Appendix 3.9

Predicted 1-hour and annual averaged VOC concentration ($\mu g/m^3$) at ASRs under various modes of operations

Appendix 3.9: Predicted 1-hr Vinyl Chloride concentration (ug/m3) at ASRs **Case 1 – ASP On**

Background concentration (with contribution from existing surface gas emission): 3.000 ug/m3

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of 1.8*10^5 ug/m3		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	1.177E-02	1.177E-02	1.178E-02	1.178E-02	3.012	3.012	3.012	3.012	within	within	within
ASR2	835474.5	843463.0	9.830E-03	9.830E-03	9.830E-03	9.830E-03	3.010	3.010	3.010	3.010	within	within	within
ASR3	836139.2	843267.7	1.262E-02	1.262E-02	1.262E-02	1.262E-02	3.013	3.013	3.013	3.013	within	within	within
ASR4	836921.6	843050.8	1.125E-02	1.125E-02	1.125E-02	1.125E-02	3.011	3.011	3.011	3.011	within	within	within
ASR5	836792.7	842938.7	1.122E-02	1.122E-02	1.122E-02	1.122E-02	3.011	3.011	3.011	3.011	within	within	within
ASR6	836499.0	843079.2	1.168E-02	1.168E-02	1.168E-02	1.168E-02	3.012	3.012	3.012	3.012	within	within	within
ASR7	834949.2	845805.6	1.183E-02	1.184E-02	1.184E-02	1.184E-02	3.012	3.012	3.012	3.012	within	within	within
ASR8	834261.5	845788.0	1.740E-02	1.740E-02	1.740E-02	1.740E-02	3.017	3.017	3.017	3.017	within	within	within
ASR9	834772.4	845729.4	1.299E-02	1.299E-02	1.299E-02	1.299E-02	3.013	3.013	3.013	3.013	within	within	within
ASR10	836866.1	845495.2	1.932E-02	2.058E-02	2.481E-02	2.481E-02	3.019	3.021	3.025	3.025	within	within	within
ASR11	834944.3	844920.6	1.449E-02	1.529E-02	1.782E-02	1.782E-02	3.014	3.015	3.018	3.018	within	within	within
ASR12	833927.6	845623.5	1.628E-02	1.628E-02	1.628E-02	1.628E-02	3.016	3.016	3.016	3.016	within	within	within
ASR13	834681.8	844507.7	1.065E-02	1.068E-02	1.075E-02	1.075E-02	3.011	3.011	3.011	3.011	within	within	within
ASR14	834932.5	844083.2	1.162E-02	1.162E-02	1.163E-02	1.163E-02	3.012	3.012	3.012	3.012	within	within	within
ASR15	834781.0	842892.0	7.230E-03	7.230E-03	7.230E-03	7.230E-03	3.007	3.007	3.007	3.007	within	within	within
ASR16	834638.8	843162.0	7.460E-03	7.460E-03	7.460E-03	7.460E-03	3.007	3.007	3.007	3.007	within	within	within
ASR17	833565.4	844380.1	9.320E-03	9.320E-03	9.320E-03	9.320E-03	3.009	3.009	3.009	3.009	within	within	within
ASR18	833659.8	844135.4	8.900E-03	8.900E-03	8.900E-03	8.900E-03	3.009	3.009	3.009	3.009	within	within	within
ASR19	833278.7	844149.0	8.260E-03	8.260E-03	8.260E-03	8.260E-03	3.008	3.008	3.008	3.008	within	within	within
ASR20	833432.9	843932.5	7.950E-03	7.950E-03	7.950E-03	7.950E-03	3.008	3.008	3.008	3.008	within	within	within
ASR21	833071.0	844042.5	7.750E-03	7.750E-03	7.750E-03	7.750E-03	3.008	3.008	3.008	3.008	within	within	within
ASR22	833816.5	843106.9	6.960E-03	6.960E-03	6.960E-03	6.960E-03	3.007	3.007	3.007	3.007	within	within	within
ASR23	833911.2	842536.3	6.720E-03	6.720E-03	6.720E-03	6.720E-03	3.007	3.007	3.007	3.007	within	within	within
ASR24	833589.5	842617.4	6.680E-03	6.680E-03	6.680E-03	6.680E-03	3.007	3.007	3.007	3.007	within	within	within
ASR25	836212.0	842390.6	9.400E-03	9.400E-03	9.400E-03	9.400E-03	3.009	3.009	3.009	3.009	within	within	within
ASR26	836864.6	842409.3	1.020E-02	1.020E-02	1.020E-02	1.020E-02	3.010	3.010	3.010	3.010	within	within	within
ASR27	836737.6	845023.5	4.617E-02	4.632E-02	4.678E-02	4.678E-02	3.046	3.046	3.047	3.047	within	within	within
		sub-max:	4.617E-02	4.632E-02	4.678E-02	4.678E-02	3.046	3.046	3.047	3.047			
		max:	4.678E-02				3.047						

Appendix 3.9: Predicted 1-hr Benzene concentration (ug/m3) at ASRs **Case 1 – ASP On**

Background concentration (with contribution from existing surface gas emission): 3.900 ug/m3

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	9.240E-03	9.240E-03	9.240E-03	9.240E-03	3.909	3.909	3.909	3.909	within	within	within
ASR2	835474.5	843463.0	7.700E-03	7.700E-03	7.700E-03	7.700E-03	3.908	3.908	3.908	3.908	within	within	within
ASR3	836139.2	843267.7	9.890E-03	9.890E-03	9.890E-03	9.890E-03	3.910	3.910	3.910	3.910	within	within	within
ASR4	836921.6	843050.8	8.820E-03	8.820E-03	8.820E-03	8.820E-03	3.909	3.909	3.909	3.909	within	within	within
ASR5	836792.7	842938.7	8.790E-03	8.790E-03	8.790E-03	8.790E-03	3.909	3.909	3.909	3.909	within	within	within
ASR6	836499.0	843079.2	9.160E-03	9.160E-03	9.160E-03	9.160E-03	3.909	3.909	3.909	3.909	within	within	within
ASR7	834949.2	845805.6	9.280E-03	9.280E-03	9.290E-03	9.290E-03	3.909	3.909	3.909	3.909	within	within	within
ASR8	834261.5	845788.0	1.363E-02	1.364E-02	1.364E-02	1.364E-02	3.914	3.914	3.914	3.914	within	within	within
ASR9	834772.4	845729.4	1.018E-02	1.018E-02	1.019E-02	1.019E-02	3.910	3.910	3.910	3.910	within	within	within
ASR10	836866.1	845495.2	1.516E-02	1.614E-02	1.946E-02	1.946E-02	3.915	3.916	3.919	3.919	within	within	within
ASR11	834944.3	844920.6	1.137E-02	1.200E-02	1.399E-02	1.399E-02	3.911	3.912	3.914	3.914	within	within	within
ASR12	833927.6	845623.5	1.276E-02	1.276E-02	1.276E-02	1.276E-02	3.913	3.913	3.913	3.913	within	within	within
ASR13	834681.8	844507.7	8.360E-03	8.380E-03	8.440E-03	8.440E-03	3.908	3.908	3.908	3.908	within	within	within
ASR14	834932.5	844083.2	9.110E-03	9.110E-03	9.110E-03	9.110E-03	3.909	3.909	3.909	3.909	within	within	within
ASR15	834781.0	842892.0	5.670E-03	5.670E-03	5.670E-03	5.670E-03	3.906	3.906	3.906	3.906	within	within	within
ASR16	834638.8	843162.0	5.850E-03	5.850E-03	5.850E-03	5.850E-03	3.906	3.906	3.906	3.906	within	within	within
ASR17	833565.4	844380.1	7.310E-03	7.310E-03	7.310E-03	7.310E-03	3.907	3.907	3.907	3.907	within	within	within
ASR18	833659.8	844135.4	6.970E-03	6.970E-03	6.970E-03	6.970E-03	3.907	3.907	3.907	3.907	within	within	within
ASR19	833278.7	844149.0	6.470E-03	6.470E-03	6.470E-03	6.470E-03	3.906	3.906	3.906	3.906	within	within	within
ASR20	833432.9	843932.5	6.230E-03	6.230E-03	6.230E-03	6.230E-03	3.906	3.906	3.906	3.906	within	within	within
ASR21	833071.0	844042.5	6.070E-03	6.070E-03	6.070E-03	6.070E-03	3.906	3.906	3.906	3.906	within	within	within
ASR22	833816.5	843106.9	5.460E-03	5.460E-03	5.460E-03	5.460E-03	3.905	3.905	3.905	3.905	within	within	within
ASR23	833911.2	842536.3	5.270E-03	5.270E-03	5.270E-03	5.270E-03	3.905	3.905	3.905	3.905	within	within	within
ASR24	833589.5	842617.4	5.230E-03	5.230E-03	5.230E-03	5.230E-03	3.905	3.905	3.905	3.905	within	within	within
ASR25	836212.0	842390.6	7.370E-03	7.370E-03	7.370E-03	7.370E-03	3.907	3.907	3.907	3.907	within	within	within
ASR26	836864.6	842409.3	7.990E-03	7.990E-03	8.000E-03	8.000E-03	3.908	3.908	3.908	3.908	within	within	within
ASR27	836737.6	845023.5	3.623E-02	3.634E-02	3.670E-02	3.670E-02	3.936	3.936	3.937	3.937	within	within	within
		sub-max:	3.623E-02	3.634E-02	3.670E-02	3.670E-02	3.936	3.936	3.937	3.937			
		max:	3.670E-02				3.937						

Appendix 3.9: Predicted annual averaged Vinyl Chloride concentration (ug/m3) at ASRs

Case 1 – ASP On

Background concentration (with contribution from existing surface gas emission): 3.000 ug/m3 unit risk factor 0.000001 (ug/m3)$^{-1}$

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)			Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 100 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	3.400E-04	3.500E-04	3.700E-04	3.700E-04	3.000E+00	3.000E+00	3.000E+00	3.400E-10	3.50E-10	3.70E-10	4.86E-12	5.00E-12	5.29E-12	5.29E-12	within	within	within	within	within	within	within	within	within
ASR2	835474.5	843463.0	3.500E-04	3.600E-04	3.600E-04	3.600E-04	3.000E+00	3.000E+00	3.000E+00	3.500E-10	3.60E-10	3.60E-10	5.00E-12	5.14E-12	5.14E-12	5.14E-12	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	4.200E-04	4.200E-04	4.400E-04	4.400E-04	3.000E+00	3.000E+00	3.000E+00	4.200E-10	4.20E-10	4.40E-10	6.00E-12	6.00E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	1.800E-04	1.800E-04	1.900E-04	1.900E-04	3.000E+00	3.000E+00	3.000E+00	1.800E-10	1.80E-10	1.90E-10	2.57E-12	2.57E-12	2.71E-12	2.71E-12	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	2.400E-04	2.500E-04	2.600E-04	2.600E-04	3.000E+00	3.000E+00	3.000E+00	2.400E-10	2.50E-10	2.60E-10	3.43E-12	3.57E-12	3.71E-12	3.71E-12	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	2.400E-04	2.400E-04	2.500E-04	2.500E-04	3.000E+00	3.000E+00	3.000E+00	2.400E-10	2.40E-10	2.50E-10	3.43E-12	3.43E-12	3.57E-12	3.57E-12	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.600E-04	1.600E-04	1.700E-04	1.700E-04	3.000E+00	3.000E+00	3.000E+00	1.600E-10	1.60E-10	1.70E-10	2.29E-12	2.29E-12	2.43E-12	2.43E-12	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	4.200E-04	4.200E-04	4.400E-04	4.400E-04	3.000E+00	3.000E+00	3.000E+00	4.200E-10	4.20E-10	4.40E-10	6.00E-12	6.00E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	1.800E-04	1.800E-04	1.900E-04	1.900E-04	3.000E+00	3.000E+00	3.000E+00	1.800E-10	1.80E-10	1.90E-10	2.57E-12	2.57E-12	2.71E-12	2.71E-12	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	3.700E-04	3.800E-04	4.300E-04	4.300E-04	3.000E+00	3.000E+00	3.000E+00	3.700E-10	3.80E-10	4.30E-10	5.29E-12	5.43E-12	6.14E-12	6.14E-12	within	within	within	within	within	within	within	within	within
ASR11	834944.3	844920.6	6.000E-04	6.500E-04	8.200E-04	8.200E-04	3.001E+00	3.001E+00	3.001E+00	6.000E-10	6.50E-10	8.20E-10	8.57E-12	9.29E-12	1.17E-11	1.17E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	8.100E-04	8.100E-04	8.300E-04	8.300E-04	3.001E+00	3.001E+00	3.001E+00	8.100E-10	8.10E-10	8.30E-10	1.16E-11	1.16E-11	1.19E-11	1.19E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	3.600E-04	3.600E-04	3.800E-04	3.800E-04	3.000E+00	3.000E+00	3.000E+00	3.600E-10	3.60E-10	3.80E-10	5.14E-12	5.14E-12	5.43E-12	5.43E-12	within	within	within	within	within	within	within	within	within
ASR14	834952.5	844083.2	4.200E-04	4.200E-04	4.400E-04	4.400E-04	3.000E+00	3.000E+00	3.000E+00	4.200E-10	4.20E-10	4.40E-10	6.00E-12	6.00E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	2.300E-04	2.300E-04	2.400E-04	2.400E-04	3.000E+00	3.000E+00	3.000E+00	2.300E-10	2.30E-10	2.40E-10	3.29E-12	3.29E-12	3.43E-12	3.43E-12	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	2.600E-04	2.600E-04	2.700E-04	2.700E-04	3.000E+00	3.000E+00	3.000E+00	2.600E-10	2.60E-10	2.70E-10	3.71E-12	3.71E-12	3.86E-12	3.86E-12	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	4.400E-04	4.400E-04	4.500E-04	4.500E-04	3.000E+00	3.000E+00	3.000E+00	4.400E-10	4.40E-10	4.50E-10	6.29E-12	6.29E-12	6.43E-12	6.43E-12	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	3.500E-04	3.500E-04	3.500E-04	3.500E-04	3.000E+00	3.000E+00	3.000E+00	3.500E-10	3.50E-10	3.50E-10	5.00E-12	5.00E-12	5.00E-12	5.00E-12	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	4.100E-04	4.100E-04	4.200E-04	4.200E-04	3.000E+00	3.000E+00	3.000E+00	4.100E-10	4.10E-10	4.20E-10	5.86E-12	5.86E-12	6.00E-12	6.00E-12	within	within	within	within	within	within	within	within	within
ASR20	833432.9	843932.5	3.500E-04	3.600E-04	3.600E-04	3.600E-04	3.000E+00	3.000E+00	3.000E+00	3.500E-10	3.60E-10	3.60E-10	5.00E-12	5.14E-12	5.14E-12	5.14E-12	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	4.200E-04	4.200E-04	4.300E-04	4.300E-04	3.000E+00	3.000E+00	3.000E+00	4.200E-10	4.20E-10	4.30E-10	6.00E-12	6.00E-12	6.14E-12	6.14E-12	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	2.400E-04	2.400E-04	2.500E-04	2.500E-04	3.000E+00	3.000E+00	3.000E+00	2.400E-10	2.40E-10	2.50E-10	3.43E-12	3.43E-12	3.57E-12	3.57E-12	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	2.300E-04	2.300E-04	2.300E-04	2.300E-04	3.000E+00	3.000E+00	3.000E+00	2.300E-10	2.30E-10	2.30E-10	3.29E-12	3.29E-12	3.29E-12	3.29E-12	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	2.300E-04	2.300E-04	2.400E-04	2.400E-04	3.000E+00	3.000E+00	3.000E+00	2.300E-10	2.30E-10	2.40E-10	3.29E-12	3.29E-12	3.43E-12	3.43E-12	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	2.800E-04	2.900E-04	2.900E-04	2.900E-04	3.000E+00	3.000E+00	3.000E+00	2.800E-10	2.90E-10	2.90E-10	4.00E-12	4.14E-12	4.14E-12	4.14E-12	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	2.100E-04	2.100E-04	2.100E-04	2.100E-04	3.000E+00	3.000E+00	3.000E+00	2.100E-10	2.10E-10	2.10E-10	3.00E-12	3.00E-12	3.00E-12	3.00E-12	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	5.400E-04	5.400E-04	5.500E-04	5.500E-04	3.001E+00	3.001E+00	3.001E+00	5.400E-10	5.40E-10	5.50E-10	7.71E-12	7.71E-12	7.86E-12	7.86E-12	within	within	within	within	within	within	within	within	within
		sub-max:	8.100E-04	8.100E-04	8.300E-04	8.300E-04	3.001E+00	3.001E+00	3.001E+00	8.100E-10	8.10E-10	8.30E-10	1.16E-11	1.16E-11	1.19E-11	1.19E-11									
		max:	8.300E-04				3.001E+00			8.300E-10			1.19E-11												

Appendix 3.9: Predicted annual averaged Benzene concentration (ug/m3) at ASRs

Case 1 – ASP On

Background concentration (with contribution from existing surface gas emission): 3.900 ug/m3

unit risk factor 0.000006 (ug/m3)$^{-1}$

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 30 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	2.700E-04	2.700E-04	2.900E-04	2.900E-04	3.900	3.900	3.900	3.900	1.62E-09	1.62E-09	1.74E-09	2.31E-11	2.31E-11	2.49E-11	2.49E-11	within	within	within	within	within	within	within	within	within
ASR2	835474.5	843463.0	2.800E-04	2.800E-04	2.900E-04	2.900E-04	3.900	3.900	3.900	3.900	1.68E-09	1.68E-09	1.74E-09	2.40E-11	2.40E-11	2.49E-11	2.49E-11	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	3.300E-04	3.300E-04	3.500E-04	3.500E-04	3.900	3.900	3.900	3.900	1.98E-09	1.98E-09	2.10E-09	2.83E-11	2.83E-11	3.00E-11	3.00E-11	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	1.400E-04	1.400E-04	1.500E-04	1.500E-04	3.900	3.900	3.900	3.900	8.40E-10	8.40E-10	9.00E-10	1.20E-11	1.20E-11	1.29E-11	1.29E-11	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	1.900E-04	1.900E-04	2.000E-04	2.000E-04	3.900	3.900	3.900	3.900	1.14E-09	1.14E-09	1.20E-09	1.63E-11	1.63E-11	1.71E-11	1.71E-11	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	1.900E-04	1.900E-04	2.000E-04	2.000E-04	3.900	3.900	3.900	3.900	1.14E-09	1.14E-09	1.20E-09	1.63E-11	1.63E-11	1.71E-11	1.71E-11	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.300E-04	1.300E-04	1.300E-04	1.300E-04	3.900	3.900	3.900	3.900	7.80E-10	7.80E-10	7.80E-10	1.11E-11	1.11E-11	1.11E-11	1.11E-11	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	3.300E-04	3.300E-04	3.500E-04	3.500E-04	3.900	3.900	3.900	3.900	1.98E-09	1.98E-09	2.10E-09	2.83E-11	2.83E-11	3.00E-11	3.00E-11	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	1.400E-04	1.400E-04	1.500E-04	1.500E-04	3.900	3.900	3.900	3.900	8.40E-10	8.40E-10	9.00E-10	1.20E-11	1.20E-11	1.29E-11	1.29E-11	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	2.900E-04	3.000E-04	3.400E-04	3.400E-04	3.900	3.900	3.900	3.900	1.74E-09	1.80E-09	2.04E-09	2.49E-11	2.57E-11	2.91E-11	2.91E-11	within	within	within	within	within	within	within	within	within
ASR11	834934.3	844920.6	4.700E-04	5.100E-04	6.400E-04	6.400E-04	3.900	3.901	3.901	3.901	2.82E-09	3.06E-09	3.84E-09	4.03E-11	4.37E-11	5.49E-11	5.49E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	6.300E-04	6.400E-04	6.500E-04	6.500E-04	3.901	3.901	3.901	3.901	3.78E-09	3.84E-09	3.90E-09	5.40E-11	5.49E-11	5.57E-11	5.57E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	2.800E-04	2.800E-04	3.000E-04	3.000E-04	3.900	3.900	3.900	3.900	1.68E-09	1.68E-09	1.80E-09	2.40E-11	2.40E-11	2.57E-11	2.57E-11	within	within	within	within	within	within	within	within	within
ASR14	834932.5	844083.2	3.300E-04	3.300E-04	3.400E-04	3.400E-04	3.900	3.900	3.900	3.900	1.98E-09	1.98E-09	2.04E-09	2.83E-11	2.83E-11	2.91E-11	2.91E-11	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	1.800E-04	1.800E-04	1.800E-04	1.800E-04	3.900	3.900	3.900	3.900	1.08E-09	1.08E-09	1.08E-09	1.54E-11	1.54E-11	1.54E-11	1.54E-11	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	2.100E-04	2.100E-04	2.100E-04	2.100E-04	3.900	3.900	3.900	3.900	1.26E-09	1.26E-09	1.26E-09	1.80E-11	1.80E-11	1.80E-11	1.80E-11	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	3.400E-04	3.400E-04	3.500E-04	3.500E-04	3.900	3.900	3.900	3.900	2.04E-09	2.04E-09	2.10E-09	2.91E-11	2.91E-11	3.00E-11	3.00E-11	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	2.700E-04	2.700E-04	2.800E-04	2.800E-04	3.900	3.900	3.900	3.900	1.62E-09	1.62E-09	1.68E-09	2.31E-11	2.31E-11	2.40E-11	2.40E-11	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	3.200E-04	3.200E-04	3.300E-04	3.300E-04	3.900	3.900	3.900	3.900	1.92E-09	1.92E-09	1.98E-09	2.74E-11	2.74E-11	2.83E-11	2.83E-11	within	within	within	within	within	within	within	within	within
ASR20	833422.9	843932.5	2.800E-04	2.800E-04	2.800E-04	2.800E-04	3.900	3.900	3.900	3.900	1.68E-09	1.68E-09	1.68E-09	2.40E-11	2.40E-11	2.40E-11	2.40E-11	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	3.300E-04	3.300E-04	3.400E-04	3.400E-04	3.900	3.900	3.900	3.900	1.98E-09	1.98E-09	2.04E-09	2.83E-11	2.83E-11	2.91E-11	2.91E-11	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	1.900E-04	1.900E-04	2.000E-04	2.000E-04	3.900	3.900	3.900	3.900	1.14E-09	1.14E-09	1.20E-09	1.63E-11	1.63E-11	1.71E-11	1.71E-11	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	1.800E-04	1.800E-04	1.800E-04	1.800E-04	3.900	3.900	3.900	3.900	1.08E-09	1.08E-09	1.08E-09	1.54E-11	1.54E-11	1.54E-11	1.54E-11	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	1.800E-04	1.800E-04	1.900E-04	1.900E-04	3.900	3.900	3.900	3.900	1.08E-09	1.08E-09	1.14E-09	1.54E-11	1.54E-11	1.63E-11	1.63E-11	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	2.200E-04	2.200E-04	2.300E-04	2.300E-04	3.900	3.900	3.900	3.900	1.32E-09	1.32E-09	1.38E-09	1.89E-11	1.89E-11	1.97E-11	1.97E-11	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	1.600E-04	1.700E-04	1.700E-04	1.700E-04	3.900	3.900	3.900	3.900	9.60E-10	1.02E-09	1.02E-09	1.37E-11	1.46E-11	1.46E-11	1.46E-11	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	4.200E-04	4.300E-04	4.300E-04	4.300E-04	3.900	3.900	3.900	3.900	2.52E-09	2.58E-09	2.58E-09	3.60E-11	3.69E-11	3.69E-11	3.69E-11	within	within	within	within	within	within	within	within	within
		sub-max:	6.300E-04	6.400E-04	6.500E-04	6.500E-04	3.901	3.901	3.901	3.901	3.78E-09	3.84E-09	3.90E-09	5.40E-11	5.49E-11	5.57E-11	5.57E-11									
		max:	6.500E-04				3.901				3.90E-09			5.57E-11												

Appendix 3.9: Predicted lifetime health risk of Benzene + Vinyl Chloride concentration (ug/m3) at ASR: **Case 1 – ASP On**

			Predicted Individual Lifetime Risk Level (Benzene + Vinyl Chloride)				Predicted Individual Lifetime Risk Level per Year (Benzene + Vinyl Chloride)				Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	1.96E-09	1.97E-09	2.11E-09	2.110E-09	2.80E-11	2.81E-11	3.01E-11	3.01E-11	within	within	within	within	within	within
ASR2	835474.5	843463.0	2.03E-09	2.04E-09	2.10E-09	2.100E-09	2.90E-11	2.91E-11	3.00E-11	3.00E-11	within	within	within	within	within	within
ASR3	836139.2	843267.7	2.40E-09	2.40E-09	2.54E-09	2.540E-09	3.43E-11	3.43E-11	3.63E-11	3.63E-11	within	within	within	within	within	within
ASR4	836921.6	843050.8	1.02E-09	1.02E-09	1.09E-09	1.090E-09	1.46E-11	1.46E-11	1.56E-11	1.56E-11	within	within	within	within	within	within
ASR5	836792.7	842938.7	1.38E-09	1.39E-09	1.46E-09	1.460E-09	1.97E-11	1.99E-11	2.09E-11	2.09E-11	within	within	within	within	within	within
ASR6	836499.0	843079.2	1.38E-09	1.38E-09	1.45E-09	1.450E-09	1.97E-11	1.97E-11	2.07E-11	2.07E-11	within	within	within	within	within	within
ASR7	834949.2	845805.6	9.40E-10	9.40E-10	9.50E-10	9.500E-10	1.34E-11	1.34E-11	1.36E-11	1.36E-11	within	within	within	within	within	within
ASR8	834261.5	845788.0	2.40E-09	2.40E-09	2.54E-09	2.540E-09	3.43E-11	3.43E-11	3.63E-11	3.63E-11	within	within	within	within	within	within
ASR9	834772.4	845729.4	1.02E-09	1.02E-09	1.09E-09	1.090E-09	1.46E-11	1.46E-11	1.56E-11	1.56E-11	within	within	within	within	within	within
ASR10	836866.1	845495.2	2.11E-09	2.18E-09	2.47E-09	2.470E-09	3.01E-11	3.11E-11	3.53E-11	3.53E-11	within	within	within	within	within	within
ASR11	834944.3	844920.6	3.42E-09	3.71E-09	4.66E-09	4.660E-09	4.89E-11	5.30E-11	6.66E-11	6.66E-11	within	within	within	within	within	within
ASR12	833927.6	845623.5	4.59E-09	4.65E-09	4.73E-09	4.730E-09	6.56E-11	6.64E-11	6.76E-11	6.76E-11	within	within	within	within	within	within
ASR13	834681.8	844507.7	2.04E-09	2.04E-09	2.18E-09	2.180E-09	2.91E-11	2.91E-11	3.11E-11	3.11E-11	within	within	within	within	within	within
ASR14	834932.5	844083.2	2.40E-09	2.40E-09	2.48E-09	2.480E-09	3.43E-11	3.43E-11	3.54E-11	3.54E-11	within	within	within	within	within	within
ASR15	834781.0	842892.0	1.31E-09	1.31E-09	1.32E-09	1.320E-09	1.87E-11	1.87E-11	1.89E-11	1.89E-11	within	within	within	within	within	within
ASR16	834638.8	843162.0	1.52E-09	1.52E-09	1.53E-09	1.530E-09	2.17E-11	2.17E-11	2.19E-11	2.19E-11	within	within	within	within	within	within
ASR17	833565.4	844380.1	2.48E-09	2.48E-09	2.55E-09	2.550E-09	3.54E-11	3.54E-11	3.64E-11	3.64E-11	within	within	within	within	within	within
ASR18	833659.8	844135.4	1.97E-09	1.97E-09	2.03E-09	2.030E-09	2.81E-11	2.81E-11	2.90E-11	2.90E-11	within	within	within	within	within	within
ASR19	833278.7	844149.0	2.33E-09	2.33E-09	2.40E-09	2.400E-09	3.33E-11	3.33E-11	3.43E-11	3.43E-11	within	within	within	within	within	within
ASR20	833432.9	843932.5	2.03E-09	2.04E-09	2.04E-09	2.040E-09	2.90E-11	2.91E-11	2.91E-11	2.91E-11	within	within	within	within	within	within
ASR21	833071.0	844042.5	2.40E-09	2.40E-09	2.47E-09	2.470E-09	3.43E-11	3.43E-11	3.53E-11	3.53E-11	within	within	within	within	within	within
ASR22	833816.5	843106.9	1.38E-09	1.38E-09	1.45E-09	1.450E-09	1.97E-11	1.97E-11	2.07E-11	2.07E-11	within	within	within	within	within	within
ASR23	833911.2	842536.3	1.31E-09	1.31E-09	1.31E-09	1.310E-09	1.87E-11	1.87E-11	1.87E-11	1.87E-11	within	within	within	within	within	within
ASR24	833589.5	842617.4	1.31E-09	1.31E-09	1.38E-09	1.380E-09	1.87E-11	1.87E-11	1.97E-11	1.97E-11	within	within	within	within	within	within
ASR25	836212.0	842390.6	1.60E-09	1.61E-09	1.67E-09	1.670E-09	2.29E-11	2.30E-11	2.39E-11	2.39E-11	within	within	within	within	within	within
ASR26	836864.6	842409.3	1.17E-09	1.23E-09	1.23E-09	1.230E-09	1.67E-11	1.76E-11	1.76E-11	1.76E-11	within	within	within	within	within	within
ASR27	836737.6	845023.5	3.06E-09	3.12E-09	3.13E-09	3.130E-09	4.37E-11	4.46E-11	4.47E-11	4.47E-11	within	within	within	within	within	within
		sub-max:	4.590E-09	4.650E-09	4.730E-09	4.730E-09	6.557E-11	6.643E-11	6.757E-11	6.757E-11						
		max:	4.730E-09				6.757E-11									

Appendix 3.9: Predicted 1-hr Vinyl Chloride concentration (ug/m3) at ASRs **Case 2 – ASP Off**

Background concentration (with contribution from existing surface gas emission): 3.000 ug/m3

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of 1.8*10^5 ug/m3		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	0.011	0.011	0.011	0.011	3.011	3.011	3.011	3.011	within	within	within
ASR2	835474.5	843463.0	0.015	0.015	0.015	0.015	3.015	3.015	3.015	3.015	within	within	within
ASR3	836139.2	843267.7	0.014	0.014	0.014	0.014	3.014	3.014	3.014	3.014	within	within	within
ASR4	836921.6	843050.8	0.012	0.012	0.012	0.012	3.012	3.012	3.012	3.012	within	within	within
ASR5	836792.7	842938.7	0.012	0.012	0.012	0.012	3.012	3.012	3.012	3.012	within	within	within
ASR6	836499.0	843079.2	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR7	834949.2	845805.6	0.012	0.012	0.012	0.012	3.012	3.012	3.012	3.012	within	within	within
ASR8	834261.5	845788.0	0.017	0.017	0.017	0.017	3.017	3.017	3.017	3.017	within	within	within
ASR9	834772.4	845729.4	0.015	0.015	0.015	0.015	3.015	3.015	3.015	3.015	within	within	within
ASR10	836866.1	845495.2	0.015	0.015	0.018	0.018	3.015	3.015	3.018	3.018	within	within	within
ASR11	834944.3	844920.6	0.016	0.016	0.017	0.017	3.016	3.016	3.017	3.017	within	within	within
ASR12	833927.6	845623.5	0.014	0.014	0.014	0.014	3.014	3.014	3.014	3.014	within	within	within
ASR13	834681.8	844507.7	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR14	834932.5	844083.2	0.015	0.015	0.015	0.015	3.015	3.015	3.015	3.015	within	within	within
ASR15	834781.0	842892.0	0.010	0.010	0.010	0.010	3.010	3.010	3.010	3.010	within	within	within
ASR16	834638.8	843162.0	0.011	0.011	0.011	0.011	3.011	3.011	3.011	3.011	within	within	within
ASR17	833565.4	844380.1	0.009	0.009	0.009	0.009	3.009	3.009	3.009	3.009	within	within	within
ASR18	833659.8	844135.4	0.009	0.009	0.009	0.009	3.009	3.009	3.009	3.009	within	within	within
ASR19	833278.7	844149.0	0.008	0.008	0.008	0.008	3.008	3.008	3.008	3.008	within	within	within
ASR20	833432.9	843932.5	0.009	0.009	0.009	0.009	3.009	3.009	3.009	3.009	within	within	within
ASR21	833071.0	844042.5	0.009	0.009	0.009	0.009	3.009	3.009	3.009	3.009	within	within	within
ASR22	833816.5	843106.9	0.008	0.008	0.008	0.008	3.008	3.008	3.008	3.008	within	within	within
ASR23	833911.2	842536.3	0.008	0.008	0.008	0.008	3.008	3.008	3.008	3.008	within	within	within
ASR24	833589.5	842617.4	0.009	0.009	0.009	0.009	3.009	3.009	3.009	3.009	within	within	within
ASR25	836212.0	842390.6	0.010	0.010	0.010	0.010	3.010	3.010	3.010	3.010	within	within	within
ASR26	836864.6	842409.3	0.010	0.010	0.010	0.010	3.010	3.010	3.010	3.010	within	within	within
ASR27	836737.6	845023.5	0.034	0.034	0.036	0.036	3.034	3.034	3.036	3.036	within	within	within
		sub-max:	0.034	0.034	0.036	0.036	3.034	3.034	3.036	3.036			
		max:	0.036				3.036						

Appendix 3.9: Predicted 1-hr Benzene concentration (ug/m3) at ASRs **Case 2 – ASP Off**

Background concentration (with contribution from existing surface gas emission): 3.900 ug/m3

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	0.009	0.009	0.009	0.009	3.909	3.909	3.909	3.909	within	within	within
ASR2	835474.5	843463.0	0.012	0.012	0.012	0.012	3.912	3.912	3.912	3.912	within	within	within
ASR3	836139.2	843267.7	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR4	836921.6	843050.8	0.009	0.009	0.009	0.009	3.909	3.909	3.909	3.909	within	within	within
ASR5	836792.7	842938.7	0.009	0.009	0.009	0.009	3.909	3.909	3.909	3.909	within	within	within
ASR6	836499.0	843079.2	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR7	834949.2	845805.6	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR8	834261.5	845788.0	0.013	0.013	0.013	0.013	3.913	3.913	3.913	3.913	within	within	within
ASR9	834772.4	845729.4	0.012	0.012	0.012	0.012	3.912	3.912	3.912	3.912	within	within	within
ASR10	836866.1	845495.2	0.012	0.012	0.014	0.014	3.912	3.912	3.914	3.914	within	within	within
ASR11	834944.3	844920.6	0.013	0.013	0.014	0.014	3.913	3.913	3.914	3.914	within	within	within
ASR12	833927.6	845623.5	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR13	834681.8	844507.7	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR14	834932.5	844083.2	0.012	0.012	0.012	0.012	3.912	3.912	3.912	3.912	within	within	within
ASR15	834781.0	842892.0	0.008	0.008	0.008	0.008	3.908	3.908	3.908	3.908	within	within	within
ASR16	834638.8	843162.0	0.008	0.008	0.008	0.008	3.908	3.908	3.908	3.908	within	within	within
ASR17	833565.4	844380.1	0.007	0.007	0.007	0.007	3.907	3.907	3.907	3.907	within	within	within
ASR18	833659.8	844135.4	0.007	0.007	0.007	0.007	3.907	3.907	3.907	3.907	within	within	within
ASR19	833278.7	844149.0	0.006	0.006	0.006	0.006	3.906	3.906	3.906	3.906	within	within	within
ASR20	833432.9	843932.5	0.007	0.007	0.007	0.007	3.907	3.907	3.907	3.907	within	within	within
ASR21	833071.0	844042.5	0.007	0.007	0.007	0.007	3.907	3.907	3.907	3.907	within	within	within
ASR22	833816.5	843106.9	0.006	0.006	0.006	0.006	3.906	3.906	3.906	3.906	within	within	within
ASR23	833911.2	842536.3	0.006	0.006	0.006	0.006	3.906	3.906	3.906	3.906	within	within	within
ASR24	833589.5	842617.4	0.007	0.007	0.007	0.007	3.907	3.907	3.907	3.907	within	within	within
ASR25	836212.0	842390.6	0.008	0.008	0.008	0.008	3.908	3.908	3.908	3.908	within	within	within
ASR26	836864.6	842409.3	0.008	0.008	0.008	0.008	3.908	3.908	3.908	3.908	within	within	within
ASR27	836737.6	845023.5	0.026	0.027	0.029	0.029	3.926	3.927	3.929	3.929	within	within	within
		sub-max:	0.026	0.027	0.029	0.029	3.926	3.927	3.929	3.929			
		max:	0.029				3.929						

Appendix 3.9: Predicted annual averaged Vinyl Chloride concentration (ug/m3) at ASRs

Case 2 – ASP Off

Background concentration (with contribution from existing surface gas emission): 3.0000 ug/m3 unit risk factor 0.000001 $(ug/m3)^{-1}$

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)			Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 100 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	3.10E-04	3.20E-04	3.40E-04	3.40E-04	3.000	3.000	3.000	3.10E-10	3.20E-10	3.40E-10	4.43E-12	4.57E-12	4.86E-12	4.86E-12	within	within	within	within	within	within	within	within	within
ASR2	835474.5	843463.0	3.00E-04	3.00E-04	3.10E-04	3.10E-04	3.000	3.000	3.000	3.00E-10	3.00E-10	3.10E-10	4.29E-12	4.29E-12	4.43E-12	4.43E-12	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	4.50E-04	4.50E-04	4.70E-04	4.70E-04	3.000	3.000	3.000	4.50E-10	4.50E-10	4.70E-10	6.43E-12	6.43E-12	6.71E-12	6.71E-12	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	2.00E-04	2.00E-04	2.10E-04	2.10E-04	3.000	3.000	3.000	2.00E-10	2.00E-10	2.10E-10	2.86E-12	2.86E-12	3.00E-12	3.00E-12	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	2.50E-04	2.60E-04	2.70E-04	2.70E-04	3.000	3.000	3.000	2.50E-10	2.60E-10	2.70E-10	3.57E-12	3.71E-12	3.86E-12	3.86E-12	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	2.60E-04	2.60E-04	2.60E-04	2.60E-04	3.000	3.000	3.000	2.60E-10	2.60E-10	2.60E-10	3.71E-12	3.71E-12	3.71E-12	3.71E-12	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.70E-04	1.70E-04	1.80E-04	1.80E-04	3.000	3.000	3.000	1.70E-10	1.70E-10	1.80E-10	2.43E-12	2.43E-12	2.57E-12	2.57E-12	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	4.90E-04	5.00E-04	5.20E-04	5.20E-04	3.000	3.001	3.001	4.90E-10	5.00E-10	5.20E-10	7.00E-12	7.14E-12	7.43E-12	7.43E-12	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	2.40E-04	2.40E-04	2.50E-04	2.50E-04	3.000	3.000	3.000	2.40E-10	2.40E-10	2.50E-10	3.43E-12	3.43E-12	3.57E-12	3.57E-12	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	2.90E-04	3.00E-04	3.40E-04	3.40E-04	3.000	3.000	3.000	2.90E-10	3.00E-10	3.40E-10	4.14E-12	4.29E-12	4.86E-12	4.86E-12	within	within	within	within	within	within	within	within	within
ASR11	834944.3	844920.6	8.70E-04	9.20E-04	1.10E-03	1.10E-03	3.001	3.001	3.001	8.70E-10	9.20E-10	1.10E-09	1.24E-11	1.31E-11	1.57E-11	1.57E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	8.40E-04	8.40E-04	8.60E-04	8.60E-04	3.001	3.001	3.001	8.40E-10	8.40E-10	8.60E-10	1.20E-11	1.20E-11	1.23E-11	1.23E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	4.70E-04	4.70E-04	4.80E-04	4.80E-04	3.000	3.000	3.000	4.70E-10	4.70E-10	4.80E-10	6.71E-12	6.71E-12	6.86E-12	6.86E-12	within	within	within	within	within	within	within	within	within
ASR14	834932.5	844083.2	4.90E-04	4.90E-04	5.10E-04	5.10E-04	3.000	3.000	3.001	4.90E-10	4.90E-10	5.10E-10	7.00E-12	7.00E-12	7.29E-12	7.29E-12	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	1.80E-04	1.80E-04	1.80E-04	1.80E-04	3.000	3.000	3.000	1.80E-10	1.80E-10	1.80E-10	2.57E-12	2.57E-12	2.57E-12	2.57E-12	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	2.10E-04	2.10E-04	2.20E-04	2.20E-04	3.000	3.000	3.000	2.10E-10	2.10E-10	2.20E-10	3.00E-12	3.00E-12	3.14E-12	3.14E-12	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	4.30E-04	4.30E-04	4.40E-04	4.40E-04	3.000	3.000	3.000	4.30E-10	4.30E-10	4.40E-10	6.14E-12	6.14E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	3.90E-04	3.90E-04	4.00E-04	4.00E-04	3.000	3.000	3.000	3.90E-10	3.90E-10	4.00E-10	5.57E-12	5.57E-12	5.71E-12	5.71E-12	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	3.90E-04	3.90E-04	4.00E-04	4.00E-04	3.000	3.000	3.000	3.90E-10	3.90E-10	4.00E-10	5.57E-12	5.57E-12	5.71E-12	5.71E-12	within	within	within	within	within	within	within	within	within
ASR20	833432.9	843932.5	4.10E-04	4.10E-04	4.20E-04	4.20E-04	3.000	3.000	3.000	4.10E-10	4.10E-10	4.20E-10	5.86E-12	5.86E-12	6.00E-12	6.00E-12	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	4.10E-04	4.10E-04	4.20E-04	4.20E-04	3.000	3.000	3.000	4.10E-10	4.10E-10	4.20E-10	5.86E-12	5.86E-12	6.00E-12	6.00E-12	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	2.70E-04	2.70E-04	2.70E-04	2.70E-04	3.000	3.000	3.000	2.70E-10	2.70E-10	2.70E-10	3.86E-12	3.86E-12	3.86E-12	3.86E-12	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	1.50E-04	1.50E-04	1.50E-04	1.50E-04	3.000	3.000	3.000	1.50E-10	1.50E-10	1.50E-10	2.14E-12	2.14E-12	2.14E-12	2.14E-12	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	2.20E-04	2.20E-04	2.30E-04	2.30E-04	3.000	3.000	3.000	2.20E-10	2.20E-10	2.30E-10	3.14E-12	3.14E-12	3.29E-12	3.29E-12	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	2.90E-04	2.90E-04	3.00E-04	3.00E-04	3.000	3.000	3.000	2.90E-10	2.90E-10	3.00E-10	4.14E-12	4.14E-12	4.29E-12	4.29E-12	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	2.20E-04	2.20E-04	2.30E-04	2.30E-04	3.000	3.000	3.000	2.20E-10	2.20E-10	2.30E-10	3.14E-12	3.14E-12	3.29E-12	3.29E-12	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	6.40E-04	6.40E-04	6.60E-04	6.60E-04	3.001	3.001	3.001	6.40E-10	6.40E-10	6.60E-10	9.14E-12	9.14E-12	9.43E-12	9.43E-12	within	within	within	within	within	within	within	within	within
		sub-max:	8.70E-04	9.20E-04	1.10E-03	1.10E-03	3.001	3.001	3.001	8.70E-10	9.20E-10	1.10E-09	1.24E-11	1.31E-11	1.57E-11	1.57E-11									
		max:	1.10E-03				3.001			1.10E-09			1.57E-11												

Appendix 3.9: Predicted annual averaged Benzene concentration (ug/m3) at ASRs

Case 2 – ASP Off

Background concentration (with contribution from existing surface gas emission): 3.9000 ug/m3 unit risk factor 0.000006 (ug/m3)$^{-1}$

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 30 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	2.40E-01	2.50E-04	2.70E-01	2.70E-04	3.900	3.900	3.900	3.900	1.44E-09	1.50E-09	1.62E-09	2.06E-11	2.14E-11	2.31E-11	2.31E-11	within	within	within	within	within	within	within	within	within
ASR2	835174.5	843463.0	2.40E-01	2.40E-04	2.40E-01	2.40E-04	3.900	3.900	3.900	3.900	1.44E-09	1.44E-09	1.44E-09	2.06E-11	2.06E-11	2.06E-11	2.06E-11	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	3.50E-04	3.50E-04	3.70E-04	3.70E-04	3.900	3.900	3.900	3.900	2.10E-09	2.10E-09	2.22E-09	3.00E-11	3.00E-11	3.17E-11	3.17E-11	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	1.60E-04	1.60E-04	1.60E-04	1.60E-04	3.900	3.900	3.900	3.900	9.60E-10	9.60E-10	9.60E-10	1.37E-11	1.37E-11	1.37E-11	1.37E-11	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	2.00E-01	2.00E-04	2.10E-01	2.10E-04	3.900	3.900	3.900	3.900	1.20E-09	1.20E-09	1.26E-09	1.71E-11	1.71E-11	1.80E-11	1.80E-11	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	2.00E-01	2.00E-04	2.10E-01	2.10E-04	3.900	3.900	3.900	3.900	1.20E-09	1.20E-09	1.26E-09	1.71E-11	1.71E-11	1.80E-11	1.80E-11	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.40E-04	1.40E-04	1.40E-04	1.40E-04	3.900	3.900	3.900	3.900	8.40E-10	8.40E-10	8.40E-10	1.20E-11	1.20E-11	1.20E-11	1.20E-11	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	3.90E-04	3.90E-04	4.10E-04	4.10E-04	3.900	3.900	3.900	3.900	2.34E-09	2.34E-09	2.46E-09	3.34E-11	3.34E-11	3.51E-11	3.51E-11	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	1.80E-04	1.90E-04	2.00E-04	2.00E-04	3.900	3.900	3.900	3.900	1.08E-09	1.14E-09	1.20E-09	1.54E-11	1.63E-11	1.71E-11	1.71E-11	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	2.30E-04	2.40E-04	2.70E-04	2.70E-04	3.900	3.900	3.900	3.900	1.38E-09	1.44E-09	1.62E-09	1.97E-11	2.06E-11	2.31E-11	2.31E-11	within	within	within	within	within	within	within	within	within
ASR11	834944.3	844920.6	6.80E-04	7.20E-04	8.70E-04	8.70E-04	3.901	3.901	3.901	3.901	4.08E-09	4.32E-09	5.22E-09	5.83E-11	6.17E-11	7.46E-11	7.46E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	6.60E-04	6.60E-04	6.70E-04	6.70E-04	3.901	3.901	3.901	3.901	3.96E-09	3.96E-09	4.02E-09	5.66E-11	5.66E-11	5.74E-11	5.74E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	3.70E-04	3.70E-04	3.80E-04	3.80E-04	3.900	3.900	3.900	3.900	2.22E-09	2.22E-09	2.28E-09	3.17E-11	3.17E-11	3.26E-11	3.26E-11	within	within	within	within	within	within	within	within	within
ASR14	834932.5	844083.2	3.80E-04	3.90E-04	4.00E-04	4.00E-04	3.900	3.900	3.900	3.900	2.28E-09	2.34E-09	2.40E-09	3.26E-11	3.34E-11	3.43E-11	3.43E-11	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	1.40E-04	1.40E-04	1.40E-04	1.40E-04	3.900	3.900	3.900	3.900	8.40E-10	8.40E-10	8.40E-10	1.20E-11	1.20E-11	1.20E-11	1.20E-11	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	1.70E-04	1.70E-04	1.70E-04	1.70E-04	3.900	3.900	3.900	3.900	1.02E-09	1.02E-09	1.02E-09	1.46E-11	1.46E-11	1.46E-11	1.46E-11	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	3.30E-04	3.40E-04	3.40E-04	3.40E-04	3.900	3.900	3.900	3.900	1.98E-09	2.04E-09	2.04E-09	2.83E-11	2.91E-11	2.91E-11	2.91E-11	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	3.10E-04	3.10E-04	3.10E-04	3.10E-04	3.900	3.900	3.900	3.900	1.86E-09	1.86E-09	1.86E-09	2.66E-11	2.66E-11	2.66E-11	2.66E-11	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	3.10E-04	3.10E-04	3.10E-04	3.10E-04	3.900	3.900	3.900	3.900	1.86E-09	1.86E-09	1.86E-09	2.66E-11	2.66E-11	2.66E-11	2.66E-11	within	within	within	within	within	within	within	within	within
ASR20	833432.9	843932.5	3.20E-04	3.20E-04	3.30E-04	3.30E-04	3.900	3.900	3.900	3.900	1.92E-09	1.92E-09	1.98E-09	2.74E-11	2.74E-11	2.83E-11	2.83E-11	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	3.20E-04	3.20E-04	3.30E-04	3.30E-04	3.900	3.900	3.900	3.900	1.92E-09	1.92E-09	1.98E-09	2.74E-11	2.74E-11	2.83E-11	2.83E-11	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	2.10E-04	2.10E-04	2.20E-04	2.20E-04	3.900	3.900	3.900	3.900	1.26E-09	1.26E-09	1.32E-09	1.80E-11	1.80E-11	1.89E-11	1.89E-11	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	1.20E-04	1.20E-04	1.20E-04	1.20E-04	3.900	3.900	3.900	3.900	7.20E-10	7.20E-10	7.20E-10	1.03E-11	1.03E-11	1.03E-11	1.03E-11	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	1.70E-04	1.80E-04	1.80E-04	1.80E-04	3.900	3.900	3.900	3.900	1.02E-09	1.08E-09	1.08E-09	1.46E-11	1.54E-11	1.54E-11	1.54E-11	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	2.30E-04	2.30E-04	2.30E-04	2.30E-04	3.900	3.900	3.900	3.900	1.38E-09	1.38E-09	1.38E-09	1.97E-11	1.97E-11	1.97E-11	1.97E-11	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	1.70E-04	1.70E-04	1.80E-04	1.80E-04	3.900	3.900	3.900	3.900	1.02E-09	1.02E-09	1.08E-09	1.46E-11	1.46E-11	1.54E-11	1.54E-11	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	5.00E-04	5.00E-04	5.20E-04	5.20E-04	3.901	3.901	3.901	3.901	3.00E-09	3.00E-09	3.12E-09	4.29E-11	4.29E-11	4.46E-11	4.46E-11	within	within	within	within	within	within	within	within	within
		sub-max:	6.80E-04	7.20E-04	8.70E-04	8.70E-04	3.901	3.901	3.901	3.901	4.08E-09	4.32E-09	5.22E-09	5.83E-11	6.17E-11	7.46E-11	7.46E-11									
		max:	8.70E-04				3.901				5.22E-09			7.46E-11												

Appendix 3.9: Predicted lifetime health risk of Benzene + Vinyl Chloride concentration (ug/m3) at ASR **Case 2 – ASP Off**

			Predicted Individual Lifetime Risk Level (Benzene + Vinyl Chloride)				Predicted Individual Lifetime Risk Level per Year (Benzene + Vinyl Chloride)				Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	1.75E-09	1.82E-09	1.96E-09	1.960E-09	2.50E-11	2.60E-11	2.80E-11	2.80E-11	within	within	within	within	within	within
ASR2	835474.5	843463.0	1.74E-09	1.74E-09	1.75E-09	1.750E-09	2.49E-11	2.49E-11	2.50E-11	2.50E-11	within	within	within	within	within	within
ASR3	836139.2	843267.7	2.55E-09	2.55E-09	2.69E-09	2.690E-09	3.64E-11	3.64E-11	3.84E-11	3.84E-11	within	within	within	within	within	within
ASR4	836921.6	843050.8	1.16E-09	1.16E-09	1.17E-09	1.170E-09	1.66E-11	1.66E-11	1.67E-11	1.67E-11	within	within	within	within	within	within
ASR5	836792.7	842938.7	1.45E-09	1.46E-09	1.53E-09	1.530E-09	2.07E-11	2.09E-11	2.19E-11	2.19E-11	within	within	within	within	within	within
ASR6	836499.0	843079.2	1.46E-09	1.46E-09	1.52E-09	1.520E-09	2.09E-11	2.09E-11	2.17E-11	2.17E-11	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.01E-09	1.01E-09	1.02E-09	1.020E-09	1.44E-11	1.44E-11	1.46E-11	1.46E-11	within	within	within	within	within	within
ASR8	834261.5	845788.0	2.83E-09	2.84E-09	2.98E-09	2.980E-09	4.04E-11	4.06E-11	4.26E-11	4.26E-11	within	within	within	within	within	within
ASR9	834772.4	845729.4	1.32E-09	1.38E-09	1.45E-09	1.450E-09	1.89E-11	1.97E-11	2.07E-11	2.07E-11	within	within	within	within	within	within
ASR10	836866.1	845495.2	1.67E-09	1.74E-09	1.96E-09	1.960E-09	2.39E-11	2.49E-11	2.80E-11	2.80E-11	within	within	within	within	within	within
ASR11	834944.3	844920.6	4.95E-09	5.24E-09	6.32E-09	6.320E-09	7.07E-11	7.49E-11	9.03E-11	9.03E-11	within	within	within	within	within	within
ASR12	833927.6	845623.5	4.80E-09	4.80E-09	4.88E-09	4.880E-09	6.86E-11	6.86E-11	6.97E-11	6.97E-11	within	within	within	within	within	within
ASR13	834681.8	844507.7	2.69E-09	2.69E-09	2.76E-09	2.760E-09	3.84E-11	3.84E-11	3.94E-11	3.94E-11	within	within	within	within	within	within
ASR14	834932.5	844083.2	2.77E-09	2.83E-09	2.91E-09	2.910E-09	3.96E-11	4.04E-11	4.16E-11	4.16E-11	within	within	within	within	within	within
ASR15	834781.0	842892.0	1.02E-09	1.02E-09	1.02E-09	1.020E-09	1.46E-11	1.46E-11	1.46E-11	1.46E-11	within	within	within	within	within	within
ASR16	834638.8	843162.0	1.23E-09	1.23E-09	1.24E-09	1.240E-09	1.76E-11	1.76E-11	1.77E-11	1.77E-11	within	within	within	within	within	within
ASR17	833565.4	844380.1	2.41E-09	2.47E-09	2.48E-09	2.480E-09	3.44E-11	3.53E-11	3.54E-11	3.54E-11	within	within	within	within	within	within
ASR18	833659.8	844135.4	2.25E-09	2.25E-09	2.26E-09	2.260E-09	3.21E-11	3.21E-11	3.23E-11	3.23E-11	within	within	within	within	within	within
ASR19	833278.7	844149.0	2.25E-09	2.25E-09	2.26E-09	2.260E-09	3.21E-11	3.21E-11	3.23E-11	3.23E-11	within	within	within	within	within	within
ASR20	833432.9	843932.5	2.33E-09	2.33E-09	2.40E-09	2.400E-09	3.33E-11	3.33E-11	3.43E-11	3.43E-11	within	within	within	within	within	within
ASR21	833071.0	844042.5	2.33E-09	2.33E-09	2.40E-09	2.400E-09	3.33E-11	3.33E-11	3.43E-11	3.43E-11	within	within	within	within	within	within
ASR22	833816.5	843106.9	1.53E-09	1.53E-09	1.59E-09	1.590E-09	2.19E-11	2.19E-11	2.27E-11	2.27E-11	within	within	within	within	within	within
ASR23	833911.2	842536.3	8.70E-10	8.70E-10	8.70E-10	8.700E-10	1.24E-11	1.24E-11	1.24E-11	1.24E-11	within	within	within	within	within	within
ASR24	833589.5	842617.4	1.24E-09	1.30E-09	1.31E-09	1.310E-09	1.77E-11	1.86E-11	1.87E-11	1.87E-11	within	within	within	within	within	within
ASR25	836212.0	842390.6	1.67E-09	1.67E-09	1.68E-09	1.680E-09	2.39E-11	2.39E-11	2.40E-11	2.40E-11	within	within	within	within	within	within
ASR26	836864.6	842409.3	1.24E-09	1.24E-09	1.31E-09	1.310E-09	1.77E-11	1.77E-11	1.87E-11	1.87E-11	within	within	within	within	within	within
ASR27	836737.6	845023.5	3.64E-09	3.64E-09	3.78E-09	3.780E-09	5.20E-11	5.20E-11	5.40E-11	5.40E-11	within	within	within	within	within	within
		sub-max:	4.950E-09	5.240E-09	6.320E-09	6.320E-09	7.071E-11	7.486E-11	9.029E-11	9.029E-11						
		max:	6.320E-09				9.029E-11									

Appendix 3.9: Predicted 1-hr Vinyl Chloride concentration (ug/m3) at ASRs **Case 3 – LFGES Off**

Background concentration (with contribution from existing surface gas emission): 3.000 ug/m3

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of 1.8*10^5 ug/m3		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	0.015	0.015	0.015	0.015	3.015	3.015	3.015	3.015	within	within	within
ASR2	835474.5	843463.0	0.020	0.020	0.020	0.020	3.020	3.020	3.020	3.020	within	within	within
ASR3	836139.2	843267.7	0.024	0.024	0.024	0.024	3.024	3.024	3.024	3.024	within	within	within
ASR4	836921.6	843050.8	0.022	0.022	0.022	0.022	3.022	3.022	3.022	3.022	within	within	within
ASR5	836792.7	842938.7	0.021	0.021	0.021	0.021	3.021	3.021	3.021	3.021	within	within	within
ASR6	836499.0	843079.2	0.023	0.023	0.023	0.023	3.023	3.023	3.023	3.023	within	within	within
ASR7	834949.2	845805.6	0.020	0.020	0.020	0.020	3.020	3.020	3.020	3.020	within	within	within
ASR8	834261.5	845788.0	0.030	0.030	0.030	0.030	3.030	3.030	3.030	3.030	within	within	within
ASR9	834772.4	845729.4	0.024	0.024	0.024	0.024	3.024	3.024	3.024	3.024	within	within	within
ASR10	836866.1	845495.2	0.017	0.017	0.019	0.019	3.017	3.017	3.019	3.019	within	within	within
ASR11	834944.3	844920.6	0.022	0.022	0.022	0.022	3.022	3.022	3.022	3.022	within	within	within
ASR12	833927.6	845623.5	0.028	0.028	0.028	0.028	3.028	3.028	3.028	3.028	within	within	within
ASR13	834681.8	844507.7	0.020	0.020	0.020	0.020	3.020	3.020	3.020	3.020	within	within	within
ASR14	834932.5	844083.2	0.021	0.021	0.021	0.021	3.021	3.021	3.021	3.021	within	within	within
ASR15	834781.0	842892.0	0.015	0.015	0.015	0.015	3.015	3.015	3.015	3.015	within	within	within
ASR16	834638.8	843162.0	0.016	0.016	0.016	0.016	3.016	3.016	3.016	3.016	within	within	within
ASR17	833565.4	844380.1	0.014	0.014	0.014	0.014	3.014	3.014	3.014	3.014	within	within	within
ASR18	833659.8	844135.4	0.014	0.014	0.014	0.014	3.014	3.014	3.014	3.014	within	within	within
ASR19	833278.7	844149.0	0.014	0.014	0.014	0.014	3.014	3.014	3.014	3.014	within	within	within
ASR20	833432.9	843932.5	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR21	833071.0	844042.5	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR22	833816.5	843106.9	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR23	833911.2	842536.3	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR24	833589.5	842617.4	0.013	0.013	0.013	0.013	3.013	3.013	3.013	3.013	within	within	within
ASR25	836212.0	842390.6	0.017	0.017	0.017	0.017	3.017	3.017	3.017	3.017	within	within	within
ASR26	836864.6	842409.3	0.020	0.020	0.020	0.020	3.020	3.020	3.020	3.020	within	within	within
ASR27	836737.6	845023.5	0.039	0.039	0.042	0.042	3.039	3.039	3.042	3.042	within	within	within
		sub-max:	0.039	0.039	0.042	0.042	3.039	3.039	3.042	3.042			
		max:	0.042				3.042						

Appendix 3.9: Predicted 1-hr Benzene concentration (ug/m3) at ASRs **Case 3 – LFGES Off**

Background concentration (with contribution from existing surface gas emission): 3.900 ug/m3

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Within Acute Reference Concentration of 1.3*10^3 ug/m3		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m
ASR1	835592.5	844094.1	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR2	835474.5	843463.0	0.016	0.016	0.016	0.016	3.916	3.916	3.916	3.916	within	within	within
ASR3	836139.2	843267.7	0.019	0.019	0.019	0.019	3.919	3.919	3.919	3.919	within	within	within
ASR4	836921.6	843050.8	0.018	0.018	0.018	0.018	3.918	3.918	3.918	3.918	within	within	within
ASR5	836792.7	842938.7	0.017	0.017	0.017	0.017	3.917	3.917	3.917	3.917	within	within	within
ASR6	836499.0	843079.2	0.018	0.018	0.018	0.018	3.918	3.918	3.918	3.918	within	within	within
ASR7	834949.2	845805.6	0.016	0.016	0.016	0.016	3.916	3.916	3.916	3.916	within	within	within
ASR8	834261.5	845788.0	0.024	0.024	0.024	0.024	3.924	3.924	3.924	3.924	within	within	within
ASR9	834772.4	845729.4	0.019	0.019	0.019	0.019	3.919	3.919	3.919	3.919	within	within	within
ASR10	836866.1	845495.2	0.013	0.013	0.015	0.015	3.913	3.913	3.915	3.915	within	within	within
ASR11	834944.3	844920.6	0.017	0.017	0.017	0.017	3.917	3.917	3.917	3.917	within	within	within
ASR12	833927.6	845623.5	0.022	0.022	0.022	0.022	3.922	3.922	3.922	3.922	within	within	within
ASR13	834681.8	844507.7	0.016	0.016	0.016	0.016	3.916	3.916	3.916	3.916	within	within	within
ASR14	834932.5	844083.2	0.017	0.017	0.017	0.017	3.917	3.917	3.917	3.917	within	within	within
ASR15	834781.0	842892.0	0.012	0.012	0.012	0.012	3.912	3.912	3.912	3.912	within	within	within
ASR16	834638.8	843162.0	0.013	0.013	0.013	0.013	3.913	3.913	3.913	3.913	within	within	within
ASR17	833565.4	844380.1	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR18	833659.8	844135.4	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR19	833278.7	844149.0	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR20	833432.9	843932.5	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR21	833071.0	844042.5	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR22	833816.5	843106.9	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR23	833911.2	842536.3	0.010	0.010	0.010	0.010	3.910	3.910	3.910	3.910	within	within	within
ASR24	833589.5	842617.4	0.011	0.011	0.011	0.011	3.911	3.911	3.911	3.911	within	within	within
ASR25	836212.0	842390.6	0.013	0.013	0.013	0.013	3.913	3.913	3.913	3.913	within	within	within
ASR26	836864.6	842409.3	0.016	0.016	0.016	0.016	3.916	3.916	3.916	3.916	within	within	within
ASR27	836737.6	845023.5	0.030	0.031	0.033	0.033	3.930	3.931	3.933	3.933	within	within	within
		sub-max:	0.030	0.031	0.033	0.033	3.930	3.931	3.933	3.933			
		max:	0.033				3.933						

Appendix 3.9: Predicted annual averaged Vinyl Chloride concentration (ug/m3) at ASRs

Case 3 – LFGES Off

Background concentration (with contribution from existing surface gas emission): 3.0000 ug/m3 unit risk factor 0.000001 (ug/m3)$^{-1}$

			worst-case year without backgd (ug/m3)				worst-case year with backgd (ug/m3)			Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 100 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	3.40E-04	3.40E-04	3.70E-04	3.70E-04	3.000	3.000	3.000	3.40E-10	3.40E-10	3.70E-10	4.86E-12	4.86E-12	5.29E-12	5.29E-12	within	within	within	within	within	within	within	within	within
ASR2	835474.5	843463.0	4.50E-04	4.50E-04	4.60E-04	4.60E-04	3.000	3.000	3.000	4.50E-10	4.50E-10	4.60E-10	6.43E-12	6.43E-12	6.57E-12	6.57E-12	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	6.10E-04	6.20E-04	6.40E-04	6.40E-04	3.001	3.001	3.001	6.10E-10	6.20E-10	6.40E-10	8.71E-12	8.86E-12	9.14E-12	9.14E-12	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	3.10E-04	3.10E-04	3.20E-04	3.20E-04	3.000	3.000	3.000	3.10E-10	3.10E-10	3.20E-10	4.43E-12	4.43E-12	4.57E-12	4.57E-12	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	4.00E-04	4.00E-04	4.10E-04	4.10E-04	3.000	3.000	3.000	4.00E-10	4.00E-10	4.10E-10	5.71E-12	5.71E-12	5.86E-12	5.86E-12	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	4.30E-04	4.30E-04	4.40E-04	4.40E-04	3.000	3.000	3.000	4.30E-10	4.30E-10	4.40E-10	6.14E-12	6.14E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	1.70E-04	1.80E-04	1.80E-04	1.80E-04	3.000	3.000	3.000	1.70E-10	1.80E-10	1.80E-10	2.43E-12	2.57E-12	2.57E-12	2.57E-12	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	5.20E-04	5.20E-04	5.40E-04	5.40E-04	3.001	3.001	3.001	5.20E-10	5.20E-10	5.40E-10	7.43E-12	7.43E-12	7.71E-12	7.71E-12	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	2.40E-04	2.40E-04	2.60E-04	2.60E-04	3.000	3.000	3.000	2.40E-10	2.40E-10	2.60E-10	3.43E-12	3.43E-12	3.71E-12	3.71E-12	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	4.20E-04	4.40E-04	4.80E-04	4.80E-04	3.000	3.000	3.000	4.20E-10	4.40E-10	4.80E-10	6.00E-12	6.29E-12	6.86E-12	6.86E-12	within	within	within	within	within	within	within	within	within
ASR11	834944.3	844920.6	9.50E-04	9.90E-04	1.16E-03	1.16E-03	3.001	3.001	3.001	9.50E-10	9.90E-10	1.16E-09	1.36E-11	1.41E-11	1.66E-11	1.66E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	1.04E-03	1.04E-03	1.07E-03	1.07E-03	3.001	3.001	3.001	1.04E-09	1.04E-09	1.07E-09	1.49E-11	1.49E-11	1.53E-11	1.53E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	5.30E-04	5.30E-04	5.40E-04	5.40E-04	3.001	3.001	3.001	5.30E-10	5.30E-10	5.40E-10	7.57E-12	7.57E-12	7.71E-12	7.71E-12	within	within	within	within	within	within	within	within	within
ASR14	834932.5	844083.2	5.50E-04	5.50E-04	5.70E-04	5.70E-04	3.001	3.001	3.001	5.50E-10	5.50E-10	5.70E-10	7.86E-12	7.86E-12	8.14E-12	8.14E-12	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	3.40E-04	3.50E-04	3.50E-04	3.50E-04	3.000	3.000	3.000	3.40E-10	3.50E-10	3.50E-10	4.86E-12	5.00E-12	5.00E-12	5.00E-12	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	3.20E-04	3.20E-04	3.30E-04	3.30E-04	3.000	3.000	3.000	3.20E-10	3.20E-10	3.30E-10	4.57E-12	4.57E-12	4.71E-12	4.71E-12	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	7.00E-04	7.00E-04	7.10E-04	7.10E-04	3.001	3.001	3.001	7.00E-10	7.00E-10	7.10E-10	1.00E-11	1.00E-11	1.01E-11	1.01E-11	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	6.30E-04	6.30E-04	6.40E-04	6.40E-04	3.001	3.001	3.001	6.30E-10	6.30E-10	6.40E-10	9.00E-12	9.00E-12	9.14E-12	9.14E-12	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	7.20E-04	7.30E-04	7.30E-04	7.30E-04	3.001	3.001	3.001	7.20E-10	7.30E-10	7.30E-10	1.03E-11	1.04E-11	1.04E-11	1.04E-11	within	within	within	within	within	within	within	within	within
ASR20	833432.9	843932.5	6.80E-04	6.90E-04	7.00E-04	7.00E-04	3.001	3.001	3.001	6.80E-10	6.90E-10	7.00E-10	9.71E-12	9.86E-12	1.00E-11	1.00E-11	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	7.80E-04	7.80E-04	7.90E-04	7.90E-04	3.001	3.001	3.001	7.80E-10	7.80E-10	7.90E-10	1.11E-11	1.11E-11	1.13E-11	1.13E-11	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	4.30E-04	4.30E-04	4.40E-04	4.40E-04	3.000	3.000	3.000	4.30E-10	4.30E-10	4.40E-10	6.14E-12	6.14E-12	6.29E-12	6.29E-12	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	3.10E-04	3.10E-04	3.20E-04	3.20E-04	3.000	3.000	3.000	3.10E-10	3.10E-10	3.20E-10	4.43E-12	4.43E-12	4.57E-12	4.57E-12	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	3.70E-04	3.80E-04	3.90E-04	3.90E-04	3.000	3.000	3.000	3.70E-10	3.80E-10	3.90E-10	5.29E-12	5.43E-12	5.57E-12	5.57E-12	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	5.10E-04	5.10E-04	5.20E-04	5.20E-04	3.001	3.001	3.001	5.10E-10	5.10E-10	5.20E-10	7.29E-12	7.29E-12	7.43E-12	7.43E-12	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	4.00E-04	4.00E-04	4.10E-04	4.10E-04	3.000	3.000	3.000	4.00E-10	4.00E-10	4.10E-10	5.71E-12	5.71E-12	5.86E-12	5.86E-12	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	8.40E-04	8.50E-04	9.00E-04	9.00E-04	3.001	3.001	3.001	8.40E-10	8.50E-10	9.00E-10	1.20E-11	1.21E-11	1.29E-11	1.29E-11	within	within	within	within	within	within	within	within	within
		sub-max:	1.04E-03	1.04E-03	1.16E-03	1.16E-03	3.001	3.001	3.001	1.04E-09	1.04E-09	1.16E-09	1.49E-11	1.49E-11	1.66E-11	1.66E-11									
		max:	1.16E-03				3.001			1.16E-09			1.66E-11												

Appendix 3.9: Predicted annual averaged Benzene concentration (ug/m3) at ASRs

Case 3 – LFGES Off

Background concentration (with contribution from existing surface gas emission): 3.9000 ug/m3

unit risk factor 0.000006 $(ug/m3)^{-1}$

			worst-case year without backgd				worst-case year with backgd (ug/m3)				Predicted Individual Lifetime Risk Level			Predicted Individual Risk Level per Year				Within Chronic Reference Concentration of 30 ug/m3			Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	6.50E-05	6.75E-05	7.25E-05	7.25E-05	3.900	3.900	3.900	3.900	3.90E-10	4.05E-10	4.35E-10	5.57E-12	5.79E-12	6.21E-12	6.21E-12	within	within	within	within	within	within	within	within	within
ASR2	835474.5	843463.0	8.75E-05	8.75E-05	9.00E-05	9.00E-05	3.900	3.900	3.900	3.900	5.25E-10	5.25E-10	5.40E-10	7.50E-12	7.50E-12	7.71E-12	7.71E-12	within	within	within	within	within	within	within	within	within
ASR3	836139.2	843267.7	1.20E-04	1.23E-04	1.25E-04	1.25E-04	3.900	3.900	3.900	3.900	7.20E-10	7.35E-10	7.50E-10	1.03E-11	1.05E-11	1.07E-11	1.07E-11	within	within	within	within	within	within	within	within	within
ASR4	836921.6	843050.8	6.00E-05	6.00E-05	6.25E-05	6.25E-05	3.900	3.900	3.900	3.900	3.60E-10	3.60E-10	3.75E-10	5.14E-12	5.14E-12	5.36E-12	5.36E-12	within	within	within	within	within	within	within	within	within
ASR5	836792.7	842938.7	7.75E-05	7.75E-05	8.00E-05	8.00E-05	3.900	3.900	3.900	3.900	4.65E-10	4.65E-10	4.80E-10	6.64E-12	6.64E-12	6.86E-12	6.86E-12	within	within	within	within	within	within	within	within	within
ASR6	836499.0	843079.2	8.25E-05	8.50E-05	8.50E-05	8.50E-05	3.900	3.900	3.900	3.900	4.95E-10	5.10E-10	5.10E-10	7.07E-12	7.29E-12	7.29E-12	7.29E-12	within	within	within	within	within	within	within	within	within
ASR7	834949.2	845805.6	3.50E-05	3.50E-05	3.50E-05	3.50E-05	3.900	3.900	3.900	3.900	2.10E-10	2.10E-10	2.10E-10	3.00E-12	3.00E-12	3.00E-12	3.00E-12	within	within	within	within	within	within	within	within	within
ASR8	834261.5	845788.0	1.00E-04	1.03E-04	1.08E-04	1.08E-04	3.900	3.900	3.900	3.900	6.00E-10	6.15E-10	6.45E-10	8.57E-12	8.79E-12	9.21E-12	9.21E-12	within	within	within	within	within	within	within	within	within
ASR9	834772.4	845729.4	4.50E-05	4.75E-05	5.00E-05	5.00E-05	3.900	3.900	3.900	3.900	2.70E-10	2.85E-10	3.00E-10	3.86E-12	4.07E-12	4.29E-12	4.29E-12	within	within	within	within	within	within	within	within	within
ASR10	836866.1	845495.2	8.25E-05	8.50E-05	9.25E-05	9.25E-05	3.900	3.900	3.900	3.900	4.95E-10	5.10E-10	5.55E-10	7.07E-12	7.29E-12	7.93E-12	7.93E-12	within	within	within	within	within	within	within	within	within
ASR11	834944.3	844920.6	1.85E-04	1.95E-04	2.28E-04	2.28E-04	3.900	3.900	3.900	3.900	1.11E-09	1.17E-09	1.37E-09	1.59E-11	1.67E-11	1.95E-11	1.95E-11	within	within	within	within	within	within	within	within	within
ASR12	833927.6	845623.5	2.03E-04	2.05E-04	2.10E-04	2.10E-04	3.900	3.900	3.900	3.900	1.22E-09	1.23E-09	1.26E-09	1.74E-11	1.76E-11	1.80E-11	1.80E-11	within	within	within	within	within	within	within	within	within
ASR13	834681.8	844507.7	1.03E-04	1.03E-04	1.05E-04	1.05E-04	3.900	3.900	3.900	3.900	6.15E-10	6.15E-10	6.30E-10	8.79E-12	8.79E-12	9.00E-12	9.00E-12	within	within	within	within	within	within	within	within	within
ASR14	834932.5	844083.2	1.08E-04	1.08E-04	1.10E-04	1.10E-04	3.900	3.900	3.900	3.900	6.45E-10	6.45E-10	6.60E-10	9.21E-12	9.21E-12	9.43E-12	9.43E-12	within	within	within	within	within	within	within	within	within
ASR15	834781.0	842892.0	6.75E-05	6.75E-05	6.75E-05	6.75E-05	3.900	3.900	3.900	3.900	4.05E-10	4.05E-10	4.05E-10	5.79E-12	5.79E-12	5.79E-12	5.79E-12	within	within	within	within	within	within	within	within	within
ASR16	834638.8	843162.0	6.25E-05	6.25E-05	6.50E-05	6.50E-05	3.900	3.900	3.900	3.900	3.75E-10	3.75E-10	3.90E-10	5.36E-12	5.36E-12	5.57E-12	5.57E-12	within	within	within	within	within	within	within	within	within
ASR17	833565.4	844380.1	1.38E-04	1.38E-04	1.40E-04	1.40E-04	3.900	3.900	3.900	3.900	8.25E-10	8.25E-10	8.40E-10	1.18E-11	1.18E-11	1.20E-11	1.20E-11	within	within	within	within	within	within	within	within	within
ASR18	833659.8	844135.4	1.23E-04	1.23E-04	1.25E-04	1.25E-04	3.900	3.900	3.900	3.900	7.35E-10	7.35E-10	7.50E-10	1.05E-11	1.05E-11	1.07E-11	1.07E-11	within	within	within	within	within	within	within	within	within
ASR19	833278.7	844149.0	1.43E-04	1.43E-04	1.43E-04	1.43E-04	3.900	3.900	3.900	3.900	8.55E-10	8.55E-10	8.55E-10	1.22E-11	1.22E-11	1.22E-11	1.22E-11	within	within	within	within	within	within	within	within	within
ASR20	833432.9	843932.5	1.35E-04	1.35E-04	1.38E-04	1.38E-04	3.900	3.900	3.900	3.900	8.10E-10	8.10E-10	8.25E-10	1.16E-11	1.16E-11	1.18E-11	1.18E-11	within	within	within	within	within	within	within	within	within
ASR21	833071.0	844042.5	1.53E-04	1.53E-04	1.55E-04	1.55E-04	3.900	3.900	3.900	3.900	9.15E-10	9.15E-10	9.30E-10	1.31E-11	1.31E-11	1.33E-11	1.33E-11	within	within	within	within	within	within	within	within	within
ASR22	833816.5	843106.9	8.50E-05	8.50E-05	8.50E-05	8.50E-05	3.900	3.900	3.900	3.900	5.10E-10	5.10E-10	5.10E-10	7.29E-12	7.29E-12	7.29E-12	7.29E-12	within	within	within	within	within	within	within	within	within
ASR23	833911.2	842536.3	6.25E-05	6.25E-05	6.25E-05	6.25E-05	3.900	3.900	3.900	3.900	3.75E-10	3.75E-10	3.75E-10	5.36E-12	5.36E-12	5.36E-12	5.36E-12	within	within	within	within	within	within	within	within	within
ASR24	833589.5	842617.4	7.25E-05	7.50E-05	7.50E-05	7.50E-05	3.900	3.900	3.900	3.900	4.35E-10	4.50E-10	4.50E-10	6.21E-12	6.43E-12	6.43E-12	6.43E-12	within	within	within	within	within	within	within	within	within
ASR25	836212.0	842390.6	1.00E-04	1.00E-04	1.03E-04	1.03E-04	3.900	3.900	3.900	3.900	6.00E-10	6.00E-10	6.15E-10	8.57E-12	8.57E-12	8.79E-12	8.79E-12	within	within	within	within	within	within	within	within	within
ASR26	836864.6	842409.3	8.00E-05	8.00E-05	8.00E-05	8.00E-05	3.900	3.900	3.900	3.900	4.80E-10	4.80E-10	4.80E-10	6.86E-12	6.86E-12	6.86E-12	6.86E-12	within	within	within	within	within	within	within	within	within
ASR27	836737.6	845023.5	1.65E-04	1.68E-04	1.75E-04	1.75E-04	3.900	3.900	3.900	3.900	9.90E-10	1.01E-09	1.05E-09	1.41E-11	1.44E-11	1.50E-11	1.50E-11	within	within	within	within	within	within	within	within	within
		sub-max:	2.03E-04	2.05E-04	2.28E-04	2.28E-04	3.900	3.900	3.900	3.900	1.22E-09	1.23E-09	1.37E-09	1.74E-11	1.76E-11	1.95E-11	1.95E-11									
		max:	2.28E-04				3.900				1.37E-09			1.95E-11												

Appendix 3.9: Predicted lifetime health risk of Benzene + Vinyl Chloride concentration (ug/m3) at ASI **Case 3 – LFGES Off**

			Predicted Individual Lifetime Risk Level (Benzene + Vinyl Chloride)				Predicted Individual Lifetime Risk Level per Year (Benzene + Vinyl Chloride)				Within Individual Lifetime Risk 1E-6			Within Individual Lifetime Risk per year 1.4E-8		
ASR_ID	x_co	y_co	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	max 1.5m to 10m	1.5m	5m	10m	1.5m	5m	10m
ASR1	835592.5	844094.1	7.30E-10	7.45E-10	8.05E-10	8.050E-10	1.04E-11	1.06E-11	1.15E-11	1.15E-11	within	within	within	within	within	within
ASR2	835474.5	843463.0	9.75E-10	9.75E-10	1.00E-09	1.000E-09	1.39E-11	1.39E-11	1.43E-11	1.43E-11	within	within	within	within	within	within
ASR3	836139.2	843267.7	1.33E-09	1.36E-09	1.39E-09	1.390E-09	1.90E-11	1.94E-11	1.99E-11	1.99E-11	within	within	within	within	within	within
ASR4	836921.6	843050.8	6.70E-10	6.70E-10	6.95E-10	6.950E-10	9.57E-12	9.57E-12	9.93E-12	9.93E-12	within	within	within	within	within	within
ASR5	836792.7	842938.7	8.65E-10	8.65E-10	8.90E-10	8.900E-10	1.24E-11	1.24E-11	1.27E-11	1.27E-11	within	within	within	within	within	within
ASR6	836499.0	843079.2	9.25E-10	9.40E-10	9.50E-10	9.500E-10	1.32E-11	1.34E-11	1.36E-11	1.36E-11	within	within	within	within	within	within
ASR7	834949.2	845805.6	3.80E-10	3.90E-10	3.90E-10	3.900E-10	5.43E-12	5.57E-12	5.57E-12	5.57E-12	within	within	within	within	within	within
ASR8	834261.5	845788.0	1.12E-09	1.14E-09	1.19E-09	1.185E-09	1.60E-11	1.62E-11	1.69E-11	1.69E-11	within	within	within	within	within	within
ASR9	834772.4	845729.4	5.10E-10	5.25E-10	5.60E-10	5.600E-10	7.29E-12	7.50E-12	8.00E-12	8.00E-12	within	within	within	within	within	within
ASR10	836866.1	845495.2	9.15E-10	9.50E-10	1.04E-09	1.035E-09	1.31E-11	1.36E-11	1.48E-11	1.48E-11	within	within	within	within	within	within
ASR11	834944.3	844920.6	2.06E-09	2.16E-09	2.53E-09	2.525E-09	2.94E-11	3.09E-11	3.61E-11	3.61E-11	within	within	within	within	within	within
ASR12	833927.6	845623.5	2.26E-09	2.27E-09	2.33E-09	2.330E-09	3.22E-11	3.24E-11	3.33E-11	3.33E-11	within	within	within	within	within	within
ASR13	834681.8	844507.7	1.15E-09	1.15E-09	1.17E-09	1.170E-09	1.64E-11	1.64E-11	1.67E-11	1.67E-11	within	within	within	within	within	within
ASR14	834932.5	844083.2	1.20E-09	1.20E-09	1.23E-09	1.230E-09	1.71E-11	1.71E-11	1.76E-11	1.76E-11	within	within	within	within	within	within
ASR15	834781.0	842892.0	7.45E-10	7.55E-10	7.55E-10	7.550E-10	1.06E-11	1.08E-11	1.08E-11	1.08E-11	within	within	within	within	within	within
ASR16	834638.8	843162.0	6.95E-10	6.95E-10	7.20E-10	7.200E-10	9.93E-12	9.93E-12	1.03E-11	1.03E-11	within	within	within	within	within	within
ASR17	833565.4	844380.1	1.53E-09	1.53E-09	1.55E-09	1.550E-09	2.18E-11	2.18E-11	2.21E-11	2.21E-11	within	within	within	within	within	within
ASR18	833659.8	844135.4	1.37E-09	1.37E-09	1.39E-09	1.390E-09	1.95E-11	1.95E-11	1.99E-11	1.99E-11	within	within	within	within	within	within
ASR19	833278.7	844149.0	1.58E-09	1.59E-09	1.59E-09	1.585E-09	2.25E-11	2.26E-11	2.26E-11	2.26E-11	within	within	within	within	within	within
ASR20	833432.9	843932.5	1.49E-09	1.50E-09	1.53E-09	1.525E-09	2.13E-11	2.14E-11	2.18E-11	2.18E-11	within	within	within	within	within	within
ASR21	833071.0	844042.5	1.70E-09	1.70E-09	1.72E-09	1.720E-09	2.42E-11	2.42E-11	2.46E-11	2.46E-11	within	within	within	within	within	within
ASR22	833816.5	843106.9	9.40E-10	9.40E-10	9.50E-10	9.500E-10	1.34E-11	1.34E-11	1.36E-11	1.36E-11	within	within	within	within	within	within
ASR23	833911.2	842536.3	6.85E-10	6.85E-10	6.95E-10	6.950E-10	9.79E-12	9.79E-12	9.93E-12	9.93E-12	within	within	within	within	within	within
ASR24	833589.5	842617.4	8.05E-10	8.30E-10	8.40E-10	8.400E-10	1.15E-11	1.19E-11	1.20E-11	1.20E-11	within	within	within	within	within	within
ASR25	836212.0	842390.6	1.11E-09	1.11E-09	1.14E-09	1.135E-09	1.59E-11	1.59E-11	1.62E-11	1.62E-11	within	within	within	within	within	within
ASR26	836864.6	842409.3	8.80E-10	8.80E-10	8.90E-10	8.900E-10	1.26E-11	1.26E-11	1.27E-11	1.27E-11	within	within	within	within	within	within
ASR27	836737.6	845023.5	1.83E-09	1.86E-09	1.95E-09	1.950E-09	2.61E-11	2.65E-11	2.79E-11	2.79E-11	within	within	within	within	within	within
		sub-max:	2.255E-09	2.270E-09	2.525E-09	2.525E-09	3.221E-11	3.243E-11	3.607E-11	3.607E-11						
		max:	2.525E-09				3.607E-11									