

## **1.0 EXECUTIVE SUMMARY**

This Sampling and Analysis Report (SAR) describes the activities associated with the Phase IIB HTRW Investigation conducted at the Inner Harbor Navigation Canal Project in New Orleans, Louisiana.

The investigation consisted of the development of a Sampling and Analysis Plan (SAP) that was designed to assess the potential HTRW hazard, if any, associated with the Inner Harbor Navigation Canal Project. The work as presented by the SAP consisted of the collection of soil and groundwater samples with subsequent laboratory analysis. Soil and groundwater samples were collected within the proposed project boundaries.

Analytical results revealed that contaminants are present along the west bank of the Inner Harbor Navigation Canal Project. Contaminants were detected within all nine areas investigated along the west bank. Levels of contaminants were in the parts per billion (ppb) to the parts per million (ppm) range and consisted of volatile, semivolatile, metals and pesticides compounds. No significant contaminants were detected at the tenth area investigated on the east bank of the canal.

The contaminant levels were not detected at concentrations which would classify the soils and groundwater as hazardous by characterization as defined by Federal Regulations but are such that the Louisiana Department of Environmental Quality may require remediation and/or permitting of operations during the construction phase of the new lock system.

## **2.0 GENERAL BACKGROUND**

The Inner Harbor Navigation Canal (IHNC) is a Corps' Civil Works project located in New Orleans, Louisiana. A project site map is provided in Figure 1. The Civil Works project consists of the proposed installation of a new Ship/Barge Lock in replacement of the current lock which is in place and in operation.

A Phase II-A HTRW investigation conducted in 1993 targeted the northeast bank of the IHNC project area. The most heavily industrialized sector of the northeast bank of the canal from Florida Avenue through North Clairborne Avenue was investigated. Results were reported in the USACE NOD Phase II HTRW Report, 1993. The remaining sector of the project corridor (approximately 45 acres) was screened by means of a soil gas survey conducted in the Phase II-B1. The Phase II-B1 results summarized in the NRI Soil Gas Survey Report were utilized in conjunction with the IHNC Land Use History Report and data collected during subsequent site visits to develop the Phase II-B2 investigation plan.

The following briefly describes the site history, site description, physiography, geology and hydrogeology of the areas of this investigation.



## 2.1 Site History

The historical land use and initial assessment studies of the west bank of the IHNC reveal that this section of the project area has been utilized as follows:

- (a) Galvez Wharf - loading and unloading of passengers and cargo materials ranging from rubber, steel, coffee, caradom seed, oil and munitions. The yard area at the south end of Galvez Wharf was occupied by MetFab in the 70's. The Port of New Orleans currently operates the area as a maintenance yard. MetFab is a metal fabrication company and continues to operate at a new site on the west bank of the Canal south of St. Claude Avenue Bridge.
- (b) U.S. Coast Guard (USCG) Station - mooring USCG vessels and possible storage of lead acid batteries, spent paint/thinner, waste oil/bilge, and spent solvents/degreasers and fluids. This site is included in the CERCLIS inventory of the EPA Superfund Program (IHNC HTRW Initial Assessment Report, Part I, USACE-NOD, 1993). Information on file indicates the USCG to be a small quantity generator since 1943. No recommendation is noted on whether further action at this site is required. A garage and machine shop were operated by the Department of Commerce Lighthouse Service, the USCG's predecessor at the site.
- (c) U.S. Army Corps of Engineers (USACE) - operation and maintenance of the present IHNC Lock. The Corps also operates on site one (new) diesel AST with LDEQ registration. In 1993, the Corps successfully performed closure on one (old) UST on the west bank of the lock. Likewise, a leaky (old) UST on the east bank, just across the Lock, was also closed after appropriate disposal/clean-up of surrounding contaminated soils.

From the Galvez Wharf to the USCG-USACE compound, railroad tracks parallel the IHNC and are adjacent to the limits of excavation (right-of-way) of the New Lock project. These tracks are still prone areas and soils underlying/bordering the railroad tracks may be potentially contaminated by spills from rail cargoes.

- (d) St. Claude Avenue Bridge to the Mississippi River - this area is occupied by a levee system that runs parallel to the IHNC. A railroad track on the protected side of the levee runs parallel to the levee, a catwalk from the bank to anchored barges is located near the St. Claude Avenue Bridge, and the New Orleans Military Terminal (NOMT), operated by the U.S. Navy, is located near the confluence of the IHNC and the Mississippi River. Contamination of soils underlying this sector of the levee system would potentially come from spills or leaks from nearby facilities (railroad tracks and NOMT), from isolated spills related to lawn mowing equipment used to maintain the levee, and from spills in the Canal. Preliminary investigations undertaken by NOMT revealed a hydrocarbon plume originating from NOMT's

UST facility west of Building 623 and extending eastward towards the IHNC within 50 feet of the Canal.

The east bank of the Canal from N. Clairborne Ave. Bridge and extending south towards the Mississippi River is currently bare of industrial activity except for the portion of land adjacent to the lock itself. This area is occupied by the levee, residential housing and the Holy Cross School. Contamination of soils along this portion of the east bank is potentially by non-point pollution such as spills in the Canal. As mentioned above, a (leaky) UST located at the Corps property just across the Lock was recently closed by the USACE-NOD.

## 2.2 Site Description

The Phase II B2 targeted ten major segments of the total project area. The ten segments are the ten "hot spots" defined by the screening of soil gas samples collected from the west and east bank of the Canal. Nine "hot spots" were identified on the west bank of the Canal from the end of Galvez Wharf to the Mississippi River, bounded by the floodwall on the west and by the Canal on the east. This area includes the Galvez Wharf, the Port of New Orleans maintenance yard (former MetFab site), the U.S. Coast Guard Station, the U.S. Army Corps of Engineer (IHNC) Lock and a narrow strip of land from St. Claude Avenue Bridge to the Mississippi River.

The tenth "hot spot" is located on the east bank of the Canal from Clairborne Avenue to the Mississippi River, bounded by the Canal on the west and by a floodwall/levee system on the east. The area has no industrial activity other than the adjacent lock system.

## 2.3 Physiography, Geology and Hydrogeology

From the Galvez St. Wharf towards St. Claude Avenue Bridge, the west bank investigation area is generally flat. The ground surface occupied by the Galvez Wharf, USCG and USCOE is generally topped with coarse gravel, concrete and asphalt. The concrete/asphalt pads range in thickness from about 6 to 10 inches. From St. Claude Avenue Bridge towards the Mississippi River, the area consists of the floodwall levee. Ground surface elevations in this sector of the project range between +0.8' (NGVD) at residential areas on the east bank to +8.6' (NGVD) at the Coast Guard Station.

Available geotechnical borings and geologic sections at/near the areas currently being investigated are shown in Figures 2A through 2D. The soil borings around the areas under investigation indicate that the subsurface soils are composed of typical fluvial and deltaic deposits consisting of clays (CH, CL), peat (Pt) and other organics (CHO, OH, OL), silts (ML) and sands (SM, SP).