

APPENDIX A

PROGRAM SUMMARY

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TABLE A
SUMMARY OF DATA FOR SSES
OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
NAME OF FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
LOCATION OF FACILITY: LUZERNE COUNTY, PENNSYLVANIA

Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS		
Air Particulates (E-3 pCi/m ³)	GR-B	318	10	1.413E+01 (212/212) (6.030E+00 - 3.340E+01)	13S6 0.4 MILES W	1.425E+01 (53/53) (6.030E+00 - 3.340E+01)	1.291E+01 (106/106) (4.550E+00 - 2.910E+01)	0
	GAMMA BE-7	24 24	N/A	1.071E+02 (16/16) (6.293E+01 - 1.333E+02)	13S6 0.4 MILES W	1.117E+02 (4/4) (9.200E+01 - 1.331E+02)	1.013E+02 (8/8) (6.986E+01 - 1.188E+02)	0
	K-40	24	N/A	4.642E+00 (16/16) (-3.353E+00 - 1.120E+01)	12E1 4.7 MILES WSW	7.219E+00 (4/4) (1.491E+00 - 1.120E+01)	2.780E+00 (8/8) (-1.320E+01 - 1.134E+01)	0
	CS-134	24	50	4.129E-01 (16/16) (-3.814E-01 - 1.766E+00)	12S1 0.4 MILES WSW	7.678E-01 (4/4) (1.300E-01 - 1.766E+00)	5.598E-01 (8/8) (-2.412E-01 - 1.144E+00)	0
	CS-137	24	60	-6.260E-02 (16/16) (-5.711E-01 - 3.728E-01)	13S6 0.4 MILES W	8.318E-02 (4/4) (-1.795E-01 - 3.728E-01)	2.278E-02 (8/8) (-7.013E-01 - 7.611E-01)	0
Charcoal (E-3 pCi/m ³)	GAMMA I-131	318 318	70	-9.598E-02 (212/212) (-9.392E+00 - 9.608E+00)	12E1 4.7 MILES WSW	4.057E-01 (53/53) (-9.392E+00 - 9.608E+00)	2.965E-01 (106/106) (-9.662E+00 - 9.928E+00)	0
	Ambient Radiation (mR/std. qtr.)	OSLD	226	N/A	18.2 (208/208) (1.03E+01 - 4.41E+01)	9S2 0.2 MILES S	38.9 (4/4) (2.85E+01 - 4.41E+01)	15.5 (18/18) (1.10E+01 - 1.93E+01)
Milk (pCi/l)	I-131	67	1	-4.776E-02 (47/47) (-9.500E-01 - 4.120E-01)	13E3 5.0 MILES W	-1.405E-02 (20/20) (-3.690E-01 - 3.770E-01)	-1.160E-01 (20/20) (-6.680E-01 - 7.590E-02)	0
	GAMMA K-40	67 67	N/A	1.369E+03 (47/47) (1.196E+03 - 1.582E+03)	13E3 5.0 MILES W	1.386E+03 (20/20) (1.211E+03 - 1.582E+03)	1.357E+03 (20/20) (1.247E+03 - 1.535E+03)	0
	CS-134	67	15	-1.661E+00 (47/47) (-8.766E+00 - 2.309E+00)	13E3 5.0 MILES W	-9.949E-01 (20/20) (-7.100E+00 - 2.309E+00)	-1.193E+00 (20/20) (-6.000E+00 - 3.001E+00)	0

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NAME OF FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
LOCATION OF FACILITY: LUZERNE COUNTY, PENNSYLVANIA

Reporting Period: December 24, 2012 to January 30, 2014

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MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS		
Milk (pCi/l)	CS-137	67	18	3.039E-01 (47/47) (-3.779E+00 - 4.392E+00)	5E2 4.5 MILES E	4.991E-01 (20/20) (-2.152E+00 - 4.392E+00)	3.601E-02 (20/20) (-3.757E+00 - 2.516E+00)	0
	BA-140	67	60	1.248E+00 (47/47) (-2.563E+01 - 2.704E+01)	13E3 5.0 MILES W	4.180E+00 (20/20) (-1.893E+01 - 2.704E+01)	-1.778E+00 (20/20) (-1.956E+01 - 1.767E+01)	0
	LA-140	67	15	-7.163E-02 (47/47) (-7.725E+00 - 4.597E+00)	10D3 3.5 MILES SSW	1.566E+00 (7/7) (-2.804E+00 - 4.268E+00)	-1.041E+00 (20/20) (-5.181E+00 - 6.360E+00)	0
	TH-228	67	N/A	8.455E-01 (47/47) (-8.068E+00 - 8.078E+00)	10G1 14 MILES SSW	2.631E+00 (20/20) (-3.291E+00 - 2.052E+01)	2.631E+00 (20/20) (-3.291E+00 - 2.052E+01)	0
Ground Water (pCi/l)	H-3	59	2000	9.061E+01 (55/55) (-2.520E+01 - 2.920E+02)	4S8 0.1 MILES ENE	2.015E+02 (4/4) (1.170E+02 - 2.920E+02)	4.508E+01 (4/4) (1.830E+01 - 6.870E+01)	0
	GAMMA K-40	59	N/A	1.695E+01 (55/55) (-3.759E+01 - 7.171E+01)	6S11A	3.193E+01 (4/4) (7.697E+00 - 7.171E+01)	1.071E+01 (4/4) (-2.321E+01 - 3.983E+01)	0
	MN-54	59	15	-2.570E-01 (55/55) (-1.976E+00 - 1.704E+00)	7S10 0.3 MILES SE	3.682E-01 (4/4) (-1.051E+00 - 1.704E+00)	-1.406E+00 (4/4) (-4.419E+00 - -2.744E-01)	0
	CO-58	59	15	7.496E-02 (55/55) (-1.844E+00 - 2.815E+00)	12F3 5.2 MILES WSW	7.751E-01 (4/4) (2.267E-01 - 1.265E+00)	7.751E-01 (4/4) (2.267E-01 - 1.265E+00)	0
	FE-59	59	30	1.068E+00 (55/55) (-5.748E+00 - 7.814E+00)	6S11A	2.959E+00 (4/4) (4.174E-01 - 5.214E+00)	6.248E-01 (4/4) (-3.245E+00 - 3.028E+00)	0
	CO-60	59	15	-1.190E-01 (55/55) (-3.431E+00 - 2.931E+00)	4S9 0.3 MILES ENE	9.162E-01 (4/4) (6.639E-02 - 2.194E+00)	-2.031E-01 (4/4) (-3.422E+00 - 2.150E+00)	0

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NAME OF FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
LOCATION OF FACILITY: LUZERNE COUNTY, PENNSYLVANIA

Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMEN	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICIATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	MEAN (3) RANGE	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
Ground Water (cont'd) (pCi/l)	ZN-65	59	30	-2.689E+00 (55/55) (-1.492E+01 - 3.073E+00)	12F3 5.2 MILES WSW	5.964E-01 (4/4) (-2.347E+00 - 4.093E+00)	5.964E-01 (4/4) (-2.347E+00 - 4.093E+00)	0
	NB-95	59	15	5.672E-01 (55/55) (-3.638E+00 - 4.549E+00)	11S2 0.4 MILES SW	2.455E+00 (4/4) (5.233E-01 - 4.549E+00)	5.176E-01 (4/4) (-7.454E-01 - 2.378E+00)	0
	ZR-95	59	30	2.129E-01 (55/55) (-7.988E+00 - 4.086E+00)	7S11	2.036E+00 (4/4) (7.947E-01 - 4.086E+00)	-9.620E-01 (4/4) (-5.000E+00 - 1.329E+00)	0
	I-131	59	15	2.917E-02 (55/55) (-7.520E+00 - 1.070E+01)	2S8	3.899E+00 (3/3) (3.010E+00 - 5.551E+00)	5.950E-01 (4/4) (-2.106E+00 - 2.921E+00)	0
	CS-134	59	15	-8.100E-01 (55/55) (-9.965E+00 - 3.501E+00)	13S7 0.2 MILES W	4.734E-01 (4/4) (-4.988E-01 - 1.296E+00)	-1.955E-01 (4/4) (-1.278E+00 - 1.744E+00)	0
	CS-137	59	18	-1.236E-01 (55/55) (-2.477E+00 - 3.076E+00)	7S11	8.202E-01 (4/4) (-3.198E-01 - 2.412E+00)	6.624E-01 (4/4) (-6.869E-01 - 1.508E+00)	0
	BA-140	59	60	-1.887E-01 (55/55) (-1.835E+01 - 1.445E+01)	6S12	6.447E+00 (4/4) (-1.233E-01 - 1.184E+01)	2.636E+00 (4/4) (-1.485E+00 - 5.653E+00)	0
	LA-140	59	15	-2.796E-01 (55/55) (-7.362E+00 - 6.849E+00)	2S2 0.9 MILES NNE	1.606E+00 (4/4) (-1.515E+00 - 3.792E+00)	-2.244E+00 (4/4) (-5.231E+00 - 1.018E+00)	0
	TH-228	59	N/A	4.293E-01 (55/55) (-8.008E+00 - 5.340E+00)	6S11A	3.188E+00 (4/4) (1.859E+00 - 4.292E+00)	-1.188E-01 (4/4) (-3.077E+00 - 5.161E+00)	0
Potable Water (pCi/l)	GR-B	12	4	1.726E+00 (12/12) (7.520E-01 - 2.880E+00)	12H2 26 MILES WSW	1.726E+00 (12/12) (7.520E-01 - 2.880E+00)	Only indicator stations sampled for this medium.	0
	H-3	12	2000	7.592E+01 (12/12) (-4.020E+00 - 1.380E+02)	12H2 26 MILES WSW	7.592E+01 (12/12) (-4.020E+00 - 1.380E+02)		0

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Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	MEAN (3) RANGE	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
Potable Water (cont'd) (pCi/l)	GAMMA K-40	12	N/A	3.009E+00 (12/12) (-6.658E+01 - 5.644E+01)	12H2 26 MILES WSW	3.009E+00 (12/12) (-6.658E+01 - 5.644E+01)	0
	MN-54	12	15	-7.913E-02 (12/12) (-1.056E+00 - 7.709E-01)	12H2 26 MILES WSW	-7.913E-02 (12/12) (-1.056E+00 - 7.709E-01)	0
	CO-58	12	15	-2.720E-01 (12/12) (-1.512E+00 - 6.990E-01)	12H2 26 MILES WSW	-2.720E-01 (12/12) (-1.512E+00 - 6.990E-01)	0 Only indicator stations sampled for this medium.
	FE-59	12	30	-5.917E-01 (12/12) (-3.057E+00 - 2.452E+00)	12H2 26 MILES WSW	-5.917E-01 (12/12) (-3.057E+00 - 2.452E+00)	0
	CO-60	12	15	1.781E-01 (12/12) (-7.257E-01 - 1.115E+00)	12H2 26 MILES WSW	1.781E-01 (12/12) (-7.257E-01 - 1.115E+00)	0
	ZN-65	12	30	-1.850E+00 (12/12) (-5.962E+00 - 7.981E-01)	12H2 26 MILES WSW	-1.850E+00 (12/12) (-5.962E+00 - 7.981E-01)	0
	NB-95	12	15	3.706E-01 (12/12) (-4.754E-01 - 1.864E+00)	12H2 26 MILES WSW	3.706E-01 (12/12) (-4.754E-01 - 1.864E+00)	0
	ZR-95	12	30	-2.919E-02 (12/12) (-1.991E+00 - 1.352E+00)	12H2 26 MILES WSW	-2.919E-02 (12/12) (-1.991E+00 - 1.352E+00)	0
	I-131	12	15	-1.172E+00 (12/12) (-1.030E+01 - 5.642E+00)	12H2 26 MILES WSW	-1.172E+00 (12/12) (-1.030E+01 - 5.642E+00)	0
	CS-134	12	15	-4.075E-01 (12/12) (-2.549E+00 - 6.293E-01)	12H2 26 MILES WSW	-4.075E-01 (12/12) (-2.549E+00 - 6.293E-01)	0

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Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST MEAN		CONTROL LOCATION		NUMBER OF NONROUTINE REPORTED MEASUREMENTS
			MEAN (3) RANGE	DISTANCE AND DIRECTION	MEAN (3) RANGE	MEAN (3) RANGE			
Potable Water (cont'd) (pCi/l)	CS-137	12	18	-9.086E-02 (12/12) (-1.138E+00 - 5.742E-01)	12H2 26 MILES WSW	-9.086E-02 (12/12) (-1.138E+00 - 5.742E-01)			0
	BA-140	12	60	3.528E+00 (12/12) (-1.055E+01 - 1.672E+01)	12H2 26 MILES WSW	3.528E+00 (12/12) (-1.055E+01 - 1.672E+01)			0
	LA-140	12	15	-7.265E-01 (12/12) (-3.323E+00 - 1.628E+00)	12H2 26 MILES WSW	-7.265E-01 (12/12) (-3.323E+00 - 1.628E+00)			0
A-7 Food/Garden Crops (pCi/kg wet)	GAMMA BE-7	23	N/A	1.120E+02 (18/18) (-6.121E+01 - 4.270E+02)	15G1 11.4 MILES NW	2.619E+02 (5/5) (7.267E+01 - 5.772E+02)	2.619E+02 (5/5) (7.267E+01 - 5.772E+02)		0
	K-40	23	N/A	6.385E+03 (18/18) (2.333E+03 - 1.845E+04)	11D1 3.3 MILES SW	9.591E+03 (4/4) (2.921E+03 - 1.845E+04)	3.376E+03 (5/5) (2.398E+03 - 4.972E+03)		0
	I-131	23	60	9.490E-01 (18/18) (-1.982E+01 - 1.562E+01)	8C1 2.9 MILES SSE	7.705E+00 (4/4) (1.905E+00 - 1.166E+01)	-3.842E+00 (5/5) (-2.112E+01 - 1.879E+01)		0
	CS-134	23	60	-4.337E+00 (18/18) (-1.972E+01 - 7.835E+00)	15G1 11.4 MILES NW	-1.858E+00 (5/5) (-8.855E+00 - 1.742E-01)	-1.858E+00 (5/5) (-8.855E+00 - 1.742E-01)		0
	CS-137	23	80	1.074E+00 (18/18) (-3.386E+00 - 6.443E+00)	15G1 11.4 MILES NW	4.780E+00 (5/5) (-1.061E+00 - 1.409E+01)	4.780E+00 (5/5) (-1.061E+00 - 1.409E+01)		0
	AC-228	23	N/A	1.170E+01 (18/18) (-3.645E+01 - 1.341E+02)	8C1 2.9 MILES SSE	4.776E+01 (4/4) (-8.283E+00 - 1.341E+02)	6.190E+00 (5/5) (-1.119E+01 - 1.809E+01)		0
	TH-228	23	N/A	4.304E+00 (18/18) (-1.682E+01 - 5.457E+01)	8C1 2.9 MILES SSE	1.435E+01 (4/4) (-4.044E+00 - 5.457E+01)	6.089E+00 (5/5) (4.353E-03 - 1.606E+01)		0

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Reporting Period: December 24, 2012 to January 30, 2014

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MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
Soil (pCi/kg dry)	GAMMA K-40	6 N/A	1.284E+04 (3/3) (1.225E+04 - 1.398E+04)	12S1 0.4 MILES WSW	1.284E+04 (3/3) (1.225E+04 - 1.398E+04)	1.132E+04 (3/3) (1.041E+04 - 1.298E+04)	0
	CS-134	6 150	1.756E+01 (3/3) (-1.700E+00 - 3.399E+01)	12S1 0.4 MILES WSW	1.756E+01 (3/3) (-1.700E+00 - 3.399E+01)	1.643E+00 (3/3) (-1.628E+01 - 2.180E+01)	0
	CS-137	6 180	1.091E+02 (3/3) (8.957E+01 - 1.313E+02)	12S1 0.4 MILES WSW	1.091E+02 (3/3) (8.957E+01 - 1.313E+02)	8.006E+01 (3/3) (5.480E+01 - 1.074E+02)	0
	RA-226	6 N/A	2.421E+03 (3/3) (2.287E+03 - 2.648E+03)	12S1 0.4 MILES WSW	2.421E+03 (3/3) (2.287E+03 - 2.648E+03)	2.389E+03 (3/3) (1.815E+03 - 2.708E+03)	0
	AC-228	6 N/A	9.457E+02 (3/3) (8.874E+02 - 1.031E+03)	8G1 12 MILES SSE	9.670E+02 (3/3) (8.059E+02 - 1.143E+03)	9.670E+02 (3/3) (8.059E+02 - 1.143E+03)	0
	TH-228	6 N/A	1.001E+03 (3/3) (9.079E+02 - 1.178E+03)	12S1 0.4 MILES WSW	1.001E+03 (3/3) (9.079E+02 - 1.178E+03)	8.963E+02 (3/3) (7.576E+02 - 1.018E+03)	0
Surface Water (pCi/l)	H-3	56 2000	1.02E+03 (43/43) (1.440E+01 - 1.250E+04)	2S7 0.1 MILES NNE	3.131E+03 (13/13) (1.440E+01 - 1.250E+04)	5.952E+01 (13/13) (1.030E+01 - 1.340E+02)	0
	GAMMA K-40	56 N/A	1.045E+01 (43/43) (-1.306E+02 - 7.724E+01)	LTAW 0.7 MILES NE	4.360E+01 (4/4) (1.281E+01 - 7.724E+01)	-6.329E+00 (13/13) (-1.134E+02 - 4.153E+01)	0
	MN-54	56 15	-4.474E-02 (43/43) (-2.849E+00 - 4.822E+00)	LTAW 0.7 MILES NE	2.238E+00 (4/4) (-1.498E+00 - 4.822E+00)	-1.594E-01 (13/13) (-1.887E+00 - 6.942E-01)	0
	CO-58	56 15	-1.676E-01 (43/43) (-3.242E+00 - 3.192E+00)	5S12 0.4 MILES E	5.377E-01 (4/4) (-1.240E+00 - 2.188E+00)	-6.000E-02 (13/13) (-1.256E+00 - 1.275E+00)	0

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Reporting Period: December 24, 2012 to January 30, 2014

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MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS		
Surface Water (cont'd) (pCi/l)	FE-59	56	30	7.019E-01 (43/43) (-3.611E+00 - 6.433E+00)	5S12 0.4 MILES E	4.673E+00 (4/4) (1.473E+00 - 6.433E+00)	5.856E-01 (13/13) (-1.905E+00 - 3.454E+00)	0
	CO-60	56	15	3.149E-01 (43/43) (-4.548E+00 - 3.776E+00)	4S7 0.4 MILES ENE	6.970E-01 (4/4) (-1.704E+00 - 3.776E+00)	2.270E-01 (13/13) (-1.281E+00 - 1.251E+00)	0
	ZN-65	56	30	-2.243E+00 (43/43) (-1.431E+01 - 4.863E+00)	4S7 0.4 MILES ENE	1.160E+00 (4/4) (-7.850E-01 - 3.681E+00)	-7.869E-01 (13/13) (-3.478E+00 - 1.859E+00)	0
	NB-95	56	15	6.951E-01 (43/43) (-1.821E+00 - 4.109E+00)	4S7 0.4 MILES ENE	2.037E+00 (4/4) (-1.533E-01 - 3.881E+00)	4.233E-01 (13/13) (-1.642E-01 - 1.223E+00)	0
	ZR-95	56	30	-9.072E-02 (43/43) (-5.950E+00 - 6.014E+00)	7S12 0.3 MILES SE	1.192E+00 (4/4) (-2.659E+00 - 6.014E+00)	-4.770E-02 (13/13) (-2.369E+00 - 1.982E+00)	0
	I-131	56	15	7.544E-01 (43/43) (-1.226E+01 - 1.141E+01)	7S12 0.3 MILES SE	4.200E+00 (4/4) (-1.754E+00 - 1.141E+01)	-2.417E-01 (13/13) (-5.287E+00 - 4.524E+00)	0
	CS-134	56	15	-8.830E-01 (43/43) (-6.029E+00 - 1.478E+00)	5S9 0.8 MILES E	1.606E-01 (2/2) (-1.327E-01 - 4.539E-01)	-4.019E-01 (13/13) (-4.060E+00 - 7.282E-01)	0
	CS-137	56	18	7.086E-04 (43/43) (-3.351E+00 - 2.051E+00)	5S12 0.4 MILES E	5.412E-01 (4/4) (-7.934E-01 - 1.397E+00)	2.705E-02 (13/13) (-7.222E-01 - 8.631E-01)	0
	BA-140	56	60	2.052E+00 (43/43) (-1.562E+01 - 2.275E+01)	2S7 0.1 MILES NNE	3.046E+00 (13/13) (-4.874E+00 - 2.275E+01)	-2.284E+00 (13/13) (-1.860E+01 - 1.632E+01)	0
	LA-140	56	15	-6.585E-01 (43/43) (-5.647E+00 - 5.532E+00)	LTAW 0.7 MILES NE	8.394E-01 (4/4) (-3.938E+00 - 5.532E+00)	-1.388E+00 (13/13) (-9.936E+00 - 5.001E+00)	0
	TH-228	56	N/A	2.101E+00 (43/43) (-1.000E+01 - 2.357E+01)	7S12 0.3 MILES SE	1.036E+01 (4/4) (4.666E+00 - 2.357E+01)	-2.947E-01 (13/13) (-6.092E+00 - 3.433E+00)	0

TABLE A
SUMMARY OF DATA FOR SSES
OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
NAME OF FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
LOCATION OF FACILITY: LUZERNE COUNTY, PENNSYLVANIA

Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMEN	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS		LOCATION WITH HIGHEST MEAN		CONTROL LOCATION		NUMBER OF NONROUTINE REPORTED MEASUREMENTS
			MEAN (3) RANGE	DISTANCE AND DIRECTION	MEAN (3) RANGE	MEAN (3) RANGE			
Fish (pCi/kg wet)	GAMMA K-40	15	N/A	3.979E+03 (8/8) (3.261E+03 - 4.917E+03)	IND 0.9-1.4 MILES ESE	3.986E+03 (7/7) (3.261E+03 - 4.917E+03)	3.775E+03 (7/7) (3.359E+03 - 4.130E+03)	0	
	MN-54	15	130	4.797E+00 (8/8) (-1.146E+01 - 2.475E+01)	IND 0.9-1.4 MILES ESE	7.120E+00 (7/7) (-1.100E+01 - 2.475E+01)	-3.001E+00 (7/7) (-2.907E+01 - 1.250E+01)	0	
	CO-58	15	130	-4.955E+00 (8/8) (-3.399E+01 - 2.231E+01)	2H 30 MILES NNE	-1.770E+00 (7/7) (-3.425E+01 - 4.654E+01)	-1.770E+00 (7/7) (-3.425E+01 - 4.654E+01)	0	
	FE-59	15	260	-1.655E+01 (8/8) (-1.040E+02 - 8.572E+01)	2H 30 MILES NNE	1.531E+01 (7/7) (-5.865E+01 - 9.169E+01)	1.531E+01 (7/7) (-5.865E+01 - 9.169E+01)	0	
	CO-60	15	130	7.815E+00 (8/8) (-1.381E+01 - 2.983E+01)	IND 0.9-1.4 MILES ESE	1.090E+01 (7/7) (-1.143E+01 - 2.983E+01)	-3.486E+00 (7/7) (-3.075E+01 - 8.495E+00)	0	
	ZN-65	15	260	-5.575E+01 (8/8) (-1.064E+02 - 7.825E+00)	LTAW 0.7 MILES NE	-2.885E+00 (1/1) (-2.885E+00)	-5.883E+01 (7/7) (-1.049E+02 - -1.932E+01)	0	
	CS-134	15	130	-2.830E+01 (8/8) (-9.435E+01 - 4.080E+00)	2H 30 MILES NNE	-5.447E+00 (7/7) (-5.645E+01 - 1.986E+01)	-5.447E+00 (7/7) (-5.645E+01 - 1.986E+01)	0	
	CS-137	15	150	-1.401E+00 (8/8) (-1.352E+01 - 2.009E+01)	IND 0.9-1.4 MILES ESE	3.301E-01 (7/7) (-9.942E+00 - 2.009E+01)	-1.560E+01 (7/7) (-2.718E+01 - 5.922E+00)	0	
Sediment (pCi/kg dry)	GAMMA K-40	7	N/A	1.224E+04 (5/5) (8.239E+03 - 1.574E+04)	2B 1.6 MILES NNE	1.868E+04 (2/2) (1.828E+04 - 1.907E+04)	1.868E+04 (2/2) (1.828E+04 - 1.907E+04)	0	
	CS-134	7	150	-1.374E+00 (5/5) (-2.517E+01 - 1.055E+01)	7B 1.2 MILES SE	3.174E+00 (2/2) (-4.202E+00 - 1.055E+01)	-1.539E+01 (2/2) (-1.712E+01 - -1.366E+01)	0	

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TABLE A
SUMMARY OF DATA FOR SSES
OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM
NAME OF FACILITY: SUSQUEHANNA STEAM ELECTRIC STATION
LOCATION OF FACILITY: LUZERNE COUNTY, PENNSYLVANIA

Reporting Period: December 24, 2012 to January 30, 2014

MEDIUM OR PATHWAY SAMPLED (UNIT OF MEASUREMENT)	ANALYSIS AND TOTAL NUMBER OF ANALYSIS PERFORMED (1)	LOWER LIMIT OF DETECTION (LLD) (2)	ALL INDICATOR LOCATIONS MEAN (3) RANGE	LOCATION WITH HIGHEST MEAN NAME DISTANCE AND DIRECTION	CONTROL LOCATION MEAN (3) RANGE	NUMBER OF NONROUTINE REPORTED MEASUREMENTS	
Sediment (cont'd) (pCi/kg dry)	CS-137	7	180 1.636E+01 (5/5) (-1.628E+01 - 4.750E+01)	2B 1.6 MILES NNE	8.360E+01 (2/2) (7.598E+01 - 9.122E+01)	8.360E+01 (2/2) (7.598E+01 - 9.122E+01)	0
	RA-226	7	N/A 2.048E+03 (5/5) (1.415E+03 - 2.399E+03)	2B 1.6 MILES NNE	3.513E+03 (2/2) (3.334E+03 - 3.692E+03)	3.513E+03 (2/2) (3.334E+03 - 3.692E+03)	0
	AC-228	7	N/A 1.074E+03 (5/5) (7.479E+02 - 1.295E+03)	2B 1.6 MILES NNE	1.289E+03 (2/2) (1.211E+03 - 1.366E+03)	1.289E+03 (2/2) (1.211E+03 - 1.366E+03)	0
	TH-228	7	N/A 1.214E+03 (5/5) (7.900E+02 - 1.368E+03)	2B 1.6 MILES NNE	1.514E+03 (2/2) (1.507E+03 - 1.521E+03)	1.514E+03 (2/2) (1.507E+03 - 1.521E+03)	0

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1. The total number of analyses does not include duplicates, splits or repeated analyses.
2. The Technical Requirement LLDs are shown when applicable.
3. The mean and range are based on all available measure results. The ratio indicated in parentheses is the total number of results used to calculate the mean to the total number of samples.
4. USNRC Reporting Levels are specified in the Technical Requirements (i.e., when Reporting Levels in Technical Requirements are exceeded).

APPENDIX B

SAMPLE DESIGNATION AND LOCATIONS

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SAMPLE DESIGNATION

All distances from the SSES to monitoring locations are measured from the standby gas treatment vent at 44200/N34117 (Pa. Grid System). The location codes are based on both distance and direction from the SSES. The letters in the location codes indicate if the monitoring locations are on site (within the site boundary) or, if they are not on site, the approximate distances of the location from the SSES as described below:

S	= On site	E	= 4 – 5 miles
A	= < 1 mile	F	= 5 – 10 miles
B	= 1 – 2 miles	G	= 10 – 20 miles
C	= 2 – 3 miles	H	= > 20 miles
D	= 3 – 4 miles		

The numbers preceding the letters in the location codes provide the direction of the monitoring locations from the SSES by indicating the sectors in which they are located. A total number of 16 sectors (numbered one through 16) equally divide an imaginary circle on a map of the SSES and its vicinity, with the SSES at the center of the circle. The middle of sector one is directed due North (N). Moving clockwise from sector one, the sector immediately adjacent to sector one is sector two, the middle of which is directed due north, north east (NNE). Continuing to move clockwise the sector number increases to 16, which is the north, northwest sector (NNW).

TABLE B-1
SAMPLING LOCATIONS

Specific information about the individual sampling locations are given in Table B-1. Maps B-1 through B-6 show the locations of sampling stations with respect to the Site. A Portable Global Positioning System (GPS) was used to provide the coordinates of sampling locations.

STATION CODE	STATION LOCATION	LATITUDINAL DEG.	LONGITUDINAL DEG.	SAMPLE TYPE
LESS THAN ONE MILE FROM THE SSES				
2S7	0.1 mi.NNE	41.093540	-76.144773	Surface water
5S9	0.8 mi.E;	41.093292	-76.130472	Surface water
5S12	0.4 mi.E;	41.092540	-76.138704	Surface water
7S12	0.3 mi.SE;	41.088507	-76.143270	Surface water
6S5	0.9 mi.ESE;	41.084639	-76.130642	Surface water
6S6 **	0.8 mi.ESE;	41.088115	-76.131637	Surface water
B-4 LTAW	0.7 mi.NE;	41.098356	-76.135401	Surface water
4S7	0.4 mi.ENE;	41.094418	-76.138236	Surface water
LTAW	0.7 mi.NE-ESE;	41.098356	-76.135401	Fish
12S1	0.4 mi.WSW;	41.088436	-76.154314	Air
13S6	0.4 mi.W;	41.091771	-76.153869	Air
3S2	0.5 mi NE;	41.095716	-76.140207	Air
12S1	0.4 mi.WSW;	41.088436	-76.154314	Soil
2S8	0.1 mi.NNE;	41.094991	-76..044207	Ground water
2S2	0.9 mi.NNE;	41.102243	-76.136702	Ground water
4S4	0.5 mi.ENE;	41.095471	-76.138798	Ground water
6S10	0.4 mi.ESE;	41.090511	-76.137802	Ground water
6S11A	0.4 mi.ESE;	41.083448	-76.133412	Ground water
6S11B	0.4 mi.ESE;	41.083448	-76.133411	Ground water
6S12	0.8 mi.ESE;	41.083411	-76.116935	Ground water
7S11	0.3 mi.SE;	41.083527	-76.133513	Ground water
11S2	0.4 mi.SW;	41.088816	-76.152793	Ground water
1S3	0.1 mi N;	41.093640	-76.146076	Ground water

** Control Location

TABLE B-1 (cont'd)
SAMPLING LOCATIONS

STATION CODE	STATION LOCATION	LATITUDINAL DEG.	LONGITUDINAL DEG.	SAMPLE TYPE
LESS THAN ONE MILE FROM THE SSES				
4S8	0.1 mi.ENE;	41.092306	-76.144283	Ground water
4S9	0.3 mi.E;	41.093292	-76.130472	Ground water
8S4	0.1 mi.SSE;	41.091424	-76.145531	Ground water
7S10	0.3 mi.SE;	41.089736	-76.142783	Ground water
13S7	0.2 mi.W;	41.091236	-76.149647	Ground water
3S2	0.5 mi.NE;	41.095716	-76.140207	Precipitation
12S1	0.4 mi.WSW;	41.088436	-76.154314	Precipitation
Site 1	0.1 mi.ESE;	41.092275	-76.145022	Precipitation
Site 2	0.1 mi.SSE;	41.091309	-76.145708	Precipitation
Site 3	0.1 mi.WSW;	41.091243	-76.147343	Precipitation
Site 4	0.1 mi.NW;	41.093321	-76.147316	Precipitation
FROM ONE to FIVE MILES FROM THE SSES				
IND	0.9 mi.ESE;	41.085141	-76.130174	Fish
IND	1.4 mi.ESE;	41.075618	-76.132682	Fish
2B **	1.6 mi.NNE;	41.112441	-76.134758	Sediment
7B	1.2 mi.SE;	41.078924	-76.131548	Sediment
12E1	4.7 mi.WSW;	41.072418	-76.230554	Air
5E2	4.5 mi.E;	41.085184	-76.061099	Milk
8C1	2.9 mi.SSE;	41.054518	-76.129027	Broadleaf
10B5	1.3 mi.SSW;	41.075404	-76.157422	Broadleaf
10D3	3.5 mi.SSW;	41.045449	-76.171899	Milk
13E3	5.0 mi.W;	41.100259	-76.241102	Milk
11D1	3.3 mi.SW;	41.055212	-76.186797	Fruits/Vegetables

** Control Location

B-5

TABLE B-1 (cont'd)
SAMPLING LOCATIONS

STATION CODE	STATION LOCATION	LATITUDINAL DEG.	LONGITUDINAL DEG.	SAMPLE TYPE
GREATER THAN FIVE MILES FROM THE SSES				
12H2	26 mi.WSW;	40.947192	-76.604524	Drinking water
2H **	30 mi.NNE;	41.459508	-75.853096	Fish
12F	6.9 mi.WSW;	41.041323	-76.255396	Sediment
6G1 **	13.5 mi.ESE;	41.018989	-75.906515	Air
8G1 **	12 mi.SSE;	40.928886	-76.055092	Air
8G1 **	12 mi.SSE;	40.928886	-76.055092	Soil
10G1 **	14 mi.SSW;	40.934847	-76.284449	Milk
12F3 **	5.2 mi.WSW;	41.054491	-76.232176	Ground water
12F7	8.3 mi.WSW;	41.036689	-76.286776	Fruits/Vegetables
8G1 **	12 mi.SSE;	40.92886	-76.055092	Precipitation
15G1 **	11.4 mi.NW;	41.188578	-76.324598	Broadleaf
OSLD LOCATIONS				
LESS THAN ONE MILE FROM THE SSES				
1S2	0.2 mi.N;	41.09566	-76.146121	OSLD
2S2	0.9 mi.NNE;	41.10207	-76.141192	OSLD
2S3	0.2 mi.NNE;	41.09486	-76.144101	OSLD
3S2	0.5 mi.NE;	41.09574	-76.140086	OSLD
3S3	0.9 mi.NE;	41.10183	-76.133127	OSLD
4S3	0.2 mi.ENE;	41.09322	-76.141934	OSLD
4S6	0.7 mi.ENE;	41.09687	-76.133807	OSLD
5S4	0.8 mi.E;	41.09286	-76.131604	OSLD
5S7	0.3 mi.E;	41.09199	-76.141165	OSLD
6S4	0.2 mi.ESE;	41.09132	-76.142616	OSLD
6S9	0.2 mi.ESE;	41.09067	-76.142966	OSLD
7S6	0.2 mi.SE;	41.08972	-76.14359	OSLD
7S7	0.4 mi.SE;	41.08745	-76.142033	OSLD

* Special Interest Area (other than controls)

** Control Location

B-6

TABLE B-1 (cont'd)
SAMPLING LOCATIONS

STATION CODE	STATION LOCATION	LATITUDINAL DEG.	LONGITUDINAL DEG.	SAMPLE TYPE
LESS THAN ONE MILE FROM THE SSES				
8S2	0.2 mi.SSE;	41.08907	-76.14437	OSLD
9S2	0.2 mi.S;	41.08952	-76.14322	OSLD
10S1	0.4 mi.SSW;	41.08663	-76.150082	OSLD
10S2	0.2 mi.SSW;	41.08894	-76.147881	OSLD
11S7	0.4 mi.SWN;	41.08832	-76.15297	OSLD
12S1	0.4 mi.WSW;	41.0887	-76.154112	OSLD
12S3	0.4 mi.WSW;	41.08968	-76.153192	OSLD
13S2	0.4 mi.W;	41.09198	-76.153166	OSLD
13S5	0.4 mi.W;	41.09179	-76.153167	OSLD
13S6	0.4 mi.W;	41.09177	-76.154073	OSLD
14S5	0.5 mi.WNW;	41.09503	-76.153787	OSLD
15S5	0.4 mi.NW;	41.09576	-76.15103	OSLD
16S1	0.3 mi.NNW;	41.09611	-76.147388	OSLD
16S2	0.3 mi.NNW;	41.09599	-76.148922	OSLD
6A4 *	0.6 mi.ESE;	41.08791	-76.136795	OSLD
8A3	0.9 mi.SSE;	41.07982	-76.1139078	OSLD
15A3 *	0.9 mi.NW;	41.10003	-76.1585	OSLD
16A2 *	0.8 mi.NNW;	41.1025	-76.151595	OSLD
FROM ONE to FIVE MILES FROM THE SSES				
12S7	1.1 mi.WSW;	41.08621	-76.165914	OSLD
8B2 *	1.4 mi.SSE;	41.07483	-76.130724	OSLD
9B1	1.3 mi.S;	41.07356	-76.147874	OSLD
10B3 *	1.7 mi.SSW;	41.07064	-76.156646	OSLD
1D5	4.0 mi.N;	41.14936	-76.144346	OSLD
8D3	4.0 mi.SSE;	41.03824	-76.121683	OSLD

* Special Interest Area (other than controls)

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TABLE B-1 (cont'd)
SAMPLING LOCATIONS

STATION CODE	STATION LOCATION	LATITUDINAL	LONGITUDINAL	SAMPLE TYPE
FROM ONE to FIVE MILES FROM THE SSES				
9D4	3.6 mi.S;	41.04015	-76.144529	OSLD
10D1	3.0 mi.SSW;	41.05446	-76.175026	OSLD
12D2	3.7 mi.WSW;	41.07363	-76.213306	OSLD
14D1	3.6 mi.WNW;	41.10706	-76.211891	OSLD
3E1	4.7 mi NE;	41.13953	-76.082398	OSLD
4E2	4.7 mi.ENE;	41.12157	-76.064115	OSLD
5E2	4.5 mi. E;	41.08539	-76.060486	OSLD
6E1	4.7 mi.ESE;	41.07275	-76.059529	OSLD
7E1	4.2 mi.SE;	41.04891	-76.090309	OSLD
11E1	4.7 mi. SW;	41.05188	-76.218713	OSLD
12E1 *	4.7 mi.WSW;	41.0725	-76.230331	OSLD
13E4	4.1 mi.W;	41.08962	-76.223726	OSLD
GREATER THAN FIVE MILES FROM THE SSES				
2F1	5.9 mi.NNE;	41.16796	-76.09146	OSLD
15F1	5.4 mi.NW;	41.15595	-76.202506	OSLD
16F1	7.8 mi.NNW;	41.18985	-76.229283	OSLD
3G4 **	17 mi.NE;	41.23431	-76.869061	OSLD
4G1 **	14 mi.ENE;	41.13898	-75.885121	OSLD
7G1 **	14 mi.SE;	40.94636	-76.974184	OSLD
12G1 **	15 mi.WSW;	41.0262	-76.411566	OSLD
12G4 **	10 mi. WSW;	40.03868	-76.327731	OSLD

* Special Interest Area (other than controls)

** Control Location

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TABLE B-2

SUSQUEHANNA STEAM ELECTRIC STATION RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Sample Medium	Analysis	Sampling Method	Collection Procedure Number	Analytical Procedure Number
Ambient Radiation	Dosimeter	Quarterly	SSES, HP-TP-205	Landauer Procedure L313, Inlight Dosimeter Analysis
Air	Gross Beta	Weekly	E-III, Appendix 2	TBE-2008 Gross Alpha and/or Gross Beta Activity in Various Matrices.
Air	I-131	Weekly	E-III, Appendix 2	TBE-2012 Radioiodine in Various Matrices
Air	Gamma	Quarterly	E-III, Appendix 2	TBE-2007 Gamma Emitting Radioisotope Analysis
Drinking Water	Gross Beta	Monthly	E-III, Appendix 5	TBE-2008 Gross Alpha and/or Gross Beta Activity in Various Matrices.
Surface & Drinking Water	Tritium	Monthly (LTAW, 4S7, 5S12 and 7S12 Quarterly)	E-III, Appendix 3, 4, 5, 6, & 7	TBE-2010 Tritium and Carbon-14 Analysis by Liquid Scintillation.
Surface & Drinking Water	Gamma	Monthly (LTAW, 4S7, 5S12 and 7S12 Quarterly)	E-III, Appendix 3, 4, 5, 6, & 7	TBE-2007 Gamma Emitting Radioisotope Analysis.
Ground Water	Tritium	Quarterly	E-III, Appendix 8	TBE-2010 Tritium and Carbon-14 Analysis by Liquid Scintillation
Ground Water	Gamma	Quarterly	E-III, Appendix 8	TBE-2007 Gamma Emitting Radioisotope Analysis

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TABLE B-2 (cont'd)

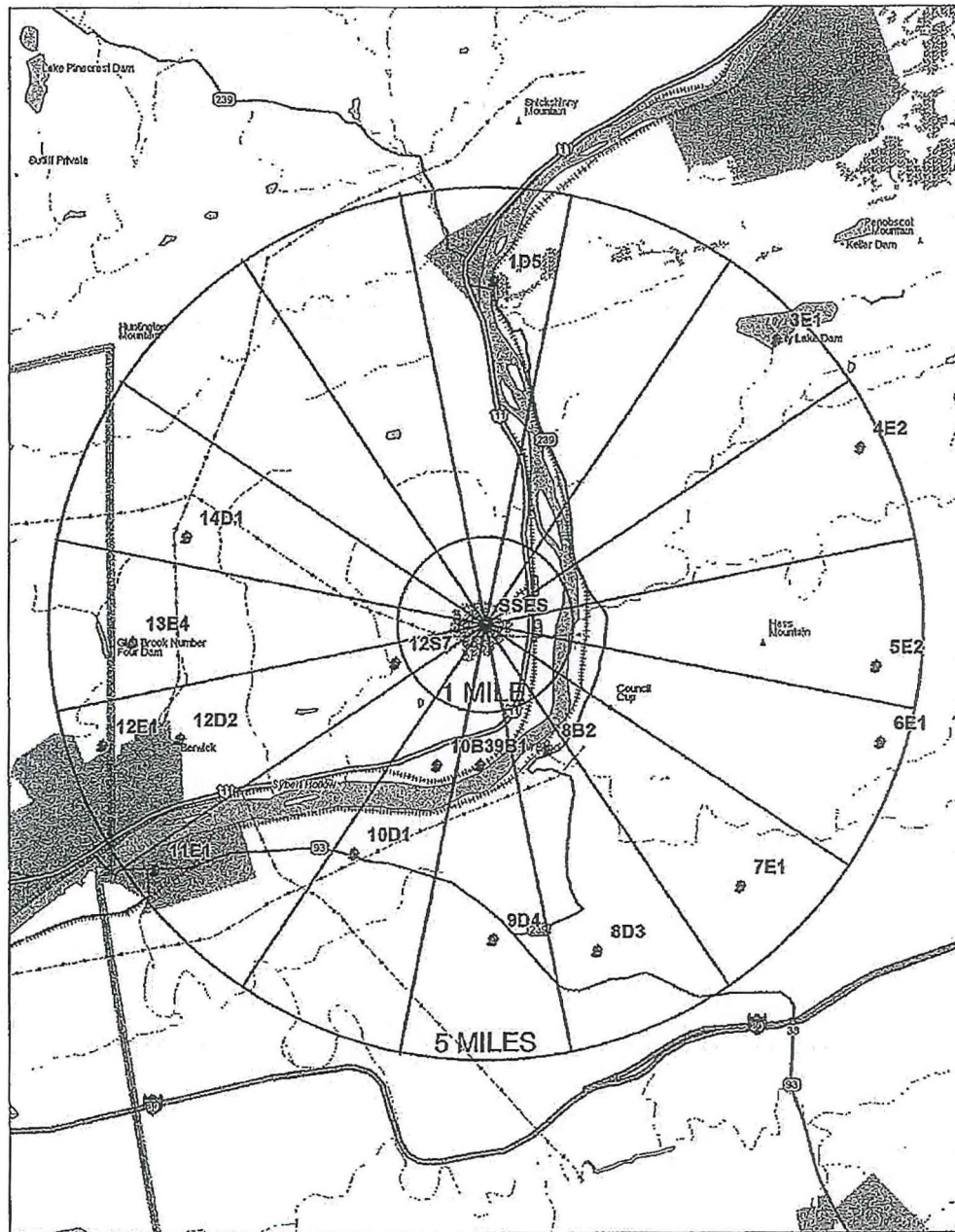
SUSQUEHANNA STEAM ELECTRIC STATION RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Sample Medium	Analysis	Sampling Method	Collection Procedure Number	Analytical Procedure Number
Precipitation	Tritium	Monthly (Apr – Nov) / Quarterly	E-III, Appendix 10	TBE-2010 Tritium and Carbon-14 Analysis by Liquid Scintillation
Milk	Gamma	Monthly/Bi-Weekly	E-III, Appendix 9	TBE-2007 Gamma Emitting Radioisotope Analysis
Milk	I-131	Monthly/Bi-Weekly	E-III, Appendix 9	TBE-2012 Radioiodine in Various Matrices
Fish	Gamma	Semi-Annually (Spring/Fall)	E-III, Appendix 11	TBE-2007 Gamma Emitting Radioisotope Analysis
Sediment	Gamma	Semi-Annually (Spring/Fall)	E-III, Appendix 12	TBE-2007 Gamma Emitting Radioisotope Analysis
Fruits & Vegetables	Gamma	In Season (When available)	E-III, Appendix 13 E-III, Appendix 15	TBE-2007 Gamma Emitting Radioisotope Analysis
Soil	Gamma	Annually	E-III, Appendix 14	TBE-2007 Gamma Emitting Radioisotope Analysis

B-10

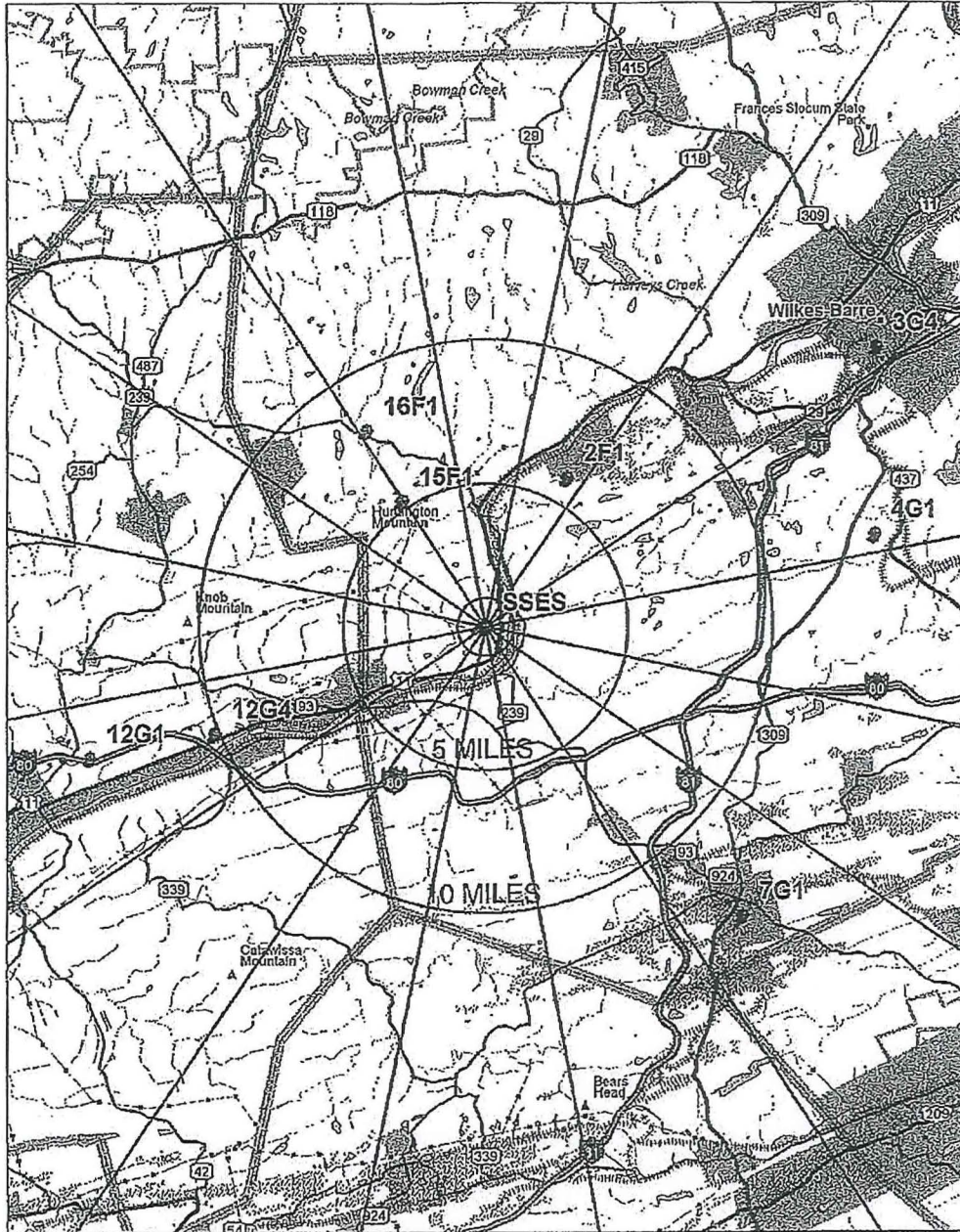
MAP B-2

Direct Radiation Monitoring Locations From One to Five Miles



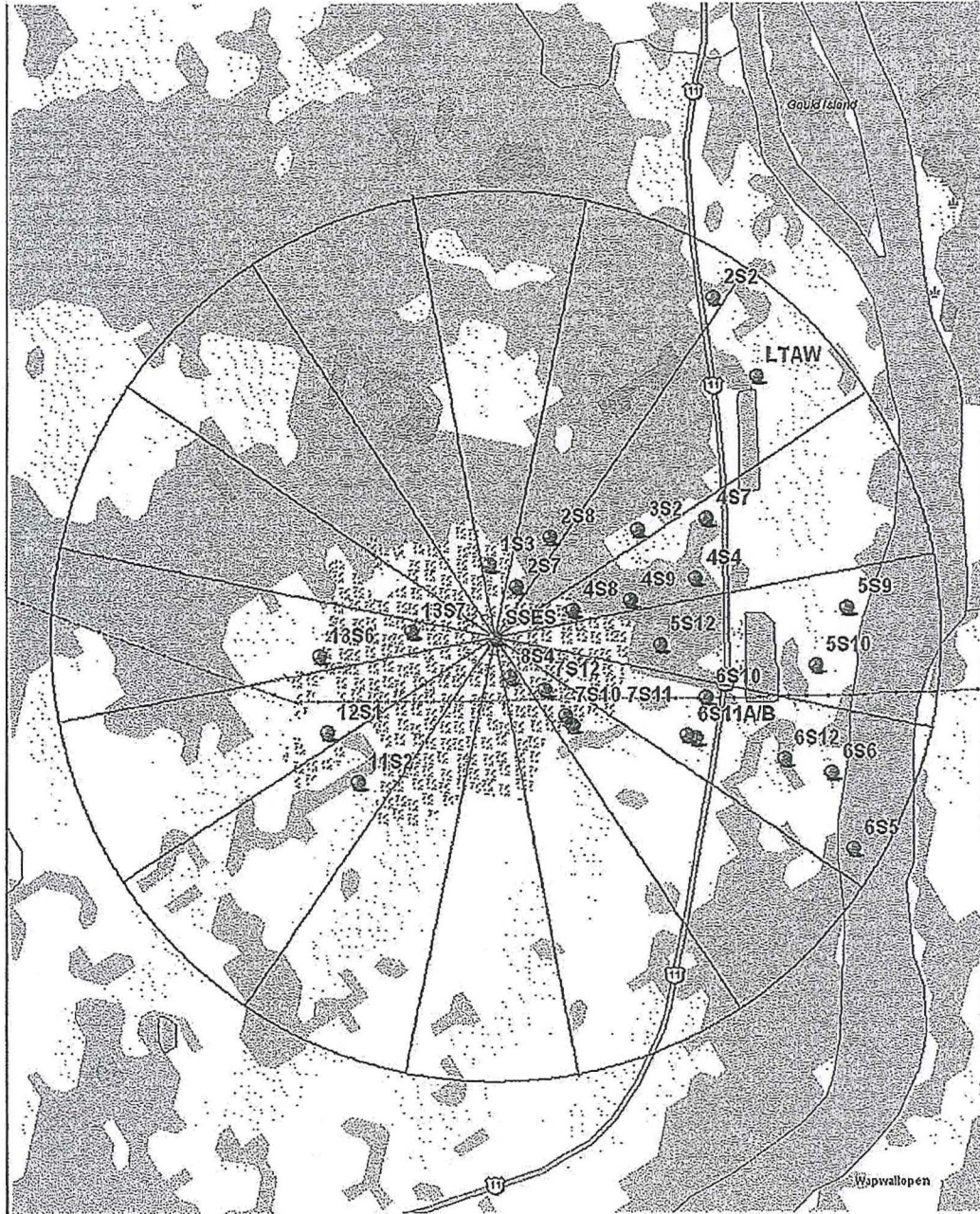
MAP B-3

Direct Radiation Monitoring Locations Greater Than Five Miles



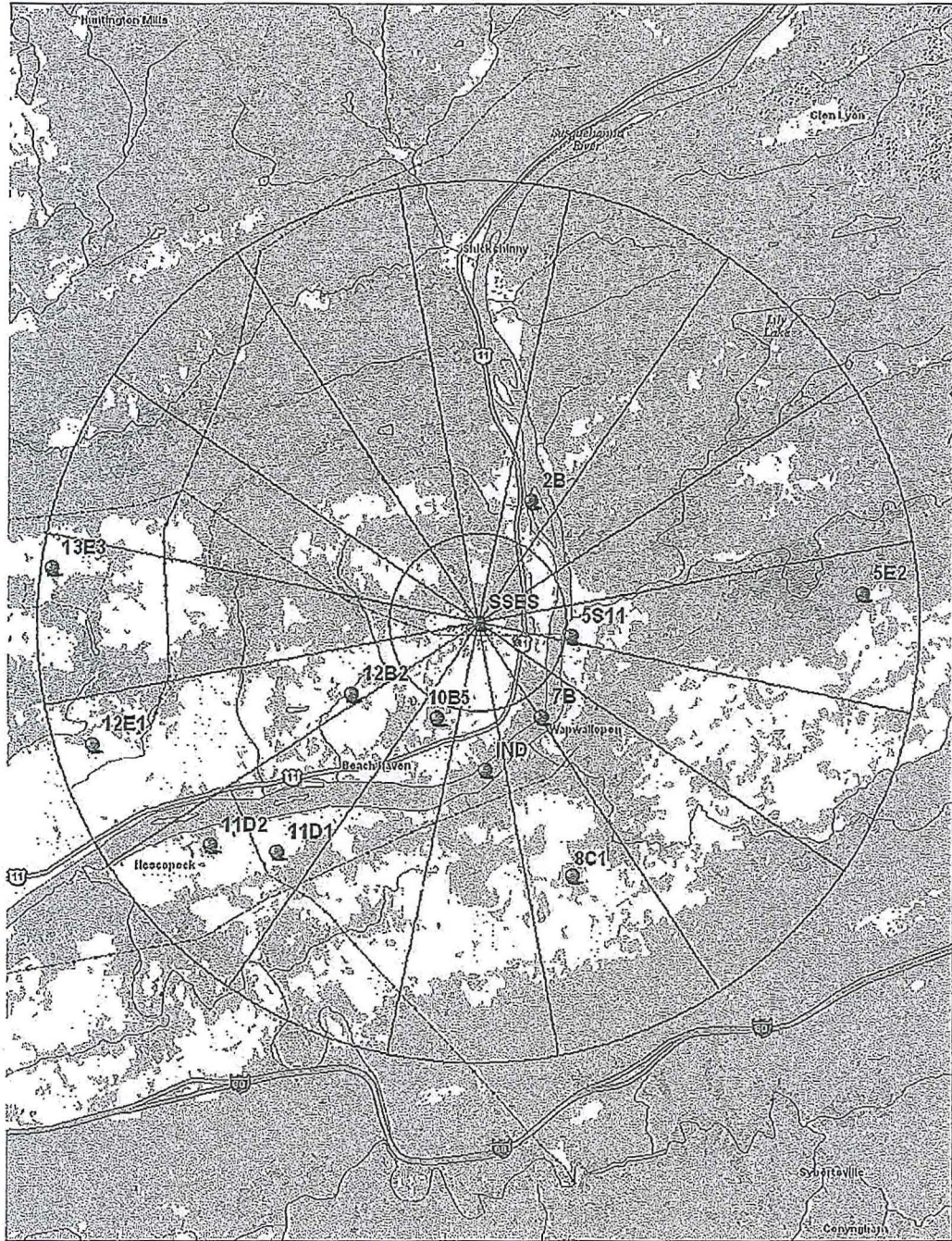
MAP B-4

Environmental Sampling Locations Within One Mile



MAP B-5

Environmental Sampling Locations From One to Five Miles



MAP B-6

Environmental Sampling Locations Greater Than Five Miles

