WILDLIFE HABITAT COUNCIL℠

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OSWER PILOT SITE 2

INDUSTRIAL EXCESS LANDFILL
Uniontown, OH

Site Description

The Industrial Excess Landfill (IEL) is a forty-acre site that was listed on the National Priorities List in the mid-eighties. It is located within Lake Township in Uniontown, Ohio, south of Akron. The landfill itself comprises about 30 acres, with ten acres of buffer, and is surrounded by residential homes and a sod farm. The site was operated as a municipal landfill as early as the 1940's. In 1966, the mining and excavation pit was converted into a landfill, which operated until 1980. During this time, the IEL received industrial waste primarily from the rubber industries in Akron, Ohio. An estimated 780,000 tons of solid waste and 1,000,000 gallons of liquid waste were dumped onto the ground and into an evaporation lagoon constructed onsite. In 1972, the Stark County Board of Health ordered IEL to stop dumping chemical wastes. Besides industrial wastes, the landfill also accepted waste from hospitals, septic tank cleaning firms, and the general public. The landfill ceased operations in 1980, and was covered with sandy soil.

Contaminant Characterization and Assessment

Groundwater, primarily onsite, continues to be contaminated with a handful of inorganics and volatile organic compounds (VOCs). Data from 2000-2001 groundwater surveys suggests the level of contamination is decreasing, both in terms of number of contaminants detected and in concentration. There is no evidence to support the presence of a groundwater plume outside of the landfill boundary. Methane concentrations in the landfill gas continue to dissipate, to the point where the existing methane venting system needs to be operated manually two to three times per week to ensure adequate flaring is maintained.

Most residents downgradient of the site have connected to an alternate water supply, thereby minimizing potential receptors of contaminated groundwater from the site. Although there have been sporadic exceedances of metals outside of the landfill boundaries, tests of drinking water wells in 1998 revealed that such metal contaminants were significantly lower (i.e., one or two orders of magniture less) than federal drinking water standards. VOCs were not detected in the drinking water wells that were tested.

Regulatory History

Between 1985 and 1988, the United States Environmental Protection Agency (U.S. EPA) installed a methane gas venting system at the site to control the migration of methane and landfill gases offsite. During the installation of this system, 53 drums of suspected industrial waste were uncovered. These drums were removed and disposed of in an U.S.

EPA-approved facility. Residential well sampling performed in 1987 showed that private wells were being impacted by groundwater contaminated by VOCs. The U.S. EPA installed air strippers in the affected residences to remove the contaminants.

In 1987, the U.S. EPA signed a Record of Decision (ROD) requiring that an alternate water supply be installed in an area comprised of 100 homes down gradient of the site where groundwater threatened to contaminate wells before an overall cleanup could eliminate the problem. Under order by the U.S. EPA, several potentially responsible parties (PRPs) constructed the alternate water supply, which was completed in 1991. In July 1989, the U.S. EPA signed the ROD selecting the following actions to clean up the site: covering the entire site with a multi-layer cap, expanding the landfill gas extraction and treatment system, extracting and treating contaminated groundwater, pumping groundwater to maintain the water table at a level that is below that of the wastes in the landfill, fencing the site, placing deed restriction of future use of the site, and continued monitoring of the site. In 1990, the U.S. EPA purchased 22 parcels of land, consisting of twelve residences and two businesses. These properties, which bordered the site, were needed for proper installation of the landfill cap.

Based on results of latest monitoring data gathered in March 1997 and September 1998, the U.S. EPA public noticed a proposed plan to modify the cleanup plans outlined in the July 1989 ROD. The data indicated that significantly fewer contaminants are present in the groundwater and that the concentrations of those detected are generally lower. Although there are still sporadic exceedances of drinking water standards for metals detected offsite, there is no evidence that a plume of contamination outside of the site boundaries still exists. As a result, the proposed plan recommends that the pump and treat system be eliminated, along with a redesigned landfill cover. A public meeting was held on March 2, 1999 to discuss this proposed agency action. The ROD Amendment was signed on March 1, 2000. An extensive responsiveness summary, addressing over 250 questions gathered during the public comment period, was prepared along with the ROD Amendment.

In 2000, the PRPs conducted pre demolition activities at IEL covering: 1) sampling contents of remaining post-ROD drums at the site and inside the remaining buildings, 2) checking for presence of asbestos in the remaining buildings, 3) disposing all trash, debris, and debris-like wastes found inside the buildings and around the landfill, and 4) conducting geophysical surveys around the remaining buildings and adjacent areas to determine what underground structures are present and require further investigation. Demolition of three remaining buildings at the site, along with removal of eight underground storage tanks, was completed by June 2000.

In July 2000, the U.S. EPA announced it would delay construction of the modified cap after receiving a petition from Lake Township officials that stated that additional testing was warranted before a decision on capping the site could be made.

The Responding Parties include Bridgestone/Firestone Inc., Goodyear Tire and Rubber Company, GenCorp., and BF Goodrich. IEL has had a long and controversial history, with several rounds of investigation and several remedial plans that were not fully implemented. The reasons for the previous lack of progress at the site were varied, but a climate of suspicion questioned the motives, science, and remedial plans of site stakeholders.

The Wildlife Habitat Council was invited by the Responding Companies and Lake Township to visit the site on May 19, 2000 in order to determine alternatives to the traditional capping scenario, which many felt might not be warranted. The landfill itself was naturally vegetated with mature poplars, as well as other species of trees and shrubs such as ash, elm, locust, and gray dogwood. This natural succession was unknowingly remediating the VOC contaminants on site by feeding the degradation microbes with oxygen. Investigations showed that natural attenuation was occurring at a significant rate. A traditional cap would halt the process, thereby slowing the clean up. Upon discussion, Lake Township trustees and residents, as well as the companies, preferred a remedy that would preserve greenspace and create an asset that would blend into the community.

WHC staff met with interested community parties to discuss solutions, explain succession, and discuss how to enhance valuable habitat. The engineering consultants likewise demonstrated that natural attenuation was occurring, and compared this to the stagnation that would occur in a traditional cap closure. They also presented the investigation findings, and explained the safety of the site to the public. The partners worked together to identify community preferences for a site remedy that:

- Protects human health and the environment;
- Provides a long-term commitment to the remedy by the Responding Companies backed by an effective contingency plan;
- Maintains greenspace;
- Enhances the existing diverse wildlife habitat;
- Provides for local future land-use control; and
- Promotes a positive community issue.

The accompanying WHC report and subsequent involvement established dialogue that allowed community preferences to be incorporated into the broad-based site remedy, as presented in the September 2000 meeting to the EPA. According to Joe Towarnicky of the consultant firm Sharp and Associates, "This dialogue occurred, in part, because WHC is an independent, scientifically-based organization that has successfully directed beneficial re-use and re-development of former industrial properties. Perhaps as importantly, WHC involvement was a voluntary initiative that dealt with new issues unrelated to those that had proven historically contentious."

The PRPs conducted groundwater surveys in August and November of 2000, and in March, May, and September of 2001. As part of these surveys, limited radiation testing

of the groundwater at all monitoring wells was performed. After reviewing the results of these five groundwater sampling efforts, and after considering an alternate proposal for addressing the site provided by the PRPs and supported by Lake Township officials, the U.S. EPA announced another Proposed Plan calling for a change in the remedy for the IEL site in April 2002. This plan includes the following components for IEL: 1) augmentation of the existing vegetative cover at IEL with selective planting of trees and other plants at the site; 2) natural attenuation of groundwater contaminants both offsite and onsite; 3) continued monitoring of groundwater and landfill gas; 4) perimeter fencing; 5) deed restrictions on the future use of the IEL property; 6) maintenance of the alternate water supply installed in 1991; and 7) additional design studies. Another extensive Responsiveness Summary was produced in response to the over 130 comments received on this new Proposed Plan, along with another ROD Amendment. The second ROD Amendment for IEL was signed on September 27, 2002.

Remedial Description

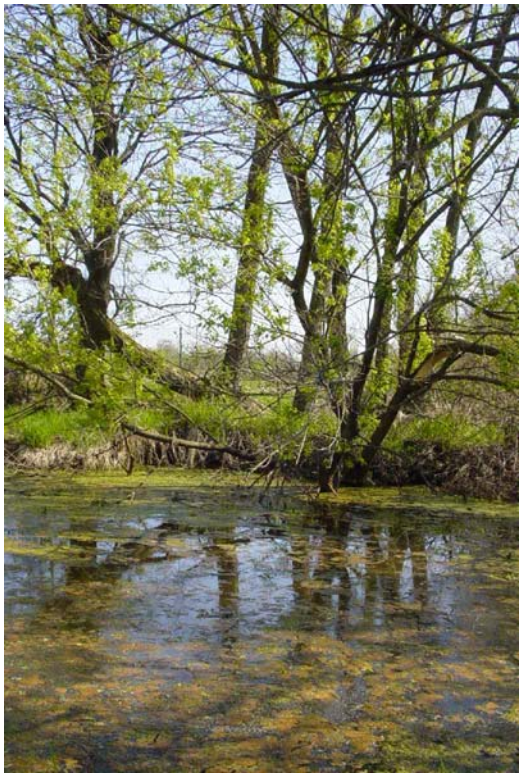
The ROD Amendment included a Biodiverse Phytocap to enhance natural attenuation. The core of this remedy involves enhancement of wildlife habitat and cones creation of greenspace. In April 2004, WHC led the implementation of the enhancement of IEL, which included planting almost 10,000 trees and shrubs on less vegetated portions of the site. Native species were chosen for their ability to thrive on poor mine spoil like conditions, as well as provide benefit to wildlife. Plantings included a thicket of shrubs along the north end, tree/shrub reforestation on the sparse south end, and wetland shrubs on the east border. A native wildflower meadow was seeded near the front gate for high visibility by the public. Invasive species such as autumn olive, tartarian honeysuckle, and phragmites were sprayed with Round-up, and will be attempted to be controlled, in order to prevent their further spread over the site. Additional enhancements will include bat box complexes by the wetlands, kestrel nest boxes, and a bluebird trail. These projects were designed with several goals in mind, including:

- Further enhancement of natural attenuation by adding woody species on sparse areas;
- Increasing biodiversity and ensuring sufficient tree cover once poplars die by adding later successional species onto the site as appropriate and controlling invasives;
- Providing aesthetic and educational enhancements for the future addition of a trail on the outside perimeter of the landfill.

This remedy, and the approach used to achieve the consensus, is one embraced by all stakeholders as it will put an end to decades of often-contentious disagreement over site management issues and plans. As Joe Towarnicky stated, “The independence, professionalism, demonstrated experience, and scientific expertise demonstrated by WHC created a platform upon which these diverse groups could develop a consensus remedy for the site that meets all stakeholder needs.” The remedy is not only safe for the community, but beneficial for the community, and that makes this story a proud success.

Jerusalem artichoke near front gate.

Fawn in center of landfill, summer 2003



Metzger's Ditch.

A container-grown red maple, planted April, 04.

After planting bareroot shrubs and trees, April 2004.

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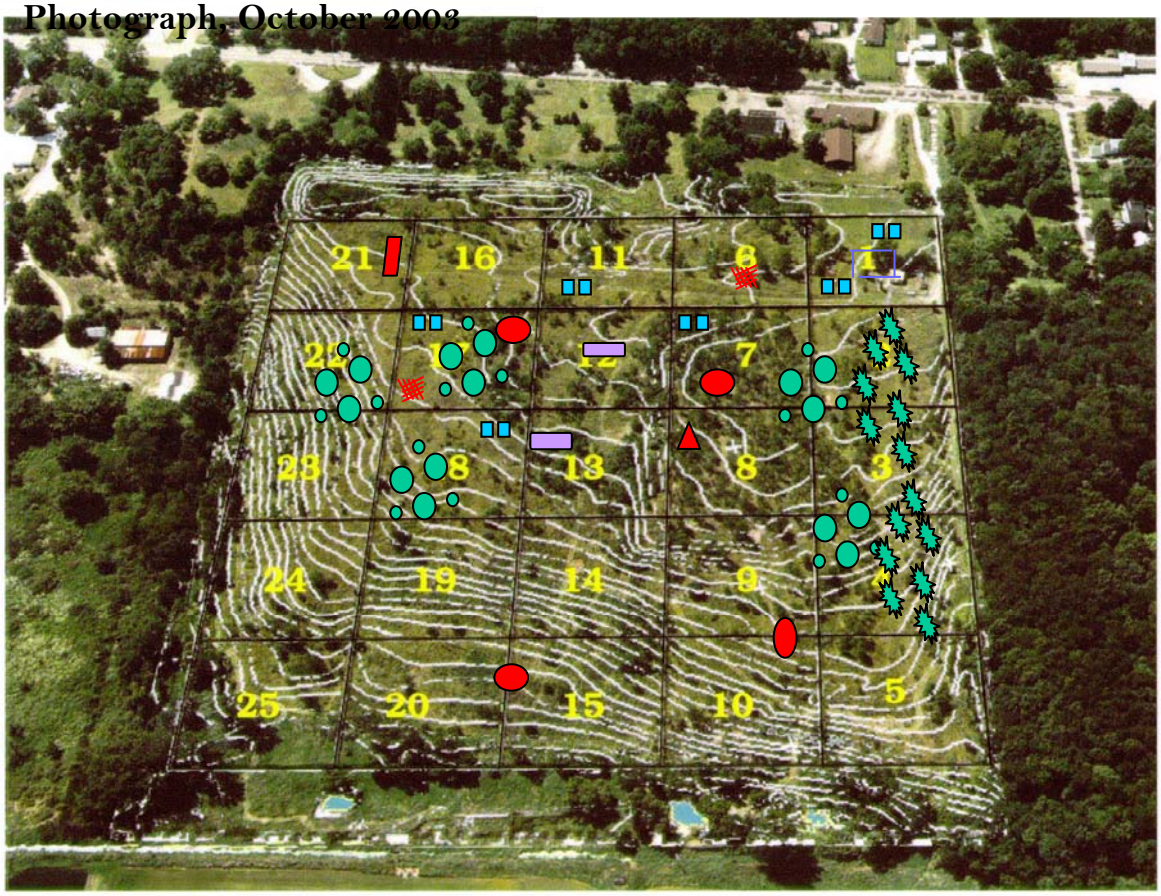
IEL Draft Habitat Plan Overlay on Site Topography Aerial Photograph, October 2003



Tree/Shrubs Islands
Trees10' apart
Shrubs 5-8' apart

-Songbird Patch

-Bluebirds nest boxes, one pair of boxes 100 yds apart in open areas.

- Bat box complex, 2 pairs of boxes on 1 pole, 10-15' high.

- Native Meadow.

- Brush pile.

- Kestrel nest box.

- Invasive Special Control..

- Fox den.

- Shrub thicket, shrubs 5-8' apart, staggered 5