

Long-Term Stewardship Assessment Report
Airco Welding Products/ BOC Gases/ Linde Group

EPA ID #: WVD980554760

State Route 2, Newell, West Virginia

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Introduction: Long-term stewardship (LTS) refers to the activities necessary to ensure that engineering controls (ECs) are maintained and that institutional controls (ICs) continue to be enforced. The purpose of the EPA Region 3 LTS program is to periodically assess the efficacy of the implemented remedies (i.e.: ECs and ICs) and to update the community on the status of the RCRA Corrective Action facilities. The assessment is conducted in twofold, which consists of a record review and a field inspection, to ensure that the remedies are implemented and maintained in accordance to the final decision.

Site Background:

The facility is located along State Route 2 in Newell, West Virginia. The site is bounded on the west by the Ohio River, on the north by the Mountaineer Race Track and Gaming Resort, on the east by the Marsh Bellofram Corporation manufacturing facility, and on the south by an inactive sand and gravel company. The western portion of the facility is presently occupied by an active industrial gas manufacturing plant, and the eastern portion of the site is vacant and covered by grass and wooded areas. A portion of the vacant eastern section of the property was purchased by the Mountaineer Race Track and Gaming Resort in 2004. Linde Group purchased BOC gases, formerly Airco in June 2006.

Airco had manufactured wire electrodes for welding machines at a section of the original facility located along State Route 2. When Airco operated the facility, process wastewater generated by manufacturing operations was discharged to two lagoons located on the site. These lagoons were approximately 2000 square feet each. The wastewater that was discharged to these lagoons was classified as spent pickle liquor (K062) and solid waste exhibiting the characteristics of corrosivity (D002). All discharges to the lagoons ceased in January 1984 when facility operations were terminated. Lagoon closure activities were initiated in September 1984. Lagoon sludge and bottom sediments were excavated and disposed of off-site. The lagoons were backfilled with clean soil and in October of 1990, the lagoons were capped using a 30-mil PVC geo-textile liner, placed within a sand bed, and overlain by topsoil, that was then re-vegetated.

Environmental concerns at the facility were limited to the two wastewater lagoons. After the lagoons were excavated and the sludge and contaminated soil were removed for off-site disposal, potential

impacts to groundwater became the focus of environmental concern. Several rounds of groundwater samples were collected from 26 on-site monitoring wells during the 1980's to assess groundwater quality. Analyses of groundwater samples from site monitoring wells revealed the presence of volatile organic compounds above benchmark concentrations. In 1991, a consent order (Order Number HW-271-91) was issued by the State of West Virginia to Airco requiring the quarterly monitoring of compliance wells at the site for a minimum of 2 years, and the statistical evaluation of the monitoring data to identify any statistically significant increases in the monitored parameters. On June 3, 1996, the West Virginia Division of Environmental Protection (WVDEP) issued a letter to BOC (Airco's successor) expressing concern that concentrations of some groundwater contaminants detected during the January 1993 monitoring episode exceeded the USEPA drinking water MCLs.

A telephone conference was held between the WVDEP, BOC, and BOC's consultant on August 12, 1996 to discuss that issue. Although BOC felt that it had satisfied the requirements of the 1991 Consent Order, they agreed to perform an additional round of sampling. BOC submitted a work plan to WVDEP in August 1996, and the work plan was approved in a January 17, 1997 letter from WVDEP. Based on previous sampling results, the work plan called for sampling of four monitoring wells; B-6-111, B-7-122, B-11-105 and B-13-109.

The groundwater sampling occurred in February 1997. Analytical results of the samples collected during this groundwater monitoring event revealed only one contaminant above an MCL, and that was PCE in monitoring well B-6-111 at a concentration of 6 ug/l. The MCL for this contaminant is 5ug/l.

In an effort to resolve the outstanding issue of the PCE contamination in monitoring well B-6-111 at a concentration just slightly above the MCL, BOC presented a proposal to WVDEP on August 26, 2005 to address the situation. Based on a review of available in-well groundwater treatment technologies, BOC's consultant, MACTEC Engineering and Consulting, Inc. ("MACTEC") had determined that injection of Hydrogen Release Compound ("HRC"), a proprietary compound trademarked by Regenesis, was the best option due to its proven effectiveness and costs. HRC is a non-hazardous compound that has been demonstrated to promote natural degradation of chlorinated organics like PCE. MATAC proposed to conduct one injection application at well B-6-111. The HRC would be pumped into the well and the surrounding aquifer through the well screen and sand pack. A packer would be installed to isolate the screened interval during the application of HRC. Regenesis has indicated that after the injection it typically takes between one to three months for the HRC to begin achieving maximum effect.

An application of HRC was completed at well B-6-111 on February 10, 2006. Seven rounds of groundwater samples were collected from well B-6-111 from March 2006 through August 2007. The results of the first five rounds of sampling revealed levels of PCE ranging from 1.3 ug/l to 7.3 ug/l. The results of the last two rounds of sampling revealed levels of PCE in well B-6-111 below the MCL of 5ug/l. The May 2007 and August 2007 sampling events revealed concentrations of PCE at 0.5 ug/l and 4.7 ug/l respectively. In accordance with the proposed groundwater remediation plan, because two consecutive rounds of below MCL results for PCE were achieved, further groundwater sampling was considered complete and the groundwater monitoring wells were abandoned in accordance with WVDEP regulations.

EPA required that institutional controls be assigned to the site to include maintenance of the lagoon cover and the limiting of groundwater use at the facility property for non-potable purposes only.

Current Site Status:

The western portion of the facility is presently occupied by Linde, an active industrial gas manufacturing plant, and the eastern portion of the site is vacant and covered by grass and wooded areas. A portion of the vacant eastern section of the property was purchased by the Mountaineer Race Track and Gaming Resort in 2004. EPA has required that institutional controls be assigned to the site to include maintenance of the lagoon cover and the limiting of groundwater use at the facility property for non-potable purposes only.

Long-term Stewardship Site Visit:

On, August 27, 2015 EPA conducted a long-term stewardship site visit with Facility representatives and to discuss and assess the status of the implemented remedies at the site.

The attendees were:

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Institutional Controls (ICs) Status:

Groundwater at the site is not used for potable purposes.

Engineering Controls (ECs) Status:

The lagoon on Linde property is capped and is enclosed with a chain link locking fence.

Follow-up Activities:

WVDEP and EPA will work with Linde to complete an Environmental Covenant to include the Institutional and Engineering Controls.

Conclusion:

The site controls are in compliance with the Final Decision for the facility. WVDEP AND EPA must follow-up so that an Environmental Covenant can be completed.

Follow-up Questions:

Do we have a geospatial map defining the restricted areas? YES.

Were records of any construction, maintenance or repairs related to any of the activity and use limitations described in the remedy provided? N/A

Are the ECs effective at reducing contaminant migration? Is data available to provide supporting evidence? N/A

Have the ECs/ICs specified in the remedy been fully implemented? YES.

Have the ECs/ICs sufficiently met the risk goals and applicable standards specified in the CA remedy? YES.

Are modifications to the ECs/ICs needed? NO.

Are additional ECs/ICs necessary to achieve the intended goals of the CA remedy? NO.

Has the Soil Management Plan been implemented as a result of earth moving activities or new releases? If so, were records of such activities provided? N/A

Date of Post Remedial Care Plan: N/A

Location of Post Remedial Care Plan: N/A