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CASE STUDY: PFOHL BROS LANDFILL

Pace offers Pfohl Brothers Landfill a single source for all its analytical services and a single point of contact for field personnel



HISTORY

From 1932 to 1971, approximately 120 acres of land owned by the Pfohl family was used for waste disposal. The site accepted municipal and industrial wastes from the surrounding townships, manufacturers and utilities. Some of the generators of the waste indicated that pine tar pitch, waste paints and thinners, waste cutting oils, oil-contaminated Fuller's earth, phenolic tar containing chlorinated benzenes and dioxins, and oil and capacitors laden with polychlorinated biphenyls (PCBs) were disposed of at the Pfohl Brothers Landfill. During the remedial investigation, a "walk over" gamma radiation survey was conducted throughout the landfill. In addition, the subsurface sources of elevated gamma radiation were investigated during the test pit excavations. The survey and sample results indicated that the elevated gamma readings were scattered randomly. By the summer of 1994, proper disposal of all of the accessible radiation sources had been completed. On May 10, 1993, the EPA proposed that the Pfohl Brothers Landfill be listed on the National Priorities List (a.k.a. "Superfund").

CHALLENGE

Excavation and consolidation of 540,000 yd³ of waste material; installation of 10,000 ft. perimeter barrier wall collection system; construction and operation of wastewater system, treating approximately 25 million gallons of water; and installation of 100 acre multi-layer, non-permeable cap system. Over the history of the project, the following consulting and engineering firms were used – Fred C. Hart, Ecology & Environment, Camp, Dresser & McKee, Severson Environmental Services, Conestoga-Rovers & Associates and Earth Sciences Consultants.

SOLUTION

Because of the elevated gamma radiation that had been detected previously, the EPA required screening of all soil samples for radioactivity prior to removal and off-site disposal. Testing included gamma spectroscopy, isotopic thorium and Ra226 via Rn222 in-growth. Pace Analytical's Pittsburgh Radiochemistry Laboratory provided prompt and dependable turnaround to facilitate excavation and disposal activities. It also provided testing of the landfill leachate collection and treatment system. The data was then used to demonstrate the effectiveness of the system designed by Severson as well as to provide ongoing monitoring. Radiological wastewater tests included gross alpha/beta, isotopic Th, isotopic U, and isotopic Ra. Conventional wastewater tests included heavy metals, PCBs, pesticides, VOCs and Semi-VOCs. Pace's services exceeded \$100,000.

BENEFIT

Pace's selection as the primary laboratory was due, in large part, to the offer of a single source for all analytical services and a single point of contact for field personnel. This simplified service approach helped to keep the project on-time and within budget. Andrew Lombardo, project manager for ESC, remarked that "Pace is more than just a provider of data. They are a project manager's technical resource and a key component of the problem solving that is required for a complex project like Pfohl Bros. Another key attribute of Pace is their responsiveness to service inquiries and alternative approaches. Technical expertise and responsiveness are why I'll use Pace on my next project."

**For more information about our radiochemistry services, contact us:
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