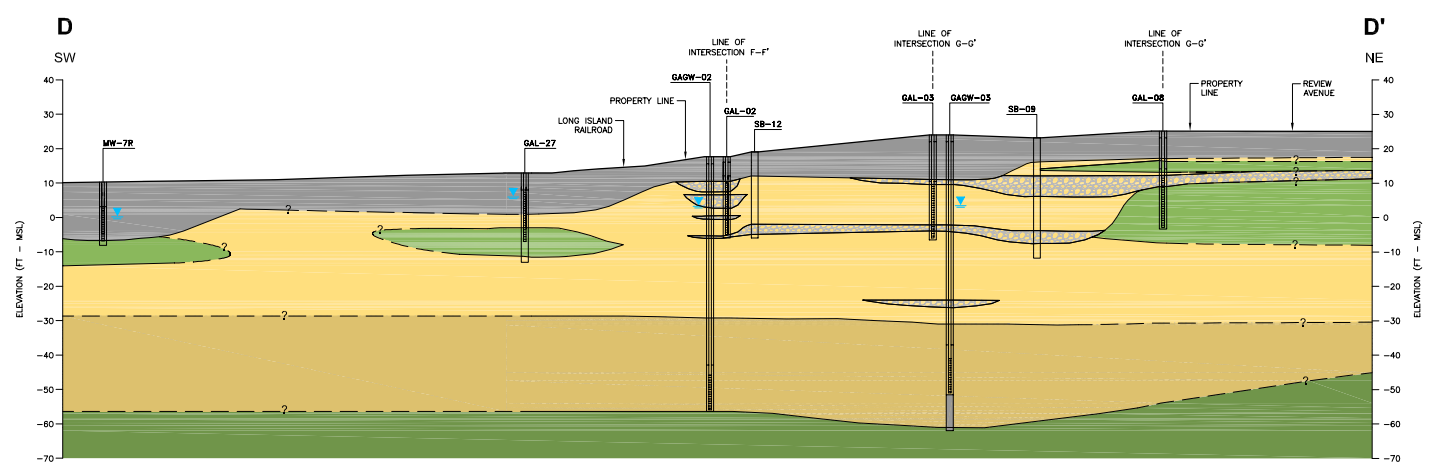


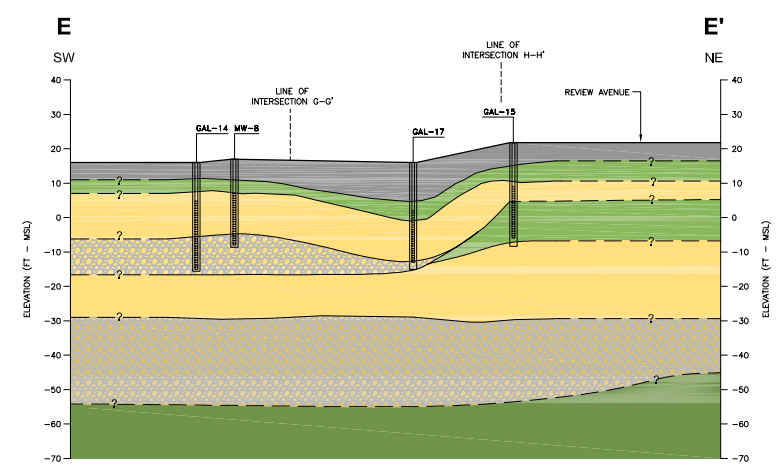
**A** CROSS SECTION A-A'  
7

**B** CROSS SECTION B-B'  
7

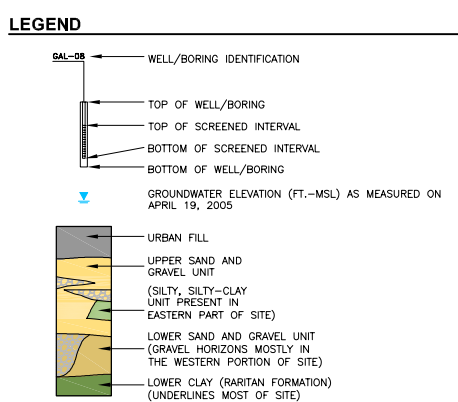
**C** CROSS SECTION C-C'  
7



**D** CROSS SECTION D-D'  
7



**E** CROSS SECTION E-E'  
7

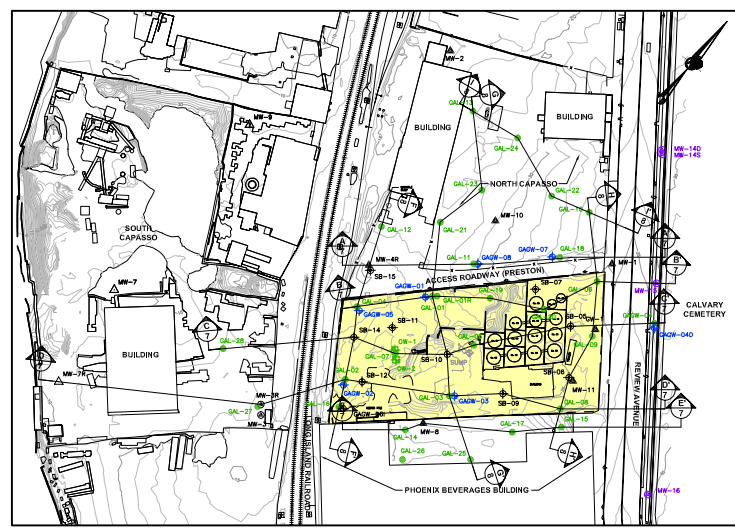


**NOTES**

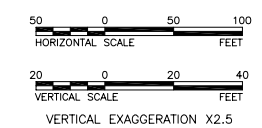
- SUBSURFACE INFORMATION OBTAINED DURING THE REMEDIAL INVESTIGATION SUPPLEMENTED WITH BOREHOLE INFORMATION OBTAINED FROM PREVIOUS INVESTIGATION BY HALEY AND ALDRICH (MONITORING WELLS MW-3R, MW-4R, MW-7R, MW-8 AND MW-11).
- INTERPRETED BOUNDARIES AND VERTICAL EXTENT ARE APPROXIMATE.

**REFERENCES**

- BASE MAP TAKEN FROM DIGITAL FILE 2148.DWG, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
- WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls, PROVIDED BY GEOD CORP.

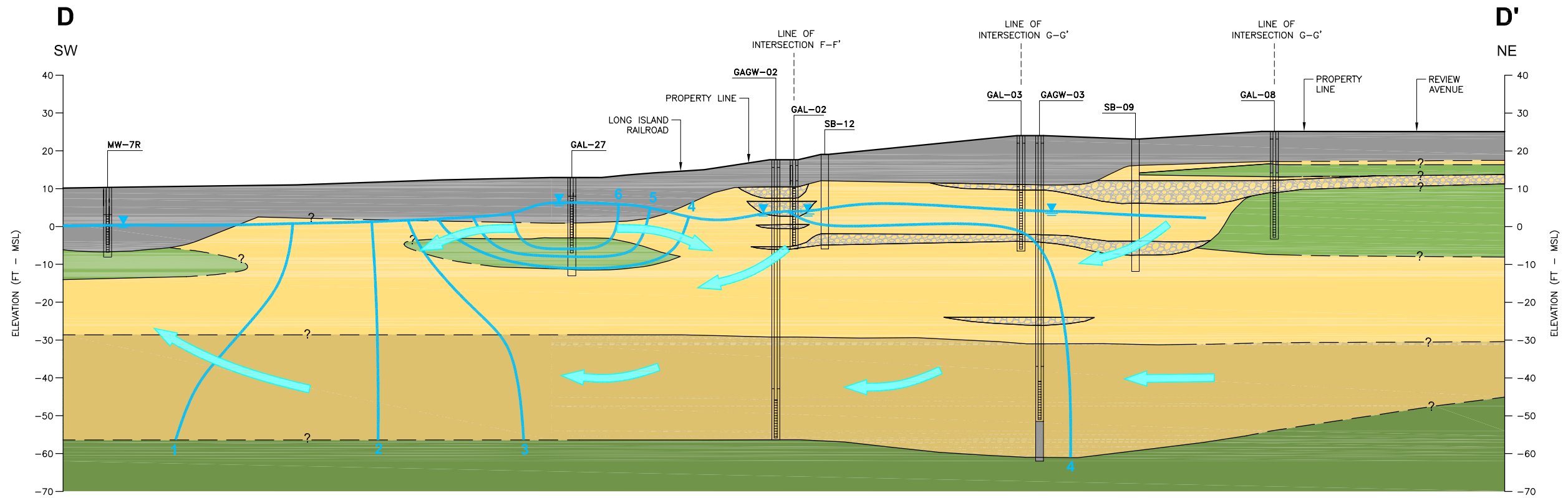


CROSS SECTION LOCATION MAP

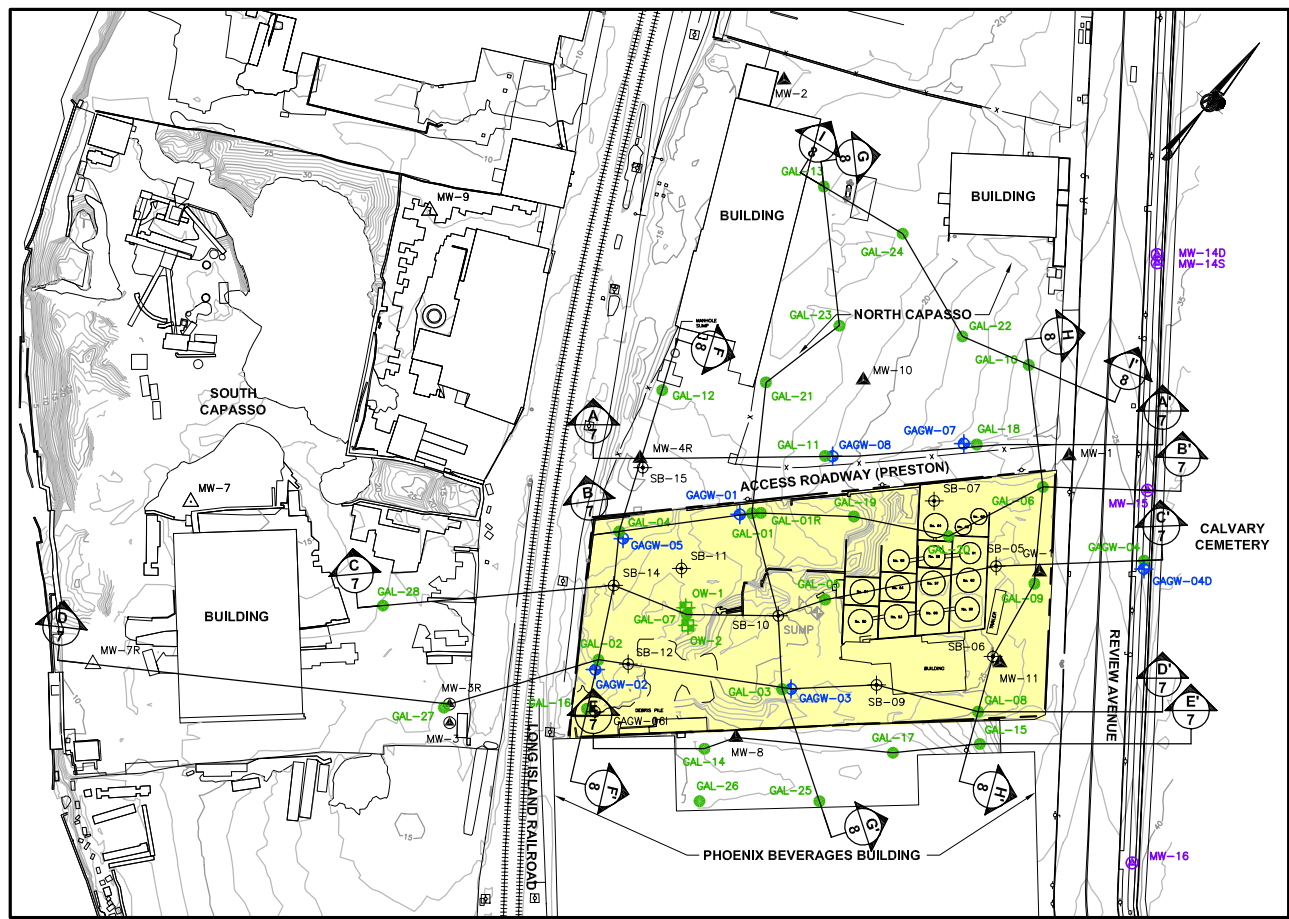


REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
PROJECT: QUANTA RESOURCES SITE REMEDIAL INVESTIGATION REPORT QUEENS COUNTY, NEW YORK						
TITLE: GENERALIZED GEOLOGIC CROSS SECTIONS A-A', THROUGH E-E'						
PROJECT No. 023-6151		FILE No. 0236151M009				
DESIGN	FG	06/01/05	SCALE AS SHOWN	REV.	0	
CADD	RG	06/20/05				
CHECK	SDM	06/20/05				
REVIEW	RSW	06/20/05				
			<b>FIGURE 7</b>			

Drawing No. 0236151M009.dwg    Date: 06/20/05    Scale: 1"=100'



**D**  
7  
**CROSS SECTION D-D'**

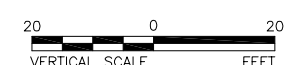


**CROSS SECTION LOCATION MAP**



**LEGEND**

- INTERPRETED GROUNDWATER CONTOUR
- DIRECTION OF GROUNDWATER FLOW
- WELL/BORING IDENTIFICATION
- TOP OF WELL/BORING
- TOP OF SCREENED INTERVAL
- BOTTOM OF SCREENED INTERVAL
- BOTTOM OF WELL/BORING
- GROUNDWATER ELEVATION (FT.-MSL) AS MEASURED ON APRIL 19, 2005
- URBAN FILL
- UPPER SAND AND GRAVEL UNIT
- (SILTY, SILTY-CLAY UNIT PRESENT IN EASTERN PART OF SITE)
- LOWER SAND AND GRAVEL UNIT (GRAVEL HORIZONS MOSTLY IN THE WESTERN PORTION OF SITE)
- LOWER CLAY (RARITAN FORMATION) (UNDERLIES MOST OF SITE)



VERTICAL EXAGGERATION X2.5

**NOTES**

- 1.) SUBSURFACE INFORMATION OBTAINED DURING THE REMEDIAL INVESTIGATION SUPPLEMENTED WITH BOREHOLE INFORMATION OBTAINED FROM PREVIOUS INVESTIGATION BY HALEY AND ALDRICH (MONITORING WELLS MW-3R, MW-4R, MW-7R, MW-8 AND MW-11).
- 2.) INTERPRETED BOUNDARIES AND VERTICAL EXTENT ARE APPROXIMATE.

**REFERENCES**

- 1.) BASE MAP TAKEN FROM DIGITAL FILE 2148.DWG, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
- 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls, PROVIDED BY GEOD CORP.

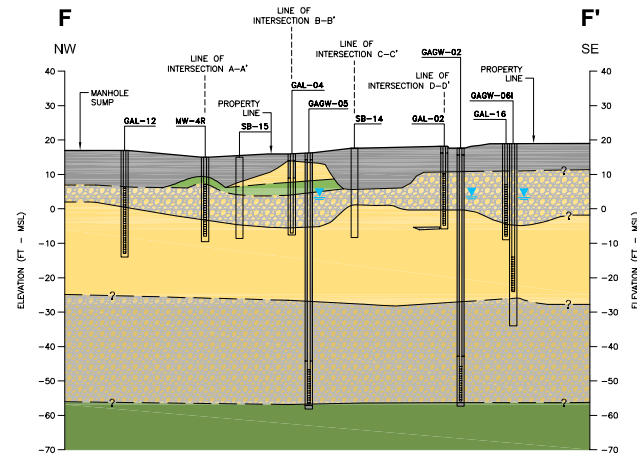
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PROJECT: QUANTA RESOURCES SITE REMEDIAL INVESTIGATION REPORT QUEENS COUNTY, NEW YORK						
TITLE: GENERALIZED HYDROGEOLOGIC CROSS SECTION D-D'						
PROJECT No. 023-6151			FILE No. 0236151M021			
DESIGN	SDM	06/22/05	SCALE	AS SHOWN	REV.	0
CADD	RF	06/20/05				
CHECK	SDM	06/20/05				
REVIEW	RSW	06/20/05				



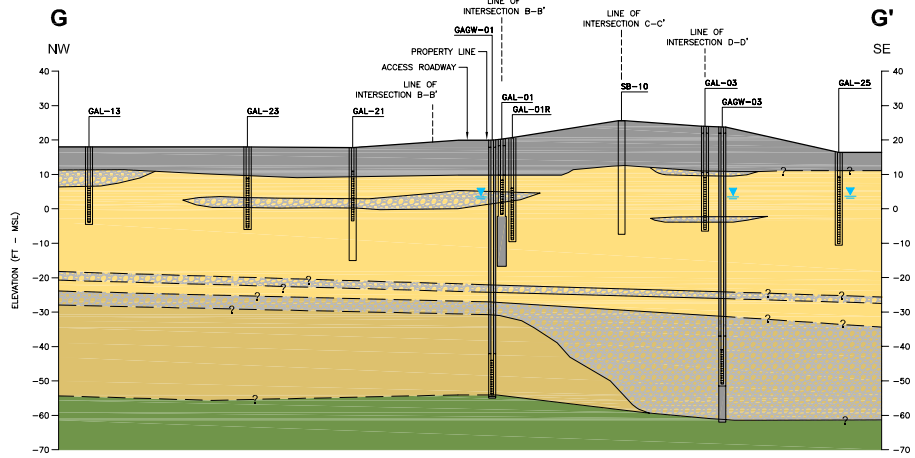
**FIGURE 7A**

Drawing file: 0236151M021.dwg Feb 02, 2006 - 11:02am

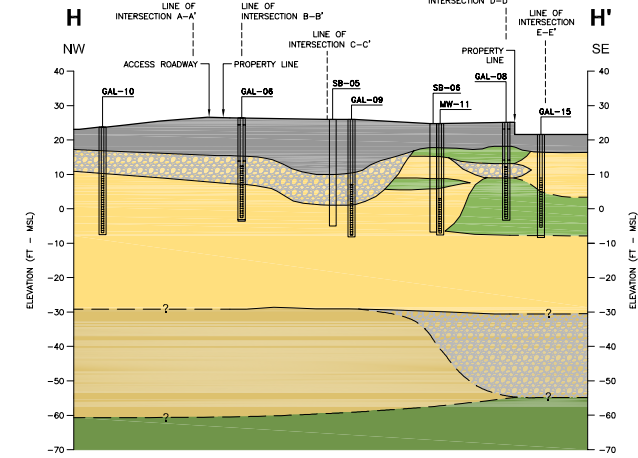




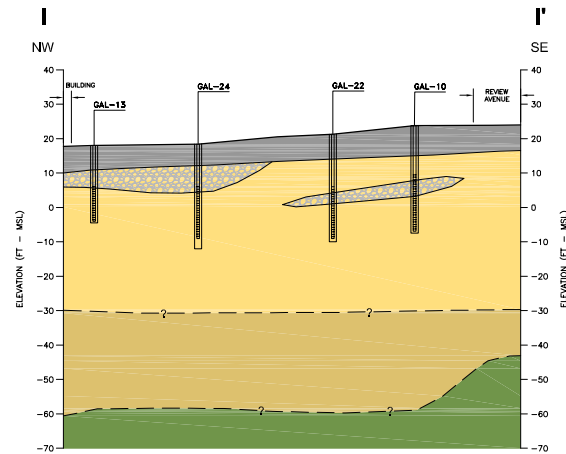
**F**  
8 CROSS SECTION F-F'



**G**  
8 CROSS SECTION G-G'

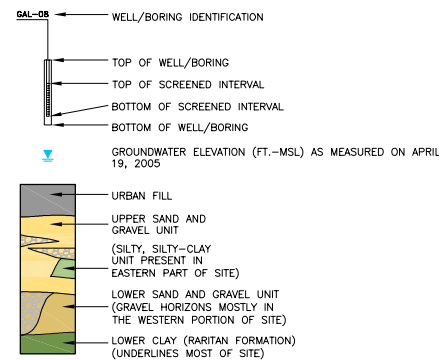


**H**  
8 CROSS SECTION H-H'



**I**  
8 CROSS SECTION I-I'

**LEGEND**

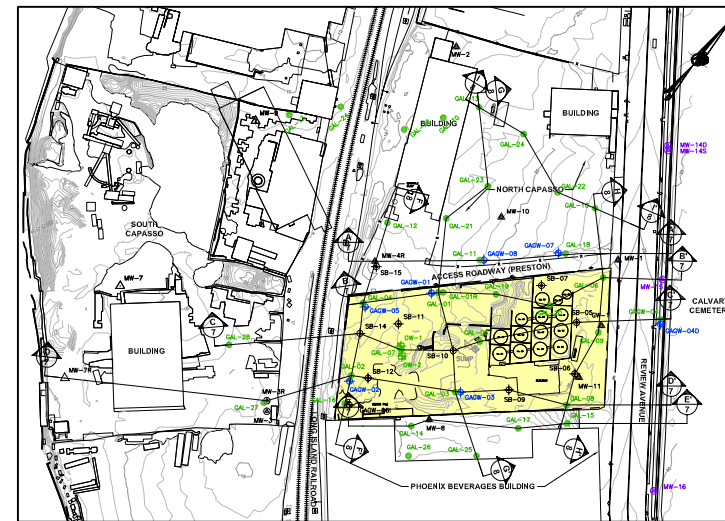


**NOTES**

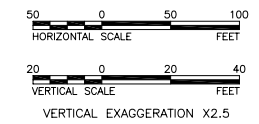
- 1.) SUBSURFACE INFORMATION OBTAINED DURING THE REMEDIAL INVESTIGATION SUPPLEMENTED WITH BOREHOLE INFORMATION OBTAINED FROM PREVIOUS INVESTIGATION BY HALEY AND ALDRICH (MONITORING WELLS MW-3R, MW-4R, MW-7R, MW-8 AND MW-11).
- 2.) INTERPRETED BOUNDARIES AND VERTICAL EXTENT ARE APPROXIMATE.

**REFERENCES**

- 1.) BASE MAP TAKEN FROM DIGITAL FILE 2148.DWG, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
- 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls, PROVIDED BY GEOD CORP.



**CROSS SECTION LOCATION MAP**



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
PROJECT: QUANTA RESOURCES SITE REMEDIAL INVESTIGATION REPORT QUEENS COUNTY, NEW YORK						
TITLE: <b>GENERALIZED GEOLOGIC CROSS SECTIONS F-F' THROUGH I-I'</b>						
PROJECT No. 023-6151		FILE No. 0236151M010				
DESIGN	FG	06/01/05	SCALE AS SHOWN	REV.	0	
CADD	RG	06/20/05				
CHECK	SDM	06/20/05				
REVIEW	RSW	06/20/05				
			<b>FIGURE 8</b>			



**TABLE 4**  
**GROUNDWATER LEVEL MEASUREMENT DATA**  
**JULY AND AUGUST 2004 AND APRIL 2005**  
**QUANTA RESOURCES SITE**  
**37-80 REVIEW AVENUE**  
**LONG ISLAND CITY, NEW YORK**

Monitoring Point ID	Date	Reference Elevation (FT. - MSL)	Depth to Groundwater (FT. BTIC)	Groundwater Elevation (FT. - MSL)
<b>On-Property Wells</b>				
GAGW-01	7/24/2004	22.33	18.85	3.48
	8/31/2004		18.81	3.52
	4/19/2005		18.36	3.97
GAGW-02	7/24/2004	20.40	17.13	3.27
	8/31/2004		17.03	3.37
	4/19/2005		16.62	3.78
GAGW-03	7/24/2004	26.52	23.04	3.48
	8/31/2004		22.94	3.58
	4/19/2005		22.55	3.97
GAGW-05	7/24/2004	18.65	15.29	3.36
	8/31/2004		15.32	3.33
	4/19/2005		14.88	3.77
GAGW-06I	7/24/2004	21.46	18.20	3.26
	8/31/2004		18.09	3.37
	4/19/2005		17.69	3.77
<b>Off-Property Wells</b>				
GAGW-04D	7/24/2004	25.54	See Note 1	
	8/31/2004		21.60	3.94
	4/19/2005		21.13	4.41
GAGW-07	7/24/2004	22.10	18.35	3.75
	8/31/2004		18.35	3.75
	4/19/2005		17.86	4.24
GAGW-08	7/24/2004	18.92	15.24	3.68
	8/31/2004		15.26	3.66
	4/19/2005		14.78	4.14

**Notes:**

(1) - Monitoring well GAGW-04D was not installed until August 2, 2004

FT. BTIC - Feet below top of inner well casing

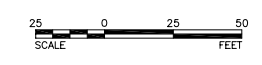
MSL = Mean Sea Level





- LEGEND**
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005) (SEE REFERENCE 2)
  - ◆ SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
  - ◆ DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
  - ▲ EXISTING ON-PROPERTY AND OFF-PROPERTY MONITORING WELL LOCATION (SEE REFERENCE 2)
  - ⊕ EXISTING OFF-PROPERTY MONITORING WELL LOCATION (LOCATION APPROXIMATE)
  - ◆ SUMP (SEE REFERENCE 2)
  - ⊕ LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
  - △ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 5 AND 6)
  - ⊕ EXISTING ABOVE GROUND TANK (REPORTED TO BE EMPTY AND DECONTAMINATED)
  - 3.4 — INTERPRETED GROUNDWATER CONTOUR (JULY 24, 2004)
  - ← INTERPRETED GROUNDWATER FLOW DIRECTION
  - 3.75 — GROUNDWATER ELEVATION (FT.-MSL)
  - 3.8 — INTERPRETED GROUNDWATER CONTOUR (AUGUST 31, 2004)
  - ← INTERPRETED GROUNDWATER FLOW DIRECTION
  - 3.75 — GROUNDWATER ELEVATION (FT.-MSL)
  - QUANTA PROPERTY BOUNDARY (SEE REFERENCE 3)
  - ||||| RAILROAD
  - FENCE LINE
  - 20 — 5 FOOT CONTOUR LINE (FT.-MSL)
  - 1 FOOT CONTOUR LINE (FT.-MSL)

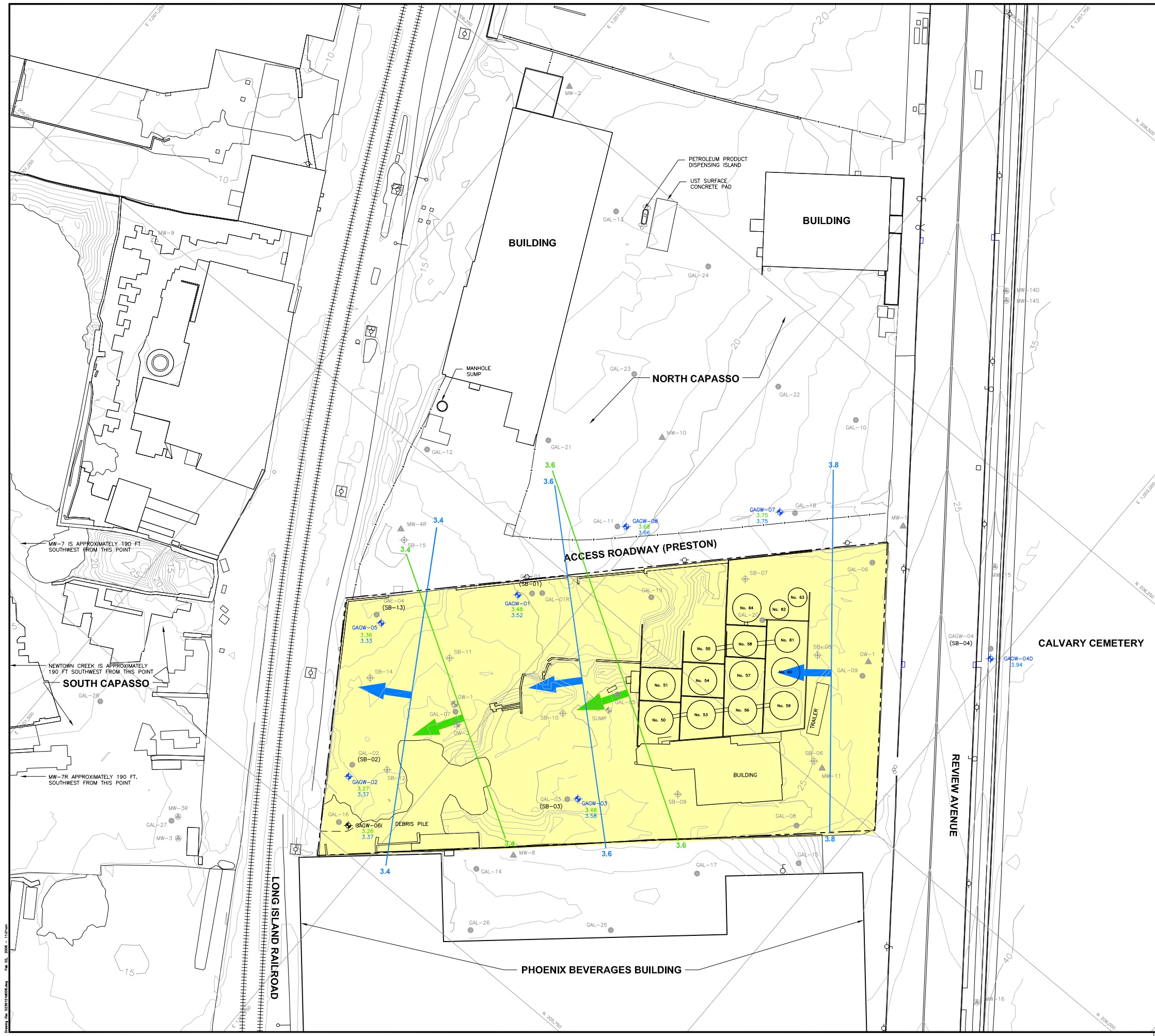
- REFERENCES**
- 1.) BASE MAP TAKEN FROM DIGITAL FILE 2148.dwg, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls, PROVIDED BY GEOD CORP.
  - 3.) PROPERTY BOUNDARY TAKEN FROM DIGITAL FILE 2148 Boundary.dwg, TITLED "MAP SHOWING BOUNDARY OF BLOCK 312 LOT 69", DATED APRIL 29, 2004, PROVIDED BY GEOD CORP.
  - 4.) DEBRIS PILE BOUNDARY REVISED PER FIELD OBSERVATIONS MADE BY GOLDER ASSOCIATES PERSONNEL DURING SITE VISITS.
  - 5.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 6.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.



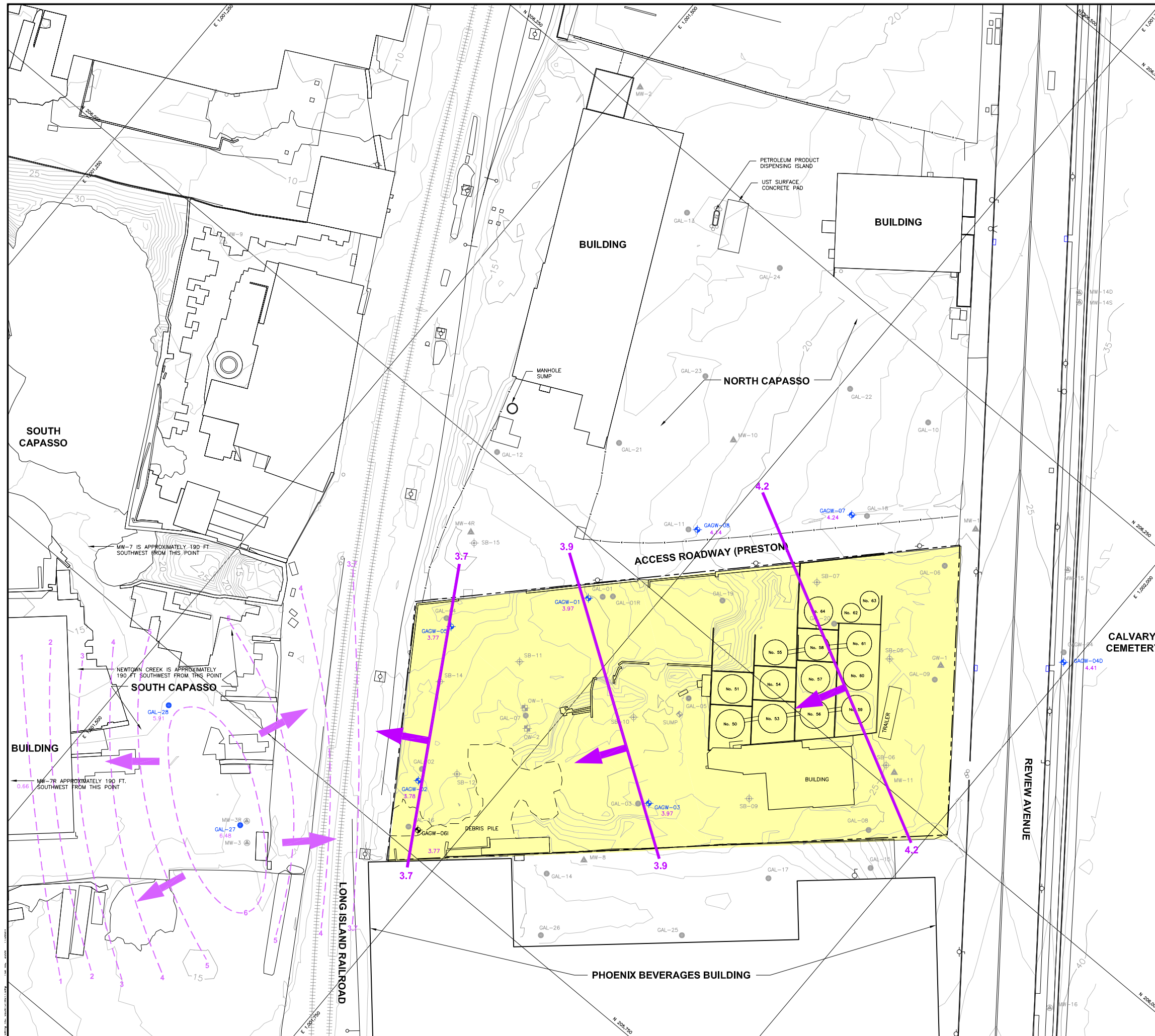
REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW
PROJECT: QUANTA RESOURCES SITE REMEDIAL INVESTIGATION REPORT QUEENS COUNTY, NEW YORK						
TITLE: INTERPRETED GROUNDWATER CONTOUR MAP (JULY AND AUGUST 2004)						
PROJECT No. 023-6151		FILE No. 0236151M008		SCALE AS SHOWN		
DESIGN	SDM	06/01/05	SCALE	AS SHOWN	REV.	0
CADD	AM	06/20/05				
CHECK	SDM	06/20/05				
REVIEW	RSW	06/20/05				



**FIGURE 11**



Drawing No. 0236151M008.dwg  
 Date: 06/20/05  
 Scale: 1" = 100'



- LEGEND**
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005) (SEE REFERENCE 2)
  - ⊕ SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
  - ⊕ DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
  - ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
  - ⊕ EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
  - ⊕ SUMP (SEE REFERENCE 2)
  - ⊕ LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
  - △ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 5 AND 6)
  - ⊕ EXISTING ABOVE GROUND TANK (REPORTED TO BE EMPTY AND DECONTAMINATED)
  - 3.4 — INTERPRETED GROUNDWATER CONTOUR (APRIL 19, 2005) (DASHED WHERE INFERRED)
  - ← INTERPRETED GROUNDWATER FLOW DIRECTION
  - 3.75 GROUNDWATER ELEVATION (FT.-MSL)
  - QUANTA PROPERTY BOUNDARY (SEE REFERENCE 3)
  - ||||| RAILROAD
  - FENCE LINE
  - 20 5 FOOT CONTOUR LINE (FT.-MSL)
  - 1 FOOT CONTOUR LINE (FT.-MSL)

**NOTES**  
 1.) FT.-MSL - FEET MEAN SEA LEVEL

- REFERENCES**
- 1.) BASE MAP TAKEN FROM DIGITAL FILE 2148.dwg, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls PROVIDED BY GEOD CORP.
  - 3.) PROPERTY BOUNDARY TAKEN FROM DIGITAL FILE 2148 Boundary.dwg, TITLED "MAP SHOWING BOUNDARY OF BLOCK 312 LOT 69", DATED APRIL 29, 2004, PROVIDED BY GEOD CORP.
  - 4.) DEBRIS PILE BOUNDARY REVISED PER FIELD OBSERVATIONS MADE BY GOLDER ASSOCIATES PERSONNEL DURING SITE VISITS.
  - 5.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 6.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

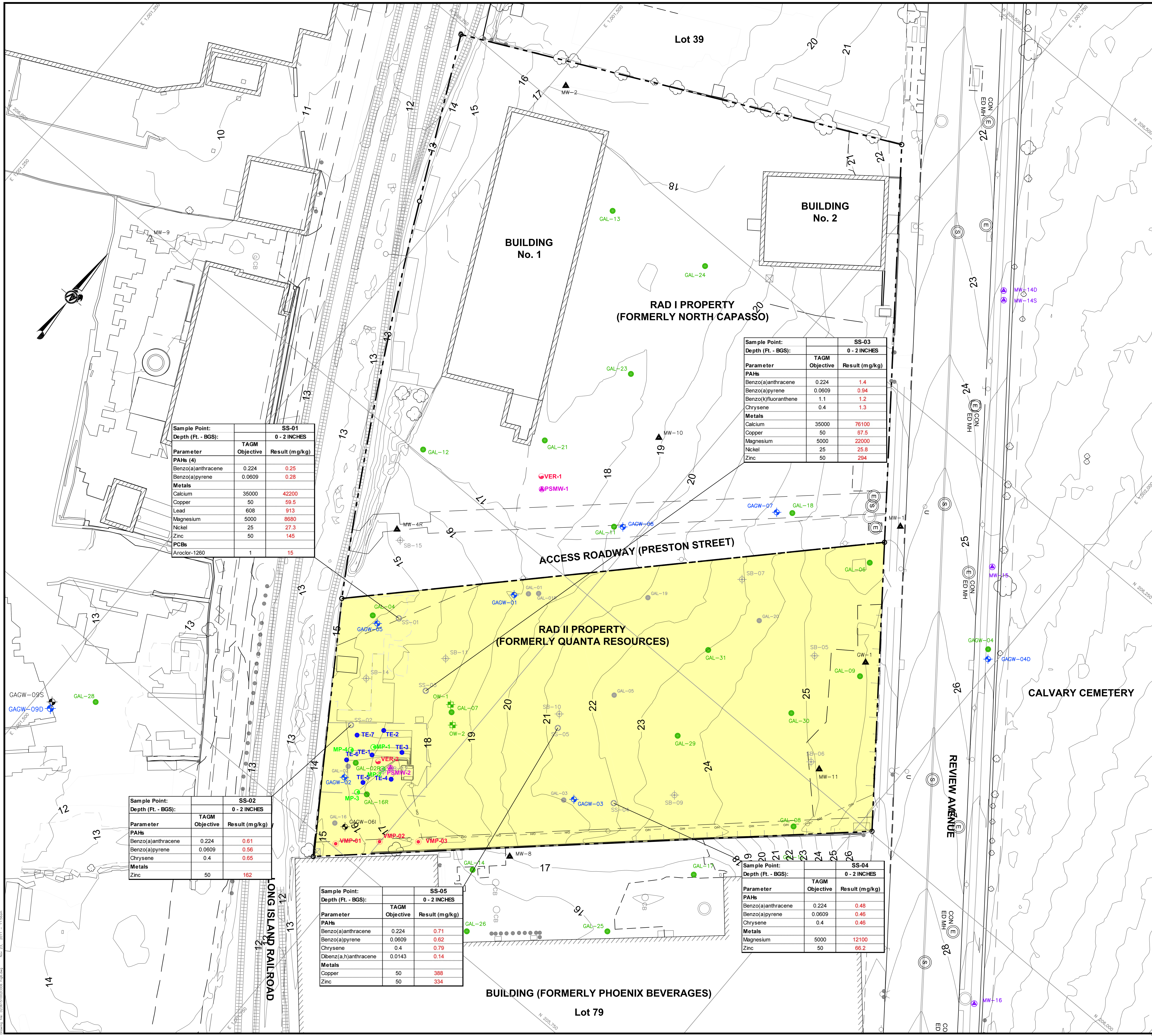
PROJECT: QUANTA RESOURCES SITE  
 REMEDIAL INVESTIGATION REPORT  
 QUEENS COUNTY, NEW YORK

TITLE: INTERPRETED GROUNDWATER CONTOUR MAP  
 (APRIL 2005)

PROJECT No.	023-6151	FILE No.	0236151M017
DESIGN	SDM 06/02/05	SCALE	AS SHOWN
CADD	RG 06/20/05	REV.	0
CHECK	SDM 06/20/05	<b>FIGURE 12</b>	
REVIEW	RSW 06/20/05		

Golder Associates Philadelphia USA





Sample Point:		SS-01	
Depth (ft. - BGS):		0 - 2 INCHES	
Parameter	TAGM Objective	Result (mg/kg)	
<b>PAHs (4)</b>			
Benzo(a)anthracene	0.224	0.25	
Benzo(a)pyrene	0.0609	0.28	
<b>Metals</b>			
Calcium	35000	42200	
Copper	50	59.5	
Lead	608	913	
Magnesium	5000	8680	
Nickel	25	27.3	
Zinc	50	145	
<b>PCBs</b>			
Aroclor-1260	1	15	

Sample Point:		SS-03	
Depth (ft. - BGS):		0 - 2 INCHES	
Parameter	TAGM Objective	Result (mg/kg)	
<b>PAHs</b>			
Benzo(a)anthracene	0.224	1.4	
Benzo(a)pyrene	0.0609	0.94	
Benzo(k)fluoranthene	1.1	1.2	
Chrysene	0.4	1.3	
<b>Metals</b>			
Calcium	35000	76100	
Copper	50	67.5	
Magnesium	5000	22000	
Nickel	25	25.8	
Zinc	50	294	

Sample Point:		SS-02	
Depth (ft. - BGS):		0 - 2 INCHES	
Parameter	TAGM Objective	Result (mg/kg)	
<b>PAHs</b>			
Benzo(a)anthracene	0.224	0.61	
Benzo(a)pyrene	0.0609	0.56	
Chrysene	0.4	0.65	
<b>Metals</b>			
Zinc	50	162	

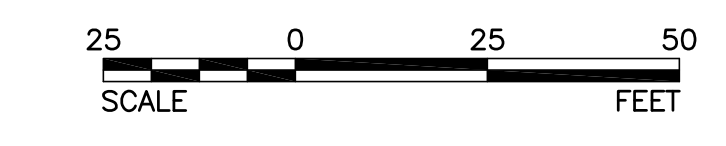
Sample Point:		SS-05	
Depth (ft. - BGS):		0 - 2 INCHES	
Parameter	TAGM Objective	Result (mg/kg)	
<b>PAHs</b>			
Benzo(a)anthracene	0.224	0.71	
Benzo(a)pyrene	0.0609	0.62	
Chrysene	0.4	0.79	
Dibenz(a,h)anthracene	0.0143	0.14	
<b>Metals</b>			
Copper	50	388	
Zinc	50	334	

Sample Point:		SS-04	
Depth (ft. - BGS):		0 - 2 INCHES	
Parameter	TAGM Objective	Result (mg/kg)	
<b>PAHs</b>			
Benzo(a)anthracene	0.224	0.48	
Benzo(a)pyrene	0.0609	0.46	
Chrysene	0.4	0.46	
<b>Metals</b>			
Magnesium	5000	12100	
Zinc	50	68.2	

- ### LEGEND
- THERMAL ENHANCED (TE) UNIT FOR LNAPL PILOT TEST (GOLDER 2008)
  - VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
  - MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
  - TEMPERATURE AND VAPOR MONITORING POINT FOR LNAPL PILOT TEST (GOLDER 2008)
  - VAPOR MONITORING POINT (GOLDER 2008)
  - LNAPL MONITORING WELL (SEE NOTE 6)
  - LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
  - + SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
  - + DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
  - ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
  - ▲ EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
  - + LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
  - ▲ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 3 AND 4)
  - CONCRETE SURVEY MONUMENT
  - REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
  - ++++ RAILROAD
  - FENCE LINE
  - 20 5 FOOT CONTOUR LINE (FT.-MSL)
  - 1 1 FOOT CONTOUR LINE (FT.-MSL)
  - EASEMENT
  - INTERPRETED EXTENT OF SOIL EXCEEDING APPLICABLE STANDARD AND REQUIRING CAP

- ### NOTES
- 1.) FT-MSL - FEET MEAN SEA LEVEL
  - 2.) FIGURE SHOWS SURFICIAL URBAN FILL / SOIL EXCEEDANCES (RED) BASED ON COMPARISON OF REPORTED ANALYTICAL RESULTS TO NEW YORK STATE TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4046, RECOMMENDED SOIL CLEANUP OBJECTIVES (TAGM) AS DISCUSSED IN SECTION 5.2 OF THE REMEDIAL INVESTIGATION REPORT.
  - 3.) TAGM VALUES ARE THE LOWER OF THE USEPA HEALTH BASED CRITERIA (RESIDENTIAL EXPOSURE SCENARIO) AND THE GROUNDWATER PROTECTION VALUE (DRINKING WATER SCENARIO). THUS, THE TAGM VALUES DO NOT DIRECTLY APPLY TO POTENTIAL EXPOSURE SCENARIOS ON THE REVIEW AVENUE DEVELOPMENT PROPERTY AND ARE USED FOR SCREENING PURPOSES ONLY.
  - 4.) ALL RESULTS ARE SHOWN IN mg/kg (ppm).
  - 5.) CHROMIUM WAS DETECTED IN THE DUPLICATE SAMPLE DSS-01 AT A CONCENTRATION AT 43.3 PPM WHICH EXCEEDS THE TAGM OBJECTIVE.
  - 6.) LNAPL MONITORING WELLS GAL-01, GAL-01R, GAL-02, GAL-03, GAL-05, GAL-16, GAL-19, AND GAL-20 WERE NOT LOCATED DURING APRIL 2011 WELL SURVEYING ACTIVITIES.

- ### REFERENCES
- 1.) BASE MAP TAKEN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR: GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, AND 2340 MONITORING WELLS.xls PROVIDED BY GEOD CORP.
  - 3.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 4.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.
  - 5.) RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - 6.) RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

PROJECT: REVIEW AVENUE DEVELOPMENT BROWNFIELD CLEANUP PROGRAM REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089 QUEENS COUNTY, NEW YORK

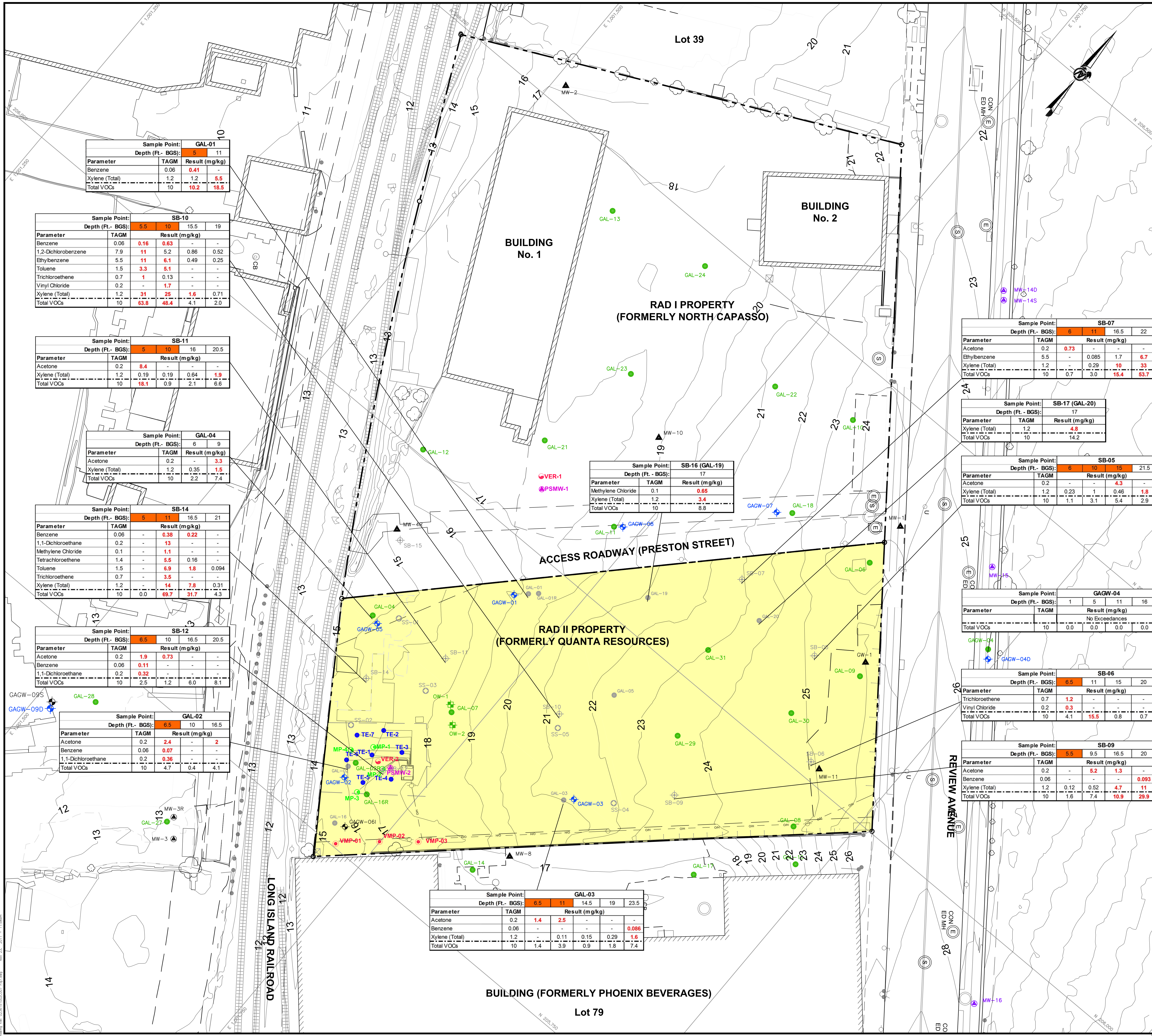
TITLE: SURFICIAL URBAN FILL / SOIL EXCEEDANCES NEW YORK STATE TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES FROM RI REPORT (JUNE 2005)

PROJECT No.	023-6151002	FILE No.	0236151002006
DESIGN	AGE 07/2011	SCALE	AS SHOWN / REV. 0
CADD	YPW 11/2011		
CHECK	KGK 11/2011		
REVIEW	RES 11/2011		

**FIGURE 6**

Golder Associates  
 Philadelphia, USA  
 Project No. 023-6151002-006  
 Date: 11/2011





### LEGEND

- THERMAL ENHANCED (TE) UNIT FOR LNAPL PILOT TEST (GOLDER 2008)
- VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- TEMPERATURE AND VAPOR MONITORING POINT FOR LNAPL PILOT TEST (GOLDER 2008)
- VAPOR MONITORING POINT (GOLDER 2008)
- LNAPL MONITORING WELL (SEE NOTE 7)
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
- + SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
- + DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
- ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
- ▲ EXISTING OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
- + LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
- △ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 3 AND 4)
- CONCRETE SURVEY MONUMENT
- REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
- ||||| RAILROAD
- FENCE LINE
- 5 FOOT CONTOUR LINE (FT.-MSL)
- 1 FOOT CONTOUR LINE (FT.-MSL)
- EASEMENT
- INTERPRETED EXTENT OF SOIL EXCEEDING APPLICABLE STANDARD AND REQUIRING CAP

- ### NOTES
- 1.) FT-MSL - FEET MEAN SEA LEVEL
  - 2.) FIGURE SHOWS SUBSURFACE SOIL EXCEEDANCES (RED) BASED ON COMPARISON OF REPORTED ANALYTICAL RESULTS TO NEW YORK STATE TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #A046, RECOMMENDED SOIL CLEANUP OBJECTIVES (TAGM) AS DISCUSSED IN SECTION 4.2 OF THE DATA SUMMARY REPORT.
  - 3.) TAGM VALUES ARE THE LOWER OF THE USEPA HEALTH BASED CRITERIA (RESIDENTIAL EXPOSURE SCENARIO) AND THE GROUNDWATER PROTECTION VALUE (DRINKING WATER SCENARIO). THUS, THE TAGM VALUES DO NOT DIRECTLY APPLY TO POTENTIAL EXPOSURE SCENARIOS ON THE REVIEW AVENUE DEVELOPMENT PROPERTY AND ARE USED FOR SCREENING PURPOSES ONLY.
  - 4.) WHEN A SAMPLE WAS COLLECTED WITHIN URBAN FILL THE DEPTH IS SHADED ORANGE.
  - 5.) (-) INDICATES NOT DETECTED RESULT
  - 6.) ALL RESULTS ARE SHOWN IN mg/kg (ppm).
  - 7.) LNAPL MONITORING WELLS GAL-01, GAL-01R, GAL-02, GAL-03, GAL-05, GAL-16, GAL-19, AND GAL-20 WERE NOT LOCATED DURING APRIL 2011 WELL SURVEYING ACTIVITIES.

- ### REFERENCES
- 1.) BASE MAP PLAN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, AND 2340 MONITORING WELLS.xls PROVIDED BY GEOD CORP.
  - 3.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 4.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.
  - 5.) RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - 6.) RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

**REVIEW AVENUE DEVELOPMENT**  
**BROWNFIELD CLEANUP PROGRAM**  
**REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089**  
**QUEENS COUNTY, NEW YORK**

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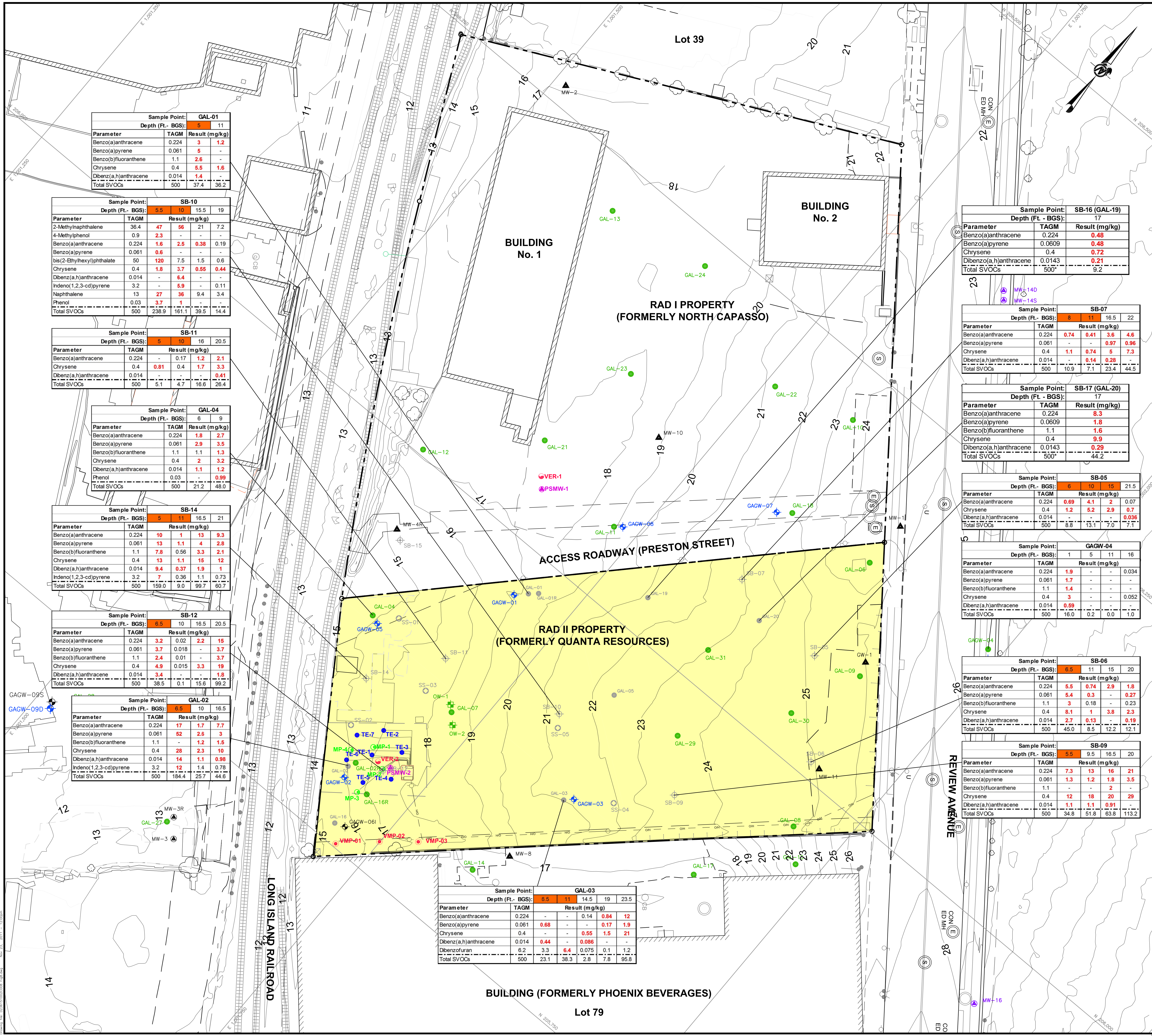
**SUBSURFACE SOIL VOC EXCEEDANCES**  
**NEW YORK STATE TAGM 4046 RECOMMENDED**  
**SOIL CLEANUP OBJECTIVES**  
**FROM RI REPORT (JUNE 2005)**

PROJECT No.	023-6151002	FILE No.	02361510020007
DESIGN	AGE 07/2011	SCALE	AS SHOWN
CADD	YPW 11/2011	REVISION	
CHECK	KGK 11/2011		
REVIEW	RES 11/2011		

FIGURE 7

Date: 11/20/2011 11:58 AM  
 User: C:\Users\jg20000777\Documents\2011-11-20 11:58 AM





Sample Point: GAL-01			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	3	1.2
Benzo(a)pyrene	0.061	5	-
Benzo(b)fluoranthene	1.1	2.6	-
Chrysene	0.4	5.5	1.6
Dibenz(a,h)anthracene	0.014	1.4	-
Total SVOCs	500	37.4	36.2

Sample Point: SB-10			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
2-Methylnaphthalene	36.4	47	56
4-Methylphenol	0.9	2.3	-
Benzo(a)anthracene	0.224	1.6	2.5
Benzo(a)pyrene	0.061	0.6	-
bis(2-Ethylhexyl)phthalate	50	120	7.5
Chrysene	0.4	1.8	3.7
Dibenz(a,h)anthracene	0.014	6.4	-
Indeno(1,2,3-cd)pyrene	3.2	27	5.9
Naphthalene	13	27	36
Phenol	0.03	3.7	1
Total SVOCs	500	238.9	161.1

Sample Point: SB-11			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	0.17	1.2
Chrysene	0.4	0.81	0.4
Dibenz(a,h)anthracene	0.014	0.4	1.7
Total SVOCs	500	5.1	4.7

Sample Point: GAL-04			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	1.8	2.7
Benzo(a)pyrene	0.061	2.9	3.5
Benzo(b)fluoranthene	1.1	1.1	1.3
Chrysene	0.4	2	3.2
Dibenz(a,h)anthracene	0.014	1.1	1.2
Phenol	0.03	0.99	-
Total SVOCs	500	21.2	48.0

Sample Point: SB-14			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	10	1
Benzo(a)pyrene	0.061	13	1.1
Benzo(b)fluoranthene	1.1	7.8	0.56
Chrysene	0.4	13	1.1
Dibenz(a,h)anthracene	0.014	9.4	0.37
Indeno(1,2,3-cd)pyrene	3.2	7	0.36
Total SVOCs	500	159.0	9.0

Sample Point: SB-12			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	3.2	0.02
Benzo(a)pyrene	0.061	3.7	0.018
Benzo(b)fluoranthene	1.1	2.4	0.01
Chrysene	0.4	4.9	0.015
Dibenz(a,h)anthracene	0.014	3.4	0.01
Total SVOCs	500	38.5	0.1

Sample Point: GAL-02			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	17	1.7
Benzo(a)pyrene	0.061	52	2.6
Benzo(b)fluoranthene	1.1	1.2	1.5
Chrysene	0.4	28	2.3
Dibenz(a,h)anthracene	0.014	14	1.1
Indeno(1,2,3-cd)pyrene	3.2	12	1.4
Total SVOCs	500	184.4	23.7

Sample Point: GAL-03			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	0.14	0.84
Benzo(a)pyrene	0.061	0.68	0.17
Chrysene	0.4	0.55	1.5
Dibenz(a,h)anthracene	0.014	0.44	0.086
Dibenzofuran	8.2	3.3	6.4
Total SVOCs	500	23.1	38.3

Sample Point: SB-16 (GAL-19)			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	0.48	0.48
Benzo(a)pyrene	0.0609	0.48	-
Chrysene	0.4	0.72	-
Dibenz(a,h)anthracene	0.0143	0.21	-
Total SVOCs	500*	9.2	-

Sample Point: SB-07			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	0.74	0.41
Benzo(a)pyrene	0.061	0.97	0.96
Chrysene	0.4	1.1	0.74
Dibenz(a,h)anthracene	0.014	0.14	0.28
Total SVOCs	500	10.9	7.1

Sample Point: SB-17 (GAL-20)			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	8.3	-
Benzo(a)pyrene	0.0609	1.8	-
Benzo(b)fluoranthene	1.1	1.6	-
Chrysene	0.4	9.9	-
Dibenz(a,h)anthracene	0.0143	0.29	-
Total SVOCs	500*	44.2	-

Sample Point: SB-05			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	0.69	4.1
Benzo(a)pyrene	0.4	1.2	5.2
Chrysene	0.014	2.9	0.7
Dibenz(a,h)anthracene	0.014	0.036	-
Total SVOCs	500	8.8	13.1

Sample Point: GAGW-04			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	1.9	-
Benzo(a)pyrene	0.061	1.7	-
Benzo(b)fluoranthene	1.1	1.4	-
Chrysene	0.4	3	-
Dibenz(a,h)anthracene	0.014	0.59	-
Total SVOCs	500	16.0	0.2

Sample Point: SB-06			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	5.5	0.74
Benzo(a)pyrene	0.061	5.4	0.3
Benzo(b)fluoranthene	1.1	3	0.18
Chrysene	0.4	8.1	1
Dibenz(a,h)anthracene	0.014	2.7	0.13
Total SVOCs	500	45.0	8.5

Sample Point: SB-09			
Parameter	TAGM	Result (mg/kg)	Depth (ft. - BGS)
Benzo(a)anthracene	0.224	7.3	13
Benzo(a)pyrene	0.061	1.3	1.2
Benzo(b)fluoranthene	1.1	-	-
Chrysene	0.4	12	18
Dibenz(a,h)anthracene	0.014	1.1	1.1
Total SVOCs	500	34.8	51.8

### LEGEND

- THERMAL ENHANCED (TE) UNIT FOR LNAPL PILOT TEST (GOLDER 2008)
- VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- TEMPERATURE AND VAPOR MONITORING POINT FOR LNAPL PILOT TEST (GOLDER 2008)
- VAPOR MONITORING POINT (GOLDER 2008)
- LNAPL MONITORING WELL (SEE NOTE 7)
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
- SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
- DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
- EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
- EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
- LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
- EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 3 AND 4)
- CONCRETE SURVEY MONUMENT
- REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
- ==== RAILROAD
- FENCE LINE
- 5 FOOT CONTOUR LINE (FT.-MSL)
- 1 FOOT CONTOUR LINE (FT.-MSL)
- EASEMENT
- INTERPRETED EXTENT OF SOIL EXCEEDING APPLICABLE STANDARD

- ### NOTES
- 1.) FT-MSL - FEET MEAN SEA LEVEL
  - 2.) FIGURE SHOWS SUBSURFACE SOIL EXCEEDANCES (RED) BASED ON COMPARISON OF REPORTED ANALYTICAL RESULTS TO NEW YORK STATE TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4046, RECOMMENDED SOIL CLEANUP OBJECTIVES (TAGM) AS DISCUSSED IN SECTION 4.2 OF THE DATA SUMMARY REPORT.
  - 3.) TAGM VALUES ARE THE LOWER OF THE USEPA HEALTH BASED CRITERIA (RESIDENTIAL EXPOSURE SCENARIO) AND THE GROUNDWATER PROTECTION VALUE (DRINKING WATER SCENARIO). THUS, THE TAGM VALUES DO NOT DIRECTLY APPLY TO POTENTIAL EXPOSURE SCENARIOS ON THE REVIEW AVENUE DEVELOPMENT PROPERTY AND ARE USED FOR SCREENING PURPOSES ONLY.
  - 4.) WHEN A SAMPLE WAS COLLECTED WITHIN URBAN FILL THE DEPTH IS SHADED ORANGE.
  - 5.) (-) INDICATES NOT DETECTED RESULT
  - 6.) ALL RESULTS ARE SHOWN IN mg/kg (ppm).
  - 7.) LNAPL MONITORING WELLS GAL-01, GAL-01R, GAL-02, GAL-03, GAL-05, GAL-16, GAL-19, AND GAL-20 WERE NOT LOCATED DURING APRIL 2011 WELL SURVEYING ACTIVITIES.

- ### REFERENCES
- 1.) BASE MAP TAKEN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR: GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, AND 2340 MONITORING WELLS.xls PROVIDED BY GEOD CORP.
  - 3.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 4.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.
  - 5.) RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - 6.) RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.

25 0 25 50  
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

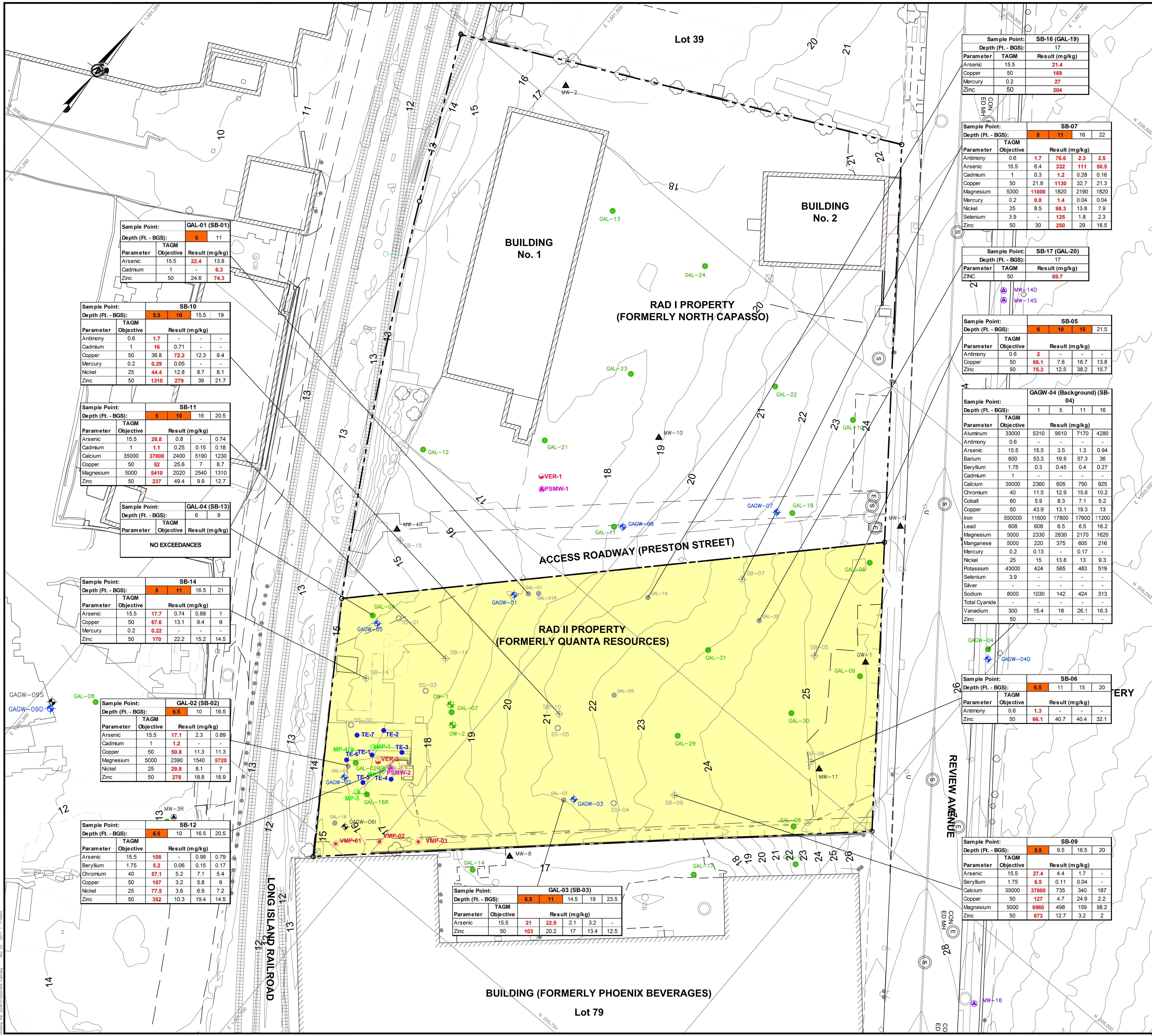
PROJECT: REVIEW AVENUE DEVELOPMENT BROWNFIELD CLEANUP PROGRAM REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089 QUEENS COUNTY, NEW YORK

TITLE: SUBSURFACE SOIL SVOC EXCEEDANCES NEW YORK STATE TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES FROM RI REPORT (JUNE 2005)

PROJECT No.	023-6151002	FILE No.	0236151002008
DESIGN	AGE 07/2011	SCALE	AS SHOWN
CADD	YPW 11/2011	REV.	0
CHECK	KGK 11/2011	FIGURE 8	
REVIEW	RES 11/2011		

Golder Associates Philadelphia USA





Sample Point: SB-16 (GAL-19)	
Depth (ft. - BGS):	Result (mg/kg)
17	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 21.4
Copper	50 169
Mercury	0.2 27
Zinc	50 204

Sample Point: SB-07	
Depth (ft. - BGS):	Result (mg/kg)
8 11 16 22	
Parameter TAGM Objective	Result (mg/kg)
Antimony	0.6 1.7 76.6 2.3 2.5
Arsenic	15.5 6.4 332 111 50.5
Cadmium	1 0.3 1.2 0.28 0.16
Copper	50 21.8 1130 32.7 21.3
Magnesium	5000 11800 1820 2190 1820
Mercury	0.2 0.8 1.4 0.04 0.04
Nickel	25 8.5 98.3 13.8 7.9
Selenium	3.9 - 125 1.8 2.3
Zinc	50 30 250 29 16.5

Sample Point: SB-17 (GAL-20)	
Depth (ft. - BGS):	Result (mg/kg)
17	
Parameter TAGM Objective	Result (mg/kg)
Zinc	50 69.7

Sample Point: SB-05	
Depth (ft. - BGS):	Result (mg/kg)
6 10 15 21.5	
Parameter TAGM Objective	Result (mg/kg)
Antimony	0.6 2 - - -
Copper	50 66.1 7.6 16.7 13.8
Zinc	50 75.3 12.5 38.2 15.7

Sample Point: GAGW-04 (Background) (SB-04)	
Depth (ft. - BGS):	Result (mg/kg)
1 5 11 16	
Parameter TAGM Objective	Result (mg/kg)
Aluminum	33000 5310 9510 7170 4280
Antimony	0.6 - - - -
Arsenic	15.5 15.5 3.5 1.3 0.94
Barium	600 53.3 19.9 57.3 36
Beryllium	1.75 0.3 0.45 0.4 0.27
Cadmium	1 - - - -
Calcium	35000 2360 605 750 925
Chromium	40 11.5 12.9 15.6 10.2
Cobalt	60 5.9 8.3 7.1 5.2
Copper	50 43.9 13.1 19.3 13
Iron	550000 11600 17800 17600 11200
Lead	608 608 6.5 6.5 16.2
Magnesium	5000 2330 2830 2170 1620
Manganese	5000 220 375 605 216
Mercury	0.2 0.13 - 0.17 -
Nickel	25 15 13.8 13 9.3
Potassium	43000 424 565 483 519
Selenium	3.9 - - - -
Silver	- - - - -
Sodium	8000 1030 142 424 313
Total Cyanide	- - - - -
Vanadium	300 15.4 18 26.1 16.3
Zinc	50 - - - -

Sample Point: SB-06	
Depth (ft. - BGS):	Result (mg/kg)
6.5 11 15 20	
Parameter TAGM Objective	Result (mg/kg)
Antimony	0.6 1.3 - - -
Zinc	50 66.1 40.7 40.4 32.1

Sample Point: SB-09	
Depth (ft. - BGS):	Result (mg/kg)
5.5 9.5 16.5 20	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 27.4 4.4 1.7 -
Beryllium	1.75 6.5 0.11 0.04 -
Calcium	35000 37800 735 340 187
Copper	50 127 4.7 24.9 2.2
Magnesium	5000 8960 498 159 88.2
Zinc	50 673 12.7 3.2 2

Sample Point: GAL-03 (SB-03)	
Depth (ft. - BGS):	Result (mg/kg)
6.5 11 14.5 19 23.5	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 21 22.9 2.1 3.2 -
Zinc	50 103 20.2 17 13.4 12.5

Sample Point: GAL-01 (SB-01)	
Depth (ft. - BGS):	Result (mg/kg)
5 11	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 22.4 6.3
Cadmium	1 - 6.3
Zinc	50 24.6 74.3

Sample Point: SB-10	
Depth (ft. - BGS):	Result (mg/kg)
5.5 10 15.5 19	
Parameter TAGM Objective	Result (mg/kg)
Antimony	0.6 1.7 - - -
Cadmium	1 16 0.71 - - -
Copper	50 36.8 72.2 12.3 9.4
Mercury	0.2 0.29 0.05 - - -
Nickel	25 44.4 12.8 8.7 8.1
Zinc	50 1310 279 39 21.7

Sample Point: SB-11	
Depth (ft. - BGS):	Result (mg/kg)
5 10 16 20.5	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 28.8 0.8 - 0.74
Cadmium	1 1.1 0.25 0.15 0.18
Calcium	35000 37000 2400 5190 1230
Copper	50 52 25.6 7 8.7
Magnesium	5000 5410 2020 2540 1310
Zinc	50 237 49.4 9.9 12.7

Sample Point: GAL-04 (SB-13)	
Depth (ft. - BGS):	Result (mg/kg)
6 9	
Parameter TAGM Objective	Result (mg/kg)
NO EXCEEDANCES	

Sample Point: SB-14	
Depth (ft. - BGS):	Result (mg/kg)
5 11 16.5 21	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 17.7 0.74 0.88 1
Copper	50 67.6 13.1 9.4 9
Mercury	0.2 0.22 - - -
Zinc	50 170 22.2 15.2 14.5

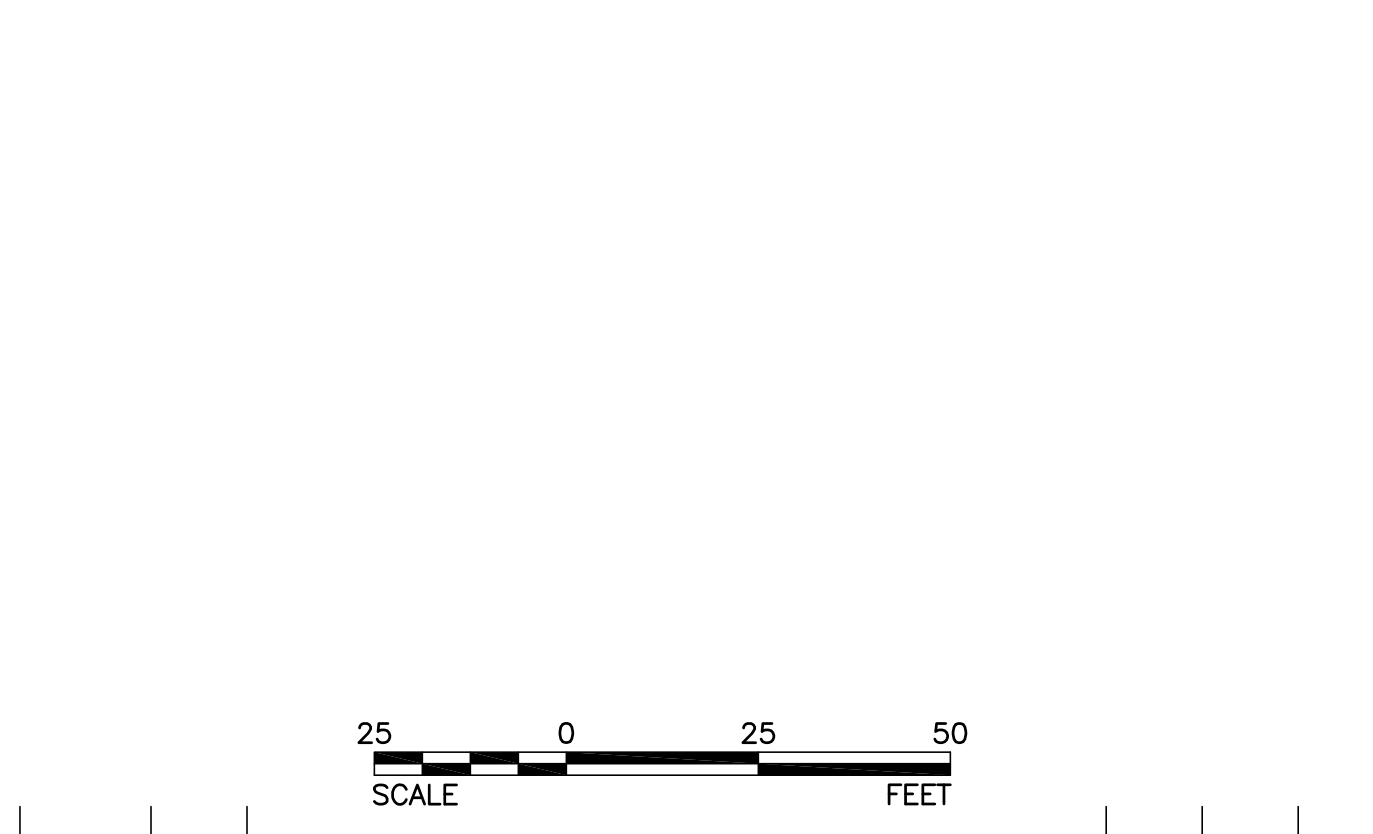
Sample Point: GAL-02 (SB-02)	
Depth (ft. - BGS):	Result (mg/kg)
6.5 10 16.5	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 17.1 2.3 0.89
Cadmium	1 1.2 - - -
Copper	50 50.8 11.3 11.3
Magnesium	5000 2390 1540 5720
Nickel	25 29.8 8.1 7
Zinc	50 278 18.8 16.9

Sample Point: SB-12	
Depth (ft. - BGS):	Result (mg/kg)
6.5 10 16.5 20.5	
Parameter TAGM Objective	Result (mg/kg)
Arsenic	15.5 108 - 0.98 0.79
Beryllium	1.75 5.2 0.06 0.15 0.17
Chromium	40 67.1 5.2 7.1 5.4
Copper	50 187 3.2 5.8 9
Nickel	25 77.5 3.6 6.9 7.2
Zinc	50 352 10.3 19.4 14.5

### LEGEND

- THERMAL ENHANCED (TE) UNIT FOR LNAPL PILOT TEST (GOLDER 2008)
- VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- TEMPERATURE AND VAPOR MONITORING POINT FOR LNAPL PILOT TEST (GOLDER 2008)
- VAPOR MONITORING POINT (GOLDER 2008)
- LNAPL MONITORING WELL (SEE NOTE 5)
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
- SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
- DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
- ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
- EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
- LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
- ▲ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 3 AND 4)
- CONCRETE SURVEY MONUMENT
- REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
- ++++ RAILROAD
- FENCE LINE
- 5 FOOT CONTOUR LINE (FT.-MSL)
- 1 FOOT CONTOUR LINE (FT.-MSL)
- EASEMENT
- INTERPRETED EXTENT OF SOIL EXCEEDING APPLICABLE STANDARD

- ### NOTES
- 1.) FT - MSL - FEET MEAN SEA LEVEL
  - 2.) FIGURE SHOWS SUBSURFACE SOIL EXCEEDANCES (RED) BASED ON COMPARISON OF REPORTED ANALYTICAL RESULTS TO THE NEW YORK STATE TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4046, RECOMMENDED SOIL CLEANUP OBJECTIVES AS DISCUSSED IN SECTION 4.2 OF THE DATA SUMMARY REPORT.
  - 3.) ALL RESULTS ARE SHOWN IN mg/kg (ppm).
  - 4.) THE TAGM 4046 SOIL OBJECTIVE FOR METALS IS THE LARGER OF THE NUMERIC VALUE IN TAGM 4046 TABLE 4 OR BACKGROUND. BACKGROUND IS EASTERN UNITED STATES/NEW YORK STATE BACKGROUND AS REPORTED IN TAGM #4046 OR AS IDENTIFIED IN SOIL SAMPLE GAGW-04 (BACKGROUND), IN WHICH EVER IS HIGHER.
  - 5.) LNAPL MONITORING WELLS GAL-01, GAL-01R, GAL-02, GAL-03, GAL-05, GAL-16, GAL-19, AND GAL-20 WERE NOT LOCATED DURING APRIL 2011 WELL SURVEYING ACTIVITIES.
- ### REFERENCES
- 1.) BASE MAP TAKEN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR: GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, AND 2340 MONITORING WELLS.xls PROVIDED BY GEOD CORP.
  - 3.) LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 4.) LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.
  - 5.) RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - 6.) RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

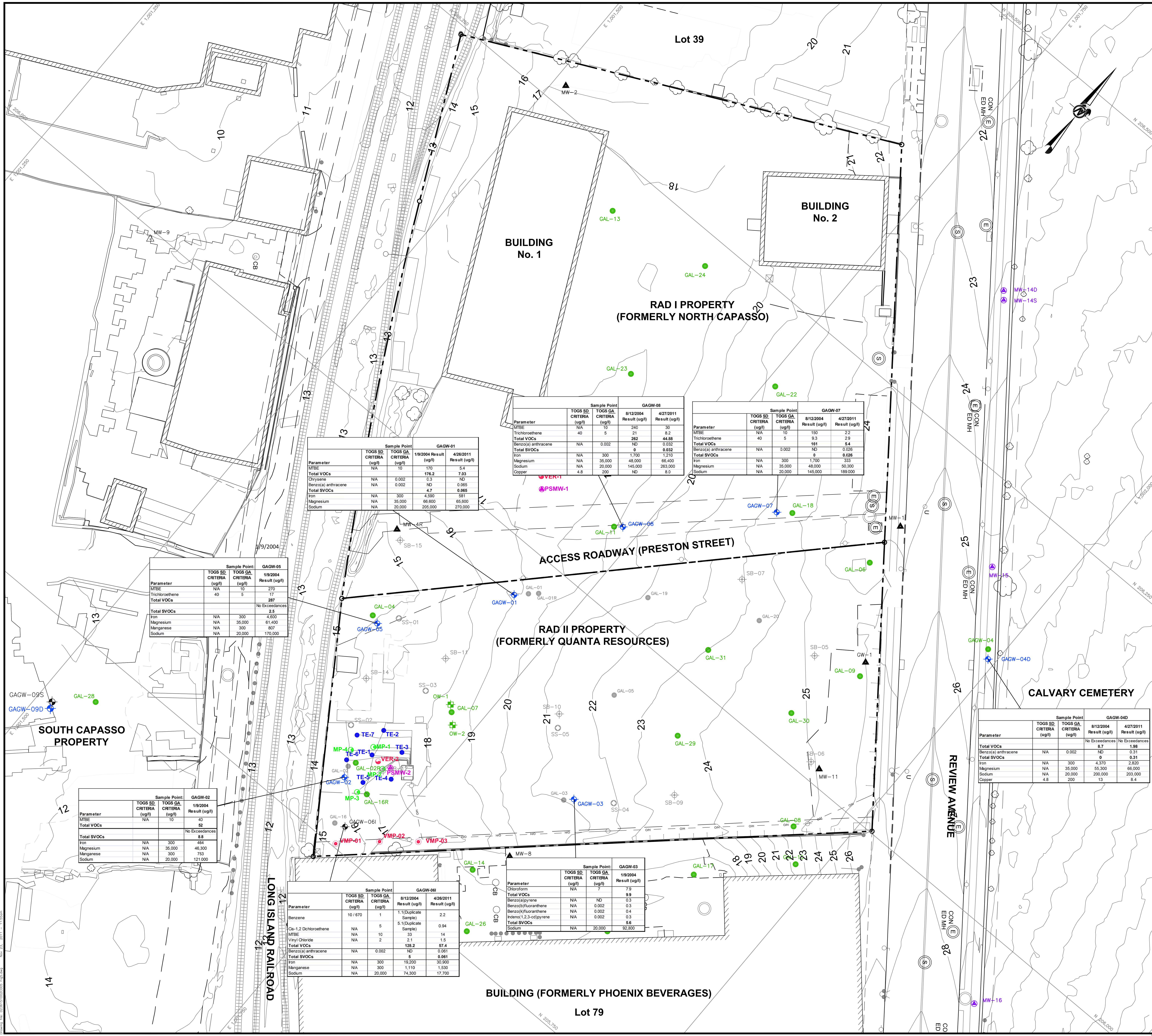
PROJECT: REVIEW AVENUE DEVELOPMENT BROWNFIELD CLEANUP PROGRAM REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089 QUEENS COUNTY, NEW YORK

TITLE: SUBSURFACE SOIL METALS EXCEEDANCES NEW YORK STATE TAGM 4046 RECOMMENDED SOIL CLEANUP OBJECTIVES FROM RI REPORT (JUNE 2005)

PROJECT No.	023-6151002	FILE No.	0236151002009
DESIGN	AGE	07/2011	SCALE AS SHOWN
CADD	YPW	11/2011	SCALE AS SHOWN
CHECK	KGK	11/2011	SCALE AS SHOWN
REVIEW	RES	11/2011	SCALE AS SHOWN

FIGURE 9



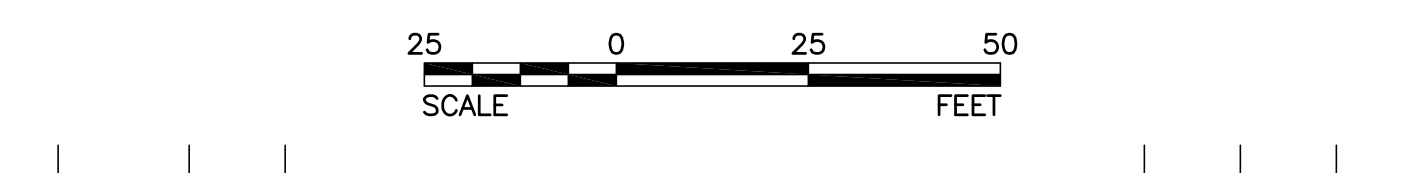


### LEGEND

- THERMAL ENHANCED (TE) UNIT FOR LNAPL PILOT TEST (GOLDER 2008)
- VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- TEMPERATURE AND VAPOR MONITORING POINT FOR LNAPL PILOT TEST (GOLDER 2008)
- VAPOR MONITORING POINT (GOLDER 2008)
- LNAPL MONITORING WELL (SEE NOTE 6)
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
- + SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
- + DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- + SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
- + ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
- ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
- ▲ EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
- + LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
- ▲ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCES 3 AND 4)
- CONCRETE SURVEY MONUMENT
- REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
- ++++ RAILROAD
- FENCE LINE
- 5 FOOT CONTOUR LINE (FT.-MSL)
- 1 FOOT CONTOUR LINE (FT.-MSL)
- EASEMENT

- ### NOTES
- FIGURE SHOWS GROUNDWATER QUALITY EXCEEDANCES BASED ON COMPARISON OF REPORTED ANALYTICAL RESULTS FROM SAMPLING EVENTS CONDUCTED IN JANUARY 2004 AND APRIL 2011 TO THE NEW YORK STATE TOGS 1.1.1 CLASS GA GROUNDWATER CRITERIA AND CLASS SD SURFACE WATER CRITERIA (WHERE APPLICABLE) (OCTOBER 1993, REVISED JUNE 1998 AND APRIL 2000 ADDENDUM).
  - ALL RESULTS ARE SHOWN IN UG/L (PPB).
  - THERE WERE NO DETECTIONS OF PCB'S.
  - FT-MSL - FEET MEAN SEA LEVEL.
  - ND - NOT DETECTED
  - LNAPL MONITORING WELLS GAL-01, GAL-01R, GAL-02, GAL-03, GAL-05, GAL-16, GAL-19, AND GAL-20 WERE NOT LOCATED DURING APRIL 2011 WELL SURVEYING ACTIVITIES.
  - N/A INDICATES NO PUBLISHED CRITERIA.

- ### REFERENCES
- BASE MAP TAKEN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR: GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, AND 2340 MONITORING WELLS.xls PROVIDED BY GEOD CORP.
  - LOCATION OF MW-9 DIGITIZED FROM HARD COPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - LOCATION OF MW-7 DIGITIZED FROM HARD COPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.
  - RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	R/W

PROJECT: REVIEW AVENUE DEVELOPMENT BROWNFIELD CLEANUP PROGRAM REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089 QUEENS COUNTY, NEW YORK

TITLE: **COMPARISON OF GROUNDWATER SAMPLING RESULTS TO THE NEW YORK STATE TOGS 1.1.1 CLASS GA AND CLASS SD CRITERIA**

PROJECT No.	023-6151002	FILE No.	02361510020005
DESIGN	AGE 07/2011	SCALE	AS SHOWN
CADD	YPW 11/2011		
CHECK	KGK 11/2011		
REVIEW	RES 11/2011		

**FIGURE 5**





**TABLE 2A**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

		Sample Point: Date Sampled: Lab ID:	GAGW-01 1/9/2004 493423			GAGW-01 4/26/2011 460-25807-2			GAGW-02 1/9/2004 493426			FGAGW-02 1/9/2004 493428			GAGW-03 1/9/2004 493424		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)															
			Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Acetone		50*	-	R	5	-	U	10	-	R	5	-	R	5	-	R	5
Benzene	10	1	-	U	1	-	U	1	-	U	1	-	U	1	-	U	1
Carbon Tetrachloride		5	-	U	2	-	U	1	-	U	2	-	U	2	0.6	JN	2
Chloroethane		5*	-	U	5	-	U	1	-	U	5	-	U	5	-	U	5
Chloroform		7	-	U	5	-	U	1	-	U	5	-	U	5	7.9		5
Cyclohexane			-	U	5	-	U	1	2.4		5	2.6	J	5	-	U	5
1,1-Dichloroethane		5	1	JN	5	0.23	U	1	-	U	5	-	U	5	-	U	5
cis-1,2-Dichloroethene		5	0.7	JN	5	-	U	1	-	U	5	-	U	5	-	U	5
Isopropylbenzene		5	-	U	5	-	U	1	-	U	5	-	U	5	-	U	5
Methyl Cyclohexane			-	U	5	-	U	1	9.6	J	5	9.9	J	5	-	U	5
MTBE		10	170		5	5.4		1	40		5	38		5	1.4	JN	5
Tetrachloroethene	1*	5	-	U	1	-	U	1	-	U	1	-	U	1	-	U	1
Toluene	6,000	5	-	U	5	-	U	1	-	U	5	-	U	5	-	U	5
Trichloroethene	40	5	4.5		1	1.4		1	-	U	1	-	U	1	-	U	1
Trichlorofluoromethane		5	-	U	5	-	U	1	-	U	5	-	U	5	-	U	5
Vinyl Chloride		2	-	U	5	-	U	1	-	U	5	-	U	5	-	U	5
Xylene (Total)	170*	5	-	U	5	-	U	3	-	U	5	1.7	JN	5	-	U	5
Total VOCs			176.2			7.03			52			52.2			9.9		

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

N indicates presumptive evidence of a compound

■ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard

Sample point identification number preceded by "F" is a field duplicate.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard

**TABLE 2A**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point: Date Sampled: Lab ID:		GAGW-04D 8/12/2004 554735	GAGW-04D 4/27/2011 460-25836-5			GAGW-05 1/9/2004 493425			GAGW-06I 8/12/2004 554731			FGAGW-06I 8/12/2004 554732			GAGW-06I 4/26/2011 460-25807-4					
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Acetone		50*	-	R	5	-	U	10	-	R	5	34	J	5	29	J	5	-	U	10
Benzene	10	1	-	U	1	-	U	1	-	U	2	1		1	1.1		1	2.2		1
Carbon Tetrachloride		5	-	U	2	0.67	J	1	-	U	4	-	UJ	2	-	UJ	2	-	U	1
Chloroethane		5*	-	U	5	-	U	1	-	U	10	4.9	J	5	4.2	J	5	4.7		1
Chloroform		7	6.8		5	1.1		1	-	U	10	2.4	J	5	2.7	J	5	-	U	1
Cyclohexane			-	U	5	-	U	1	-	U	10	15		5	16		5	19		1
1,1-Dichloroethane		5	-	U	5	-	U	1	-	U	10	1.6	J	5	1.5	J	5	0.43	J	1
cis-1,2-Dichloroethene		5	-	U	5	-	U	1	-	U	10	5		5	5.1		5	0.94	J	1
Isopropylbenzene		5	-	U	5	-	U	1	-	U	10	1.2	J	5	1.2	J	5	1.9		1
Methyl Cyclohexane			-	U	5	-	U	1	-	U	10	28		5	30		5	11		1
MTBE		10	1	J	5	0.21	J	1	270		10	33		5	32		5	14		1
Tetrachloroethene	1*	5	-	U	1	3.3		1	-	U	2	-	U	1	-	U	1	-	U	1
Toluene	6,000	5	0.9	J	5	-	U	1	-	U	10	-	U	5	-	U	5	0.43	J	1
Trichloroethene	40	5	-	U	1	-	U	1	17		2	-	U	1	-	U	1	-	U	1
Trichlorofluoromethane		5	-	U	5	3.5			-	U	10	-	U	5	-	U	5	-	U	1
Vinyl Chloride		2	-	U	5	-	U	1	-	U	10	2.1	J	5	2.1	J	5	1.5		1
Xylene (Total)	170*	5	-	U	5	-	U	3	-	U	10	-	U	5	-	U	5	1.3	J	3
Total VOCs			8.7			8.78			287			128.2			124.9			57.4		

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

N indicates presumptive evidence of a compound

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard

Sample point identification number preceded by "F" is a field duplicate.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard

Checked By: JWL 8/11/11



**TABLE 2A**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point: Date Sampled: Lab ID:			GAGW-07 8/12/2004 554734			GAGW-07 4/27/2011 460-25836-4			GAGW-08 8/12/2004 554733			GAGW-08 4/27/2011 460-25836-2			FGAGW-08 4/27/2011 460-25836-3		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Acetone		50*	-	R	5	-	U	10	-	R	5	-	U	10	-	U	10
Benzene	10	1	-	U	2	-	U	1	-	U	2	-	U	1	-	U	1
Carbon Tetrachloride		5	-	U	4	-	U	1	-	U	4	-	U	1	-	U	1
Chloroethane		5*	-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
Chloroform		7	1.7	J	10	0.18	J	1	-	U	10	-	U	1	-	U	1
Cyclohexane			-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
1,1-Dichloroethane		5	-	U	10	0.15	J	1	-	U	10	0.38	J	1	0.33	J	1
cis-1,2-Dichloroethene		5	-	U	10	-	U	1	1	J	10	3.3		1	3		1
Isopropylbenzene		5	-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
Methyl Cyclohexane			-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
MTBE		10	150		10	2.2		1	240		10	33		1	30		1
Tetrachloroethene	1*	5	-	U	2	-	U	1	-	U	2	-	U	1	-	U	1
Toluene	6,000	5	-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
Trichloroethene	40	5	9.3		2	2.9		1	21		2	8.2		1	7.7		1
Trichlorofluoromethane		5	-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
Vinyl Chloride		2	-	U	10	-	U	1	-	U	10	-	U	1	-	U	1
Xylene (Total)	170*	5	-	U	10	-	U	3	-	U	10	-	U	3	-	U	3
Total VOCs			161			5.43			262			44.88			41.03		

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"- " indicates that the constituent was not detected as qualified by "U " or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

N indicates presumptive evidence of a compound

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard

Sample point identification number preceded by "F" is a field duplicate.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard

**TABLE 2A**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point: Date Sampled: Lab ID:			GAGW-09S 10/17/2005 677998			FGAGW-09S 10/17/2005 677997			GAGW-09D 10/17/2005 677996		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
			Acetone		50*	8.2		5	7.4		5
Benzene	10	1	7.8		1	7.6		1	-	U	2
Carbon Tetrachloride		5	-	U	2	-	U	2	-	U	4
Chloroethane		5*	20		5	18		5	-	U	10
Chloroform		7	-	U	5	-	U	5	-	U	10
Cyclohexane			52		5	52		5	-	U	10
1,1-Dichloroethane		5	-	U	5	-	U	5	-	U	10
cis-1,2-Dichloroethene		5	-	U	5	-	U	5	-	U	10
Isopropylbenzene		5	3.1	J	5	3.2	J	5	-	U	10
Methyl Cyclohexane			68		5	68		5	-	U	10
MTBE		10	14		5	14		5	250		10
Tetrachloroethene	1*	5	-	U	1	-	U	1	-	U	2
Toluene	6,000	5	1.4	J	5	1.4	J	5	-	U	10
Trichloroethene	40	5	-	U	1	-	U	1	16		2
Trichlorofluoromethane		5	-	U	5	-	U	5	-	U	10
Vinyl Chloride		2	-	U	5	-	U	5	-	U	10
Xylene (Total)	170*	5	3.8	J	5	3.6	J	5	-	U	10
Total VOCs			178.3			175.2			266		

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

N indicates presumptive evidence of a compound

■ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard

Sample point identification number preceded by "F" is a field duplicate.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard

**TABLE 2B  
SUMMARY OF CHEMICAL DETECTIONS  
GROUNDWATER SAMPLE ANALYSES  
SEMI-VOLATILE ORGANIC COMPOUNDS  
REVIEW AVENUE DEVELOPMENT  
LONG ISLAND CITY, NEW YORK**

Parameter	Sample Point: Date Sampled: Lab ID:		GAGW-01 1/9/2004 493423			GAGW-01 4/26/2011 460-25807-2			GAGW-02 1/9/2004 493426			FGAGW-02 1/9/2004 493428			GAGW-03 1/9/2004 493424		
	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Acenaphthene	60	20	-	U	11	-	U	11	0.7	J	12	0.6	J	11	-	U	10
Anthracene		50	-	U	11	-	U	11	0.6	J	12	0.6	J	11	-	U	10
Benzo(a)anthracene		0.002	-	U	1.1	0.065		0.056	-	U	1.2	-	U	1.1	-	U	1
Benzo(a)pyrene	0.0006 <sup>+</sup>	0.0002 <sup>**</sup>	-	U	1.1	-	U	0.056	-	U	1.2	-	U	1.1	0.3	J	1
Benzo(b)fluoranthene		0.002 <sup>+</sup>	-	U	1.1	-	U	0.056	-	U	1.2	-	U	1.1	0.3	J	1
Benzo(g,h,i)perylene			-	U	11	-	U	11	-	U	12	-	U	11	0.6	J	10
Benzo(k)fluoranthene		0.002 <sup>+</sup>	-	U	1.1	-	U	1.1	-	U	1.2	-	U	1.1	0.4	J	1
bis(2-Ethylhexyl)phthalate		5	-	U	11	-	U	11	-	U	12	-	U	11	3.2	J	10
Chrysene		0.002 <sup>+</sup>	0.3	J	11	-	U	11	-	U	12	-	U	11	-	U	10
Di-n-butylphthalate		50	3	J	11	-	U	11	3.2	J	12	3	J	11	-	U	10
Dibenz(a,h)anthracene			-	U	1.1	-	U	1.1	-	U	1.2	-	U	1.1	0.5	J	1
Fluoranthene		50	0.3	J	11	-	U	11	0.3	J	12	0.3	J	11	-	U	10
Fluorene	23 <sup>+</sup>	50 <sup>+</sup>	-	U	1.1	-	U	11	0.7	J	12	0.6	J	11	-	U	1
Hexachlorobenzene	0.00003	0.04	-	U	1.1	-	U	0.022	-	U	1.2	-	U	1.1	-	U	1
Indeno(1,2,3-cd)pyrene		0.002 <sup>+</sup>	-	U	1.1	-	U	11	-	U	1.2	-	U	1.1	0.3	J	1
2-Methylnaphthalene	38 <sup>+</sup>	5	-	U	1.1	-	U	11	0.9	J	12	0.8	J	11	-	U	1
Naphthalene	140 <sup>+</sup>	10 <sup>+</sup>	-	U	11	-	U	11	-	U	12	-	U	11	-	U	10
Pentachlorophenol		1 <sup>+</sup>	-	U	11	-	U	0.22	-	U	12	-	U	11	-	U	10
Phenanthrene	14 <sup>+</sup>	50 <sup>+</sup>	0.3	J	11	-	U	11	1.6	J	12	1.5	J	11	-	U	10
Pyrene		50 <sup>+</sup>	0.8	J	11	-	U	11	0.8	J	12	0.8	J	11	-	U	10
Total SVOCs			4.7			0.065			8.8			8.2			5.6		

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Total phenolic compounds

Sample point identification number preceded by "F" is a field duplicate.

\*\* Practical quantification limit for constituent in water.

+ Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard.



**TABLE 2B**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**SEMI-VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Parameter	TOGS 1.1.1 SD Criteria/ Guidance (Surface Water)	TOGS 1.1.1 GA Criteria (Ground water)	Sample Point: Date Sampled: Lab ID:			GAGW-04D 8/12/2004 554735			GAGW-04D 4/27/2011 460-25836-5			GAGW-05 1/9/2004 493425			GAGW-06I 8/12/2004 554731			FGAGW-06I 8/12/2004 554732			GAGW-06I 4/26/2011 460-25807-4		
			Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL			
Acenaphthene	NA/60	20	-	U	10	-	U	11	-	U	10	1	J	10	1.4	J	11	-	U	10			
Anthracene		50	-	U	10	-	U	11	-	U	10	0.6	J	10	0.8	J	11	-	U	10			
Benzo(a)anthracene		0.002	-	U	1	0.031	J	0.053	-	U	1	-	U	1	-	U	1.1	0.061		0.051			
Benzo(a)pyrene	NA/0.0006	0.0	-	U	1	-	U	0.053	-	U	1	-	U	1	-	U	1.1	-	U	0.051			
Benzo(b)fluoranthene		0.002	-	U	1	-	U	0.053	-	U	1	-	U	1	-	U	1.1	-	U	0.051			
Benzo(g,h,i)perylene			-	U	10	-	U	11	-	U	10	-	U	10	-	U	11	-	U	10			
Benzo(k)fluoranthene		0.002	-	U	1	-	U	1.1	-	U	1	-	U	1	-	U	1.1	-	U	1			
bis(2-Ethylhexyl)phthalate		5	-	U	10	-	U	11	-	U	10	-	U	10	-	U	11	-	U	10			
Chrysene		0.002	-	U	10	-	U	11	-	U	10	-	U	10	-	U	11	-	U	10			
Di-n-butylphthalate		50	-	U	10	-	U	11	2.2	J	10	-	U	10	-	U	11	-	U	10			
Dibenz(a,h)anthracene			-	U	1	-	U	1.1	-	U	1	-	U	1	-	U	1.1	-	U	1			
Fluoranthene		50	-	U	10	-	U	11	-	U	10	-	U	10	-	U	11	-	U	10			
Fluorene	NA/23	50	-	U	1	-	U	11	-	U	1	0.9	J	10	1.1	J	11	-	U	10			
Hexachlorobenzene	0.00003	0.04	-	U	1	0.032	J	0.021	-	U	1	-	U	1	-	U	1.1	-	U	0.02			
Indeno(1,2,3-cd)pyrene		0.002	-	U	1	-	U	1.1	-	U	1	-	U	1	-	U	1.1	-	U	1			
2-Methylnaphthalene	NA/38		-	U	1	-	U	11	-	U	1	0.2	J	10	-	U	1.1	-	U	10			
Naphthalene	NA/140	10	-	U	10	-	U	11	-	U	10	-	U	10	0.4	J	11	-	U	10			
Pentachlorophenol		2 *	-	U	10	-	U	0.21	-	U	10	-	U	10	0.2	J	42	-	U	0.2			
Phenanthrene	NA/14	50	-	U	10	-	U	11	0.3	J	10	1.9	J	10	2.2	J	11	-	U	10			
Pyrene		50	-	U	10	-	U	11	-	U	10	0.4	J	10	0.4	J	11	-	U	10			
Total SVOCs			0			0.063			2.5			5			6.5			0.061					

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U " or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Total phenolic compounds

Sample point identification number preceded by "F" is a field duplicate.

\*\* Practical quantification limit for constituent in water.

+ Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard.

Checked By: JWL 8/11/11

**TABLE 2B**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**SEMI-VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Parameter	TOGS 1.1.1 SD Criteria/ Guidance (Surface Water)	TOGS 1.1.1 GA Criteria (Ground water)	Sample Point: Date Sampled: Lab ID:			GAGW-07 8/12/2004 554734			GAGW-07 4/27/2011 460-25836-4			GAGW-08 8/12/2004 554733			GAGW-08 4/27/2011 460-25836-2			FGAGW-08 4/27/2011 460-25836-2		
			Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL			
Acenaphthene	NA/60	20	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Anthracene		50	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Benzo(a)anthracene		0.002				0.026	J	0.051				0.032	J	0.052	-	U	0.051			
Benzo(a)pyrene	NA/0.0006	0.0	-	U	1	-	U	0.051	-	U	1	-	U	0.052	-	U	0.051			
Benzo(b)fluoranthene		0.002	-	U	1	-	U	0.051	-	U	1	-	U	0.052	-	U	0.051			
Benzo(g,h,i)perylene			-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Benzo(k)fluoranthene		0.002	-	U	1	-	U	1	-	U	1	-	U	1	-	U	1			
bis(2-Ethylhexyl)phthalate		5	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Chrysene		0.002	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Di-n-butylphthalate		50	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Dibenz(a,h)anthracene			-	U	1	-	U	1	-	U	1	-	U	1	-	U	1			
Fluoranthene		50	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Fluorene	NA/23	50	-	U	1	-	U	10	-	U	1	-	U	10	-	U	10			
Hexachlorobenzene	0.00003	0.04	-	U	1	0.022	U	0.02	-	U	1	0.026	U	0.021	0.02	U	0.2			
Indeno(1,2,3-cd)pyrene		0.002	-	U	1	-	U	1	-	U	1	-	U	1	-	U	1			
2-Methylnaphthalene	NA/38		-	U	1	-	U	10	-	U	1	-	U	10	-	U	10			
Naphthalene	NA/140	10	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Pentachlorophenol		2 *	-	U	10	-	U	0.2	-	U	10	-	U	0.21	-	U	0.2			
Phenanthrene	NA/14	50	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Pyrene		50	-	U	10	-	U	10	-	U	10	-	U	10	-	U	10			
Total SVOCs			0			0.048			0			0.058			0.02					

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Total phenolic compounds

Sample point identification number preceded by "F" is a field duplicate.

\*\* Practical quantification limit for constituent in water.

+ Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard.

**TABLE 2B**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**SEMI-VOLATILE ORGANIC COMPOUNDS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Parameter	TOGS 1.1.1 SD Criteria/ Guidance (Surface Water)	TOGS 1.1.1 GA Criteria (Ground water)	Sample Point: Date Sampled: Lab ID:			GAGW-09S 10/17/2005 677998			FGAGW-09S 10/17/2005 677997			GAGW-09D 10/17/2005 677996		
			Result	Qual	RL	Result	Qual	RL	Result	Qual	RL			
Acenaphthene	NA/60	20	3	J	10	3.3	J	10	-	U	10			
Anthracene		50	0.9	J	10	0.9	J	10	-	U	10			
Benzo(a)anthracene		0.002	-	U	1	-	U	1	-	U	1			
Benzo(a)pyrene	NA/0.0006	0.0	-	U	1	-	U	1	-	U	1			
Benzo(b)fluoranthene		0.002	-	U	1	-	U	1	-	U	1			
Benzo(g,h,i)perylene			-	U	10	-	U	10	-	U	10			
Benzo(k)fluoranthene		0.002	-	U	1	-	U	1	-	U	1			
bis(2-Ethylhexyl)phthalate		5	-	U	10	-	U	10	-	U	10			
Chrysene		0.002	-	U	10	-	U	10	-	U	10			
Di-n-butylphthalate		50	-	U	10	-	U	10	-	U	10			
Dibenz(a,h)anthracene			-	U	1	-	U	1	-	U	1			
Fluoranthene		50	-	U	10	-	U	10	-	U	10			
Fluorene	NA/23	50	2.3	J	10	2.5	J	10	-	U	10			
Hexachlorobenzene	0.00003	0.04	-	U	1	-	U	1	-	U	1			
Indeno(1,2,3-cd)pyrene		0.002	-	U	1	-	U	1	-	U	1			
2-Methylnaphthalene	NA/38		2	J	10	1.9	J	10	-	U	10			
Naphthalene	NA/140	10	1.2	J	10	0.9	J	10	-	U	10			
Pentachlorophenol		2 *	-	U	42	-	U	40	-	U	42			
Phenanthrene	NA/14	50	2.1	J	10	2.4	J	10	-	U	10			
Pyrene		50	-	U	10	1.1	J	10	-	U	10			
Total SVOCs			11.5			13			0					

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical &amp; Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

J indicates a laboratory approximated value.

■ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Total phenolic compounds

Sample point identification number preceded by "F" is a field duplicate.

\*\* Practical quantification limit for constituent in water.

+ Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard.

**TABLE 2C**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**POLYCHLORINATED BIPHENOLS (PCBs)**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point:			GAGW-01			GAGW-01			GAGW-02			FGAGW-02			GAGW-03		
Date Sampled:			1/9/2004			4/26/2011			1/9/2004			1/9/2004			1/9/2004		
Lab ID:			493423			460-25807-2			493426			493428			493424		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
	Aroclor-1016	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U
Aroclor-1221	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5
Aroclor-1232	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5
Aroclor-1242	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5
Aroclor-1248	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5
Aroclor-1254	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5
Aroclor-1260	0.00012*	0.09*	-	U	0.56	-	U	0.51	-	U	0.52	-	U	0.52	-	U	0.5

**There were no detections of PCBs**

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical & Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

Sample point identification number preceded by "F" is a field duplicate.

\* Applies to total PCBs.

**TABLE 2C**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**POLYCHLORINATED BIPHENOLS (PCBs)**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point: Date Sampled: Lab ID:			GAGW-04D 8/12/2004 554735			GAGW-04D 4/27/2011 460-25836-5			GAGW-05 1/9/2004 493425			GAGW-06I 8/12/2004 554731			FGAGW-06I 8/12/2004 554732			GAGW-06I 4/26/2011 460-25807-4		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result			Result			Result			Result			Result			Result		
			Qual	RL	Qual	RL	Qual	RL	Qual	RL	Qual	RL	Qual	RL	Qual	RL	Qual	RL		
Aroclor-1016	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1221	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1232	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1242	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1248	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1254	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51
Aroclor-1260	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.5	-	U	0.51	-	U	0.51

**There were no detections of PCBs**

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical & Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

Sample point identification number preceded by "F" is a field duplicate.

\* Applies to total PCBs.



**TABLE 2C  
SUMMARY OF CHEMICAL DETECTIONS  
GROUNDWATER SAMPLE ANALYSES  
POLYCHLORINATED BIPHENOLS (PCBs)  
REVIEW AVENUE DEVELOPMENT  
LONG ISLAND CITY, NEW YORK**

Sample Point: Date Sampled: Lab ID:			GAGW-07 8/12/2004 554734			GAGW-07 4/27/2011 460-25836-4			GAGW-08 8/12/2004 554733			GAGW-08 4/27/2011 460-25836-2			FGAGW-08 4/27/2011 460-25836-2		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
			Aroclor-1016	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52
Aroclor-1221	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51
Aroclor-1232	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51
Aroclor-1242	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51
Aroclor-1248	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51
Aroclor-1254	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51
Aroclor-1260	0.00012*	0.09*	-	U	0.5	-	U	0.51	-	U	0.5	-	U	0.52	-	U	0.51

**There were no detections of PCBs**

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical & Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U" or "UJ".

RL indicates reporting limit.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

Sample point identification number preceded by "F" is a field duplicate.

\* Applies to total PCBs.

**TABLE 2C**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**POLYCHLORINATED BIPHENOLS (PCBs)**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Sample Point:			GAGW-09S			FGAGW-09S			GAGW-09D		
Date Sampled:			10/17/2005			10/17/2005			10/17/2005		
Lab ID:			677998			677997			677996		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
	Aroclor-1016	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U
Aroclor-1221	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5
Aroclor-1232	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5
Aroclor-1242	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5
Aroclor-1248	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5
Aroclor-1254	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5
Aroclor-1260	0.00012*	0.09*	-	U	0.5	-	U	0.5	-	U	0.5

**There were no detections of PCBs**

**Notes:**

All units are µg / L.

TOGS 1.1.1 = New York Division of Water Technical & Operational Guidance Series

"-" indicates that the constituent was not detected as qualified by "U " or "UJ".

RL indicates reporting limit.

█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

Sample point identification number preceded by "F" is a field duplicate.

\* Applies to total PCBs.

**TABLE 2D**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**METALS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Parameter	Sample Point: Date Sampled: Lab ID:		GAGW-01 1/9/2004 493423			GAGW-01 4/26/2011 460-25807-2			GAGW-02 1/9/2004 493426			FGAGW-02 1/9/2004 493428		
	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Aluminum			103	B	63	247		50	140	B	63	135	B	63
Arsenic	120	25	7		3	-	U	2.5	-	U	3.2	-	U	3.2
Barium		1,000	60	B	2	82		5	141	B	2	142	B	2
Calcium			19,800		43	195,000		250	147,000		43	146,000		43
Chromium		50	-	U	1.6	-	U	5	-	U	1.6	-	U	1.6
Copper	4.8	200	-	U	3.7	-	U	5	-	U	3.7	-	U	3.7
Iron		300	4,590		39	581		150	464		39	421		39
Lead	204	25	-	U	2.3	1.4	J	1.5	3		2	-	U	2.3
Magnesium		35,000*	66,600		42	65,600		250	46,300		42	46,000		42
Manganese		300	277		1	187		10	753		1	749		1
Nickel	74	100	3	B	2	-	U	5	5	B	2	4	B	2
Potassium			4,850	B	315	5,050		250	2,970	B	315	2,990	B	315
Selenium		10	-	U	4.2	2	J	2.5	-	U	4.2	-	U	4.2
Sodium		20,000	205,000		396	270,000		250	121,000		396	122,000		396
Vanadium			-	U	1.8	4.4	J	5	-	U	1.8	4	B	2
Zinc	95	2,000*	7	B	6	-	U	20	10	B	6	10	B	6

**Notes:**

All units are µg / L.

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"-" indicates that the constituent was not detected as qualified by "U" or "UU".

RL indicates reporting limit.

J indicates a laboratory approximated value.

B indicates the analyte was found in the laboratory blank as well as the sample.

indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard

Sample point identification number preceded by "F" is a field duplicate.

**TABLE 2D**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**METALS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

		Sample Point: Date Sampled: Lab ID:	GAGW-03 1/9/2004 493424			GAGW-04D 8/12/2004 554735			GAGW-04D 4/27/2011 460-25836-5			GAGW-05 1/9/2004 493425			GAGW-06I 8/12/2004 554731		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Aluminum			123	B	63	2,140		63	1,350		50	79	B	63	-	U	0.5
Arsenic	120	25	-	U	3.2	-	U	3.2	-	U	2.5	-	U	3.2	-	U	3.2
Barium		1,000	72	B	2	146	B	2	128		5	80	B	2	165	B	2
Calcium			80,400		43	144,000	B	43	162,000		250	189,000		43	56,200		43
Chromium		50	-	U	1.6	7	B	2	18.4		5	-	U	1.6	-	U	1.6
Copper	4.8	200	4	B	4	13	B	4	8.4		5	-	U	3.7	-	U	3.7
Iron		300	266		39	4,370		39	2,820		150	4,600		39	19,200		39
Lead	204	25	-	U	2.3	6		3	4.2		1.5	-	U	2.3	-	U	2.6
Magnesium		35,000*	25,500		42	55,300		42	66,000		250	61,400		42	17,700		42
Manganese		300	104		1	235		1	136		10	807		1	1,110		1
Nickel	74	100	2	B	2	9	B	2	11.9		5	3	B	2	3	B	2
Potassium			3,150	B	315	4,040	B	315	3,760		250	3,440	B	315	7,090		315
Selenium		10	-	U	4.2	-	U	4.2	4.8	U	2.5	-	U	4.2	-	U	2.5
Sodium		20,000	92,800		396	200,000		396	203,000		250	170,000		396	74,300		396
Vanadium			-	U	1.8	2	B	2	-	U	5	-	U	1.8	-	U	2
Zinc	95	2,000*	10	B	6	27	B	6	17.8	J	20	7	B	6	9	B	6

**Notes:**

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indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

\* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard  
Sample point identification number preceded by "F" is a field duplicate.

**TABLE 2D  
SUMMARY OF CHEMICAL DETECTIONS  
GROUNDWATER SAMPLE ANALYSES  
METALS  
REVIEW AVENUE DEVELOPMENT  
LONG ISLAND CITY, NEW YORK**

Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Sample Point: FGAGW-06I			GAGW-06I			GAGW-07			GAGW-07			GAGW-08			GAGW-08		
			Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Aluminum			-	U	0.51	160		50	722		63	244		50	-	U	0.5	542		50
Arsenic	120	25	-	U	3.2	4.7		2.5	-	U	3.2	-	U	2.5	-	U	3.2	4.1		2.5
Barium		1,000	153	B	2	200		5	127	B	2	81.7		5	44	B	2	26.7		5
Calcium			50,200		43	101,000		250	148,000		43	156,000		250	196,000		43	200,000		250
Chromium		50	-	U	1.6	-	U	5	4	B	2	-	U	5	-	U	1.6	-	U	5
Copper	4.8	200	-	U	3.7	-	U	5	-	U	3.7	-	U	5	-	U	3.7	7.2		5
Iron		300	16,300		39	30,900		150	1,700		39	333		150	74	B	39	1,210		150
Lead	204	25	-	U	2.6	1.5		1.5	4		3	-	U	1.5	-	U	2.6	2.8		1.5
Magnesium		35,000*	15,900		42	25,300		250	48,000		42	50,000		250	63,100		42	66,400		250
Manganese		300	1,010		1	1,530		10	106		1	42.8		10	207		1	236		10
Nickel	74	100	3	B	2	-	U	5	6	B	2	-	U	5	4	B	2	-	U	5
Potassium			7,400		315	5,200		250	3,850	B	315	3,950		250	4,110	B	315	4,370		250
Selenium		10	-	U	4.2	-	U	2.5	-	U	4.2	4.1		2.5	-	U	4.2	-	U	2.5
Sodium		20,000	81,900		396	17,700		250	145,000		396	189,000		250	213,000		396	263,000		250
Vanadium			-	U	2	-	U	5	-	U	2	-	U	5	-	U	2	-	U	5
Zinc	95	2,000*	10	B	6	37		20	18	B	6	-	U	20	7	B	6	49.6		20

**Notes:**

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 J indicates a laboratory approximated value.  
 B indicates the analyte was found in the laboratory blank as well as the sample.  
 indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.  
 \* Guidance level in TOGS 1.1.1 for SD or GA water classification in absence of a standard  
 Sample point identification number preceded by "F" is a field duplicate.

**TABLE 2D**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**METALS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

		Sample Point: Date Sampled: Lab ID:	FGAGW-08 4/27/2011 460-25836-3			GAGW-09S 10/17/2005 677998			FGAGW-09S 10/17/2005 677997			GAGW-09D 10/17/2005 677996		
Parameter	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Standard (Drinking water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Aluminum			605		50	3,390		62.6	1,710		62.6	92.7	B	62.6
Arsenic	120	25	4.2		2.5	16.6		3.2	17		3.2	-	U	3.2
Barium		1,000	28.7		5	164	B	1.7	152	B	1.7	92.1	B	1.7
Calcium			200,000		250	67,100		42.5	65,700		42.5	159,000		42.5
Chromium		50	3.8	J	5	6.2	B	1.6	2.1	B	1.6	-	U	1.6
Copper	4.8	200	8		5	9.6	B	3.7	6.6	B	3.7	5.5	B	3.7
Iron		300	1,440		150	28,900		39.2	24,900		39.2	631		39.2
Lead	204	25	3.2		1.5	4.9		2.7	3.7		2.7	-	U	2.7
Magnesium		35,000*	66,200		250	24,900		41.6	23,900		41.6	52,900		41.6
Manganese		300	241		10	1,020		1.2	977		1.2	1,040		1.2
Nickel	74	100	-	U	5	9.8	B	2.4	6.2	B	2.4	4.4	B	2.4
Potassium			4,490		250	19,700		315	18,800		315	4,980	B	315
Selenium		10	1.9	J	2.5	-	U	4.2	-	U	4.2	-	U	4.2
Sodium		20,000	261,000		250	43,400		396	43,200		396	172,000		396
Vanadium			-	U	5	9.8	B	4.7	-		4.7	-	U	4.7
Zinc	95	2,000*	54.8		20	26	B	5.8	21.3	B	5.8	7.9	B	5.8

**Notes:**

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█ indicates that detected value is greater than the NYS TOGS 1.1.1 SD Standard.

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Sample point identification number preceded by "F" is a field duplicate.



**TABLE 2E**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**NATURAL ATTENUATION PARAMETERS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

Parameter	Units	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Drinking (Ground water)	Sample Point: Date Sampled: Lab ID:			GAGW-01 1/9/2004 493423			GAGW-01 4/26/2011 460-25807-2			GAGW-02 1/9/2004 493426			FGAGW-02 1/9/2004 493428			GAGW-03 1/9/2004 493424		
				Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL			
Alkalinity	mg/L			381		5	374		5	401		5	391		5	258		5			
Carbon Dioxide	mg/L			63		5	37.7	HF	5	54.1		5	39.1		5	10		5			
Chloride	mg/L		250	500	J	5				262	J	5	263	J	5	100	J	5			
Dissolved Organic Carbon	mg/L			-	R	1	1.9		1	-	R	1	-	R	1	-	R	1			
Ethane	ng/L			130		5	25		25	350		5	360		5	410		5			
Ethene	ng/L			170		5	44		25	58		5	63		5	380		5			
Methane	µg/L			8.5		0.015	6		0.1	590		0.02	640		0.02	1.8		0.02			
Nitrate	mg/L		10	1.5		0.1	4.8		0.4	4.2		0.1	4.1		0.1	7.9		0.1			
Nitrite	mg/L		10																		
Sulfate	mg/L		250	186		5	136		25	83		5	82.7		5	101		5			
Total Dissolved Solids	mg/L			1,540		10				1,030		10	1,020		10	619		10			
Total Organic Carbon	mg/L			-	R	1	1.3		1	-	R	1	-	R	1	-	R	1			

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HF indicates a field parameter with a holding time of 15 minutes

**TABLE 2E  
SUMMARY OF CHEMICAL DETECTIONS  
GROUNDWATER SAMPLE ANALYSES  
NATURAL ATTENUATION PARAMETERS  
REVIEW AVENUE DEVELOPMENT  
LONG ISLAND CITY, NEW YORK**

		Sample Point:		GAGW-04D			GAGW-04D			GAGW-05			GAGW-06I			FGAGW-06I			GAGW-06I		
		Date Sampled:		8/12/2004			4/27/2011			1/9/2004			8/12/2004			8/12/2004			4/26/2011		
		Lab ID:		554735			460-25836-5			493425			554731			554732			460-25807-4		
Parameter	Units	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Drinking (Ground water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
				Alkalinity	mg/L			306		5	321		5	350		5	326		5	321	
Carbon Dioxide	mg/L			42.3	J	5	34.2	HF	5	40		5	92	J	5	86.5	J	5	259	HF	5
Chloride	mg/L		250	402		5				431	J	5	34.6		5	34.3		5			
Dissolved Organic Carbon	mg/L			2.2		1	1.1		1	-	R	1	6.1		1	5.8		1	1.9		1
Ethane	ng/L			360		5	9.4	J	25	96		5	390		5	510		5	3,100		25
Ethene	ng/L			280		5	130		25	88		5	210		5	280		5	250		25
Methane	µg/L			2.3		0.02	0.45		0.1	1.6		0.02	5,000		0.02	4,800		0.02	14,000		0.1
Nitrate	mg/L		10	6.7		0.1	8.5		0.5	2.9		0.1	-	U	0.1	-	U	0.1	-	U	0.1
Nitrite	mg/L		10				0.03	J	0.1												
Sulfate	mg/L		250	126		5	105	B	25	145		5	53.5		5	58.3		5	-	U	5
Total Dissolved Solids	mg/L			1,070		10				1,290		10	574		10	544		10			
Total Organic Carbon	mg/L			2.3		1	1.2		1	-	R	1	6.0		1	6.3		1	16.9		1

**Notes:**

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HF indicates a field parameter with a holding time of 15 minutes

**TABLE 2E  
SUMMARY OF CHEMICAL DETECTIONS  
GROUNDWATER SAMPLE ANALYSES  
NATURAL ATTENUATION PARAMETERS  
REVIEW AVENUE DEVELOPMENT  
LONG ISLAND CITY, NEW YORK**

		Sample Point:		GAGW-07			GAGW-07			GAGW-08			GAGW-08			FGAGW-08		
		Date Sampled:		8/12/2004			4/27/2011			8/12/2004			4/27/2011			4/27/2011		
		Lab ID:		554734			460-25836-4			554733			460-25836-2			460-25836-3		
Parameter	Units	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Drinking (Ground water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Alkalinity	mg/L			326		5	336		5	372		5	398		5	391		5
Carbon Dioxide	mg/L			35.8	J	5	38.9	HF	5	52.6	J	5	109	HF	5	70.8	HF	5
Chloride	mg/L		250	277		5				452		5						
Dissolved Organic Carbon	mg/L			-	U	1	1.3		1	1.4		1	1.7		1	1.6		1
Ethane	ng/L			160		5	26		25	140		5	19	J	25	21	J	25
Ethene	ng/L			140		5	49		25	66		5	94		25	66		25
Methane	µg/L			3.1		0.015	0.44		0.1	4.2		0.015	2		0.1	1.8		0.1
Nitrate	mg/L		10	6		0.1	7.6		0.1	4.4		0.1	5.2		0.4	5.2		0.4
Nitrite	mg/L		10				0.022	J	0.1				0.052	J	0.1	0.052	J	0.1
Sulfate	mg/L		250	126		5	76	B	20	167		5	132	B	25	130	B	25
Total Dissolved Solids	mg/L			1,304		10				1,890		10						
Total Organic Carbon	mg/L			1.2		1	1.2		1	1.5		1	1.6		1	1.4		1

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Sample point identification number preceded by "F" is a field duplicate.

HF indicates a field parameter with a holding time of 15 minutes



**TABLE 2E**  
**SUMMARY OF CHEMICAL DETECTIONS**  
**GROUNDWATER SAMPLE ANALYSES**  
**NATURAL ATTENUATION PARAMETERS**  
**REVIEW AVENUE DEVELOPMENT**  
**LONG ISLAND CITY, NEW YORK**

		Sample Point:		GAGW-09S			FGAGW-09S			GAGW-09D		
		Date Sampled:		10/17/2005			10/17/2005			10/17/2005		
		Lab ID:		677998			677997			677996		
Parameter	Units	TOGS 1.1.1 SD Standard (Saline Water)	TOGS 1.1.1 GA Drinking (Ground water)	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL
Alkalinity	mg/L			377		5	370		5	368		5
Carbon Dioxide	mg/L											
Chloride	mg/L		250	35.7		5	33.8		5	358		5
Dissolved Organic Carbon	mg/L											
Ethane	ng/L											
Ethene	ng/L											
Methane	µg/L											
Nitrate	mg/L		10	-	U	0.1	-	U	0.1	5.1		0.1
Nitrite	mg/L		10									
Sulfate	mg/L		250	-	U	5	-	U	5	128		5
Total Dissolved Solids	mg/L			383		10	426		10	750		10
Total Organic Carbon	mg/L			13.4		1	13.2		1	1.3		1

**Notes:**

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RL indicates reporting limit.

J indicates a laboratory approximated value.

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**TABLE 3**  
**SUMMARY OF PHYSICAL CHARACTERISTICS**  
**LNAPL SAMPLE ANALYSES**  
**REVIEW AVENUE DEVELOPMENT**  
**37-80 AND 37-30 REVIEW AVENUE**  
**LONG ISLAND CITY, NEW YORK**

		RAD II WELLS							
Sample Point:		GAGW-04 *	GAL-01	GAL-01R	(duplicate)	GAL-02	GAL-03	GAL-04	GAL-05
Date Sampled:		12/17/2003	11/18/2003	7/16/2004	7/16/2004	11/18/2003	11/18/2003	11/25/2003	11/19/2003
Lab ID:		488619	481266	547612	547613	481265	481942	483777	481943
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
% Sediments	wt %	10	0.4	0.34	0.8	0.3	0.05	0.2	0.05
% Sulfur	wt %	0.329	0.274	0.323	0.323	0.274	0.416	0.234	0.38
BTU/TOT	BTU/TOT	19155	19457	19416	19421	19586	19305	19377	19411
Flashpoint	deg F	281	201	180	189	280	302	224	277
Interfacial Tension/TOT	dynes/cm	32.55	28.59	12.68	17.85	32.97	31.07	30.5	30.24
Specific Gravity	g/cm <sup>3</sup>	0.899	0.885	0.891	0.894	0.899	0.899	0.892	0.897
Surface Tension/TOT	dynes/cm	38	38.5	33	35.5	38	37.5	30.5	38
TOX/TOT	mg/kg	5	321	279.43	223.03	155	23	259	38.72
Viscosity	cSt	41.34	106	82.1	74.15	117.6	51.81	75.9	49.87

		RAD II WELLS							
Sample Point:		GAL-06	GAL-07	GAL-07B	GAL-08	GAL-09	GAL-16	MW-11	MW-15 *
Date Sampled:		11/17/2003	11/17/2003	11/19/2003	11/25/2003	7/10/2004	7/10/2004	11/20/2003	7/12/2004
Lab ID:		481263	481264	481944	483778	545882	545883	482760	ORGANIC
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result
% Sediments	wt %	0.05	0.05	0.2	0.05	-	0.2	0.06	24
% Sulfur	wt %	0.331	0.294	0.29	0.223	0.38	0.342	0.373	0.306
BTU/TOT	BTU/TOT	19326	19391	19327	19343	19250	19307	19375	19242
Flashpoint	deg F	201	275	260	209	219	303	219	288
Interfacial Tension/TOT	dynes/cm	32.94	34.38	29.67	30.5	20.64	20.77	30.3	10.64
Specific Gravity	g/cm <sup>3</sup>	0.897	0.903	0.898	0.915	0.898	0.905	0.895	0.898
Surface Tension/TOT	dynes/cm	39	39	38	30.5	36	36.5	30.3	36
TOX/TOT	mg/kg	9.56	34.54	23.17	66.69	7.03	17.89	29.47	13.57
Viscosity	cSt	30.72	45.02	45.91	47.13	34.34	66.15	37.33	41.03

**Notes:** \* - Wells GAGW-04 and MW-15 are located north of the RAD II (aka Quanta) property across from Review Avenue.

"-" indicates analysis was not conducted

**TABLE 3**  
**SUMMARY OF PHYSICAL CHARACTERISTICS**  
**LNAPL SAMPLE ANALYSES**  
**REVIEW AVENUE DEVELOPMENT**  
**37-80 AND 37-30 REVIEW AVENUE**  
**LONG ISLAND CITY, NEW YORK**

RAD II WELLS							
Sample Point:		Sump	GAL-29	GAL-30	GAL-31	VER-2	GAL-04
Date Sampled:		1/14/2004	8/7/2008	8/7/2008	8/7/2008	10/29/2008	10/29/2008
Lab ID:		494865	X938-941025	X938-941026	X938-941027	962888	962890
Parameter	Units	Result	Result	Result	Result	Result	Result
% Sediments	wt %	1.2	-	-	-	-	-
% Sulfur	wt %	0.385	-	-	-	-	-
BTU/TOT	BTU/TOT	16278	-	-	-	-	-
Flashpoint	deg F	280	-	-	-	-	-
Interfacial Tension/TOT	dynes/cm	10.68	28.2	28.4	28	-	-
Specific Gravity	g/cm <sup>3</sup>	0.9028	0.8965	0.8942	8934	-	-
Surface Tension/TOT	dynes/cm	34	33.7	33	33.2	-	-
TOX/TOT	mg/kg	456.8	-	-	-	-	-
Viscosity	cSt	254.9	49.36	43.71	38.95	170.38	91.12

RAD I WELLS							
Sample Point:		GAL-10	(duplicate)	GAL-11	GAL-12	GAL-13	GAL-18
Date Sampled:		7/9/2004	7/9/2004	7/9/2004	7/9/2004	7/9/2004	7/16/2004
Lab ID:		545873	545874	545870	545876	545871	547611
Parameter	Units	Result	Result	Result	Result	Result	Result
% Sediments	wt %	1.2	2.4	0.8	0.8	0.2	0.3
% Sulfur	wt %	0.202	0.172	0.255	0.241	0.18	0.281
BTU/TOT	BTU/TOT	19295	19307	19337	19366	19464	19324
Flashpoint	deg F	165	163	178	230	141	155
Interfacial Tension/TOT	dynes/cm	16	19.29	15.78	17.26	17.41	15.97
Specific Gravity	g/cm <sup>3</sup>	0.889	0.888	0.875	0.09	0.875	0.892
Surface Tension/TOT	dynes/cm	35.8	34.8	36	35.5	35	34.5
TOX/TOT	mg/kg	37.29	33.43	177.54	74.27	46.95	67.68
Viscosity	cSt	25.43	27.32	50.55	45.93	23.27	27.85

**Notes:** \* - Wells GAGW-04 and MW-15 are located north of the RAD II (aka Quanta) property across from Review Avenue.

"-" indicates analysis was not conducted



**TABLE 3**  
**SUMMARY OF PHYSICAL CHARACTERISTICS**  
**LNAPL SAMPLE ANALYSES**  
**REVIEW AVENUE DEVELOPMENT**  
**37-80 AND 37-30 REVIEW AVENUE**  
**LONG ISLAND CITY, NEW YORK**

		<b>RAD I WELLS</b>				
<b>Sample Point:</b>		<b>MW-4R</b>	<b>MW-10</b>	<b>MH-Sump</b>	<b>VER-1</b>	<b>GAL-21</b>
<b>Date Sampled:</b>		7/9/2004	7/9/2004	8/13/2004	10/29/2008	10/29/2008
<b>Lab ID:</b>		545875	545872	554895	962887	962889
<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>
% Sediments	wt %	0.2	0.4	14	-	-
% Sulfur	wt %	0.232	0.208	0.35	-	-
BTU/TOT	BTU/TOT	19210	19303	16879	-	-
Flashpoint	deg F	229	168	298	-	-
Interfacial Tension/TOT	dynes/cm	16.62	17.09	9.79	-	-
Specific Gravity	g/cm <sup>3</sup>	0.9	0.891	0.891	-	-
Surface Tension/TOT	dynes/cm	36	35.5	34	-	-
TOX/TOT	mg/kg	122.34	76.14	83.55	-	-
Viscosity	cSt	54.99	36.8	184.2	48.14	51.53

		<b>PHOENIX BEVERAGES WELLS</b>		
<b>Sample Point:</b>		<b>GAL-14</b>	<b>GAL-17</b>	<b>MW-8</b>
<b>Date Sampled:</b>		7/10/2004	7/10/2004	7/10/2004
<b>Lab ID:</b>		545881	545879	545880
<b>Parameter</b>	<b>Units</b>	<b>Result</b>	<b>Result</b>	<b>Result</b>
% Sediments	wt %	0.2	0.4	-
% Sulfur	wt %	0.39	0.444	0.387
BTU/TOT	BTU/TOT	19245	19283	19246
Flashpoint	deg F	294	305	292
Interfacial Tension/TOT	dynes/cm	23.19	23.14	20.76
Specific Gravity	g/cm <sup>3</sup>	0.906	0.09	0.905
Surface Tension/TOT	dynes/cm	35.5	36	36
TOX/TOT	mg/kg	-	-	9.27
Viscosity	cSt	49.56	50.12	51.22

**Notes:** \* - Wells GAGW-04 and MW-15 are located north of the RAD II (aka Quanta) property across from Review Avenue.

"-" indicates analysis was not conducted





**LEGEND**

- VACUUM ENHANCED RECOVERY (VER) WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- MONITORING WELL FOR LNAPL PILOT TEST (GOLDER 2008)
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005/2008) (SEE REFERENCE 2)
- CONCRETE SURVEY MONUMENT
- PROPOSED LNAPL MONITORING WELL
- PROPOSED VACUUM ENHANCED RECOVERY (VER) WELLS
- PROPOSED SINGLE PHASE (SKIMMER) WELLS
- PRE-CAST CONCRETE VAULT (SIZE VARIES)
- EXISTING UTILITY MANHOLES
- PROPOSED VER RECOVERING UNDERGROUND CONVEYANCE INFRASTRUCTURE FOR PCB LIQUID LNAPL
- PROPOSED SKIMMER RECOVERING UNDERGROUND CONVEYANCE INFRASTRUCTURE
- REVIEW AVENUE DEVELOPMENT PROPERTY BOUNDARY (SEE REFERENCE 1)
- RAILROAD
- FENCE LINE
- EASEMENT
- LNAPL VISCOSITY ZONE 1 (AS REPRESENTED IN JUNE 2005 RI REPORT)
- LNAPL VISCOSITY ZONE 2 (AS REPRESENTED IN JUNE 2005 RI REPORT)
- LNAPL VISCOSITY ZONE 3 (AS REPRESENTED IN JUNE 2005 RI REPORT)

- NOTES**
- 1.) FT-MSL - FEET MEAN SEA LEVEL
  - 2.) LNAPL WAS NOT OBSERVED IN WELL MW-2 DURING THE REMEDIAL INVESTIGATION (JUNE 2005) OR DURING A JUNE 20, 2008 WELL INSPECTION.
  - 3.) RECOVERY WELL SPACING WILL BE AS GENERALLY DEPICTED IN FIGURE 10. THE VER WELL SPACING IN ZONE 2 AND SKIMMER WELL SPACING IN ZONE 3 MAY BE INCREASED LOCALLY BASED ON SITE CONSTRAINTS OR REDEVELOPMENT REQUIREMENTS. THE MAXIMUM VER WELL SPACING WILL NOT EXCEED 100 FEET.
  - 4.) TO OPTIMIZE LNAPL RECOVERY AND TO LIMIT COLLECTING GROUNDWATER, THE VER WELLS WILL BE CYCLED ON AND OFF AT APPROXIMATELY 4 TO 8 HR INTERVALS.
  - 5.) VER PILOT TEST INFRASTRUCTURE, INSTALLED IN ZONE 1 IN 2008 TO BE REMOVED OR CLOSED, INCLUDING MONITORING PROBES (VMP-1, VMP-2, VMP-3, MP-1, MP-2, MP-3 AND MP-4) AND THERMAL ENHANCEMENT UNITS (TE-1, TE-2, TE-3, TE-4, TE-5, TE-6 AND TE-7), DEPENDING UPON DETAIL DESIGN, MONITORING WELL PSMW-1 AND PSMW-2 AND RECOVERY WELL VER-01 AND VER-02 MAY REMAIN.
  - 6.) UNDERGROUND CONVEYANCE INFRASTRUCTURE AND VAULT LOCATIONS ARE SUBJECT TO CHANGE BASED ON SITE CONSTRAINTS OR REDEVELOPMENT REQUIREMENTS.

- REFERENCES**
- 1.) BASE MAP TAKEN AND PROPERTY BOUNDARY FROM DIGITAL FILE 2148-DELIVERY-2.dwg, ENTITLED "BOUNDARY AND TOPOGRAPHIC PLAN, BLOCK 312 LOTS 41 & 69, 37-80 REVIEW AVENUE, PREPARED FOR: GOLDER ASSOCIATES, LOCATED IN: LONG ISLAND CITY, QUEENS, N.Y. PROVIDED BY GEOD CORPORATION, DATED JUNE 10, 2011.
  - 2.) EXISTING WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls, 2148A 4-11-05.xls, 2340 MONITORING WELLS.xls AND Monitoring Wells from 5-23-2011.xls PROVIDED BY GEOD CORP.
  - 3.) RAD II PROPERTY - BLOCK 312, LOT 69; BCA# C241005.
  - 4.) RAD I PROPERTY - BLOCK 312, LOT 41; BCA# C241089.

**SCALE**

25 0 25 50  
SCALE FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

**PROJECT**

REVIEW AVENUE DEVELOPMENT  
BROWNFIELD CLEANUP PROGRAM  
REMEDIAL ACTION WORK PLAN FOR SITES C241005 & C241089  
QUEENS COUNTY, NEW YORK

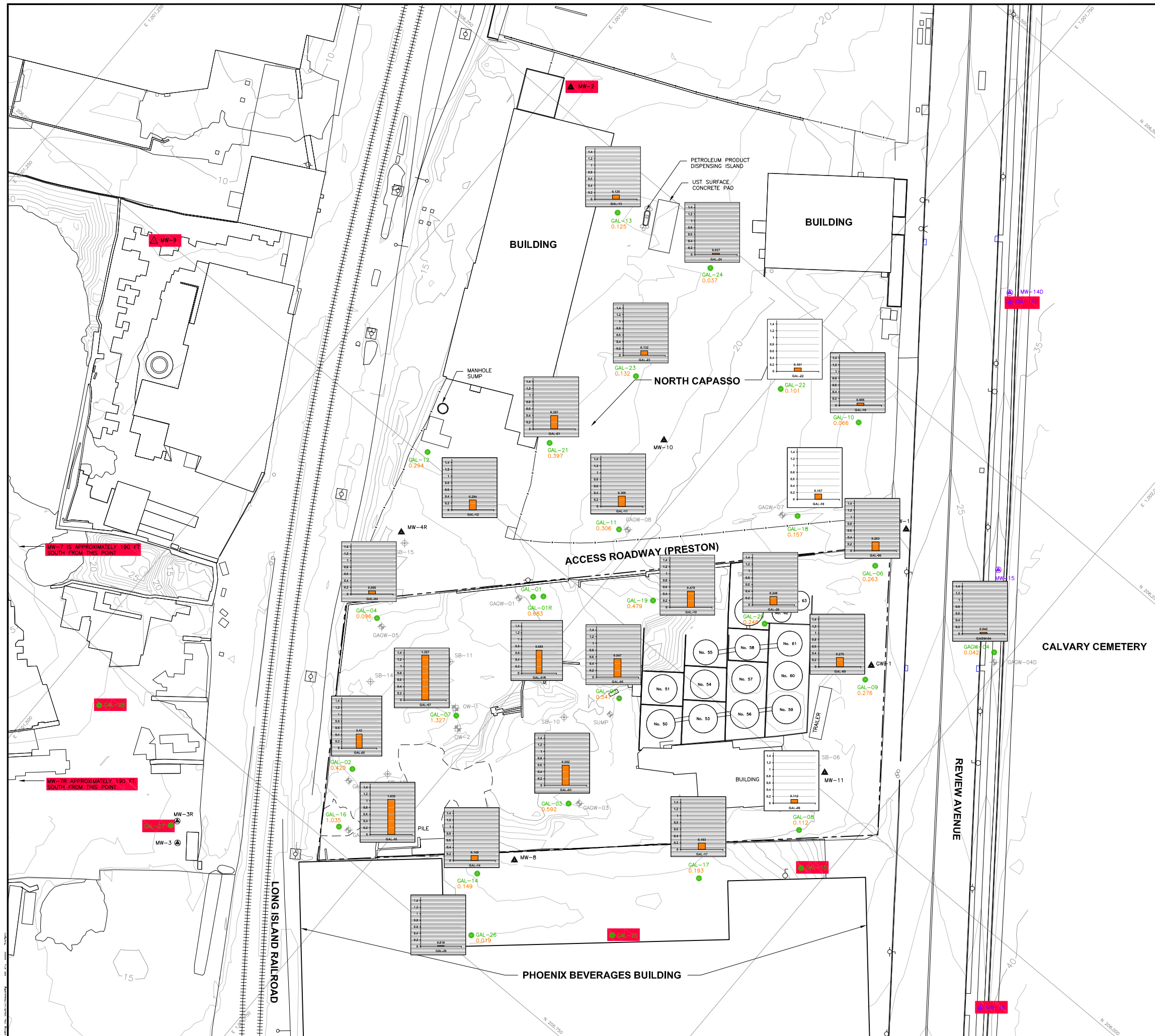
**TITLE**

LNAPL RECOVERY WELL LAYOUT  
SINGLE PHASE & VACUUM ENHANCED  
AREA WIDE RECOVERY

PROJECT No.	023-6151002	FILE No.	0236151002C012
DESIGN	AGE 07/2011	SCALE	AS SHOWN   REV. 0
CADD	YPW 11/2011	<b>FIGURE 10</b>	
CHECK	KGK 11/2011		
REVIEW	RES 11/2011		

**Golder Associates**  
Philadelphia USA

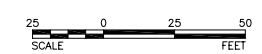




- LEGEND**
- LNAPL MONITORING WELL (GOLDER ASSOCIATES 2003/2004/2005) (SEE REFERENCE 2)
  - ⊕ SHALLOW GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2004) (SEE REFERENCE 2)
  - ⊕ DEEP GROUNDWATER MONITORING WELL (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ SOIL BORING (GOLDER ASSOCIATES 2003/2004) (SEE REFERENCE 2)
  - ⊕ ROEHR CHEMICAL INVESTIGATION WELL LOCATION (NOVEMBER 2000) (SEE REFERENCE 2)
  - ▲ EXISTING ON-SITE AND OFF-SITE MONITORING WELL LOCATION (SEE REFERENCE 2)
  - ⊕ EXISTING OFF-SITE MONITORING WELL LOCATION (LOCATION APPROXIMATE)
  - ⊕ SUMP (SEE REFERENCE 2)
  - ⊕ LNAPL PILOT TEST STUDY OBSERVATION WELL (SEE REFERENCE 2)
  - ⊕ EXISTING OFF-PROPERTY MONITORING WELL LOCATIONS (SEE REFERENCE 5)
  - ⊕ EXISTING ABOVE GROUND TANK (REPORTED TO BE EMPTY)
  - QUANTA PROPERTY BOUNDARY (SEE REFERENCE 3)
  - ++++ RAILROAD
  - FENCE LINE
  - 20 5 FOOT CONTOUR LINE (FT.-MSL)
  - 1 1 FOOT CONTOUR LINE (FT.-MSL)
  - 0.652 SPECIFIC FREE-PRODUCT VOLUME OF LNAPL IN SOIL (SEE NOTES 1 AND 2)
  - 0.652 SPECIFIC FREE-PRODUCT VOLUME OF LNAPL IN SOIL (FT.) (SEE NOTES 1 AND 2)
  - LNAPL NOT PRESENT (SEE NOTE 3)

- NOTES**
- 1.) REFER TO APPENDIX L OF THE RI FOR DISCUSSION OF THE ESTIMATION OF SPECIFIC FREE-PRODUCT VOLUME. THE MODEL PREDICTION VALUES ADJUSTED FOR TPH CONCENTRATIONS WERE USED.
  - 2.) THE SPECIFIC FREE-PRODUCT VOLUME IS BY DEFINITION PER UNIT AREA AND THEREFORE HAS A UNIT LENGTH OF FEET.
  - 3.) DURING THE RI, LNAPL WAS NOT OBSERVED IN WELLS MW-2, MW-7R, MW-14S, MW-16S, GAL-15, GAL-27 AND GAL-28. PRIOR TO THE RI, LNAPL HAD NOT BEEN OBSERVED IN WELLS MW-7 AND MW-9. THE LAST MEASUREMENT COLLECTED AT MW-7 WAS ON OCTOBER 3, 2000 AND FEBRUARY 11, 2003 AT MW-9. GOLDER WAS NOT ABLE TO LOCATE MW-7 AND WAS NOT PROVIDED ACCESS TO THE PROPERTY WHERE MW-9 IS LOCATED.

- REFERENCES**
- 1.) BASE MAP TAKEN FROM DIGITAL FILE 2148.dwg, ENTITLED TOPOGRAPHIC SURVEY OF QUANTA RESOURCES SUPERFUND SITE, LONG ISLAND CITY, NY, PROVIDED BY GEOD CORPORATION, DATED JANUARY 11, 2004.
  - 2.) WELL COORDINATES TAKEN FROM A MICROSOFT EXCEL FILE Quanta Samples and Wells.xls, 2148A 8-23-04.xls AND 2148A 4-11-05.xls, PROVIDED BY GEOD CORP.
  - 3.) PROPERTY BOUNDARY TAKEN FROM DIGITAL FILE 2148 Boundary.dwg, TITLED "MAP SHOWING BOUNDARY OF BLOCK 312 LOT 69", DATED APRIL 29, 2004, PROVIDED BY GEOD CORP.
  - 4.) DEBRIS PILE BOUNDARY REVISED PER FIELD OBSERVATIONS MADE BY GOLDER ASSOCIATES PERSONNEL DURING SITE VISITS.
  - 5.) LOCATION OF MW-9 DIGITIZED FROM HARDCOPY FIGURE TITLED "GROUNDWATER CONTOURS", PROVIDED BY HALEY & ALDRICH, DATED FEBRUARY 2004.
  - 6.) LOCATION OF MW-7 DIGITIZED FROM HARDCOPY FIGURE TITLED "SITE PLAN WITH SITE INVESTIGATION BORING LOCATIONS", PROVIDED BY ENVIRON, DATED SEPTEMBER 2000.



REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RW

PROJECT: QUANTA RESOURCES SITE FEASIBILITY STUDY REPORT QUEENS COUNTY, NEW YORK

TITLE: TOTAL SPECIFIC LNAPL VOLUME AT LNAPL MONITORING WELLS

PROJECT No.	023-6151	FILE No.	0236151N022
DESIGN	SDM 06/01/05	SCALE	AS SHOWN
CADD	RG 07/01/05	REV.	0
CHECK	SDM 07/01/05	<b>FIGURE 16</b>	
REVIEW	RSW 07/01/05		

Golder Associates Philadelphia USA