

SENTINEL LEAD ENCAPSULANT

A CASE STUDY – WATER GREMLIN, WHITE BEAR LAKE, MN

BACKGROUND

Water Gremlin Company, founded in 1949, is a leading manufacturer of lead fishing sinkers as well as terminals for lead-acid batteries. The company has over 160,000 square feet of combined manufacturing and warehouse space in Minnesota with nearly 150 employees. In October 2019 the Minnesota Department of Health (MDH) found elevated blood lead levels (EBLs) in 24 children of Water Gremlin employees. These employees may have been exposed to lead dust and possibly brought lead dust on clothes, shoes, body, and personal items into homes.

INVESTIGATION OF CAUSE

Inspection of Water Gremlin's lead casting operation took place with MDH personnel, Water Gremlin personnel, and Wenck Associates, Inc., an environmental consultant hired to assess and recommend clean-up actions. Plans were made to clean and remediate building surfaces contaminated with lead dust. Approximately 75,000 square feet of ceilings and 125,000 square feet of walls were included in the plan.

REMEDIATION

The painting contractor, BICS, Inc., was hired to perform the recommended actions. Work in November 2019 through January 2020 involved grinding the floors in the manufacturing areas to remove lead contaminants and coating with a 2-part epoxy coating. Walls and ceilings in the same areas were vacuumed (with HEPA filters), cleaned with a detergent, and wiped down with lead wipes. Finally, one coat of Sentinel Lead Encapsulant White coating was sprayed on all walls and ceilings at a wet coat thickness of 10-14 mils. The Sentinel Lead Encapsulant white coating is designed to bind to mechanical ductwork, metal and plastic piping, painted areas, and other wall surfaces to provide a permanent barrier to lead-based paints and lead dust. Finally, a tinted topcoat was applied over the Lead Encapsulant white for aesthetic purposes.

RESULTS

Water Gremlin Company and the MDH approved the results from the lead encapsulation application. This project was completed while Water Gremlin continued manufacturing operations. There were no reports of odors from anyone involved in the project. BICS, Inc. reported that the Sentinel Lead Encapsulant white was a "great product" and that they sprayed over all installations on the walls with no flaking or peeling and no separation between the Lead Encapsulant white and the tinted topcoat.



PRODUCT INFORMATION

Sentinel Lead Encapsulant white is an interior/exterior, water-based, zero VOC, low odor coating designed as a permanent solution for abatement of lead-based paint. Sentinel Lead Encapsulant white is formulated with a flexible, durable, high solids finish that provides a thick barrier that traps and holds in lead contaminants on a variety of building surfaces. Sentinel Lead Encapsulant white contains a bitter tasting, anti-ingestant which deters children from oral contact. Sentinel Lead Encapsulant white has been independently tested and found to meet ASTM E-1795 requirements for liquid coating lead encapsulation products. Sentinel Lead Encapsulant white complies with HUD and EPA requirements for abatement by encapsulation.

PROJECT

Water Gremlin Company
White Bear Lake, Minnesota

CLEANING/PAINTING CONTRACTOR

BICS, Inc.
Brooklyn Park, Minnesota

ENCAPSULATION PRODUCT

Sentinel Lead Encapsulant White

PROJECT SIZE

Approximately 200,000 square feet

COMPLETED

January 2020

