

Region 3 GPRA Baseline RCRA Corrective Action Facility

E.I. duPont de Nemours & Co., Inc.

901 West Dupont Avenue
Belle, WV 25015
Congressional District 2
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Current Progress at the Site

In September 1998, EPA issued the Corrective Action portion (i.e., HSWA permit) of RCRA Permit (Permit No. WVD 00-501-2851) to DuPont. The Corrective Action portion of the permit requires DuPont to conduct investigations of potential releases of hazardous waste and to determine if corrective measures are necessary.



DuPont began implementing the RCRA Facility Investigation (RFI) field program in March 2000. Phase I of the RFI investigation was directed toward areas which likely pose the greatest threat to human health or the environment. The activities included installing monitoring wells, and sampling soil, sediment, and groundwater. Based on the results of this work, DuPont and EPA targeted the next phase of investigation work on three areas within the Plant Area where organic compounds were detected. In late 2002 DuPont implemented a Phase II investigation to identify the sources and the extent of impacted groundwater from these three areas.

In 2002, DuPont also began evaluating remedial technologies to clean up a known area of impacted soil and groundwater in the northern portion of the Plant Area. This area, referred to as the Benzol Process Area, is located adjacent to the Kanawha River. The soil and groundwater is impacted with oily material from an underground tank, which was removed several years ago and was associated with the former benzol process. In May, 2002 DuPont field tested contaminant destruction through in-situ chemical oxidation, but the results from this test indicated variable success in the removal of organic mass from the impacted media. Therefore, Dupont elected to examine alternative approaches. In December 2002, DuPont pilot tested air sparging and the results were more favorable. Building upon this success, an air sparging / soil vapor extraction system was pilot tested in April 2004. However, results indicated limited potential to draw vapor (and contaminants) with the method due to the low permeability of the fine-grained sediments in the area. Testing of a dual phase extraction system was conducted in July 2004 and determined to be a preferred remedial alternative for this area. In March 2005, DuPont began operating a dual phase system in the Benzol Process Area and in another source area referred to as the SSS Process Area. This dual phase system continues to operate at both of these areas on a periodic basis.

DuPont has also collected several surface water samples in the Kanawha River to assess whether source areas located near the river are adversely impacting the surface water quality. The results of the Kanawha River sampling indicate that the contaminated groundwater is not adversely impacting the surface water quality.

To evaluate impacted groundwater discharging from former disposal areas in the Mountain Area portion of the site, DuPont sampled water from several private home wells around the facility. The results indicated that the impacted groundwater is not affecting any residential wells. In addition, the facility has developed a groundwater model to assist in understanding the complex groundwater flow patterns of this area and to assess cleanup options. Additional wells were installed in the Mountain Area in the fall of 2004. In 2005 the new wells were sampled and environmental forensics was used to assess the nature of the widespread groundwater contamination. The results of the environmental forensics combined with the groundwater model and contaminant data indicate that there are sources beyond DuPont that are contributing to groundwater contamination in the area.

Field work in 2007 focused on characterizing solid waste managements units located within the mountain area portion of the site. In the Spring of 2007, DuPont completed geophysical testing in the mountain area, the first phase of this work. That effort is being followed up by test pits, soil sampling and groundwater sampling.

Site Description

The DuPont Belle Plant is located in Belle, West Virginia, approximately 8 miles east of Charleston, W.V. The 723-acre site is situated along the Kanawha River and has manufactured various specialty and agricultural chemical products since 1926. The Belle Plant is located in an area that consists of industrial, commercial, and residential land use. A former Occidental Chemical Corporation industrial facility is located immediately adjacent to the site's eastern boundary.

Today, DuPont employs approximately 400 people at the Belle site. The facility has 7 primary operating divisions that span a 105-acre manufacturing area that is nearly 1 mile in length. An additional 618-acres of mountain property is situated just north of the site across Route 60.

A portion of the Mountain Area is set aside as a Wildlife Habitat Area. The DuPont Belle Plant wildlife team manages 490 acres of undeveloped property. This program has been company certified for many years and has worked with the community to promote habitat in this area. These habitat enhancements include: planting trees and cool season grasses to provide food resources and cover for wildlife, constructing nesting structures for birds and mammals, developing three ponds, and establishing and maintaining a wildflower plot.

Site Responsibility

RCRA Corrective Action activities at this facility are being conducted under the direction of EPA Region 3 with assistance from the State.

Contaminants

Volatile and semi-volatile organic compounds are the main constituents found in the site's soil and groundwater. These compounds primarily consist of acetone, benzene, 2-butanone, phenol, toluene, and xylene.

Community Interaction

As part of its activities as a member of the local community, the DuPont Belle Plant has organized a Community Advisory Council (CAC) to address citizen's concerns about the site safety, health and environmental performance, and review related topics. The team is composed of citizens from neighboring communities and plant personnel. Programs like the RFI are typically reviewed in the council's monthly meetings. DuPont and EPA periodically update the CAC on the progress of the investigation and cleanup.

Institutional Controls

Institutional controls have not been implemented at this site. However, they will likely be a component of the final remedy.

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For more information about EPA's corrective action webpage, including Environmental Indicators, please visit our site at: www.epa.gov/reg3wcmd/correctiveaction.htm