Trinity Consultants

MEMORANDUM

TO: Dolly Potter, Solvay Minerals, Inc.
CC: Robert Liles, Trinity Consultants
Erick Mertooetomo, Trinity Consultants
FROM: Malisa Maynard, Trinity Consultants
DATE: May 29, 2001
RE: ISCST3, ISC-PRIME, and AERMOD Modeling Results Summary 014401.0027

The maximum modeled concentrations for 1987 through 1991 and 1999 are shown in Tables 1 through 6, respectively. Table 7 summarizes the maximum modeled concentrations for 1987 through 1991. Attachment A provides the input, output, and meteorological files, in addition to the spreadsheet, used in the ISCST3, ISC-PRIME, and AERMOD modeling runs. Attachment B provides the source and building parameters, in addition to the PM_{10} emission rates. Attachment C contains the concentration and contour plots for each averaging period and receptor grid. If you have any questions, please feel free to call me at (972) 661-8100.

Table 1. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1987

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	42.00	49.19	17.17	30
Fine	24-hour	23.71	30.44	15.75	30
Medium	24-hour	10.18	12.79	6.95	30
Coarse	24-hour	3.39	3.76	3.39	30
Property Line	Annual	13.29	15.05	5.76	17
Fine	Annual	8.09	9.55	4.80	17
Medium	Annual	1.44	1.69	1.15	17
Coarse	Annual	0.52	0.55	0.47	17

Table 2. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1988

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	42.13	48.17	18.03	30
Fine	24-hour	20.61	27.95	16.03	30
Medium	24-hour	10.89	13.39	6.17	30
Coarse	24-hour	3.55	4.41	2.90	30
Property Line	Annual	13.49	15.47	6.03	17
Fine	Annual	8.53	10.39	5.00	17
Medium	Annual	1.51	1.77	1.11	17
Coarse	Annual	0.55	0.57	0.44	17

Table 3. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1989

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	33.87	41.82	20.73	30
Fine	24-hour	23.55	28.76	17.34	30
Medium	24-hour	11.79	13.85	6.49	30
Coarse	24-hour	3.07	3.69	3.17	30
Property Line	Annual	11.26	12.79	6.42	17
Fine	Annual	8.01	9.65	5.47	17
Medium	Annual	1.29	1.49	1.33	17
Coarse	Annual	0.53	0.54	0.52	17

Table 4. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1990

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	37.58	41.78	15.61	30
Fine	24-hour	21.04	26.48	14.05	30
Medium	24-hour	10.71	12.59	5.87	30
Coarse	24-hour	3.59	4.58	3.13	30
Property Line	Annual	10.29	11.66	5.73	17
Fine	Annual	7.08	8.58	4.87	17
Medium	Annual	1.14	1.30	1.18	17
Coarse	Annual	0.47	0.47	0.46	17

Table 5. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1991

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	32.56	38.93	20.50	30
Fine	24-hour	23.18	25.60	18.60	30
Medium	24-hour	9.22	10.95	9.38	30
Coarse	24-hour	3.17	3.32	5.22	30
Property Line	Annual	9.66	10.87	7.26	17
Fine	Annual	7.80	9.29	6.12	17
Medium	Annual	1.26	1.33	1.57	17
Coarse	Annual	0.55	0.56	0.62	17

Table 6. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1999

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	66.21	66.39	19.67	30
Fine	24-hour	40.17	45.33	22.50	30
Medium	24-hour	17.63	22.22	6.58	30
Coarse	24-hour	5.00	5.85	3.23	30
Property Line	Annual	19.68	21.72	6.90	17
Fine	Annual	11.19	13.70	6.38	17
Medium	Annual	2.10	2.37	0.97	17
Coarse	Annual	0.68	0.69	0.41	17

Table 7. High Second-Highest 24-Hour Average and Annual Average PM_{10} Concentrations for 1987-1991

Receptor Grid	Averaging Period	ISCST3 Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	ISC-PRIME Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	AERMOD Maximum Modeled PM_{10} Concentration ($\mu g/m^3$)	PSD Increment ($\mu g/m^3$)
Property Line	24-hour	42.13	49.19	20.73	30
Fine	24-hour	23.71	30.44	18.60	30
Medium	24-hour	11.79	13.85	9.37	30
Coarse	24-hour	3.59	4.58	5.23	30
Property Line	Annual	13.49	15.47	7.26	17
Fine	Annual	8.53	10.39	6.12	17
Medium	Annual	1.51	1.77	1.56	17
Coarse	Annual	0.55	0.57	0.62	17

ISCST3 INPUT FILES

Pme87.dat
Pme88.dat
Pme89.dat
Pme90.dat
Pme91.dat
Pme99.dat

ISC-PRIME INPUT FILES

Pmf87.dat
Pmf88.dat
Pmf89.dat
Pmf90.dat
Pmf91.dat
Pme99.dat

AERMOD INPUT FILES

Ppc87.dat
Ppc88.dat
Ppc89.dat
Ppc90.dat
Ppc91.dat
Ppc99.dat

ISCST3 AND ISC-PRIME METEOROLOGICAL FILES

Rks87.asc
Rks88.asc
Rks89.asc
Rks90.asc
Rks91.asc
Sol99.asc

AERMOD METEOROLOGICAL FILES

Grr87b.pfl
Grr88b.pfl
Grr89b.pfl
Grr90b.pfl
Grr91b.pfl
Solvay99.pfl
Grr87b.sfc
Grr88b.sfc
Grr89b.sfc
Grr90b.sfc

Grr91b.sfc
Solvay99.sfc

ISCST3 OUTPUT FILES

Pme87.lst
Pme88.lst
Pme89.lst
Pme90.lst
Pme91.lst
Pme99.lst

ISC-PRIME OUTPUT FILES

Pmf87.lst
Pmf88.lst
Pmf89.lst
Pmf90.lst
Pmf91.lst
Pmf99.lst

AERMOD OUTPUT FILES

Ppc87.lst
Ppc88.lst
Ppc89.lst
Ppc90.lst
Ppc91.lst
Ppc99.lst

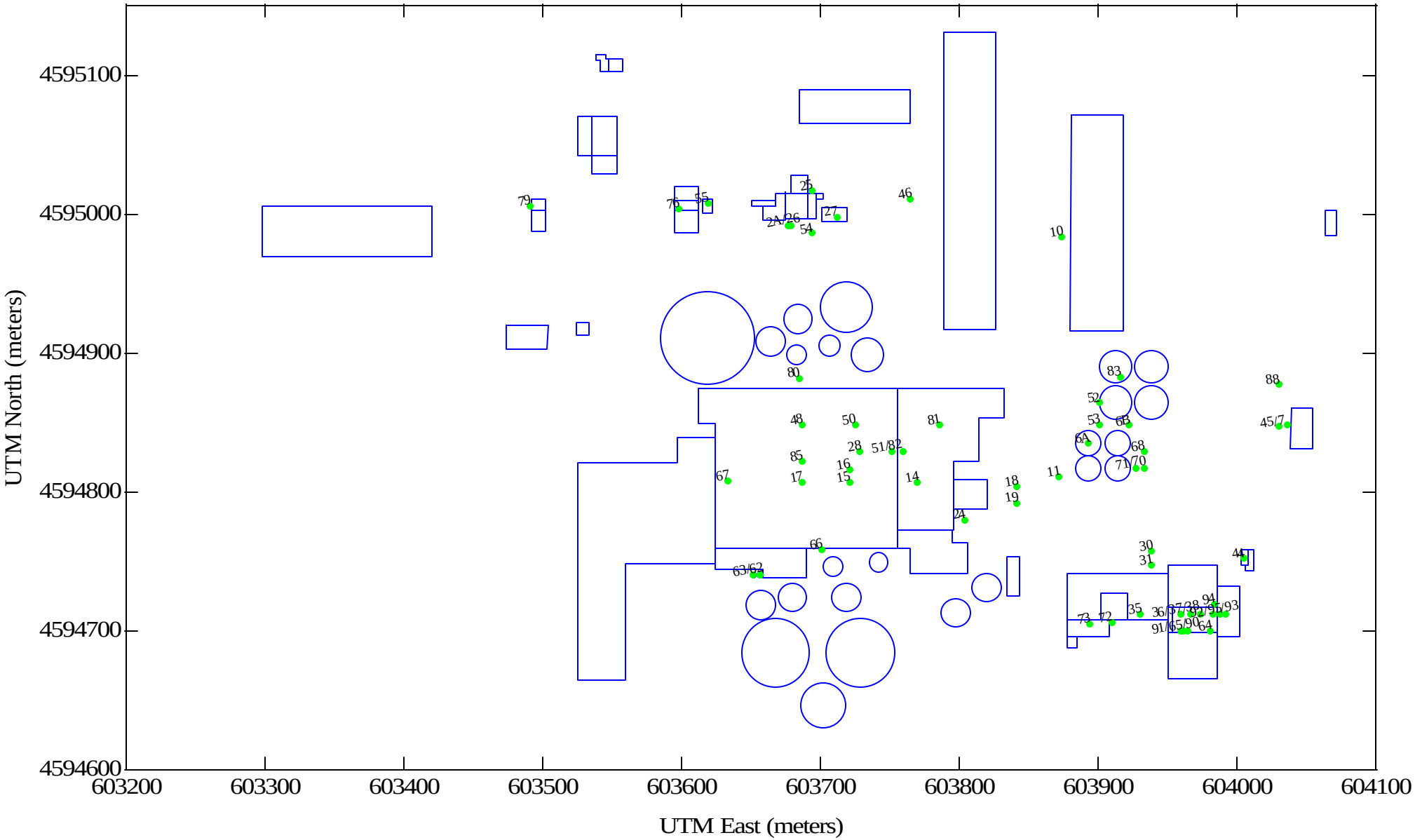
MODELING SPREADSHEET

Scrparm(1).xls

ATTACHMENT B

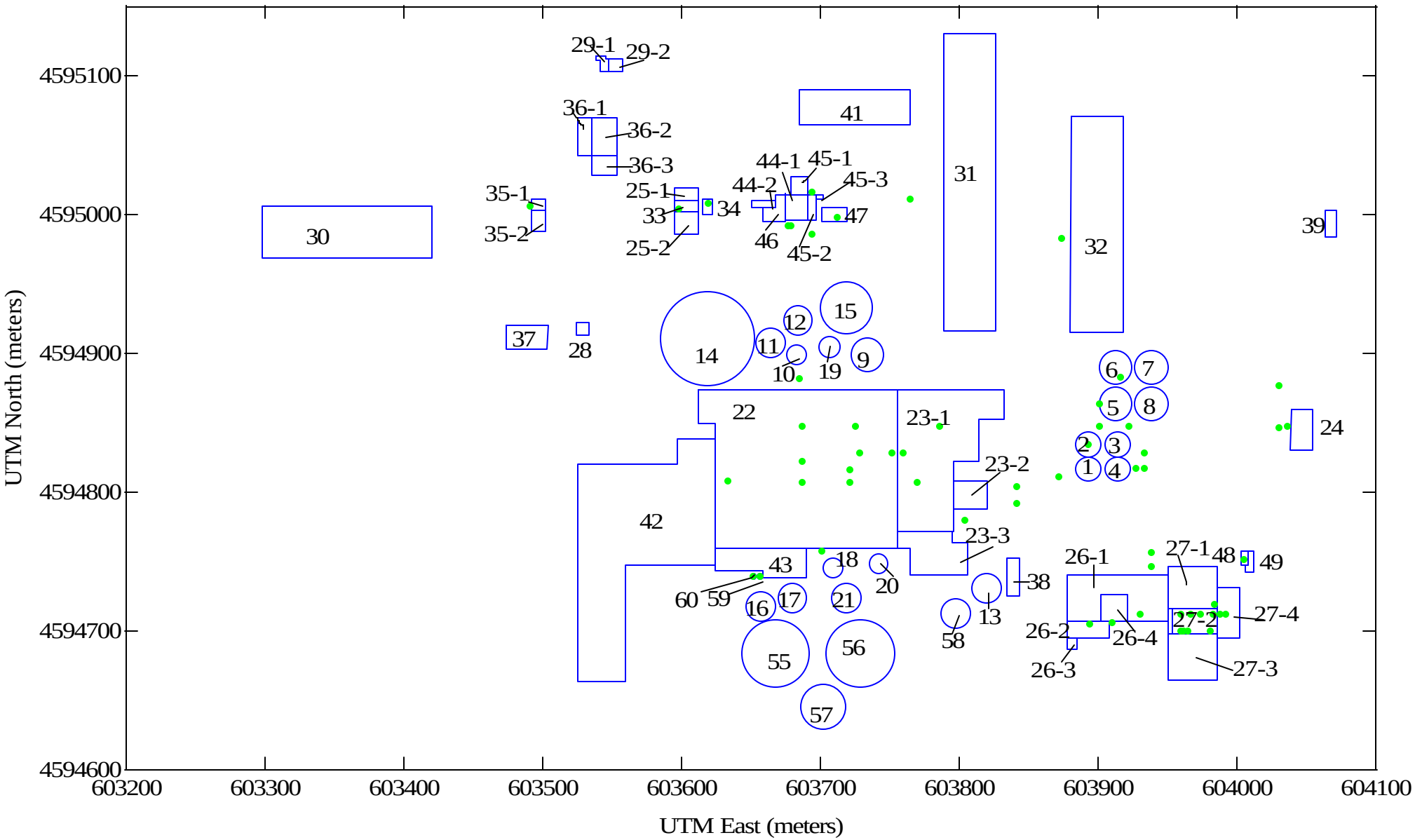
SOURCE AND BUILDING INFORMATION

Figure 1. Source and Building Locations



Source IDs shown.

Figure 2. Building Locations



See spreadsheet srcpram(5).xls for Buildings No.

Source Parameters

EPN	UTM East (m)	UTM North (m)	Elevation (m)	PM Emission Rate (lb/hr)	Rate g/s	Stack Height (feet)	Stack Height (meters)	Temperature (K)	Exit Velocity (ft/s)	Exit Velocity (m/s)	Diameter (feet)	Diameter (meter)
Existing												
2A	603677	4594992	1900	1.60	2.016E-01	23	7.01	293	52.0	15.85	3.5	1.06
6A	603893	4594835	1903	0.30	3.780E-02	133	40.54	309	82.0	24.99	2.1	0.64
6B	603922	4594848	1903	0.51	6.426E-02	15	4.72	297	33.0	10.06	2.2	0.67
7	604037	4594848	1906	1.20	1.512E-01	82	24.99	293	64.0	19.51	2.5	0.75
10*	603874	4594983	1900	0.26	3.276E-02	13	4.05	293	18.0	5.49	2.0	0.60
11*	603872	4594811	1901	0.21	2.646E-02	35	10.76	293	21.0	6.40	1.8	0.55
14*	603770	4594807	1902	0.37	4.662E-02	125	38.10	293	57.0	17.37	1.4	0.43
15	603721	4594807	1902	4.34	5.468E-01	180	54.86	347	49.0	14.94	6.0	1.83
16	603721	4594816	1902	0.90	1.134E-01	126	38.40	369	42.0	12.80	3.5	1.07
17	603687	4594807	1902	22.30	2.810E+00	180	54.86	464	44.0	13.41	12.0	3.66
18	603842	4594804	1902	5.00	6.300E-01	180	54.86	325	58.0	17.68	7.3	2.21
19	603842	4594792	1902	5.00	6.300E-01	180	54.86	322	60.0	18.29	7.3	2.21
24	603804	4594780	1902	0.30	3.780E-02	25	7.62	302	41.0	12.50	1.0	0.30
25	603694	4595017	1900	1.00	1.260E-01	76	23.16	293	48.0	14.63	2.4	0.73
26	603679	4594992	1900	0.55	6.930E-02	67	20.42	311	58.0	17.68	2.4	0.73
27	603712	4594998	1900	0.50	6.300E-02	60	18.29	293	62.0	18.90	1.6	0.48
28	603729	4594829	1902	2.90	3.654E-01	140	42.67	347	40.0	12.19	4.0	1.22
30	603939	4594757	1902	0.20	2.520E-02	88	26.82	293	59.0	17.98	0.7	0.20
31	603939	4594747	1902	0.20	2.520E-02	88	26.82	293	59.0	17.98	0.7	0.20
35	603931	4594712	1905	1.40	1.764E-01	103	31.39	327	48.0	14.63	2.3	0.70
36	603960	4594712	1905	0.10	1.260E-02	60	18.29	338	84.9	25.88	0.5	0.15
37	603967	4594712	1905	0.10	1.260E-02	60	18.29	338	84.9	25.88	0.5	0.15
38	603974	4594712	1905	0.10	1.260E-02	60	18.29	338	84.9	25.88	0.5	0.15
44*	604005	4594752	1905	0.18	2.268E-02	63	19.20	293	56.0	17.07	1.0	0.30
45	604030	4594847	1906	0.20	2.520E-02	18	5.43	293	29.0	8.84	0.9	0.27
46	603765	4595011	1900	0.71	8.946E-02	13	3.81	293	46.0	14.02	2.2	0.67
48	603687	4594848	1902	9.30	1.172E+00	180	54.86	450	32.0	9.75	10.5	3.20
50	603725	4594848	1902	0.70	8.820E-02	180	54.86	366	27.0	8.23	4.5	1.37
51	603752	4594829	1902	2.40	3.024E-01	180	54.86	422	33.0	10.06	8.0	2.44
52	603901	4594864	1903	0.50	6.300E-02	141	42.98	293	50.0	15.24	1.5	0.46
53	603901	4594848	1903	0.45	5.670E-02	30	9.14	293	36.0	10.97	2.8	0.85
54	603694	4594986	1900	0.19	2.394E-02	64	19.57	293	79.0	24.08	0.6	0.18
55	603619	4595008	1900	0.40	5.040E-02	64	19.51	293	50.0	15.24	1.3	0.40
62	603657	4594740	1900	0.13	1.638E-02	91	27.74	293	110.0	33.53	0.5	0.15

EPN	UTM East (m)	UTM North (m)	Elevation (m)	PM Emission Rate (lb/hr)	Rate g/s	Stack Height (feet)	Stack Height (meters)	Temperature (K)	Exit Velocity (ft/s)	Exit Velocity (m/s)	Diameter (feet)	Diameter (meter)
63	603652	4594740	1900	0.14	1.764E-02	58	17.68	293	117.0	35.66	0.5	0.15
64	603981	4594700	1905	0.08	1.008E-02	29	8.84	293	96.0	29.26	0.5	0.15
65	603962	4594700	1905	0.07	8.820E-03	8	2.44	293	38.0	11.58	0.8	0.23
66	603701	4594758	1902	0.58	7.308E-02	20	6.10	293	75.0	22.86	1.0	0.30
67	603634	4594808	1902	0.47	5.922E-02	125	38.10	311	33.0	10.06	1.5	0.46
68	603933	4594829	1905	0.36	4.536E-02	82	24.99	293	77.0	23.47	1.2	0.37
70	603933	4594817	1905	0.27	3.402E-02	82	24.99	293	49.0	14.94	1.3	0.40
71	603928	4594817	1905	0.27	3.402E-02	82	24.99	293	49.0	14.94	1.3	0.40
72	603910	4594706	1905	0.07	8.820E-03	61	18.49	366	53.0	16.15	0.7	0.20
73	603894	4594705	1905	0.90	1.134E-01	95	28.96	305	56.0	17.07	2.0	0.61
76	603598	4595004	1900	2.45	3.087E-01	110	33.53	289	56.5	17.22	3.7	1.12
79	603491	4595006	1900	0.84	1.058E-01	68	20.73	289	59.9	18.26	2.1	0.63
80	603685	4594882	1902	12.25	1.544E+00	180	54.86	425	50.8	15.49	10.5	3.20
81	603786	4594848	1902	0.50	6.300E-02	120	36.58	394	76.4	23.29	1.7	0.51
82	603760	4594829	1902	3.45	4.347E-01	180	54.86	421	43.1	13.15	8.0	2.44
83	603916	4594883	1903	0.41	5.166E-02	130	39.62	366	57.3	17.47	1.7	0.51
85	603687	4594822	1902	0.48	6.048E-02	140	42.67	436	50.0	15.24	3.0	0.91
88	604030	4594877	1906	0.20	2.520E-02	11	3.35	293	64.0	19.51	1.0	0.30
90	603965	4594700	1905	0.05	6.300E-03	23	7.01	293	63.0	19.20	0.5	0.15
91	603960	4594700	1905	0.05	6.300E-03	24	7.32	293	63.0	19.20	0.5	0.15
92	603983	4594712	1905	0.30	3.780E-02	64	19.51	293	85.0	25.91	1.06	0.32
93	603992	4594712	1905	0.17	2.142E-02	70	21.34	293	53.0	16.15	1.00	0.30
94	603984	4594719	1905	0.30	3.780E-02	90	27.43	293	85.0	25.91	1.06	0.32
95	603988	4594712	1905	0.10	1.260E-02	90	27.43	293	85.0	25.91	0.49	0.15
BC1	599153	4608435	1896	3.000	3.780E-01	93	28.35	350	61.1	18.63	2.5	0.76
BC2	599153	4608484	1896	1.698	2.140E-01	91	27.74	313	34.0	10.35	2.5	0.76
MONO11	599323	4607941	1896	3.000	3.780E-01	25	7.62	291	67.9	20.70	2.5	0.76
MONO12	599331	4608374	1896	1.722	2.170E-01	60	18.29	294	56.6	17.25	3.0	0.91
MW3	599058	4608059	1896	0.272	3.430E-02	130	39.62	339	60.3	18.38	6.5	1.98
RA29	598812	4608511	1896	0.354	4.460E-02	80	24.38	355	96.8	29.51	4.0	1.22
FD617	603742	4605237	1902	0.230	2.900E-02	4	1.22	286	87.7	26.73	0.7	0.20
GR3Q	603476	4605127	1902	1.500	1.890E-01	118	35.96	341	44.1	13.44	3.0	0.91

*Sources only operate a maximum of 12 hours per day, between the hours of 6 AM and 6 PM

Tanks												
	Building	Description	UTM Easting (m)	UTM Northing (m)	Elevation	Height (feet)	Height (meter)	Radius(feet)	Radius(meters)			
	BLD1	Psilo1	603893	4594817	1903	110.0	33.53	29.5	9.00			
	BLD2	Psilo2	603893	4594835	1903	110.0	33.53	29.5	9.00			
	BLD3	Psilo3	603914	4594835	1903	110.0	33.53	29.5	9.00			
	BLD4	Psilo4	603914	4594817	1903	110.0	33.53	29.5	9.00			
	BLD5	PSTsilo1	603913	4594864	1903	110.0	33.53	39.4	12.00			
	BLD6	PSTsilo2	603913	4594890	1903	110.0	33.53	39.4	12.00			
	BLD7	PSTsilo3	603939	4594890	1903	110.0	33.53	39.4	12.00			
	BLD8	PSTsilo4	603939	4594864	1903	110.0	33.53	39.4	12.00			
	BLD9	PLcontk	603734	4594899	1900	55.0	16.76	39.4	12.00			
	BLD10	Ta-126	603683	4594899	1900	45.0	13.72	23.0	7.00			
	BLD11	Ta-146	603664	4594908	1900	37.0	11.28	34.4	10.50			
	BLD12	Ta-136	603684	4594924	1900	37.0	11.28	34.4	10.50			
	BLD13	Ta-75	603820	4594731	1902	37.0	11.28	34.4	10.50			
	BLD14	Ta-139	603619	4594911	1900	26.0	7.92	109.9	33.50			
	BLD15	Ta-110	603719	4594933	1900	19.0	5.79	60.7	18.50			
	BLD16	TA-158	603657	4594718	1900	37.0	11.28	34.4	10.50			
	BLD17	TA-13	603680	4594724	1900	37.0	11.28	34.4	10.50			
	BLD18	TA-92	603709	4594746	1900	45.0	13.72	22.5	6.86			
	BLD19	Ta-113	603707	4594905	1900	37.0	11.28	24.5	7.47			
	BLD20	Ta-36	603742	4594749	1900	45.0	13.72	22.5	6.86			
	BLD21	TA-26	603719	4594724	1900	37.0	11.28	35.0	10.67			
	BLD55	TA-10	603668	4594684	1900	23.0	7.01	80.0	24.38			
	BLD56	TA-11	603729	4594684	1900	23.0	7.01	80.0	24.38			
	BLD57	TA-162	603702	4594646	1900	50.0	15.24	52.5	16.00			
	BLD58	TA-73	603798	4594713	1900	37	11.28	34.4	10.49			
	BLD59	Silo 1	603657	4594740	1900	71	21.64	7	2.13			
	BLD60	Silo 2	603652	4594740	1900	41	12.50	6	1.83			

Buildings												
	Building	Description	UTM Easting (m)	UTM Northing (m)	Elevation	Height (feet)	Height (meter)	X length (feet)	X length (meter)	Y length (feet)	Y length (meter)	Angle
	BLD22	PROCAT1	603612	4594874	1902	110	33.53					
	BLD23-1	PROCAT	603795.7	4594808.5	1902	110	33.53					
	BLD23-2	PROCAT2	603755.3	4594874	1902	70	21.34	67	20.42	80	24.38	90
	BLD23-3	PROCAT	603755.3	4594771.9	1902	50	15.24					
	BLD24	PRODLS	604039.1	4594860	1906	106	32.31					
	BLD25-1	PRISCR	603595	4595020	1900	24	7.32	33	10.06	57	17.37	90
	BLD25-2	PRISCR	603595	4595002.3	1900	103	31.39	54	16.46	57	17.37	90
	BLD26-1	Caust1	603877.6	4594741	1905	75	22.86	110	33.53	240	73.15	90
	BLD26-2	Caust1	603877.6	4594707.5	1905	75	22.86	40	12.19	100	30.48	90
	BLD26-3	Caust1	603877.6	4594695.3	1905	24	7.32	25	7.62	25	7.62	90
	BLD26-4	Caust1	603902.7	4594707.4	1905	93	28.35	60	18.29	65	19.81	0
	BLD27-1	Caust2	603950.75	4594716.7	1905	30	9.14	115	35.05	100	30.48	0
	BLD27-2	Caust2	603953.8	4594716.7	1905	10	3.05	10	3.05	60	18.29	180
	BLD27-3	Caust2	603950.7	4594698.4	1905	30	9.14	110	33.53	115	35.05	90
	BLD27-4	Caust2	604002.55	4594731.94	1905	45	13.72	55	16.76	120	36.58	180
	BLD28	SHDFRA	603524	4594922	1900	168	51.21					
	BLD29-1	NHDFRA	603548.14	4595111.9	1900	168	51.21					
	BLD29-2	NHDFRA	603539	4595115	1900	65	19.81	30	9.14	30	9.14	90
	BLD30	WOREST	603298.4	4595006	1900	65	19.81					
	BLD31	ORESTO	603789.2	4595131	1900	63	19.20					
	BLD32	COALSTO	603880.6	4595071	1900	63	19.20					
	BLD33	PRICRU	603595	4595002.3	1900	54	16.46	57	17.37	25	7.62	0
	BLD34	ORECRU	603615	4595011	1900	60	18.29	35	10.67	25	7.62	90
	BLD35-1	TTOW1	603492	4595011	1900	83	25.30	27	8.23	33	10.06	90
	BLD35-2	TTOW1	603492	4595002.8	1900	62	18.90	48	14.63	33	10.06	90
	BLD36-1	NHOISH	603525	4595070	1900	24	7.32	90	27.43	35	10.67	90
	BLD36-2	NHOISH	603535.67	4595070	1900	41	12.50	90	27.43	60	18.29	90
	BLD36-3	NHOISH	603535.7	4595042.6	1900	24	7.32	45	13.72	60	18.29	90
	BLD37	SHOISH	603473.7	4594920	1900	41	12.50					
	BLD38	COOLTO	603834.9	4594753	1902	40	12.19					
	BLD39	UNLSTA	604063.5	4595003	1906	38	11.58					
	BLD41	PLANWA	603685.5	4595090	1900	25	7.62					
	BLD42	PROCATX	603624.2	4594838.9	1902	35	10.67					
	BLD43	PROCATY	603624.19	4594759.7	1902	96	29.26					
	BLD44-1	Ore01	603674.76	4595015.2	1900	108	32.92	62	18.90	52	15.85	90
	BLD44-2	ORE04	603651	4595010	1900	15	4.57	15	4.57	55	16.76	90
	BLD45-1	Ore02	603690.65	4595015.2	1900	80	24.38	40	12.19	37	11.28	270
	BLD45-2	ORE06	603690.61	4594996.3	1900	35	10.67	20	6.10	62	18.90	0
	BLD45-3	ORE07	603696.71	4595015.2	1900	15	4.57	13	3.96	17	5.18	90
	BLD46	ORE03	603674.7	4595015.1	1900	72	21.95					
	BLD47	ALK10	603701	4595005	1900	26	7.92	32	9.75	62	18.90	90
	BLD48	LIMEUN	604003	4594758	1905	54	16.46	35	10.67	17	5.18	90
	BLD49	LIMEUN	604008.2	4594758	1905	37	11.28					

ATTACHMENT C

CONCENTRATION AND CONTOUR PLOTS

Note:

Figures A-1 through C-8 represent the maximum concentrations for 1987 – 1991 at each receptor
Figures 1 through 6 represent contour plots for the maximum concentrations for 1987 – 1991

Figure A1. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, 24-hour, Property Grid
PSD Increment = 30 μg/m³

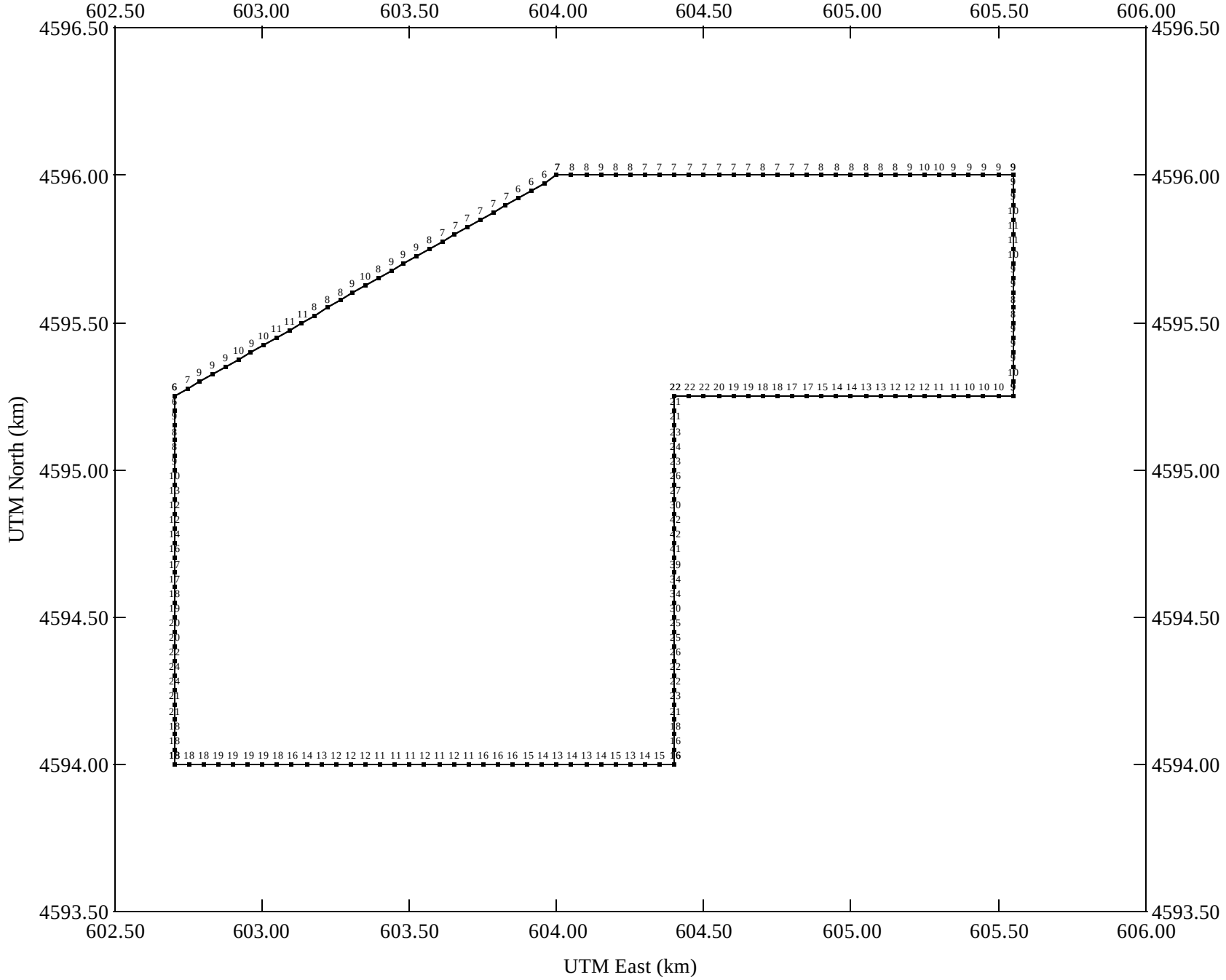


Figure A2. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, 24-hour, Fine Grid
PSD Increment = 30 $\mu g/m^3$

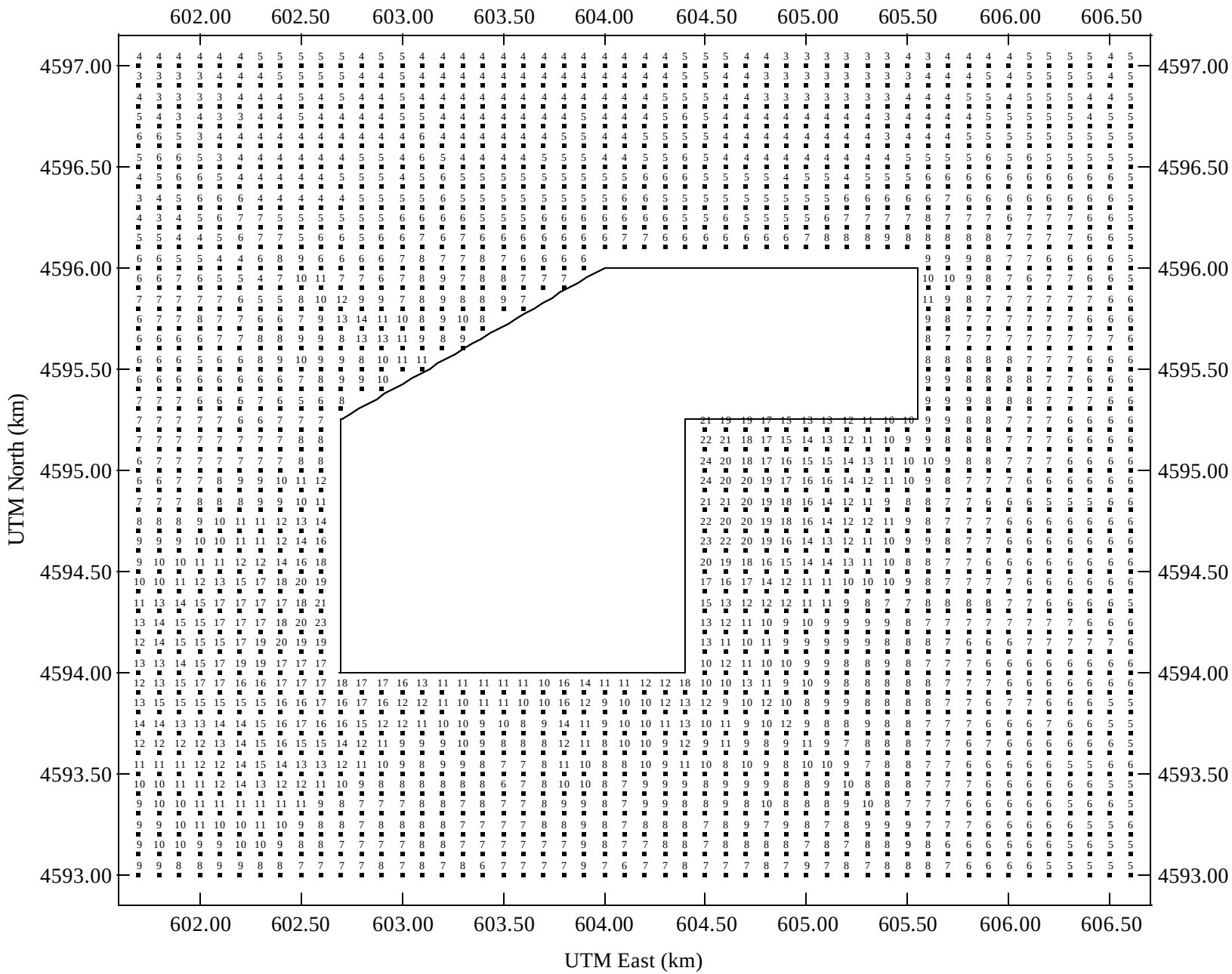


Figure A3. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, 24-hour, Medium Grid
PSD Increment = 30 $\mu g/m^3$

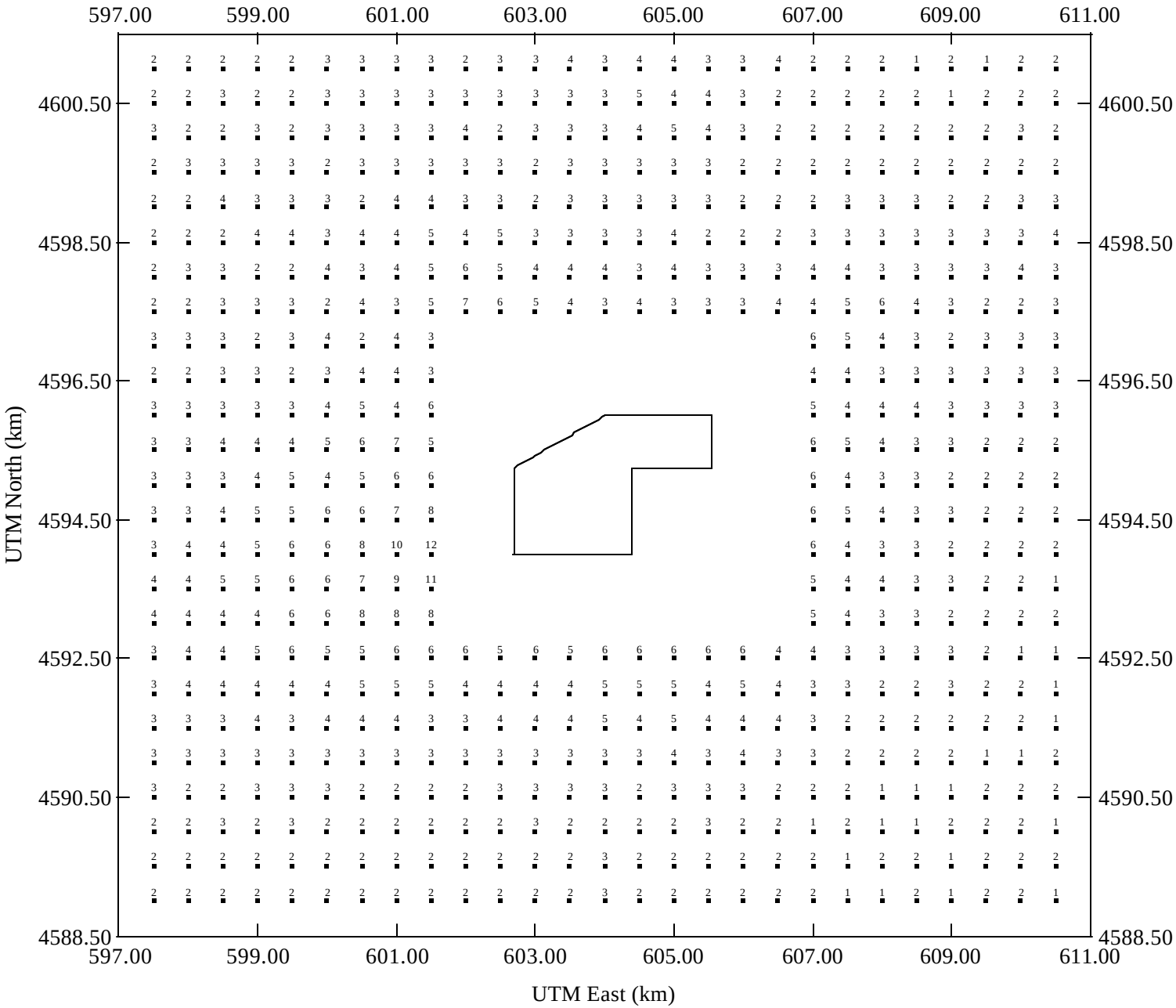


Figure A4. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, 24-hour, Coarse Grid
PSD Increment = 30 $\mu g/m^3$

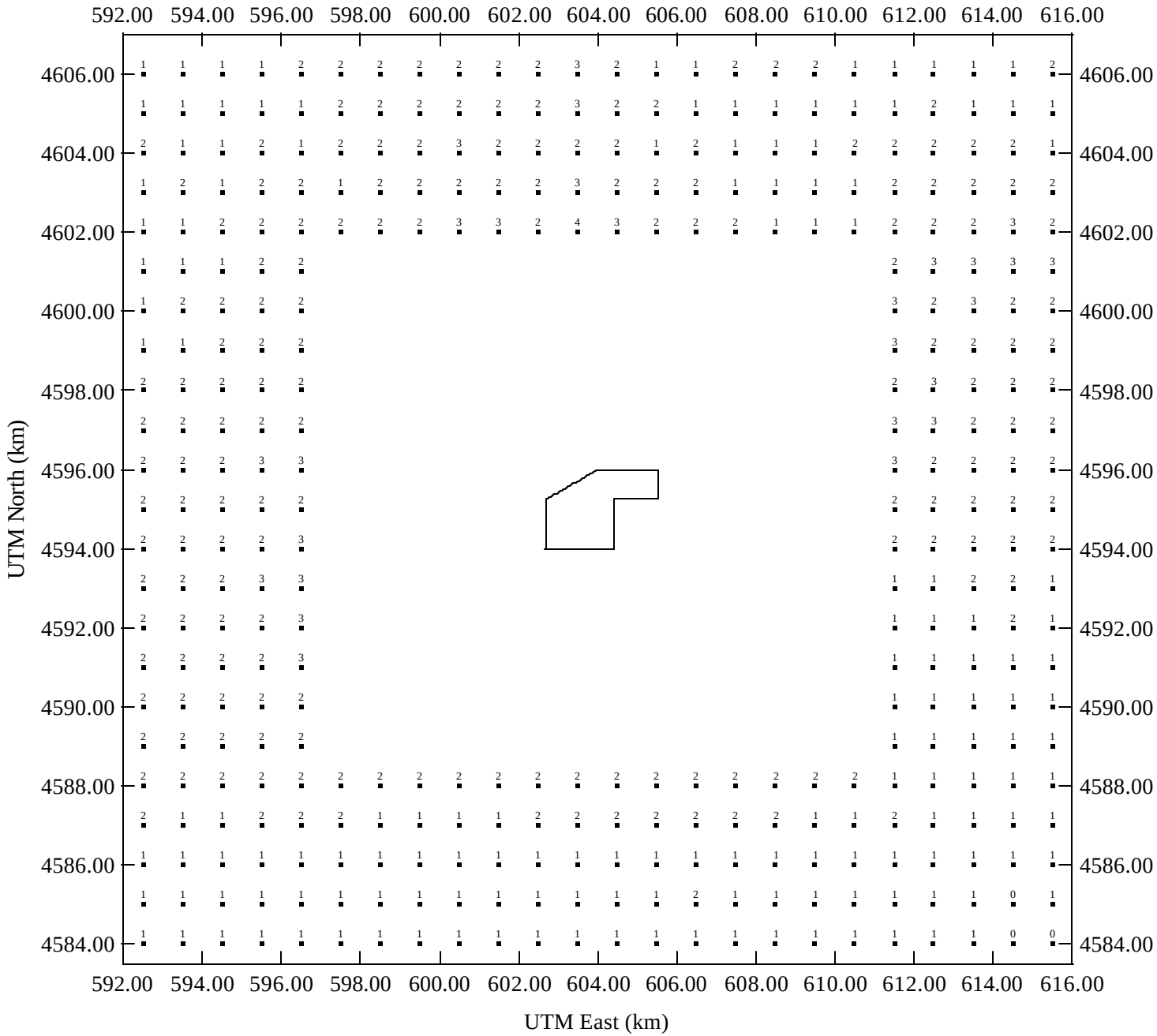


Figure A5. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, Annual, Property Grid
PSD Increment = 17 $\mu g/m^3$

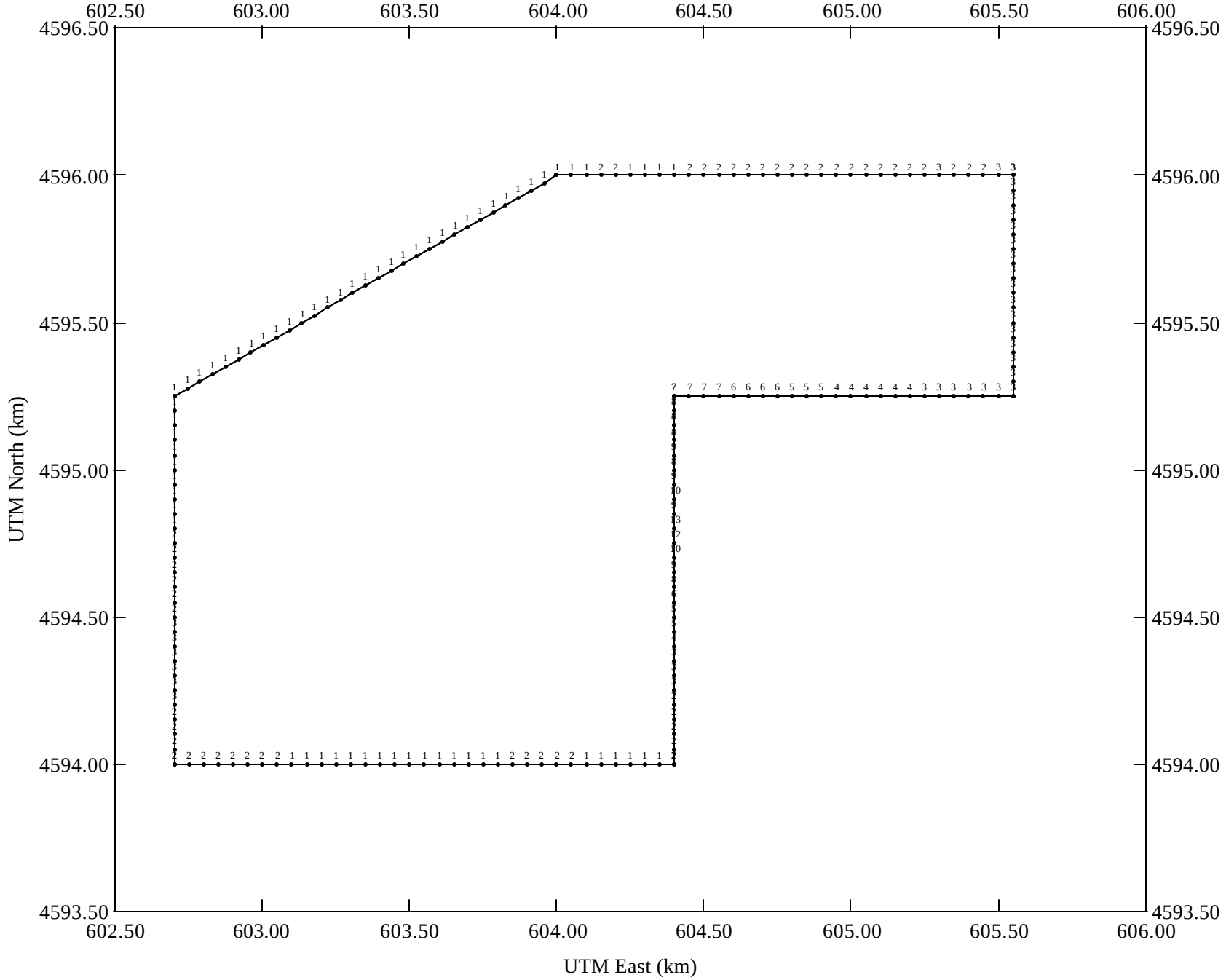


Figure A6. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, Annual, Fine Grid
PSD Increment = 17 $\mu g/m^3$

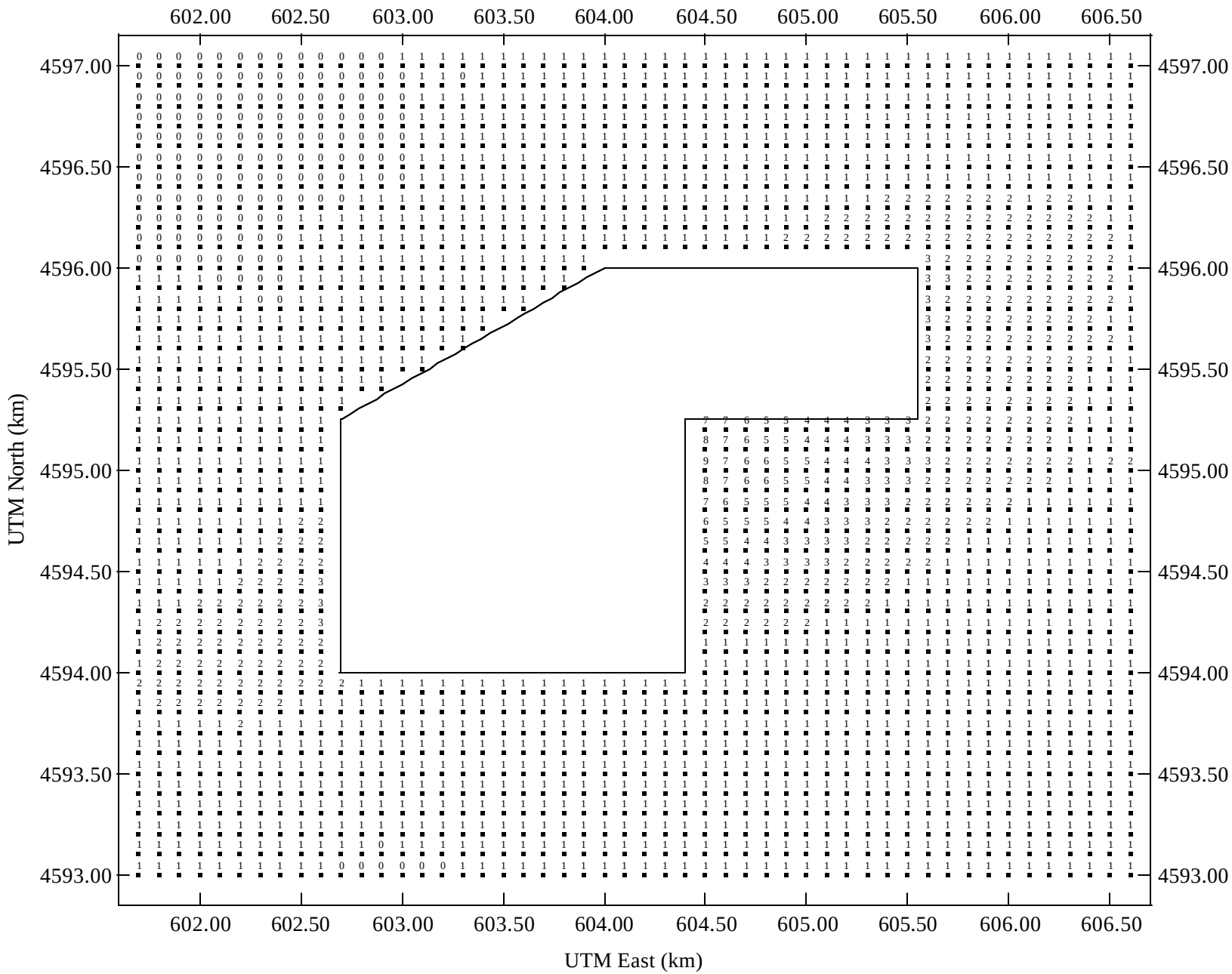


Figure A7. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, Annual, Medium Grid
PSD Increment = 17 $\mu g/m^3$

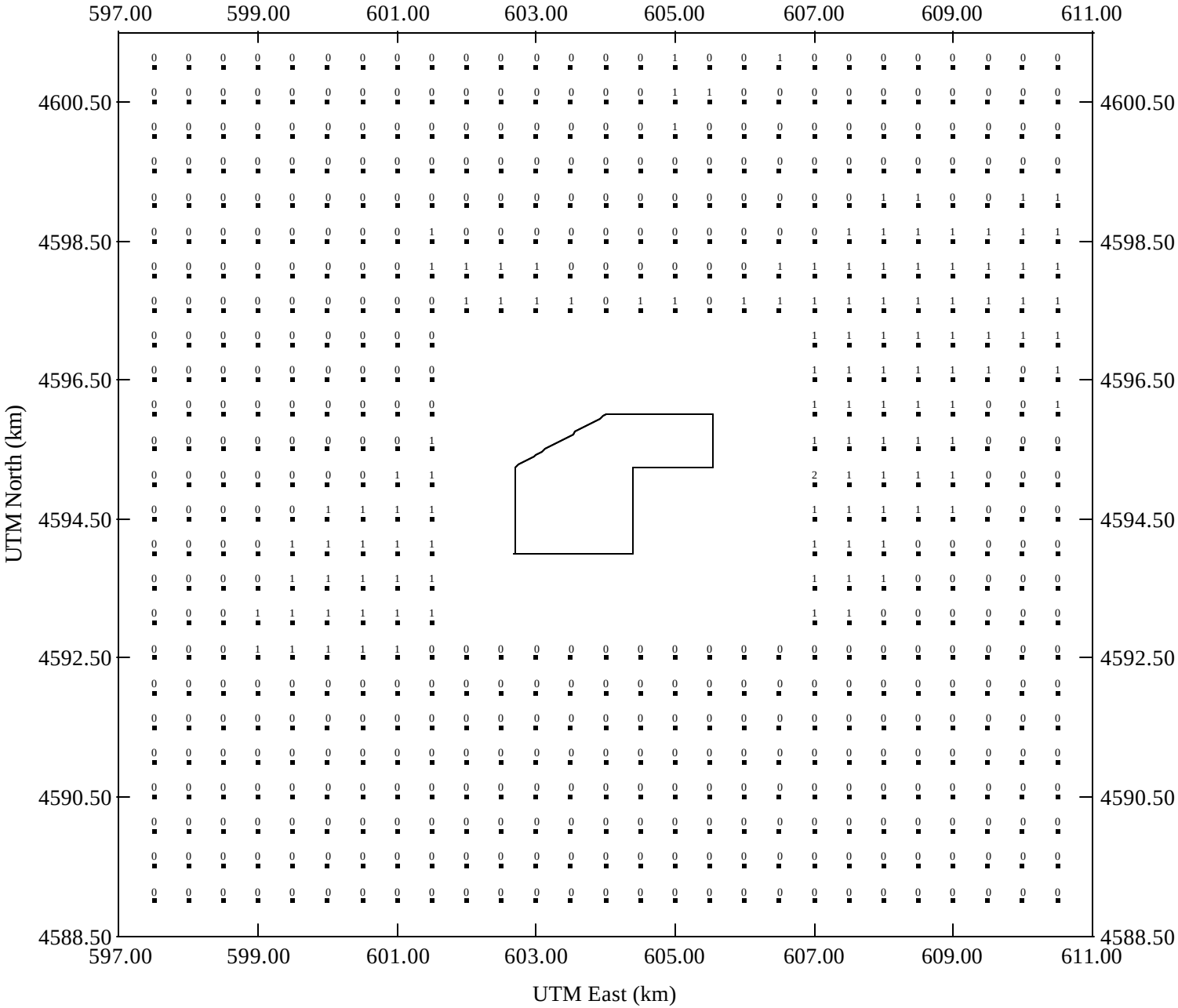


Figure A8. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, Annual, Coarse Grid
PSD Increment = 17 $\mu g/m^3$

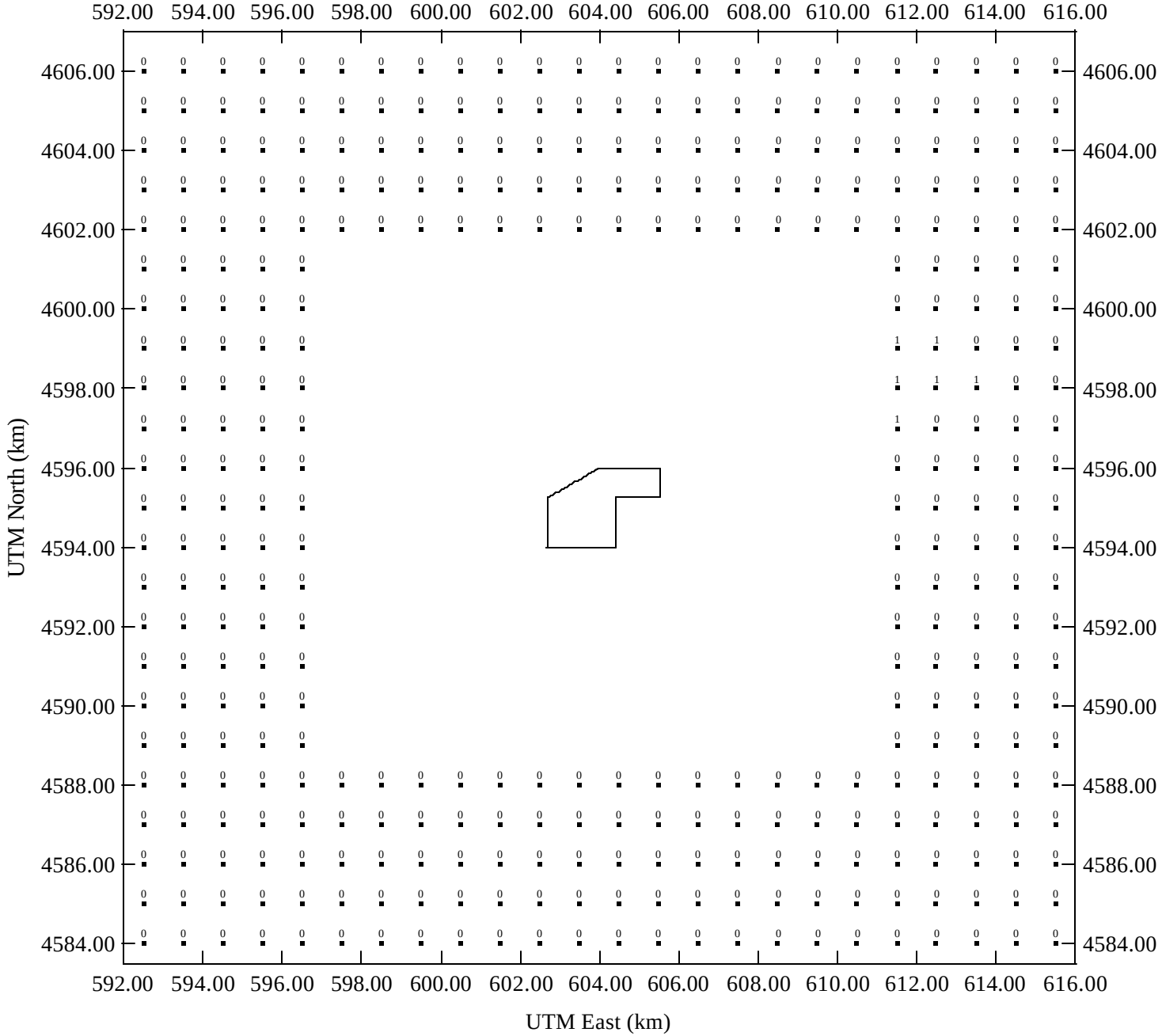


Figure B1. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, 24-hour, Property Grid
PSD Increment = 30 μg/m^3

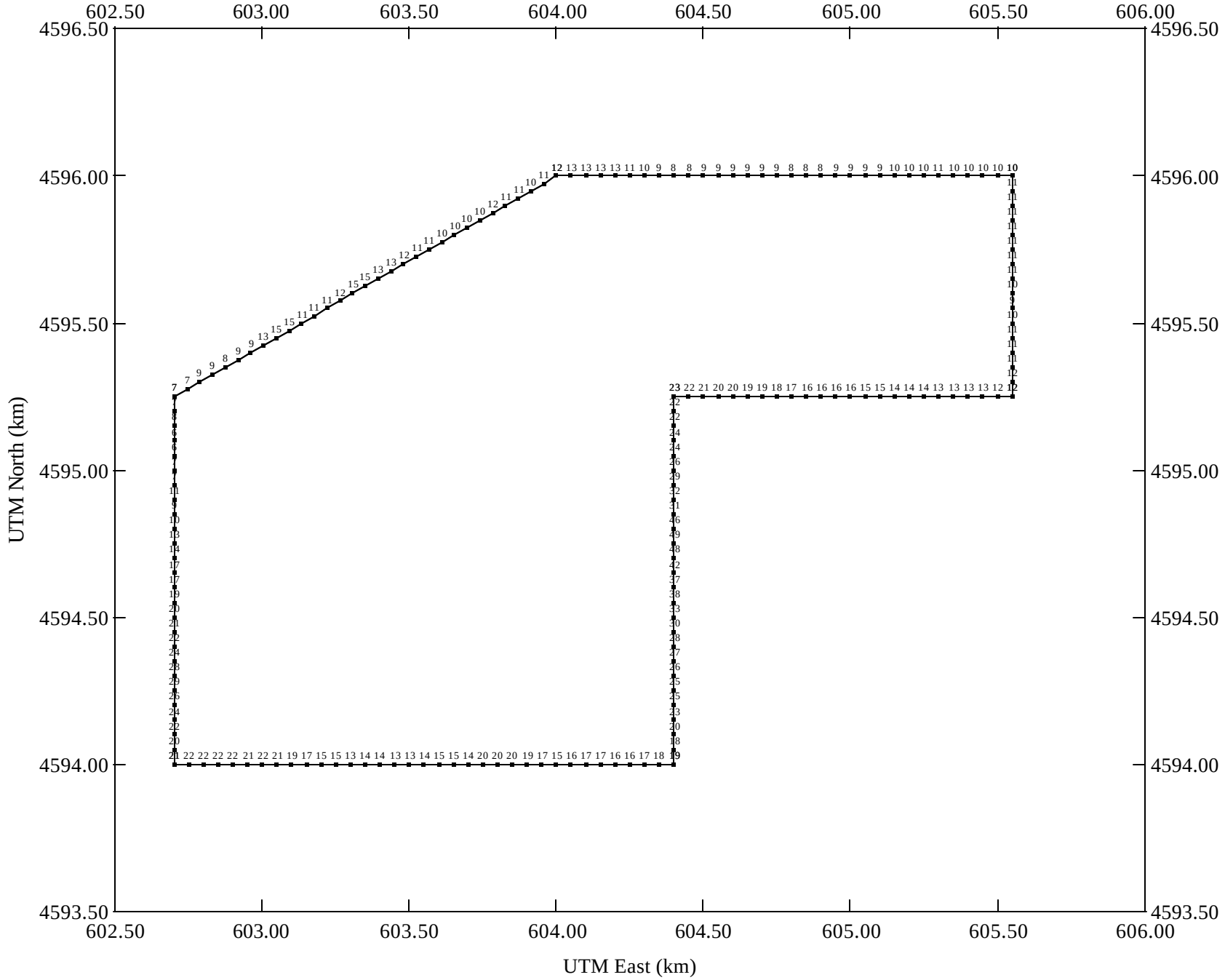


Figure B2. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, 24-hour, Fine Grid
PSD Increment = 30 $\mu g/m^3$

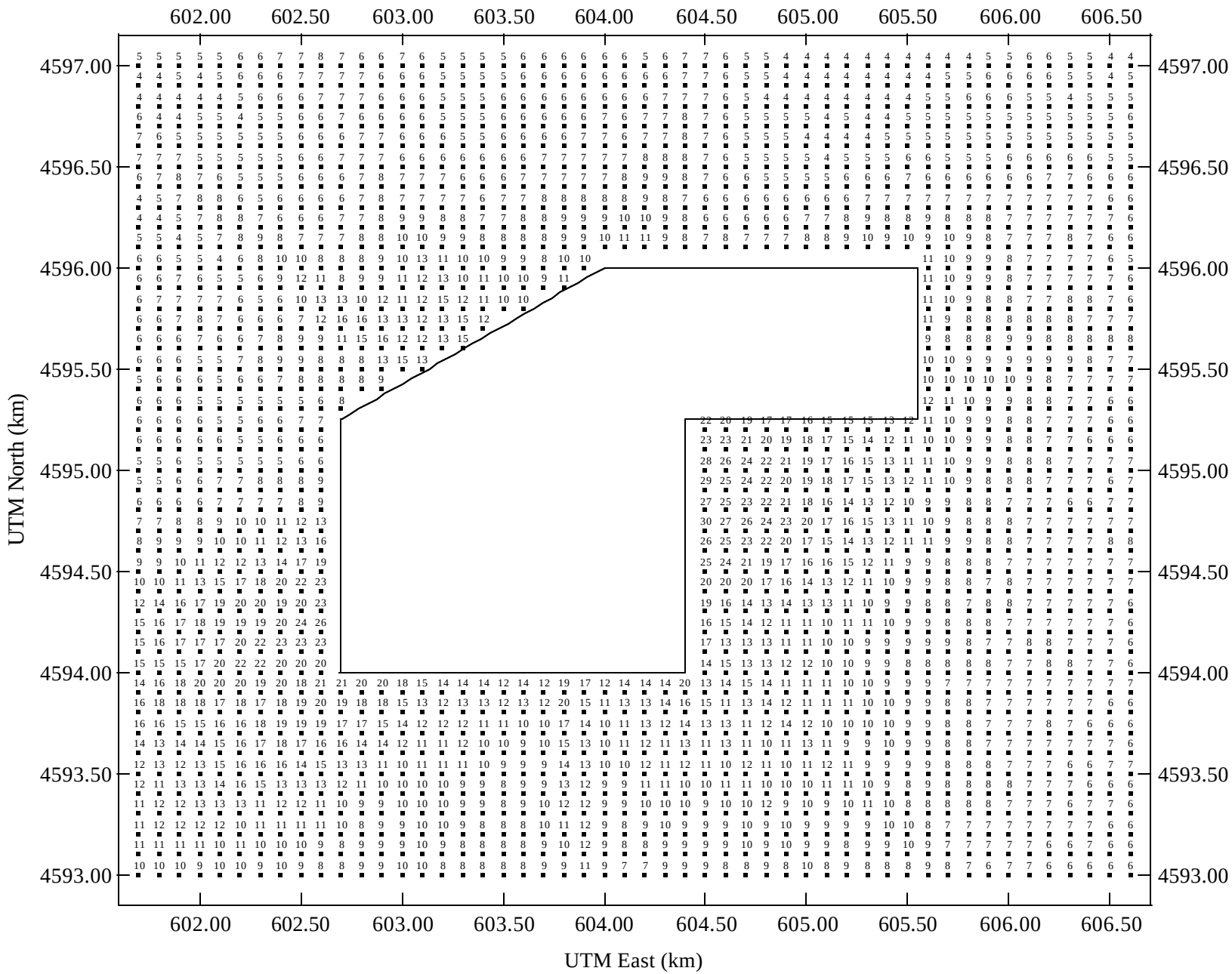


Figure B3. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, 24-hour, Medium Grid
PSD Increment = 30 $\mu g/m^3$

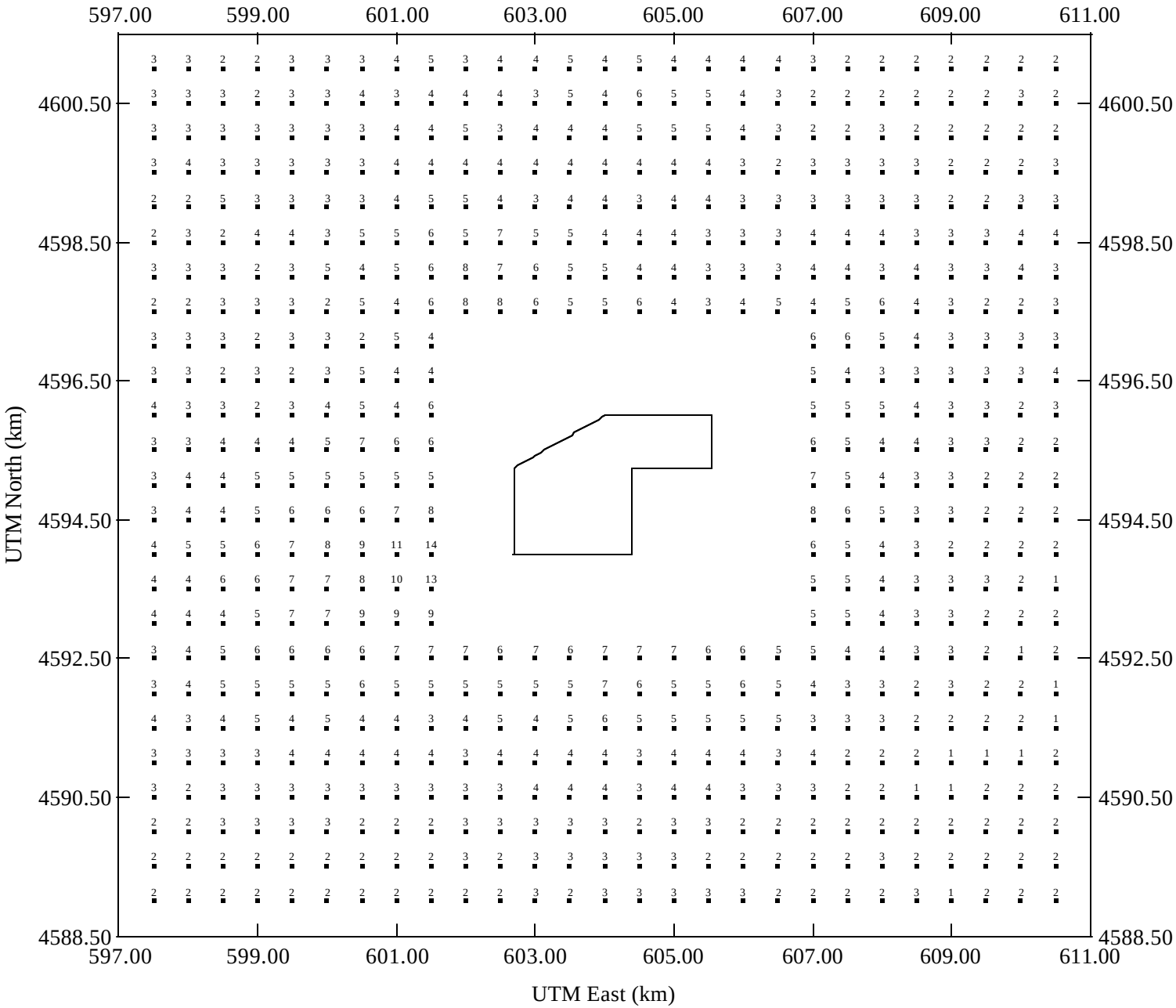


Figure B4. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, 24-hour, Coarse Grid
PSD Increment = 30 $\mu g/m^3$

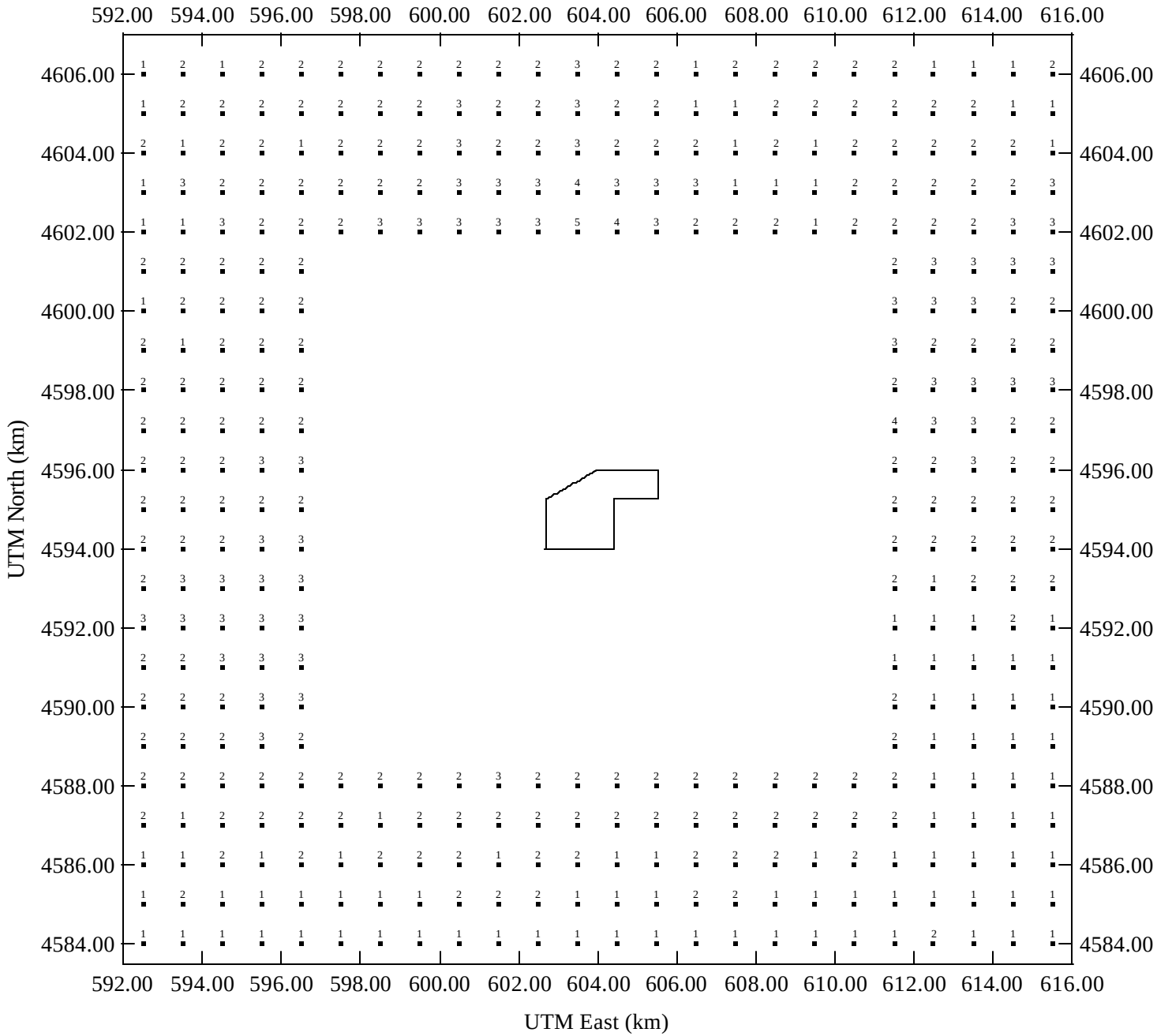


Figure B5. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, Annual, Property Grid
PSD Increment = 17 μg/m^3

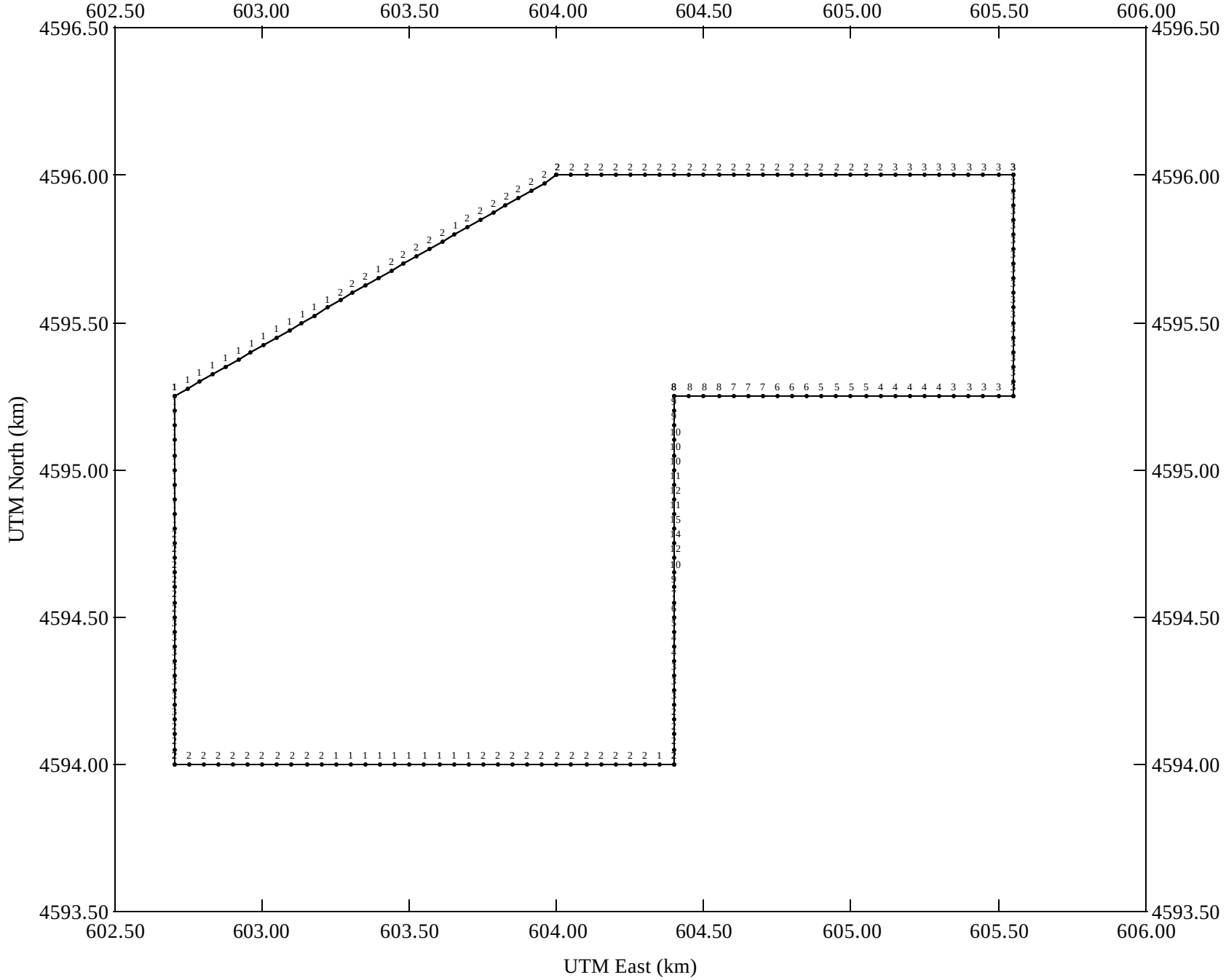


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Figure B6. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, Annual, Fine Grid
PSD Increment = 17 $\mu g/m^3$

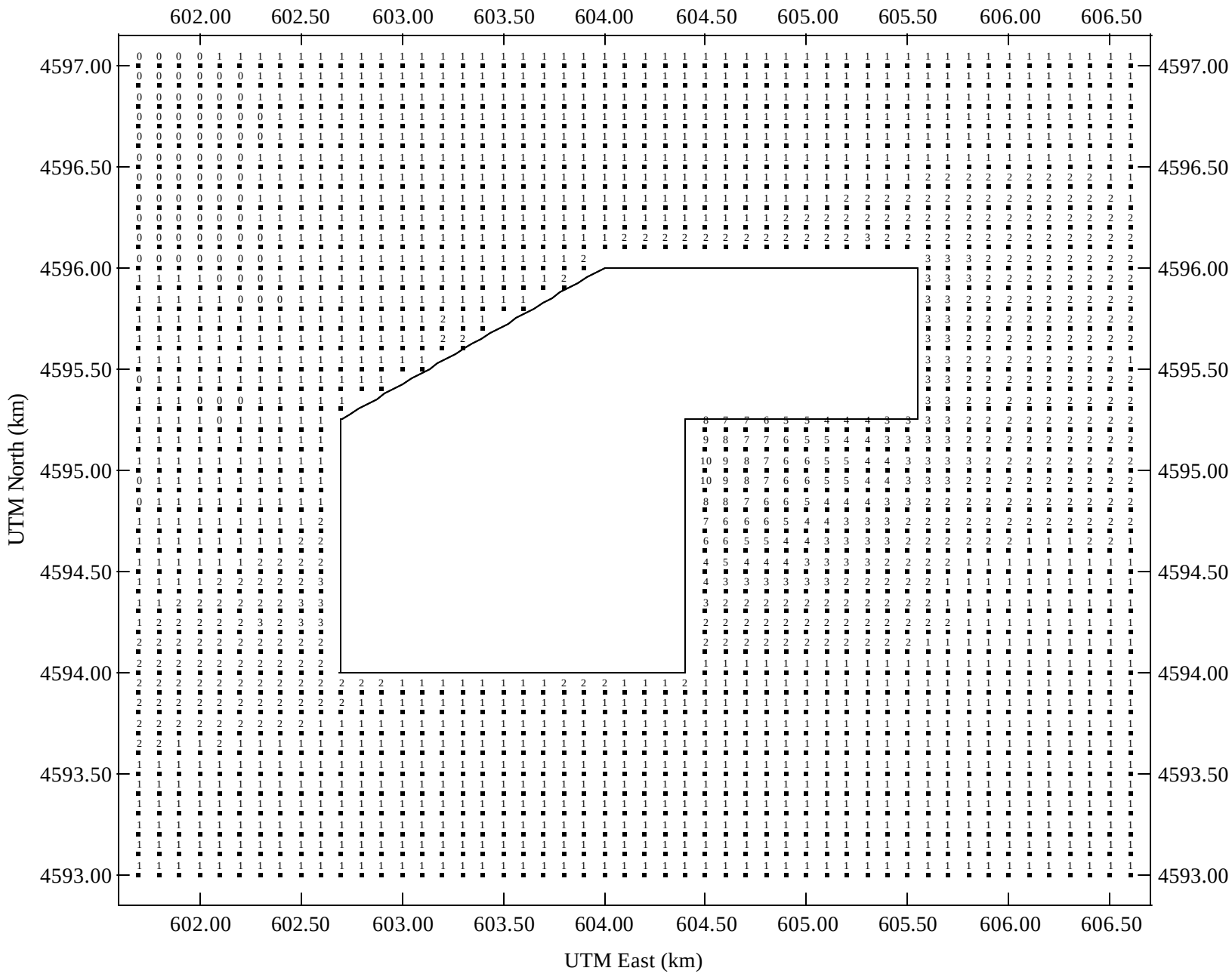

Figure B7. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, Annual, Medium Grid
PSD Increment = 17 $\mu g/m^3$

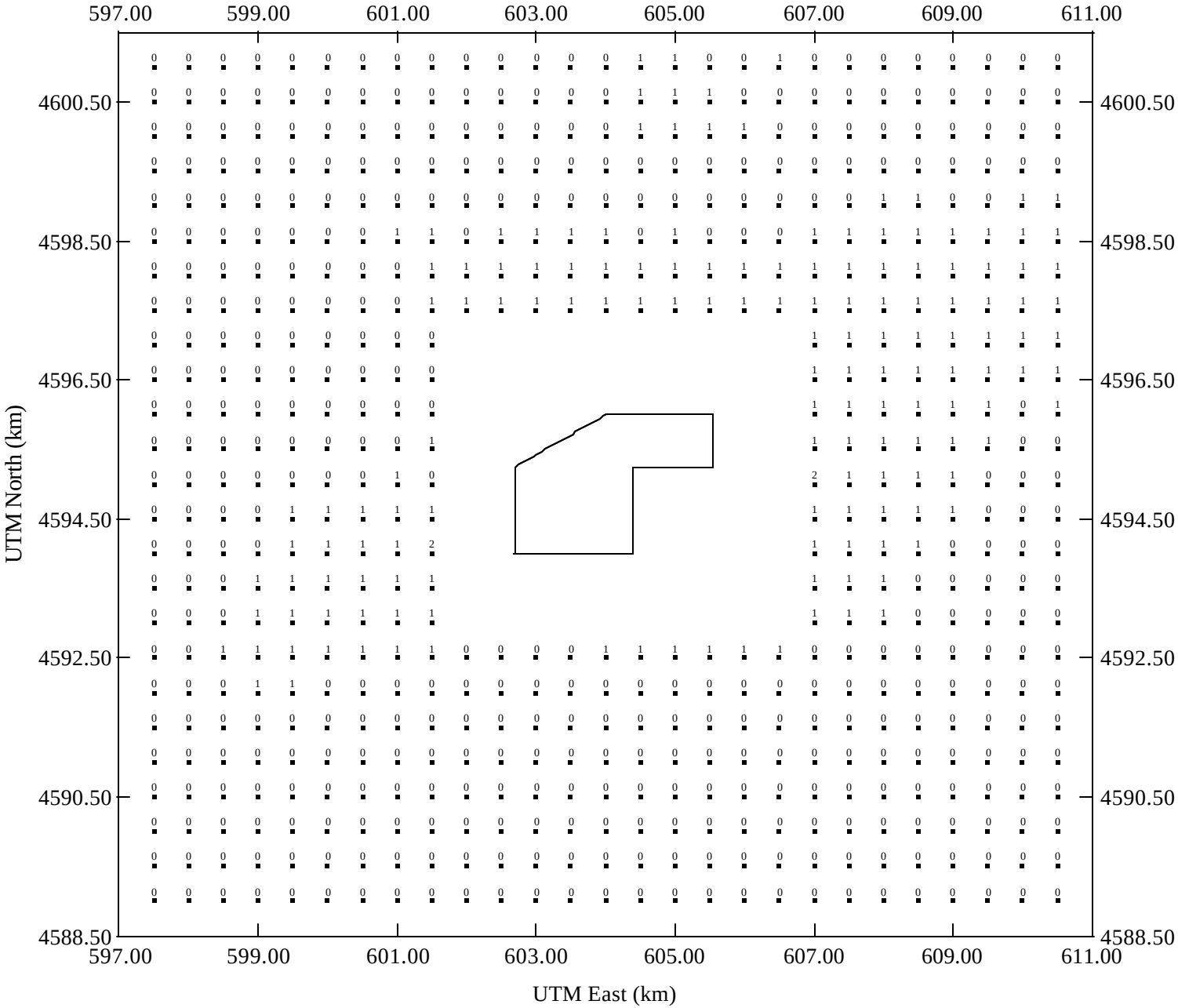

Figure B8. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, Annual, Coarse Grid
PSD Increment = 17 $\mu g/m^3$

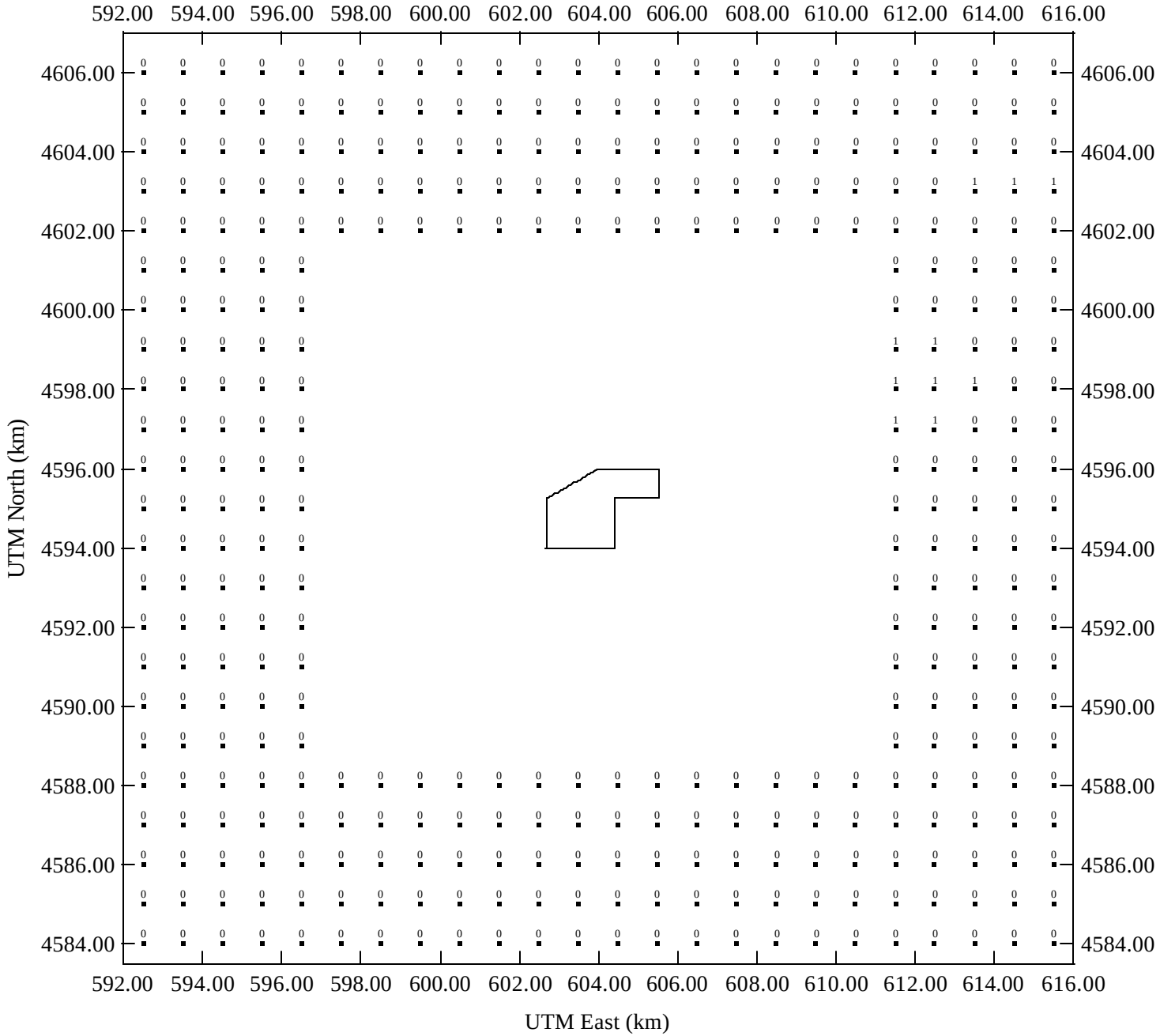

Figure C1. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, 24-hour, Property Grid
PSD Increment = 30 μg/m^3

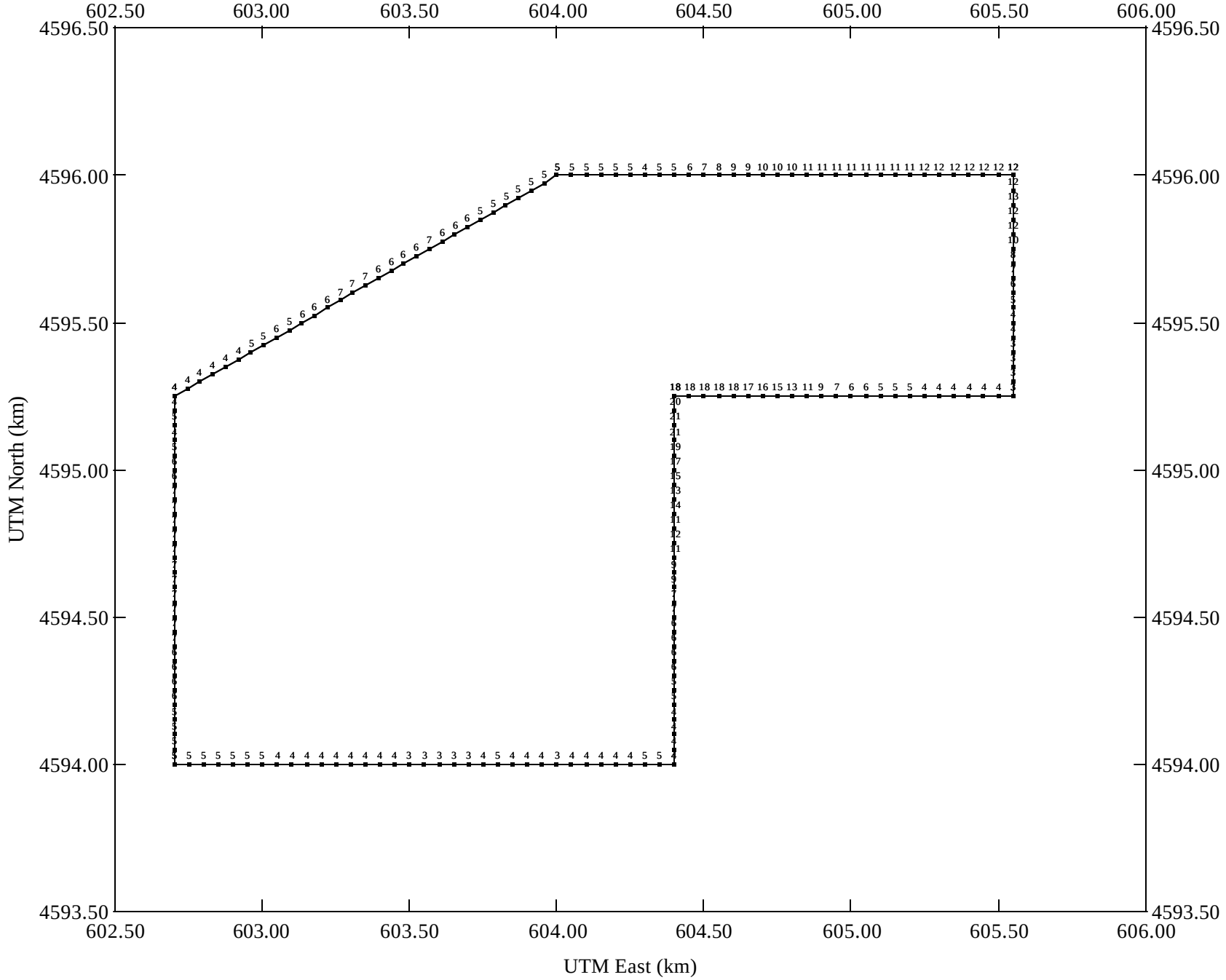

Figure C2. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, 24-hour, Fine Grid
PSD Increment = 30 $\mu g/m^3$

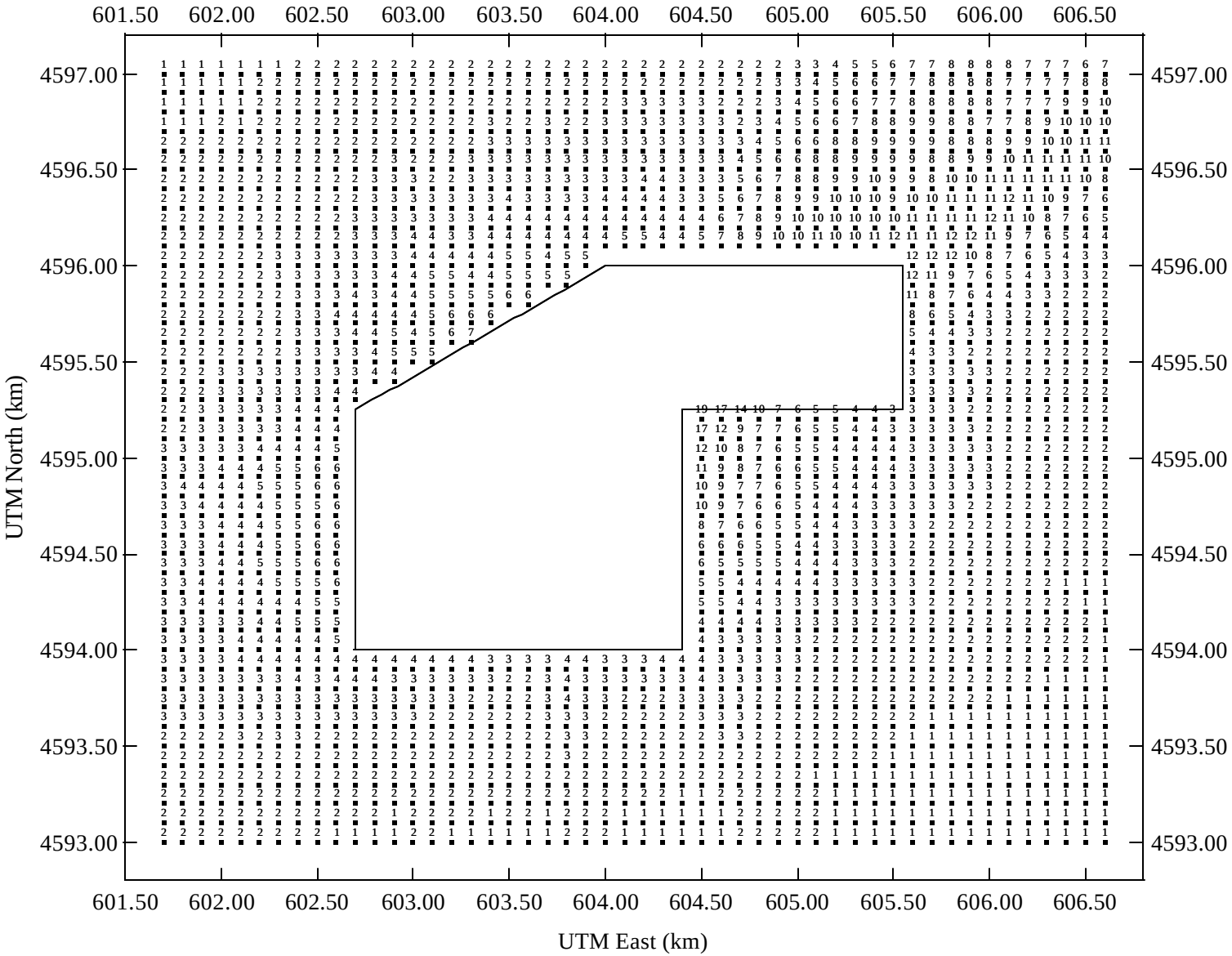

Figure C3. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, 24-hour, Medium Grid
PSD Increment = 30 $\mu g/m^3$

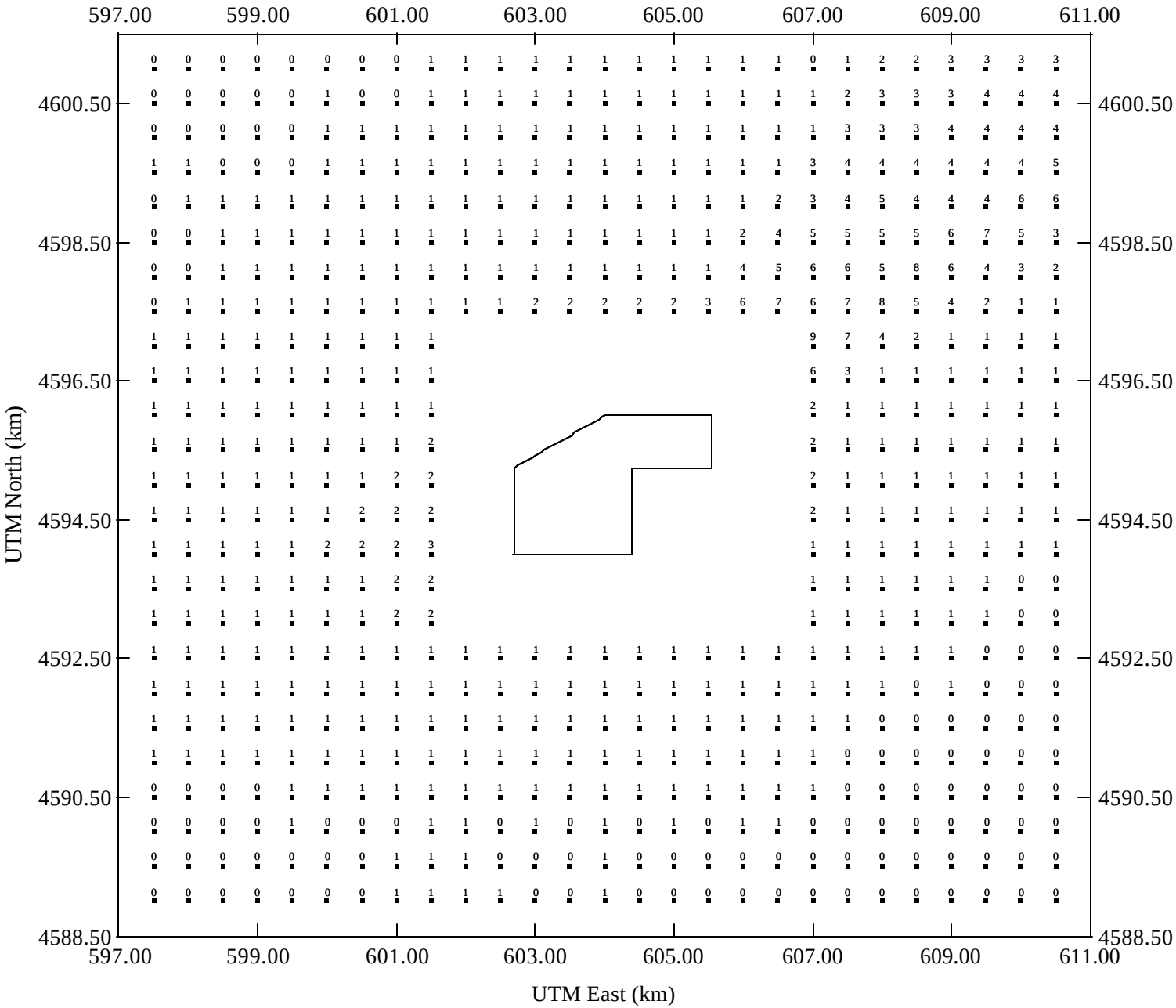

Figure C4. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, 24-hour, Coarse Grid
PSD Increment = 30 $\mu g/m^3$

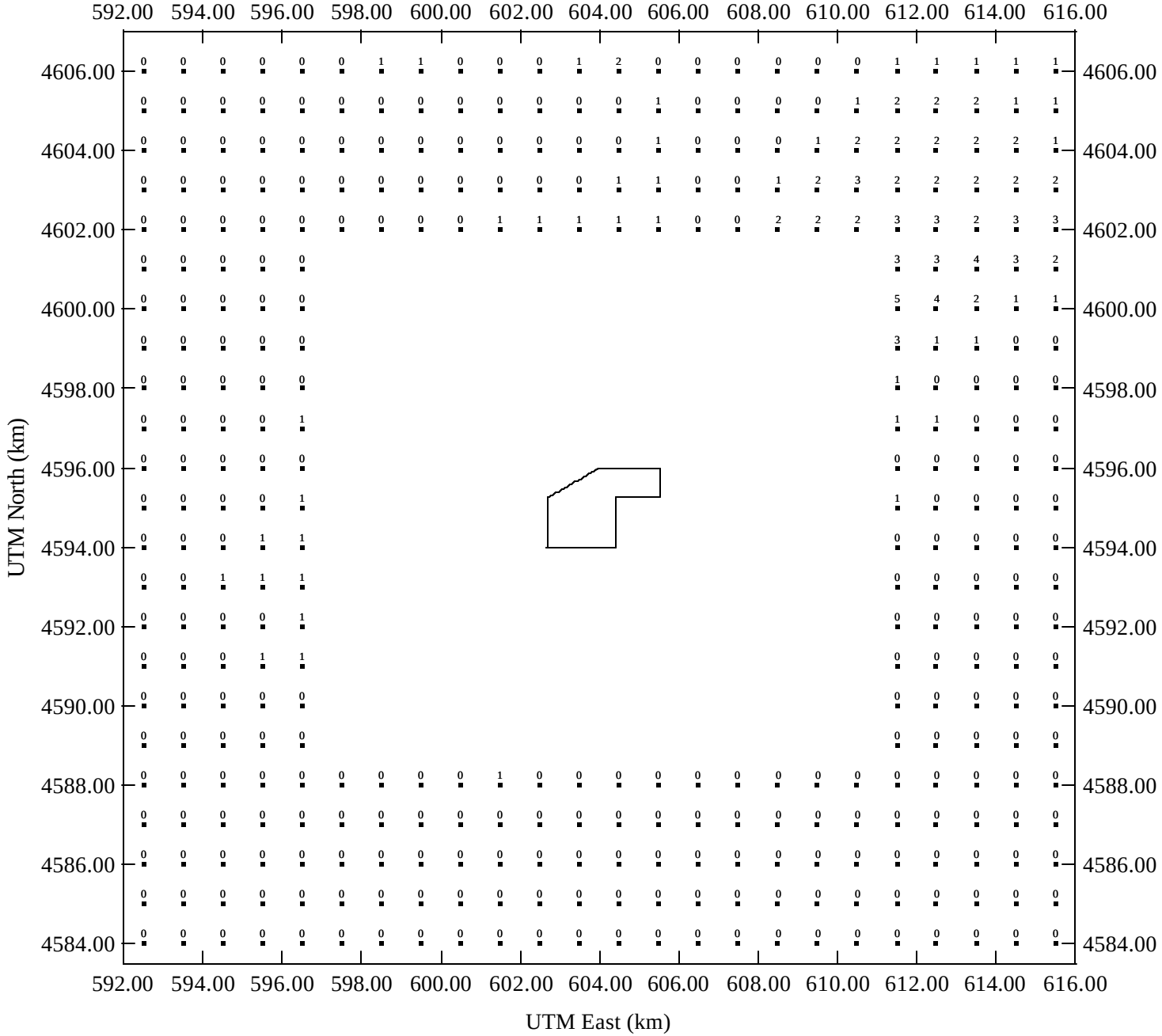

Figure C5. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, Annual, Property Grid
PSD Increment = 17 μg/m^3

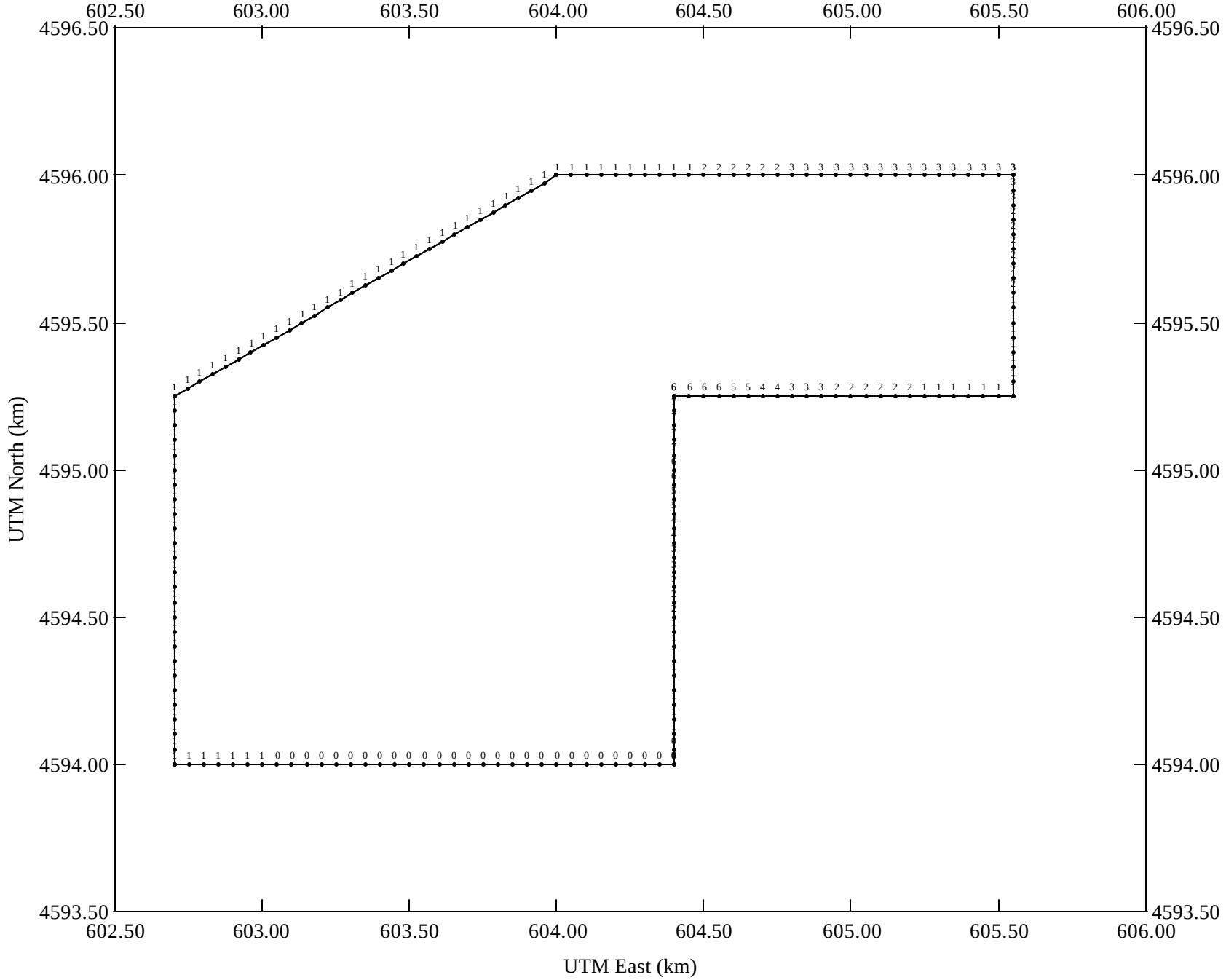

Figure C6. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, Annual, Fine Grid
PSD Increment = 17 $\mu g/m^3$

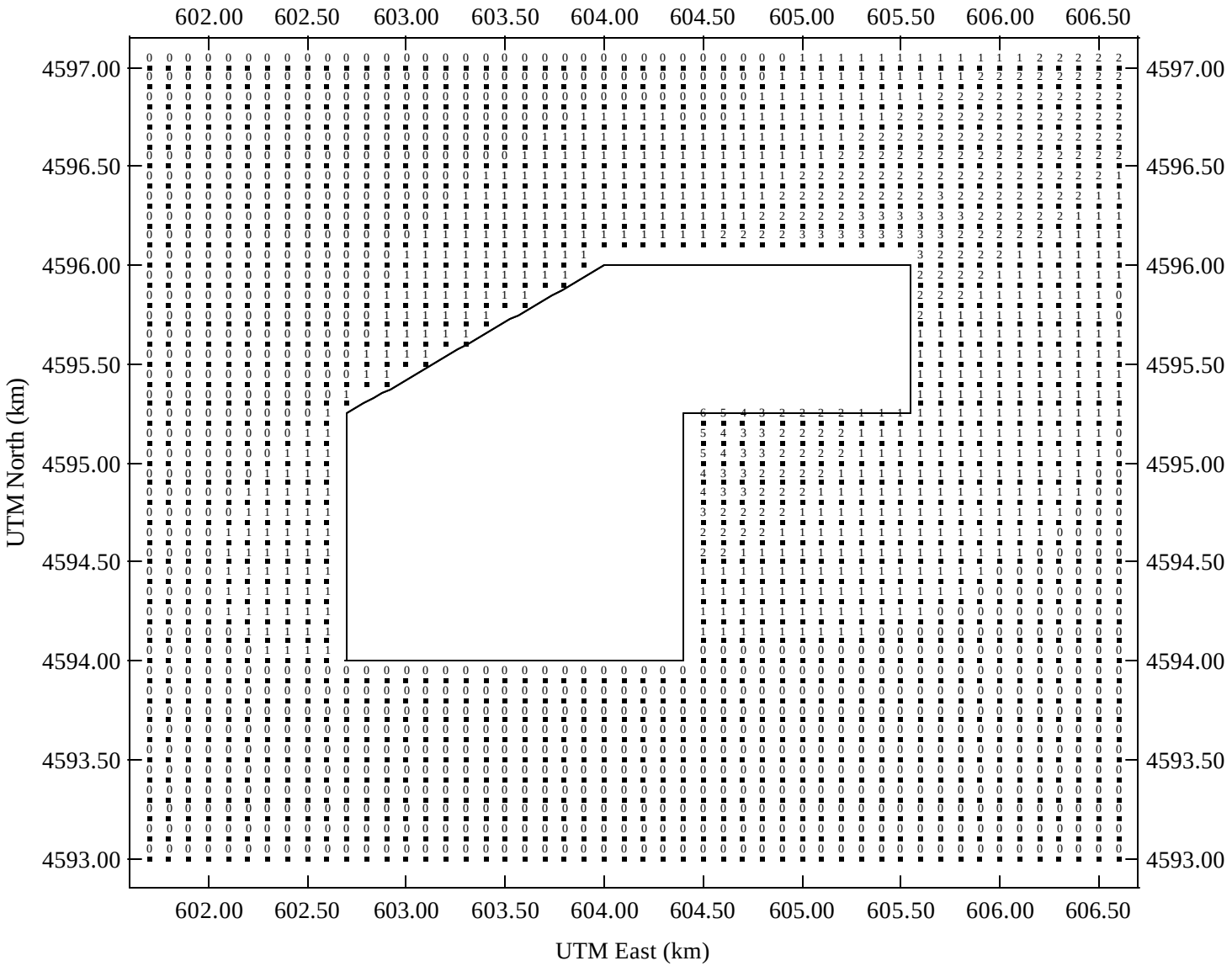

Figure C7. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, Annual, Medium Grid
PSD Increment = 17 $\mu g/m^3$

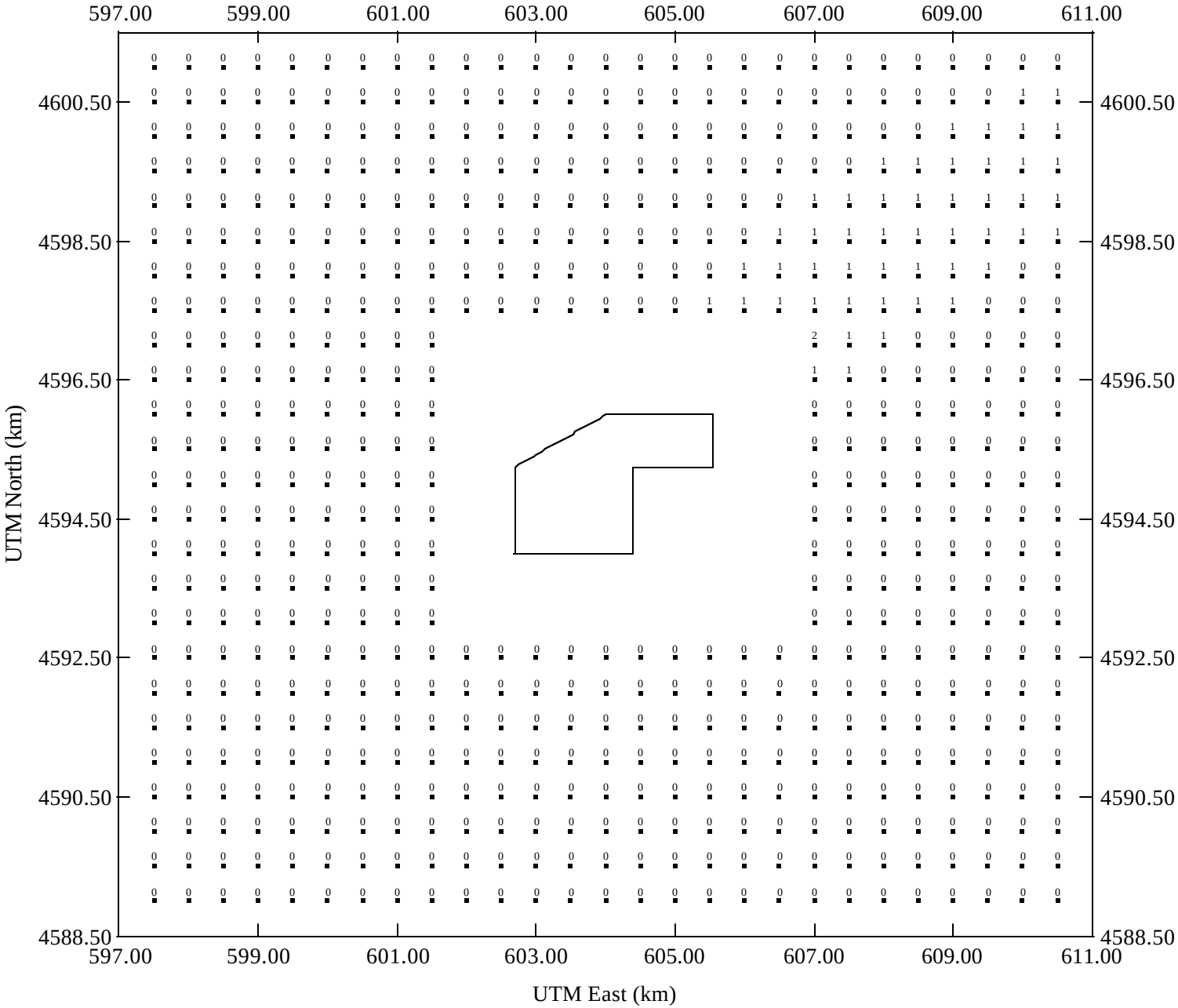

Figure C8. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, Annual, Coarse Grid
PSD Increment = 17 $\mu g/m^3$

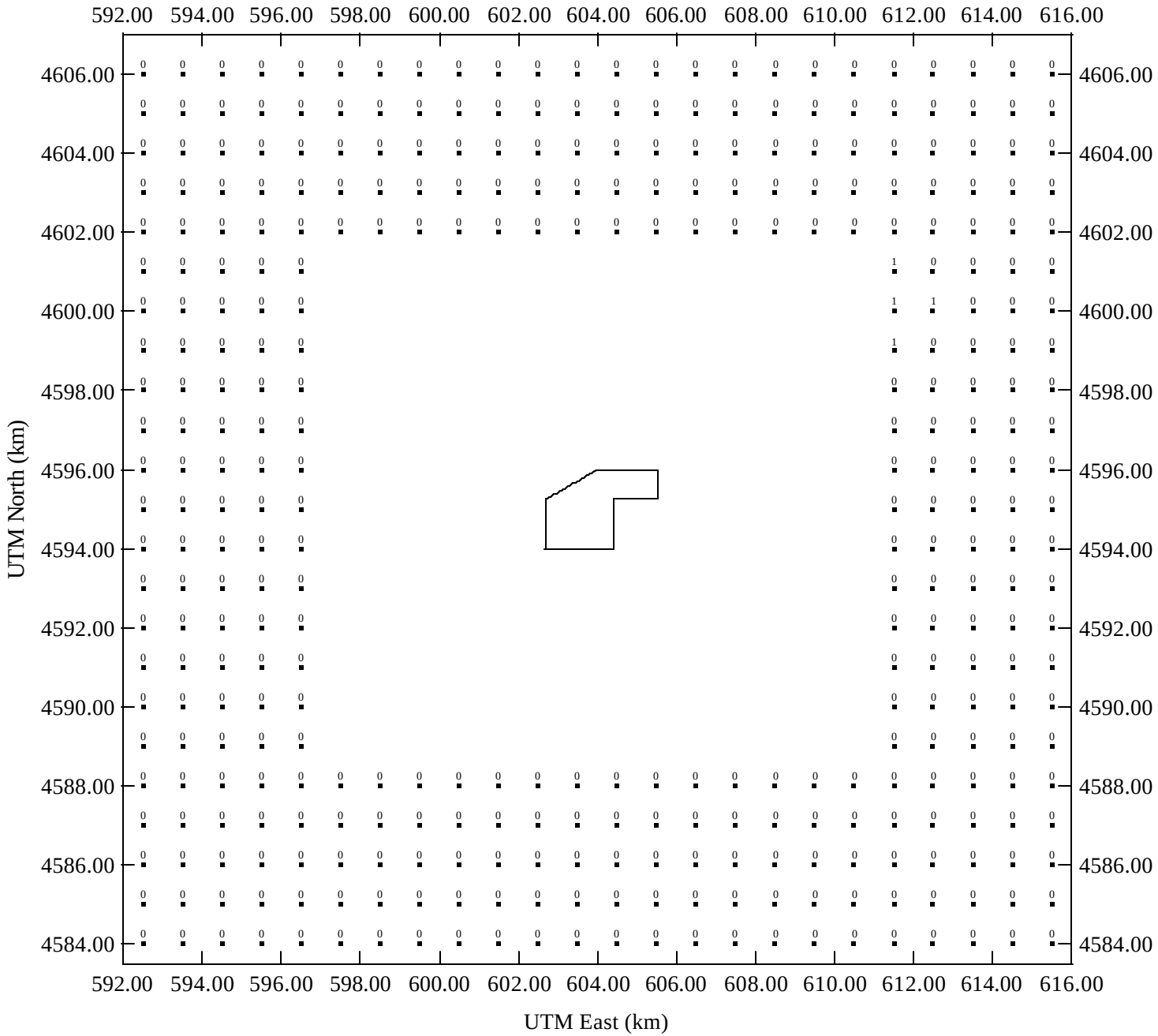

Figure 1. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, 24-hour
PSD Increment = 30 $\mu g/m^3$

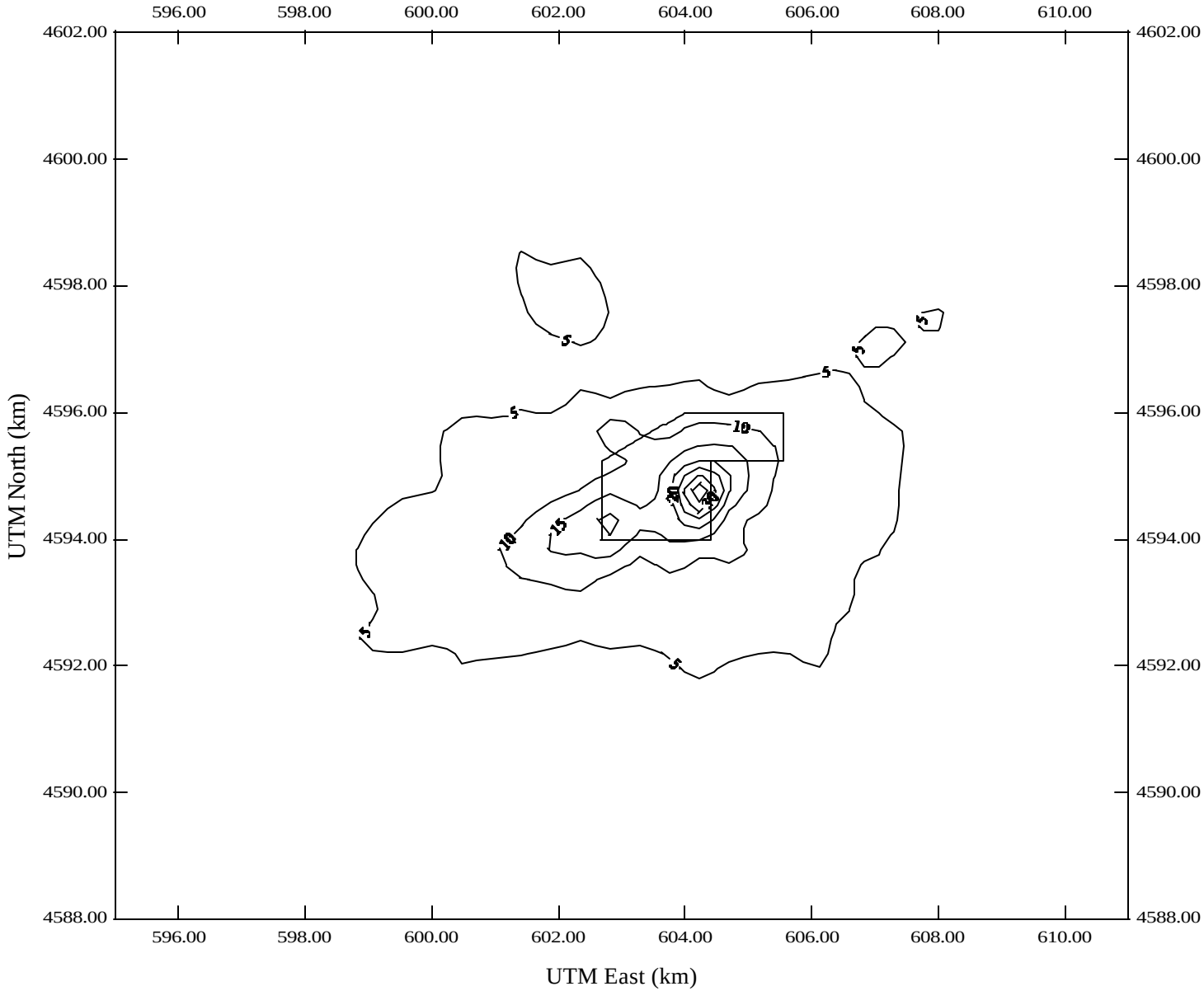

Figure 2. Solvay Minerals, Inc. - Green River Facility - ISC Modeling Results
PM_{10}, Annual

PSD Increment = 17 $\mu g/m^3$

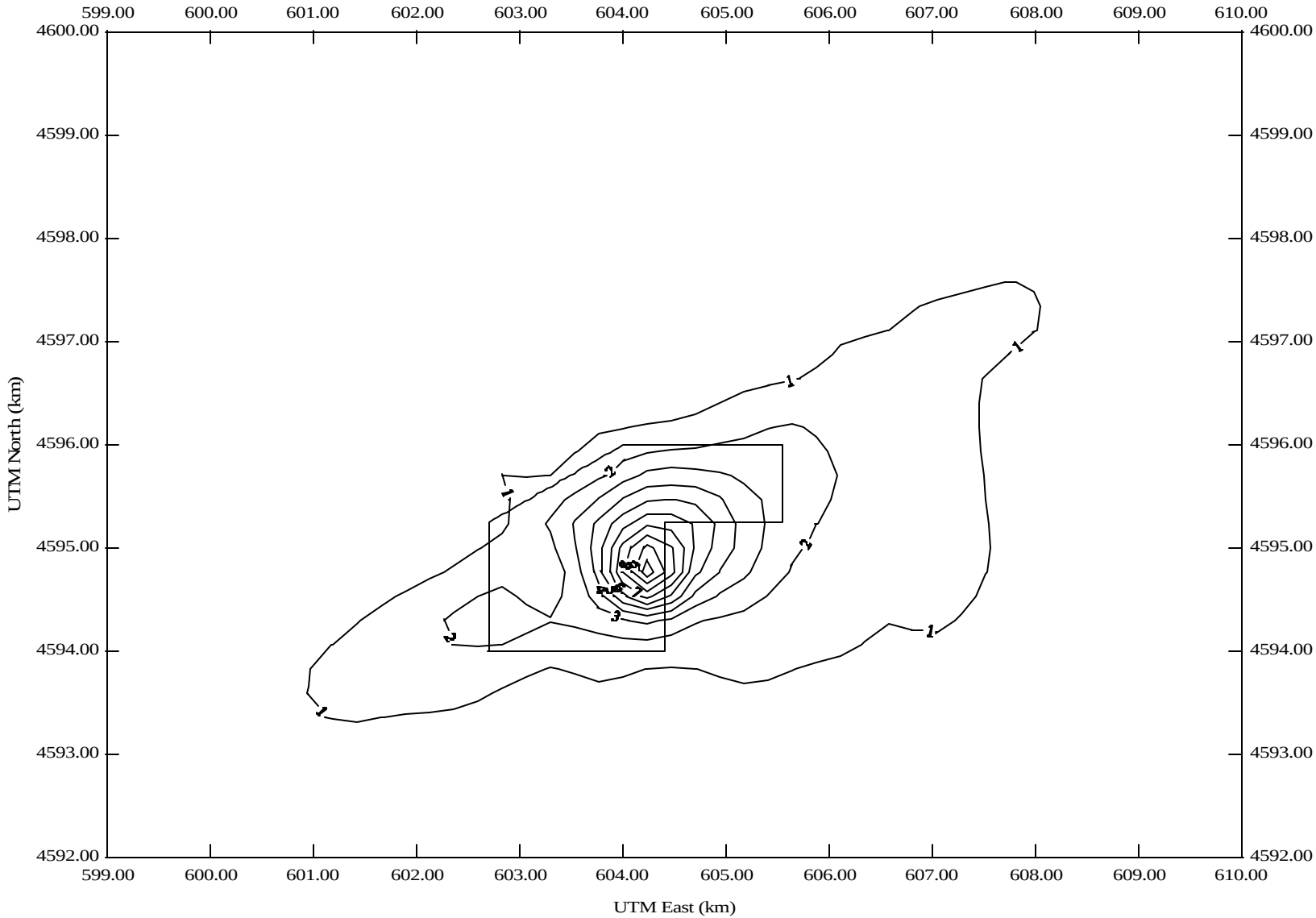

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Figure 3. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, 24-hour

PSD Increment = 30 μg/m^3

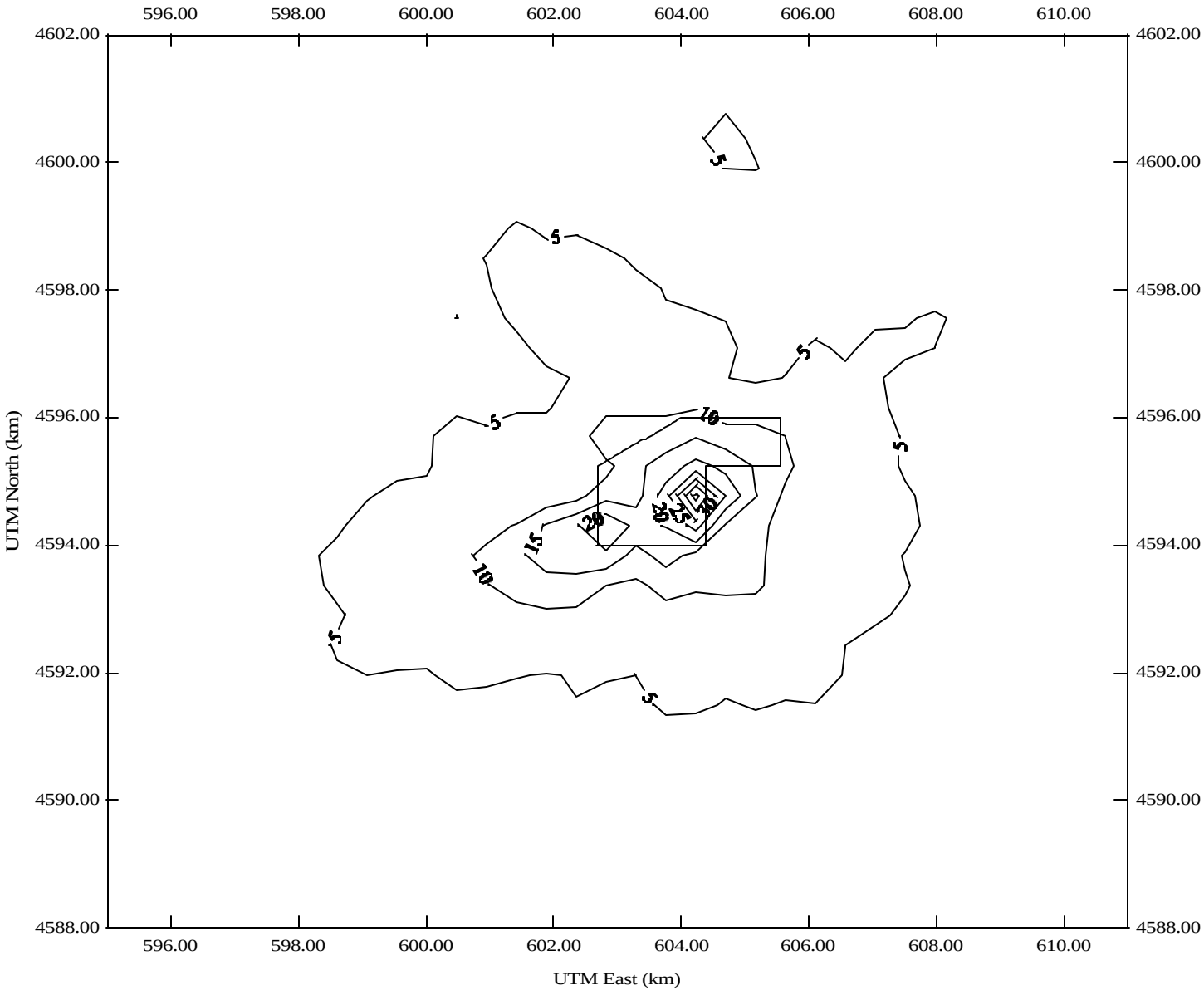


Figure 4. Solvay Minerals, Inc. - Green River Facility - ISCPRIME Modeling Results
PM_{10}, Annual

PSD Increment = 17 μg/m^3

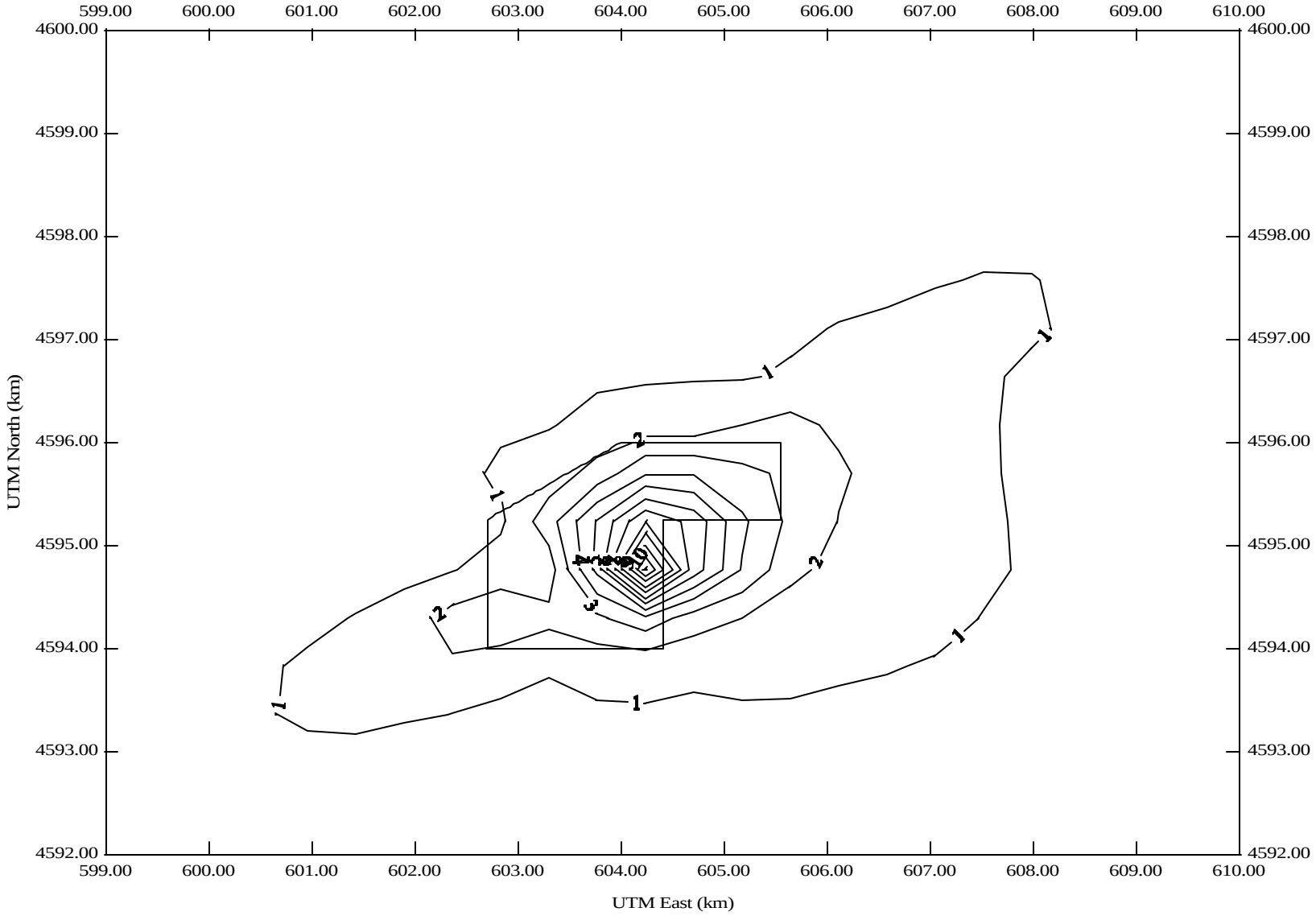


Figure 5. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, 24-hour

PSD Increment = 30 $\mu g/m^3$

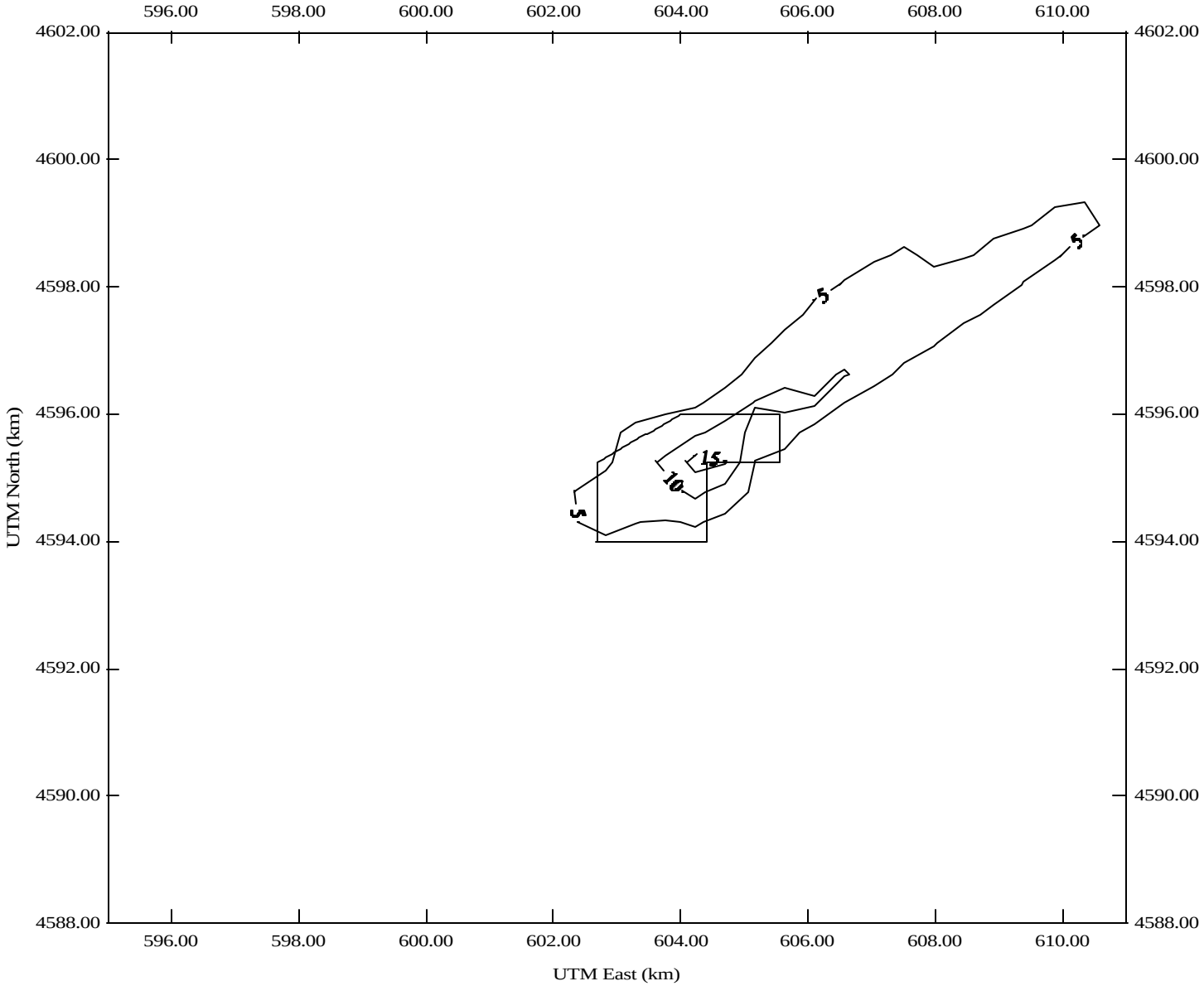
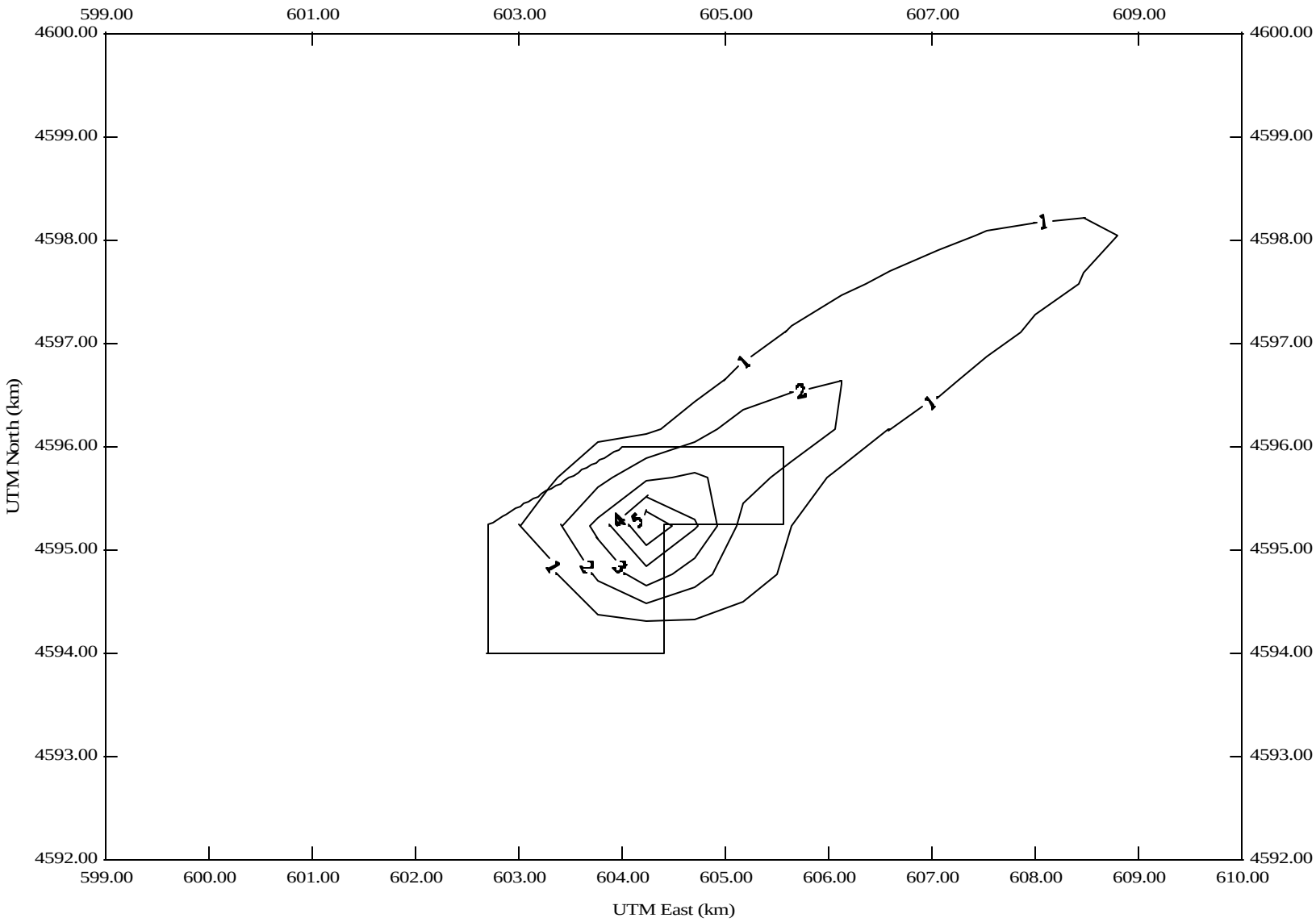


Figure 6. Solvay Minerals, Inc. - Green River Facility - AERMOD Modeling Results
PM_{10}, Annual
PSD Increment = 17 $\mu g/m^3$



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