SITE HISTORY

The Estech General Chemicals property is a 60-acre property located on the Cape Fear River at the end of Navassa Road in Navassa, North Carolina. The property is bounded by the Cape Fear River to the east, the Seaboard Coastline Railroad and a former manufacturing facility to the southeast, undeveloped property and Old Navassa Road to the southwest, undeveloped property to the northwest, and Cartwheel Branch to the north.

Phosphate-based fertilizer manufacturing took place on a 15 acre portion of the property (Site) from 1884 until the early 1980's, which involved reacting phosphate ore with sulfuric acid to produce phosphoric acid, the building block of Nitrogen-Phosphorus-Potassium (N-P-K) agricultural fertilizers. In addition, the sulfuric acid which was made at the Site was stored in lead-lined chambers and was used on Site in the fertilizer production activities. The acid chambers used in the fertilizer production process represent the most relevant feature of phosphate/fertilizer operations regarding the potential for adverse environmental impacts. During periodic cleaning of the lead chambers, it is believed that wash-down water containing acid and soluble lead was flushed onto the ground surface. In addition, pyrite cinders that did not burn completely in the combustion chambers were used as on-Site fill material. This slag material (also called clinker) has a magenta appearance and has been found to contain elevated levels of arsenic and lead. Elemental sulfur remaining on site could also lower soil and groundwater pH through sulfur oxidation to sulfuric acid.

A number of different companies manufactured fertilizer at the Site, including Virginia Carolina Chemical Company (VCC) and Estech, Inc. (Estech). The Navassa Guano Company constructed the original facility in 1884. In 1927, the property was sold to VCC. In 1963, VCC merged with the Socony Mobil Oil Company, which changed its name in 1968 to Mobil Oil Corporation. By way of a corporate merger in 1999, the ExxonMobil Oil Corporation, a subsidiary of the ExxonMobil Corporation (ExxonMobil), is successor in interest to former VCC phosphate-based fertilizer manufacturing activities conducted at the Site.

SITE INVESTIGATION

Since 2003, ExxonMobil Environmental Services and Estech, Inc. have conducted a number of sampling investigations at the Site to evaluate the nature and extent of potential impacts, and determine the potential risks to public health and the environment caused by the release or threatened release of contamination from the Site. The analytical results from these investigations indicate elevated levels of arsenic and lead in soil, groundwater, and sediment at the Site.

PROJECT TIME LINE

2003 — **Site Investigation**

2009 — **Design of Selected Remedy**

SITE REMOVAL ACTION

The Removal Action was implemented in accordance with the October 2005 Administrative Order on Consent entered into voluntarily by the ExxonMobil Environmental Services, Estech, Inc., the property owners at the time (V.A. Creech and Donald W. Sneeden) and the United States Environmental Protection Agency (USEPA). The work was overseen by the USEPA and the North Carolina Department of Environment and Natural Resources.

Removal Action activities (October 2010 through May 2011) Included:

Site clearing and demolition of select structures. Approximately 1,200 tons of demolition debris were disposed of off-site

Excavation and off-site disposal of approximately 107,000 tons of soil and sediment with visible (magenta) slag or magenta staining

Backfilling of the upland area excavation with imported clean fill, and seeding

Backfilling of the marsh excavation area with imported clean fill and vegetation with native marsh plants

Restoration of the marsh with native vegetation, and Cape Fear River bank and western drainage channel with rock

Installation of 1-foot thick soil covers over areas of residual lead and arsenic containing soils, and seeding

2010 **Site Removal Action** **2011** **Post-Removal Monitoring** **2016**

- Success of upland and marsh vegetation
- Rock restoration
- Soil covers
- Annual Groundwater Monitoring