



The report is produced by an independent technical advisor to interpret and help the community understand technical information about our Superfund Sites

Annual Superfund Sites Update



Superfund Process: What Happens Next?

There are many steps in the Superfund process and each of the three Brunswick sites is at different steps in the process.

The **Remedial Investigation** involves more testing of the site to determine the health risk to humans, plants, and animals from the harmful chemicals at the site. If the health risks are above what is allowed, a list of cleanup options is created as part of a **Feasibility Study**.

A **Feasibility Study** looks at each of the cleanup options being considered to figure out the best cleanup for the site that will protect human health and the environment from current or future exposure to the site chemicals. Because the cleanup can be accomplished in different ways, the cleanup options must be compared to each other.

After all the alternatives in the **Feasibility Study** have been reviewed, one is selected and published as the **Proposed Plan** to clean up the site. After the **Proposed Plan**, a **Record of Decision** is written. The **Record of Decision** is a document that states how a site will be cleaned up and the long-term monitoring that will be put in place.

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In This Issue

Superfund Process

Brunswick Wood Preserving

· *Site Background*

· *Current Activities*

LCP Chemicals– Turtle River

· *Site Background*

· *Current Activities*

Terry Creek/Hercules Outfall

· *Site Background*

· *Current Activities*

This update and more information about Glynn County Superfund Sites at:

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Brunswick Wood Preserving

Background

From 1958 to 1991, the Brunswick Wood Preserving Site housed wood treatment and preserving operations. The site requires long-term cleanup due to regular use of chemicals such as creosote, pentachlorophenol, and copper chromium arsenate, which contaminated the groundwater and soil. Other chemicals of concern include dense non-aqueous phase liquids and sediment chemicals such as naphthalene, benzene, and semi-volatile organic compounds. The cleanup is managed in two parts, 1) the Upland, or site-wide soils, sediments, and groundwater and 2) the ecological risks in Burnett Creek and other surface waters.

Historical Highlights

- June 1998: Remedial Investigation Report**
- June 2001: Final Feasibility Study (Upland)**
- June 2002: Record of Decision**
- September 2012: Five-Year Site Review**
- December 2013: All groundwater treatment discontinued**
- March 2014: Seven new wells installed to measure groundwater levels**

Current Activities

EPA is in the process of finalizing an Explanation of Significant Difference report, which will detail the cleanup plan for the shallow creosote still outside the western containment area. Deeper dense non-aqueous phase liquids are outside this area but not across the creek. Monitoring in this area will continue.

January 2015: Water levels inside the eastern containment area have increased two feet over the last four years but there is no release to the surface waters. The system will require long-term response action, including groundwater extraction.

March 2015: In-Situ Solidification is being considered to immobilize and contain the shallow dense non-aqueous phase liquids outside the western containment area, that were not captured by the primary and secondary barrier walls. Additional remedial components will be required due to the utilities and railroad tracks in that area.

May/June 2015: A water extraction system was installed for the eastern containment area. The groundwater study will continue before a decision is made on installing a similar system for the western containment area.



Brunswick Wood Preserving groundwater treatment site 2014
Photo by Daniel Parshley

LCP Chemical Site: Turtle River

Background

Various industries (i.e. oil refinery, electrical power, paint/varnish, and a chlor-alkali chemical plant) used this site from the 1920s through 1994. Contaminants, including polychlorinated biphenyls, mercury, lead, dioxins, and cancer-causing hydrocarbons, are still present as runoff and are impacting the soil, groundwater, tidal marsh sediment, and marsh plants and animals. The site cleanup is being managed in three parts: the estuary, the groundwater, and the upland soils and sediments.

Historical Highlights

- August 1980: Site discovery**
- July 2011: Human Health Baseline Risk Assessment for the Estuary and for the Uplands Soils**
- March 2013: Estuary Feasibility Study Tech Memo**
- April 2013: Final Uplands Feasibility Study Technical Memo**
- June 2014: Estuary Feasibility Study**
- November 2014: Estuary Proposed Plan**

Current Activities

Cleanup actions are continuing on the land areas and in the groundwater to prepare the site for redevelopment and economic activity. According to EPA, site contamination does not currently threaten people living near the site. However, human exposure is still a concern, and fish consumption advisories remain in place for the estuary. The contaminated groundwater is also still a problem, and will need continued treatment over the years.

August 2014: A supplemental geo-probe investigation was performed to better define the caustic brine pool. Well installation began and continued into September in preparation for Phase 2 carbon dioxide sparging.

November 2014: The EPA issued the Estuary Proposed Plan for cleanup of this site on the Turtle River. The Plan has the following elements: removal of contaminated sediment and creek bank, capping of contaminated sediments with fully engineered capping materials, covering salt marsh with a thin layer of clean materials, permitting the natural sedimentation processes to cover contamination, and continued restrictions on fish consumption to control the behavior of people using the site.

The following have been identified as issues with the Plan: there needs to be more sediment removal compared to capping and thin-cover placement, a replanting program of *Spartina* post-remediation should be one of the first monitoring efforts, the evaluation of the way the LCP site is used by the community is inaccurate, Atlantic bottlenose dolphins are an essential part of the local ecosystem and are not included in the ecological risk assessment, thin-cover placement is not a suitable recovery method, and the Human Health Risk Assessment is inadequate to protect humans.

December 2014-March 2015: Carbon dioxide sparging and associated monitoring of groundwater for pH and water level were conducted pursuant to the Carbon Dioxide Sparging Workplan and the technical memorandum. A total of 717 tons of carbon dioxide was sparged into the CBP during this time.

January 2015: The EPA approved the use of 35 acres of the LCP site for the new Glynn County Detention Center.

Terry Creek/Hercules Outfall

Background

The Terry Creek Spoil Area/Hercules Outfall site consists of three disposal areas and the Hercules Outfall Ditch. From 1948 to 1980, toxaphene, a pesticide, was produced at the plant and was discharged into Dupree



An aerial view of the former LCP Chemicals site before the buildings were removed. Photo by Daniel Parshley



A White Ibis wading in the creek.. Photo by James Holland

Creek, which flows into Terry Creek. Toxaphene contamination is present in the outfall ditch sediments, Terry and Dupree Creek sediments, and the dredge disposal areas.

Historical Highlights

January 2012: Draft Focused Remedial Investigation/Feasibility Study for Outfall Ditch

December 2012: Draft Remedial Alternative Screening Technical Memo

February 2014: Revised Draft Focused Remedial Investigation/Feasibility Study for Outfall Ditch

December 2014: Focused Remedial Investigation/Feasibility Study for Outfall Ditch

June 2015: Proposed Plan for Outfall Ditch

Current Activities

Early cleanup actions have begun and the *Proposed Plan* has been released. Human exposure is still a concern, and fish consumption advisories remain in place.

December 2014: The *Focused Remedial Investigation/Feasibility Study* failed to address the possible effects the site-related chemicals may have on human health and the environment. The report's preferred cleanup option does not permanently remove contaminated sediments from the site.

January 2015: Activities to prepare for remedial design/remedial action were initiated.

June 2015: The *Proposed Plan* failed to address the groundwater contamination plume or groundwater, other than carbon tetrachloride in the surface water. Regarding contaminant levels in fish, the report argues for the use of the same analytical method as the one that did not find poison in fish. This is despite the fact that the same samples were tested and found to be up to 52 times the "EPA Do Not Eat" level of pesticide.



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Current and Upcoming Activities

Brunswick Wood Preserving

- A site tour was held on July 22.
- Remedial work is anticipated to begin as soon as the end of August, with the Explanation of Significant Difference finalized at the same time field work begins.

LCP Chemicals Site

- EPA anticipates that the Record of Decision for the Uplands will be finalized this year.
- New documents regarding the caustic brine pool will soon be made available.
- A draft Carbon Dioxide Sparging Phase 2 Full Scale Implementation and Monitoring Report for the LCP Chemicals Site is available on the EPA's website.

Terry Creek

- Fish tissue sampling continues to be conducted in order to reevaluate the site's fish consumption advisory every two years.
- GEC held a Public Meeting on July 23, and the EPA held an EPA Public Comment Meeting July 30. A formal request to extend the time for public comments has been submitted.



Brunswick, GA marshlands

Source: Golden Isles Georgia