Fact Sheet
Pilot Study for Sediments
BASF Rensselaer Site, Rensselaer, New York

Summer 2009

Introduction

As part of its commitment to protect the environment and be a good neighbor in the community, BASF has an ongoing effort at its Rensselaer, New York site to study potential impacts to the environment from former operations on the property. A former dye manufacturing plant operated on a 94-acre parcel of land on the east bank of the Hudson River. Although the plant is believed to have operated in keeping with the standards and practices of its time, more is known today about potential impacts to the environment. BASF, in cooperation with the New York Department of Environmental Conservation (NYDEC), is studying conditions at the site and is taking actions to manage impacts to the environment. This fact sheet provides specific information about planned tests of treatment techniques to address sediment containing site-related chemicals.

Site History

Industrial use of the Rensselaer property dates to the late 1800s, when the first dye manufacturing plant was constructed by the Albany Aniline and Chemical Company. The site was originally part of a larger property, which included the adjacent Albany Molecular Research, Inc. property to the north; dye manufacturing was conducted on both properties. The two properties were separated in approximately 1917 when Sterling Drug Company acquired the properties and sold what is now the BASF site.



The site was owned and operated as a dye manufacturing plant by several corporate entities and the United States government (from World War II until 1964). BASF acquired the property in 1978. BASF ended manufacturing operations in 2001.

Where is the site?

The site is bordered by Riverside Avenue and the Hudson River on the west, a truck access road (Irwin Stewart Port Expressway, also known as the Port Access Highway) on the east and south, and by another industrial facility on the north. The developed area includes the main plant, the lagoons area, and the former on-site landfill. An electrical cogeneration plant (known as the Empire Generating Project) is currently under construction on the southern portion of the property, which is property BASF has leased to First Light Energy Partners. Undeveloped areas of the site include a wildlife habitat area (including a nature trail), a pond, and areas of marshland, meadow, and forest designed to provide habitat for a variety of wildlife species.

Have impacts to the environment occurred at the site? What has been done to address these impacts so far?

BASF has been performing environmental studies and taking actions to manage impacts at the site since its closure in 2001. Environmental studies have shown potential impacts to soil, groundwater, and sediment. To address soil and groundwater impacts, as of this time, we have:

(1) installed a site-wide groundwater treatment system;

(2) completed the remedial action of two former wastewater treatment lagoons;

(3) removed several thousands of tons of soil in the area known as the Main Plant;

(4) performed treatment of arsenic in groundwater; and

(5) completed the majority of the actions required by the NYSDEC for closure of the former on-site landfill.

Currently, we have a plan to cleanup impacted sediment in the Hudson River. Before the plan can be implemented, we need to test the selected cleanup technology in a Pilot Study.

What is a pilot study?

A pilot study is usually done at a site to "test" the technology on a small volume of impacted material before using it on the entire site. A pilot study is also done to show "proof of concept," and, if it's successful, to develop information to design the technology implementation on a full-scale basis. BASF's pilot study will also look to determine the best

engineering configuration for the design – and will help us develop better cost estimates for the full scale remedy.

What sediment will be tested? Do you need to dredge the river?

During the winter and spring of 2008/2009, approximately 1,000 cubic yards (CY) of sediment were dredged from the Hudson River adjacent to the site to allow for installation of a process water discharge line associated with construction of the Empire Generating Project. The dredged sediment is currently stockpiled in a secure enclosure (referred to as the "Containment Cell") in the western portion of the site. The sediment from this Containment Cell will be used in the pilot study, thus further dredging of the River is not necessary for the pilot study.

Where on the site are you doing the pilot study?

The Pilot Study will be conducted on a paved and fenced area of the Main Plant site immediately across Riverside Avenue from the Containment Cell location. The Pilot Test program will involve dividing the 1,000 CY of sediment into four approximately equally sized treatment cells for pilot testing. Each of the four piles will be treated slightly differently to permit us to evaluate performance of the cleanup technology. For example, each cell will have a different treatment configuration, heating mechanisms, piping structure, and so on.

What technology are you testing?

After careful study of the range of available treatment technologies, which included laboratory-scale testing of several technologies, BASF selected a low temperature treatment technology for the pilot study. Essentially, this technology uses moderate levels of heat, which when applied to the sediment, will help remove the contaminants.

How will the study be done?

The study will take place in four distinct phases. Phase 1 will include mobilization and site preparation. This phase will also include inspection and mark-out of work areas and access roads, and inspection of the Containment Cell area. During Phase 2 of the Pilot Study, a series of tests will be performed to evaluate whether incorporation of amendments increases sediment permeability, reduces sediment water content, or improves sediment material handling properties. Following completion of these tests, amendments will be mixed into approximately 50 percent of the sediment for evaluation in two of the four pilot test cells. In Phase 3, the four Pilot Treatment Cells will be constructed, and in Phase 4, the pilot study will be commenced.



Are government agencies involved with the project?

We are conducting our project in cooperation with the NYSDEC, who will be overseeing the project to ensure that the remedy achieves a satisfactory level of protection of human health and the environment.

What are the project's safety measures?

Our environmental cleanup projects are carried out under health and safety plans that are designed to protect workers and ensure there are no adverse off-site impacts.

The pilot study area will be secured by a fence, and the gates will be locked when the workers are not present. Traffic may be controlled at times when trucks are entering and leaving the site.

We expect the work may produce slight odors at some times, and the program has been designed to minimize these nuisance odors. Workers will be able to reduce the odors with foam and tarps. In addition, the air will be monitored for dust and volatile organic compounds using equipment that works much like smoke detectors to alert workers before emissions could reach unsafe levels.

What are the next steps – when will we know if it worked?

The pilot study will be operated for three to four months. Sampling of the sediment will occur during this time. Once the sample results are available and have been reviewed, BASF will provide the results to the NYSDEC.

Where can I get more information?

For questions or further information, you may contact:

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