

Corps completes 14-year environmental cleanup at Marion Engineer Depot



Todd Hornback

The new Marion Harding High School stands as a symbol of one of the biggest milestones in the environmental cleanup at the former Marion Engineer Depot in Marion, Ohio. Two local schools were relocated so that subsurface remedial actions could take place at the site.

In 1942, the War Department acquired 654 acres of farmland for the U.S. Army Corps of Engineers to construct an engineering equipment storage depot in Marion County, Ohio. The Marion Engineer Depot (MED) began operation during WWII and continued for approximately 15 years thereafter. During its operation, the MED was the largest depot of its type in the United States.

The former MED was constructed for the purpose of storing, maintaining, and renovating heavy construction machinery for the U.S. Army. There were five large warehouses, three sheds, a maintenance area, 22 miles of railroad, six streets, four avenues and a headquarters area.

During WWII, the depot also housed up to 300, mostly German, prisoners of war at Camp Marion. After the war, the mission of the depot changed, and it began stocking strategic materials for the Treasury Department. It transformed again during the Korean War and increased the amount of heavy equipment it rebuilt.

Katie Newton, public affairs

After more than 14 years of investigative and cleanup activities, the former Marion Engineer Depot (MED) in Marion, Ohio, was deemed environmentally restored and No Further Action (NFA) is necessary. The environmental remediation process followed the federal Comprehensive Environmental Restoration Compensation and Liability Act (CERCLA) for Formerly Used Defense Sites.

“The magnitude of this project was extraordinary,” said Dr. David Brancato, Louisville District Human and Ecological Risk Assessor who has been involved with the project since its beginning. Soil, air, water and sediment around the schools located on former MED were investigated to determine if any current and future risk existed to the students and staff of the Riv-

er Valley Local School District (RVLSD). “The investigation at MED was one of the most thorough federal and state agency response actions to date,” said Brancato.

The environmental investigation began in 1997 when RVLSD expressed concern that there was a high rate of leukemia among its graduates. The seven cases of leukemia represented a statistically significantly higher number than national rates, and therefore the Ohio Department of Health recommended thorough testing for potentially toxic substances on the site and adjacent areas.

During the course of the investigation several technical strategies were used for sampling at MED. Methods included ambient air monitoring in the athletic fields and on top of the middle school, more than 1,100 soil borings and samples, and

23 groundwater monitoring wells placed throughout the property.

Testing showed that the contaminants found in the subsurface soil on the property were not a health threat to the students. “All agencies agreed that the students weren’t at risk,” said Brancato. “Removal technology of the subsurface soil contaminants would require an enclosure, but just the appearance of bringing contaminated subsurface soil to the surface would strain the suspicions that the students had by being on the River Valley School campus. Therefore, the schools were relocated and the former MED property was restored.”

The relocation of the Marion Harding High School and the River Valley Middle School, part of RVLSD, in 2003 was one of the biggest milestones in the project. “It was definitely one of our biggest challenges,” said Brancato. Ultimately, Congress allowed the Corps of Engineers to pay \$15 million toward the relocation of the schools.

The investigation for radiological sources on the property began with the Ohio Department of Health Radiation Protection surveying soils and buildings on River Valley School property for radioactivity. That investigation discovered a dime-sized disk, containing radium, in the subsurface soil in front of the high school that was presumably used by the Army to mark positions of bridges and vehicles so troops could see them during nighttime operations. The survey also located a rock in a science classroom that had a low level of radiation, and was later removed. Congress requested a full search of the former MED property to determine if there was a definitive source of radioactive material that could be a possible link to the cases of leukemia. “One of the most thorough Multi-Agency Radiation Surveys was conducted and the investigation was negative” said Brancato.

The Concerned Citizens Group at Marion needed help to assimilate all the investigative data to determine whether there was a link to the approximate seven graduates from River Valley Schools that were diagnosed with leukemia. The Restoration Advisory Board (RAB) assembled to provide input on the cleanup program

Continued on page 7

Continued from page 6

at former MED and provided the citizens of Marion with support tools they needed throughout the process.

Next, the Corps continued with the CERCLA process through site inspections and later remedial investigations of areas suspected of contamination. One area was a former waste disposal area, where the Army disposed of and burned fuels and solvents in trenches. "Disposal practices weren't as restrictive at the time of disposal as they are today," said Brancato. "There were no laws regulating the use of these chemicals when the depot was open, so if it was waste, then it was buried." Testing showed that these contaminants were not reaching the surface air, or the groundwater because of the tight soil clays that prevented movement of the contamination.

Continuing with the CERCLA process, an evaluation was made for removal of the subsurface contaminants. Thousands of tons of dirt were removed with the excavated area backfilled with acceptable soil and capped to seal it. "The cap is working as designed," said Brancato.

The remediation allowed the land to be rezoned for industrial purposes. "The property was bought by a commercial entity, making a viable contribution to the Marion Commerce Center," said Brancato. "It's just another one of the benefits of the cleanup."

Even though the cleanup in Marion had

been at the center of public and congressional interest, citizens were appreciative of the Corps' efforts to ensure protection of human health and the environment.

"Thank you, guys," said Ted Graham, a community Restoration Advisory Board (RAB) member as the RAB dissolved, "You built a new school because of the stigma that was attached to the location. Not only that, but you came in and solved even more problems."

Even though the cleanup is complete, the Corps will still perform Long-Term Monitoring (LTM), and the required CERCLA 5-year reviews, of the site. The first 5-year review of Operable Unit-1—the

area used by the schools for their athletic fields—was completed in 2009 with the next review scheduled in May 2014. "We determined from 2009 that the remedy is effective and the consensus was to decommission all but three groundwater wells because they are no longer needed," said Brancato.

The success at MED was possible through partnerships among the Corps of Engineers, Agency of Toxic Substances and Disease Registry, Ohio EPA, Ohio Department of Health, Ohio Department of Health Radiation Protection, who worked together to address concerned citizens.



Remedial work on the Operable Unit-1 in April 2005 removed thousands of tons of dirt from the area used by the local school for their athletic fields. The area was excavated and backfilled with acceptable soil and sealed with a cap. Today, the area is used for industrial purposes.

USACE

History

Drought reveals razed town submerged 45 years ago

John Neville, public affairs

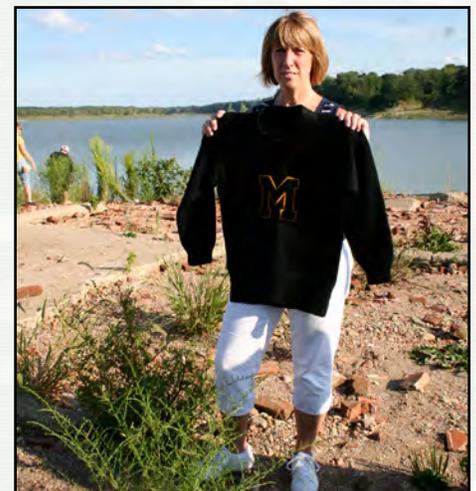
It's been 45 years since anyone has seen the small town in northeastern Indiana in the summertime. Although parts of Monument City are typically visible during the winter when water levels are low, the town has spent summers at the bottom of the Salamonie Lake since 1967.

The federal government purchased the city and intentionally flooded it to make way for the construction of the Salamonie Lake reservoir. The U.S. Army Corps of Engineers has built scores of these man-made lakes around the country in an effort to manage flood risk.

This summer, a severe drought has taken its toll on water levels around the nation. The lake was between 13 and ten

feet below summer pool this year. The low level exposed parts of the old town and spurred the curiosity of former residents and their descendents and the interests of others with little or no connection. While the Corps removed the majority of the town's razed debris and moved the cemetery outside Corps property, dead trees, bricks, glass, tile, wooden posts and even the foundation of the town's three story K-12 school remain.

The area that eventually became Monument City was first inhabited by Miami and Osage Indians. In 1834, Jacob Fisher and his family settled in the area. In 1869, the town paid \$500 for the construction of a monument bearing the names of the 27 men from the area who died in the Civil



A woman stands with a Mound City High School letter jacket her father earned playing basketball. He graduated with the Class of 1939.

L.Fager, IDNR

Continued on page 8