Arkema Chemical Facility
Potential Release
EPA Response Strategy

Situation: The Arkema Chemical Facility, 18000 Crosby East Gate Road, Crosby, Harris County, TX stores chemicals that are currently at risk of release or explosion due to the facility's inability to maintain refrigeration on the chemical containers. Modeling performed recommends a 1.5 mile evacuation. This evacuation was completed yesterday. The following outlines EPA's response plan following a release.

Facility Information: The Arkema facility stores chemicals including organic peroxides and toxic chemicals. On Site, the facility stores approximately 1 .3 million pounds of organic peroxides and 47,000 lbs. of sulfur dioxide. Chlorine gas (3 100-lb cylinders) are also stored on site. The facility is both a Tier II facility and RMP facility.

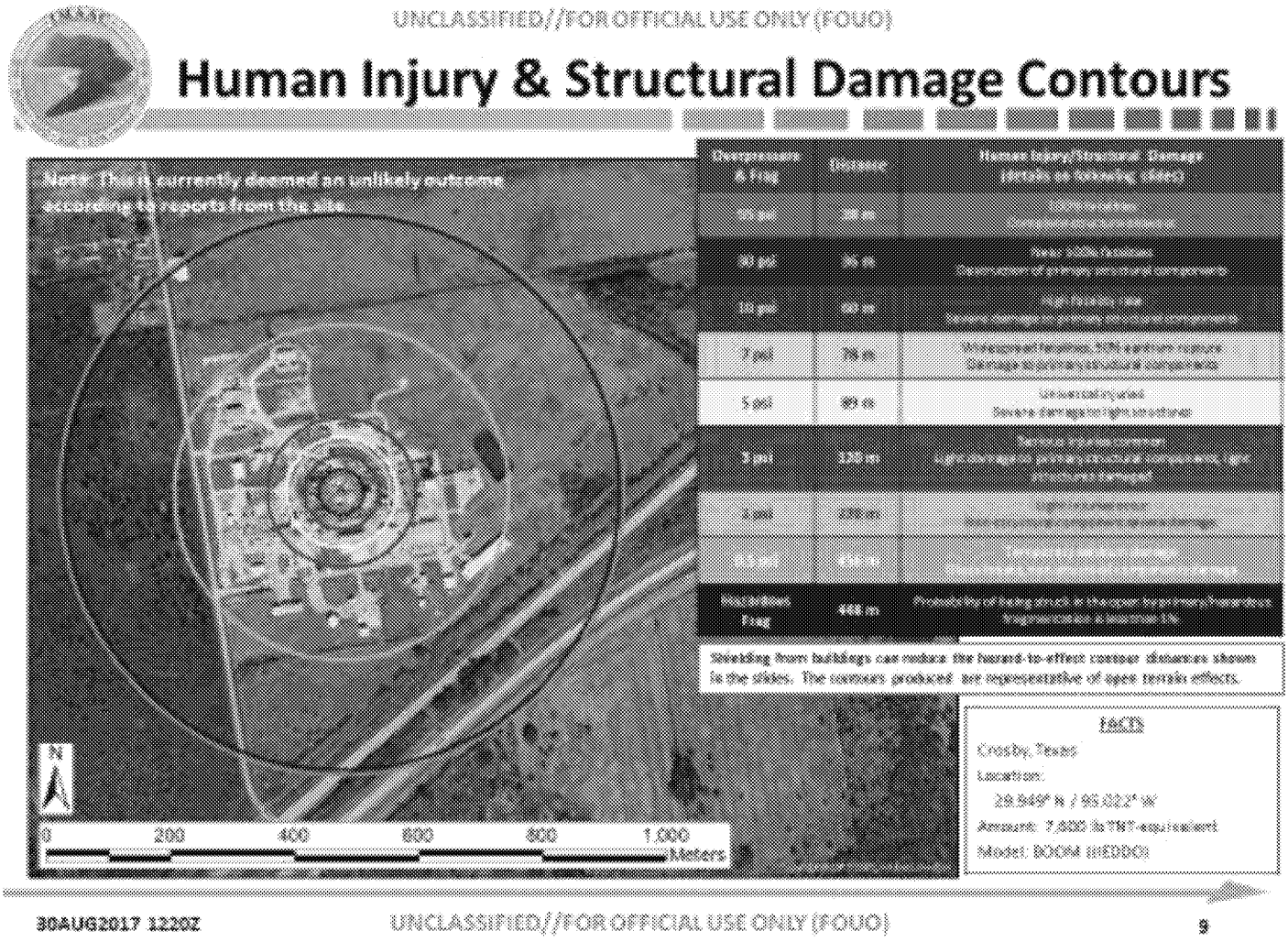
Hazard Assessment: A worst case scenario included in the facility's RMP indicates an endpoint of 23 miles. More specific modeling by NARAC (National Atmospheric Release Advisory Center) recommended a 1.5 mile evacuation zone. This evacuation was implemented yesterday. Sulfur dioxide is a corrosive and poison gas which Is heavier than air.

Possible scenarios: Two possible scenarios are addressed in this document:

1. Explosion: There are no known ignition sources in the area which could cause the organic peroxides to explode. However, if the facility was struck by lightning, the organic peroxides could ignite, resulting in an explosion which could possibly impact several miles. If the entire facility is involved in the explosion, sulfur dioxide would also be released.
2. Meltdown: The damaged container which is storing organic peroxide is in danger of melting. Once this carbon steel begins to melt, the organic peroxide will quickly release into the flood waters and surrounding environment. This will cause the rapid release of concentrated hydrogen peroxide and organic by-products. This hydrogen peroxide can quickly react with the organic waste materials in the flooded areas. This poses a threat of fire and release of volatile organic chemicals.

Recommended EPA Response Strategy

The chemicals which could be released in either of these two events pose threats to both public health and the environment. EPA will coordinate all actions with local emergency officials, TCEQ, and Texas Emergency Management officials

1. If feasible, EPA ASPECT plane will perform overflight to determine if any areas are still in danger of reaction.
2. Assuming access is possible, perform air monitoring beginning at a 1.5 mile radius of the facility to determine a safe work area. Air monitoring strategy will be based on the chemical classes stored at the facility to determine a safe working area. Results will be immediately relayed to Unified Command.
3. Using safe operating practices, including the use of hazardous materials ensembles, determine a safe approach to the facility to assess the damage.

4. Consult with Unified Command and facility representatives to determine if mitigation can be safely performed.
5. Perform air monitoring for all sensitive populations within 3 miles of the facility.
6. Perform sampling as needed once hazard assessment is complete
7. Consult with local officials to allow evacuated citizens to return as soon as possible.