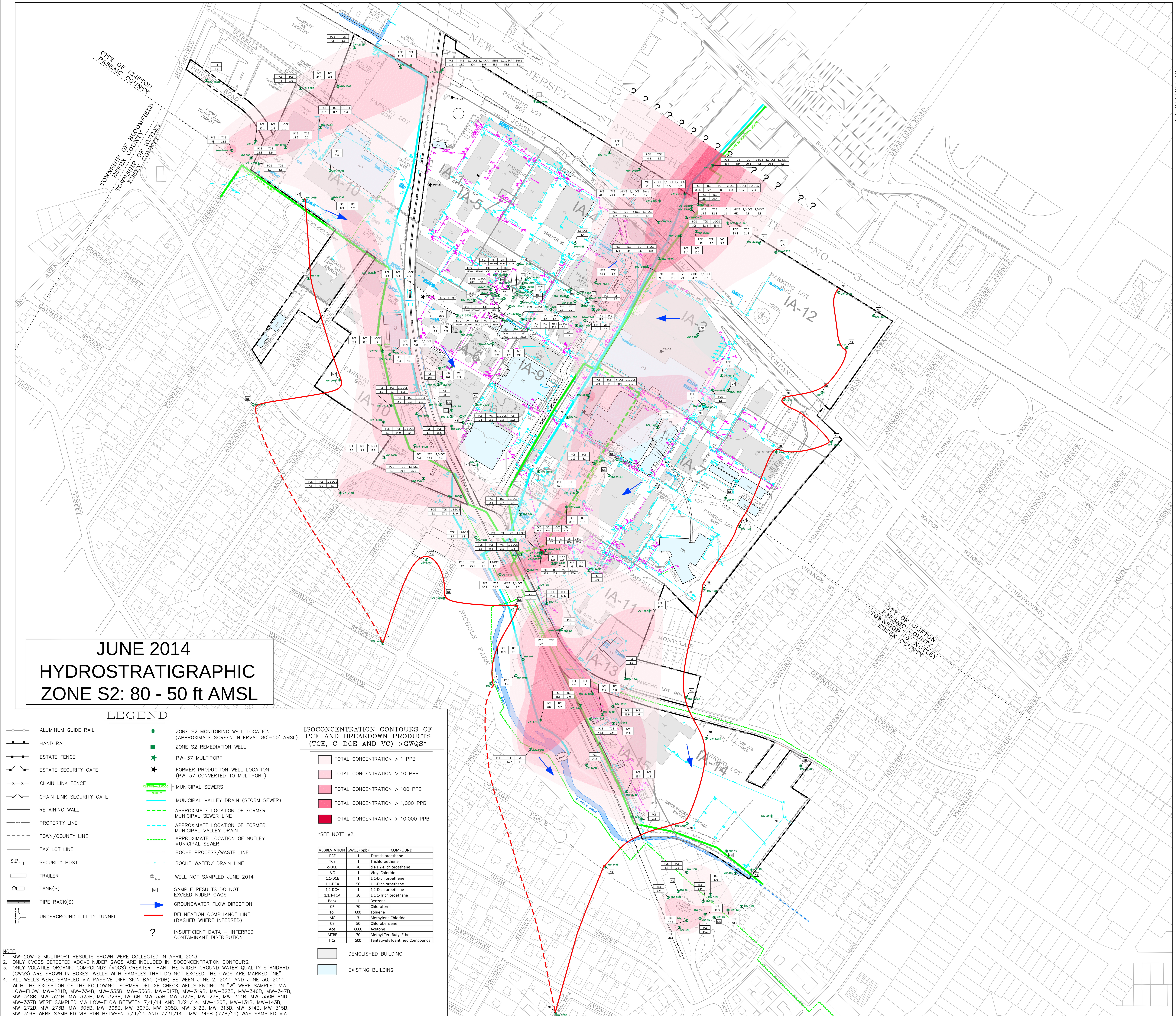
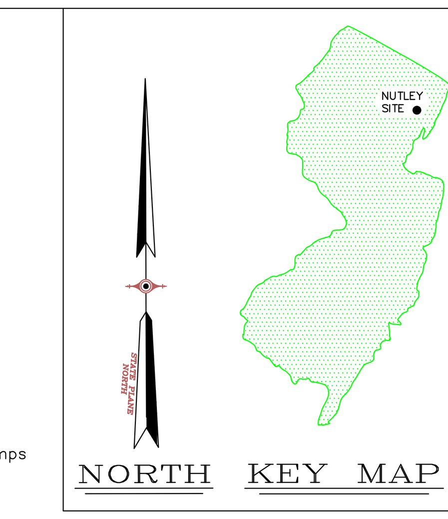


JUNE 2014 HYDROSTRATIGRAPHIC ZONE S2: 80 - 50 ft AMSL

IA–6 PUMP AND TREAT SYSTEM

Pumping Well	Min-Max Pumping Rates (gpm)	Average Pumping Rate (gpm)
RW-51	3.0 – 8.3	4.7
RW-96	3.0 – 11	5

Active Onsite Sumps and Dewatering Activites:
B52 – Sump pump in vault
Utility Tunnel – Numerous (>50) sump pumps within.
B39 – Multiple sump pumps
B76 – Sump pump in vault
B1 – Sump pump in vault
B115 – Multiple sump pumps
B118 – Sump pump In Vault
B116 – Multiple sump pumps
B85 (Demolished and turned off early 2014) – 2 sump pumps



MONITORING WELLS SHOWN ON THIS FIGURE

Well Designation	Hydrogeologic Zone	Investigation Area (IA)	Well Designation	Hydrogeologic Zone	Investigation Area (IA)
MW-186-2	S2	IA-02	MW-319B	S2	IA-10
MW-226B	S2	IA-02	MW-347B	S2	IA-10
MW-240BR	S2	IA-02	MW-348B	S2	IA-10
MW-241B	S2	IA-02	MW-349B	S2	IA-10
MW-243B	S2	IA-02	MW-26A	S2	IA-11
MW-246B	S2	IA-02	MW-55	S2	IA-11
MW-305B	S2	IA-02	MW-55B	S2	IA-11
MW-306B	S2	IA-02	MW-63	S2	IA-11
MW-307B	S2	IA-02	MW-71	S2	IA-11
MW-308B	S2	IA-02	MW-73	S2	IA-11
MW-312B	S2	IA-02	MW-74	S2	IA-11
MW-313B	S2	IA-02	MW-75	S2	IA-11
MW-314B	S2	IA-02	MW-172C	S2	IA-11
MW-315B	S2	IA-02	MW-227B	S2	IA-11
MW-316B	S2	IA-02	MW-324B	S2	IA-11
ART-MW-6	S2	IA-02	MW-325B	S2	IA-11
MW-40A	S2	IA-03	MW-326B	S2	IA-11
MW-41	S2	IA-03	MW-327B	S2	IA-11
MW-115	S2	IA-03	IW-6B	S2	IA-11
MW-189B	S2	IA-03	MW-3	S2	IA-12
MW-190B	S2	IA-03	MW-24A	S2	IA-12
MW-191B	S2	IA-03	MW-24B	S2	IA-12
MW-225B	S2	IA-03	MW-60-Z2	S2	IA-12
MW-228B	S2	IA-03	MW-60A-S2	S2	IA-12
MW-24C	S2	IA-03	MW-61B	S2	IA-12
MW-260C	S2	IA-03	MW-80-Z2	S2	IA-12
MW-181	S2	IA-04	MW-114	S2	IA-12
MW-351B	S2	IA-04	MW-224B	S2	IA-12
MW-22A	S2	IA-06	MW-231B	S2	IA-12
MW-50	S2	IA-06	MW-232C	S2	IA-12
MW-53	S2	IA-06	MW-234B	S2	IA-12
MW-76	S2	IA-06	MW-237B	S2	IA-12
MW-78	S2	IA-06	MW-250B	S2	IA-12
MW-82	S2	IA-06	MW-263B	S2	IA-12
MW-84	S2	IA-06	MW-265B	S2	IA-12
MW-87	S2	IA-06	MW-266B	S2	IA-12
MW-244B	S2	IA-06	MW-271B	S2	IA-12
MW-251B	S2	IA-06	MW-272B	S2	IA-12
MW-264B	S2	IA-06	MW-295B	S2	IA-12
MW-317B	S2	IA-06	MW-143B	S2	IA-13
MW-346B	S2	IA-06	MW-276B	S2	IA-13
MW-350B	S2	IA-06	MW-47	S2	IA-14
MW-15B	S2	IA-07	MW-48	S2	IA-14
MW-118	S2	IA-07	MW-49	S2	IA-14
MW-120	S2	IA-07	MW-131B	S2	IA-14
MW-122	S2	IA-07	MW-148A	S2	IA-14
MW-125A	S2	IA-07	MW-277B	S2	IA-14
MW-128B	S2	IA-07	MW-112B	S2	IA-15
MW-204B	S2	IA-07	MW-124B	S2	IA-15
MW-218B	S2	IA-07	MW-221B	S2	IA-15
MW-238B	S2	IA-07	MW-278B	S2	IA-15
MW-253B	S2	IA-07	MW-334B	S2	IA-15
MW-288B	S2	IA-07	MW-335B	S2	IA-15
MW-292B	S2	IA-07	MW-336B	S2	IA-15
PW-37 Port 1	S2	IA-07	MW-337B	S2	IA-15
PW-37 Port 2	S2	IA-07	MW-103B	S2	Off-Site
MW-7C	S2	IA-09	MW-104B	S2	Off-Site
MW-152B	S2	IA-09	MW-105B	S2	Off-Site
MW-154B	S2	IA-09	MW-106B	S2	Off-Site
MW-167B	S2	IA-09	MW-107	S2	Off-Site
MW-168B	S2	IA-09	MW-108B	S2	Off-Site
MW-169B	S2	IA-09	MW-144B	S2	Off-Site
MW-170B	S2	IA-09	MW-145B	S2	Off-Site
MW-217B	S2	IA-09	MW-146B	S2	Off-Site
MW-252B	S2	IA-09	MW-171B	S2	Off-Site
MW-297B	S2	IA-09	MW-201	S2	Off-Site
MW-298B	S2	IA-09	MW-209B	S2	Off-Site
MW-299B	S2	IA-09	MW-213C	S2	Off-Site
MW-300B	S2	IA-09	MW-214B	S2	Off-Site
MW-323B	S2	IA-09	MW-236B	S2	Off-Site
MW-16AW	S2	IA-10	MW-257B	S2	Off-Site
MW-27B	S2	IA-10	MW-258B	S2	Off-Site
MW-44B	S2	IA-10	MW-267B	S2	Private Road
MW-70-1	S2	IA-10	MW-7W	S2	Deluxe Check
MW-70-2	S2	IA-10	MW-9W	S2	Deluxe Check
MW-70-3	S2	IA-10	MW-20W Port 2	S2	Deluxe Check
MW-126B	S2	IA-10	MW-1N	S2	Nova Electric
MW-206B	S2	IA-10	MW-2N	S2	Nova Electric
MW-207B	S2	IA-10	MW-3N	S2	Nova Electric
MW-208B	S2	IA-10	MW-5N	S2	Nova Electric
MW-223B	S2	IA-10	MW-6RN	S2	Nova Electric
MW-229B	S2	IA-10	MW-7N	S2	Nova Electric
MW-230B	S2	IA-10	MW-8N	S2	Nova Electric
MW-259B	S2	IA-10	MW-9N	S2	Nova Electric
MW-268B	S2	IA-10	MW-12N	S2	Nova Electric
MW-273B	S2	IA-10	MW-17N	S2	Nova Electric
MW-274B	S2	IA-10	MW-18N	S2	Nova Electric
MW-275B	S2	IA-10	MW-19N	S2	Nova Electric
MW-280B	S2	IA-10	MW-20N	S2	Nova Electric

LEGEND

- ALUMINUM GUIDE RAIL
- HAND RAIL
- ESTATE FENCE
- ESTATE SECURITY GATE
- CHAIN LINK FENCE
- CHAIN LINK SECURITY GATE
- RETAINING WALL
- PROPERTY LINE
- TOWN/COUNTY LINE
- TAX LOT LINE
- S.P. SECURITY POST
- TRAILER
- TANK(S)
- PIPE RACK(S)
- UNDERGROUND UTILITY TUNNEL
- ZONE S2 MONITORING WELL LOCATION (APPROXIMATE SCREEN INTERVAL 80'–50' AMSL)
- ZONE S2 REMEDIATION WELL
- PW–37 MULTIPORT
- FORMER PRODUCTION WELL LOCATION (PW–37 CONVERTED TO MULTIPORT)
- CLIFTON–ALLWOOD / NUTLEY MUNICIPAL SEWERS
- MUNICIPAL VALLEY DRAIN (STORM SEWER)
- APPROXIMATE LOCATION OF FORMER MUNICIPAL SEWER LINE
- APPROXIMATE LOCATION OF FORMER MUNICIPAL VALLEY DRAIN
- APPROXIMATE LOCATION OF NUTLEY MUNICIPAL SEWER
- ROCHE PROCESS/WASTE LINE
- ROCHE WATER/ DRAIN LINE
- MW WELL NOT SAMPLED JUNE 2014
- NE SAMPLE RESULTS DO NOT EXCEED NJDEP GWQS
- GROUNDWATER FLOW DIRECTION
- DELINEATION COMPLIANCE LINE (DASHED WHERE INFERRED)
- ? INSUFFICIENT DATA – INFERRED CONTAMINANT DISTRIBUTION

ISOCONCENTRATION CONTOURS OF PCE AND BREAKDOWN PRODUCTS (TCE, C–DCE AND VC) >GWQS*

- TOTAL CONCENTRATION > 1 PPB
- TOTAL CONCENTRATION > 10 PPB
- TOTAL CONCENTRATION > 100 PPB
- TOTAL CONCENTRATION > 1,000 PPB
- TOTAL CONCENTRATION > 10,000 PPB

*SEE NOTE #2.

ABBREVIATION	GWQS (ppb)	COMPOUND
PCE	1	Tetrachloroethene
TCE	1	Trichloroethene
c-DCE	70	cis-1,2-Dichloroethene
VC	1	Vinyl Chloride
1,1-DCE	1	1,1-Dichloroethene
1,1-DCA	50	1,1-Dichloroethane
1,2-DCA	1	1,2-Dichloroethane
1,1,1-TCA	30	1,1,1-Trichloroethane
Benz	1	Benzene
CF	70	Chloroform
Tol	600	Toluene
MC	3	Methylene Chloride
CB	50	Chlorobenzene
Ace	6000	Acetone
MTBE	70	Methyl Tert Butyl Ether
TICs	500	Tentatively Identified Compounds

- DEMOLISHED BUILDING
- EXISTING BUILDING

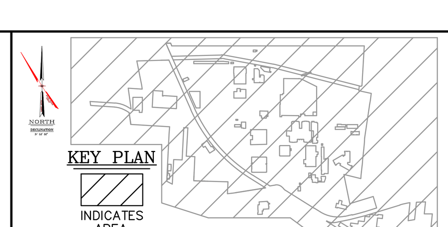
NOTE:
1. MW–20W–2 MULTIPORT RESULTS SHOWN WERE COLLECTED IN APRIL 2013.
2. ONLY CVOCS DETECTED ABOVE NJDEP GWQS ARE INCLUDED IN ISOCONCENTRATION CONTOURS.
3. ONLY VOLATILE ORGANIC COMPOUNDS (VOCS) GREATER THAN THE NJDEP GROUND WATER QUALITY STANDARD (GWQS) ARE SHOWN IN BOXES. WELLS WITH SAMPLES THAT DO NOT EXCEED THE GWQS ARE MARKED "NE".
4. ALL WELLS WERE SAMPLED VIA PASSIVE DIFFUSION BAG (PDB) BETWEEN JUNE 2, 2014 AND JUNE 30, 2014, WITH THE EXCEPTION OF THE FOLLOWING: FORMER DELUXE CHECK WELLS ENDING IN "W" WERE SAMPLED VIA LOW–FLOW. MW–221B, MW–334B, MW–335B, MW–336B, MW–317B, MW–319B, MW–323B, MW–346B, MW–347B, MW–348B, MW–324B, MW–325B, MW–326B, IW–6B, MW–55B, MW–327B, MW–27B, MW–351B, MW–350B AND MW–337B WERE SAMPLED VIA LOW–FLOW BETWEEN 7/1/14 AND 8/21/14. MW–126B, MW–131B, MW–143B, MW–272B, MW–273B, MW–305B, MW–306B, MW–307B, MW–308B, MW–312B, MW–313B, MW–314B, MW–315B, MW–316B WERE SAMPLED VIA PDB BETWEEN 7/9/14 AND 7/31/14. MW–349B (7/8/14) WAS SAMPLED VIA BAILER.
5. TICs = TENTATIVELY IDENTIFIED COMPOUNDS.
6. ALL CONCENTRATIONS ARE IN PARTS PER BILLION (PPB).
7. AMSL = ABOVE MEAN SEA LEVEL.

ENGINEER IN RESPONSIBLE CHARGE OF THE WORK SHOWN ON THIS DRAWING

DATE: ________ SIGNATURE

PROFESSIONAL ENGINEER: ENG
LIC. # LIC

TRC ENVIRONMENTAL CORP.
41 SPRING STREET
NEW PROVIDENCE, NEW JERSEY 07974
908–988–1700



GRAPHIC SCALE
150 0 75 150 300
1 INCH = 150 FEET

REV	DATE	BY	DESCRIPTION
1	10/7/14	MG	ADDED DELINEATION COMPLIANCE LINE
0	6/27/14	MG	DRAFT ISSUED FOR REVIEW

DESIGN SUPERVISOR
PROJECT ENGINEER

PROJECT TITLE: NUTLEY SITE REMEDIATION PROJECT

INITIATOR	DRAWN BY	CHECKED BY	PROJECT ENGINEER
T. O'MEARA	M. GIAMBATTISTA	S. McCRAY	G. CIERPIAL
	START DATE 6–27–14	SUPERVISOR A. GOELLER	

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DRAWING TITLE: FIGURE 61
VOCs IN GROUNDWATER >GWQS
ZONE S2
JUNE 2014 PDB SAMPLING EVENT

SCALE: 1" = 150'
BLDG. NO. –

PREPARED FOR Roche Hoffmann–La Roche Inc.
340 KINGSLAND STREET NUTLEY, NEW JERSEY 07110–1199

DRAWING NO. NR–STE–S29215–C1216 (1)

FILE: C:\USERS\LGREENBAUM\APPDATA\LOCAL\TEMP\ACPUBLISH_6200\ZONE S2 Q2 2014 CVOC PLUMES 11.6.14.DWG, DATE: 12/10/2014 10:19:52AM