



## EPA holds LCP site clean up hearing

By Pamela Permar-Shierling

Thirty-four years, four months, and four days after the U.S. Environmental Protection Agency (EPA) became aware of the LCP Chemicals Site, the EPA came to town last Thursday to hold a Public Hearing to explain the proposed plan to clean up the site and to hear public input.

The standing-room-only meeting was held in the large conference room of the Brunswick-Glynn County Library, and while the crowd was polite, they were insistent that the EPA and the companies responsible for the Superfund site do much more than what EPA proposed to clean it up.

The LCP site consists of approximately 670 acres, the majority of which is tidal marsh. The main feature of the LCP Chemicals marsh is Purvis Creek, which divides the marshlands roughly in half - north to south. Purvis Creek flows into the Turtle River.

The site is located on the west side of Highway 341 (Norwich Street extension) slightly north of Georgia Pacific and south of the new Sheriff's Complex and Jail.

For about 70 years various manufacturing industries operated at the site. These industries contaminated the site with mercury, lead, polychlorinated biphenyls (PCBs) and other toxic chemicals.

The contaminants impact the soil on the site, the ground water, and tidal marsh sediment and marsh biota (plant and animal life).

### Site history

August 1980 - Site discovery  
January 1984 - Preliminary Assessment  
June 1996 - LCP site placed

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on National Priorities List (NPL)

April 2011 - Ecological Risk Assessment for Estuary

November 2011 - Human health risk assessments for the Estuary

June 2014 - Estuary Feasibility Study: EPA put forth a proposed clean up plan based on this study

November 2014 - Estuary Proposed Information from the EPA proposed plan summary:

Since the early 1920s, the LCP Chemicals Site has been used by industry, initially for the refinement of petroleum products, followed by electric power generation, then paint formulation.

From 1957 to 1994 the property was used as a chlor-alkali plant for the making of hydrogen gas, chlorine gas and sodium hydroxide using the nearly obsolete mercury cell process. The industrial uses of the site resulted in contaminants either being placed in the marsh or pumped through pipelines into the marsh.

Although the twice daily tides have dispersed the contaminants, due to the properties of the contaminants, the highest concentrations remain within the creeks and channels closest to where the contaminants were placed or pumped.

Wildlife, including finfish, shellfish,

December 8, 2014, The Islander, Page 5, birds and mammals live in or migrate through the LCP Chemicals marsh. Because some of the Site's contaminants are persistent, they accumulate and magnify in the wildlife.

The LCP Chemicals marsh is bordered to the west by Turtle River, to the north by Gibson Creek (a tributary to the Turtle River) and to the south by the Brunswick Cellulose facility.

The site has been divided into four domains. Domain 1 is 21 acres and bounded by the uplands to the east, the Main Canal to the north and Eastern Creek to the west. Because

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this Domain is located closest to LCP Chemical's discharge disposal areas, a removal of contaminated sediments took place in the eastern portion of Domain 1 in 1998-1999.

Domain 2 is 115 acres and bounded on the east by Domain 1, the south by uplands and the west and north by Purvis Creek and the Main Canal. It contains the Western Creek Complex.

Domain 3 is 108 acres and bounded to the south by the Main Canal, the east by the uplands which are part of the site, and the west and north by Purvis Creek.

Domain 4 is 417 acres in size and is the area west of Purvis Creek up to the Turtle River.

The proposed clean up plan would take place on about 24 acres, include sediment removal, capping, and thin cover placement, take about two years to complete and cost an estimated \$28.6 million.

Sediment removal and backfilling would occur in Eastern Creek and the LCP ditch. Capping would occur in Purvis Creek and the Domain 3 Creek (in the North Eastern portion of the site). Thin cover placement would occur in Dillon Duck (eastern most portion of Domain 3) the vegetated marshes of Domain 1a and Domain 2.

The proposed plan also includes a plan for short and long term monitoring.

Dr. Peter deFur, President of Environmental Stewardship Concepts,

LLC, is a technical advisor and works on behalf of the Glynn County community through Glynn Environmental Coalition. He was at the meeting to ask questions and state his concerns about the proposed plan.

Dr. deFur's issues with the plan include: not enough contamination removal; evaluation of the way the LCP site is used by residents is not accurate; dolphins, a sentinel species, which are not included in the EPA's ecological risk assessment, are an essential part of the ecosystem; thin cover placement is not a sustainable recovery method; it is necessary to re-plant salt marsh grass after sediment removal; the EPA's human health risk assessment does not accurately describe harm to humans.

PCBs as well as other contaminants at the LCP site are topics of ongoing research. New information is being released continuously.

Information from an Environmental Stewardship Concepts PCB fact sheet:

PCBs can cause cancer, alter hormone levels, and alter the condition of the skin, liver, pancreas, and the cardiovascular system.

PCBs can also impair development of the brain and neurological system. Exposure of the unborn fetus can cause low birth weight babies. PCBs are present in the breast milk of women in the US and around the world. Babies exposed to PCBs can also be behaviorally affected and act "fussier" than unexposed babies.

Living in the vicinity of a PCB waste

site can also be an important source of exposure. Children born before or during dredging of a contaminated river had higher umbilical cord PCB levels than children born after dredging.

A 2010 NOAA and Georgia Department of Natural Resources study found PCB concentrations in Brunswick dolphins to be ten times higher than in dolphins from the Savannah area.

Finally, a study conducted recently by the Agency for Toxic Substances and Disease Registry on Sapelo Island residents showed that some Sapelo Islanders have dangerously high levels of PCBs in their bodies based on blood samples.

According to the study when Sapelo residents' samples were compared to samples from the local Atlantic bottlenose dolphins, scientists found that the human and dolphin samples contained similar environmental contaminants.

Contaminants from the LCP Chemicals Site seem to have migrated into the waters and sediment surrounding Sapelo Island, into the local seafood, and finally into the bodies of the local residents who eat the seafood.

One young woman at the meeting said she was from Sapelo Island, that her parents still lived on Sapelo and had lived there all their lives, ate fish daily, and no one had ever said anything to them about a PCB study.

"This is the first I have heard of this study," she said.

David Kyler, Executive Director Center for Sustainable Coast had

comments for the EPA.

"If timely control of this site had been implemented and the laws in effect had been properly enforced, much of the present calamity and expense could have been avoided," Kyler said.

Kyler further pointed out that

- Coastal storms and Georgia's high tidal range strongly suggest that a thin-cover placement is not a reliable method to protect the public and wildlife from further damage due to the migration of toxins from the LCP site.

- Direct exposure to toxic chemicals in the estuary remains a possibility unless more study conclusively and objectively demonstrates that there is little or no recreational use of creeks in the area.

- Based on a recent study of The Agency for Toxic Substances and Disease Registry (ATSDR), it is known that residents in the impact area consume contaminated seafood at a rate that is at least two-and-a-half times that assumed to be the maximum safe limit in the EPA Human Health Assessment. As a result, people in the area are at much greater risk than the EPA analysis suggests, as indicated by findings of the referenced Toxic Substances study, which reported dangerously high levels of PCBs in blood samples taken from residents ranging in age from 21 to 74 years old. Such a finding is especially disturbing because PCBs are known to cause cross-generational harm to animal

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species that are contaminated by them – including Atlantic bottlenose dolphins as well as humans.

Kyler continued, "Such under-rated risks and related deficiencies in the EPA Plan strongly justify far more extensive clean-up efforts, with corresponding budget enhancement, which are needed to improve protection of Georgians and the natural resources upon which they depend."

After a bit more pushing from Kyler, Galo Jackson, the EPA representative from Atlanta and LCP Superfund site manager, said the remedy could be altered.

James Holland, retired Altamaha Riverkeeper, put it very plainly. "48 acres just doesn't cut it. You'd better take a look at the whole thing."

Holland continued to ask EPA representatives how the plan was developed; how were the six alternatives developed; and how did the people on Sapelo end up with PBCs from the LCP site in their blood.

Jackson said that alternative 6 was chosen as a matter of balancing the disturbance to the marsh. "The marsh may not come back if too much is removed," he said.

Note: 48 acres is mentioned in Alternative 2 and Alternative 3 of the 6 clean up alternatives the EPA put forth.

Alternative 1 was do nothing.

Alternative 2 - Sediment Removal - 48 acres - \$64.5 million; 3-4 years

Alternative 3 - Sediment Removal, Capping and Thin-Cover Placement - 48 Acres - \$38.7 million;

Alternative 4: Sediment Removal - 18 Acres - \$34.1 million; 2 years

Alternative 5: Sediment Removal, Capping and Thin-Cover Placement - 18 Acres - \$26 million; 2 years

Alternative 6 (Preferred Remedy): Sediment Removal, Capping and Thin-Cover Placement - 24 Acres - \$28.6 million; 2 years

Stephen Day, CEO of Etana, LLC, a firm licensed to distribute a PCB extraction method developed by NASA, asked if anyone from Honeywell, the company currently responsible for the site, was present.

When no one in the crowd responded, Day continued, where did the plan come from? Was input from Honeywell sought? Is Honeywell willing to stand up and do the proper clean up?

"We understand how influence is gained," Day said. "We need Honeywell to stand up."

Finally John Morris from Honeywell's corporate office said, "We are co-operating with the EPA. We are ready to implement the remedy."

Day questioned him further. "Are you willing to go back to your board (of directors) and ask for more money?"

Morris' response: "We support the process."

Megan Desrosiers, Executive Director of the group 100 Miles, commented that EPA should have made the plan available to the public sooner than it did.

The clean up plan was placed in the Brunswick Glynn County Library only 24 hours prior to the meeting.

"24 hours is not enough time for the

public to digest the plan and engage with the EPA in discussion," she said.

Desrosiers also pointed out that the remedy plan's long term monitoring does not include marine mammals. "Nor will simply capping clean up the site," she said.

Sediment capping involves overing contaminated sediment with layers of clean material such as sand or gravel. Caps are meant to isolate the contaminated sediment underneath so that chemicals cannot escape.

A commercial fisherman commented that all commercial fisherman in the area know there is a major problem in all estuaries. "The shrimpers are willing to take their nets off and drag the stuff (contaminated sediment) out," he said. "They will help."

Daniel Parsshley, Project Manager Glynn Environmental Coalition, was passionate in his comments.

"This is not a public hearing. It's a farce. You don't put a record out only 24 hours in advance and expect the public to be ready for a public hearing," he said.

"This is a question and answer session so I want my questions on the record."

Parsshley commented that he had seen no interim measure, no management plan to keep contaminants from getting out. "You need to stabilize the area. If this site were on land, there would be a fence around it," he said.

"39 tons of contaminated sediment have been removed and brought the toxic levels down but that's all," he continued. "This site is functioning as a vector for health problems."

In February 1994, after numerous investigations by the GAEPD and the EPA, GAEPD requested that the EPA initiate removal enforcement actions at the Site. According to the Action Memorandum signed in May 1994, the Site was a high priority for removal action.

A Unilateral Administrative Order was issued in 1994 and then amended in 1995, to add potentially responsible parties (PRPs).

Three PRPs; Allied, Georgia Power,

and ARCO, subsequently entered into a mixed funding Administrative Order on Consent (AOC) to conduct additional removal activities in August 1997. The removal was completed in July 1999. The RI/FS has been performed pursuant to an AOC, between ARCO, Allied, Georgia Power and the EPA. The PRPs agreed to perform the remedial investigation/feasibility study concurrently with the removal work.

In May 2007, Honeywell, the

successor to Allied, signed an AOC, agreeing to perform a time-critical removal of a caustic brine pool located in the vicinity of the former mercury cell buildings.

Parsshley also commented that the report ignores air transport of the contaminants. How did the PCBs get to Sapelo Island? Across the Brunswick peninsula and the Islands? How many

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pounds of chemicals were released into the marsh and into the air?

What institutional controls has EPA implemented? Describe these controls in detail.

Questions from other residents included how does the plan protect the aquifer? Is EPA concerned if Honeywell is happy? Why is no bio-remediation being explored? Have residents close to the LCP site been tested for PCBs and mercury? And wouldn't that testing be the gold standard for the clean up plan?

An EPA representative's answer to the bio-remediation question was that bio-remediation of PBCs have been worked on for 20 plus years but are not at the point where this type of clean up is feasible.

Jackson did answer the resident testing question: he didn't recall if residents had been tested; and he responded that yes testing on humans would be the gold standard.

The public has until February 2, 2015 to comment on the proposed LCP clean up site plan.

Comments may be sent to Galo Jackson, EPA, 61 Forsyth St., Atlanta, Ga. 30303; or email [jackson.galo@epa.gov](mailto:jackson.galo@epa.gov).

The full plan may be viewed at [www.glynnenvironmental.org](http://www.glynnenvironmental.org); or [www.epa.gov/Region04/LCP ChemicalReading Room](http://www.epa.gov/Region04/LCP_ChemicalReadingRoom).

Sources used in this article include the EPA plan; information from Dr. Peter deFur; David Kyler; and Daniel Parsshley. □

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