

POOL FIRE REPORT

Unique Audit Number:

491



Study Folder: TOP EVENT 1

PHAST v6.00



TOP EVENT 1




Methanol spill out

Outside containment basins

Base Case

Data

 **Weather:** Category 2/F
Speed: 2,00 m/s **Stability:** F

TOP EVENT 1\Methanol spill out\Outside containment basins

Flame Data

Correlation Type

Thomas / Johnson

User-Defined Quantities

| | |
|---------------------------|---------------|
| Material | METHANOL |
| Ambient Temperature | 9,85 C |
| Ambient Relative Humidity | 0,70 fraction |
| Ambient Wind Speed | 2,00 m/s |
| Pool Diameter | 6,32 m |
| Surface Type | Land |
| Elevation | 0,00 m |
| Maximum Exposure Duration | 20,00 s |

Input and/or Output Quantities

Input

Output

| | |
|----------------------|---------------|
| Flame Length | 5,22 m |
| Flame Angle | 37,44 degrees |
| Flame Emissive Power | 152,94 kW/m2 |

Flame Co-ordinates

| X m | Z m | R m | Phi degrees |
|---------------|---------------|---------------|-----------------------|
| 0,00 | 0,00 | 3,16 | 0,00 |
| 3,17 | 4,14 | 3,16 | 0,00 |
| 3,17 | 4,14 | 0,00 | 0,00 |

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Radiation Ellipse

User-Defined Quantities

| | | |
|----------------------|----------|---------|
| Observer Inclination | Variable | degrees |
| Exposure Duration | 20,00 | s |

Calculated Quantities

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 3,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|-------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 60,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 5,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|--------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 100,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 7,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|--------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 140,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

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Radiation Distance

User-Defined Quantities

| | | |
|---------------------------|----------|---------|
| Maximum Distance | 50,00 | m |
| Angle from Wind Direction | 0,00 | degrees |
| Height above Origin | 0,00 | m |
| Observer Inclination | Variable | degrees |
| Observer Orientation | 0,00 | degrees |

Calculated Quantities

| X Coordinates m | Y Coordinates m | Z Coordinates m | Incident Radiation kW/m2 | Lethality Level percent | View Factor |
|-----------------------|-----------------------|-----------------------|--------------------------------|-------------------------------|----------------|
| 0,00 | | | 152,94 | | |
| 1,00 | | | 152,94 | | |
| 2,00 | | | 152,94 | | |
| 3,00 | | | 152,94 | | |
| 4,00 | | | 97,59 | | |
| 5,00 | | | 79,31 | | |
| 6,00 | | | 63,87 | | |
| 7,00 | | | 49,95 | | |
| 8,00 | | | 38,27 | | |
| 9,00 | | | 29,19 | | |
| 10,00 | | | 22,38 | | |
| 11,00 | | | 17,37 | | |
| 12,00 | | | 13,72 | | |
| 13,00 | | | 11,17 | | |
| 14,00 | | | 9,25 | | |
| 15,00 | | | 7,72 | | |
| 16,00 | | | 6,53 | | |
| 17,00 | | | 5,52 | | |
| 18,00 | | | 4,78 | | |
| 19,00 | | | 4,18 | | |
| 20,00 | | | 3,68 | | |
| 21,00 | | | 3,27 | | |
| 22,00 | | | 2,92 | | |
| 23,00 | | | 2,62 | | |
| 24,00 | | | 2,37 | | |
| 25,00 | | | 2,15 | | |
| 26,00 | | | 1,96 | | |
| 27,00 | | | 1,79 | | |
| 28,00 | | | 1,64 | | |
| 29,00 | | | 1,51 | | |
| 30,00 | | | 1,40 | | |
| 31,00 | | | 1,29 | | |
| 32,00 | | | 1,20 | | |
| 33,00 | | | 1,12 | | |
| 34,00 | | | 1,05 | | |
| 35,00 | | | 0,98 | | |
| 36,00 | | | 0,92 | | |

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| X Coordinates m | Y Coordinates m | Z Coordinates m | Incident Radiation kW/m2 | Lethality Level percent | View Factor |
|-----------------------|-----------------------|-----------------------|--------------------------------|-------------------------------|----------------|
| 37,00 | | | 0,86 | | |
| 38,00 | | | 0,81 | | |
| 39,00 | | | 0,76 | | |
| 40,00 | | | 0,72 | | |
| 41,00 | | | 0,68 | | |
| 42,00 | | | 0,65 | | |
| 43,00 | | | 0,61 | | |
| 44,00 | | | 0,58 | | |
| 45,00 | | | 0,55 | | |
| 46,00 | | | 0,53 | | |
| 47,00 | | | 0,50 | | |
| 48,00 | | | 0,48 | | |
| 49,00 | | | 0,46 | | |

Weather: Category 5/DSpeed: 5,00 m/sStability: D

TOP EVENT 1\Methanol spill out\Outside containment basins

Flame Data

Correlation Type

Thomas / Johnson

User-Defined Quantities

| | |
|---------------------------|---------------|
| Material | METHANOL |
| Ambient Temperature | 9,85 C |
| Ambient Relative Humidity | 0,70 fraction |
| Ambient Wind Speed | 5,00 m/s |
| Pool Diameter | 6,32 m |
| Surface Type | Land |
| Elevation | 0,00 m |
| Maximum Exposure Duration | 20,00 s |

Input and/or Output Quantities

Input

Output

| | |
|----------------------|---------------|
| Flame Length | 5,22 m |
| Flame Angle | 53,95 degrees |
| Flame Emissive Power | 152,94 kW/m2 |

Flame Co-ordinates

| X m | Z m | R m | Phi degrees |
|--------|--------|--------|----------------|
| 0,00 | 0,00 | 3,16 | 0,00 |
| 4,22 | 3,07 | 3,16 | 0,00 |
| 4,22 | 3,07 | 0,00 | 0,00 |

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Radiation Ellipse

User-Defined Quantities

| | | |
|----------------------|----------|---------|
| Observer Inclination | Variable | degrees |
| Exposure Duration | 20,00 | s |

Calculated Quantities

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 3,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|-------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 60,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 5,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|--------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 100,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

| | | |
|----------------------------------|-------------|-------|
| Incident Radiation Level: | 7,00 | kW/m2 |
|----------------------------------|-------------|-------|

| | | |
|--------------------------|--------|---------|
| Lethality Level | n/a | percent |
| View Factor | n/a | |
| Total Radiation Received | 140,00 | kJ/m2 |

| | | |
|-------------------------|-------------|---|
| Downwind semi-axis (A) | Not Reached | m |
| Crosswind semi-axis (B) | Not Reached | m |
| Offset Ratio (D) | Not Reached | |

| | | |
|-----------------|-------|----|
| Effect Distance | 6,00 | m |
| Area | 28,27 | m2 |

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Radiation Distance

User-Defined Quantities

| | | |
|---------------------------|----------|---------|
| Maximum Distance | 50,00 | m |
| Angle from Wind Direction | 0,00 | degrees |
| Height above Origin | 0,00 | m |
| Observer Inclination | Variable | degrees |
| Observer Orientation | 0,00 | degrees |

Calculated Quantities

| X Coordinates m | Y Coordinates m | Z Coordinates m | Incident Radiation kW/m2 | Lethality Level percent | View Factor |
|-----------------------|-----------------------|-----------------------|--------------------------------|-------------------------------|----------------|
| 0,00 | | | 152,94 | | |
| 1,00 | | | 152,94 | | |
| 2,00 | | | 152,94 | | |
| 3,00 | | | 152,94 | | |
| 4,00 | | | 110,35 | | |
| 5,00 | | | 96,83 | | |
| 6,00 | | | 82,82 | | |
| 7,00 | | | 66,33 | | |
| 8,00 | | | 49,17 | | |
| 9,00 | | | 34,93 | | |
| 10,00 | | | 24,78 | | |
| 11,00 | | | 18,09 | | |
| 12,00 | | | 13,56 | | |
| 13,00 | | | 10,44 | | |
| 14,00 | | | 8,32 | | |
| 15,00 | | | 6,80 | | |
| 16,00 | | | 5,63 | | |
| 17,00 | | | 4,75 | | |
| 18,00 | | | 4,05 | | |
| 19,00 | | | 3,47 | | |
| 20,00 | | | 3,02 | | |
| 21,00 | | | 2,66 | | |
| 22,00 | | | 2,36 | | |
| 23,00 | | | 2,10 | | |
| 24,00 | | | 1,89 | | |
| 25,00 | | | 1,70 | | |
| 26,00 | | | 1,55 | | |
| 27,00 | | | 1,41 | | |
| 28,00 | | | 1,29 | | |
| 29,00 | | | 1,18 | | |
| 30,00 | | | 1,09 | | |
| 31,00 | | | 1,01 | | |
| 32,00 | | | 0,93 | | |
| 33,00 | | | 0,87 | | |
| 34,00 | | | 0,81 | | |
| 35,00 | | | 0,75 | | |
| 36,00 | | | 0,71 | | |

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| X Coordinates m | Y Coordinates m | Z Coordinates m | Incident Radiation kW/m2 | Lethality Level percent | View Factor |
|-----------------------|-----------------------|-----------------------|--------------------------------|-------------------------------|----------------|
| 37,00 | | | 0,66 | | |
| 38,00 | | | 0,62 | | |
| 39,00 | | | 0,59 | | |
| 40,00 | | | 0,55 | | |
| 41,00 | | | 0,52 | | |
| 42,00 | | | 0,49 | | |
| 43,00 | | | 0,47 | | |
| 44,00 | | | 0,44 | | |
| 45,00 | | | 0,42 | | |
| 46,00 | | | 0,40 | | |
| 47,00 | | | 0,38 | | |
| 48,00 | | | 0,36 | | |
| 49,00 | | | 0,35 | | |