
Intercontinental Terminals Company LLC (ITC) Deer Park Facility Tank Fire

Preassessment Screen
and Determination

August 5, 2019

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I. Introduction and Purpose

The Texas Commission on Environmental Quality (TCEQ), the Texas Parks and Wildlife Department (TPWD), the Texas General Land Office (GLO), the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce (DOC), and the United States Fish and Wildlife Service (USFWS) acting on behalf of the U.S. Department of the Interior (DOI), (collectively, the Trustees) may pursue claims for natural resource damages under section 107(f) of CERCLA in Texas.

This document is a preassessment screen (PAS) prepared by the Trustees pursuant to 43 CFR Part 11 for the Intercontinental Terminals Company LLC (ITC) Deer Park Facility Tank Fire (ITC Tank Fire).¹ Before pursuing further natural resource damage assessment (NRDA) efforts the trustees complete a preassessment screen and make a determination as to whether an assessment shall be carried out. The purpose of the PAS is to provide a rapid review of readily available information that focuses on resources and services for which the Federal or State agency or Indian tribe may assert trusteeship under section 107(f) or section 126(d) of CERCLA. This review should ensure that there is a reasonable probability of making a successful claim before monies and efforts are expended in carrying out an assessment (43 C.F.R. § 11.23(b)).

II. Description of Site and Hazardous Substances and/or Oil Released

The ITC Deer Park terminal started operations in 1972 and currently has 13.1 million barrels (2.2 million cubic meters) of capacity in 242 tanks. It stores various petrochemical liquids and gases, as well as fuel oil, bunker oil and distillates. The terminal has five ship docks and ten barge docks, rail and truck access, and multiple pipeline connections. Products are stored in tanks that range in size from 8,000 – 160,000 barrels. Total throughput exceeds 144 million barrels a year, and ITC handles approximately 770 ships, 3,700 barges, 12,000 tank cars, and 33,600 tank trucks annually (collectively referred to herein as “Facility”). Approximately 270 associates work at the Deer Park Terminal.

Deer Park is located in east Houston at the confluence of Buffalo Bayou and the San Jacinto River (Figure 1). Numerous bayous and rivers in the vicinity, including Tucker Bayou, Buffalo Bayou, Carpenters Bayou, the Old San Jacinto River, the Houston Ship Channel, and Santa Anna Bayou are all part of the 310 miles of open streams and rivers within the San Jacinto River watershed. The San Jacinto River hosts a typical riverine ecosystem and contains reaches with natural undeveloped habitat, as well as reaches with development encroaching to the water's edge. The confluence of Buffalo Bayou and the San Jacinto River have created a unique environment, influenced by freshwater and tidal saltwater inflows, that supports numerous fringe marsh, riparian, marsh, and mudflat habitats that, in turn, support a wide variety of fish, waterfowl, migratory, wading and shore bird's rookeries.

¹ The ITC Tank fire is also known as the ITC 2nd 80s Fire.

The San Jacinto Battleground State Historic Site is located off the Houston Ship Channel in unincorporated Harris County, Texas, and adjacent to the ITC Facility (Figure 1). The Historic Site includes the location of the Battle of San Jacinto, the San Jacinto Museum of History, the San Jacinto Monument and the Battleship Texas State Historic Site where the USS Texas is docked along the Houston Ship Channel. The Battleground, which was designated a National Historic Landmark in 1960, also protects coastal prairie, forests and marshlands that provides refuge for variety of migratory birds and waterfowl, alligators, and other wildlife.

The Baytown Nature Center (BNC), located across from the San Jacinto Battleground State Historic Park on a 450-acre peninsula along the Houston Ship Channel, is bordered by Burnet Bay, Crystal Bay, and Scott Bay (Figure 1). BNC consists of hardwood uplands, high quality tidal marsh, and freshwater wetlands. This unique site is listed on the Great Texas Coastal Birding Trail and provides habitat for 317 species of resident and neo-tropical migrant birds. The American Bird Conservancy designated BNC as a nationally important bird area and is also the site of restoration projects implemented by the Trustees through other NRDA's.

On Sunday March 17, 2019, a storage tank caught fire engulfing 9 of the 15 tanks in the 80's tank battery at the ITC Facility. The fire continued to burn at the facility until it was initially extinguished on March 20, 2019. On Friday March 22, 2019, the fire reignited, and damage to the secondary containment wall for the 80's tank battery caused a catastrophic breach, releasing an estimated 470,000 – 523,000 barrels of a mixture of fire water², 16 different firefighting aqueous film forming foams (AFFF), and the remaining petrochemical products from the storage tanks into Tucker Bayou and the air (Table 1) (Releases). Releases flowed from Tucker Bayou into Buffalo Bayou and were carried by stream flow and tides into the San Jacinto River, Houston Ship Channel, Carpenters Bayou, Old River, and Santa Ana Bayou and surrounding water bodies ultimately impacting or potentially impacting approximately 136 miles of shoreline and associated benthic, marsh, riparian, and beach habitats. Air quality was impacted in the Deer Park area, forcing the closure of roads, schools, County and State Parks, as well as shelter in place orders over several days for most of the Deer Park area (anywhere contaminants have come to be located is collectively referred to herein as "Site"). Remedial activities to stop the release and recover product have not been completed.

² Fire water refers to water that has been used in firefighting and requires disposal or was released as a result of firefighting activities. Fire water contains materials present in the building or facility involved in the fire and may also contain dissolved and particulate materials from combustion processes and materials generated through quenching.

Figure 1: Site Map

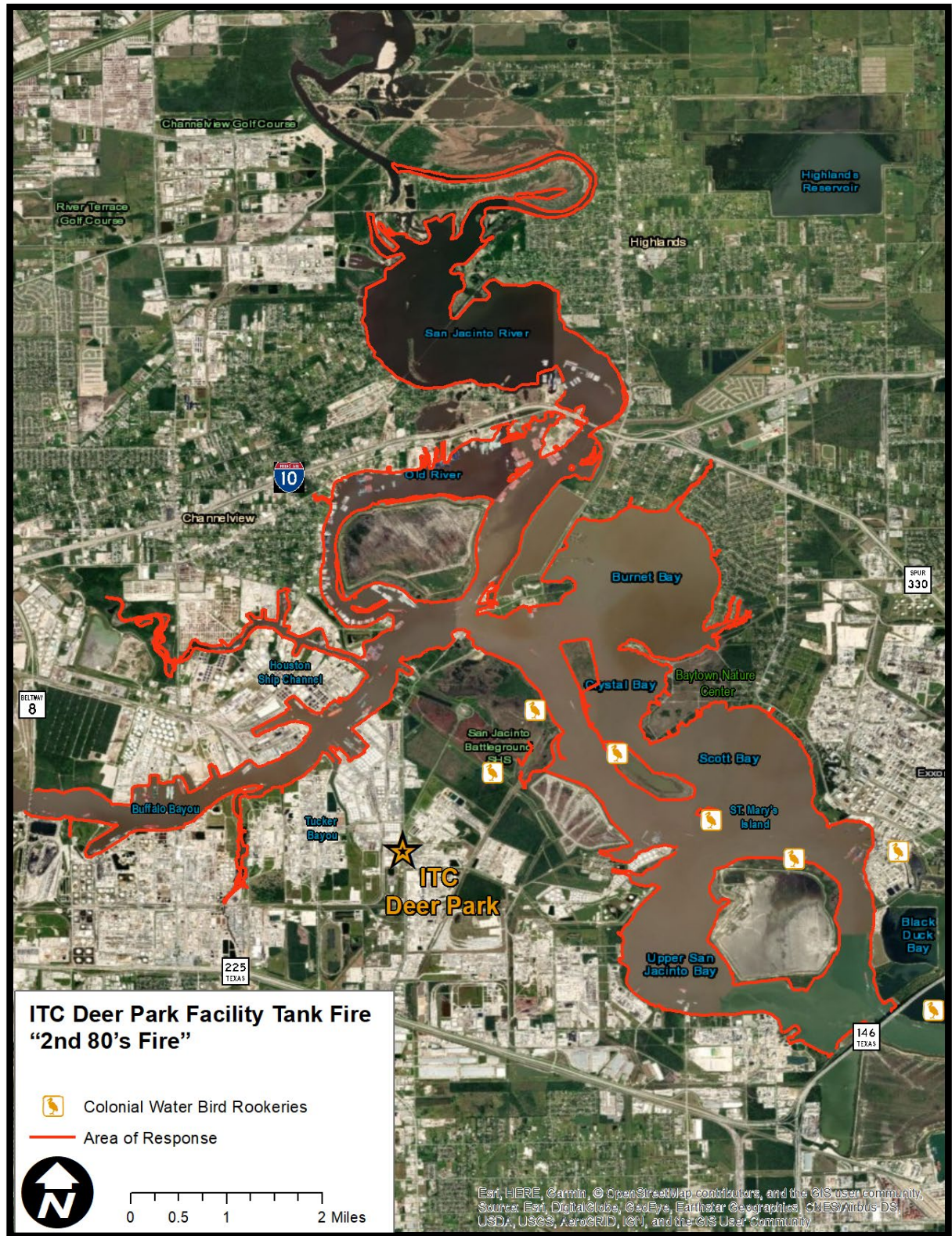


Table 1: List of Hazardous Substances, Chemicals or Oil Potentially Released

<i>Name</i>	<i>Chemical Name</i>	<i>CAS No.</i>
<i>Aliphatic alcohols</i>	Alcohols, C5-C12	VARIES
<i>Alkenes</i>	Alkenes, C>8, Linear, Branched, or Cyclic	68411-00-7
<i>Alkyl polyglycoside</i>	Alkylglucoside C8	
<i>Aromatic Hydrocarbons</i>	Aromatic Hydrocarbons, C9-C17	68333-88-0
<i>Benzene</i>	Benzene	71-43-2
<i>Caprylcaprylyl glucoside</i>	Oligomeric D-glucopyranose decyl octyl glycosides	68515-73-1
<i>Cocamidopropyl betaine</i>	N-Cocamidopropyl-N,N-dimethylglycine, hydroxide, inner salt	61789-40-0
<i>Cocamidopropyl hydroxysultaine</i>	1-Propanaminium, N-(3-Aminopropyl)-2-hydroxy-N,N-dimethyl-3-sulfo-, N-Coco-acylderivates	68139-30-0
<i>Cumene</i>	Benzene, (1-methylethyl)-	98-82-8
<i>Cyclohexane</i>	Cyclohexane	110-82-7
<i>Debutanizer bottoms pyrolysis gasoline</i>	Gasoline, pyrolysis, debutanizer bottoms	68606-10-0
<i>Dicyclopentadiene</i>	4,7-Methano-1H-indene, 3a,4,7,7a-tetrahydro-	77-73-6
<i>Diethylene glycol monobutyl ether</i>	Ethanol, 2-(2-butoxyethoxy)-	112-34-5
<i>Dipropylene glycol monomethyl ether</i>	Propanol, 1(or 2)-(2-methoxymethylethoxy)-	34590-94-8
<i>Distillates (petroleum) hydrotreated heavy paraffinic</i>	Distillates (petroleum) hydrotreated heavy paraffinic	64742-54-7
<i>Distillates (petroleum), solvent-dewaxed heavy paraffinic</i>	Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0
<i>Ethylbenzene</i>	Ethylbenzene	100-41-4
<i>Ethylene glycol</i>	1,2-Ethanediol	107-21-1
<i>Fluorosurfactants</i>	Amphoteric Hydrocarbon Surfactant 6608110000	
<i>Fluoroalkyl surfactants</i>	Fluoroalkyl surfactants	
<i>Fuller's earth</i>	Fuller's earth	8031-18-3
<i>Hexane</i>	Hexane (n-Hexane)	110-54-3
<i>Hydrocarbon surfactant</i>	Anionic Hydrocarbon Surfactant 3201310000	
<i>Hydrocarbon surfactant</i>	Anionic Hydrocarbon Surfactant 6608700000	
<i>Lauramidopropyl betaine</i>	Lauramidopropyl betaine ((carboxymethyl)dimethyl-3-[(1-oxododecyl)amino]propylammonium hydroxide	4292-10-8
<i>Lauryl Imino Propionate, Sodium Salt</i>	sodium;3-[2-carboxyethyl(dodecyl)amino]propanoate	14960-06-6
<i>Methanol</i>	Methanol	67-56-1
<i>Mixture of Fluorosurfactants</i>	Mixture of Fluorosurfactants	
<i>Mixture of Fluorinated Polymers</i>	Mixture of Fluorinated Polymers	
<i>Naphthalene</i>	Naphthalene	91-20-3
<i>N-Cocamidopropyl-N,N-dimethylglycine, hydroxide, inner salt</i>	1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-coco acyl derivs., inner salts	61789-40-0
<i>Non-ionic Hydrocarbon Surfactant 6607730000</i>	Non-ionic Hydrocarbon Surfactant 6607730000	
<i>Petroleum</i>	Petroleum distillates (Naphtha)	8002-05-9
<i>Polyfluorinated alkyl betaine</i>	Polyfluorinated alkyl betaine	
<i>Polyfluorinated alkyl polyamide</i>	Polyfluorinated alkyl polyamide	
<i>Polyfluorinated alkyl quaternary amine chloride</i>	Polyfluorinated alkyl quaternary amine chloride	
<i>Polyglycoside Surfactant</i>	Alkylpolyglycoside (D-Glucopyranoside, C9-C11 Oligomer)	132778-08-6
<i>Potassium Bicarbonate</i>	Carbonic acid, potassium salt (1:1)	298-14-6
<i>Purple Pigment</i>	C.I. Basic Violet 1, benzoate	68647-14-3
<i>Sericite Potassium Aluminum Silicate</i>	dipotassium;dioxosilane;oxo(oxoalumanyloxy)alumane;oxygen(2-)	12001-26-2
<i>Silicone fluid - Silicone Oil Methyl Hydrogen Polysiloxane</i>	Siloxanes and Silicones, Me hydrogen	63148-57-2
<i>Sodium Bicarbonate</i>	Carbonic acid sodium salt (1:1)	144-55-8
<i>Sodium Decyl Sulfate</i>	Sulfuric acid, monodecyl ester, sodium salt (1:1)	142-87-0
<i>Sodium Octyl Sulfate</i>	Sulfuric acid, mono-octyl ester, sodium salt (1:1)	142-31-4
<i>Surfactants, unspecified mixture</i>	Surfactant	
<i>Synthetic Detergent</i>	Synthetic Detergent	
<i>Toluene</i>	Benzene, Methyl	108-88-3
<i>Xanthan Gum</i>	Xanthan Gum	11138-66-2
<i>Xylene - mixed isomers</i>	Benzene, dimethyl	1330-20-7

III. Potentially Responsible Parties

As the lead agencies for the response, the U.S. Environmental Protection Agency (EPA) and TCEQ identified ITC as the potentially responsible party for the March 2019 fires at the Deer Park Terminal Facility. ITC was founded on February 24, 1972, with its purpose to construct, operate, maintain, and grow Mitsui & Company (U.S.A.) Inc. terminal assets. ITC currently operates facilities in Deer Park and Pasadena, Texas, along with joint ventures in Antwerp, Belgium.

IV. Damages excluded from liability

Pursuant to Section 11.24(b) of the CERCLA NRDAR regulations, the Trustees have evaluated the potential for any exclusion or defense to liability under applicable laws. Discharges or releases resulting from the ITC Tank Fire and the resulting injuries and damages were not within the terms of its permit or license, did not occur wholly before the enactment of CERCLA and did not result from the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 135-135k; or any other federally permitted release, as defined in section 101(10) of CERCLA; or the release or threatened release of recycled oil from a service station dealer described in section 107(a)(3) or (4) of CERCLA. The Trustees are unaware of any other exclusion or defense to liability under CERCLA, the Oil Pollution Act (OPA), or other applicable laws.

V. Preliminary identification of resources at risk

The area around the Site, while heavily industrialized, supports a wide variety of wildlife, habitats, and recreational opportunities. There are a number of resources and associated services under the trusteeship of federal and state agencies that may have been or were impacted by the ITC Tank Fire, which include, but are not limited to:

- Migratory birds, including osprey, bald eagle, waterfowl, and shorebirds
- Fish
- Marine and terrestrial mammals,
- Reptiles and amphibians
- Aquatic invertebrates
- Aquatic plants
- Beaches, mud flats, wetland, riparian, and upland habitats
- Surface water and sediments
- Supporting habitat for natural resources, including food, shelter, breeding, foraging, rookeries, and other factors essential for survival
- Recreational use

In addition to the above resources, three restoration projects implemented through previous NRDA cases are located within the affected area and may have been impacted.

VI. Determination

The Site has had documented releases of hazardous substances, oil, and other chemicals used as part of the response that may have and may be currently posing a threat to natural resources. The purpose of the PAS is

to determine if the release of these hazardous materials pose a significant enough threat to natural resources and the services they provide to warrant further investigation. The Trustees have evaluated the existing data against the screening criteria in 43 CFR§11.23 and determined to proceed with a NRDA.

Criterion 1: A discharge of oil or a release of a hazardous substance has occurred

Releases of hazardous substances from the ITC Facility have occurred. Air releases as well as an estimated 470,000 – 523,000 barrels of a mixture of fire water, 16 different AFFF, and the remaining products from the storage tanks were released into Tucker Bayou and adjacent waters.

According to response, products released to surface water, sediments and air include, but are not limited to, benzene, ethylbenzene, naphtha, xylene, toluene, pyrolysis gas (pygas) benzene, ethylbenzene, naphtha, xylene, toluene, pyrolysis gas and other refined oil and petrochemical products (See Table 1). In all, approximately 50 different chemicals regulated under CERCLA, the Clean Water Act (CWA), and OPA were released from the Facility. Thirty-six of the chemicals released are on the EPA's Substance Registry Service, 17 are on the Consolidated List of Lists under CERCLA, and 5 are listed on OPA list Of Petroleum and Non-petroleum Oils.

Criterion 2: Natural resources for which the Federal or State agency or Indian tribe may assert trusteeship under CERCLA have been or are likely to have been adversely affected by the discharge or release.

In accordance with the NCP, 40 CFR §§ 300.600- 300.605, and 42 U.S.C. 9607(f)(2)(B), TCEQ, TPWD, GLO, NOAA, and USFWS, have, or share, trusteeship over the natural resources and services³ identified in Section V, which have or potentially have been injured, lost, or destroyed by the releases of hazardous substances and oil from the ITC Facility as well as response actions. As a result of the releases of hazardous substances and oil, the Texas Department of State Health Services issued a consumption advisory preventing the consumption of any species of fish or blue crab caught in the Houston Ship Channel and all contiguous waters north of the Fred Hartman Bridge, State Highway 146 including the San Jacinto River below the Lake Houston Dam. Recreational activities in the area were similarly impacted with the closure of area to recreational and commercial boating and shipping, as well as the closure of the San Jacinto Battleground State Historic Park, the BNC, local and county parks, and roads. Preliminary surveys have indicated potential impacts, including mortality and loss of ecological function, to habitat and wildlife from exposure to the hazardous substance released. For example, the response recovered 93 birds representing 19 different species, and the substances released were observed along the shorelines. Thus, the Trustees have determined that natural resources and services for which they have trusteeship have been or likely have been affected by the ITC Tank Fire.

³ *Services* is defined in 43 C.F.R. § 11.14(nn) as the “physical and biological functions performed by the resource including the human uses of those functions. These services are the result of the physical, chemical, or biological quality of the resource.”

Criterion 3: The quantity and concentration of the discharged oil or released hazardous substance is sufficient to potentially cause injury, as that term is used in this part, to those natural resources;

Air releases and an estimated 470,000 – 523,000 barrels of mixture of fire water, AFFF, and petrochemical products (Table 1) were released into Tucker Bayou and adjacent waters, sediments, and habitats. Hazardous substance concentrations documented by response water sampling efforts for the ITC Tank Fire are sufficient to cause injury to natural resources. The issuance of state fish consumption advisories is evidence of injury under the NRDA regulations (43 CFR § 11.62 (f)).

Criterion 4: Data sufficient to pursue an assessment are readily available or likely to be obtained at reasonable cost

Data currently exists from the response that will be helpful and cost-effective to use to further assess injury of natural resources. Additional studies may be necessary to better quantify injury and service losses for some resources; these data could be obtained at reasonable costs.

Criterion 5: Response actions, if any, carried out or planned do not or will not sufficiently remedy the injury to natural resources without further action.

The Trustees expect the remedial actions will minimize exposure to hazardous substances. The full extent of such impact cannot be assessed until the remedial action is completed. However, remediation likely will not address lost natural resource services or the loss associated with any residual contamination. Therefore, the Trustees have determined that additional assessment is warranted.

VII. Summary of Determination

Based on the information available, all preassessment screening criteria have been met. Natural resources over which the Trustees may assert trusteeship have been or may have been impacted, and ITC is a viable PRP. Accordingly, the designated trustee agencies, acting on behalf of the public, in accordance with 42 U.S.C. § 9607f of CERCLA, do find sufficient cause to proceed with an NRDA of the ITC Tank Fire.