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October 21, 2008

Mr. Steven P. Stucker, P.G.
Lead Engineer
National Grid
300 Erie Boulevard West
Syracuse, New York 13202-4250

Subject: Annual (2008) Groundwater Monitoring Report
Hudson (Water Street) Site, Hudson, New York

Dear Mr. Stucker:

CDM is pleased to submit this *Annual (2008) Groundwater Monitoring Report* for the Hudson (Water Street) Site, Hudson, New York. This report includes the requirements associated with the operation, maintenance, and monitoring of the Remedial Action Plan (RA) at Operable Unit (OU) 1 of the Hudson (Water Street) Former Manufactured Gas Plant (MGP) Site located in Hudson, New York. Please refer to the Operation, Maintenance, and Monitoring Plan (OM&M Plan), January 2007 and the CDM memorandum dated July 30, 2007 for quarterly well monitoring, annual sampling, quarterly site inspection requirements, and associated detailed site conditions and groundwater flow pattern documentation.

Background

The Hudson (Water Street) Former Manufactured Gas Plant Site located in Hudson, New York is comprised of approximately two acres of land and is owned by National Grid (refer to Attachment A for Figure 1 - Location Map and Figure 2 - Post Remediation Site Conditions). The remedial action plan in place at the site was substantially completed in December 2006 and the OM&M Plan was finalized in January 2007 to provide a method for monitoring its effectiveness.

The objective of the post-construction groundwater monitoring task within the OM&M plan is to characterize post-remedy groundwater flow patterns and assess the quality of shallow groundwater as it leaves the site. Groundwater samples are analyzed for the presence and/or extent of benzene, toluene, ethylbenzene and total xylenes (BTEX) and naphthalene.

Site Inspections and General Maintenance

The annual site inspection was conducted on September 16, 2008. In addition, site inspections were also performed on March 10, 2008 and June 10, 2008. Annual site inspections will continue

for a five year period and will include inspection of the existing groundwater monitoring wells (MW-02, MW-03, MW-05, MW-06, MW-07, MW-08A, MW-09A, MW-10, MW-11, OW-2, OW-4), the three existing DNAPL monitoring wells (RW-1, RW-2, CW-01A), security fencing, and other site features. To date, there have been no public complaints or comments noted by National Grid. The site inspection reports are included in Attachment B.

The site in general, including the surface cover areas, erosion controls, steel sheet pile retaining wall and trees, shrubs and other planting materials are in good condition. In July 2008, riprap was installed along the Hudson River bank (near RW-1) due to minor settlement and erosion. National Grid's OM&M contractor will continue to note additional settlement and/or erosion.

DNAPL Monitoring and Collection

Quarterly DNAPL monitoring took place over the last year on the following dates; December 1, 2007, March 10, 2008, June 10, 2008 and September 16, 2008. No DNAPL was recovered from any of the wells during any of these events. However, during the December 1, 2007 monitoring at well CW-01A, a slight odor was noted. The DNAPL monitoring and collection reports are included in Attachment B.

As stated in the OM&M Plan, quarterly DNAPL monitoring was required for a period of at least one year for RW-1, RW-2, and CW-01A. If DNAPL was present, the depth to the DNAPL surface from the top of the well casing was to be measured and recorded. DNAPL would be collected and disposed of off-site as necessary. If DNAPL does not accumulate in any of the wells at a thickness more than 0.1 foot within the first year or the rate of DNAPL production for each well does not exceed two gallons per year, with the rate measured over the period of one year, the program will be completed.

After the initial one year monitoring period the DNAPL program was evaluated. Due to no recovery of DNAPL over the last four monitoring periods the DNAPL monitoring program will be terminated.

Site Monitoring Wells

The site monitoring wells include: MW-02, MW-03, MW-05, MW-06, MW-07, MW-08A, MW-09A, MW-10, MW-11, OW-2, OW-4, CW-01A, RW-1 and RW-2. Only monitoring wells MW-03, MW-05, MW-06 and MW-11 were sampled for site constituents. Well locations are shown on the Site Plan in Attachment A.

Well Gauging

All wells listed in the section above, as well as the level of the Hudson River, were gauged prior to groundwater sampling on June 10th. The water level elevation (feet above mean sea level (amsl)) ranged from 1.77 feet amsl at MW-02, to 7.97 feet amsl at CW-01A. The wells were gauged again on September 19, 2008 during the site inspection. The water elevation ranged from 0.77 feet amsl at RW-1, to 8.02 feet amsl CW-01A. The groundwater direction continues appears to remain in a south/southeast direction as shown on previous groundwater contour

figures. A summary of all static water level measurements collected at the site is included in Attachment B.

Groundwater Sampling

Groundwater samples were collected from monitoring wells MW-03, MW-05, MW-06 and MW-11. The wells were purged using a peristaltic pump. Field Measurements of pH, conductivity, turbidity, dissolved oxygen, temperature, total dissolved solids and oxidation-reduction potential were recorded using a Horiba water quality meter during sample collection. Samples were collected once field parameters had been stabilized. Well purging data is included in Attachment B.

Four aqueous samples and a field duplicate were processed for BTEX, and naphthalene by the USEPA SW486 method 8260B, with additional QC requirements of the NYSDEC ASP. A trip blank was also analyzed. The samples were sent to Test America (formerly Severn Trent Laboratories, Inc.) of Buffalo, New York in accordance with the NYSDEC Analytical Services Protocol. The chain-of-custody record is included in Attachment B.

After the initial five year monitoring period has been completed, the collected data will be evaluated to determine whether the program should be continued and/or if any modifications are necessary. According to the OM&M Plan, the program will be complete if it is demonstrated that chemicals of potential concern (COPC's) are not migrating offsite through the groundwater at concentrations higher than the New York State Ambient Water Quality Standards (NYSAWQS). The program may be discontinued if the concentrations of COPC's in samples collected are below the NYSAWQS for two consecutive years starting with the fourth year of the five year program. If the standards are not met at this time, the program will be continued until concentrations of COPC are below the standards for two consecutive years.

Groundwater Analytical Results

There was no BTEX or naphthalene detected in the samples from monitoring wells MW-03, MW-05 and MW-06. However, benzene, ethylbenzene and o-xylene were detected in MW-11. Both benzene and ethylbenzene were detected above the NYSAWQS in monitoring well MW-11. Summarized laboratory results are included in Attachment C.

Data Validation

The analytical data report provided by Test America was sent to Data Validation Services of North Creek, New York for third party data validation. The primary objective of the data validation was to identify any questionable or invalid laboratory processes or data. The data validation company generated the Data Usability Summary Report (DUSR) from review of the summary form information, with review of sample raw data and limited review of the associated QC raw data, as required for the DUSR validation package.

The review completed by Data Validation Services stated that the field sample analyte values/reporting limits are usable as reported. The data validation report (with qualified laboratory report forms) is included in Attachment D.

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Conclusions and Recommendations

The data collected from the June 2008 sampling event indicate that there are three contaminants of concern (benzene, ethylbenzene and o-xylene) at well MW-11 with benzene and ethylbenzene above the NYSAWQS. In addition, total xylenes and naphthalene detected at this well during August 2007 was not detected during the June 2008 event. Additionally, from the August 2007 to the June 2008 sampling event, benzene levels were reduced from 12 ug/L to 3.8 ug/L and ethylbenzene levels were reduced from 16 ug/L to 8 ug/L. MW-11 is located to the west of the brick warehouse, sampling and monitoring will continue at this location.

Since inception of the well monitoring, no DNAPL has been noted in any site well. Therefore, CDM recommends discontinuing the DNAPL quarterly monitoring at the site. The remaining groundwater monitoring program and maintenance activities, as described in the OM&M Plan dated January 2007 will be continued.

If you have any questions relating to these sampling events or our recommendations, please do not hesitate to contact me at 315-434-3256.

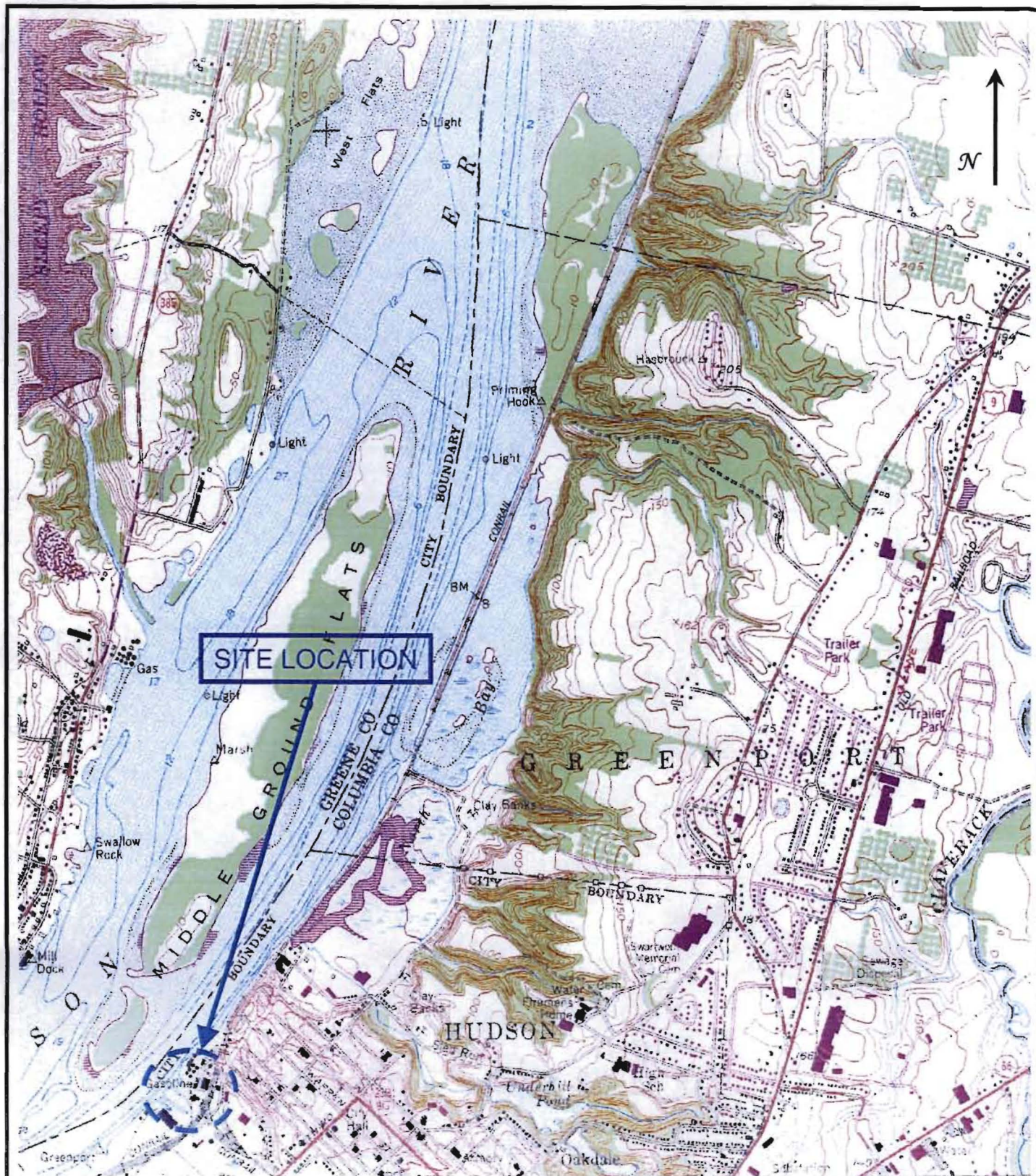
Very truly yours,



Matthew D. Millias, P.E.
Senior Project Manager
Camp Dresser & McKee

Cc: Tim Beaumont - CDM

Attachment A
Site Maps



Notes:

USGS Topo. Quad. Hudson North
used to create base map.

0 1000 2000 3000 4000

APPROXIMATE SCALE

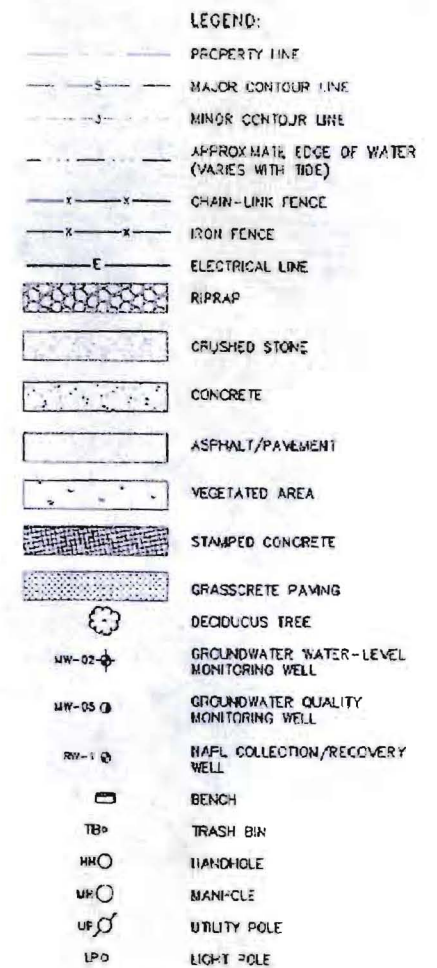
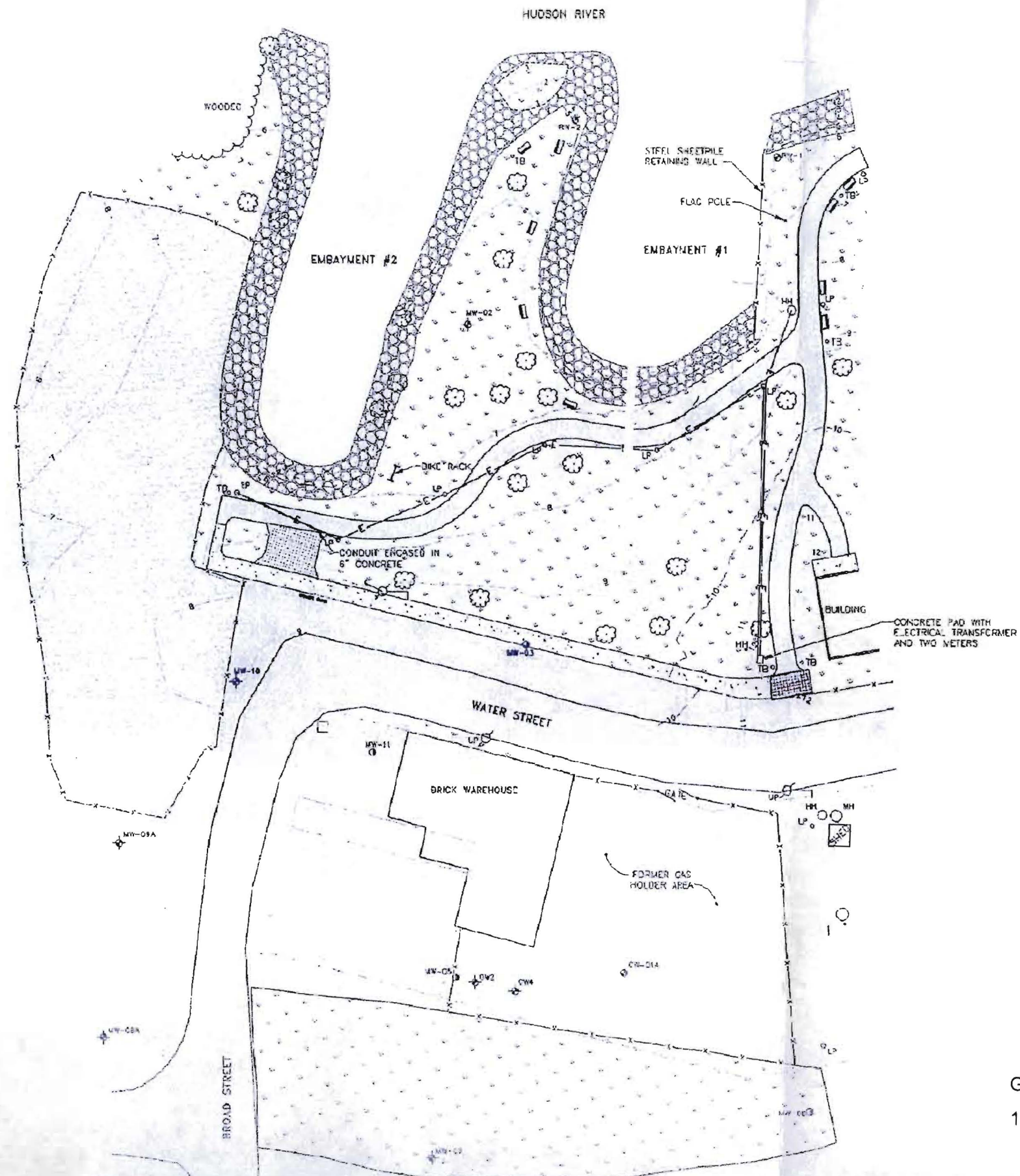


NATIONAL GRID
HUDSON (WATER STREET)

SITE LOCATION MAP

CDM

Figure
1



NOTE:

1. SURVEY DATA WAS OBTAINED FROM SURVEYS BY C.T. MALL ASSOCIATES, DATED AUGUST 23, 2005 AND NOVEMBER 15, 2005, DRAWING FILES F-ASR001.DWG AND W-ASR002.DWG, RESPECTIVELY.



NATIONAL GRID HUDSON (WATER STREET)

POST REMEDIATION SITE CONDITIONS

CDM

Figure
2

GENERAL NOTES:

1. BASE MAP TAKEN FROM OM&M PLAN PREPARED BY ARCADIS BBL.

Attachment B
Inspection and Monitoring Forms

**Site Inspection
Hudson-Water Street
Operable Unit 1
Hudson, New York**

Date: 3/10/2008
Technician: Beaumont

Time: 1045
Weather: Sunny 30's

Surface Cover Areas

Excessive Settlement Observed	YES	NO	COMMENTS:
Cracks or Potholes Observed	YES	NO	
Depressions and/or Rutting Observed	YES	NO	
Exposed subbase materials Observed	YES	NO	

Erosion Controls (Rip-Rap or Sod)

Exposed or damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:
Excessive Settlement Observed	YES	NO	
Stressed Vegetation Observed	YES	NO	

Steel Sheetpile Retaining Wall

Settlement of Wall	YES	NO	COMMENTS:
Subsidence or Cracking of Soils Behind the Wall	YES	NO	
Cracking or Separation of Wall Joints	YES	NO	

Trees, Shrubs and other Planting Materials

Strong Growth Observed	YES	NO	COMMENTS:
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Surface Water Quality

Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

General Comments:

There is a flat bed trailer staged in the corner of the fenced in area.

There is a lot of debris washed up on the lawn.

The gate to the warehouse needs repair. Looks to have been opened backwards and needs adjustment. It is secure.

There is some rip-rap erosion near RW-1.

**Site Inspection
Hudson-Water Street
Operable Unit 1
Hudson, New York**

Date: 6/10/2008
Technician: Beaumont

Time: 800
Weather: Sunny 80's

Surface Cover Areas

Excessive Settlement Observed	YES	NO	COMMENTS:
Cracks or Potholes Observed	YES	NO	
Depressions and/or Rutting Observed	YES	NO	
Exposed subbase materials Observed	YES	NO	

Erosion Controls (Rip-Rap or Sod)

Exposed or damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:
Excessive Settlement Observed	YES	NO	
Stressed Vegetation Observed	YES	NO	

Steel Sheetpile Retaining Wall

Settlement of Wall	YES	NO	COMMENTS:
Subsidence or Cracking of Soils Behind the Wall	YES	NO	
Cracking or Separation of Wall Joints	YES	NO	

Trees, Shrubs and other Planting Materials

Strong Growth Observed	YES	NO	COMMENTS:
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Surface Water Quality

Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

General Comments:

There is some rip-rap erosion near RW-1.
Asplundh will be repairing the rip-rap area .

**Site Inspection
Hudson-Water Street
Operable Unit 1
Hudson, New York**

Date: 9/16/2008
Technician: Beaumont

Time: 1300
Weather: Sunny 70's

Surface Cover Areas

Excessive Settlement Observed	YES	NO	COMMENTS:
Cracks or Potholes Observed	YES	NO	
Depressions and/or Rutting Observed	YES	NO	
Exposed subbase materials Observed	YES	NO	

Erosion Controls (Rip-Rap or Sod)

Exposed or damaged Geotextile layer(s) Observed	YES	NO	COMMENTS:
Excessive Settlement Observed	YES	NO	some rip rap settling along grassline.
Stressed Vegetation Observed	YES	NO	

Steel Sheetpile Retaining Wall

Settlement of Wall	YES	NO	COMMENTS:
Subsidence or Cracking of Soils Behind the Wall	YES	NO	
Cracking or Separation of Wall Joints	YES	NO	

Trees, Shrubs and other Planting Materials

Strong Growth Observed	YES	NO	COMMENTS:
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Surface Water Quality

Sheens Observed On:	Rip-Rap	NONE	MINOR	SIGNIFICANT	COMMENTS:
	Sheetpile Wall	NONE	MINOR	SIGNIFICANT	
	Other Water Surfaces	NONE	MINOR	SIGNIFICANT	

General Comments:

Asplundh repaired the rip-rap area near RW-1 .

Well ID.	Sample?	Well Size	Well Material	Stickup-Flush	DTP	DTW	DTP	DTB	Sump ?	Comments
MW-02	No	2"	PVC	Flush		4.78		20.50	No	
MW-03	No	2"	PVC	Flush		2.06		25.50	No	
MW-05	No	2"	PVC	Stickup		5.58		28.10	No	
MW-06	No	2"	PVC	Stickup		6.03		26.10	Yes	
MW-07	No	2"	PVC	Stickup		2.85		24.55	Yes	
MW-08A	No	2"	PVC	Flush		2.84		25.85	No	
MW-09A	No	2"	PVC	Stickup		5.54		25.07	Yes	
MW-10	No	2"	PVC	Flush		0.75		28.70	Yes	
MW-11	No	2"	PVC	Flush		0.86		8.10	Yes	
OW-2	No	2"	PVC	Stickup		5.72		27.55	Yes	
OW-4	No	2"	PVC	Stickup		5.35		28.05	Yes	
Hudson River	No					5.80				Chiseled square adjacent to the 8th railing post on top of the sheetpile wall.
CW-01A	No	4"	Steel	Flush		0.78		30.90	Yes	
RW-1	No	4"	PVC	Flush		4.10		26.50	Yes	
RW-2	No	4"	PVC	Flush		5.10		22.35	Yes	

Well ID.	Sample?	Well Size	Well Material	Stickup-Flush	DTP	DTW	DTP	DTB	Sump ?	Comments
MW-02		2"	PVC	Flush		4.33		20.50	No	
MW-03		2"	PVC	Flush		2.26		25.50	No	
MW-05		2"	PVC	Stickup		5.69		28.10	No	
MW-06		2"	PVC	Stickup		5.55		26.10	Yes	
MW-07		2"	PVC	Stickup		5.10		24.55	Yes	
MW-08A		2"	PVC	Flush		3.56		25.85	No	
MW-09A		2"	PVC	Stickup		5.45		25.07	Yes	
MW-10		2"	PVC	Flush		2.27		28.70	Yes	
MW-11		2"	PVC	Flush		2.75		8.10	Yes	
OW-2		2"	PVC	Stickup		5.82		27.55	Yes	
OW-4		2"	PVC	Stickup		5.45		28.05	Yes	
Hudson River						2.90				Chiseled square adjacent to the 8th railing post on top of the sheetpile wall.
CW-01A		4"	Steel	Flush		1.70		30.90	Yes	slight odor
RW-1		4"	PVC	Flush		2.82		26.50	Yes	
RW-2		4"	PVC	Flush		2.56		22.35	Yes	

Purge water is stored in labeled 5-gallon drums within the fenced area.

Well ID.	Sample?	Well Size	Well Material	Stickup-Flush	DTP	DTW	DTP	DTB	Sump ?	Comments
MW-02	No	2"	PVC	Flush		4.40		20.50	No	
MW-03	No	2"	PVC	Flush		1.96		25.50	No	
MW-05	No	2"	PVC	Stickup		5.09		28.10	No	
MW-06	No	2"	PVC	Stickup		5.27		26.10	Yes	
MW-07	No	2"	PVC	Stickup		4.53		24.55	Yes	
MW-08A	No	2"	PVC	Flush		3.42		25.85	No	
MW-09A	No	2"	PVC	Stickup		5.23		25.07	Yes	
MW-10	No	2"	PVC	Flush		1.75		28.70	Yes	
MW-11	No	2"	PVC	Flush		2.35		8.10	Yes	
OW-2	No	2"	PVC	Stickup		5.20		27.55	Yes	
OW-4	No	2"	PVC	Stickup		4.96		28.05	Yes	
Hudson River	No					3.72				Chiseled square adjacent to the 8th railing post on top of the sheetpile wall.
CW-01A	No	4"	Steel	Flush		1.65		30.90	Yes	slight odor
RW-1	No	4"	PVC	Flush		4.32		26.50	Yes	
RW-2	No	4"	PVC	Flush		4.18		22.35	Yes	

**Hudson Water Street
Hudson, New York**

Quarterly DNAPL Monitoring Event (December 1, 2007)

Well Id.	DTP	DTW	DTP	DTB	Thickness	Amount Recovered	Comments
CW-01A		2.00		30.90	0	0	Slight odor
RW-1		4.92		26.50	0	0	
RW-2		5.50		22.35	0	0	

Comments:

***Hudson Water Street
Hudson, New York***

Quarterly DNAPL Monitoring Event (March 10, 2008)

Well Id.	DTP	DTW	DTP	DTB	Thickness	Amount Recovered	Comments
CW-01A		0.78		30.90	0	0	
RW-1		4.10		26.50	0	0	
RW-2		5.10		22.35	0	0	

Comments:

**Hudson Water Street
Hudson, New York**

Quarterly DNAPL Monitoring Event (June 10, 2008)

Well Id.	DTP	DTW	DTP	DTB	Thickness	Amount Recovered	Comments
CW-01A		1.70		30.90	0	0	
RW-1		2.82		26.50	0	0	
RW-2		2.56		22.35	0	0	

Comments:

**Hudson Water Street
Hudson, New York**

Quarterly DNAPL Monitoring Event (September 16, 2008)

Well Id.	DTP	DTW	DTP	DTB	Thickness	Amount Recovered	Comments
CW-01A		1.65		30.90	0	0	
RW-1		4.32		26.50	0	0	
RW-2		4.18		22.35	0	0	

Comments:

National Grid
Water Street, Hudson, New York

Sampling Personnel: Tim Beaumont

Job Number: 36380.64152

Well Id. MW-03

Date: 6/10/08

Weather: Sunny 82°

Time In: 950

Time Out: 1030

Well Information

		TOC	Other
Depth to Water:	(feet)	2.26	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	25.50	
Length of Water Column:	(feet)	23.24	
Volume of Water in Well:	(gal)	3.72	
Three Well Volumes:	(gal)	11.16	

Well Type: Flushmount ☒ Stick-Up ☐
Well Locked: Yes ☒ No ☐
Measuring Point Marked: Yes ☒ No ☐
Well Material: PVC ☒ SS ☐ Other: ☐
Well Diameter: 1" ☐ 2" ☒ Other: ☐
Comments:

Purging Information

Purging Method: ☐ Bailer ☒ Peristaltic ☒ Grundfos Pump
Tubing/Bailer Material: Teflon ☐ Stainless St. ☐ Polyethylene ☒
Sampling Method: Bailer ☒ Peristaltic ☐ Grundfos Pump
Average Pumping Rate: (ml/min) 250
Duration of Pumping: (min) 30
Total Volume Removed: (gal) ~ 2.5 Did well go dry? Yes ☐ No ☒
Horiba U-22 Water Quality Meter Used? Yes ☒ No ☐

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=133.7cu. feet				

Time	DTW (feet)	pH	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)
955	3.60	7.11	1.30	103.0	1.93	16.02	.80	-153
1000	6.50	7.28	1.24	45.6	1.05	15.70	.8	-164
1005	9.00	7.37	1.23	45.0	0	15.78	.8	-165
1010	10.05	7.35	1.22	40.1	0	15.80	.8	-165
1015	11.02	7.34	1.22	30.7	0	15.85	.8	-164
1020	12.00	7.32	1.22	31.2	0	15.86	.8	-163
1025	13.02	7.33	1.22	31.8	0	15.88	.8	-161

Sampling Information:

USEPA SW-846 Method 8260 VOC's BTEX Including Naphthalene

3 - 40 mL vials

Yes ☒ No ☐

Sample ID: MW-03-0608

Duplicate? Yes ☐ No ☒

Sample Time: 1025

MS/MSD? Yes ☐ No ☒

Shipped: Drop-off Syracuse Service Center ☒

Fed-Ex ☐ UPS ☐

Comments/Notes:

no odor no slen

Laboratory: Test America
Amherst, New York

Test America
Amherst, New York

National Grid
Water Street, Hudson, New York

Sampling Personnel: Tim Beaumont

Job Number: 36380.64152

Well Id. MW-06

Date: 6/10/08

Weather: Sunny 79°

Time In: 805

Time Out: 855

Well Information

		TOC	Other
Depth to Water:	(feet)	5.55	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	26.10	
Length of Water Column:	(feet)	20.55	
Volume of Water in Well:	(gal)	3.29	
Three Well Volumes:	(gal)	9.87	

Well Type: Flushmount ☐ Stick-Up ☒
Well Locked: Yes ☒ No ☐
Measuring Point Marked: Yes ☒ No ☐
Well Material: PVC ☒ SS ☐ Other: _____
Well Diameter: 1" ☐ 2" ☒ Other: _____
Comments: _____

Purging Information

Purging Method: _____
Tubing/Bailer Material: _____
Sampling Method: _____
Average Pumping Rate: (ml/min) 250 → 150 *
Duration of Pumping: (min) 30
Total Volume Removed: (gal) ~ 2.0
Did well go dry? Yes ☐ No ☒
Horiba U-22 Water Quality Meter Used? Yes ☒ No ☐

Bailer ☐ Peristaltic ☒
Teflon ☐ Stainless St. ☐
Bailer ☒ Peristaltic ☐
Grundfos Pump ☐
Polyethylene ☒
Grundfos Pump ☐

Conversion Factors				
gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	pH	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)
815	6.15	6.55	1.04	120	.91	13.61	.7	-112
820	8.70	6.25	1.03	74.2	.30	13.61	.7	-105
825	9.80	6.22	1.01	59.1	.16	13.62	.6	-108
830	10.20	6.18	.99	55.3	.14	14.02	.6	-107
835	11.62	6.21	.97	50.1	.18	14.20	.6	-105
840	12.50	6.28	.96	50.8	.22	14.32	.6	-108
845	13.22	6.30	.96	50.2	.19	14.31	.6	-110

Sampling Information:

USEPA SW-846 Method 8260 VOC's BTEX Including Naphthalene

9 - 40 mL vials

Yes ☒ No ☐

Sample ID: MW-6-0608

Duplicate?

Yes ☐ No ☒

Shipped: Drop-off Syracuse Service Center ☒

Sample Time: 845

MS/MSD?

Yes ☒ No ☐

Fed-Ex ☐ UPS ☐

Comments/Notes:

no odor no sheen

Laboratory: Test America
Amherst, New York

National Grid
Water Street, Hudson, New York

Sampling Personnel: Tim Beaumont

Job Number: 36380.64152

Well Id. MW-11

Date: 6/10/08

Weather: Sunny 82°

Time In: 1035 Time Out: 1130

Well Information

		TOC	Other
Depth to Water:	(feet)	2.75	
Depth to Product:	(feet)	—	
Depth to Bottom:	(feet)	8.10	
Length of Water Column:	(feet)	5.35	
Volume of Water in Well:	(gal)	.86	
Three Well Volumes:	(gal)	2.58	

Well Type: Flushmount ☒ Stick-Up ☐
Well Locked: Yes ☒ No ☐
Measuring Point Marked: Yes ☒ No ☐
Well Material: PVC ☒ SS ☐ Other: ☐
Well Diameter: 1" ☐ 2" ☒ Other: ☐
Comments:

Purging Information

Purging Method: ☐ Bailer ☒ Peristaltic ☐ Grundfos Pump
Tubing/Bailer Material: Teflon ☐ Stainless St. ☐ Polyethylene ☒
Sampling Method: Bailer ☒ Peristaltic ☐ Grundfos Pump
Average Pumping Rate: (ml/min) 300
Duration of Pumping: (min) 30
Total Volume Removed: (gal) ~3.0 Did well go dry? Yes ☐ No ☐
Horiba U-22 Water Quality Meter Used? Yes ☒ No ☐

Conversion Factors

gal/ft. of water	1" ID	2" ID	4" ID	6" ID
	0.04	0.16	0.66	1.47
1 gallon=3.785L=3785mL=1337cu. feet				

Time	DTW (feet)	pH	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	Temp (°C)	TDS (g/L)	ORP (mV)
1040	2.80	7.14	1.32	127.0	1.21	16.41	.8	-113
1045	2.80	7.09	1.13	74.2	.41	16.74	.7	-125
1050	2.80	7.15	1.00	50.6	0	16.86	.6	-140
1055	2.80	7.19	.98	24.2	0	16.92	.6	-163
1100	2.80	7.07	.98	15.1	0	16.95	.6	-171
1105	2.80	7.09	.97	12.2	0	16.96	.6	-180
1110	2.80	7.10	.96	10.1	0	16.96	.6	-185

Sampling Information:

USEPA SW-846 Method 8260 VOC's BTEX Including Naphthalene

3 - 40 mL vials Yes ☒ No ☐

Sample ID: MW-11-0608 Duplicate? Yes ☐ No ☒

Sample Time: 1110 MS/MSD? Yes ☐ No ☒

Shipped: Drop-off Syracuse Service Center ☒

Fed-Ex ☐ UPS ☐

Comments/Notes:

No Sheen Slight odor

Laboratory: Test America
Amherst, New York

Hudson (Water Street)
Static Water Level Measurements

Well ID	Top of Inner Casing (feet amsl)	Depth to Water (feet)											Water Level Elevation (feet amsl)										
		6/11/2007	6/20/2007	6/26/2007	7/24/2007	8/14/2007	8/19/2007	9/13/2007	12/1/2007	3/10/2008	6/10/2008	9/16/2008	6/11/2007	6/20/2007	6/26/2007	7/24/2007	8/14/2007	8/19/2007	9/13/2007	12/1/2007	3/10/2008	6/10/2008	9/16/2008
MW-02	6.10	4.37	4.15	5.15	4.31	4.14	4.33	4.38	4.87	4.78	4.33	4.40	1.73	1.95	0.95	1.79	1.96	1.77	1.72	1.23	1.32	1.77	1.70
MW-03	8.97	2.31	2.25	3.69	2.10	1.87	2.01	2.37	2.38	2.06	2.26	1.96	6.66	6.72	5.28	6.87	7.10	6.96	6.60	6.59	6.91	6.71	7.01
MW-05	12.57	5.90	5.60	6.87	5.75	5.55	5.70	5.67	5.45	5.58	5.69	5.09	6.67	6.97	5.70	6.82	7.02	6.87	6.90	7.12	6.99	6.88	7.48
MW-06	11.81	5.55	5.20	5.52	5.49	5.37	5.54	5.60	5.68	6.03	5.55	5.27	6.29	6.64	6.32	6.35	6.47	6.30	6.24	6.16	5.81	6.29	6.57
MW-07	8.94	5.10	4.85	5.08	5.40	5.38	5.55	5.29	4.18	2.85	5.10	4.53	3.84	4.09	3.86	3.54	3.56	3.39	3.65	4.76	6.09	3.84	4.41
MW-08A	6.35	3.47	2.90	3.85	3.74	3.62	3.84	3.75	3.48	2.84	3.56	3.42	2.89	3.46	2.51	2.62	2.74	2.52	2.61	2.88	3.52	2.80	2.94
MW-09A	8.10	5.48	5.25	5.56	5.29	5.15	5.15	5.27	5.55	5.54	5.45	5.23	2.92	3.15	2.84	3.11	3.25	3.25	3.13	2.85	2.86	2.95	3.17
MW-10	9.67	1.70	1.61	2.17	1.12	2.20	2.38	1.52	2.10	0.75	2.27	1.75	6.99	7.08	6.52	7.57	6.49	6.31	7.17	6.59	7.94	6.42	6.94
MW-11	9.57	2.80	2.81	3.12	2.94	3.36	3.53	2.77	2.42	0.86	2.75	2.35	6.77	6.76	6.45	6.63	6.21	6.04	6.80	7.15	8.71	6.82	7.22
OW-2	12.02	5.89	5.72	6.94	5.85	5.70	5.83	5.57	5.60	5.72	5.82	5.20	6.93	7.10	5.88	6.97	7.12	6.99	7.25	7.22	7.10	7.00	7.62
OW-4	12.00	5.52	5.33	6.00	5.48	5.34	5.50	5.42	5.28	5.35	5.45	4.96	7.14	7.33	6.66	7.18	7.32	7.16	7.24	7.38	7.31	7.21	7.70
Hudson River	5.29	4.45	3.10	4.75	4.80	6.15	4.00	5.50	6.03	5.80	2.90	3.72	0.84	2.19	0.54	0.49	-0.86	1.29	-0.21	-0.74	-0.51	2.39	1.57
CW-01A	9.67	2.12	n/a	n/a	n/a	n/a	n/a	1.65	2.00	0.78	1.70	1.65	7.55	n/a	n/a	n/a	n/a	n/a	8.02	7.67	8.89	7.97	8.02
HW-1	5.09	3.60	n/a	n/a	n/a	n/a	n/a	4.04	4.92	4.10	2.82	4.32	1.49	n/a	n/a	n/a	n/a	n/a	1.05	0.17	0.99	2.27	0.77
HW-2	4.90	4.00	n/a	n/a	n/a	n/a	n/a	4.11	5.50	5.10	2.56	4.18	0.96	n/a	n/a	n/a	n/a	n/a	0.85	-0.54	-0.14	2.40	0.78

Notes:

amsl Estimated elevation; well paved over during surveying but uncovered presently and can be monitored

amsl Above Mean Sea Level

Attachment C
Laboratory Data Summary

National Grid
Hudson (Water Street)
Hudson, New York

Analytical Data Summary

Compound	NYSAWQS (ug/L)	June 2008 Event (ug/L)			
		MW-03	MW-05	MW-06	MW-11
Benzene	1	ND	ND	ND	3.8
Toluene	5	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	8
o-Xylene	-	ND	ND	ND	2.4
m/ p-Xylenes	-	ND	ND	ND	ND
Xylene (total)	5	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND

ND - Not Detected

NYSAWQS - New York State Aqueous Water Quality Standards

Bolded numbers exceed the NYSAWQS

National Grid
Hudson (Water Street)
Hudson, New York

Analytical Data Summary

Compound	August 2007 Event (ug/L)				
	MW-03	MW-05	MW-06	MW-07	MW-11
Benzene	ND	ND	ND	ND	12
Toluene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	16
o-Xylene	ND	ND	ND	ND	6.8
m/p-Xylenes	ND	ND	ND	ND	ND
Xylene (total)	ND	ND	ND	ND	7.5
Naphthalene	ND	ND	ND	ND	5.1

Attachment D
Data Validation Report

Data Validation Services

120 Cobble Creek Road P.O. Box 208

North Creek, NY 12853

Phone 518-251-4429

Facsimile 518-251-4428

September 10, 2008

Matthew Millias

CDM

One General Motors Dr. Suite 2

Syracuse, NY 13206

RE: Data Usability Summary Report for NMPC-Hudson-Water St site
TAL-Buffalo Job No. A08-6791

Dear Mr. Millias:

Review has been completed for the data package generated by TestAmerica Laboratories, Inc. that pertains to samples collected 6/10/08 at the NMPC Hudson Water St. site. Four aqueous samples and a field duplicate were processed for BTEX, and naphthalene by the USEPA SW846 method 8260B, with additional QC requirements of the NYSDEC ASP. A trip blank was also analyzed.

The data packages submitted contain full deliverables for validation, but this usability report is generated from review of the summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed. However, the reported summary forms have been reviewed for application of validation qualifiers, using guidance from the NMPC generic QAPP, USEPA Region 2 validation SOPs, the USEPA National Functional Guidelines for Data Review, and professional judgment, as affects the usability of the data. The following items were reviewed:

- * Laboratory Narrative Discussion
- * Custody Documentation
- * Holding Times
- * Surrogate and Internal Standard Recoveries
- * Matrix Spike Recoveries/Duplicate Correlations
- * Field Duplicate Correlations
- * Preparation/Calibration Blanks
- * Control Spike/Laboratory Control Samples
- * Calibration Standard Responses
- * Instrumental Tunes
- * Instrument IDLs
- * Sample Quantitation and Identification

The items listed above which show deficiencies are discussed within the text of this narrative. All of the other items were determined to be acceptable for the DUSR level review.

In summary, field sample analyte values/reporting limits are usable as reported, with the exception that results for one compound in the samples are considered estimated in quantitative value.

Copies of the laboratory case narratives and the sample identification summary forms are attached to this text, and should be reviewed in conjunction with this report. Also included with this narrative are laboratory sample results forms with the validation qualifiers applied in red.

BTEX by EPA 8260B/NYSDEC ASP

Holding times were met and instrumental tunes are within acceptance ranges. Surrogate and internal standard recoveries are within required limits. Blanks show no contamination.

The matrix spikes of MW-06-0608 show acceptable accuracy and precision values. Blind field duplicate correlations of MW-05-0608 were also within guidance limits.

Calibrations standards show acceptable responses, with the exception of that for naphthalene in the continuing calibration verification standard (35%D). The results for that compound (all are non-detection) are qualified as estimated ("UJ"), and may have a low bias.

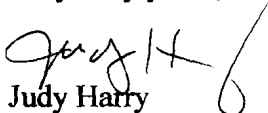
Reporting limits for m,p-xylene and total xylene could be lowered to 1 ug/L.

Data Completeness

Although required of the laboratory deliverables, raw data are not identified with the client ID.

Please do not hesitate to contact me if you have comments or questions regarding this report.

Very truly yours,


Judy Harry

VALIDATION QUALIFIER DEFINITIONS

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the national qualifiers assigned to results in the data review process. If the Regions choose to use additional qualifiers, a complete explanation of those qualifiers should accompany the data review.

- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.**
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.**
- N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."**
- NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.**
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.**
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.**

**CLIENT and LABORATORY SAMPLE IDs
and CASE NARRATIVES**

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: TESTAMERICA LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
FD-0608	A8679105	SW8463	-	-	-	-	-	-
MW-03-0608	A8679101	SW8463	-	-	-	-	-	-
MW-05-0608	A8679102	SW8463	-	-	-	-	-	-
MW-06-0608	A8679103	SW8463	-	-	-	-	-	-
MW-11-0608	A8679104	SW8463	-	-	-	-	-	-

NYSDEC-1

SAMPLE SUMMARY

<u>LAB SAMPLE ID</u>	<u>CLIENT SAMPLE ID</u>	<u>MATRIX</u>	<u>SAMPLED</u>		<u>RECEIVED</u>	
			<u>DATE</u>	<u>TIME</u>	<u>DATE</u>	<u>TIME</u>
A8679105	FD-0608	WATER	06/10/2008	00:00	06/12/2008	09:15
A8679101	MW-03-0608	WATER	06/10/2008	10:25	06/12/2008	09:15
A8679102	MW-05-0608	WATER	06/10/2008	09:35	06/12/2008	09:15
A8679103	MW-06-0608	WATER	06/10/2008	08:45	06/12/2008	09:15
A8679103MS	MW-06-0608	WATER	06/10/2008	08:45	06/12/2008	09:15
A8679103SD	MW-06-0608	WATER	06/10/2008	08:45	06/12/2008	09:15
A8679104	MW-11-0608	WATER	06/10/2008	11:10	06/12/2008	09:15
A8679106	Trip Blank	WATER	06/10/2008	00:00	06/12/2008	09:15

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

SDG NARRATIVE

Job#: A08-6791Project#: NY7A9595
Site Name: Niagara Mohawk O & MGeneral Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A08-6791

Sample Cooler(s) were received at the following temperature(s); 6@2.0 °C

All samples were received in good condition.

GC/MS Volatile Data

For method 8260, all samples were preserved to a pH less than 2.

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."



Jason R. Kacalski
Project Manager

7/7

Date

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

QUALIFIED SAMPLE REPORT FORMS

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CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

FD-0608

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: RECONY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A8679105Sample wt/vol: 5.00 (g/mL) ML Lab File ID: S5078.RRLevel: (low/med) LOW Date Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

71-43-2-----	Benzene	1.0	U
108-88-3-----	Toluene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
95-47-6-----	o-Xylene	1.0	U
-----	m/p-Xylenes	2.0	U
1330-20-7-----	Total Xylenes	3.0	U
91-20-3-----	Naphthalene	1.0	U u.s.

CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

MW-03-0608

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: RECONY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATER Lab Sample ID: A8679101Sample wt/vol: 5.00 (g/mL) ML Lab File ID: S5072.RRLevel: (low/med) LOW Date Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: N Date Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm) Dilution Factor: 1.00

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

71-43-2-----	Benzene	1.0	U
108-88-3-----	Toluene	1.0	U
100-41-4-----	Ethylbenzene	1.0	U
95-47-6-----	o-Xylene	1.0	U
-----	m/p-Xylenes	2.0	U
1330-20-7-----	Total Xylenes	3.0	U
91-20-3-----	Naphthalene	1.0	U <u>uJ</u>

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CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

MW-05-0608

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: RECONY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A8679102Sample wt/vol: 5.00 (g/mL) MLLab File ID: S5073.RRLevel: (low/med) LOWDate Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
71-43-2-----	Benzene		1.0	U
108-88-3-----	Toluene		1.0	U
100-41-4-----	Ethylbenzene		1.0	U
95-47-6-----	o-Xylene		1.0	U
-----	m/p-Xylenes		2.0	U
1330-20-7-----	Total Xylenes		3.0	U
91-20-3-----	Naphthalene		1.0	U <i>ug</i>

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CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

MW-06-0608

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: RECONY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A8679103Sample wt/vol: 5.00 (g/mL) MLLab File ID: S5074.RRLevel: (low/med) LOWDate Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
71-43-2-----	Benzene		1.0	U
108-88-3-----	Toluene		1.0	U
100-41-4-----	Ethylbenzene		1.0	U
95-47-6-----	o-Xylene		1.0	U
-----	m/p-Xylenes		2.0	U
1330-20-7-----	Total Xylenes		3.0	U
91-20-3-----	Naphthalene		1.0	U <i>uJ</i>

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CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

MW-11-0608

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: REONY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A8679104Sample wt/vol: 5.00 (g/mL) MLLab File ID: S5077.RRLevel: (low/med) LOWDate Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
71-43-2-----	Benzene		3.8	
108-88-3-----	Toluene		1.0	U
100-41-4-----	Ethylbenzene		8.0	
95-47-6-----	o-Xylene		2.4	
-----	m/p-Xylenes		2.0	U
1330-20-7-----	Total Xylenes		3.0	U
91-20-3-----	Naphthalene		1.0	U <u>UJ</u>

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CAMP DRESSER AND MCKEE
 NIAGARA MOHAWK O & M
 METHOD 8260 - BTEX + NAPHTHALENE
 ANALYSIS DATA SHEET

Client No.

Trip Blank

Lab Name: TestAmerica Laboratories Inc. Contract: _____Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____Matrix: (soil/water) WATERLab Sample ID: A8679106Sample wt/vol: 5.00 (g/mL) MLLab File ID: S5079.RRLevel: (low/med) LOWDate Samp/Recv: 06/10/2008 06/12/2008% Moisture: not dec. _____ Heated Purge: NDate Analyzed: 06/22/2008GC Column: ZB-624 ID: 0.18 (mm)Dilution Factor: 1.00

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
71-43-2-----	Benzene		1.0	U
108-88-3-----	Toluene		1.0	U
100-41-4-----	Ethylbenzene		1.0	U
95-47-6-----	o-Xylene		1.0	U
-----	m/p-Xylenes		2.0	U
1330-20-7-----	Total Xylenes		3.0	U
91-20-3-----	Naphthalene		1.0	U <u>UJ</u>