

Superfund NEWS

July 2018

EPA probes reveal need for additional repairs to Waste Pits Cap

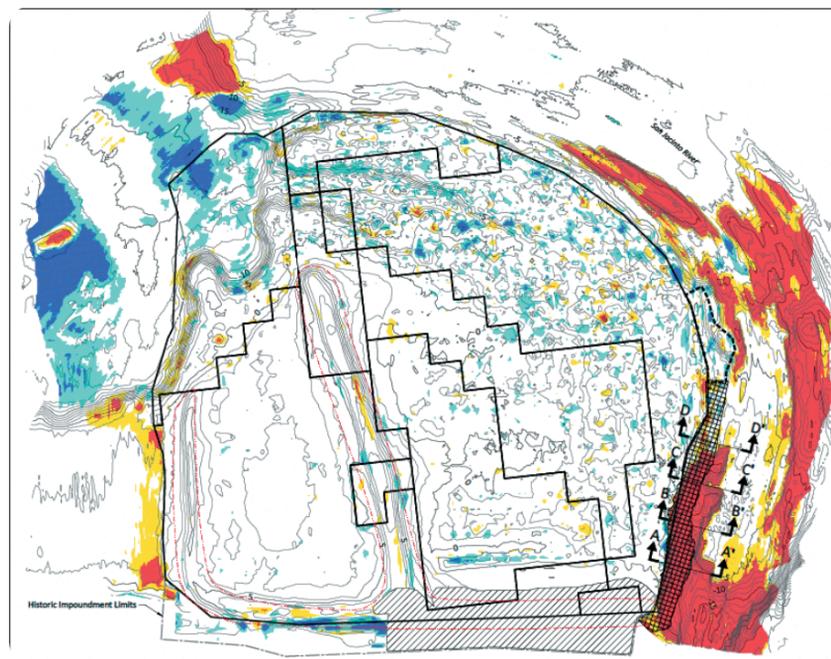
Toxic material exposed after Hurricane; cap membrane missing

EPA Directs Additional Repairs for San Jacinto River Waste Pits Superfund Site

DALLAS – (June 29, 2018) EPA is directing the potentially responsible parties of the San Jacinto River Waste Pits Superfund site in Texas to take immediate action to address damage to the protective cap. Initial repairs will begin shortly at the damaged areas where the protective rock was missing. Upon completion, EPA will inspect the final repair.

EPA received preliminary data from sediment samples collected by EPA's dive team from twenty-two small areas measuring up to 50 square feet at the San Jacinto River Waste Pits Superfund site. Samples from twenty-two of the areas confirmed the protective cap is absent and the underlying waste material was exposed. The preliminary sample showed dioxins up to 60,500 ng/kg. EPA recommended clean up level for the site is 30 ng/kg.

EPA has directed both International Paper and Industrial Maintenance Corporation, the potentially responsible parties (PRPs) for the San Jacinto Waste Pits Superfund site in Harris County, to take steps to ensure that the exposed waste material is isolated and securely covered. The dioxin in the waste material does not dissolve easily in



San Jacinto Riverbed scouring image post Hurricane Harvey. Gridded areas of riverbed labeled A, B, C, D will be repaired, as well as exposed toxin areas in Northwest corner (dark blue) See also Dr. Garland's report, on Page 2 overleaf.

water, but it can migrate further out into the surrounding sediments.

The PRPs developed an Operations, Monitoring, and Maintenance Plan under Federal Order by the EPA and completed work to prevent wastes from continuing to migrate to adjacent areas including the San Jacinto River in July 2011. The Order allows the Agency to require additional measures and investigations deemed necessary by the Agency from its periodic inspection of the protective cap. EPA is exercising that authority today. EPA divers determined that additional measures were necessary.

The PRP conducted similar repairs in December 2015 and September

2017. EPA selected long-term remedy for the site has 150,000 cubic yards of waste removed and disposed of offsite.

EPA will continue to provide updates about the status of the Superfund site, and continue to work with the PRPs to ensure that risk to human health and the environment is managed as best as possible.

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THEA COMMENTS: Highly Toxic Waste Once Again Exposed at San Jacinto River Waste Pits Superfund Site

Friday 6/29/2018 the Environmental Protection Agency announced high levels of dioxin waste are currently exposed to the San Jacinto River from the San Jacinto River Waste Pits Superfund Site. In the EPA dive team's recent inspection, they found 22 areas of concern and collected samples from those locations.



The sample results show levels of 60,500 ng/kg of dioxin exposed to the river. The level that prompts a cleanup is 30 ng/kg.

The executive director of Texas Health and Environment Alliance, Jackie Young: "Yet again astronomic levels of dioxin are found exposed to the river from the San Jacinto Waste Pits. The bottom line is the cap is not working and public health and the environment are at risk."

Per EPA statement: "The dioxin in the waste material does not dissolve easily in water, but it can migrate further out into the surrounding sediments."

Continued Overleaf

Who is involved in the San Jacinto River Waste Pits Superfund?

US EPA

The federal Environmental Protection Agency is the lead in dealing with the Superfund site. Congress has designated them with the responsibility to solve the problem.

PRP

Potential Responsible Parties include successors to the perpetrators of the Waste Pits. These include International Paper, and Waste Management.

US CONGRESS

Most legislators whose district includes the San Jacinto River, have expressed the need to remove the Waste Pits. This includes Congressmen Gene Green, Brian Babin, Ted Poe and others.

HARRIS COUNTY

County Attorney Vince Ryan led a lawsuit to make the Responsible Parties pay for remediation of the site. He won a \$29.2 million dollar judgement to be spent on environmental improvements in the area.

SJRC/THEA

A Citizens movement, led by previous Highlands resident Jackie Young, has been the leading voice to have the Waste Pits totally removed. She heads San Jacinto River Coalition, and the new Texas Health and Environmental Alliance, Inc.

KEEPITCAPPED

A Citizens Group named San Jacinto Citizens Against Pollution located in Baytown has a web site espousing its belief that a permanent cap is the best solution. Thomas Knickerbocker is their attorney, but the leadership is anonymous.

THEA Comments continued

The waste pits were discovered by the government in 2005 when they found that highly-toxic paper mill waste had been deposited along the San Jacinto River near the I-10 Bridge during the 1960s. The pits became partially submerged in the river over time. The EPA named the pits a Superfund site in 2008 and the companies responsible for the waste were ordered to put a temporary cap over it in 2011.

After years of complaints from local residents and local officials, the EPA this past October ordered that the toxic chemicals at the site be removed at the expense of the responsible parties. The plan approved by the EPA will require removal of about 212,000 cubic yards of material contaminated with dioxin, one of the most dangerous chemicals in existence. The plan includes engineering controls to ensure that no chemicals are released during this process and that the contaminated material will be put into a secure, stable, inland permitted facility.

Young and many other local officials and residents have warned for years that the cap was insufficient to protect the river. Hurricane Harvey proved the cap's vulnerability to flooding and storms when EPA divers found damage afterwards. The EPA found that one of its samples showed dioxins at 70,000 ng/kg. Immediate repairs to the cap were ordered by the EPA following Hurricane Harvey.

The recent findings prompt questions that Young is pushing for answers: Was the exposed area recently discovered physically inspected after Harvey? Does the EPA have any idea how long these high levels of dioxin have been exposed to the river?

Follow THEA and the San Jacinto River Coalition on Facebook for all the latest.

Dr. Garland reviews Waste Pits after Hurricane Harvey

Post Harvey TCRA Cap Survey and Sampling Results: Implications for Cap integrity and Release of Waste to the San Jacinto River and Environs

Presented by Dr. Kathleen Garland
June 20, 2018
Highlands Community Center

In the wake of Hurricane Harvey's floods, both the EPA and the Potentially Responsible Parties (PRPS) conducted activities at the San Jacinto River Waste Pits Superfund site in order to determine how the floods had affected the armored cap, and whether contaminated waste materials had been exposed by the floods and escaped into the river. These activities focused on the north site, located adjacent to the I 10 river bridge.

Site activities included physical surveys of the cap surface both above and below water level, probing of the entire site on a 30' by 30' grid pattern using steel rods, physical examination of areas of the cap by EPA divers, and sediment sampling and analysis in areas of interest. The PRPs' contractors conducted the initial physical survey and sampling. EPA staff accompanied the contractors during the probe survey and later sampling activities. PRP contractors were also present during EPA's dives on the site.

Using the physical survey data, the PRPs created a map of the cap surface that shows the differences between the shape and elevation of the surface as mapped in July 2017 and in early September 2017 after floodwaters receded. This map, reproduced as Figure 1 in this report, shows areas of erosion in yellow and red, and areas of deposition in blue and green. Areas in white showed less than 1 ft. of elevation difference between the two mapping events. This map shows that some areas of the cap experienced erosion (called "scour" in this report) and other areas experienced deposition of additional sediment (called "fill" in this report). Scour and fill features typically form when currents and eddies affect a streambed. These currents and eddies pick up sediment from some areas of the streambed and deposit it in other areas. The map produced by the PRPs indicates that small scale scour and fill took place



Dr. Garland displays a typical Geotextile used in the cap of the Waste Pits.

across the armored cap while it was submerged by the floodwaters. Overall, the waste pits had the same configuration after the floods as they did before, indicating that the site as a whole remained intact during the floods.

Two areas of the site identified on this map caused particular concern to the EPA. The first of these is on the southeast side of the site, outside of the cap and waste pits, and appears in red on Figure 1. This area experienced significant erosion, and raised concerns that future events could erode into the waste pits on that side of the site. The EPA required a repair plan, and the PRPs installed additional rock armoring in this area to protect that side of the pits.

The second area of concern is on the northwest side of the site. This area has never been protected by a geotextile because the slope is too steep to allow rock armor to stay in place if there is a geotextile liner underneath it. Instead of geotextile, this area has an aggregate rock layer on top of the waste, and then rock armor on top of that. The aggregate rock layer is made of mixed sizes of gravel laid down in a thick sheet over the underlying waste. This layer is designed so that smaller pieces of gravel will fill in the spaces between larger pieces, creating a more cohesive and erosion resistant surface. Large rock armor is then placed on top of this mixed rock layer. The aggregate layer helps hold the larger rock armor in place. This area has undergone repairs in the past, as this construction is more easily damaged due to its composition and the steep slope in that area. EPA focused their dive team investigation and sampling on this part of the cap.

The probe survey of the cap covered the entire site, and identified 38 areas of interest where the thickness of the rock armor was less than required, and/or where the geotextile liner was exposed.

Based on the map and the probe survey, EPA calculated that damaged areas totaled 6700 square feet, distributed across the entire site. The probe survey confirms the conditions indicated by the site mapping: local currents and eddies thinned the rock armor, and in some areas scoured out the rock down to the underlying geotextile. Some of these scour features remain. In other areas, these scours were filled back up with new sediment. Elsewhere on the cap, the armor and geotextile remained in place and were buried under several inches to a few feet of new sediment.

The underwater environment at this site was extremely dynamic, as one would expect during a flood of this magnitude.

Sampling by the EPA, and duplicated by the PRPS, took place in the northwest areas of the cap and focused on locations where cap materials were missing and soft sediments were exposed at the surface. EPA also sampled downslope of these soft areas in order to determine if waste materials washed downslope from the exposed areas and was redeposited at the toe of the slope.

Testing of these samples identified one location where waste materials were exposed at the surface. Both the EPA and PRP samples produced extremely high dioxin concentration measurements. Samples taken by both EPA and the PRPs downslope of this location also found dioxin concentrations consistently elevated above background levels by a factor of 10 to 20. Samples taken elsewhere on the site did not exceed background concentrations. Sampling and analysis confirms that waste materials were released locally from the site during the floods, but this release was small. Some of these materials were redeposited locally at the toe of the slope, within the site boundary.

Post Harvey investigations of the SJRWP Superfund site confirm a small release of dioxin contaminated waste, and highlight the inherent risk posed by this site and the need for EPA to expedite its chosen remedy of complete removal of this waste from the river. Although Hurricane Harvey floods were severe, a hurricane accompanied by storm surge could potentially cause greater damage to this site. The only way to eliminate the threat this waste poses to human health and the environment is to completely remove it from this dynamic river system.

Who is involved in the San Jacinto River Waste Pits Superfund?

USArmy COE

The Army Corps of Engineers has completed Technical Studies on the Environmental impact of 6+ strategies to Cap or Remove the toxic wastes. Their recommendations are included in a 237 page report, favoring a modified cap over removal, but stating either is possible.

TPWD

Texas Parks and Wildlife Department was designated by the Legislature, with the help of Representative Wayne Smith, to administer \$10 million of the lawsuit settlement funds for environmental projects along the River.

HC PCT 2

Pct. 2 received \$10 million of the \$29.2 million settlement, and plans to use it for environmental projects within 5 miles of the Waste Pits, according to Commissioner Jack Morman.

HARRIS COUNTY

Various departments are involved, including Grants Administration, Pollution Control, and Public Health.

GBF

Galveston Bay Foundation maintains a website with information on all of the Waste Pits parties actions, and other matters of interest to the environmental health of the River and Galveston Bay.

OTHERS

-- TCEQ
-- US Coast Guard
-- Private Attorneys
-- Houston Chronicle
-- City of Baytown
-- KRIV ch26
-- Star-Courier