

Marjol Battery Site (Gould)

600 Delaware Street
Throop, PA 18512
Congressional District 10
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Current Progress at the Site

Gould Electronics, Inc. signed a consent order with EPA and the Pennsylvania Department of Environmental Protection (PADEP) to complete the cleanup of lead contamination and other chemicals from the Marjol Battery and Equipment Company Site (Marjol site) in Throop, Lackawanna County, Pennsylvania. The order was effective on July 12, 2006. This site has been stabilized to prevent releases of contaminants since 1992.

The order requires Gould to design and construct a permanent on-site containment landfill for contaminated material at the site. As a first step, Gould Electronics conducted a boring investigation that further evaluated the coal seams beneath the site. The boring investigation was recommended by the EPA National Ombudsman in his May 2004 review of the final remedy for the Marjol site. This review was prompted by concerns raised by residents regarding possible mine fire and subsidence hazards at the site.

EPA and PADEP used the additional study and previous studies to establish the northernmost limit of the waste containment area. Waste contained on-site south of this limit will not be subject to pothole subsidence or mine fire hazards. The containment cap was designed to accommodate the maximum potential future trough subsidence at the site.

In addition to conducting further potential mine-fire hazard studies, the cleanup measures described in the order also include: designing the cleanup remedy, constructing the remedy, providing for long-term monitoring and maintenance of the remedy, and providing financial assurance for all work.

The Final Remedy selected by EPA is required to guarantee permanent containment, including a cap and treated layer for added protection.

Gould has completed the design of the landfill. EPA and PADEP approved the design on May 8, 2008. Construction of the project started on May 12, 2008, and should be completed in November 2009.

Background

A 1990 EPA-PADEP consent order required Gould to conduct an investigation and a study at the Site to identify the nature and extent of on-Site and off-Site contamination and to propose permanent alternatives for long term remediation of the Site. Prior cleanup actions by Gould include the cleanup of 133 residential and commercial properties adjacent to the site, and the stabilization of the site to prevent releases of contamination from the site.

Major investigation and characterization reports for the site include:

- RCRA Facility Investigation (RFI), March 1993, to characterize the nature and extent of any contamination present at the facility;
- Corrective Measures Study (CMS), March 1995, containing Gould's evaluation of clean-up options for the site;
- Supplementary RCRA Facility Investigation, July 1995, to further evaluate conditions at the site;
- Mine Subsidence Investigation (MSI), January 1999, to determine the future potential subsidence at the site; and

- Revised CMS, June 1999, incorporation the findings of the MSI.

On October 15, 1999, EPA and PADEP released a Statement of Basis which described the proposed remedy for the Site. A public comment period extended from November 1, 1999 to January 15, 2000. During that time several hundred comments were received by EPA from concerned citizens, elected officials, and Gould. EPA carefully evaluated all comments received and issued its final cleanup decision in a document entitled "Final Decision and Response to Comments" dated December 1, 2000.

The major elements of the remedy are:

- move contaminated material away from near-surface, mined coal seams at the northern part of the site;
- consolidate the waste in a secure, on-site landfill, approximately 10 acres in area (waste material that will not fit will be taken off-site for disposal);
- stabilize the top layer of waste with a cement mixture to provide redundant protection from releases;
- install an engineered combination cap (soil and synthetic layers);
- plant and maintain a grass cover;
- clean the entire site to less than 500 parts per million lead (unrestricted use);
- continue monitoring, including blood lead screening;
- resample community soil when finished;
- provide financial assurance for the maintenance of the remedy; and
- perform on-site and off-site sampling to ensure that soil cleanup standards are achieved.

Due to community concerns regarding the cleanup of the Site, EPA's National Ombudsman reviewed the final remedy decision. EPA suspended implementation of the final remedy decision on December 18, 2000, to allow the Ombudsman time to provide recommendations to EPA. The Ombudsman issued a preliminary report in October 2001. EPA Region 3 submitted a response in November 2001. A final Ombudsman Review Report was issued on May 18, 2004.

The final Ombudsman Review Report included an evaluation of the mining-related issues by an independent mining expert. The Report makes two recommendations:

1. Calculate the surface strains from any expected subsidence, and design and implement the cap to meet or exceed those calculations to make a more reliable cap, and
2. Work with Gould, PADEP, and the Borough of Throop to reach agreement on the method, such as borehole drilling, to properly address the safety issue of potential mine-fire hazard associated with the Top Split Four Foot and Top Four Foot Coal seams on the Marjol site.

Region III issued a response to the Report on August 16, 2004. In our response we agree to implement both recommendations. Our response also includes a discussion of the appropriate scope of work for the recommended mine fire hazard assessment. We discussed the recommendations with the PADEP Marjol review team. They agree with the scope of work for implementation of the recommendations. On August, 26, 2004, the Ombudsman accepted the Region's response and proposal to implement the Report's recommendation.

EPA and PADEP worked with Gould and Throop Borough representatives to determine a scope of work for the additional mine fire hazard assessment. On March 21, 2005, EPA approved, with the concurrence of PADEP, a scope of work for the additional assessment. The assessment

will be performed as a first step (pre-design) of project implementation. If the investigation reveals inconclusive or contradictory information, design modifications or additional investigation may be warranted.

On September 13, 2005, EPA lifted the project suspension and restarted the implementation of the remedy.

In the fall of 2006, Gould conducted the additional mine fire hazard investigation recommended by the EPA Ombudsman. Gould drilled 9 additional borings to investigate the coal seams at the site. All field work was observed by EPA and PADEP representatives, including PADEP contractors, Gannett Fleming/Skelly & Loy. EPA and PADEP technical review teams have evaluated the new and previously existing data related to the seams, and they have concluded that a waste containment area may be designed with adequate isolation from the coal seams at the site.

In the spring of 2008, Gould started construction on the consolidation and containment remediation. The construction is scheduled for completion in the fall of 2009. PADEP and EPA are inspecting the project to ensure that contaminated material is not released during the construction activities. The air is monitored at the facility perimeter and at the work zone.

Site Description

The Marjol Battery and Equipment Company is a former battery processing facility located on a 43.9-acre parcel in the Borough of Throop, Lackawanna County, Pennsylvania. From 1963 to 1981, Marjol operations involved battery crushing, lead reclamation, and on-site disposal of spent battery casings. As a result of the plant operations, the Site became contaminated with lead. Fugitive dust emissions and lead contained in on-site soils were carried off-site by prevailing winds. Storm water runoff carried lead contaminated soil off-site into adjacent drainage ways. Sulphur Creek, which borders the facility, was also contaminated with lead. The sediments in the Lackawanna River, which is adjacent to the Site, became contaminated with lead. In May 1980, Gould purchased the Marjol Battery and Equipment Company and subsequently shut down plant operations in April 1982. The site was stabilized in 1992 to prevent the continuing release of contamination from the site. Construction of the final clean-up started in May 2008. Comprehensive measures are in place to prevent releases of contamination during the construction activities.

Site Responsibility

As co-signatories of the Marjol Consent Order, EPA and PADEP are both responsible for the enforcement, oversight, and implementation of the provisions of the Order.

Contaminants

Lead is the primary constituent of concern at the Site. Lead is present in approximately 372,000 cubic yards of contaminated soil, battery casing material, and debris at the Site. Polyaromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs) were identified in surface soil in former operational areas on Site. Lead was also identified in off-site soils in the surrounding community.

In June 1987, EPA determined that an imminent and substantial endangerment to the public health, welfare, and the environment may be present as a result of the release of lead from the Marjol site. In April 1988, EPA issued a CERCLA Consent Agreement and Order (Order) to Gould to address this potential health threat. Contaminated surface soil was removed from 133 residential and commercial properties near the Marjol Site which exhibited lead at levels greater

than 500 milligrams per kilogram (mg/kg). EPA determined that levels below 500 mg/kg were not harmful to human health. Lead dust was also removed from the interior of 107 residential units. In addition, actions were taken at the Site to prevent further releases of lead contamination from the property into the surrounding community.

Community Interaction

EPA has kept the concerned citizens of Throop informed about the human health and environmental concerns related to the Site, since it first became involved with the Site in 1987. EPA and PADEP participated in monthly meetings of the Throop Borough Council and Citizens Review Committee for many years. On January 11, 2000, EPA held a public hearing on the selected remedy. EPA held briefings for elected officials on its proposed and final remedies. EPA and PADEP have continued to discuss the project with Throop Borough Council and residents. On August 29, 2005, EPA/PADEP met with Borough Council and Throop residents to provide information on the Ombudsman's recommendation and the restart of the remedy. EPA/PADEP held several public meetings and meetings with Throop Borough Council in 2007 and 2008 to provide information on additional investigations at the site and the design of the site remedy. On April 8, 2008, EPA and PADEP held an informational Open House in Throop to provide information on the project construction and to answer individual questions from area residents. EPA and PADEP continue to be available to respond to local citizens concerns about the Site.

Institutional Controls

Since the remedy is a permanent containment landfill, controls will be required to prevent any unauthorized breach of the landfill cap. The area surrounding the landfill will be cleaned up to allow unrestricted use.

The groundwater aquifer is not impacted by the site contamination. The aquifer beneath the site is a Class III aquifer that is not suitable as a water supply source. Therefore, no site controls on groundwater use are required.

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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

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