

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.

**Guyton Battery Casings – North Carolina**

Treated approximately 8,000 tons of soil *ex-situ*.

**Confidential Site – North Carolina**

Untreated soil contained lead totals of 3,740 mg/kg and antimony totals of 187 mg/kg. Lead was leaching at 1,660 mg/L and antimony at a concentration of 1.71 mg/L. TCLP site standards for antimony and lead were 0.5 mg/L and 5 mg/L, respectively. Dosage rates of 4% to 5% EnviroBlend 80/20 Coarse reduced antimony to acceptable leachable levels.

Leaching Results							
Sample Name	Lab ID	EnviroBlend® Dosage		Screening Leaching Test Results			
		Chemical	Percentage	Pretest pH	Solution	Final pH	Lead, mg/L
Sludge	09-01016	Untreated	-	2.16	TCLP 1	5.11	368
		EnviroMag® Coarse	2.0%	-	TCLP 1	6.07	89.4
			3.0%	-	TCLP 1	8.86	2.22
			4.0%	4.54	TCLP 1	9.78	0.90

**Winston-Salem Police Firing Range – North Carolina**

The project consisted of remediating 2,400 tons of lead-contaminated soil from the municipal firing range by stabilizing the soil with the use of EnviroBlend and transporting stabilized soils to a local landfill. The stabilized lead-contaminated soil was required to pass a series of tests, TCLP, MEP, and SPLP Metals prior to removal. Working in the different areas and concentrations of lead contamination, CST teamed with Premier Chemical to evaluate and pretest the soil to best determine the proper mixing of EnviroBlend. This enabled CST to provide a competitive bid and win the award of the job. Working as a team with the city and Premier Chemical, CST was able to complete work under budget and ahead of schedule. The finished product not only met but exceeded the city's expectations allowing the city to continue to use the site for future training rather than abandoning the site.

**Seymour Johnson AFB – North Carolina**

In the summer of 2011, A&D Environmental Services, Inc. (A&D Environmental) was contracted by the engineering firm MMG to remediate this former small arm firing range in Goldsboro, NC. In addition to small arms bullets and debris, the site was screened for munitions and explosives of concern (MEC) including unexploded ordnance (UXO). MMG managed the site and supplied UXO technicians throughout the project duration. A&D Environmental has completed many similar sites and while the base initially assumed that all materials would be managed as RCRA Hazardous Waste for TCLP lead levels, the state regulators agreed that an on-site treatment step would be allowable.

A&D Environmental excavated and screened over 4,000 tons of lead impacted soils. The soils were mixed *in-situ* in 100-ton batches utilizing a 3% admix of EnviroBlend 90/10 Coarse. Samples were collected for every 200 cubic yards generated. 100% of the soils were rendered RCRA non-hazardous on the first treatment pass.

The resulting effect to the project's bottom line was a savings of over \$600,000 to the customer by eliminating the RCRA hazardous characteristic. Following removal of the impacted soils, A&D demolished the range concrete retaining walls and graded the former soil mound to match surrounding grades.

### ***Former Shooting Range – North Carolina***

Stabilized 2,500 tons of lead-contaminated soil from firing range with EnviroBlend® 90/10 Coarse. The soil had to meet SPLP and MEP testing requirements.

### ***Pre-Regulatory Landfill Closure – North Carolina***

A former unpermitted landfill had lead-contaminated soil caused by battery cracking and disposal. Prior to treatment, TCLP levels were >5.0 mg/l lead. The client utilized pre-staged stockpiles and an excavator to apply EnviroBlend® CS at a 3% dosage rate. Total cost savings of \$1.75 million were realized by being able to dispose of the material in a non-hazardous Subtitle D landfill versus a hazardous Subtitle C landfill.

“EnviroBlend has always been a reliable product. We have successfully treated many tens of thousand tons of soil through the years.”  
– Confidential Client