

Low Flow Groundwater Sampling Landfill Project Overview

Utilizing Proactive Environmental Products® 12 volt Sample Champ® pumps

Landfill Location: _____ County, Virginia

Chart #1: Reflects previous groundwater sampling methods to collect samples from 31 groundwater monitoring wells. We purged full case volume using disposable bailers and then allowed for wells to recharge to collect low flow samples using the rented SS Mega Monsoon® Pump System. After each deployment the pump was cleaned using standard groundwater equipment cleaning procedure: Run the pump through a five gallon bucket of soap water. Then run it through a five gallon bucket of clean tap water, and then run it through a 5 gallon bucket of deionized water.

Chart #2: Reflects the current and reoccurring groundwater sampling methods using Sample Champ® pumps to collect low flow samples. Note that two monitoring wells at this site require bailer sampling due to very low water volume and slow recharge.

Summary: Delivered cost total invoice: _____. By dedicating 29 Stainless Steel 12 volt Sample Champ® pumps, stationed FEP lined Polyethylene tubing, well pump holders and well caps, the landfill's investment paid itself off in two years and we now go direct to low flow sampling method. It is worthy to note that by dedicating Sample Champ® pumps we eliminated potential of cross contamination, significantly minimized disposable items and purge and decon waste water. The Sample Champ® pumps streamlined and simplified the site's groundwater sampling program.

CHART #1: Previous Groundwater Program / 31 wells. Sampled two times a year

Equipment	Quantity	Average cost/unit	Per GW Event \$	Total Annual
Bailers	31	\$7.00	\$217	\$434
Bailer Twine (in feet)	1500	\$.10/ft.	\$150	\$300
Tubing (in feet)	600	\$.25 /ft.	\$150	\$300
Rental (SS Mega Monsoon® pump)	1	\$250	\$250	\$500
Man Hours	100	\$85/hr.	\$8,500	\$17,000
Purge water generated in gallons	644	\$1.00 /gallon	\$644	\$1,288
Decon waste water in gallons removal (pump and flow cell)	435	\$1.00 /gallon	\$435	\$870
Total			\$10,346	\$20,692

CHART #2: Current and reoccurring groundwater program / 29 wells sampled with stationed Sample Champ® pumps and two wells bailer sampled. Sampled two times a year

Equipment	Quantity	Average cost/unit	Per GW Event \$	Total Annual
Bailers	2	\$7.00	\$14	\$28
Bailer Twine (in feet)	75	\$.10/ft.	\$7.50	\$15
Tubing (in feet)	145	\$.20 /ft.	\$29	\$58
Man Hours	48	\$85/hr.	\$4,080	\$8,160
Purge water generated in gallons	87	\$1.00 /gallon	\$87	\$174
Decon waste water in gallons (flow cell)	5	\$1.00 /gallon	\$5	\$10
Total			\$4,222.50	\$8,445