BEXAR COUNTY LOCAL EMERGENCY PLANNING COMMITTEE

Minutes for March 11, 2016

OPENING:

I. **Call to Order:**

The meeting was called to order at approximately 10:10 a.m. by the LEPC Chair Harold Lovejoy. Those in attendance introduced themselves.

II. **Attendance:**

See attached list.

III. **Citizens to be heard:**

None.

IV. **Approval of Minutes:**

Minutes of the February 12, 2016 meeting were distributed to attendees for review.

Walt Daugherty made a motion to accept the meetings minutes as written; the motion was seconded by Willie Davis. Motion was approved.

V. **Financial Report:**

John Hageman provided the information on the financial statement that he created as of February 24, 2016. A copy of the full financial report was emailed out and is attached. To summarize, there was approximately $27 in interest income, and one check for HOTZONE cleared for about $379 and a reimbursement for GoDaddy $215. The current balance is approximately $46,500.

John Hageman noted that the 2-year subscription for GoDaddy is now on automatic withdrawal.

VI. **Old Business:**

Harold Lovejoy opened discussion for the International Hazardous Materials Conference in Baltimore, Maryland on June 16-19, 2016. He identified all of the associated costs with attending, as outlined in Patrick Lewis' proposal provided last month. Hal then asked for any comments from the committee.

Henry Gonzalez, NuStar, said he received approval from his supervisor for their annual contribution of $3000 to LEPC and he hopes to have the check by next month. They

would like to see this contribution go to training, and more specifically the International conference.

Walt Daugherty mentioned that this topic has come up in the past, but there was never an open discussion about it. He requested the information relating to the conference from Patrick Lewis, and remarked that is in his personal opinion that there are three deserving candidates for having their expenses paid by LEPC for attending the International conference. The candidates for which Walt feels have shown dedication to the LEPC are Mike Parsons with SAFD Hazmat, Patrick Lewis with CESO, and William Johnston with BCOEM.

An estimated cost for an attendee has been changed to $2700, which differs from the proposal due to eliminating car rental and adding per diem. The total would be $8100 from the LEPC for the funding for three people to attend the International Hazardous Materials Conference in 2016. The comment was made that since this is the first time for the LEPC to fund this conference, the LEPC should evaluate how this round goes to see if this funding should be provided again in the future. Future candidates for the conference can be brought up later for discussion. It was suggested for the LEPC to document the benefit of providing the funds for the conference in meeting minutes for future use. It was also advised that this funding be correctly identified as being used for conference attendance, and not training.

Walt Daugherty made the motion for the LEPC to fund up to $8100 to pay for three people to attend the International Hazardous Materials Conference in Baltimore, MD on June 16-19, 2016. The motion was amended by Walt to include the three entities to receive a slot for the 2016 conference: BCOEM WMD, CESO Hazmat, and SAFD Hazmat. Walt advised that after the motion passes the logistics will be sorted out at next month's meeting, such as the name of the of the person representing each entity. John Hagman seconded the motion with amendment, and the motion passed with vote.

International Hazardous Materials Conference information can be found online at http://www.iafc.org/hazmat

VII. Committee Reports:

a. HazMat Watchdog Committee: (Mike Parsons, William Johnston, Patrick Lewis, Emily Thompson, Ronnie Hernandez, Johnathan Jones, Charlie Metzger)

Mike Parsons, SAFD Hazmat, presented an incident map of the 11 hazmat runs since February's meeting. Mike discussed each incident as he highlighted them on the map. Majority of the incidents were diesel responses.

Mike Parson stated that there has been a little bit of progress made with towing contracts and nuisance spills. Smaller single vehicle accidents with spills about 20

gallons or less, may have the emergency responder (while providing absorbent) request the towing company put absorbent on the spill. The towing company can put a lien of $50 on the car, to be paid to the towing company when vehicle is picked up by owner, as reimbursement for clean-up costs.

Damon Shadrock, Calumet, advised on a flaring event that occurred at their facility on February 17, 2016. The facility had a problem syncing up a new compressor, resulting in their equipment going into safe mode. The result was a lot of flaring.

b. Training Committee: (Walt Daugherty, Patrick Lewis, William Johnston, Stan Moczgmba)

Walt Daugherty provided a follow-up for A&M fire school and Bexar Metro 911 funding. Two people from Alamo Heights did attend the spring school last week. Funds can be used for industrial and municipal schools. Any other first responder agencies that are interested, need to get their request emailed to Walt.

Joshua Carrillo, Union Pacific, mentioned that Union Pacific offers free training concerning rail and safety for LEPCs and local fire departments.

c. Facility Operator Liaison Committee (RMP/Tier II): (Greg Batts, Willie Davis, Frank Salinas, Lynn Lindsay, Abe Gallegos, William Johnston, Steve Diaz, Joe Thaxton)

Hal Lovejoy noted that Tier2 reports are flooding in. They were due March 1st. You can email Hal with any questions chair.bexarcountylepc@gmail.com.
Hal will request the Tier2 from TCEQ.

d. Exercise Committee: (Henry King, Roger Pollock, Paul Tarter, Willie Davis)

Henry King advised that there will be an active shooter exercise at Wilford Hall on Lackland AFB the last Wednesday of April.

Larry Trevino mentioned that there was an exercise coordination meeting, and attendees were asked to provide information on their planned exercises and if they needed COSA resources or assets. During that meeting approximately 35-40 exercises were identified. COSA is making an effort to consolidate exercises and make partners, to hopefully be less taxing on the resources/teams.

On April 14, 2016 there will be a state organized mass evacuation and sheltering tabletop exercise, with the full-scale exercise occurring on June 8-9, 2016. Full-scale will involve C-130s coming from the valley full of evacuees heading to Austin, SA, and Dallas/FW. The participants will need to be sheltered overnight, and then relocated back to the valley.

On May 16, 2016 the Hurricane Awareness Tour is in San Antonio. NOAA's National Weather Service and partner agencies teaching visitors about weather safety and preparedness, with Hurricane Hunter airplanes on display.

e. Membership Committee: (Greg Batts, Willie Davis, Kyle Coleman)

None.

f. LEPC Website: (Henry Gonzalez, Chair)

Henry Gonzalez commented that GoDaddy account is set up and is a work in progress.

g. THIRA Annex Q: (Jeff Dean, Chair)

Jeff Dean advised that he now has help to assist with the THIRA.

It is believed that the ANNEX Q is up for renewal, which will have to be signed by the Mayor who is the Emergency Director.

h. Community Outreach Committee: (Frank Salinas, Chair)

Larry Trevino advised that the City of San Antonio is in the process of purchasing an application that citizens can download to their phone called Ready South Texas. It will be a quick series application with multiple guides including basic emergency preparedness, terrorism, active shooter, public health, damage recovery, and flooding. They are hoping to have it available by next meeting.

VIII. New Business:

None.

IX. Announcements:

National Rural EMS Conference is at the San Antonio Marriot Riverwalk on April 21-22, 2016. More info at: https://nosorh.org/calendar-events/national-rural-ems-conference/

Annual STRAC Conference on April 28-29, 2016 at the Westin Riverwalk.

2016 Texas Emergency Management Conference hosted by TDEM is at the HBG Convention Center on April 5-8, 2016.

Bay Valley Foods announced that they have a new location off of Hwy 151 next to the SA Food Bank. They are planning a tour and luncheon event on April 7, 2016. For info contact Chad Sim, Plant Manager, at chad_sim@bayvalleyfoods.com .

X. **Adjournment:** The meeting was adjourned at approximately 11:15 a.m. The next LEPC meeting is scheduled for Friday, April 8, 2016 at the Southwest Research Institute (SWRI) starting at 10:00 a.m.

BEXAR COUNTY LEPC FINANCIAL STATEMENT			
SUMMARY OF MONTHLY OPERATIONS*			
Starting Balances	Savings 3 Year Cert. of Deposit Checking	$ 7,908.48 $ 25,450.44 $ 13,738.99	**$ 47,097.91**
CONTRIBUTIONS	None	$ 0.00	**$ 0.00**
Dividends and Interest	Savings CD Monthly Interest Checking	$ 0.00 $ 25.72 $ 1.14	**$ 26.86**
Checks and Fees	379 HotZone, (M Wagner)	$ 379.08	**-$ 379.08**
Transfers, etc.	None	$ 0.00	**$ 0.00**
New Balances	Savings 3 Year Cert. of Deposit Checking	$ 7,908.48 $ 25,476.16 $ 13,361.05	**$ 46,745.69**
***Bank statement ending February 24, 2016**			
PROJECTED INCOME AND EXPENSES			
Planned Assets	None	$ 0.00	$ 0.00
Planned Liabilities	380 GoDaddy.com/J Hageman	$ 215.78	$ 215.78
Transfers, etc.	None	$0.00	$ 0.00
Projected Balances	Savings 3 Year Cert. of Deposit Checking	$ 7,908.48 $ 25,476.16 $ 13,145.27	$ 46,529.91
Submitted by: John P. Hageman, LEPC Treasurer	Signature: John P. Hageman		Date: March 11,2016

Bexar County LEPC
Voting Member Sign-In

DATE: 3/14/16

NAME	SERC CAT	SIGNATURE OR INITIALS
Harold Lovejoy, Chair	CP	
Walt Daugherty, Vice Chair	CV	
John Hageman, Treasurer	FO	
Emily Thompson, Secretary	LEG	
Greg Batts	FO	
Charles Bauer	HO	
Erwin Brown	FO	
Kyle Coleman	EM	
Willie Davis	FO	
Jeff Dean	EM	
Steven Diaz	CG	

Bexar County LEPC
Voting Member Sign-In

DATE: 3/11/2016

Miguel Falcon	HO	
Miguel Fernandez	HO	
Abe Gallegos	FO	
Frank Gautier	EM	
Henry Gonzalez	FO	
Randy Grimes	FO	
Paul Harvey	TP	
Ronnie Hernandez	LEG	
Randy Jenkins	FF	
William Johnston	FF	
Ruth Jones McClendon	SLO	
Henry King	EM	

Bexar County LEPC
Voting Member Sign-In

DATE: 3/11/2016

Billy Lawson	FF	
Patrick Lewis	FF	
Craig Manifold	EMS	
Charles Metzer	TP	
Michael Parsons	FF	
Roger Pollok	HE	
Tom Roach	LE	
Frank Salinas	FO	Damon Shadrock, CSM Sitting in for Frank
Lawrence Trevino	EM	

BEXAR COUNTY LEPC

VISITORS SIGN IN SHEET

DATE: 3/19/16

PRINTED NAME	ORGANIZATION	EMAIL ADDRESS
Amanda Nasto	SARA	anasto@sara-tx.org
JOSHUA CARRILLO	UPRR	jacarril61@up.com
Paul Barrera	SwRI	paul.barrera@swri.org
Chad Sim	Bay Valley Foods / 43LLC	chad_sim@bayvalleyfoods.com
Robyn Gordon	Bayvalley Foods	Robyn_gordon@bayvalleyfoods.com
Jeff Haynes	43LLC	JEFF@43LLC.com
Noreen O. Castellano	Mission Solar Energy	ncastellano@missionsolar.com
Elaine Felten	A. Red Cross	elaine.felten@redcross.org
Veronica Williams	SAWS	Veronika.Williams@SAWS.org

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March 2016

Region 6 LEPC Update

Steve Mason, EPA Region 6
mason.steve@epa.gov
Hilary Gafford, Weston Solutions
hilary.gafford@westonsolutions.com

This month we are announcing LEPC workshops for 2016, requesting feedback from LEPCs across Region 6 to help improve our preparedness, and announcing updates from PHMSA Grants and EPA.

-Steve and Hilary

LEPC Workshops 2016

EPA Region 6 will host 32 LEPC workshops throughout New Mexico, Oklahoma, Texas, Arkansas, and Louisiana.

LEPC ...safety in knowledge®

Workshops Will Be:

- *May-September of 2016*
- *Open to the public*
- *Free of charge*

LEPC members, local and regional emergency responders and planners, and industry will benefit from the newly updated series of presentations.

Presenters will include state EPCRA/SERC representatives, EPA, OSHA, and DHS.

We will announce the workshop agenda, exact dates and locations, and instructions for registration in the next month or so.

LEPC SURVEY by NASTTPO

The National Association of SARA Title III Program Officials Needs Your Feedback!

A Message from Tonya Ngotel, NASTTPO President:

"It is with honor and pride that I tell you that NASTTPO created a LEPC Forum committee in Houston this last October.

This group was developed to identify and enhance NASTTPO's mission in information sharing and LEPC support. At the direction of John Wisner, PIMA AZ County OEM & LEPC, the committee developed a survey to assist NASTTPO in moving our mission forward and generating new ideas for future projects and conferences.

The more LEPC members that complete it, the better picture we will have.

For those who are not NASTTPO members, please visit our web site for more information and consider joining us": www.nasttpo.com

Please take some time to visit the website and participate in the survey.

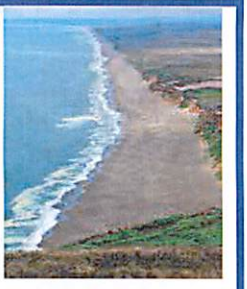
LEPC Survey Closes 17 April 2016

https://www.surveymonkey.com/r/VV7N6QY.

Thanks to the Oklahoma DEQ and SERC for hosting the survey – we couldn't have made this possible without the endless hours you've contributed.

Disaster Planning in Texas
NDOW Call for Coastal Staging Areas

The Natural Disaster Operation Workgroup in Texas (NDOW-Texas) is a group of state and federal stakeholders, committed to the optimal engagement of response resources, and to effective planning for natural disaster response in the State of Texas.



For more information about NDOW-Texas and training opportunities, visit http://ndow.net .

LEPCs and Emergency Managers Along the Texas Gulf Coast:

In preparation for the upcoming Hurricane Season, NDOW-Texas is currently looking for areas to stage post-hurricane response field operations in support of ESF-3 and ESF-10.

Sites Needed: Field Operational Camps

NDOW seeks to establish a planned location in each county for Field Operational Camps. The camps will be used to stage command posts, heavy equipment, and living quarters (travel trailers) for government and contractor personnel. These areas should be located outside of any major surge areas (minimum of 1.5-2 miles inland from beachfront). Unified Command will set up the camps after the water recedes. Airports, and city/county/state parks are examples of locations which have served well in the past.

Sites Needed: Hazardous Waste Staging

NDOW is also looking for suitable areas to stage household hazardous waste (HHW), orphaned containers, and commercial hazardous waste (ASTs, cylinders, etc.) collected during post-hurricane operations. Hazardous waste staging areas are separate from the Field Operational Camps.

Site Criteria, Each Coastal County:

1. One 5-6 acre area for Field Operational Camp
2. One 5-6 acre area for Hazardous Waste Staging
3. Located outside of major surge areas / flood zones
4. Easy access to major roadways/highways
5. Electricity/water hookups if possible
6. Paved Areas

To Advise on Potential Sites, Please Contact:

Derek Ragon
Logistics Coordinator, U.S. EPA Region 6
214-665-7362
ragon.derek@epa.gov

Eric Paisley
Logistics Coordinator, U.S. EPA Region 6
214-665-6405
paisley.eric@epa.gov

FAST ACT CHANGES – Local Effects

Changes to PHMSA Hazmat Grants within the Fixing America's Surface Transportation (FAST) Act

Courtesy of the HMEP Grants Team at U.S. DOT / PHMSA

On December 4, 2015, President Obama signed the Fixing America's Surface Transportation (FAST) Act.

FAST Act is five-year legislation to improve the Nation's surface transportation infrastructure, including our roads, bridges, transit systems, and rail transportation network. The bill reforms and strengthens transportation programs, refocuses on national priorities, provides long-term certainty and more flexibility for states and local governments, streamlines project approval processes, and maintains a strong commitment to safety.

The FAST Act affects the Hazardous Materials Emergency Preparedness (HMEP) Grant program in several ways, establishes new grant opportunities, and promulgates new SERC requirements.

HMEP Grant Program Changes:

- Planning and training grants are combined into one grant.
- The reference to "in a fiscal year" has been removed.
- Removal of the 75% pass through requirements for planning and training.
- Addition of a requirement that the recipient agrees to have an auditable accounting system.
- Addition of a requirement that the Secretary consider "the past record of the State or Indian tribe in effectively managing planning and training grants."

New Community Safety Grants:

This is a competitive program for making grants to non-profit organizations for:

- Conducting national outreach and training programs to assist communities in preparing for and responding to accidents and incidents involving the transportation of hazardous materials, including Class 3 flammable liquids by rail.
- Training State and local personnel responsible for enforcing the safe transportation of hazardous materials, including Class 3 flammable liquids.
- This grant is to be up to $1M, but will not be derived from registration fees.

FAST ACT CHANGES – Local Effects *continued*

New SERC Requirements – Reporting High Hazard Flammable Rail Shipments

New SERC reporting requirements to locals include:

- Each Class I railroad must provide advanced notification and information on high-hazard flammable trains to each State emergency response commission, consistent with the notification content requirements in Emergency Order Docket No. 9 DOT–OST–2014–0067
- Each applicable State emergency response commission must provide to a political subdivision of a State, or public agency responsible for emergency response or law enforcement, upon request of the political subdivision or public agency, the information the commission receives from a Class I railroad pursuant to paragraph (3), including, for any such political subdivision or public agency responsible for emergency response or law enforcement that makes an initial request for such information, any updates received by the State emergency response commission.

For Questions on PHMSA Grants, Contact

The HMEP Grants Team
The Hazardous Materials Emergency Preparedness (HMEP) Grant Program
US Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Hazardous Materials Safety
HMEP.Grants@dot.gov
(202) 366-1109 phone
(202) 366-3753 fax

EPA Office of Land and Emergency Management

~~OSWER~~ OLEM

EPA has retired the name OSWER (Office of Solid Waste and Emergency Response), and the program has been given the new title of Office of Land and Emergency Management, or OLEM.

This action is being taken to more accurately reflect the nature of the work that this office does to protect human health and the environment, and the name change will not affect any of the programs which fall under the office.

For more information on the name change, and to read about what the EPA OLEM programs, visit:

http://www.epa.gov/aboutepa/about-office-land-and-emergency-management-olem

State EPCRA / LEPC Coordinators and SERC Contacts

Arkansas	Kenny Harmon	501-683-6700	kenny.harmon@adem.arkansas.gov
Louisiana	Gene Dunegan	225-925-6113	gene.dunegan@dps.la.gov
New Mexico	Henry Jolly	505-476-6240	henry.jolly@state.nm.us
Oklahoma	Tom Bergman	405-702-1013	tom.bergman@deq.ok.gov
	Bonnie McKelvey	405-521-2481	bonnie.mckelvey@oem.ok.gov
Texas	Bernardine Zimmerman	800-452-2791	Bernardine.zimmerman@tceq.texas.gov

Emergency Response Numbers

Arkansas Dept. of Emergency Management	800-322-4012
Louisiana State Police	877-925-6595
New Mexico State Police	505-827-9126
Oklahoma Dept. of Environmental Quality	800-522-0206
Texas Environmental Hotline	800-832-8224
National Response Center	800-424-8802
EPA Region 6	866-372-7745
CHEMTREC	800-424-9300

- The articles herein are provided for general purposes only.
- EPA does not accept responsibility for any errors or omissions or results of any actions based upon this information.
- Please consult the applicable regulations when determining compliance.
- Mention of trade names, products, or services does not convey, and should not be interpreted as conveying official EPA approval, endorsement, or recommendation.

Flood Preparedness
Recommended Best Practices

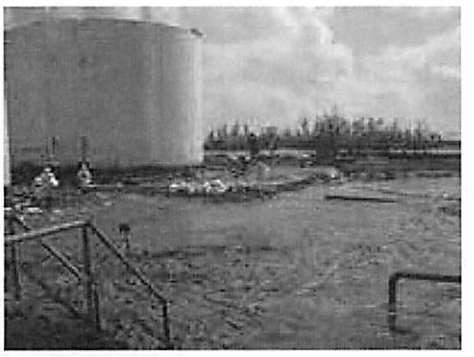
Region 6 RRT

- State of Arkansas
- State of Louisiana
- State of New Mexico
- State of Oklahoma
- State of Texas
- U.S. Environmental Protection Agency
- U.S. Coast Guard
- U.S. Department of Agriculture
- U.S. Department of Commerce/NOAA
- U.S. Department of Defense
- U.S. Department of Energy
- U.S. Department of Health and Human Services
- U.S. Department of the Interior
- U.S. Department of Justice
- U.S. Department of Labor
- U.S. Department of Transportation
- Federal Emergency Management Agency/DHS
- U.S. General Services Administration
- U.S. Nuclear Regulatory Commission
- U.S. Department of State

Due to the large number of spills generated by hurricanes Katrina and Rita, the RRT-6 Executive Committee charged the Science and Technology Committee to assess the reasons why, when subjected to the same set of circumstances, some above ground storage tanks failed and others did not. Nearly four years later following the floods in Colorado, Texas and elsewhere, the Response Committee reviewed lessons learned to understand how to best safeguard cylinders, containers and other tanks against these types of events. The results of these two efforts are presented here as recommended best practices for flood preparedness.

Aboveground Storage Tanks

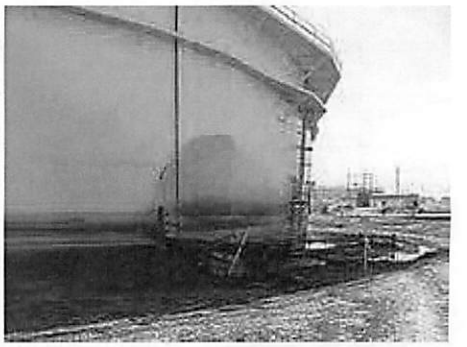
After looking into the spills caused by the major hurricanes of 2005, it was found that the aboveground storage tanks which had failed did so due to one of three reasons. These were: 1) exposure to storm surge, 2) exposure to flooding, or 3) impact from debris. Tank failure took the form of flood induced displacement (floating), shell buckling or rupturing of the tank.



1) Storm Surge. This abnormal rise of the sea is created as water pushes towards land due to an incoming hurricane or tropical storm. A storm surge's severity is affected by the shallowness of a water body and the timing of the tides. A storm surge can penetrate well inland from the coastline. During Hurricane Ike in 2008, the surge moved inland nearly 30 miles in some parts of SE Texas and SW Louisiana. During Hurricane Katrina, the storm surge was measured at over 28ft.

2) Flooding. While flooding may occur at any time, heavy rainfall ahead of a hurricane or tropical storm can cause problems well inland. As heavy rain accumulates, an area's ability to shed water diminishes and flood threats can quickly build. Flooding can also be caused by rapidly melting snow, backed-up storm drains, compromised levees or saturated ground due to extended periods of rain. During Hurricane Isaac in 2012, heavy rainfall overwhelmed protection systems and resulted in over 7ft of water in some areas.

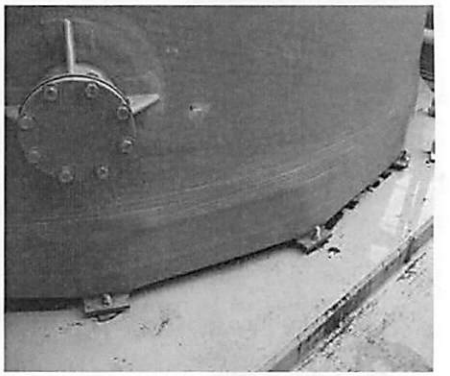
3) Debris. Storm generated debris is a common hazard and difficult to safeguard against as it can be brought onto the facility by the storm or be created by gear and other miscellaneous items already there. The greatest debris threat comes from when a tank has begun to float (becoming "debris") and threatens to damage other tanks. This specific threat underscores the need to prevent a tank from floating in the first place.



In those instances where an aboveground storage tank successfully survived exposure to these three hazards, the following was discovered:

- The tank had a greater height of product inside than the floodwaters outside and/or;
- The tank had been securely anchored to its foundation

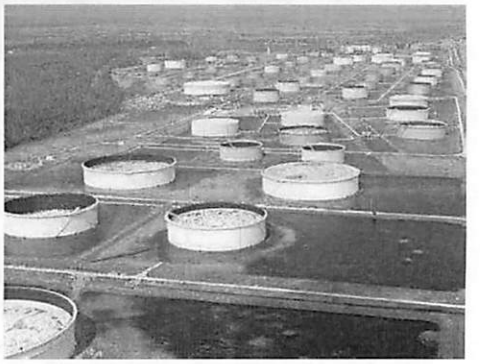
As a general rule of thumb, to avoid floating and reduce the chances of a tank buckling or rupturing, the height of the product inside should be at least equivalent to, but preferably greater than, the height of the water level outside. The exact amount needed to prevent floating, buckling or rupturing will vary depending on the product's density. For example, a tank of gasoline would require higher content volume than a tank of asphalt due to gasoline's lower density.



Best Practices

- Prior to the storm, empty tank of product and fill entirely with water.
- If removing the product is not possible, add more product to the tank so its height is 3-6 feet higher than the expected storm surge or predicted reach of flood water. Close valves associated with piping and dispensing
- Anchor tanks and all piping to prevent uplift or floatation
- Use stiffener rings to prevent buckling from storm surge and wind loads
- To the greatest extent possible, remove or secure all possible projectile hazards from the facility grounds
- Ensure all storm drains and dewatering intakes are clear and free of debris.
- Shut off the power to the fuel system
- Inventory and record the level of product in each tank to account for any loss or water entry
- Conduct a detailed risk assessment of the facility and evaluate the impact of mitigation strategies; include these assessments in the Spill Prevention, Control and Countermeasure Plan, Facility Response Plan, Risk Management Plan or other pollution prevention plan, as applicable. Develop a detailed timeline for preparing tanks in advance of an event

Here are some additional steps to consider:



- Move product out of the flood location; sell product from those stock tanks which are accessible by truck
- Seal thief hatches with locks and sand-bags
- Modify vent lines on the tanks by placing a check valve at the exit point so flow can only go inward
- Stay in contact with responsible authorities such as the US Army Corps of Engineers, US Coast Guard, EPA, state and local agencies. Monitor water levels closely
- Alert the local and state health departments if there has been a release or discharge
- Facility personnel will need to know the hazards involved; this may require an assessment to identify spilled or released substances. Sampling, monitoring, as well as personal protective equipment may also be required (for more information, see OSHA's Hurricane eMatrix)

Cylinders, Drums, and other Tanks and Containers:

Steps should also be taken to safeguard compressed gas cylinders, containers and other storage tanks during a storm or flooding event. Cylinders and tanks holding gases or toxic chemicals such as propane, anhydrous ammonia, bulk liquid fertilizer and pesticides can become a serious hazard if damaged. Risks include the release of flammable or toxic gas into the atmosphere, fire, or explosion. To reduce these risks, follow these best practices before and after a flood event.

Best Practices: Before the event

- Move small portable tanks to higher ground, ensure valves are tightened. Do not leave tanks in unventilated sheds or buildings
- Palletize individual compressed gas cylinders together using straps, chains or rope and move to higher ground
- Larger storage tanks on wheels should be disconnected and also moved to higher ground with all valves tightened, locked and secured
- If moving a larger storage tank to higher ground is not possible, secure the tank to an immovable object
- Lash storage containers together, then anchor and secure in the same manner as a large storage tank
- To prevent underground tanks from being hydrostatically lifted, fill completely with either product or water. Secure all openings to the tops of the tanks, ensuring that the fill cap, vapor recovery cap, and tank probe are all sealed or capped. Shut off the power to the fuel system
- Close the shear valves below the dispensers on each underground tank's pressurized piping system. Inventory and record the level of product in each underground tank to account for any loss or water entry
- Any tanks left online for last minute use should be secured and the supply valve shut off prior to the arrival of the storm or flood waters
- Be sure to avoid securing tanks, cylinders, or containers to power or telephone poles
- Inventory all stored products and have this available for response personnel post-event
- Accelerate or postpone any product shipments as the timeline of the event demands
- **Ensure the facility name, contact phone number and contents are prominently displayed on all tanks, cylinders and containers**

Best Practices: After

- Carefully check all tanks, cylinders and containers for damage or leaks
- Look specifically for dents, torn or disconnected supply lines, broken valves, or evidence that its condition is compromised in any way
- Conduct a post-event inventory; report any discrepancies
- Use certified inspectors, as required, to inspect tanks and equipment before reconnection and use
- Alert the local and state health departments if there has been a release or discharge

General Flood Loss Prevention:

Best Practices: Before the event

- Separate and make safe all water-reactive chemical products and flammable liquids. In case of spillage, they would create a pollution issue and a fire hazard with potentially catastrophic consequences
- If possible, make sure that vents from tanks and containers are extended above the maximum anticipated flood level
- Raise facility utility equipment above the maximum anticipated flood level. This equipment might include transformers, switchgear, electrical cabinets, gas and oil control valves, critical control equipment and critical drive motors
- Avoid installing critical equipment (such as computer servers) in basements or other flood-prone areas of the facility
- Close any unnecessary building openings with masonry and seal any cracks in floors and walls with hydraulic cement
- Check for the possibility of water entering into buildings from backup of sewer or drainage lines. Provide valves or check valves on underground sewer or drainage lines to prevent flood water from backing up into the building
- Indicate valve and hydrant positions on walls or on indicating panels at a level higher than the maximum anticipated flood level
- Consider constructing a reinforced concrete floodwall or earthen levee to protect the facility
- Provide sandbags or other provisional alternatives to protect window and door openings

Best Practices: After

After the storm, contact local emergency organizations as needed (e.g., fire department, emergency management) and those companies able to provide services and equipment for cleanup, salvage or alternative production. If the entire region was subjected to flooding, such services will be in heavy demand.

Once cleanup operations are completed, a more in-depth assessment of flood damage to equipment will be necessary. The degree of damage to mechanical or electrical equipment may not be immediately apparent. A quick check of equipment such as transformers, compressors and electric motors may lead to a hasty conclusion that the flood did little damage. Here are some examples of damage that may not be readily observed after a flood:

- Compressor intakes filled with water
- Water contaminated oil in transformers
- Electric motors with water-soaked and debris-filled windings
- Large machines which may be misaligned due to undetected damage
- Foundations of buildings and machines damaged from water washout
- Loss of potable water
- Damage to telephone lines or roads to the facility

Report Oil or Chemical Spills to the National Response Center: 800-424-8802

This document does not substitute for specific agency regulations, nor is it a regulation itself. It cannot impose legally binding requirements on federal departments/agencies, states, or the regulated community, and may not apply to a particular situation based upon circumstances. This guidance does not represent any final department/agency action, and may change in the future, as appropriate.