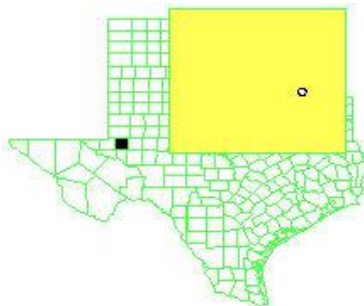


# SPRAGUE ROAD (ECTOR COUNTY) ODESSA, TEXAS



**EPA REGION 6**  
**CONGRESSIONAL**  
**DISTRICT 11**

**Contact: Vincent Malott**  
**214-665-8313**

**Updated: March 2012**

**EPA ID# TX0001407444**  
**Site ID: 0605023**

## Background

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The Site is located in Ector County, Texas, immediately north of the Odessa City limits. The population within ½ mile of the site is approximately 400; the population within 1 mile of the site is approximately 400; the population within 4 miles of the site is approximately 18,600.

The site is approximately 180 acres in size and consists of three separate inactive or abandoned chromium plating facilities within a 1/3 mile area - Leigh Metal Plating, Inc., National Chromium Corporation, and Machine and Casting, Inc. The individual facilities are less than 4 acres in size and located in a residential and light industrial area. Three plumes of chromium contaminated ground water are present at the site. The largest of the three plumes originates from the Leigh Metal Plating Inc. facility; the next largest plume originates from the National Chromium Corporation facility; the smallest plume originates from the Machine and Casting, Inc. facility. The site is a mixture of light to medium commercial operations with private residences mixed throughout the area. While some private residences are connected to the Odessa public water supply system, the majority of residences are dependent on a single, high-quality aquifer for their drinking water.

The Trinity aquifer is the only source of high-quality drinking water in the site area. The water table in the unconfined aquifer is present at approximately 85 feet below the ground surface. The base of the aquifer is present at approximately 145 feet below ground surface. The Triassic red beds form the base of the aquifer. Private wells yield an average of 24 gallons per minute. Ground water flow in the aquifer is to the east-southeast.

## Current Status

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The site is in the 8<sup>th</sup> year of the 10-year long-term remedial action. The remedy at the site is a ground water pump and treat (P&T) system composed of 43 active pumping wells. The water was treated through an on-site ion exchange treatment plant (IXTP) to remove the chromium from the extracted ground water. This system has been shut-down and an alternative treatment system is currently being fabricated with an expected delivery time of June 30, 2012. The alternative treatment system will achieve lower a lower chromium concentration in the treated water at a lower monthly operating cost. The treated water is injected back into the Trinity aquifer. A site-wide ground water sampling event was completed in October 2011 and five additional well locations were sampled in early December 2011.

EPA completed well installation for the in-situ treatment pilot test in June 2010 followed by the initial sampling of the 30 wells. The pilot scale injection of amendments for in-situ reduction of chromium beneath the former Machine and Casting facility test was completed the week of July 12<sup>th</sup> and the first round of post-injection groundwater monitoring was completed the week of August 23<sup>rd</sup>. A site-wide ground water sampling event was completed the week of August 30<sup>th</sup>. The fourth round of post-injection ground water monitoring was completed the week of December 13<sup>th</sup>. The pilot test evaluated the potential

reduction in the time frame for cleanup of the contaminated ground water. The initial pilot test sampling results have indicated that the in-situ treatment has been successful in converting the mobile hexavalent chromium into the immobile trivalent chromium.

The EPA completed the five-year review process on September 19, 2008. The report is posted on the EPA Region 6 website and a copy is available at the local repository in Odessa. The five-year review determined that the remedy is currently protective of human health and the environment. The remedy will attain long-term protectiveness after the issues and recommendations identified in the First Five-Year Review Report have been addressed. The issues are related to revising the current ground water model to improve the capture zone evaluation, installation of additional monitoring wells to evaluate the increasing chromium concentrations in select recovery wells, and completion of maintenance and repair to system components. The Second Five-Year Review is scheduled for completion by September 2013.

## **Benefits**

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The P&T system has prevented further migration of the contaminant plume in the Trinity aquifer and chromium concentrations continue to decline across the site. Remediation of the plume will allow unrestricted use of the aquifer, the source of drinking water and irrigation water for the local community.

## **National Priorities Listing (NPL) History**

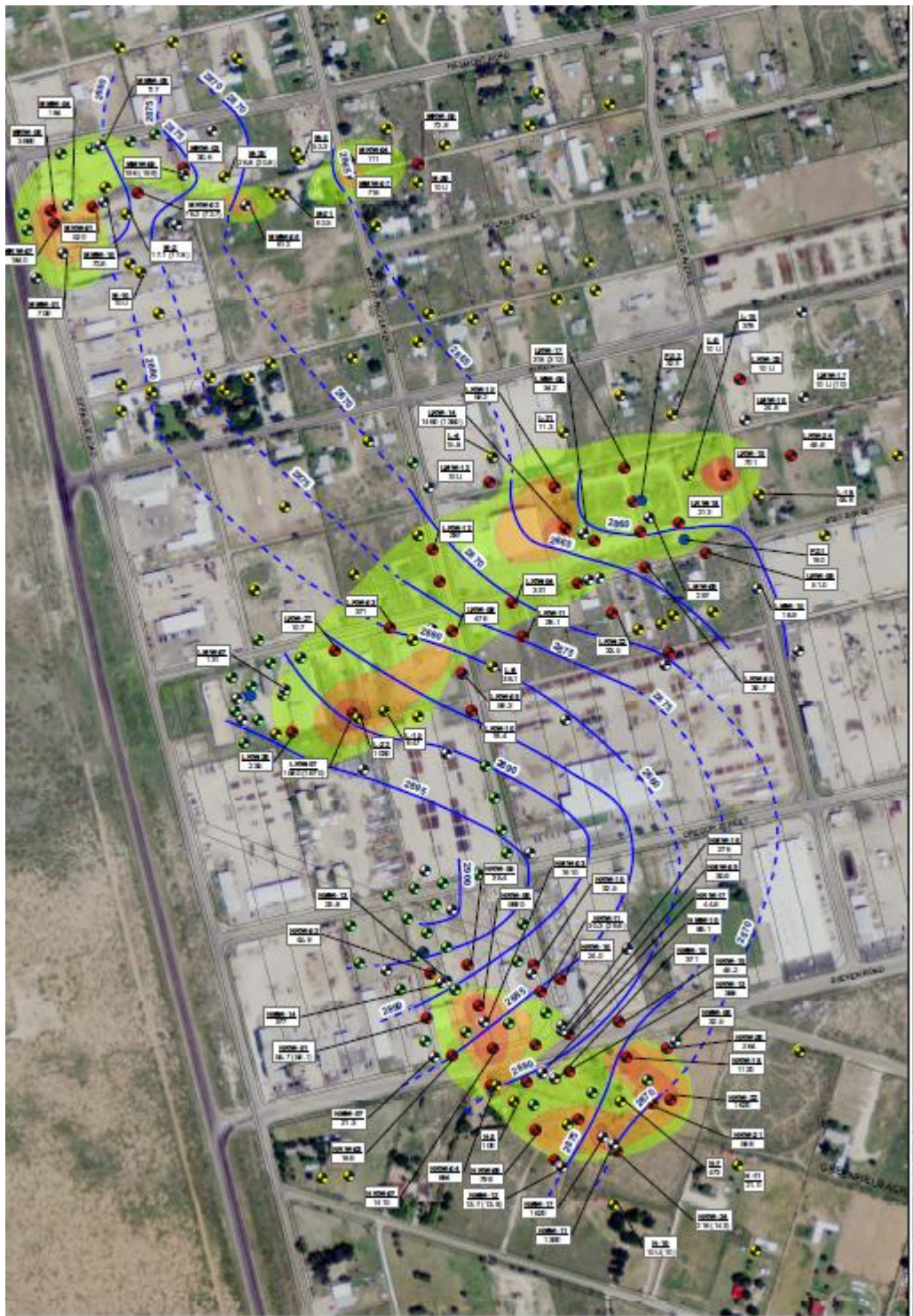
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NPL Inclusion Proposal Date:	April 1, 1997
NPL Inclusion Final Date:	September 25, 1997

## **Site Map**

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The following site maps illustrate the August 2010 sampling results and the extent of the chromium plumes based on the 100 µg/L cleanup goal at the Machine and Casting site and the Leigh Metals site. The results of the October and December 2011 sampling results are presented for the National Chromium site.



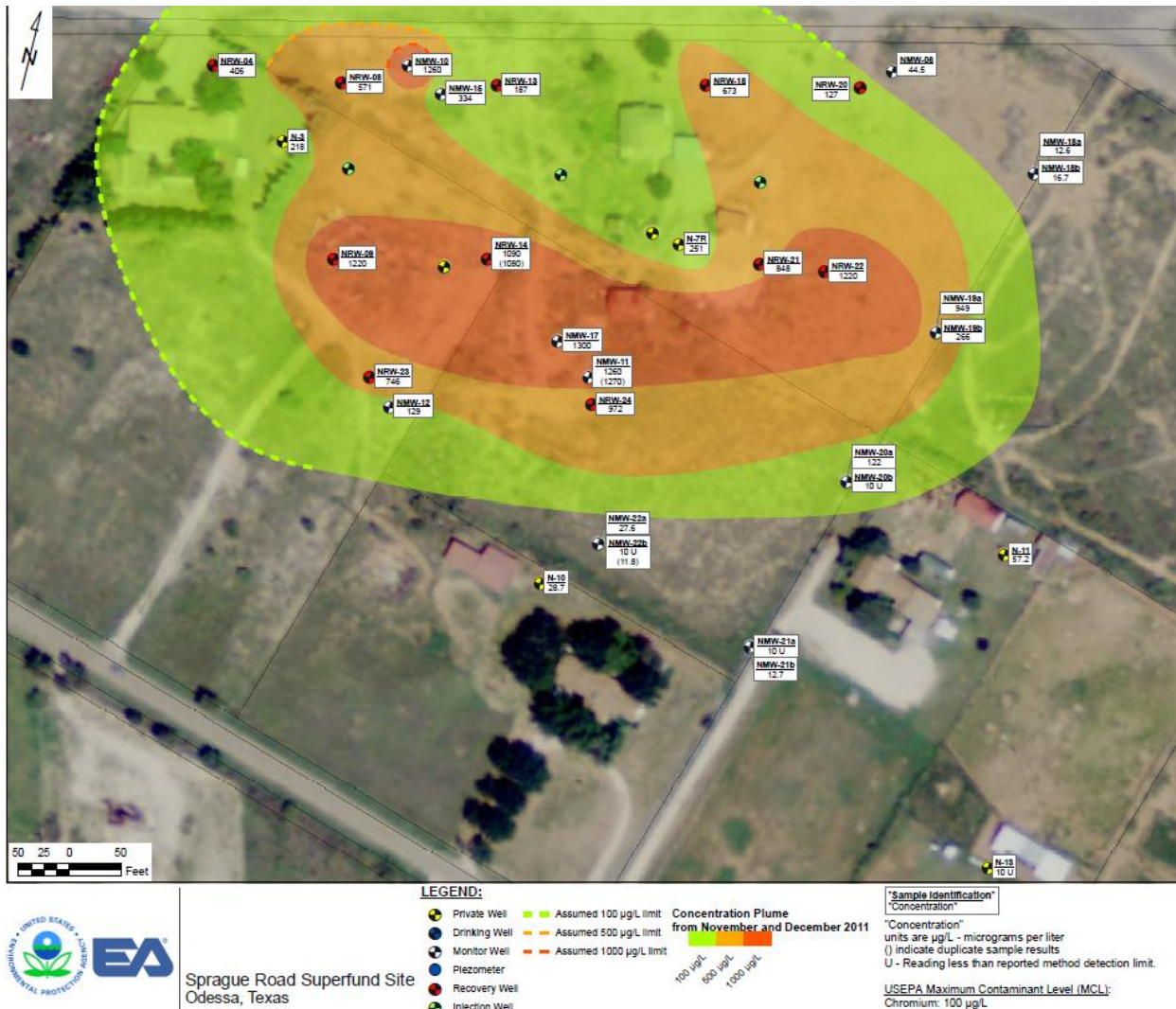
Machine and Casting site



Leigh Metals Site



## National Chromium site



## Wastes and Volumes

The cleanup goal for chromium in the ground water is 100 ppb. The three separate chromium plumes defined by the 100 ppb limit extends approximately 750 feet from the Machine and Casting property, 1600 feet from the Leigh Metals property, and 600 feet from the National Chromium property. The highest chromium concentration is measured in the National Chromium plume at 6200 ppb.

## Health Considerations

Chromium in the ground water poses a risk to residents in the area dependent on private water wells for drinking water. Chromium concentrations off-site from the three facilities exceed the MCL of 0.1 mg/L. The private residences and businesses in the vicinity of Leigh Metals and National Chromium facilities are connected to the Odessa City water supply. Private residences in the vicinity of the Machine and Casting facility still utilize private water wells.

## Record of Decision (ROD)

A Final Record of Decision was signed on September 29, 2000.

## Community Involvement

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The EPA completed the five-year review process on September 19, 2008, and a public announcement was posted in the Odessa newspaper on September 28<sup>th</sup>.

## Site Contacts

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EPA Superfund Region 6 Toll Free Number: 1-800-533-3508		

**Information Repository:** Ector County Public Library in Odessa, Texas