ENVIREMED

Nature's Solution to Man-Made Problems

Heavy Metal Remediation

Simple Solutions to Complex Problems

EnviRemed products are SAFE, non-toxic, non-corrosive, non-pathogenic and highly effective.

Problem

Heavy Metal pollutants leach into water and soil.

Solution

EnviRemed will cost-effectively reduce heavy metals.

EnviRemed applies a specially formulated slurry to reduce the amount of metals found in water and soil. The metals are contained in a crystalline structure that is not leachable according to the Toxicity Characteristic Leaching Procedure (TCLP) standards. The bond created only strengthens with time. These solutions help protect the environment and your bottom line.

The reagents used in Virotec** Technology have several remarkable characteristics that make them ideal for environmental remediation on land and in water. They have an excellent trace metal and metalloid binding capacities and, equally importantly, elements that are bound when the material is used to treat contaminated water or soil are held very tightly. Furthermore, the longer the spent Virotec reagents are left to age after use, the more tightly the bound elements are held. As the residue ages some new metal-trapping capacity develops.

H_1		Remediated Metals															He_2
Li_3	Be_4											B_5	C_6	N_7	O_8	F_9	Ne_{10}
Na_{11}	Mg_{12}											Al_{13}	Si_{14}	P_{15}	S_{16}	Cl_{17}	Ar_{18}
K_{19}	Ca_{20}	Sc_{21}	Ti_{22}	V_{23}	Cr_{24}	Mn_{25}	Fe_{26}	Co_{27}	Ni_{28}	Cu_{29}	Zn_{30}	Ga_{31}	Ge_{32}	As_{33}	Se_{34}	Br_{35}	Kr_{36}
Rb_{37}	Sr_{38}	Y_{39}	Zr_{40}	Nb_{41}	Mo_{42}	Tc_{43}	Ru_{44}	Rh_{45}	Pd_{46}	Ag_{47}	Cd_{48}	In_{49}	Sn_{50}	Sb_{51}	Te_{52}	I_{53}	Xe_{54}
Cs_{55}	Ba_{56}	La_{57}	Hf_{72}	Ta_{73}	W_{74}	Re_{75}	Os_{76}	Ir_{77}	Pt_{78}	Au_{79}	Hg_{80}	Tl_{81}	Pb_{82}	Bi_{83}	Po_{84}	At_{85}	Rn_{86}
Fr_{87}	Ra_{88}	Ac_{89}	Rf_{104}	Db_{105}	Sg_{106}	Bh_{107}	Hs_{108}	Mt_{109}	Ds_{110}	Rg_{111}	Uub_{112}	Uut_{113}	Uuq_{114}	Uup_{115}	Uuh_{116}	Uus_{117}	Uuo_{118}
	Ce_{58}	Pr_{59}	Nd_{60}	Pm_{61}	Sm_{62}	Eu_{63}	Gd_{64}	Tb_{65}	Dy_{66}	Ho_{67}	Er_{68}	Tm_{69}	Yb_{70}	Lu_{71}			
	Th_{90}	Pa_{91}	U_{92}	Np_{93}	Pu_{94}	Am_{95}	Cm_{96}	Bk_{97}	Cf_{98}	Es_{99}	Fm_{100}	Md_{101}	No_{102}	Lr_{103}			

Our solutions to heavy metal problems have been EPA tested and meet U.S. EPA Guidelines.

***EnviRemed is the licensed U.S. solution provider for Virotec Global Solutions.*

VIROTEC

Environmentally Safe, Non-Pathogenic & Natural Remediation Solutions for:

WasteWater | Groundwater | Hydrocarbons | Heavy Metal Remediation in Water & Soil | Landfills | Sludge Reduction (Human & Animal Waste)

Grease Remediation | Agriculture & Aquaculture | Industrial, Municipal, Gov't & Military Applications

EnviRemed—A Veteran Owned Company: DUNS: 829350219 CAGE/NCAGE: 5BSW3

Environmental Impact of Treatment

EnviRemed's solutions are not toxic, dangerous or hazardous. Contaminated water, soil, rock and tailings treated with Virotec's reagents are generally not toxic to plants, animals or humans.

The Toxicity Characteristic Leaching Procedure (or TCLP) was designed by the United States Environmental Protection Agency (EPA) to determine the mobility of both organic and inorganic analytes present in liquid, solid, and multiphasic wastes. The TCLP test is often used to determine if a waste meets a "toxicity" definition, and was developed to mimic what will happen to a solid when left to age in nature for 20 years under acid leaching conditions.

Virotec's reagents have been used to treat contaminated mine site dam water, toxic mine tailings, and waste rock. Results of this research has shown that the treated water, the dam sediment, treated tailings and waste rock were not toxic to plants or animals.

Moreover, Virotec's reagents, both prior to and after application, cannot be classified as either a hazardous or dangerous waste, as defined by regulatory guidelines worldwide, including the Hazardous Waste Act. For these reasons, Virotec's reagents are considered safe to transport, safe to handle, and safe to apply, and are not toxic to plants, soil biota, fish or other aquatic life when assessed using worldwide standards of toxicological practice. Virotec's reagents are therefore considered to be fully sustainable and healthy for the environment.

EnviRemed

EnviRemed is a consortium of top scientists, engineers and businessmen who have united to offer the best available technology to provide safe and natural solutions for governmental authorities, corporations, and private citizens to create a cleaner future for our planet.

Available worldwide, we offer environmentally friendly solutions that help your bottom line. Through simple processes we have saved our customers millions of dollars, thousands of man hours, and improved the way they take care of their business.

Dissolved element concentration data for leachate from the ViroMine™ treated Waste Rock Trench

Analyte – Units	Untreated Control 2003	Result 2001	Result 2002	Result 2003	Result 2004	Result 2005
pH	1.93	7.9	7.96	8.35	8.62	8.70
Acidity (mg/L as CaCO3)	49,000	4	< 5	< 5	< 5	< 5
Alkalinity (mg/L as CaCO3)	<LLD (5)	90	62	66	72	58
TDS (mg/L)	77,000	11,500	8,300	3,000	1,200	2,900
Sodium (mg/L)	9,300	2,970	2,990	570	250	430
Sulfate (mg/L)	55,000	6,000	5,800	2,200	840	2,100
Chloride (mg/L)	47	2,300	140	8.6	3.8	15
Fluoride (mg/L)	261	< 0.2	0.57	0.53	0.87	1.6
Ag (µg/L)	150	< (1)	1.1	< LLD (5)	< LLD (5)	< LLD (1.6)
Al (µg/L)	1,200,000	< LLD (50)	10	66	< LLD (50)	190
As (µg/L)	35,000	3.1	3.7	< LLD (0.4)	< LLD (10)	< LLD (0.4)
Ba (µg/L	99	155	27	35	NA	10
Be (µg/L)	56	< 0.4	0.34	< LLD (5)	< LLD (5)	< LLD (1.2)
Cd (µg/L)	630	0.41	0.4	< LLD (1)	< LLD (1)	< LLD (2.6)
Co (µg/L)	2,200	1.5	11	< LLD (10)	< LLD (10)	< LLD (2.6)
Cr (µg/L)	390	< (1)	12	< LLD (10)	< LLD (10)	< LLD (21)
Cu (µg/L)	33,000	8.2	7.2	< LLD (10)	< LLD (10)	< LLD (2.4)
Fe (µg/L)	21,000,000	< LLD (25)	18	120	210	40
Hg (µg/L)	0.2	< 0.1	0.2	< LLD (0.2)	< LLD (0.2)	< LLD (0.11)
Mn (µg/L)	34,000	17	0.3	< LLD (10)	< LLD (10)	< LLD (1.1)
Ni (µg/L)	1,600	2.1	1.4	< LLD (10)	< LLD (10)	< LLD (3.2)
Pb (µg/L)	390	< 2.2	2.9	< LLD (10)	< LLD (10)	< LLD (5.8)
Sb (µg/L)	500	< 3.7	48	< LLD (10)	< LLD (10)	< LLD (20)
Se (µg/L)	102	41.4	3.9	< LLD (8.5)	< LLD (5)	< LLD (0.3)
Tl (µg/L)	200	< 5.2	3.1	< LLD (5)	< LLD (5)	NA
V (µg/L)	1,700	< 0.9	1.0	< LLD (10)	< LLD (10)	< LLD (2)
Zn (µg/L)	29,000	42	21	< LLD (10)	< LLD (10)	< LLD (2.4)

Data for water leaching from sulfidic waste rock that had been treated using ViroMine™ reagent in the Trench Trial at the Gilt Edge Mine site; the data span the five years since the treatment was carried out. The USA EPA conducted independent trials on ViroMine™ Technology Terra B™ reagent for five years.The trials were conducted at the Gilt Edge Mine Site in South Dakota, USA. The control data were obtained for leachate emanating from the same type of waste rock that had not been treated with ViroMine™ reagent. < LLD indicates that the concentration is below the detection limit for the analytical procedure used (the detection limit is indicated in parentheses). NA indicates not analysed.