	A	B	C	D	E	F
1						TABLE 1 - 12/28/11
2						FIELD AND QC SAMPLING SU
3						DIMOCK RESIDENTIAL GROUND
4						DIMOCK, SUSQUEHANNA COUNTY,
5		**Parameter/Method**	Lab	**Matrix**	**Field Samples**	**Bkgd**
6						
7		Alkalinity (SM 2320B) (Total Hardness, HCO3, CO3) (2320B, 2340B)	Ft. Meade	drinking water	60	0
8		Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2-butanol (8015D)	?	drinking water	60	0
9		Anions, Chloride, Bromide, Fluoride, Nitrate/Nitrite as N, Orthophosphorus as P, Sulfate as SO4 (300.0)	Ft. Meade	drinking water	60	0
10		Glycols incl. 2-Butoxyethanol (8321 Modified)	Ft. Meade	drinking water	60	0
11		Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V,K, Hg (200.8/245.1)	Ft. Meade	drinking water	60	0
12		Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V,K, Hg (200.8/245.1)	Ft. Meade	Filtered drinking water	60	0
13		pH (9040C)	Ft. Meade	drinking water	60	0
14		Phosphorus, Total (365.1)	Ft. Meade	drinking water	60	0
15		Nitrate/Nitrite (353.2)	Ft. Meade	drinking water	60	0
16		Semi-Volatiles (TCL plus TICs) (CLP Trace plus TICS) (OLC03.2)	Ft. Meade	drinking water	60	0
17		1-methylnapthalene (8270 or equivalent)	Ft. Meade	drinking water	60	0
18		Volatiles Incl. Acrylonitrile (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2)	Ft. Meade	drinking water	60	0
19		Solids, Total Dissolved (TDS) (2540C)	Ft. Meade	drinking water	60	0
20		Solids, Total Suspended (TSS) (2540D)	Ft. Meade	drinking water	60	0
21		Bacteria (total coliform, HPC)	TechLaw	drinking water	60	0

	A	B	C	D	E	F
22		$d^{13}C$ and $d^{2}H$ of methane (isotech)	Isotech	drinking water	10	0
23		$d^{13}C$ of inorganic carbon (isotech)	Isotech	drinking water	10	0
24		Stable isotopes of water (O,H) (isotech)	Isotech	drinking water	10	0
25		Complete compositional analysis of headspace gas (isotech)	Isotech	drinking water	10	0
26		Diss. gases methane, ethane, ethene (isotech)	Isotech	drinking water	10	0
27		Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)	Region 9	drinking water	60	0
28		DRO (8015M)	Region 9	drinking water	60	0
29		GRO (8015M)	Region 9	drinking water	60	0
30		Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-234, U-235, U-238) (901.1)	NAREL	drinking water	60	0
31		Gross Alpha/Beta (900.0)	NAREL	drinking water	60	0
32		Ethylene Glycol (8015M)	TechLaw Pace	drinking water	60	0
33		2-Methoxyethanol (8015B)	TechLaw Pace	drinking water	60	0
34		Methylene Blue Active Substances (MBAS) (SM 5540C)	TechLaw Pace	drinking water	60	0
35		Oil & Grease (HEM) (1664A)	TechLaw Pace	drinking water	60	0
36		Ra-226 (903.1)	TechLaw Pace	drinking water	60	0
37		Ra-228 (904.0)	TechLaw Pace	drinking water	60	0
38		Turbidity, Nephelometric (180.1)	TechLaw	drinking water	60	0
39		Notes:				
40		1. This QA sample will be an aqueous matrix.				
41		sampling equipment is used.				
42		3. Estimate based on 5 sampling days				
43		Key:				
44		Bkgd = Background		QA/QC = Quality assurance/quality control		

	A	B	C	D	E	F
45		MS/MSD = Matrix Spike/Matrix Spike Duplicate		Sr = Strontium		
46		CRQL = Contract-Required Quantitation limit.				
47		Dup = Duplicate				
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	G	H	I	J	K	L	M	N	O
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2	**IMMARY**								
3	**WATER SITE**								
4	**PENNSYLVANIA**								
5	**QC Sample Summary**					**Total Field and QA/QC Analyses (not including MS/MSD)[3]**			
6	**Dup**	**Trip[1] Blanks**	**Rinsate[1,2] Blanks**	**Field[1] Blanks**	**MS/MSD**				
7	6	0	0	5	0	71			
8	6	0	0	5	3	71			
9	6	0	0	5	0	71			
10	6	0	0	5	0	71			
11	6	0	0	5	6	71			
12	6	0	0	5	6	71			
13	6	0	0	5	0	71			
14	6	0	0	5	0	71			
15	6	0	0	5	0	71			
16	6	0	0	5	3	71			
17	6	0	0	5	0	71			
18	6	1 per cooler	0	5	3	71 + Trip Blanks for Coolers			
19	6	0	0	5	0	71			
20	6	0	0	5	0	71			
21	6	0	0	5	0	71			

	G	H	I	J	K	L	M	N	O
22	0	0	0	0	0	10			
23	0	0	0	0	0	10			
24	0	0	0	0	0	10			
25	0	0	0	0	0	10			
26	0	0	0	0	0	10			
27	6	0	0	5	0	71			
28	6	0	0	5	0	71			
29	6	0	0	5	0	71			
30	6	0	0	5	0	71			
31	6	0	0	5	0	71			
32	6	0	0	5	0	71			
33	6	0	0	5	0	71			
34	6	0	0	5	0	71			
35	6	0	0	5	0	71			
36	6	0	0	5	0	71			
37	6	0	0	5	0	71			
38	6	0	0	5	0	71			
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1	TABLE 2 - 12/28/11							
2	SAMPLE ANALYTICAL REQUIREMENTS SUMMARY							
3	DIMOCK RESIDENTIAL GROUNDWATER SITE							
4	DIMOCK, SUSQUEHANNA COUNTY, PENNSYLVANIA							
5	**Analytical parameter and Method**		**Matrix**		**Sample Preservation**		**Holding Time**	
6								
7	Alcohols: Ethanol, methanol, 1-propanol, 1-butanol, 2-butanol (8015D)		drinking water		Ice, 6°C		7 days	
8	Alkalinity (2320B, 2340B)		drinking water		Ice, 6°C		14 days	
9	Anions: Chloride, Bromide, Fluoride, Nitrate/Nitrate as N, Orthophosphorus as P, Sulfate as SO4 (300.0)		drinking water		Ice, 6°C		28 days	
10	Bacteria (total coliform, HPC)		drinking water		Ice, 4°C (.008% Na2S2O3 if residual Cl- present)		6 hours	
11	d13C and d2H of methane (Isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
12	d13C of inorganic carbon (Isotech)		drinking water		Ice, 4°C		6 months	
13	Complete compositional analysis of headspace gas (isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
14	Diss. gases methane, ethane, ethene (isotech)		drinking water		Ice, 4°C, biocide pill in sample container		6 months	
15	Dissolved Gases, Methane, Ethane, & Ethene (RSK-175)		drinking water		pH<2 with HCl and cool with ice, 4°C		7 days	
16	Ethylene Glycol (8015M)		drinking water		Ice, 4°C		7 days	
17	DRO (8105M)		drinking water		Ice, 4°C		7 days extract; 40 days analysis	
18	GRO (8105M)		drinking water		pH<2 with HCl and cool with ice, 4°C		14 days	
19	Gamma Spec (K-40, Ra-226, Ra-228, Th-232, Th-234, U-235, U-238) (901.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
20	Glycols incl. 2-Butoxyethanol (8316)		drinking water		Ice, 6°C		7 days	
21	Gross Alpha/Beta (900.0)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
22	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
23	Metals: Al, Ca, Cr, Cu, Fe, Mg, Mn, Ni, Na, As, Se, Zn, Ti, Sr, Ba, Sn, Sb, Be, Cd, Co, Tl, U, V, K, Hg (200.8/245.1)		(filtered) drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
24	Methylene Blue Active Substances (MBAS) (SM 5540C)		drinking water		Ice, 4°C		48 hours	

	A	B	C	D	E	F	G	H
25	Nitrate/Nitrite (Total N) (353.2)		drinking water		pH<2, H2SO4, and cool with ice, 4°C		7 days	
26	Oil & Grease (HEM) (1664A)		drinking water		pH<2, H2SO4, and cool with ice, 4°C		28 days	
27	pH (9040C)		drinking water		Ice, 6°C		As soon as possible	
28	Phosphorus, Total (365.1)		drinking water		Ice, 6°C		28 days	
29	Ra-226 (903.1)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
30	Ra-228 (904.0)		drinking water		pH<2 with HNO3 and cool with ice, 4°C		6 months	
31	Semi-Volatiles (TCL plus TICs) (OLC03.2)		drinking water		Ice, 6°C		7 days	
32	Solids, Total Dissolved (TDS) (SM 2540C)		drinking water		Ice, 6°C		7 days	
33	Solids, Total Suspended (TSS) (SM 2540D)		drinking water		Ice, 6°C		7 days	
34	Stable isotopes of water (O,H) (Isotech)		drinking water		Ice, 4°C		6 months	
35	Turbidity, Nephelometric (180.1)		drinking water		Ice, 4°C		48 hours	
36	2-Methoxyethanol (8015B)		drinking water		Ice, 6°C		7 days	
37	1-methylnapthalene (8270 or equivalent)		drinking water		Ice, 6°C		7 days	
38	Volatiles (TCL plus TICs) (CLP Trace - 0.5 ug/L QL) (OLC03.2) incl. Acrylonitrile		drinking water		2 drops of 1:1 HCl, pH<2, Ice, 6°C		7 days	
39	**Note: Analyses will be combined into sample bottles as applicable/appropriate based on determination by lab(s)**							
40	**KEY:**							
41	Celsius		milliliter					
42	C14 = Carbon 14		= Sodium					
43	CLP = Contract Lab		potential					
44	D13C = delta of		QL =					
45	D2H = delta of		Sr =					
46	Acid		Target					
47	density		Tentativel					
48	HN03 = Nitric Acid		microgra					
49	Heterotrophic		paramete					

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5	**Sample Container(s)**			Procurement	Number
6				Source or Lab	
7	Three 40-ml glass vials (Fill to capacity with no head space)			Ft. Meade	3
8	One 500-ml HDPE			Ft. Meade	1
9	One 500-ml HDPE			Ft. Meade	1
10	125 ml Pre-sterilized polyproylene			Tier 4	1
11	one 1-L poly/TBD*			Tier 4	1
12	one 1-L poly/TBD*			Tier 4	1
13	one 1-L poly/TBD*			Tier 4	1
14	one 1-L poly/TBD*			Tier 4	1
15	One 40-ml glass vial			Tier 4	1
16	Three 40-ml glass vials (Fill to capacity with no head space)			Tier 4	3
17	Two 1-Liter amber glass jars with teflon-lined lids				2
18	Three 40-ml glass vials (Fill to capacity with no head space)				3
19	One 1-Liter HDPE			Tier 4	1
20	Three 40-ml glass vials (Fill to capacity with no head space)			Ft. Meade	3
21	One 1-Liter HDPE			Tier 4	1
22	One 1-Liter HDPE			Ft. Meade	1
23	One 1-Liter HDPE			Ft. Meade	1
24	One 500-ml HDPE			Tier 4	1

	I	J	K	L	M
25	Two 1-Liter amber glass jars with teflon-lined lids			Ft. Meade	2
26	One 1-Liter amber glass jars with teflon-lined lids			Tier 4	1
27	One 250-ml HDPE			Ft. Meade	1
28	One 400-ml HDPE			Ft. Meade	1
29	One 1-Liter HDPE			Tier 4	1
30	One 1-Liter HDPE			Tier 4	1
31	Two 1-Liter amber glass jars with teflon-lined lids			Ft. Meade	2
32	One 500-ml HDPE			Ft. Meade	1
33	One 500-ml HDPE			Ft. Meade	1
34	one 1-L poly/TBD*			Tier 4	1
35	One 250-ml HDPE			Tier 4	1
36	Two 1-Liter amber glass jars with teflon-lined lids			Tier 4	2
37	Two 1-Liter amber glass jars with teflon-lined lids			Tier 4	2
38	Six 40-ml glass vials w/Teflon lined cap (no head space)			Ft. Meade	6
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