San Jacinto Disposal Site Update

Summary

In 2008, the San Jacinto Disposal Site at Interstate 10 was identified by the EPA for long-term cleanup under the federal Superfund program. In 2011, in compliance with well-established EPA and Army Corps of Engineer standards, McGinnis Industrial Maintenance Corp. (MIMC) and International Paper (IP) completed construction of a rigorously-engineered armored cap. This protective barrier has eliminated any potential for dioxin exposure from the site. The structure is highly secure, protects people's health and the environment, and is engineered to withstand a 100-year flood event.

EPA is currently evaluating a final cleanup plan for the site. MIMC and IP support a final cleanup plan that best protects public health and the environment, and further enhances the rigorously-engineered cap with additional fortification capable of withstanding 100-year storm and 500-year flood events – including events such as the October 1994 flood (a 50 to 100-year flood), Hurricane Ike (a 2-year flood), and Tropical Storm Allison (a 5-year flood) – and continued regular inspection.

One of the options currently being reviewed is removal of the protective cap and digging up, treating and transporting the sediment – an excavation process that would cause waste material to be re-exposed and may unnecessarily increase dioxin levels in fish tissue, creating new risk of human and environmental health hazards. Removing and transporting sediment could also take up to 19 months to complete, including during storm seasons, and require up to 17,500 truck trips locally. This would be unprecedented, and could unnecessarily expose both humans and the environment to serious risk.

Site History

- 1965: The Harris County Health Unit approves the San Jacinto site for use as disposal impoundments.
- 1965-1966: Disposal of paper mill waste in waste pits.
- 2008: The San Jacinto site is listed on the National Priorities List, the EPA's list of sites identified for long-term cleanup under the federal Superfund program. Dioxins are the focus of cleanup efforts.
- 2011: In compliance with EPA and Army Corps of Engineers standards, MIMC and IP constructed an armored cap comprised of geotextile and geomembrane layers covered by stone over approximately 15.7 acres. The cap was installed at a cost of $9 million.
- The San Jacinto River is an industrial waterway impacted by a wide variety of pollution sources over many years. Various environmental studies of the river show the presence of many other chemicals that come from an array of adjacent activities in Harris County, including the Houston Ship Channel.
- Texas seafood consumption advisories indicate the presence in the river of various chemicals that did not originate from the San Jacinto Disposal Site; for example, pesticides.

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Clean-Up Actions

- In response to the San Jacinto site's identification as a superfund site in 2008, MIMC and IP have been cooperating with and participating in EPA processes regarding the site.
- In 2011, consistent with EPA and Army Corps of Engineers standards, MIMC and IP constructed a rigorously-engineered, armored cap that is effective, protective and secure. This capping method fully protects people's health and the environment.
- This specially engineered cap:
    - Consists of 59,000 tons of stone, and thick, specially protective layers of geo-technical materials covering approximately 15.7 acres;
    - Is designed to withstand a 100-year flood event; and
    - Undergoes regular monitoring and maintenance, and is surrounded by 5,700 feet of perimeter fence.

Results

- A total of 11 monitoring wells were installed and groundwater samples were collected from across the site from 2011 to 2013.
- Dioxins are virtually insoluble; they do not move readily within groundwater.
- Sampling results confirm that drinking water, drawn from the deep aquifer, has not been affected by dioxins or any other chemicals associated with the site.
- According to testing performed by a third-party water quality specialist, there is no dioxin exposure through the armored cap at the site.
- Residential soil sampling in the area shows dioxin levels consistent with background concentrations found in public areas throughout Houston.

What are the next steps?

- In March 2014, MIMC and IP submitted a technical report to EPA that identified several remedy alternatives for the site.
- EPA is currently evaluating this in-depth study to determine a final remedy for the site. Options include:
    - Keeping the cap in place with additional fortifications designed to withstand 100-year storm and 500-year flood events, including events such as:
        - October 1994 flood (a 50 to 100-year flood);
        - Hurricane Ike (a 2-year flood); and,
        - Tropical Storm Allison (a 5-year flood),

      together with continued regular inspection to further ensure that waste material remains permanently contained.
    - Removing the heavily engineered cap (including 59,000 tons of material), digging up impacted sediment, and transporting this material to a landfill.

- MIMC and IP researched precedent for removing an engineered cap constructed as part of an interim remedy. National experts have confirmed that there has never been a removal of an effectively engineered cap constructed either as an interim or as a final remedy.
- Protective caps like the one now in place at the San Jacinto Disposal Site have proven successful and safe as a permanent solution.
- In contrast, removal of the cap presents both public health and logistical concerns:
    - Excavation will cause suspension of waste material (that is currently contained by the engineered cap) and an unnecessary increase in fish tissue dioxin levels;
    - Excavation will take up to 19 months to complete, thereby exposing open waste material to severe weather events over the course of two hurricane seasons; and
    - Complete removal will require 17,500 heavy truck trips on already congested local roads and highways.
- MIMC and IP are focused on the plan that best protects public health and the environment and is in compliance with well-established EPA and Army Corps of Engineers guideline.
    - The remedial alternative supported by MIMC and IP includes further enhancement to the existing robustly engineered cap:
        1. adding additional armoring to strengthen and make the cap permanent;
        2. further flattening of slopes; and
        3. implementing measures to protect the armored cap from river vessel traffic.

Conclusion

- Significant action is currently being taken at the San Jacinto Disposal Site to address historical waste disposal issues and protect the environment.
- The site's permanent protection and future needs are being thoroughly reviewed and are addressed via EPA's rigorous process.

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