witness  
Print Name: MARIA STACHURA

By: James Imbriaco (SEAL)  
James Imbriaco  
Secretary

Mary F. Culver  
Notary Public  
Print Name: MARY F. CULVER

Commission Expiration Date:  
Mary F. Culver  
Notary Public  
State of NJ  
**My Comm. Exp. 10-21-11**

[AFFIX NOTARIAL SEAL]

## EXHIBIT B

### PERMITTED EXCEPTIONS

1. All taxes for the year 2007 and subsequent years and any additional taxes, interest and/or penalties which may be assessed for prior tax years by virtue of re-adjustment, re-appraisal, re-assessment, appeal or other amendments to the tax records.
2. Riparian rights incident to the premises.
3. License agreement between Central Railway Company of Georgia, a Georgia corporation, and Georgia-Louisiana Chemical Company, dated February \_\_, 1928, filed for record February 11, 1928 at 1:00 p.m., recorded in Deed Book 1081, Page 242, Records of Fulton County, Georgia.
4. Easement from Hercules Powder Company to Georgia Power Company, dated October 8, 1937, filed for record October 15, 1937 at 11:39 a.m., recorded in Deed Book 1655, Page 410, aforesaid Records.
5. Easement contained in Warranty Deed from The American Agricultural Company, a Delaware corporation, to B.C. Boswell, filed for record May 21, 1940 at 10:35 a.m. recorded in Deed Book 1775, Page 389, aforesaid Records.
6. Easement contained in Warranty Deed from B.C. Boswell to Hercules Powder Company, a corporation, dated October 4, 1940, filed for record October 5, 1940 at 11:14 a.m., recorded in Deed Book 1820, Page 195, aforesaid Records.
7. Notice of Order and Judgment Affecting Interest in Real Estate, dated as of September 5, 2001, filed for record May 6, 2005 at 2:11 p.m., recorded in Deed Book 39942, Page 584, aforesaid Records.
8. All matters as would be shown on a current and accurate survey of the property.

**EXHIBIT "A"**

**LEGAL DESCRIPTION**

**PARCELS ONE AND TWO COMBINED**

*ALL THAT PARCEL OR TRACT OF LAND BEING SITUATED IN LAND LOT 131, 14<sup>TH</sup> DISTRICT, CITY OF EAST POINT, FULTON COUNTY, GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:*

***BEGINNING AT THE POINT OF INTERSECTION OF THE SOUTHERN RIGHT OF WAY OF NORTH MARTIN STREET (60'R/W) AND THE PROJECTED WESTERN RIGHT OF WAY OF RANDALL STREET (50'R/W); THENCE SOUTH 00 DEGREES 27 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 515.55 FEET TO A 1/2" REBAR FOUND; THENCE SOUTH 00 DEGREES 27 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 2.64 FEET TO A POINT; THENCE NORTH 87 DEGREES 46 MINUTES 22 SECONDS WEST FOR A DISTANCE OF 220.11 FEET TO A POINT; THENCE NORTH 87 DEGREES 34 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 541.38 FEET TO A POINT; THENCE NORTH 02 DEGREES 16 MINUTES 32 SECONDS EAST FOR A DISTANCE OF 216.32 FEET TO A POINT; THENCE NORTH 60 DEGREES 41 MINUTES 12 SECONDS WEST FOR A DISTANCE OF 51.02 FEET TO A POINT; THENCE NORTH 53 DEGREES 51 MINUTES 15 SECONDS WEST FOR A DISTANCE OF 120.90 FEET TO A POINT; THENCE NORTH 40 DEGREES 06 MINUTES 09 SECONDS WEST FOR A DISTANCE OF 90.30 FEET TO A POINT; THENCE NORTH 16 DEGREES 31 MINUTES 59 SECONDS WEST FOR A DISTANCE OF 104.50 FEET TO A POINT; THENCE NORTH 02 DEGREES 54 MINUTES 09 SECONDS EAST FOR A DISTANCE OF 33.59 FEET TO A POINT; THENCE NORTH 69 DEGREES 19 MINUTES 21 SECONDS EAST FOR A DISTANCE OF 17.48 FEET TO A POINT; THENCE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST FOR A DISTANCE OF 311.57 FEET TO A POINT ON THE AFOREMENTIONED SOUTHERN RIGHT OF WAY LINE OF NORTH MARTIN STREET; THENCE CONTINUE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST ALONG SAID SOUTHERN RIGHT OF WAY LINE FOR A DISTANCE OF 437.27 FEET TO A POINT; THENCE SOUTH 87 DEGREES 56 MINUTES 45 SECONDS EAST ALONG SAID SOUTHERN RIGHT OF WAY LINE FOR A DISTANCE OF 216.15 FEET TO A POINT; THENCE ALONG SAID SOUTHERN RIGHT OF WAY LINE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 405.30 FEET FOR AN ARC DISTANCE OF 3.94 FEET, SAID ARC HAVING A CHORD BEARING OF SOUTH 87 DEGREES 40 MINUTES 01 SECONDS EAST FOR 3.94 FEET TO THE POINT OF BEGINNING.***

*CONTAINING 439,382 SQ.FT. OR 10.0868 ACRES, MORE OR LESS.*

### COMMERCIAL PURCHASE AND SALE AGREEMENT

**Purchase and Sale.** MARTIN STREET PROPERTY, LLC., a Georgia limited liability company ("Buyer") agrees to buy and GENERALCHEMICAL LLC, a Delaware limited liability company ("Seller") agrees to sell a portion, comprising approximately 9.9 acres (said portion being hereinafter referred to as the "Property"), with such improvements as are located thereon as of the date of Closing (as hereinafter defined), of that larger tract or parcel of land, said larger tract being described as follows: that certain tract of land lying and being in Land Lots 175 and 131 of the 14<sup>th</sup> District of Fulton County, Georgia, all being hereinafter collectively referred to as the "Larger Tract", as more particularly described in Exhibit "A", attached hereto and made a part hereof. The approximate location of the Property, within the boundaries of the Larger Tract, is depicted on Exhibit "B" attached hereto and made a part hereof.

**1. Purchase Price.** Buyer warrants that Buyer will have sufficient cash at closing will allow Buyer to complete the purchase of Property. The purchase price of the Property to be paid by Buyer is: Seven Hundred Twenty Five Thousand U.S. Dollars (\$725,000.00) including the Earnest Money deposit previously made, and subject to all prorations and adjustments shall be paid by Buyer at the Closing by cash wire transfer of immediately available funds.

#### 2. Earnest Money.

**A. Receipt:** Buyer has paid to Seller earnest money of \$72,500.00 (Seventy Two Thousand Five Hundred Dollars) (the "Earnest Money") which has been received by Seller. In addition, Buyer has paid Seller the sum of \$25.00, the receipt of which is hereby acknowledged by Seller, as option money for Seller for holding Property off the market during the Due Diligence Period, said sum being non-refundable under any circumstance. The Earnest Money is non-refundable to Buyer, and shall be deemed the immediate property of Seller, except only as set forth in sections 2.B and 2.C. herein.

**B. Entitlement to Earnest Money:** Buyer shall be entitled to the Earnest Money only upon: a) termination of this Agreement due to the default of Seller as provided herein; or b) the termination of this Agreement in accordance with a specific right to terminate set forth in this Agreement provided said termination right explicitly provides that the Earnest Money is to be refunded to Buyer upon the exercise of such termination right; or c) if any material limitations are imposed on the use of the Property (after the date hereof and prior to Closing) by any county, state or federal agency which materially and detrimentally restrict the development of the Property by prohibiting the use of the Property for trailer storage, repair and marshalling.

**3. Inspection.** Prior to the Closing Date, but subject to all of the terms and conditions of this section 3, Buyer and Buyer's agents shall have the right to enter upon the Property at Buyer's expense and at mutually agreeable times, to inspect, survey, examine, and test the Property as Buyer may deem necessary as part of Buyer's acquisition of Property ("Buyer's Inspection"). Buyer shall take all reasonable steps to minimize disruption to any tenants or occupants of the Property and the Larger Tract and to minimize damage to the Property and the Larger Tract. Buyer shall obtain Seller's written approval prior to conducting any invasive or intrusive tests on the Property (including, without limitation, soil borings), which intrusive testing shall be conducted only pursuant to a work plan approved in writing by Seller. Buyer hereby covenants and agrees to repair any and all damage to the Property and the Larger Tract caused by Buyer's testing and Buyer hereby indemnifies and holds harmless Seller and Seller's agents, employees, invitees, officers and representatives from any and all claims, injuries, and damages to persons and/or property arising out of or related to the exercise of Buyer's rights hereunder. Buyer shall have 30 days from the Binding Agreement Date ("Due Diligence Period") to evaluate Property, the feasibility of the transaction, the availability and cost of financing, and any other matter of concern to Buyer. Within 30 days from the Binding Agreement Date, Seller shall deliver to Buyer copies of the materials concerning Property referenced in Exhibit "B" (collectively "Due Diligence Materials"), which materials shall be promptly returned by Buyer if this Agreement does not close for any reason. If Buyer fails to timely notify Seller that it is not proceeding with the transaction, Buyer shall waive its rights to terminate this Agreement pursuant to this paragraph. Notwithstanding the foregoing, it is expressly acknowledged and agreed, that any right of Buyer to conduct any intrusive inspection of the Property extends only to conducting the activities set forth in a Work Plan when accompanied by, and at all times, in the presence of a duly authorized representative of Seller, and to no other activities on the Property. The Work Plan must be approved in writing by Seller before the right to conduct any intrusive testing of the Property becomes effective. There shall be no modifications to the Work Plan, unless Buyer has obtained the prior written consent of Seller thereto. Buyer shall provide splits of all soil and other test samples extracted from the Property at Buyer's cost and deliver the same to Seller, properly packaged and labeled, prior to the removal of any test samples or other materials from the Property by Buyer. Buyer shall use only a certified laboratory to perform analysis of the samples taken at the Property and shall provide Seller with all results of such analysis received by Buyer immediately upon receipt (without regard to data quality verification procedures employed by the laboratory).

Buyer shall maintain all analytical and test results obtained pursuant to this Agreement as confidential and subject to the Confidentiality Agreement between the parties, and shall not disclose such analytical and test results to any third party except as required by law. If notification of the analytical and test results is required by law to be given to governmental agencies, Seller shall be responsible for making such notifications and will inform Buyer of any such notification promptly thereafter.

#### 4. Title.

**A. Conveyance of Title.** Seller shall convey title to the Property to Buyer by limited warranty deed, subject to the Permitted Exceptions (as hereinafter defined) and subject to the Restricted Uses (hereafter defined). Seller and Buyer acknowledge and agree that the Property is currently part of the Larger Tract. On or before twenty (20) days after the date hereof, Buyer shall deliver a survey to Seller, for Seller's review and approval, (i) depicting the Larger Tract subdivided into the Property and the remaining approximately four (4) acres, (ii) depicting the Access Easement Area (as hereinafter defined), and (iii) containing metes-and-

bounds legal descriptions of the Property and the Access Easement Area. Buyer shall cause to be made such modifications to said survey as Seller may reasonably desire in Seller's sole opinion. The said survey, as revised as applicable and as approved by Seller, may be referred to herein as the "Survey". Upon approval of the Survey by Seller, (i) the legal description of the Property as depicted thereon shall be the legal description to be used in the limited warranty deed to be executed by Seller at Closing, (ii) Buyer shall cause all appropriate governmental entities to issue such approvals as may be necessary to subdivide (but not to rezone) the Larger Tract as aforesaid, provided that Buyer shall obtain Seller's approval prior to the submission of any materials to any governmental entities, and (iii) the legal description of the Access Easement Area as depicted thereon shall be the legal description to be used in the easement agreement to be executed at Closing.

**B. Title Objections.** Buyer shall have 10 days from the Binding Agreement Date in which to furnish Seller with a written statement of any title objections, UCC-1 or UCC-2 Financing Statements, and encroachments, and other facts affecting the marketability of Property as revealed by a current title examination or the Survey. Seller shall have 30 days from the receipt of such objections (the "Title Cure Period") to cure all valid title objections, provided that Seller shall not have the obligation to cure said valid title objections. If Seller fails to cure any other valid title objections of Buyer within the Title Cure Period (and fails to provide Buyer with evidence of Seller's cure reasonably satisfactory to Buyer and to the Buyer's title company (the "Title Company")), then within five days of the earlier of the expiration of the Title Cure Period and the date of receipt by Buyer of a letter from Seller informing Buyer of Seller's intent with respect to the cure of the various title objections, Buyer may as Buyer's sole remedies: (1) rescind the transaction contemplated hereby, in which event the Earnest Money shall be refunded to Buyer and, except for those provisions which survive termination of this Agreement, this Agreement shall be void and of no further force and effect; (2) waive any such objections and elect to close the transaction contemplated hereby irrespective of such title objections (which shall be deemed "Permitted Exceptions") and without reduction of the Purchase Price; or (3) extend the Closing Date for a period of time not to exceed fifteen days to allow Seller further time to cure such valid title objections. Failure to act in a timely manner under this paragraph shall constitute a waiver of Buyer's rights hereunder. Buyer shall have the right to re-examine title prior to Closing and to immediately notify Seller at Closing of any title objections which appear of record after the date of Buyer's initial title examination and before Closing, provided such new title objections shall be subject to cure in the manner set forth herein. Permitted Exceptions shall also include all title and survey matters affecting the Property which are not timely objected to by Buyer.

#### 5. Closing.

**A. Closing Date:** This transaction shall be consummated ("Closing") at 10:00 a.m. on the 29<sup>th</sup> day March, 2007, or at such other time and at such place as the parties may agree upon in writing (the "Closing Date").

**B. Possession:** Seller shall deliver possession and occupancy of Property to Buyer at Closing, subject only to the rights of tenants in possession and the Permitted Exceptions.

**6. Seller's Obligations at Closing:** At Closing, Seller shall deliver to Buyer in forms reasonably acceptable to Seller, (a) a Closing Statement; (b) Limited Warranty Deed; (c) FIRPTA Affidavit (indicating that Seller is not a "foreign person" or "foreign corporation" as that term is defined in Section 1445(f)(3) of the Internal Revenue Code of 1986); (d) an Affidavit of Seller's Residence Regarding Georgia Withholding Tax establishing that Seller is exempt from the requirements of O.C.G.A. § 48-7-128, the Georgia Withholding Statute (or Affidavit of Exemption or Affidavit of Seller's Gain, if withholding is required); (e) a title affidavit in the form customarily used in Georgia commercial real estate transactions so as to enable the Title Company to issue Buyer an owner's title insurance policy (the "Title Policy") with all standard exceptions deleted and subject only to the Permitted Exceptions and (f) evidence reasonably satisfactory to Title Company of Seller's due and proper authority and power to perform its obligations hereunder (all documents to be delivered by Seller under this paragraph are collectively "Seller's Closing Documents").

#### 7. Conditions to Closing.

**A. Conditions in Favor of Buyer:** The obligation of Buyer to consummate the transaction contemplated herein is conditioned upon the following conditions precedent as of the Closing Date:

1. All representations and warranties of Seller made herein shall remain true and correct;
2. Seller shall have performed all of the covenants undertaken by Seller in this Agreement to be performed by Seller at or prior to Closing;
3. Seller shall have delivered to the Buyer properly executed originals of Seller's Closing Documents;
4. There shall have been no material adverse change in the physical condition of Property, except as otherwise provided for in this Agreement.

**B. Conditions in Favor of Seller:** The obligation of Seller to consummate the transaction contemplated herein is conditioned upon the following conditions precedent as of the Closing Date:

1. All representations and warranties of Buyer made herein shall remain true and correct;
2. Buyer shall have performed all of the covenants undertaken by Buyer in this Agreement to be performed by Buyer at or prior to Closing; and
3. Buyer shall have: (a) delivered to the Seller properly executed originals of the Buyer's Closing Documents (as hereinafter defined); and (b) paid the Purchase Price, including the application of Earnest Money thereto, plus or minus prorations and adjustments, to Seller.

#### 8. Costs.

**A. Seller's Costs:** Seller shall pay the cost of recording any title curative document, including without limitation, satisfactions of deeds to secure debt, quitclaim deeds and financing statement terminations; all transfer taxes; all deed recording fees; the fees of Seller's counsel.

**B. Buyer's Costs:** Buyer shall pay the cost of Buyer's counsel and consultants; any costs in connection with Buyer's inspection of Property (including without limitation, the Survey, the title examination, the Title policy, and all other costs related thereto), any costs associated with obtaining financing for the acquisition of Property (including any intangibles tax, all deed recording fees and the cost of recording Buyer's loan documents).

**9. Taxes and Prorations.** Real estate and personal property taxes on Property for the calendar year in which the Closing takes place shall be prorated as of 12:01 a.m. on the Closing Date. In the event actual tax figures are not available, Seller and Buyer agree, upon request of either party, to promptly adjust such prorations upon the tax figures becoming available. All utility charges applicable to the Property shall be prorated as of 12:01 a.m. on the day of Closing.

**10. Representations and Warranties.**

**A. Seller's Representations and Warranties:** As of the Binding Agreement Date and the Closing Date, Seller makes the representations and warranties to Buyer, if any, as indicated in Exhibit "C."

**B. Buyer's Representations and Warranties:** As of the Binding Agreement Date and the Closing Date, Buyer represents and warrants to Seller that Buyer has the right, power and authority to enter into this Agreement, perform its obligations under and to consummate the transaction contemplated by the terms and conditions of this Agreement; that it shall comply in all respects with the provisions of Section 3, and the persons executing this Agreement on behalf of Buyer have been duly and validly authorized by Buyer to execute and deliver this Agreement and shall have the right, power and authority to enter into this Agreement and bind Buyer. Buyer has not (i) made any assignment for the benefit of creditors, (ii) filed any voluntary petition in bankruptcy or suffered the filing of an involuntary petition by its creditors, (iii) suffered the appointment of a receiver to take possession of any of its assets, (iv) suffered the attachment or other judicial seizure of any of its assets, (v) admitted in writing its inability to pay its debts as they come due, or (vi) made an offer of settlement, extension or composition to its creditors generally.

**11. Agencies and Brokerage.** In this Agreement, the term "Broker" shall mean a licensed Georgia real estate broker or brokerage firm and, where the context would indicate, the broker's affiliated licensees. Buyer and Seller acknowledge that they are not represented by a Broker. Buyer and Seller covenant and agree, each to the other, to indemnify the other against any loss, liability, costs, claims, demands, damages, actions, causes of action, and suits arising out of or in any manner related to the alleged employment or use by the indemnifying party of any real estate broker or agent.

**12. Destruction of Property Prior to Closing.** If the Property is destroyed or substantially destroyed prior to Closing such that Seller determines, in the exercise of Seller's reasonable discretion, such damage would cost an amount greater than or equal to \$100,000 to repair (a "Casualty") or a material portion of the Property (in the exercise of Seller's reasonable discretion) is subject to any actual or threatened (to the extent that Seller has current actual knowledge thereof) taking, condemnation or other like proceeding (hereinafter called "Condemnation"), Seller shall give Buyer prompt notice thereof, which notice shall include Seller's reasonable estimate of: (1) the cost to restore and repair the damage caused by such Casualty or Condemnation; (2) the amount of insurance or condemnation proceeds, if any, available for the same; and (3) whether the damage will be repaired prior to Closing. Upon notice to Seller of such Casualty or Condemnation, Buyer may terminate this Agreement by delivering written notice of such termination to Seller within seven days of receiving such notice from Seller, in which event the Earnest Money shall be refunded to Buyer and, except for those provisions which survive termination of this Agreement, this Agreement shall be void and of no further force and effect. If Buyer does not terminate this Agreement within said 7-day period or if Seller determines, in the exercise of Seller's reasonable discretion, such damage would cost an amount less than \$100,000 to repair, Buyer shall be deemed to have accepted Property with the damage and shall receive at Closing: (1) any insurance or condemnation proceeds which have been paid to Seller but not yet spent to repair the damage, and which apply specifically to the Property, and (2) an assignment of all unpaid insurance condemnation proceeds on the claim which apply specifically to the Property.

**13. As-Is: Certain Environmental Matters.**

**A.** Anything contained in this Agreement to the contrary notwithstanding, it is understood and agreed that the Property is being sold and conveyed hereunder, "AS IS, WHERE IS, AND WITH ALL FAULTS" with no right of setoff or deduction to the Purchase Price and without any express or implied representation or warranty by Seller except as expressly set forth herein.

**B.** Buyer, for Buyer and its successors and assigns, hereby releases Seller from and waives all actions, claims and liability against Seller in connection with or arising out of any structural, physical or environmental condition in, at, about or under the Property.

**C.** Seller hereby discloses and Buyer hereby acknowledges that Seller, under the supervision of the EPD, has excavated solid waste from the Property that originated from Seller's aluminum sulfate manufacturing process and continues to monitor the pH and sulfate level of the groundwater at the Property. Seller has prepared and submitted a corrective action plan to address EPD's concerns regarding groundwater conditions at the Property. Seller hereby covenants and agrees to implement such corrective action plan as approved by the EPD until such time as the EPD issues a "no further action" letter or its equivalent to Seller. Seller agrees to indemnify Buyer from any damages resulting from Seller's material breach of such corrective action plan as approved by the EPD.

**D.** Anything herein to the contrary notwithstanding, the covenants and agreements of Seller and Buyer set forth in this section 13 shall survive the Closing and shall be enforceable until such time as the EPD issues a "no further action" letter or its equivalent to Seller.

**14. Other Provisions.**

**A. Binding Effect, Entire Agreement, Modification, Assignment.** This Agreement constitutes the sole and entire agreement between the parties and shall be binding upon the parties and their successors, heirs and permitted assigns. No representation, promise or inducement not included in this Agreement shall be binding upon any party hereto. This Agreement may not be amended, modified or waived except by the written agreement of Buyer and Seller. This Agreement may not be assigned by Buyer except with the written agreement of Seller. Any assignee shall fulfill all the terms and conditions of this Agreement.

**B. Survival of Agreement.** The indemnity provisions of section 3 and the provisions of sections 9 and 11 shall all survive Closing and shall not be merged into the Closing documents. All other provisions of this Agreement shall be merged into the Closing documents and shall not survive Closing unless otherwise expressly provided.

**C. Governing Law.** This Agreement may be signed in multiple counterparts and shall be interpreted in accordance with the laws of the State of Georgia.

**D. Time of Essence.** Time is of the essence of this Agreement. If any date of significance hereunder falls upon a Saturday, Sunday or legal holiday, such date shall be deemed moved to the next succeeding day which is not a Saturday, Sunday or legal holiday.

**E. Terminology.** As the context may require in this Agreement: (1) the singular shall mean the plural and vice versa; and (2) all

pronouns shall mean and include the person, entity, firm, or corporation to which they relate.

F. **Responsibility to Cooperate.** All parties agree to take all actions and do all things reasonably necessary to fulfill in good faith and in a timely manner the terms and conditions of this Agreement.

G. **Notices.** Unless otherwise specified in this Agreement, any notice, election, or other communication required or permitted hereunder shall be delivered by hand (including overnight or other professional courier service) or by certified United States mail, return receipt requested, postage and charges prepaid, to the following addresses:

To Seller: General Chemical LLC  
90 East Halsey Road  
Parsippany, New Jersey 07054  
Attn: James Imbriaco, Esq.

With copy to: Powell Goldstein LLP  
1201 W. Peachtree Street, N.W., Suite 1400  
Atlanta, Georgia 30309  
Attn: Marc D. Glenn, Esq.

To Buyer: Mr. Matt Drain  
Martin Street Property  
1359 Central Avenue  
East Point, Georgia 30344

Any notice, election, or other communication delivered or mailed as aforesaid shall be effective upon delivery or receipt. A party's failure to accept delivery of any notice, election or other communication shall constitute receipt thereof. Each party hereto may change its address and addressee for notice, elections, and other communications from time to time by notifying the other parties hereto of the new address and addressee in the manner provided for giving notice herein.

H. **Binding Agreement Date.** The Binding Agreement Date shall be the later of the dates of execution of this Agreement by Buyer and Seller (as indicated below each signature).

I. **Romadles**

1. In the event Buyer breaches this Agreement, and fails to cure said breach on or before the earlier to occur of (i) ten (10) days after notice of said breach and (ii) Closing, the Earnest Money shall be promptly paid over to Seller as full liquidated damages for Buyer's failure or refusal to close in accordance with the terms of this Agreement and shall be the sole and exclusive remedy of Seller. The parties hereto acknowledge the difficulty of ascertaining Seller's actual damages in the event Buyer breaches this Agreement, and that such liquidated damages represent the parties' best and reasonable estimate of such damages. The parties hereto expressly acknowledge and agree that such liquidated damages are not intended as a penalty.

2. In the event Seller breaches this Agreement, and fails to cure said breach on or before the earlier to occur of (i) ten (10) days after notice of said breach and (ii) Closing, then, in such event, the Earnest Money shall be returned to Buyer as the sole and exclusive remedy of Buyer.

J. **Exhibits and Addenda.** All exhibits and/or addenda attached hereto, listed below, or referenced herein are made a part of this Agreement. If any such exhibit or addendum conflicts with any preceding paragraph, said exhibit or addendum shall control:

Exhibit "A" Legal Description of the Larger Tract

Exhibit "B" Depiction of the Property

Exhibit "C" Seller's Warranties and Representations

K. **Special Stipulations.** The following Special Stipulations, if conflicting with any exhibit or preceding paragraph, shall control:

1. **Buyer's Closing Documents.** Buyer shall deliver at Closing: (i) the Purchase Price, as adjusted by prorations and costs as provided in this Agreement; (ii) a settlement statement, duly executed by Buyer; (iii) evidence of appropriate authorization satisfactory to Seller, in its reasonable discretion for (a) the purchase of the Property in accordance with this Agreement, (b) the execution and delivery of this Agreement on behalf of Buyer, and (c) the consummation of the transaction contemplated by this Agreement on behalf of Buyer; and (iv) such other items reasonably necessary for consummating the transaction contemplated hereby (all documents to be delivered by Buyer under this paragraph are collectively "Buyer's Closing Documents").

2. **Legal Fees.** In the event of the bringing of any action or suit by a party hereto against another party hereunder by reason of any breach of any of the covenants, agreements, representations or warranties on the part of the other party arising out of this Agreement, then, in that event, notwithstanding anything in this Agreement to the contrary, the prevailing party in such action or dispute, whether by judgment or out of court settlement, shall be entitled to have and recover of and from the other party all costs and expenses of suit, including actual attorney's fees (but not to include fees of in-house counsel).

3. **Access Easement.** At Closing, Buyer shall grant to Seller an access easement over such portions of the Property as Seller may deem necessary or desirable to permit Seller to fulfill its obligations as set forth above in section 13. Seller shall prepare



the said easement agreement subject to the review and approval of Buyer, in its reasonable discretion.

4. **Restricted Uses.** The Limited Warranty Deed delivered at the Closing by Seller shall provide that none of the following uses shall be permitted on the Property: (a) residence(s) for human habitation; (b) hotels; (c) hospitals; (d) day care centers for children or senior citizens; or (e) schools (collectively, the "Restricted Uses").

In Witness Whereof Seller and Buyer have caused their duly authorized officers as of the day and year first above written.

GENERAL CHEMICAL LLC,  
a Delaware limited liability company

By: [Signature]  
Print Name: Thomas B Testa  
Title: VP/CEO

Date: 3-19-07

MARTIN STREET PROPERTY, LLC,  
a Georgia Limited Liability Company

By: [Signature]  
Print Name: Lloyd E. Fehinley  
Title: President

Date: 3-14-07

**EXHIBIT "B" to  
COMMERCIAL PURCHASE AND SALE AGREEMENT**

DESCRIPTION OF THE PROPERTY IS ATTACHED HERETO

(EXHIBIT A IS THE DESCRIPTION OF THE LARGER TRACT)

**Due Diligence Documents Made Available To Buyer**

1.	Compliance Status Report February 1999
2.	Site Reconstruction Report August 2006
3.	Revised Corrective Action Plan October 2006
4.	Old & New Site Surveys and Maps
5.	Site Storm Water Permits, NOI's and Communications
6.	Corrective Action Plan September 2002
7.	Erosion, Sedimentation and Pollution Control Plan September 2004
8.	Restoration, Erosion, Sedimentation and Pollution Control Plan November 2005
9.	Dirt from Ditch Analysis September 1999
10.	Soil Confirmation Testing Results January 17, 2006
11.	Clay Material TCLP February 2004
12.	City of Atlanta Watershed Management May 4, 2005
13.	City of Atlanta Annual Inspection 1998
14.	City of Atlanta Water Pollution Control December 8, 1985
15.	City of Atlanta Site Visit November 20, ????
16.	City of East Point Inspection April 8, 2004
17.	GA DNR Emergency Response Team March 17, 2005
18.	GA DNR Hazardous Waste Inspection October 8, 1997
19.	GA DNR Inspection April 12, 1989
20.	Environmental Matters Agreement -- Invoicing for Surface Impoundment 1987
21.	Old SWP3's
22.	SWP3 August 14, 2006
23.	SWP3 September 15, 2006
24.	Annual Storm Water Inspection 2006
25.	Annual Storm Water Inspection 2004
26.	EPD Consent Order March 30, 1992
27.	General Fill Testing June 5, 2006

## EXHIBIT "C" to COMMERCIAL PURCHASE AND SALE AGREEMENT

### Seller's Warranties and Representations

To the extent that Buyer has actual knowledge or is deemed to know prior to the Closing Date that Seller's representations and warranties are inaccurate, untrue or incorrect in any way, and Buyer elects to close Escrow, such representations and warranties shall be deemed modified to reflect Buyer's actual knowledge or deemed knowledge. For purposes of this Agreement: (1) Buyer shall be "deemed to know" of the existence of a fact or circumstance to the extent that such fact or circumstance is disclosed (a) by this Agreement, (b) in any Due Diligence Materials, (c) in any reports or other documents arising from Buyer's inspection of the Property, (d) in any recorded document on title to the Larger Tract, (e) in any publicly available record or document related to the Larger Tract, including any record or document related to Seller's disclosure in Section 13 C. or (f) in any other document in the actual possession of Buyer prior to the Closing Date (all of the foregoing are collectively referred to as the "Property Documents"); and (2) Buyer shall be "deemed to know" that a representation or warranty was untrue, inaccurate or incorrect to the extent that the Property Information contains information which is inconsistent with such representation or warranty.

1. Authority. Assuming a proper, lawful subdivision of the Larger Tract has been obtained by Buyer, Seller has the right, power and authority to enter into this Agreement and to convey Property in accordance with the terms and conditions of this Agreement; and the persons executing this Agreement on behalf of Seller have been duly and validly authorized by Seller to execute and deliver this Agreement and have the right, power and authority to enter into this Agreement and bind Seller.

2. Certificates. To Seller's knowledge, the present use and occupation of Property is in compliance and conformity with certificates of occupancy and all licenses and permits issued with respect to the Larger Tract.

3. Condemnation. Seller has not been notified in writing that any condemnation or other taking by eminent domain of Property or any portion thereof has been instituted and, to Seller's knowledge, there are no pending or threatened condemnation or eminent domain proceedings (or proceedings in the nature or in lieu thereof) affecting Property or any portion thereof or its use.

4. Declarations. To Seller's knowledge, there is no default, or any event which with the passage of time or notice, or both, would constitute a default or breach on the part of Seller under any declaration of easements and/or restrictive covenants affecting the Property; and, to Seller's knowledge, there is no default, or claim of default, or any event which with the passage of time or notice, or both, would constitute a default or breach thereunder on the part of any other party whose property is encumbered by or benefits from any declaration.

5. Hazardous Substances. Except as disclosed in any of the Property Documents, to Seller's knowledge (i) no "hazardous substances", as that term is defined in the Comprehensive Environmental Response, Compensation, and Liability Act, and the rules and regulations promulgated pursuant thereto, or any other pollutants, toxic materials, or contaminants have been discharged, disbursed, released, stored, treated, generated, disposed of, or allowed to escape on Property in violation of applicable law, (ii) no underground storage tanks are located on the Property or were located on the Property and subsequently removed or filled, (iii) Property has not previously been used as a gas station, cemetery, landfill, or as a dump for garbage or refuse, and (iv) Property has not previously been and is not currently listed on the Georgia Environmental Protection Division Hazardous Site Inventory. Seller has not received any notice or demand from any governmental or regulatory agency or authority requiring Seller to remove any hazardous substances or contaminants or toxic materials from Property.

6. No Assessments. To the knowledge of Seller, no assessments (other than ad valorem taxes) have been made against Property that are unpaid whether or not they have become liens which will interfere with Buyer's use of the Property.

7. No Liens. There are no claims against the Property or Seller in connection therewith which will interfere with Buyer's use of the Property.

8. No Litigation. There are no actions, suits, or proceedings pending or, to the Seller's knowledge, threatened by any organization, person, individual, or governmental agency against Seller with respect to Property or against Property, or with respect thereto, nor does Seller know of any basis for such action which will interfere with Buyer's use of the Property.

9. Pre-Existing Right to Acquire. To Seller's knowledge, no person or entity has any right or option to acquire the Property or any portion thereof which will have any force of effect after execution hereof, other than Buyer or other than an entity with the power of condemnation or eminent domain.

All references in this Agreement to "Seller's knowledge" or words of similar import shall refer only to the actual knowledge of Michael A. Ware (the "Seller Designated Employee") and shall not be construed to refer to the knowledge of any other officer, agent or employee of Seller or to impose or have imposed upon the Seller Designated Employee any duty to investigate the matters to which such knowledge, or the absence thereof, pertains. The Seller Designated Employee shall not have the obligation to review or investigate files, documents and materials made available to or disclosed to Buyer, including without limitation, the Property Documents. There shall be no personal liability on the part of the Seller Designated Employee arising out of any representations or warranties made herein.

AMENDMENT TO COMMERCIAL  
PURCHASE AND SALE AGREEMENT

THIS AMENDMENT TO COMMERCIAL PURCHASE AND SALE AGREEMENT (this "Amendment") dated this 29<sup>th</sup> day of March, 2007 by and between MARTIN STREET PROPERTY, LLC ("Buyer") and GENERAL CHEMICAL LLC ("Seller");

WITNESSETH


WHEREAS, Buyer and Seller entered into that certain Commercial Purchase and Sale Agreement dated March 19, 2007 (the "Agreement"), with respect to certain property located in Fulton County, Georgia, as more particularly described therein; and

WHEREAS, Buyer and Seller desire to amend the Agreement as hereinafter set forth;

NOW THEREFORE, for and in consideration of Ten and No/100 Dollars (\$10.00) and other good and valuable consideration, the receipt, adequacy and sufficiency of which is hereby acknowledged, Buyer and Seller acknowledge and agree that Section 5.A. of the Agreement shall be modified by deleting "the 29<sup>th</sup> day March, 2007" and inserting "April, 13, 2007" in its stead. The intent of the parties is to change the date of Closing (as that term is defined in the Agreement) to April 13, 2007. The parties acknowledge and agree that, except as modified herein, the terms of the Agreement remain in full force and effect. This Amendment may be executed in counterparts, which together shall constitute a complete Amendment. This Amendment shall be deemed effective if executed and transmitted by the parties by mail, overnight delivery service, facsimile or other form of electronic transmission.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date set forth above.

MARTIN STREET PROPERTY, LLC

By:   
Matthew Drain, by Power of Attorney for  
Louis E. Shirley, III

GENERAL CHEMICAL LLC

By: \_\_\_\_\_  
James Imbriaco, Secretary

**AMENDMENT TO COMMERCIAL  
PURCHASE AND SALE AGREEMENT**

THIS AMENDMENT TO COMMERCIAL PURCHASE AND SALE AGREEMENT (this "Amendment") dated this 29<sup>th</sup> day of March, 2007 by and between MARTIN STREET PROPERTY, LLC ("Buyer") and GENERAL CHEMICAL LLC ("Seller");

WITNESSETH

WHEREAS, Buyer and Seller entered into that certain Commercial Purchase and Sale Agreement dated \_\_\_\_\_, 2007 (the "Agreement"), with respect to certain property located in Fulton County, Georgia, as more particularly described therein; and

WHEREAS, Buyer and Seller desire to amend the Agreement as hereinafter set forth;

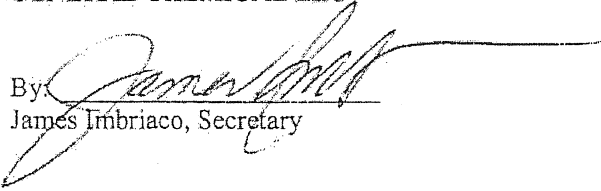
NOW THEREFORE, for and in consideration of Ten and No/100 Dollars (\$10.00) and other good and valuable consideration, the receipt, adequacy and sufficiency of which is hereby acknowledged, Buyer and Seller acknowledge and agree that Section 5.A. of the Agreement shall be modified by deleting "the 29<sup>th</sup> day March, 2007" and inserting "April, 13, 2007" in its stead. The intent of the parties is to change the date of Closing (as that term is defined in the Agreement) to April 13, 2007. The parties acknowledge and agree that, except as modified herein, the terms of the Agreement remain in full force and effect. This Amendment may be executed in counterparts, which together shall constitute a complete Amendment. This Amendment shall be deemed effective if executed and transmitted by the parties by mail, overnight delivery service, facsimile or other form of electronic transmission.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date set forth above.

MARTIN STREET PROPERTY, LLC

By: \_\_\_\_\_  
Matthew Drain, by Power of Attorney for  
G. Robert Triesch, Vice President

GENERAL CHEMICAL LLC

By:   
James Imbriaco, Secretary

Filed & Recorded, MAY 27 1986 at 8:49 *Barbara J. Price* CLERK

Fulton County, Georgia  
Real Estate Transfer Tax  
Paid \$ 349.30  
Date 5-27-86  
BARBARA J. PRICE  
Clerk, Superior Court  
By: *R. Overholt*  
Deputy Clerk

QUITCLAIM DEED

THIS INDENTURE, made this 19th day of May  
\_\_\_\_\_ in the year of our Lord One Thousand Nine  
Hundred and Eighty-Six between ALLIED CORPORATION, with  
an address at P.O. Box 2745, Morris Township, New Jersey  
("Grantor"), of the first part, and ONE NEWCO, INC., a  
Delaware corporation having an address c/o Allied-Signal  
Inc., Columbia Road and Park Avenue, Morris Township,  
N.J. 07960 ("Grantee"), of the second part.

WITNESSETH: That the said party of the first  
part for and in consideration of the sum of TEN DOLLARS,  
cash in hand paid, the receipt of which is hereby ac-  
knowledged, has bargained, sold and does by these pre-  
sents bargain, sell, remise, release, and forever quit-  
claim to the said party of the second part, its succes-  
sors and assigns, all the right, title, interest, claim  
or demand which the said party of the first part had or  
may have had in and to the parcel of land described in  
Exhibit A annexed hereto and made a part hereof together  
with all the rights, members and appurtenances (including  
any easements) to the said described premises in anywise  
appertaining or belonging.

TO HAVE AND TO HOLD the said described premises  
unto the said party of the second part, its successors  
and assigns, so that neither the said party of the first  
part nor its successors or assigns, nor any other person  
or persons claiming under it, shall at any time, claim or  
demand any right, title or interest to the aforesaid  
described premises or its appurtenances.

Allied Corporation, a New York corporation,  
makes this conveyance as the successor in interest to  
General Chemical Company (present record holder of ti-

tle), as the result of merger and subsequent name changes. General Chemical Company was consolidated with four other companies on December 17, 1920 to form Allied Chemical & Dye Corporation, a New York corporation. Allied Chemical & Dye Corporation changed its name to Allied Chemical Corporation in 1958. In 1981, Allied Chemical Corporation changed its name to Allied Corporation.

Grantee herein is a newly formed Delaware corporation created at the direction of Grantor for the purposes hereinafter described. Grantor is contributing the real property herein conveyed (the "Property"), together with other assets of Grantor, to Grantee in exchange for all of the outstanding common stock of Grantee, the effect of which is to cause the Property to be held by a wholly-owned subsidiary of Grantor.

IN WITNESS WHEREOF, the said part y of the first part has S hereunto set his hand and affixed \_\_\_\_\_ seal on the day and year above written.



ALLIED CORPORATION

Signed, sealed and delivered in presence of

By N.A. Cameron  
(Vice) President  
N. A. Cameron  
\_\_\_\_\_  
(Seal)

H.B. Flanders, Jr.  
State of New Jersey H. B. Flanders, Jr.  
County of Morris

The foregoing instrument was acknowledged before me this 19th day of May, 1986 by N.A. Cameron as (Vice) President of a corporation.



Dorothy C. Ozimek  
(Notary Public)

DOROTHY C. OZIMEK  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires 7-20-87

Record and Return to:  
Michael Benner, Esq.  
Wachtell, Lipton, Rosen & Katz  
299 Park Avenue  
New York, New York 10171

EXHIBIT A

All that certain piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the County of Fulton, State of Georgia, being more particularly bounded and described as follows:

Tract No. 1

BEGINNING at a point on the northeasterly side of the right of way of the Central of Georgia Railroad 606.6 feet southeasterly from the north line of Land Lot No. 158 (said distance being measured along the northeasterly side of said right-of-way and said beginning point being marked by an iron pin, which is 484 feet northwesterly as measured along the northeast side of said right-of-way from the northwest corner of land of American Agricultural Chemical Company); running thence north 68° 30' east 293.2 feet to a point (now marked by an iron pipe); thence south 88° 46' east 749 feet to a point (now marked by an iron pin); thence south 00° 30' east 513.2 feet to a point; thence north 88° 46' west and along an iron fence between this property and that of American Agricultural Chemical Company, 764.5 feet to a point on the northeast side of said right-of-way (now marked by an iron pin); thence northwesterly along said right-of-way 484.0 feet to the point of beginning, containing 11.635 city acres of land.

BEING the same premises which C.K. Williams conveyed unto Georgia-Louisiana Corporation by deed dated December 5, 1927.

BEING the same premises which Georgia-Louisiana Corporation, a corporation of Georgia, by deed dated May 13, 1932, recorded in the Clerk's Office, Superior Court, Fulton County, Georgia, in Book 1419, Page 384, on May 27, 1932, granted and conveyed to Paper Makers Chemical Corporation, a corporation of Delaware.

BEING the same premises which Paper Makers Chemical Corporation, a Delaware Corporation, conveyed to Hercules Powder Company, the grantor herein, by deed dated November 2, 1936 and recorded in the Clerk's Office of Fulton County, Georgia in Book 1599, Page 340.

Tract No. 2

BEGINNING at a point on the west side of Randall Street 675.0 feet south along said street from the intersection of the west line of Randall Street with the south line of Holcomb Street, and running thence west



A

220.06 feet to a point at the northeast corner of Tract No. 1; thence south 510.0 feet, more or less, along the east line of Tract No. 1 to a point at the corner which marks the northeast corner of lands now owned by the American Agricultural Chemical Company; thence east 220.0 feet, more or less, to a point on the west line of Randall Street, and thence north 510.0 feet, more or less, along the west line of Randall Street to the point of beginning, being part of lands conveyed to B.C. Boswell, by deed from the American Agricultural Chemical Company, dated April 25, 1940, and recorded in Deed Book 1775, Page 389 of Fulton County records.

BEING the same premises which B.C. Boswell conveyed to Hercules Powder Company, the grantor herein, by deed dated October 4, 1940, and recorded in the Clerk's Office of Fulton County, Georgia, in Book 1820, Folio 195.

This conveyance is made subject to the rights-of-way reserved and described in that certain deed from B.C. Boswell to Hercules Powder Company, the grantor herein, dated October 4, 1940, and recorded in the Clerk's Office of Fulton County, Georgia, in Book 1820, Folio 195, and also to the reservation of right-of-way contained in that certain deed from the American Agricultural Chemical Company to B.C. Boswell dated April 25, 1940 and recorded in Deed Book 1775, Page 389 of said records.

QUIT-CLAIM DEED

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FROM  
ALLIED CORPORATION  
TO  
ONE NEWCO, INC.

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GEORGIA, FULTON County,  
Clerk's Office Superior Court

Filed for Record at \_\_\_\_\_ o'clock \_\_\_\_\_ M  
\_\_\_\_\_, 19\_\_\_\_

Recorded Book \_\_\_\_\_ Folio \_\_\_\_\_  
\_\_\_\_\_, 19\_\_\_\_

\_\_\_\_\_  
Clerk

## ATTACHMENT C

### Calculation of Type 1 and Type 4 Risk Reduction Standards for Aluminum

**Table 1**  
**Calculation of Type 1 and Type 4 Risk Reduction Standards for Aluminum<sup>(1)</sup>**  
**Toxicity Values and Receptor-Specific Inputs**  
**General chemicals**  
**East Point, Georgia**

Parameters		Definitions	Units	Residential Child	Residential Adult	Non-Residential Adult
Toxicity Values	RfDo	Non-Cancer Oral Reference Dose	mg/kg-day	1.0E+00	1.0E+00	1.0E+00
	RfC	Noncancer Reference Concentration	mg/m <sup>3</sup>	5.0E-03	5.0E-03	5.0E-03
	RfDi	Noncancer Inhalation Reference Dose	mg/kg-day	1.4E-03	1.4E-03	1.4E-03
RRS Equation Inputs <sup>(4)</sup>	RRS <sub>GW</sub>	Risk Reduction Standard - Groundwater	mg/L	calculated	calculated	calculated
	RRS <sub>SO</sub>	Risk Reduction Standard - Soil	mg/kg	calculated	calculated	calculated
	THQ	Target Hazard Quotient	unitless	1	1	1
	ATN	Averaging time - noncancer	days	2,190	10,950	9,125
	BW	Body weight	kg	15	70	70
	IRW	Groundwater ingestion rate	L/day	1	2	1
	IRS	Soil ingestion rate	mg/day	200	114	50
	FI	Fractional intake	unitless	1	1	1
	IRa	Soil (Particulate) Inhalation Rate	m <sup>3</sup> /day	15	20	20
	EF	Exposure frequency	d/yr	350	350	250
	ED	Exposure duration	yr	6	30	25
	PEF	Particulate Emission Factor	m <sup>3</sup> /kg	4.63E+09	4.63E+09	4.63E+09
CFs	Conversion factor soil	kg/mg	1.0E-06	1.0E-06	1.0E-06	

**Notes:**

1. Aluminum is not listed in Appendix I of the Rules of Hazardous Site Response (i.e., aluminum is not a regulated substance) and, therefore, risk reduction standards (RRS) are typically not applicable. However, at the request of the Georgia Environmental Protection Division (GAEPD), Type 1 and 4 RRS have been calculated.

2. Toxicity values were obtained from: United States Environmental Protection Agency Regions 3, 6, and 9. (Accessed 01-03-13). Regional Screening Levels for Chemical Contaminants at Superfund Sites. [http://www.epa.gov/reg3hwmd/risk/human/rb-concentration\\_table/index.htm](http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm). Updated November 2012. The noncancer toxicity values for aluminum presented in the RSL Tables are EPA Provisional Peer Reviewed Toxicity Values (PPRTVs). Aluminum is not classified as a carcinogen; therefore, cancer toxicity values are not presented.

3.  $RfDi = RfDo \times 20m^3/day / 70kg$

4. Exposure assumptions are based on Table 3 of Appendix 3 of GAEPD 391-19-.07.

**Table 2  
Type 1 Risk Reduction Standards for Aluminum  
Residential Scenario  
General Chemicals  
East Point, Georgia**

Analyte	CAS NO.	Groundwater Type 1 RRS <sup>(1)</sup>  mg/L	Soil Type 1 RRS <sup>(2)</sup>  mg/kg	Soil Calculations <sup>(2)</sup>						
				Protection of Groundwater <sup>(2a)</sup>  mg/kg	Protection of Human Health - Direct Contact Child Resident <sup>(2b)</sup>			Protection of Human Health - Direct Contact Adult Resident <sup>(2b)</sup>		
					Ingestion mg/kg	Inhalation mg/kg	Total mg/kg	Ingestion mg/kg	Inhalation mg/kg	Total mg/kg
Aluminum	7429-90-5	3.5E+01	7.7E+04	--	7.8E+04	6.8E+06	7.7E+04	6.4E+05	2.4E+07	6.2E+05

**Notes:**

1. Concentrations of regulated substances in groundwater shall not exceed concentrations given in Table 1 of Appendix III, or for those substances not listed, the background or detection limit concentrations. Aluminum is not listed in Table 1 of Appendix III; therefore, the Type 1 GW RRS is the 35 mg/L.
2. Concentrations at any point above the uppermost groundwater zone in soil that has been affected by a release shall not exceed the concentrations given in Table 2 of Appendix III or, for those substances not listed (i.e., aluminum), the least of the concentrations based on the protection of groundwater and the protection of human health.
  - a. Protection of Groundwater. For substances not listed in Appendix 1 or in Table 1 of Appendix III, the concentration under Rule 391-3-19-.07(6)(c)1. shall be considered non-calculable. Aluminum is not listed in either of these tables.
  - b. Protection of human health. As noted in Table 1, aluminum is non-carcinogenic; therefore, the RRS based on the protection of human health are concentrations in soil which are unlikely to result in any noncancer toxic effects on human health via soil ingestion along with inhalation of volatiles and particulates. Type 1 soil RRS were determined using Equation 7 of RAGS, Part B, and standard child and adult residential exposure assumptions.

**Table 3**  
**Type 4 Risk Reduction Standards for Aluminum**  
**Non-Residential Scenario**  
**General Chemicals**  
**East Point, Georgia**

Analyte	CAS NO.	Groundwater Type 4 RRS <sup>(1)</sup> mg/L	Soil Type 4 RRS <sup>(2,4)</sup> mg/kg	Soil Calculations			
				Protection of Groundwater <sup>(3)</sup> mg/kg	Protection of Human Health - Direct Contact <sup>(4)</sup>		
					Ingestion mg/kg	Inhalation mg/kg	Total mg/kg
Aluminum	7429-90-5	1.0E+02	1.5E+05	1.5E+05	2.0E+06	3.3E+07	1.9E+06

**Notes:**

1. Concentrations of regulated substances in groundwater samples must not exceed, at any point within the property boundary, the lesser of the risk-based values calculated using Equations 1 and 2 from RAGS, Part B, and non-residential exposure factors as described in Sections (9)(c)(1) and (9)(c)(2) of GAEPD 391-19-.07. Because aluminum is non-carcinogenic and non-volatile, the Type 4 RRS for groundwater corresponds to a concentration in groundwater that is unlikely to result in non-cancer effects to non-residential receptors via ingestion of groundwater.
2. Concentrations of regulated substances in soil must not exceed the leachability-based value (Item 3 above) AND, for surface soil, the lesser of the risk-based values calculated using Equations 1 and 2 from RAGS, Part B, and non-residential exposure factors as described in Sections (9)(d)(2) of GA EPD 391-19-.07. Because aluminum is non-carcinogenic and non-volatile, the Type 4 RRS for soil corresponds to a concentration in soil that is unlikely to result in non-cancer effects on non-residential receptors via ingestion of soil or inhalation of soil particulates. This direct contact value is also protective of human health.
3. Concentrations of regulated substances in soil will not cause contamination of groundwater at levels which exceed Type 4 groundwater concentration criteria. Soil concentrations protective of groundwater were determined by the following fate-and-transport model:

$$RRS_{LEACH} \text{ (mg/kg)} = RRS_{GW} \times DAF \times [K_d + (\theta_w/\rho_\beta)]$$

where:

RRS <sub>GW</sub>	Target Groundwater RRS	1.0E+02	mg/L
DAF	Dilution attenuation factor	1	unitless
K <sub>d</sub>	Soil-water partition coefficient	1.50E+03	L/kg
θ <sub>w</sub>	Water-filled soil porosity (=ω × ρ <sub>β</sub> )	0.3	L <sub>water</sub> /L <sub>soil</sub>
ρ <sub>β</sub>	Dry soil bulk density	1.5	g/cm <sup>3</sup>
ω	Average soil moisture content	0.2	g <sub>water</sub> /g <sub>soil</sub>

4. Concentrations of regulated substances in surface soil must not exceed the lesser of the risk-based values calculated using Equations 1 and 2 from RAGS, Part B, and non-residential exposure factors as described in Sections (9)(d)(2) of GA EPD 391-19-.07. Because aluminum is non-carcinogenic and non-volatile, the Type 4 RRS for soil corresponds to a concentration in soil that is unlikely to result in non-cancer effects on non-residential receptors via ingestion of soil or inhalation of soil particulates. A concentration in excess of 1 million parts per million (mg/kg) is impossible; thus, the proposed Type 4 RRS for aluminum is soil based on the protection of groundwater, which is also protective of human health based on direct contact with soil.

**Table 4**  
**Summary of Risk Reduction Standards for Aluminum**  
**Non-Residential Scenario**  
**General Chemicals LLC**  
**East Point, Georgia**

Analyte	CAS NO.	Groundwater RRS (mg/L)		Soil RRS (mg/kg)	
		Type 1	Type 4	Type 1	Type 4
Aluminum	7429-90-5	3.5E+01	1.0E+02	7.7E+04	1.5E+05

**Basis of RRS:**

GW Type 1: Background

GW Type 4: Protection of Human Health, Non-Resident, Non-Cancer Endpoint

Soil Type 1: Protection of Human Health, Child Resident, Non-Cancer Endpoint

Soil Type 4: Protection of Groundwater (102 mg/L)

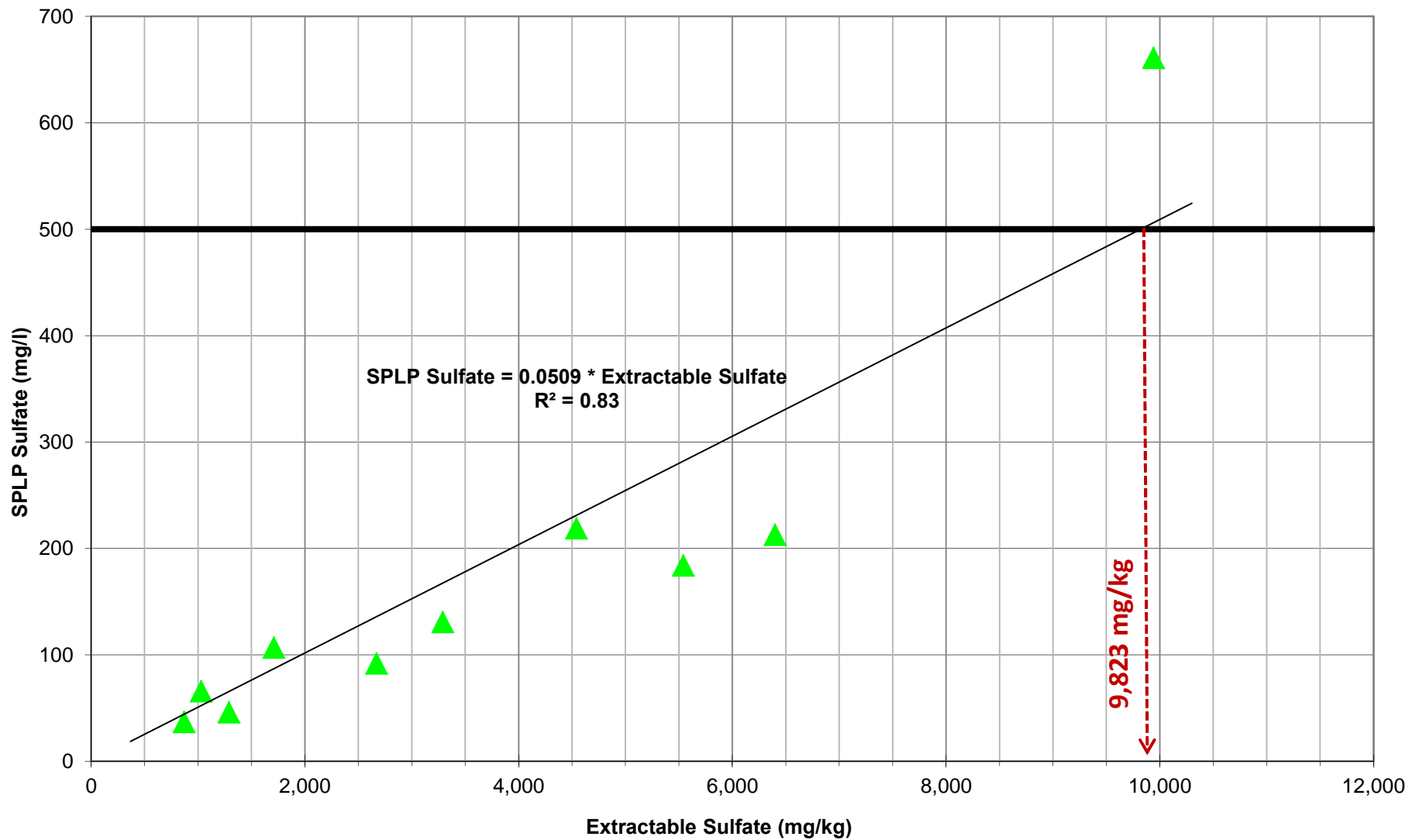
# ATTACHMENT D

SPLP Correlation to Extractable Sulfate



ATTACHMENT D  
SPLP CORRELATION TO EXTRACTABLE SULFATE

GENERAL CHEMICALS  
EAST POINT, GEORGIA



▲ SPLP Data    — Groundwater Sulfate Target Concentration    — Linear (SPLP Data)