

## Toxic Threat Zone

ALOHA® 5.4.3



**Time:** July 18, 2012 1200 hours AST (user specified)

**Chemical Name:** AMMONIA

**Wind:** 6 miles/hour from E at 3 meters

**THREAT ZONE:**

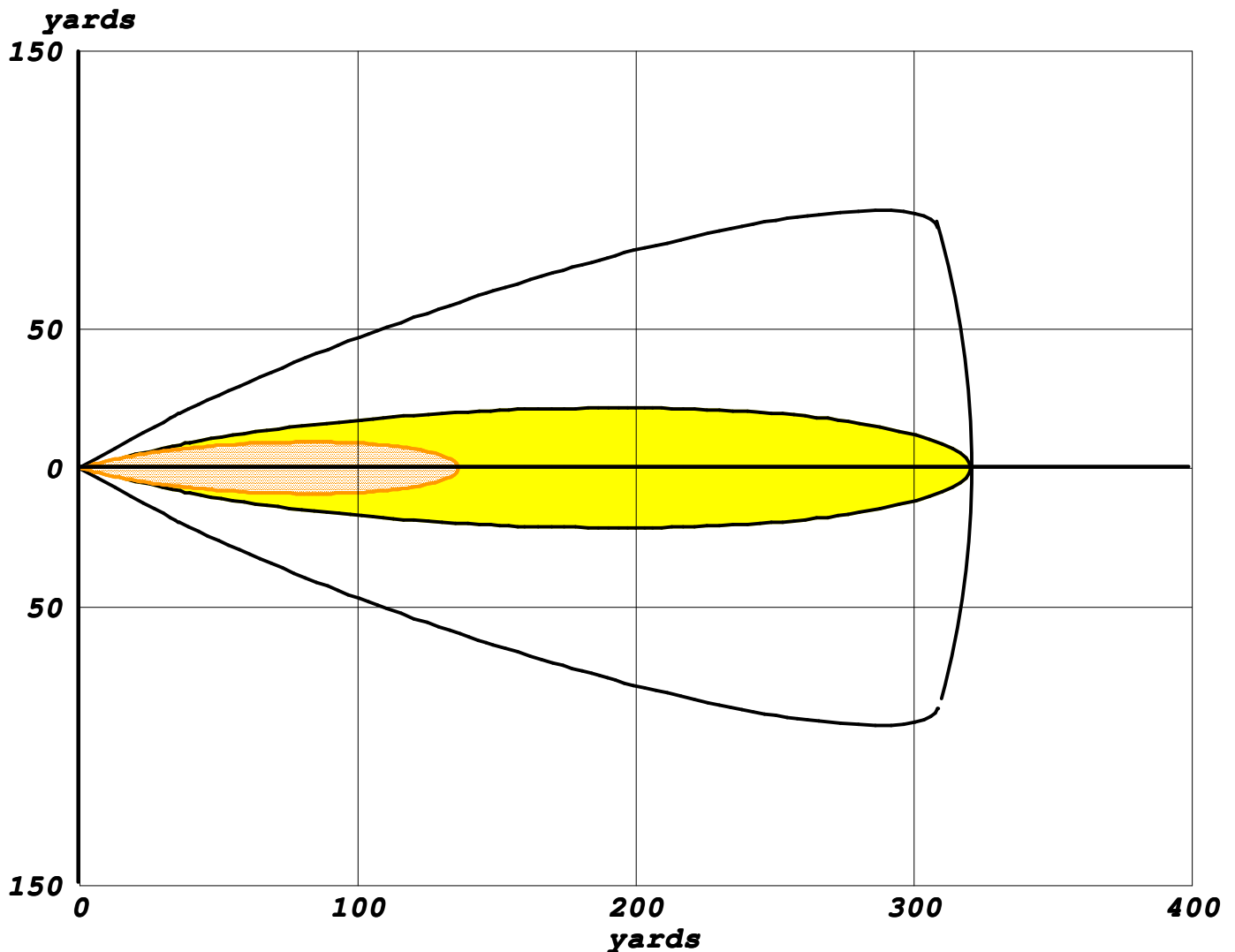
**Model Run:** Gaussian





**Red** : 52 yards --- (1100 ppm = AEGL-3 (60 min))

**Note:** Threat zone was not drawn because effects of near-field patchiness make dispersion predictions less reliable for short distances.

**Orange:** 137 yards --- (160 ppm = AEGL-2 (60 min))

**Yellow:** 321 yards --- (30 ppm = AEGL-1 (60 min))



-  greater than 1100 ppm (AEGL-3 [60 min]) (not drawn)
-  greater than 160 ppm (AEGL-2 [60 min])
-  greater than 30 ppm (AEGL-1 [60 min])
-  Confidence Lines

**SITE DATA:**

**Location:** LUQUILLO, PUERTO RICO  
**Building Air Exchanges Per Hour:** 0.53 (sheltered single storied)  
**Time:** July 18, 2012 1200 hours AST (user specified)

**CHEMICAL DATA:**

**Chemical Name:** AMMONIA **Molecular Weight:** 17.03 g/mol  
**AEGL-1 (60 min):** 30 ppm **AEGL-2 (60 min):** 160 ppm **AEGL-3 (60 min):** 1100 ppm  
**IDLH:** 300 ppm **LEL:** 150000 ppm **UEL:** 280000 ppm  
**Ambient Boiling Point:** -28.2° F  
**Vapor Pressure at Ambient Temperature:** greater than 1 atm  
**Ambient Saturation Concentration:** 1,000,000 ppm or 100.0%

**ATMOSPHERIC DATA: (MANUAL INPUT OF DATA)**

**Wind:** 6 miles/hour from E at 3 meters  
**Ground Roughness:** urban or forest **Cloud Cover:** 10 tenths  
**Air Temperature:** 90° F **Stability Class:** D  
**No Inversion Height** **Relative Humidity:** 80%

**SOURCE STRENGTH:**

**Leak from short pipe or valve in horizontal cylindrical tank**  
**Flammable chemical escaping from tank (not burning)**  
**Tank Diameter:** 6 feet **Tank Length:** 37.8 feet  
**Tank Volume:** 8000 gallons  
**Tank contains liquid** **Internal Temperature:** 90° F  
**Chemical Mass in Tank:** 1.52 tons **Tank is 6% full**  
**Circular Opening Diameter:** .5 inches  
**Opening is 6.00 feet from tank bottom**  
**Release Duration:** ALOHA limited the duration to 1 hour  
**Max Average Sustained Release Rate:** 20.7 pounds/min  
(averaged over a minute or more)  
**Total Amount Released:** 546 pounds  
**Note:** The chemical escaped from the tank as a gas.

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