

EnviroBlend[®] has extensive knowledge of the fate and transport of heavy metal contamination, as well as remedial action experience. Our scientists have spent years developing cost-effective chemistries for rendering lead, cadmium, arsenic, hexavalent chromium, zinc and other heavy metal contaminants non-hazardous. This research has resulted in a number of patented products that have been widely applied for heavy metal remediation sites across the country.

Mid-West Ferrous Foundry Facility

A ferrous foundry located in the mid-west has been using EnviroBlend XL supersacks to treat lead and cadmium-contaminated dust at their facility for over a decade. The EnviroBlend is added in-line as part of their process by using a duct injection method at low dosage rate which renders their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP).

The foundry produces pump housing and seat sides. This site is regulated by the state.

Southeast Ferrous Foundry

A ferrous foundry, located in the Southeast, has been using EnviroBlend CS Bulk and super sacks to treat lead and cadmium-contaminated dust from the cupola furnace for over 15 years. EnviroBlend is added in-line as part of their process by using a duct injection method to render their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). EnviroBlend treats over 3000 tons annually at this foundry. The foundry produces DI pipes. This site is regulated by the state.

Mid-West Ferrous Foundry

A ferrous foundry located in the mid-west has been using EnviroBlend 90/10 to treat lead and cadmium-contaminated dust at their facility. The EnviroBlend is added in-line as part of their process by using a duct injection method at a low dosage rate which renders their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). The foundry produces custom core castings.

Southeast Chrome Alloy Facility

A chrome alloy facility located in the Southeast has been using EnviroBlend CR50 to treat roughly 40 tons annually of lead, and cadmium-contaminated chrome dust. Prior to switching to EnviroBlend in 2014, the facility had been using Bantox to treat the dust. EnviroBlend is added in-line as part of their process by using a duct injection method to render their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). The facility manufactures ingots.

Ferrous Foundry - Midwest

A ferrous foundry, located in the Midwest, has been using EnviroBlend CS Bulk since 2017 to treat approximately 2800 annual tons of gray iron dust contaminated with lead and cadmium. To treat the dust EnviroBlend is added in-line as part of their process by using a duct injection method at a low dosage rate to render their dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). The foundry produces agriculture and automotive parts.

Deep South Ferrous Foundry

A ferrous foundry located in the deep south has been using EnviroBlend 93 HR to treat lead and cadmium-contaminated baghouse

filter bags since 2009. EnviroBlend is added in-line as part of their process by using a duct injection method at a low dosage rate which renders their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). The foundry produces DI pipe joints and couplings.

Ferrous Foundry – Midwest II

A ferrous foundry located in the Midwest has been using EnviroBlend CS Bulk to treat lead and cadmium-contaminated ferrous dust since 2007. EnviroBlend treats over one hundred tons annually by a duct injection method at a 6% dosage rate which renders ferrous dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). The foundry produces heavy truck parts and axle housings.

Ferrous Foundry, Midwest III

A ferrous foundry, located in the Midwest has been using EnviroBlend to treat their ferrous dust since 2009. Initially, EnviroBlend 80/20 was used and then they switched to our EPhos milled bags. The foundry treats the lead and cadmium-contaminated ferrous dust through baghouse duct injection at roughly 10 tons annually. Water valve castings are produced at this facility.

Ferrous Foundry in the West

A ferrous foundry located in the western US has been using EnviroBlend Emag XL to treat lead and cadmium-contaminated dust at their facility for over a decade. The EnviroBlend is added in-line as part of their process by using a duct injection method at low dosage rate of 8% which renders their dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP).

The foundry produces DI pipe.

Mid-West Foundry

A ferrous foundry in the Midwest has been using EnviroBlend to treat their cadmium and lead-contaminated dust for over 11 years. Using EnviroBlend CS sacks, they are applied via a dust injection process at a 20% dosage rate to render the dust non-hazardous. The foundry manufactures brake rotors and other auto parts.

Heartland Alloys Plant

An Aluminum Alloy Recycling plant in the US heartland uses EnviroBlend CS and AG20 to treat over 600 annual tons of dust contaminated with lead, cadmium. Hydrogen chloride gas is also treated. EnviroBlend is added as part of their duct injection process for metals and acid gas. This plant produces aluminum-based alloys.

Southern US Ferrous Foundry

A ferrous foundry located in the southern US switched its heavy-metal waste treatment reagents from Bantox to EnviroBlend CS. EnviroBlend now helps them annually treat over 500 tons of lead and cadmium-contaminated ferrous dust via a dust-injection method. A low dosage rate of 7% renders their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP).

Ferrous Foundry in the Mid Atlantic

A Spin Cast Ferrous Foundry located in the Mid Atlantic has been using EnviroBlend EMag XL for over 15 years to treat 1500 tons of cadmium and lead-contaminated dust annually. The EnviroBlend is added in-line as part of their process by using a duct injection method at a dosage rate of 15% which renders their baghouse dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP).

Spin Cast Ferrous Foundry in the southern US

A spin-cast ferrous foundry located in the southern US uses EnviroBlend CS in bulk and supersacks at high temperatures to treat 6000 tons of lead and cadmium-contaminated ferrous dust from cupola. To treat the dust, EnviroBlend is used via a dust injection method at a 25% dosage rate to render dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP).

Mid-South Ferrous Foundry

A Ferrous Foundry, located in the Mid-South, that produces ball mill casting and crusher parts has been using EnviroBlend CS Sacks to treat cadmium and lead-contaminated dust for over 15 years. EnviroBlend helps treat the facility's ferrous dust through duct injection at a dosage rate of 20%. This foundry is regulated by the state.

Ferrous Foundry in the South

A ferrous foundry in the South uses EnviroBlend CS Bulk to treat lead, cadmium, and zinc-contaminated dust from their cupola furnace. EnviroBlend is used by way of dust injection at a dosage rate of 10% and treats 2200 tons annually. This facility is regulated by the state.

North-East Ferrous Foundry

A ferrous foundry located in the Northeast uses EnviroBlend 80/20 CS to treat dust contaminated with lead, cadmium, and zinc. EnviroBlend treats roughly 200 tons of dust annually by way of a duct injection method at a dosage rate of 12% to render dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). This foundry manufactures pipe fittings and couplings.

Deep South Bronze and Aluminum Castings Factory

A bronze and aluminum casting factory uses EnviroBlend CS bags to treat a mix of different types of dust within the facility. The main metals treated are lead and cadmium. A duct injection method is used to treat the metals at a slow dosage rate to render dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). This plant is regulated by the state.

Ferrous Foundry - Northeast

A ferrous foundry located in the Northeast has been using EnviroBlend EMag XL for over a decade to treat ferrous dust contaminated with lead and cadmium. It is used to treat roughly 700 tons annually. The EnviroBlend is added in-line as part of their process by using a duct injection method at a low dosage rate of 4% which renders dust non-hazardous according to the EPA Toxicity Characteristic Leaching Procedure (TCLP). This foundry manufactures pipe fittings.

Ductile Iron Foundry – Texas

A ductile iron foundry in Texas has been using EnviroBlend® CS to treat baghouse dust for the past 11 years. The metals treated annually are Lead, Arsenic, Barium, Beryllium, Boron, Cadmium, Hexavalent Chromium, Mercury, Selenium, and Silver. The baghouse dust pH levels are also of concern for the foundry and are treated with EnviroBlend. The foundry uses the baghouse injection method for application at a dosage rate of 2-3lbs per hour of baghouse run time.

While the initial Toxicity Characteristic Leaching Procedure (TCLP) levels were unknown, the waste did test as hazardous per an EPA inspection. After treatment, the TCLP levels for each metal were all below detection limits.

Since the facility has had great success with EnviroBlend treating the baghouse dust, they recently started treating the baghouse filters prior to removal with a specialized EnviroBlend chemistry. Each filter has tested as non-hazardous since the use of EnviroBlend.

The site is regulated by the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency.

Brass Foundry Hazardous Waste Sands

A brass foundry recently found that a switch to EnviroBlend® from calcium silicate cement for waste foundry sands disposal provides cost savings to them in many ways. The amount of EnviroBlend reagent needed to treat in-situ the hazardous waste sands from the sand mold casting, while meeting TCLP regulatory standards was reduced by 40% by weight when compared to the silicate cement-based product at this non-ferrous foundry.

The overall weight and cost of the waste disposal were reduced substantially with a switch to EnviroBlend®. This fact, coupled with the upfront reduction of reagent requirements and reduced cost, proved to be an obvious priority for the foundry in such a competitive industry and market.

Copper Smelting Facility – Australia

EnviroBlend® conducted treatability tests to determine field dosages for the treatment of arsenic, cadmium, copper, lead, selenium, and zinc. We designed a mapping plan that resulted in a 10% savings in treatment costs by identifying regions of the waste that required lower treatment dosages than would be required for a composite sample. Most parcels of material required only single dosing of chemicals. The overall percentage of batches passing the TCLP after a single treatment exceeded 95%. Total treatment cost was less than half of the cost of hazardous waste disposal.

Former Foundry

Treated approximately 2,000 cubic yards of soil in stockpiles ex-situ with backhoes. Treated material disposed of at a Subtitle D permitted landfill. The total treatment and non-hazardous disposal costs were less than half of the cost of hazardous waste disposal.

Landfill Foundry – Utah

A landfill based in Utah has been using EnviroBlend® in a fixed mixing tank to treat waste at their facility for the past 20 years.

EnviroBlend's product, Enviromag XL, is used to treat 32,400 tons of lead-contaminated soil, baghouse dust, sediments, and sludge annually.

Prior to EnviroBlend treatment, the Toxicity Characteristic Leaching Procedure (TCLP) levels average around 5mg/L to 110 mg/L. EnviroBlend XL successfully reduces the lead to non-detect. The site is regulated by the Utah Department of Environmental Quality.

Large Ductile Iron Spin-Casting Foundry

A large ductile iron spin-casting foundry was offered a perceived lower cost calcium silicate cement-based heavy metal stabilization product as a replacement for EnviroBlend®. The apparent front-end cost savings made this product look attractive but after a two-year overall cost study, the actual cost of using the silicate cement-based product proved to be significantly higher.

Maintenance labor costs were extremely high over this trial period due to the attention needed to keep the material from clogging lines. This coupled with the spare parts costs from the frequent damage to screw feeder equipment and the shortened life span of the baghouse filter socks proved that EnviroBlend was the lower cost and better choice for the foundry. Reagent usage and cost were also down in comparison to the silicate cement-based product.

Since making the switch to EnviroBlend, the foundry has had no clogging of feed equipment, piping, or any other frequent and urgent problems from the reagent. TCLP results have proved to be in compliance and the overall liability of this waste stream has decreased due to a steady feed of the EnviroBlend.

Lemac Foundry – Pennsylvania

EnviroBlend® rendered over 350 tons of lead-affected soil non-hazardous at Lemac Foundry. The treated soil was transported to and disposed of at a Subtitle D landfill, which provided significant savings over disposing at a hazardous-waste landfill.



Speakman Company Foundry Sand Site - Delaware

EnviroBlend® remediated over 5,000 tons of lead-impacted soil *in-situ* at an operating manufacturing facility under the Voluntary Cleanup Program (VCP) in Delaware. This required the preparation of a remedial action work plan and documentation report subject to public comment and review. Work was completed on a 0.5-acre site in a mixed residential and commercial area without affecting neighboring properties. The total project cost was more than 60% less than hazardous waste disposal.

