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Texas Commission on Environmental Quality

Performance Standards for Safety at Storage Vessels Program - RPN 2022-015-338-CE.

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My name is Shiv Srivastava, policy researcher at Fenceline Watch, a community-based organization located in the East End of Houston, Tx, dedicated to eradicating multigenerational toxic harm faced by fenceline communities. We thank the Texas Commission on Environmental Quality for the opportunity to submit comments on Performance Standards for Safety at Storage Vessels Program - RPN 2022-015-338-CE.

Houston is home to the nation's largest petrochemical complex¹. Our communities are surrounded by oil, gas, and petrochemical infrastructure. In March 2019, on Saint Patrick's Day, 13 aboveground storage tanks at the Intercontinental Terminals Company (ITC) in Deer Park caught fire. The fire produced a plume of black smoke that measured 47 miles in length and 17 miles wide²; it darkened the sky over our community and across the Houston skyline. The fire burned for days. This accident occurred only 19 months after the aboveground tanks surrounding communities in Houston's East End failed during Hurricane Harvey, spilling hundreds of thousands of pounds of cancer-causing benzene into the Manchester community. Two years later winter storm Uri would lead to additional unintended emissions from failure of infrastructure³. SB 900, introduced in the aftermath of the ITC fire is aimed at addressing the issues that have led to the failures experienced by aboveground storage vessels around the state, and safeguarding our ground and surface water when accidents and natural disaster occurs.

¹<https://www.colliers.com/en/news/houston/petrochemical-and-plastics-industry-2019-houston-economic-outlook#:~:text=Houston%20Ship%20Channel%20recognized%20as%20the%20largest%20petrochemical%20complex%20in%20the%20U.S.,-By%20Lisa%20Bridges>

²<https://www.houstonpublicmedia.org/articles/news/2019/03/21/325995/shelter-in-place-in-deer-park-gale-na-park-due-to-increased-levels-of-benzene-from-itc-fire/>

³<https://www.theguardian.com/us-news/2022/feb/03/texas-disaster-pollution-spikes-monitoring-often-unnecessary>



TCEQ's proposed Aboveground Storage Vessel Safety Program takes the directive put forth by SB 900 in order to provide regulatory oversight of the nearly 36,000 above ground storage vessels in Texas. We request TCEQ to adopt as part of the purpose of the Aboveground Storage Vessel Safety Program the establishment of a protective standard for those communities co-located within 3 miles of aboveground storage vessels.

Our comments will focus upon proposed exemptions, increasing transparency, and frequency of inspections.

1. Exemptions

The proposed rules contain a number of exceptions to the new Aboveground Safety Vessel Safety Program that put surface and groundwater safety at risk in the event of accidents and natural disasters. Specifically:

- a. Proposed paragraph (5) states:

"It should be noted that the petrochemical plant definition does not include a facility that manufactures "allied chemical products" or a facility, other than one that produces a basic or an intermediate chemical, that generates any chemical as a waste product or a by-product."

Facilities that produce those chemicals deemed as "allied chemical products" should be subject to this new rule. If a facility has a storage tank with potentially hazardous material it should be made to conform to safety standards that protect surface and groundwater in the event of chemical disaster or weather events

- b. Proposed paragraph (4) states:



“Proposed paragraph (4) provides an exemption for storage vessels that are operating above 0.5 pounds per square inch gauge (psig). To determine status of this exemption the owner or operators should either: measure the operating pressure of the storage vessel with a pressure gauge located in the vapor space of the vessel or calculate the operating pressure as the total mixture vapor pressure at the storage temperature converted to gauge pressure. It should be noted that the executive director may ask for information that proves that the vessel is exempt from the standards found in this chapter.”

Exemptions for storage vessels operating above .5 psig should not be included in the final rule.

c. Proposed paragraph (5) states:

“Proposed paragraph (5) provides an exemption for heated vessels. For this exemption to apply, the storage vessel must be heated using an external heat source. This heat source could include but is not limited to, steam, electric heating elements, or a heat medium such as hot oil. A storage vessel in which the process fluid being received is above ambient temperature and/or storage in an insulated vessel that is not heated using an external heat source would not be considered a heated vessel.”

Exemptions for heated vessels should not be included in the final rule.

d. Proposed paragraph (6)

“Proposed paragraph (6) provides an exemption for intermediate bulk containers or similar vessels that can be moved within a facility. It is the executive director’s understanding that this exemption would apply to vessels that are equal to or exceed the 21,000 gallon applicability requirement and are designed to be mobile. For example, ‘frac tanks’ could meet this exemption if they are not being used as permanent storage.”

Exemptions for mobile and intermediate bulk containers should not be included in the final rule. Mobile storage tanks exceeding 21,000 gallons of regulated substances should not be exempted from the new rules. The risk posed to water safety and community remains the same.

e. Proposed subsection (b)

Proposed subsection (b) provides that the owner or operator of an affected storage vessel may submit a request for a specific storage vessel to be exempted from the requirements of this chapter...The request



must demonstrate that the storage vessel presents a sufficiently low risk of floods, storm surges, hurricanes, accidents, fires explosions, or other hazards such that it does not warrant regulation under this chapter. If an exemption request is submitted, the storage vessel is considered subject to any applicable requirements until the executive director has provided written approval for the requested exemption. The executive director will determine what is a “sufficiently low risk” and does not foresee this type of exemption being widely requested or approved.”

The proposed exemptions in §338.3 paragraph 10 subsection (b) should not be included in the final rule. Climate research indicates that hurricanes along the Texas Gulf Coast are expected to grow in severity and frequency in the coming years⁴. Specifically, storage vessels along the Houston Ship Channel have experienced failures over the last several years⁵, spilling hundreds of thousands of pounds of cancer causing toxics into communities residing along the fenceline of aboveground storage vessels⁶ caused by natural disasters. Additionally, the Houston area experiences explosions⁷, fires⁸ and other accidents with regularity. No above ground storage tanks along the Texas Gulf Coast could be considered “sufficiently low risk” of floods, hurricanes, accidents, fire explosions or other hazards.

f. Proposed subsection (c)

Proposed subsection (c) states that upon the request of the executive director, an owner or operator claiming to be exempted under subsection (a) or (b) of this section must provide appropriate documentation or other information in a timely manner to support the exemption claim.

Proposed subsection (c) of this section should not be included in the final rule as the exemptions outlined in subsections (a) and (b) do not assure safety of groundwater or surface water in the event of accident or natural disaster.

⁴ Balaguru, K. *et al.* (2023) “Increased U.S. Coastal Hurricane Risk under climate change,” *Science Advances*, 9(14). Available at: <https://doi.org/10.1126/sciadv.adf0259>.

⁵<https://www.chron.com/business/energy/article/Harvey-toppled-storage-tanks-in-the-oil-patch-12191055.php#:~:text=Soon%20after%20Hurricane%20Harvey%20reached,100%20miles%20west%20of%20Houston.>

⁶<https://www.reuters.com/article/us-storm-harvey-spills/oil-and-chemical-spills-from-hurricane-harvey-big-but-dwarfed-by-katrina-idUSKCN1BQ1E8>

⁷ <https://abc13.com/what-caused-pasadena-explosion-tanker-truck-explodes-plant-fire-ineos/12995593/>

⁸<https://www.houstonpublicmedia.org/articles/news/energy-environment/2021/12/23/416192/at-least-4-injured-after-baytown-refinery-explosion-sheriff-says/>



The final rule should exclude the above exemptions as they fail to establish a protective standard for the public in the event of tank failure due to accident or natural disaster. These exemptions are potential loopholes that owner/operators of regulated tanks may use to circumvent the intent of SB 900 and the Aboveground Storage Vessel Safety Program. If these exemptions are included in the final rule we request the executive director provide to the public the following to ensure transparency in the commission's decision making process regarding ASVS exemptions :

1. Make publicly available any documentation provided by owner/operators seeking exemption from the new vessel safety program including:
 - a. Exemptions provided by paragraph (4) of §338.3 by owner operators of storage vessels operating above 0.5 pounds per square inch gauge (psig)
 - b. Exemptions provided by paragraph (5) of §338.3 exempting heated vessels using an external heat source.
 - c. Exemptions provided by paragraph (6) of §338.3 exempting intermediate bulk containers or similar vessels that can be moved within a facility equal to or exceeding 21,000 gallons (mobile tank exemption).
 - d. Exemptions provided by subsection (b) of §338.3 providing owner/operators of an affected storage vessel the ability to request exemptions from requirements of the ASVS program.
2. TCEQ should provide a clearly defined standard for what constitutes “sufficiently low risk” for exemptions provided by subsection (b) of §338.3
3. Make publicly available online and in writing all exemptions provided by proposed subsection (c) §338.3

g. Proposed rule §33.5 paragraph (3) subsection (d) states:

“An owner or operator may request approval from the executive director that the necessary modifications or retrofits are not technically feasible.”

TCEQ should not allow owner/operators to seek exemptions for retrofitting aboveground storage tanks or modifications. The final rule must assure that all tanks, even those prior to September 1, 2027 comply with the new rules.

2. Increasing Transparency through proposed Standards



- a. Proposed rule §338.5 provides performance standards taken from national consensus standards from the American Petroleum Institute (API), as outlined in SB 900:

Standard 653: Tank Inspection, Repairs, Alteration, and Reconstruction, the commission shall require adherence to the protocol to applicable tanks included in this standard for the following:

- (i) Section 4.3: Tank Shell Evaluation;*
- (ii) Section 4.4: Tank Bottom Evaluation;*
- (iii) Section 4.5: Tank Foundation*

Evaluation;

- (iv) Section 6.2: Inspection Frequency*

Considerations;

(v) Section 6.3: Inspections from the Outside of the Tank;

(vi) Section 6.4: Internal Inspection, if applicable in accordance with Section 6.3;

(vii) Section 8: Design Considerations for Reconstructed Tanks; and

(viii) Section 9: Tank Repair and Alteration;

(B) from API Standard 2350 or API Recommended Practices 2350: Overfill Protection for Storage Tanks in Petroleum Facilities, the commission shall include the following critical

safety elements for storage vessels included in this standard:

(i) Section 4: Overfill Prevention Systems, including management systems and operational procedures before and after product receipt as applicable;

(ii) Section 5: Overfill Prevention Systems, including requirements for manual or automated overfill prevention systems as applicable, including use of remote operated shutoff valves;

(iii) the requirements referenced in Subparagraphs (i) and (ii) only apply to atmospheric tanks as specified in API Standard 2350; and

(iv) API 2350 assessment protocol to determine how to manage overfill through engineered controls,



administrative controls, and hazard class in applicable quantities; and

American Petroleum Institute standards are copyrighted material belonging to the American Petroleum Institute, thus API Standard 653 and API Standard 2350 are not freely available to the public. These standards can only be accessed by paying several hundreds of dollars for either a digital or hardcopy⁹. The proposed safety standards that undergird the new rules being put are effectively paywalled off limits from our community. We request that TCEQ make available to the public API Standard 653 and API Standard 2350. The state of Texas has deemed it appropriate to use industry consensus standards to formulate safety rules that TCEQ is charged with formulating; as such, communities that are directly impacted by these rules must have access to these standards.

- b. Proposed subsection (b) paragraph (1) of §338.5 incorporates by reference, 40 Code of Federal Regulations (CFR) Part 68, Chemical Accident Prevention Provisions. Proposed subparagraph (C) incorporates 40 CFR §68.1, stating:

“[establishing] the general requirements for Programs 1, 2, and 3. If the referenced section requires that a plan or document be submitted, this will either be required under the certification requirements found in §338.21 or will be captured as a recordkeeping requirement in §338.9”

Final rule §338.5 should make available to the public online and in writing documentation required by CFR §68.12 General Requirements parts (a), (b), (c), and (d) including:

1. (b) (1) worst-case release scenario for the process(es), as provided in § 68.25; document that the nearest public receptor is beyond the distance to a toxic or flammable endpoint defined in CFR §68.22(a); and worst-case release scenario as provided in §68.165.
2. (b) (2) Complete the five-year accident history for the process as provided in § 68.42.
3. (b) (3) Documentation that ensures response actions have been coordinated with local emergency planning and response agencies.
4. (c) (2) Documentation of a hazard assessment as provided in CFR§68.20 through §68.42
5. (c) (5) Documentation of implement an emergency response program, and conduct exercises, as provided in CFR §68.90 to §68.96.

⁹ https://global.ihc.com/doc_detail.cfm?document_name=API%20STD%20653&item_s_key=00121066



c. We request that the TCEQ make plans and documents required to be submitted under Programs 1, 2 and 3 as required in CFR §68.12 be made publicly available online and in writing available at local libraries or by request. Many of these plans are incorporated into subpart G of §68.150 however this information is not readily available online or by request to the community. In incorporating these plans the commission has the opportunity to greatly increase transparency for communities that are co-located with regulated aboveground storage vessels by providing access to hazard assessments, response programs, emergency planning and response information, as well as five year accident history to those who are most impacted by tank failure caused by accident and natural disaster.

d. We request that TCEQ make publicly available as outlined in proposed subparagraph (E) CFR §68.48 Safety Information including:

1. (a)(1) Safety Data Sheets
2. (a)(2) Maximum intended inventory of equipment in which the regulated substances are stored or processed;
3. (c) update the safety information if a major change occurs that makes the information inaccurate.

e. Additionally, we request that TCEQ make publicly available documents as outlined in proposed subparagraph (F) CFR §68.50 Hazard Review and request that TCEQ include in the final rule §338.5 CFR §68.58 Compliance Audits.

f. Proposed subparagraphs (H), (I), (J), (K), (L), (M), and (O) incorporate 40 CFR §68.65, §68.67, §68.73, §68.75, §68.77, §68.90, §68.93, §68.95, §68.96, §68.150, §68.151, §68.152, §68.155, §68.160, §68.165, §68.168, §68.170, §68.175, §68.180, §68.185, §68.190, §68.195, §68.200, §68.210, §68.215, §68.220 covering a wide range of reporting and documentation requirements. We request that TCEQ make publicly available this information online, in writing and at public libraries.

Proposed paragraph (2) incorporates 40 CFR §112.7 General Requirements for Spill Prevention, Control, and Countermeasure Plans; requiring:



“plan...available in writing, if the plan does not follow the specifically listed sequence specified in the plan, an equivalent plan must be approved and followed. The plan must also address when additional facilities or procedures, methods, or equipment are not yet fully operation by providing details of installation and operational start-up information.”

g. We request that TCEQ make these written plans available to the public. We also request that if an equivalent plan is requested by owner/operator of regulated vessel that those documents be made available to the public.

Proposed subparagraph (H) incorporates 40 CFR §112.20 Facility Response Plans, requiring:

“...facility, which due to its location, could be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, must prepare a facility response plan. This plan may be required to be submitted to the executive director during the facilities certification and will be required to be kept on-site per the recordkeeping requirements.”

We request that TCEQ make these records available to the public online and in writing.

3. Inspection

a. The March 2019 Intercontinental Terminal Company was the catalyst for SB 900 and serves as the legislation that the ASVS program is predicated upon. That fire also underscored the need for regular inspection of tanks. SB 900 states:

“The commission shall conduct on-site inspections of the registered/certified facilities at least once every five years to determine compliance with the Performance Standards for Safety at Storage Vessels Program. This subsection does not limit the commission's ability to inspect facility under other state or federal regulations. “

While proposed rule §338.21 (d) states:

“The owner or operator shall re-certify compliance with the standards under §338.5 of this title every 10 years.”

We request that TCEQ conduct on-site inspections of registered vessels/certified facilities at least once every three years, and annually for those owner/operators of tanks that have either experienced failure or have a history of non-compliance. The ASVS program serves as a new



form of oversight available to the TCEQ and will provide increased capacity in the form of approximately 73 new full time equivalent employees; many of which will serve as inspectors. In order to fully protect the communities that are surrounded by aboveground tank infrastructure we implore the TCEQ to reduce the time between inspections and employ inspection intervals that are more frequently for those tanks with a history of failure or noncompliance.

b. Fees

Proposed rule §338.21 subsection (b) establishes a fee assessment. We request that up to 15% of collected fees be allocated to municipal, county, or city emergency response and first responders. SB 900 requires the new program to be self-sustaining, as the proposed rules require emergency coordination with local emergency teams and first responders money allocated to these agencies would be going directly to satisfying the requirements of the law.

To summarize, we request TCEQ adopt weatherization standards that prevent the types of tank failures seen during Hurricane Harvey, winter storm Uri and other climate events. Make publicly available American Petroleum Institute standards. Make publicly available enforcement history, compliance records, and cited violations. Close loopholes that allow exemptions for the new rule including those for mobile and heated tanks of regulated substances, and make known the contents of regulated tanks to those in the community who would be most impacted by contamination of surface and groundwater

We would like to thank the Texas Commission on Environmental Quality for the opportunity to provide comment and offer Fenceline Watch as a resource as the commission adopts and moves to implementation of these new rules.

Thank you.

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