APPENDIX H9: INSTANTANEOUS FAILURE EVENT TREE ANALYSIS

H9.1 Introduction

H9.1.1.1 The event trees in this appendix cover instantaneous failures of the PAFF tanks leading to possible bund overtopping (for the higher fill levels) and a subsequent fire. Two specific cases are considered:

- Instantaneous removal of the whole tank wall by a failure of the tank floor seam;
- Unzipping of the tank wall vertically.

H9.1.1.2 Additionally, instantaneous removal of the tank wall and immediate ignition due to aircraft impact is included

H9.1.1.3 For each tank, the failure frequency of instantaneous failure is split between the two cases and for the unzipping case, a different evaluation is made for releases at different angles relative to the direction of SWS (the floor seam failure is symmetrical and so there is no need to consider different angles). Forty-five degree sectors have been chosen for this, based on the differences in the results expected at different angles. Ignition probabilities are evaluated separately depending on the area the release is predicted to and the different ignition sources present in different directions (see Appendix H5).

H9.1.1.4 For the ignited release, the off-site populations affected are estimated based on the predicted area each release would cover (see Appendix H7) and the populations present (see Appendix H8). Different populations are considered depending on whether the release occurs during the day, during the day when the peak numbers of lorries are expected within SWS and during the night. No allowance in the analysis has been made for escape from the subsequent fire for people caught within the area of the release. This provides a conservative estimate of fatalities.

H9.1.1.5 The result is a set of outcome frequencies for each tank covering a range of fatality estimates depending on the direction of the release and the time at which it occurs. Event trees for each tank are shown below for the cautious best estimate.

H9.1.1.6 The potential number of persons in any population impacted has been estimated from the product of the total population present in each worker group for each time of day and the fractional coverage of the populated area by each event. Populations in SWS, EcoPark and elsewhere are shown separately for clarity. The probabilities of daytime (peak), daytime (other) and night-time are 12.5% (3 hours), 25% (6 hours) and 62.5% (15 hours) respectively.

H9.1.1.7 For the initial development case, the results corresponding to tanks 001, 003, 007 and 009 are excluded.

H9.1.1.8 For aircraft impact, the affected population estimates for the floor seam failure are used for each tank, together with the aircraft impact frequency per tank (see H3.6.1.10) and an ignition probability of 1.

H9.2 Floor Seam Failure Event Trees

Tank Floor Seam Failure	T001 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.014		Seam100%	1.49E-11	97.5	58.8	3.2	96.7	58.0	2.4	0.0	0.0	0.0	0.8	0.8	0.8
		No	0.986		Unignited	1.04E-09												
Instant	60-90%	Yes	0.015		Seam80%	2.21E-12	60.3	32.6	0.8	59.5	31.8	0.0	0.0	0.0	0.0	0.8	0.8	0.8
Frequency		No	0.985		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank Floor Seam Failure	T002 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.077		Seam100%	8.04E-11	33.3	33.3	4.0	0.0	0.0	0.0	32.7	32.7	3.3	0.7	0.7	0.7
		No	0.923		Unignited	9.70E-10												
Instant	60-90%	Yes	0.042		Seam80%	6.29E-12	20.7	20.7	2.1	0.0	0.0	0.0	20.7	20.7	2.1	0.0	0.0	0.0
Frequency		No	0.958		Unignited	1.44E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank Floor Seam Failure	T003 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.017		Seam100%	1.75E-11	107.3	68.5	6.1	105.4	66.6	4.2	0.0	0.0	0.0	1.9	1.9	1.9
		No	0.983		Unignited	1.03E-09												
Instant	60-90%	Yes	0.014		Seam80%	2.14E-12	61.0	33.3	1.5	59.6	31.9	0.1	0.0	0.0	0.0	1.4	1.4	1.4
Frequency		No	0.986		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank Floor Seam Failure	T004 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.027		Seam100%	2.84E-11	15.4	15.4	1.5	0.0	0.0	0.0	15.4	15.4	1.5	0.0	0.0	0.0
		No	0.973		Unignited	1.02E-09												
Instant	60-90%	Yes	0.020		Seam80%	2.95E-12	9.6	9.6	1.0	0.0	0.0	0.0	9.6	9.6	1.0	0.0	0.0	0.0
Frequency		No	0.980		Unignited	1.47E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank Floor Seam Failure	T005 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.080		Seam100%	8.44E-11	53.8	53.8	5.4	0.0	0.0	0.0	53.8	53.8	5.4	0.0	0.0	0.0
		No	0.920		Unignited	9.66E-10												
Instant	60-90%	Yes	0.054		Seam80%	8.11E-12	26.9	26.9	2.7	0.0	0.0	0.0	26.9	26.9	2.7	0.0	0.0	0.0
Frequency		No	0.946		Unignited	1.42E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank Floor Seam Failure	T006 Fill Level	Cautious Best Estimate Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.077		Seam100%	8.03E-11	53.8	53.8	5.4	0.0	0.0	0.0	53.8	53.8	5.4	0.0	0.0	0.0
		No	0.923		Unignited	9.70E-10												
Instant	60-90%	Yes	0.044		Seam80%	6.66E-12	26.9	26.9	2.7	0.0	0.0	0.0	26.9	26.9	2.7	0.0	0.0	0.0
Frequency		No	0.956		Unignited	1.43E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T007	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.020		Seam100%	2.06E-11	109.5	79.0	3.2	108.1	77.6	1.8	0.0	0.0	0.0	1.4	1.4	1.4
		No	0.980		Unignited	1.03E-09												
Instant	60-90%	Yes	0.014		Seam80%	2.16E-12	55.9	33.7	1.5	54.5	32.3	0.1	0.0	0.0	0.0	1.4	1.4	1.4
Frequency		No	0.986		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T008	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.026		Seam100%	2.76E-11	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
		No	0.974		Unignited	1.02E-09												
Instant	60-90%	Yes	0.011		Seam80%	1.65E-12	3.8	3.8	0.4	0.0	0.0	0.0	3.8	3.8	0.4	0.0	0.0	0.0
Frequency		No	0.989		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T009	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.014		Seam100%	1.43E-11	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
		No	0.986		Unignited	1.04E-09												
Instant	60-90%	Yes	0.011		Seam80%	1.58E-12	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Frequency		No	0.989		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T010	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.040		Seam100%	4.18E-11	37.6	37.6	19.6	0.0	0.0	0.0	20.0	20.0	2.0	17.6	17.6	17.6
		No	0.960		Unignited	1.01E-09												
Instant	60-90%	Yes	0.031		Seam80%	4.64E-12	12.7	12.7	1.3	0.0	0.0	0.0	12.7	12.7	1.3	0.0	0.0	0.0
Frequency		No	0.969		Unignited	1.45E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T011	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.106		Seam100%	1.11E-10	65.7	65.7	6.6	0.0	0.0	0.0	65.7	65.7	6.6	0.0	0.0	0.0
		No	0.894		Unignited	9.39E-10												
Instant	60-90%	Yes	0.056		Seam80%	8.45E-12	32.8	32.8	3.3	0.0	0.0	0.0	32.8	32.8	3.3	0.0	0.0	0.0
Frequency		No	0.944		Unignited	1.42E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

Tank	T012	Cautious Best Estimate					Population affected (Total)			Population affected (SWS)			Population affected (EcoPark)			Population affected (other)		
Floor Seam Failure	Fill Level	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	Yes	0.023		Seam100%	2.41E-11	10.8	10.8	1.1	0.0	0.0	0.0	10.8	10.8	1.1	0.0	0.0	0.0
		No	0.977		Unignited	1.03E-09												
Instant	60-90%	Yes	0.016		Seam80%	2.38E-12	5.4	5.4	0.5	0.0	0.0	0.0	5.4	5.4	0.5	0.0	0.0	0.0
Frequency		No	0.984		Unignited	1.48E-10												
2.50E-09	35-60%	Yes	0.012	10m/s	Seam60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
per year			0.012	5m/s	Seam60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
			0.012	2m/s	Seam60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			0.012	0m/s	Seam60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
		No	0.988		Unignited	1.24E-10												
	<35%	Yes	0.004	10m/s	Seam35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			0.004	5m/s	Seam35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	2m/s	Seam35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			0.004	0m/s	Seam35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		No	0.996		Unignited	1.17E-09												
					Sum	2.50E-09												

H9.3 Unzipping Event Trees

Tank Unzipping Failure	T001 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	1.000		Zip100_0	1.31E-10	165.8	110.4	11.0	164.6	109.3	9.8	0.0	0.0	0.0	1.2	1.2	1.2
			No	0.000		Unignited	0.00E+00												
		+45	Yes	0.521		Zip100_+45	6.84E-11	166.2	110.9	11.2	164.8	109.4	9.8	0.0	0.0	0.0	1.4	1.4	1.4
			No	0.479		Unignited	6.28E-11												
		+90	Yes	0.042		Zip100_+90	5.50E-12	151.2	104.2	31.5	120.1	73.0	0.3	0.0	0.0	0.0	31.2	31.2	31.2
			No	0.958		Unignited	1.26E-10												
		+135 to -135	Yes	0.004		Zip100_180	1.58E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	3.92E-10												
		-90	Yes	0.061		Zip100_-90	7.98E-12	110.2	74.2	3.0	85.7	49.7	0.2	24.2	24.2	2.4	0.4	0.4	0.4
			No	0.939		Unignited	1.23E-10												
Instant		-45	Yes	1.000		Zip100_-45	1.31E-10	158.5	108.7	13.2	155.2	105.4	12.3	2.7	2.7	0.3	0.6	0.6	0.6
Frequency			No	0.000		Unignited	0.00E+00												
2.50E-09	60-90%	0 - SWS	Yes	1.000		Zip80_0	1.88E-11	130.1	85.8	7.2	129.2	84.9	6.3	0.0	0.0	0.0	0.9	0.9	0.9
per year			No	0.000		Unignited	0.00E+00												
		+45	Yes	0.508		Zip80_+45	9.53E-12	124.9	80.6	6.7	123.9	79.6	5.6	0.0	0.0	0.0	1.1	1.1	1.1
			No	0.492		Unignited	9.22E-12												
		+90	Yes	0.016		Zip80_+90	2.98E-13	110.8	66.5	2.7	108.3	64.0	0.2	0.0	0.0	0.0	2.5	2.5	2.5
			No	0.984		Unignited	1.85E-11												
		+135 to -135	Yes	0.004		Zip80_-180	2.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	5.60E-11												
		-90	Yes	0.054		Zip80_-90	1.01E-12	68.5	46.4	2.4	47.2	25.0	0.1	21.1	21.1	2.1	0.2	0.2	0.2
			No	0.946		Unignited	1.77E-11												
		-45	Yes	1.000		Zip80_-45	1.88E-11	132.5	82.7	4.6	130.9	81.1	4.1	1.2	1.2	0.1	0.5	0.5	0.5
			No	0.000		Unignited	0.00E+00												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T002 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.014		Zip100_0	1.80E-12	60.4	32.7	1.3	57.7	30.0	0.1	1.5	1.5	0.2	1.1	1.1	1.1
			No	0.986		Unignited	1.29E-10												
		+45	Yes	0.014		Zip100_+45	1.82E-12	6.9	4.1	1.1	5.8	3.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
			No	0.986		Unignited	1.29E-10												
		+90	Yes	0.004		Zip100_+90	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+135 to -135	Yes	0.059		Zip100_180	2.33E-11	28.8	28.8	2.9	0.0	0.0	0.0	28.8	28.8	2.9	0.0	0.0	0.0
			No	0.941		Unignited	3.70E-10												
		-90	Yes	0.156		Zip100_-90	2.04E-11	99.1	99.1	9.9	0.0	0.0	0.0	99.1	99.1	9.9	0.0	0.0	0.0
			No	0.844		Unignited	1.11E-10												
Instant		-45	Yes	0.148		Zip100_-45	1.95E-11	98.4	98.4	9.8	0.0	0.0	0.0	98.4	98.4	9.8	0.0	0.0	0.0
Frequency			No	0.852		Unignited	1.12E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.009		Zip80_0	1.73E-13	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
per year			No	0.991		Unignited	1.86E-11												
		+45	Yes	0.010		Zip80_+45	1.94E-13	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
			No	0.990		Unignited	1.86E-11												
		+90	Yes	0.004		Zip80_+90	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+135 to -135	Yes	0.025		Zip80_-180	1.39E-12	14.4	14.4	1.4	0.0	0.0	0.0	14.4	14.4	1.4	0.0	0.0	0.0
			No	0.975		Unignited	5.49E-11												
		-90	Yes	0.087		Zip80_-90	1.64E-12	49.6	49.6	5.0	0.0	0.0	0.0	49.6	49.6	5.0	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		-45	Yes	0.090		Zip80_-45	1.69E-12	49.2	49.2	4.9	0.0	0.0	0.0	49.2	49.2	4.9	0.0	0.0	0.0
			No	0.910		Unignited	1.71E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T003 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.513		Zip100_0	6.73E-11	150.9	106.6	9.6	149.0	104.7	7.7	0.0	0.0	0.0	1.9	1.9	1.9
			No	0.487		Unignited	6.40E-11												
		+45	Yes	0.514		Zip100_+45	6.74E-11	191.1	144.0	10.7	189.2	142.1	8.8	0.0	0.0	0.0	1.9	1.9	1.9
			No	0.486		Unignited	6.38E-11												
		+90	Yes	0.045		Zip100_+90	5.88E-12	92.0	64.4	20.7	72.4	44.7	1.1	0.0	0.0	0.0	19.6	19.6	19.6
			No	0.955		Unignited	1.25E-10												
		+135 to -135	Yes	0.004		Zip100_180	1.58E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	3.92E-10												
		-90	Yes	0.061		Zip100_-90	8.06E-12	142.6	90.0	3.7	125.6	72.9	1.2	16.1	16.1	1.6	0.9	0.9	0.9
			No	0.939		Unignited	1.23E-10												
Instant		-45	Yes	1.000		Zip100_-45	1.31E-10	162.6	109.9	10.9	161.4	108.8	9.8	0.0	0.0	0.0	1.1	1.1	1.1
Frequency			No	0.000		Unignited	0.00E+00												
2.50E-09	60-90%	0 - SWS	Yes	0.508		Zip80_0	9.52E-12	133.6	89.3	6.8	132.4	88.1	5.7	0.0	0.0	0.0	1.2	1.2	1.2
per year			No	0.492		Unignited	9.23E-12												
		+45	Yes	0.510		Zip80_+45	9.56E-12	122.7	92.3	7.2	121.4	90.9	5.8	0.0	0.0	0.0	1.4	1.4	1.4
			No	0.490		Unignited	9.19E-12												
		+90	Yes	0.021		Zip80_+90	4.01E-13	66.6	38.9	2.5	64.6	36.9	0.4	0.0	0.0	0.0	2.0	2.0	2.0
			No	0.979		Unignited	1.83E-11												
		+135 to -135	Yes	0.004		Zip80_-180	2.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	5.60E-11												
		-90	Yes	0.042		Zip80_-90	7.80E-13	42.5	31.4	2.5	23.1	12.0	0.1	18.8	18.8	1.9	0.5	0.5	0.5
			No	0.958		Unignited	1.80E-11												
		-45	Yes	1.000		Zip80_-45	1.88E-11	134.4	87.3	6.7	133.7	86.6	5.9	0.0	0.0	0.0	0.7	0.7	0.7
			No	0.000		Unignited	0.00E+00												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T004 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.013		Zip100_0	1.72E-12	2.1	2.1	1.1	1.0	1.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1
			No	0.987		Unignited	1.30E-10												
		+45	Yes	0.013		Zip100_+45	1.68E-12	7.0	4.2	1.2	5.8	3.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
			No	0.987		Unignited	1.30E-10												
		+90	Yes	0.004		Zip100_+90	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+135 to -135	Yes	0.037		Zip100_180	1.48E-11	27.7	27.7	2.8	0.0	0.0	0.0	27.7	27.7	2.8	0.0	0.0	0.0
			No	0.963		Unignited	3.79E-10												
		-90	Yes	0.051		Zip100_-90	6.74E-12	27.7	27.7	2.8	0.0	0.0	0.0	27.7	27.7	2.8	0.0	0.0	0.0
			No	0.949		Unignited	1.25E-10												
Instant		-45	Yes	0.011		Zip100_-45	1.39E-12	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
Frequency			No	0.989		Unignited	1.30E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.007		Zip80_0	1.41E-13	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
per year			No	0.993		Unignited	1.86E-11												
		+45	Yes	0.009		Zip80_+45	1.70E-13	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
			No	0.991		Unignited	1.86E-11												
		+90	Yes	0.004		Zip80_+90	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+135 to -135	Yes	0.022		Zip80_-180	1.26E-12	13.8	13.8	1.4	0.0	0.0	0.0	13.8	13.8	1.4	0.0	0.0	0.0
			No	0.978		Unignited	5.50E-11												
		-90	Yes	0.030		Zip80_-90	5.55E-13	13.8	13.8	1.4	0.0	0.0	0.0	13.8	13.8	1.4	0.0	0.0	0.0
			No	0.970		Unignited	1.82E-11												
		-45	Yes	0.006		Zip80_-45	1.08E-13	0.5	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
			No	0.994		Unignited	1.86E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T005 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.004		Zip100_0	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+45	Yes	0.004		Zip100_+45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+90	Yes	0.163		Zip100_+90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
		+135 to -135	Yes	0.163		Zip100_180	6.42E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	3.30E-10												
		-90	Yes	0.163		Zip100_-90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
Instant		-45	Yes	0.160		Zip100_-45	2.10E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
Frequency			No	0.840		Unignited	1.10E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.004		Zip80_0	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
per year			No	0.996		Unignited	1.87E-11												
		+45	Yes	0.004		Zip80_+45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+90	Yes	0.087		Zip80_+90	1.63E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		+135 to -135	Yes	0.087		Zip80_-180	4.89E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	5.14E-11												
		-90	Yes	0.087		Zip80_-90	1.63E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		-45	Yes	0.088		Zip80_-45	1.66E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.912		Unignited	1.71E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T006 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.004		Zip100_0	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+45	Yes	0.004		Zip100_+45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+90	Yes	0.163		Zip100_+90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
		+135 to -135	Yes	0.163		Zip100_180	6.42E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	3.30E-10												
		-90	Yes	0.163		Zip100_-90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
Instant		-45	Yes	0.004		Zip100_-45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frequency			No	0.996		Unignited	1.31E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.004		Zip80_0	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
per year			No	0.996		Unignited	1.87E-11												
		+45	Yes	0.004		Zip80_+45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+90	Yes	0.087		Zip80_+90	1.63E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		+135 to -135	Yes	0.087		Zip80_-180	4.89E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	5.14E-11												
		-90	Yes	0.087		Zip80_-90	1.63E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		-45	Yes	0.004		Zip80_-45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T007 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.512		Zip100_0	6.71E-11	148.3	115.0	7.2	146.9	113.7	5.9	0.0	0.0	0.0	1.4	1.4	1.4
			No	0.488		Unignited	6.41E-11												
		+45	Yes	0.057		Zip100_+45	7.45E-12	153.2	133.8	47.5	109.1	89.7	4.4	1.2	1.2	0.1	43.0	43.0	43.0
			No	0.943		Unignited	1.24E-10												
		+90	Yes	0.038		Zip100_+90	4.94E-12	28.5	28.2	17.1	10.1	9.8	0.1	1.5	1.5	0.2	16.8	16.8	16.8
			No	0.962		Unignited	1.26E-10												
		+135 to -135	Yes	0.004		Zip100_180	1.58E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	3.92E-10												
		-90	Yes	0.035		Zip100_-90	4.56E-12	187.6	115.6	5.4	186.2	114.2	4.0	0.0	0.0	0.0	1.4	1.4	1.4
			No	0.965		Unignited	1.27E-10												
Instant		-45	Yes	0.511		Zip100_-45	6.70E-11	165.2	115.3	11.4	164.0	114.2	10.3	0.0	0.0	0.0	1.2	1.2	1.2
Frequency			No	0.489		Unignited	6.42E-11												
2.50E-09	60-90%	0 - SWS	Yes	0.509		Zip80_0	9.55E-12	125.8	98.2	5.7	124.6	96.9	4.5	0.0	0.0	0.0	1.3	1.3	1.3
per year			No	0.491		Unignited	9.20E-12												
		+45	Yes	0.023		Zip80_+45	4.38E-13	95.1	81.3	12.1	85.9	72.1	2.9	0.0	0.0	0.0	9.2	9.2	9.2
			No	0.977		Unignited	1.83E-11												
		+90	Yes	0.019		Zip80_+90	3.53E-13	10.7	9.6	1.5	8.2	7.1	0.1	1.2	1.2	0.1	1.3	1.3	1.3
			No	0.981		Unignited	1.84E-11												
		+135 to -135	Yes	0.004		Zip80_-180	2.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	5.60E-11												
		-90	Yes	0.018		Zip80_-90	3.44E-13	141.5	80.5	2.8	140.1	79.2	1.4	0.0	0.0	0.0	1.4	1.4	1.4
			No	0.982		Unignited	1.84E-11												
		-45	Yes	0.509		Zip80_-45	9.54E-12	112.3	73.6	4.7	112.3	73.6	4.7	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.491		Unignited	9.21E-12												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T008 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.017		Zip100_0	2.17E-12	1.2	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
			No	0.983		Unignited	1.29E-10												
		+45	Yes	0.011		Zip100_+45	1.48E-12	8.3	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.3	8.3
			No	0.989		Unignited	1.30E-10												
		+90	Yes	0.030		Zip100_+90	3.90E-12	13.8	13.8	8.6	0.0	0.0	0.0	5.8	5.8	0.6	8.0	8.0	8.0
			No	0.970		Unignited	1.27E-10												
		+135 to -135	Yes	0.033		Zip100_180	1.32E-11	19.2	19.2	1.9	0.0	0.0	0.0	19.2	19.2	1.9	0.0	0.0	0.0
			No	0.967		Unignited	3.81E-10												
		-90	Yes	0.004		Zip100_-90	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
Instant		-45	Yes	0.012		Zip100_-45	1.52E-12	32.6	18.7	1.5	31.1	17.3	0.0	0.0	0.0	0.0	1.4	1.4	1.4
Frequency			No	0.988		Unignited	1.30E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.009		Zip80_0	1.73E-13	0.3	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
per year			No	0.991		Unignited	1.86E-11												
		+45	Yes	0.008		Zip80_+45	1.50E-13	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
			No	0.992		Unignited	1.86E-11												
		+90	Yes	0.019		Zip80_+90	3.53E-13	13.4	13.4	10.0	0.0	0.0	0.0	3.8	3.8	0.4	9.6	9.6	9.6
			No	0.981		Unignited	1.84E-11												
		+135 to -135	Yes	0.019		Zip80_-180	1.06E-12	9.6	9.6	1.0	0.0	0.0	0.0	9.6	9.6	1.0	0.0	0.0	0.0
			No	0.981		Unignited	5.52E-11												
		-90	Yes	0.004		Zip80_-90	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		-45	Yes	0.009		Zip80_-45	1.64E-13	0.9	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
			No	0.991		Unignited	1.86E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T009 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.010		Zip100_0	1.37E-12	2.2	2.2	1.0	1.3	1.3	0.0	0.0	0.0	0.0	1.0	1.0	1.0
			No	0.990		Unignited	1.30E-10												
		+45	Yes	0.009		Zip100_+45	1.17E-12	8.1	8.1	8.1	0.0	0.0	0.0	0.0	0.0	0.0	8.1	8.1	8.1
			No	0.991		Unignited	1.30E-10												
		+90	Yes	0.011		Zip100_+90	1.50E-12	10.3	10.3	8.2	0.0	0.0	0.0	2.3	2.3	0.2	8.0	8.0	8.0
			No	0.989		Unignited	1.30E-10												
		+135 to -135	Yes	0.004		Zip100_180	1.58E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	3.92E-10												
		-90	Yes	0.007		Zip100_-90	9.11E-13	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
			No	0.993		Unignited	1.30E-10												
Instant		-45	Yes	0.012		Zip100_-45	1.51E-12	2.3	2.3	1.1	1.3	1.3	0.0	0.0	0.0	0.0	1.1	1.1	1.1
Frequency			No	0.988		Unignited	1.30E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.008		Zip80_0	1.48E-13	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
per year			No	0.992		Unignited	1.86E-11												
		+45	Yes	0.006		Zip80_+45	1.18E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.994		Unignited	1.86E-11												
		+90	Yes	0.008		Zip80_+90	1.57E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.992		Unignited	1.86E-11												
		+135 to -135	Yes	0.004		Zip80_-180	2.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	5.60E-11												
		-90	Yes	0.007		Zip80_-90	1.23E-13	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
			No	0.993		Unignited	1.86E-11												
		-45	Yes	0.008		Zip80_-45	1.46E-13	0.4	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
			No	0.992		Unignited	1.86E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T010 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.021		Zip100_0	2.73E-12	11.5	11.5	9.1	0.0	0.0	0.0	2.7	2.7	0.3	8.8	8.8	8.8
			No	0.979		Unignited	1.29E-10												
		+45	Yes	0.019		Zip100_+45	2.48E-12	11.8	11.8	8.4	0.0	0.0	0.0	3.8	3.8	0.4	8.0	8.0	8.0
			No	0.981		Unignited	1.29E-10												
		+90	Yes	0.030		Zip100_+90	3.93E-12	21.4	21.4	9.3	0.0	0.0	0.0	13.4	13.4	1.3	8.0	8.0	8.0
			No	0.970		Unignited	1.27E-10												
		+135 to -135	Yes	0.023		Zip100_180	9.03E-12	15.4	15.4	1.5	0.0	0.0	0.0	15.4	15.4	1.5	0.0	0.0	0.0
			No	0.977		Unignited	3.85E-10												
		-90	Yes	0.004		Zip100_-90	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
Instant		-45	Yes	0.012		Zip100_-45	1.52E-12	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
Frequency			No	0.988		Unignited	1.30E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.010		Zip80_0	1.88E-13	0.8	0.8	0.1	0.0	0.0	0.0	0.8	0.8	0.1	0.0	0.0	0.0
per year			No	0.990		Unignited	1.86E-11												
		+45	Yes	0.012		Zip80_+45	2.30E-13	1.9	1.9	0.2	0.0	0.0	0.0	1.9	1.9	0.2	0.0	0.0	0.0
			No	0.988		Unignited	1.85E-11												
		+90	Yes	0.023		Zip80_+90	4.34E-13	15.7	15.7	8.8	0.0	0.0	0.0	7.7	7.7	0.8	8.0	8.0	8.0
			No	0.977		Unignited	1.83E-11												
		+135 to -135	Yes	0.014		Zip80_-180	7.94E-13	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
			No	0.986		Unignited	5.55E-11												
		-90	Yes	0.004		Zip80_-90	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		-45	Yes	0.009		Zip80_-45	1.63E-13	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
			No	0.991		Unignited	1.86E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T011 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.004		Zip100_0	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+45	Yes	0.004		Zip100_+45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+90	Yes	0.163		Zip100_+90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
		+135 to -135	Yes	0.163		Zip100_180	6.42E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	3.30E-10												
		-90	Yes	0.163		Zip100_-90	2.14E-11	111.4	111.4	11.1	0.0	0.0	0.0	111.4	111.4	11.1	0.0	0.0	0.0
			No	0.837		Unignited	1.10E-10												
Instant		-45	Yes	0.004		Zip100_-45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frequency			No	0.996		Unignited	1.31E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.004		Zip80_0	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
per year			No	0.996		Unignited	1.87E-11												
		+45	Yes	0.004		Zip80_+45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+90	Yes	0.094		Zip80_+90	1.75E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.906		Unignited	1.70E-11												
		+135 to -135	Yes	0.087		Zip80_-180	4.89E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	5.14E-11												
		-90	Yes	0.087		Zip80_-90	1.63E-12	55.7	55.7	5.6	0.0	0.0	0.0	55.7	55.7	5.6	0.0	0.0	0.0
			No	0.913		Unignited	1.71E-11												
		-45	Yes	0.004		Zip80_-45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												

Tank Unzipping Failure	T012 Fill Level	Cautious Best Estimate Direction Clockwise from SWS	Ignition	Ignition Probabilities	Windspeed	Case ID	Frequency (/yr)	Population affected (Total) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (SWS) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (EcoPark) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)	Population affected (other) Day - peak (3 hrs)	Day - other (6 hrs)	Night (15 hrs)
	90-100%	0 - SWS	Yes	0.004		Zip100_0	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+45	Yes	0.004		Zip100_+45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.31E-10												
		+90	Yes	0.107		Zip100_+90	1.40E-11	70.0	70.0	7.0	0.0	0.0	0.0	70.0	70.0	7.0	0.0	0.0	0.0
			No	0.893		Unignited	1.17E-10												
		+135 to -135	Yes	0.107		Zip100_180	4.21E-11	70.0	70.0	7.0	0.0	0.0	0.0	70.0	70.0	7.0	0.0	0.0	0.0
			No	0.893		Unignited	3.52E-10												
		-90	Yes	0.107		Zip100_-90	1.40E-11	70.0	70.0	7.0	0.0	0.0	0.0	70.0	70.0	7.0	0.0	0.0	0.0
			No	0.893		Unignited	1.17E-10												
Instant		-45	Yes	0.004		Zip100_-45	5.25E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Frequency			No	0.996		Unignited	1.31E-10												
2.50E-09	60-90%	0 - SWS	Yes	0.004		Zip80_0	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
per year			No	0.996		Unignited	1.87E-11												
		+45	Yes	0.004		Zip80_+45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
		+90	Yes	0.065		Zip80_+90	1.22E-12	35.0	35.0	3.5	0.0	0.0	0.0	35.0	35.0	3.5	0.0	0.0	0.0
			No	0.935		Unignited	1.75E-11												
		+135 to -135	Yes	0.059		Zip80_-180	3.33E-12	35.0	35.0	3.5	0.0	0.0	0.0	35.0	35.0	3.5	0.0	0.0	0.0
			No	0.941		Unignited	5.29E-11												
		-90	Yes	0.059		Zip80_-90	1.11E-12	35.0	35.0	3.5	0.0	0.0	0.0	35.0	35.0	3.5	0.0	0.0	0.0
			No	0.941		Unignited	1.76E-11												
		-45	Yes	0.004		Zip80_-45	7.50E-14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.87E-11												
	35-60%		Yes	0.012	10m/s	Unzip60%_10m/s	4.50E-15	25.3	25.3	5.9	0.0	0.0	0.0	21.6	21.6	2.2	3.8	3.8	3.8
				0.012	5m/s	Unzip60%_5m/s	3.17E-13	11.4	11.4	4.5	0.0	0.0	0.0	6.7	6.7	0.7	4.7	4.7	3.8
				0.012	2m/s	Unzip60%_2m/s	1.14E-12	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
				0.012	0m/s	Unzip60%_0m/s	4.05E-14	3.8	3.8	3.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	3.8	3.8
			No	0.988		Unignited	1.24E-10												
	<35%		Yes	0.004	10m/s	Unzip35%_10m/s	1.41E-14	7.7	7.7	0.8	0.0	0.0	0.0	7.7	7.7	0.8	0.0	0.0	0.0
				0.004	5m/s	Unzip35%_5m/s	9.92E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	2m/s	Unzip35%_2m/s	3.57E-12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				0.004	0m/s	Unzip35%_0m/s	1.27E-13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
			No	0.996		Unignited	1.17E-09												
						Sum	2.50E-09												