Galaxy/Spectron Inc

U.S. EPA Removal Proposed Plan
Fact Sheet - June 1998

EPA Issues Removal Proposed Plan for Little Elk Creek Containment System

This Proposed Plan* is issued as part of the Community Involvement activities for the Little Elk Creek Removal Project at the Galaxy/Spectron Superfund Site. Late last fall, EPA had announced changes to the removal project, which was scheduled for construction in September 1998. The changes resulted from concerns that significant site-related contamination might be entering Little Elk Creek downstream of the former Spectron facility. In December 1997, numerous surface water samples were collected from the creek as far downstream as one mile. The sampling confirmed that the creek containment system, as originally planned and discussed at past public meetings, would prevent substantial sources of the contamination from entering Little Elk Creek at the Spectron Site.

This Proposed Plan announces EPA's proposal to approve construction of the Little Elk Creek containment system (as described on the next page) in the summer of 1998. The Proposed Plan also describes other options EPA considered for addressing contamination in the creek as part of this removal project. After the 30-day public comment period, during which EPA will accept and consider comments on the plan, EPA will issue a decision document, called an Action Memorandum. The memorandum will outline the selected plan to address the contamination in Little Elk Creek. Based on its review of comments received during the comment period, EPA may modify the cleanup plan, develop and/or select a different option, or keep the plan as described in this Proposed Plan.

We Want to Hear From You

EPA relies on community input when making decisions about a Superfund Site to ensure that the selected cleanup plan addresses community concerns. On February 17, 1998, EPA will open a public comment period. Interested parties may comment on the Proposed Plan until March 18, 1998. Submit comments to one of the EPA representatives listed on the last page for consideration.

During the comment period, EPA will hold a public meeting to present the Proposed Plan and to address questions and concerns. The public meeting will be held at 7:00 p.m. on Tuesday, February 24, 1998, at the Cherry Hill Middle School, 2535 Singerly Road, Elkton, Maryland.

EPA will summarize and address all comments received at the public meeting and written comments postmarked by March 18, 1998, in the Action Memorandum. The memorandum will document EPA's final selection of the removal cleanup plan to address high levels of contamination currently entering Little Elk Creek, and will be available to the public in the Administrative Record File at the information

repository. (Please see page 5 for information about the Administrative Record File and the location of the information repository.)

Containment System Will Protect Public From Contamination

If the Action Memorandum determines that the stream containment system is appropriate, construction would begin in the summer of 1998, when water flow conditions within the stream would allow such work. The containment system will prevent ground water contaminated by the Spectron Site from entering the creek and being carried more than one mile downstream. Although EPA has determined that it is currently safe to swim in the creek, levels of contamination along the west bank of the former chemical plant pose a danger to the public and the environment. The creek containment system will protect people from direct contact with the contaminated seeps.

EPA is proposing that 1,100 feet of the creek be lined with a chemicalresistant plastic membrane from just below the Spectron dam to just past the Providence Road Bridge. Mats of rock encased in chain-link fence (often called Gabion mats or Gabions) will be placed on the membrane or liner to protect the liner and to provide a surface on which to rebuild the habitat in the creek. Underneath the membrane, a french drain system will collect the ground water that is currently carrying contamination to the creek. A small treatment plant will be constructed at the former chemical plant in the spring of 1999 to treat the contaminated ground water, which will then be discharged to Little Elk Creek.

The goal of this project is to make sure Little Elk Creek complies with Maryland Surface Water Quality Standards (SWQSs). Maryland's SWQSs for the Little Elk Creek are at levels which make the water safe to drink and protect the aquatic life in the creek. Due to the hazards that can be caused by the contaminants at this site, the SWQSs are very stringent.

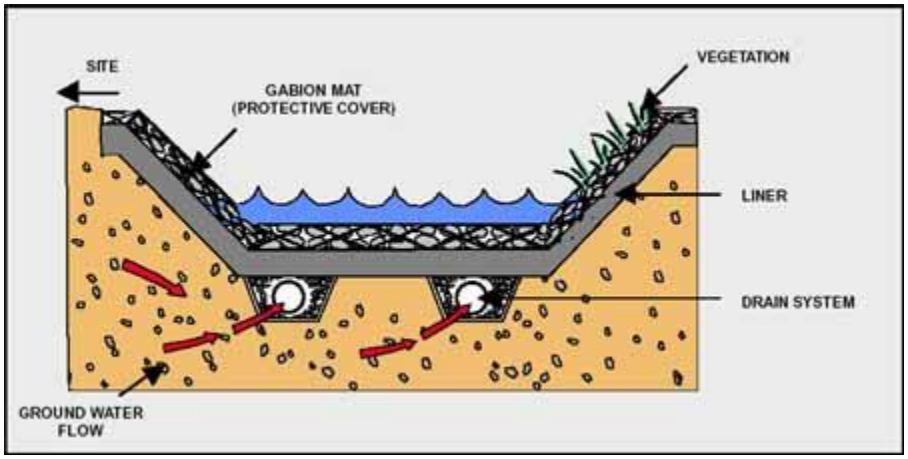
The containment system is designed to capture contamination that enters the creek in three ways:

1. From shallow ground water that creates the highly contaminated seeps along the west bank.
2. From deep or bedrock ground water that discharges into the creek from below the creek.
3. From contamination resulting from the dissolution of pure solvents that are in the creek sediments.

Due to the three sources of contamination and the stringent SWQSs, EPA believes that in order to accomplish the goals of the Removal Project, lining the creek is preferable to the other options that were considered.

A major component of the project will be to rebuild the creek habitat after the liner is installed. Efforts will be made to minimize the destruction of habitat, including the number of trees that will be cut down during the construction. Trees that must be cut down will be replaced. During the year following

the liner installation (at the most appropriate time), vegetation will be planted on and around the liner in order to promote the reestablishment of the creek habitat.



Anticipated Schedule

Summer - Fall 1998	Liner Constructed
Spring 1999	Treatment Plant Constructed
Fall 1998 - 1999	Little Elk Creek Habitat

Cleanup Necessary to Protect Public Health and the Environment

EPA previously determined that action must be taken by its Superfund Removal Program in order to protect human health and the environment. A number of chlorinated organic compounds have been found in the seeps along the west bank of Little Elk Creek and in the creek itself. The major contaminants include methylene chloride, trichloroethane and dichloroethane. Methylene chloride is the primary contaminant of concern due to the health hazards associated with it and the high levels found at the site. EPA has determined that it is already safe to swim in the creek once the contaminants completely mix with the surface water. However, exposure to the level of contaminants found in the seeps at the western edge of the creek adjacent to the former chemical plant may pose a threat to public health and to aquatic life in that area.

Containment System Only Option Expected to Meet State Standards

EPA evaluated numerous options to address the creek contamination, several of which are discussed below. EPA believes the creek containment is the best option because it is the only one that can meet the SWQSs. Although the other options would significantly reduce contamination in the creek to varying degrees, none would meet the SWQSs, which EPA and the State of Maryland believe are critical to protecting the public and the environment. Even if other removal options were taken at this

time, it is likely that the stream containment system would be required in the future. Therefore, although the other options would not be as intrusive to the creek, EPA believes the stream containment system should be constructed at this time.

Other Options Considered

Creek Aeration

This option would involve blowing a large volume of air throught the creek water after the contaminants mix the creek. This would cause contaminants to volatilize, thus preventing downstream migration. While this option may prevent migration of contaminants away from the site, it would increase the contaminant levels in the air at the site and would not address the potential for exposure to the seeps themselves.

Pump and Treat Shallow and Ground Water

This option would involve installing shallow ground water wells at the site to intercept highly contaminated ground water before it seeps out along the creek bank. This option would also include covering the predominant seep areas with riprap to prevent contact with contaminated soil. While this option could address potential exposure to the highly contaminated seeps, it would not meet SWQSs because it does not address bedrock ground water or the pure solvents in the creek sediments.

Sediment Removal

This option would involve excavating the highly contaminated sediments in the middle of the creek, which contain several inches of pure solvents. This option also would not meet the SWQSs because it fails to address the seeps and the bedrock ground water that are carrying contamination into Little Elk Creek.

Combination

This option would involve combining sediment removal, shallow ground water pump and treat, and creek aeration. This combination of options removes more contamination than any of these options would by itself. However, SWQSs would not be met in the 1,100-foot stretch of the creek at the site, and there would still be significant air releases of contaminants from the aeration system.

History of the Galaxy/Spectron Inc. Site

The Spectron Site is an eight-acre property located about seven miles north of the town of Elkton, in northeastern Cecil County, Maryland. From the mid-1800s until 1946, several paper manufacturers operated water-powered paper mills at the property. After a fire destroyed the last paper mill in 1946,

the property was left vacant until Galaxy Chemicals Inc. purchased the site in 1961. From 1962 to 1988 property owners used the site as a recycling facility for chemicals from the electronic, pharmaceutical, paint, lacquer, coatings and chemical industries. During that time, the site operated under three names: Galaxy Chemical (1962- 1976); Solvent Distillers Inc. (1976- 1978); and Spectron Inc. (1978- 1988).

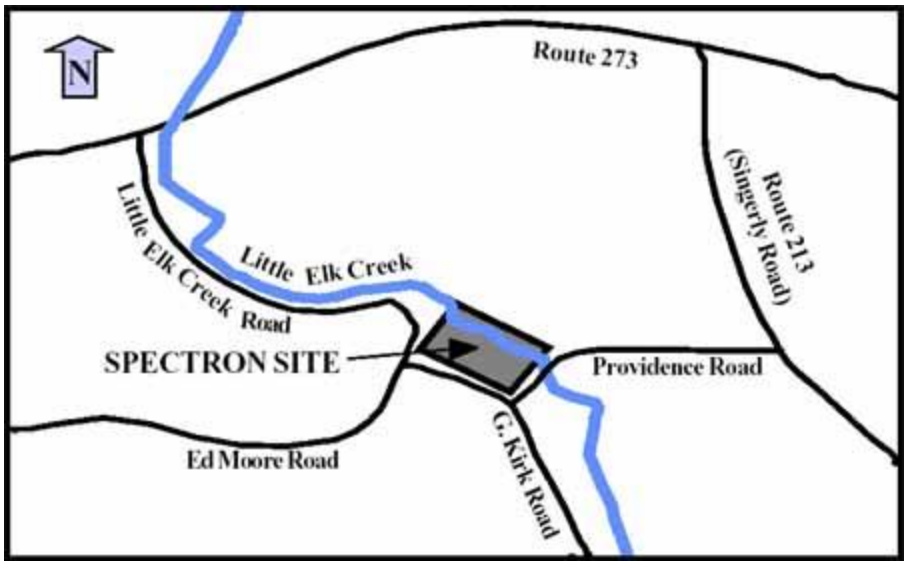
Soon after Galaxy began operations in 1962, area residents began complaining of foul odors coming from the site. Complaints about the odors increased greatly throughout the late 1960s, and several residents filed suit against the company in 1969, seeking damages for alleged exposure-related health effects. In December 1970 and April 1971, the Maryland Department of the Environment (MDE) conducted air, soil, surface water and ground water sampling at the site. The sampling efforts showed high levels of contamination in the air, tap water, Little Elk Creek, ground water and a sump at the site.

Operations continued at the site until 1975 when Galaxy filed for bankruptcy. In 1976, Solvent Distillers Inc. began new recycling operations at the site. The company changed its name to Spectron Inc. in 1978 and continued the recycling operations. Because of repeated environmental problems and permit violations, the State of Maryland denied Spectron's application for a permit to continue operations in 1989. Spectron Inc. subsequently closed and declared bankruptcy.

At the request of the State of Maryland, EPA investigated the site in April 1989 to evaluate the need for a removal action. EPA's investigation confirmed the presence of approximately 500,000 gallons of flammable liquids in storage tanks at the abandoned facility and numerous organic compounds in the soil and ground water. EPA determined that many of the tanks were highly unstable and susceptible to fire or explosion.

In May 1989, EPA began an emergency response action to remove the flammable liquids stored in the tanks and to remove more than 1,300 drums of chemicals from the site. Additionally, EPA posted a 24- hour fire and security watch at the site. In accordance with an administrative order and under EPA's supervision, potentially responsible parties (PRPs) completed the emergency action in 1990.

After continued evaluations of the property, EPA added the site to the National Priorities List (NPL) in 1994. The NPL is EPA's list of the nation's most serious hazardous waste sites that are eligible for cleanup funding from the Federal Superfund program.



Administrative Record File Available for Review

Information about the site and EPA's planned removal project is available in the Administrative Record File. The Administrative Record File is EPA's official collection of documents, data, reports and other information that support EPA's decision for cleaning up a site. You may review the file at the information repository listed to the right. You may also call to make an appointment to review the file at the EPA Administrative Records Room in Philadelphia, Pennsylvania, by calling (215) 566-3157.

Cecil County Library
301 Newark Avenue
Elkton, Maryland
410-996-5600

Hours:
Monday - Thursday 10:00 a.m. - 9:00 p.m.
Friday - Saturday 10:00 a.m. - 5:00 p.m.

Glossary of Terms

Action Memorandum:
A decision document that outlines EPA's selection of a cleanup plan for a removal project.

Dichloroethane:
A manufactured chemical that is often used to make other chemicals and to dissolve grease, glue and dirt. High levels of this chemical may damage the nervous system, heart, liver, kidneys and lungs.

French Drain System:
A system of pipes with many small holes, into which ground water flows. The pipes direct the ground water to a collection area.

Ground Water:

Fresh water found underground that fills in gaps between soil, sand and gravel particles, and is often a major source of drinking water.

Methylene Chloride:

A manufactured chemical that is often used to make paint strippers or metal cleaners and is suspected of causing cancer.

Potentially Responsible Parties (PRPs):

The companies or people responsible for cleaning up a Superfund site.

Proposed Plan:

A document that describes the cleanup methods EPA evaluated to address problems caused by contamination and identifies EPA's preferred option. The public is invited to comment on a Proposed Plan during a 30-day public comment period.

Removal Project:

Short-term cleanup actions to address the release or threatened release of hazardous substances. EPA conducts removal actions to reduce or eliminate imminent threats to public health and the environment.

Riprap:

Broken rocks placed on the ground to protect the underlying surface.

Sediments:

Soil, sand and mineral particulates washed away from land into water, usually after rain, which then settle to the bottom of surface water.

Seeps:

Ground water that has surfaced from the ground.

Superfund:

The program operated under the legislative authority of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA) that has the authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health, welfare or the environment.

Trichlorethane:

A manufactured chemical that is often used as an industrial degreaser or as a drycleaning agent and is suspected of causing cancer.