

A.1 SNAP SAMPLER

A.1.1 US AIR FORCE/PARSONS

FINAL Results Report for the Demonstration of No-Purge Groundwater Sampling Devices at Former McClellan Air Force Base, California

A.1.2 Summary

Media:	Groundwater
Study Type:	Side-by-side comparison study
Technology:	Passive Grab Sampler/Snap Sampler
Peer Reviewed:	No
Publication Date:	2005

A.1.3 Site Description

The overall objective of the method demonstration at McClellan Air Force Base was to evaluate and demonstrate the use of selected passive diffusion and grab sampling technologies that potentially represent useful and cost-effective alternatives to conventional groundwater sampling approaches. The site itself and stage of remediation was unimportant in the study other than to provide wells with a range and variety of contaminant types that could be sampled and compared among different devices. Devices tested included Snap Samplers, PBDs, variations of diffusion-based devices including different membrane types, and HydraSleeves. All passive samplers were compared to low flow purging and sampling, volume-based purging and sampling and passive devices to each other. Snap Samplers and Hydrasleeves were not deployed in the same wells and therefore were not compared directly.

A.1.4 Remedial Phase

Long Term Monitoring

A.1.5 Outcome

As the Final Results Report for the study concludes, most of the devices were able to collect samples and provide results comparable to traditional sampling methods. All were cost-reducing compared to traditional sampling approaches. Specific to the Snap Sampler technology, the report explains:

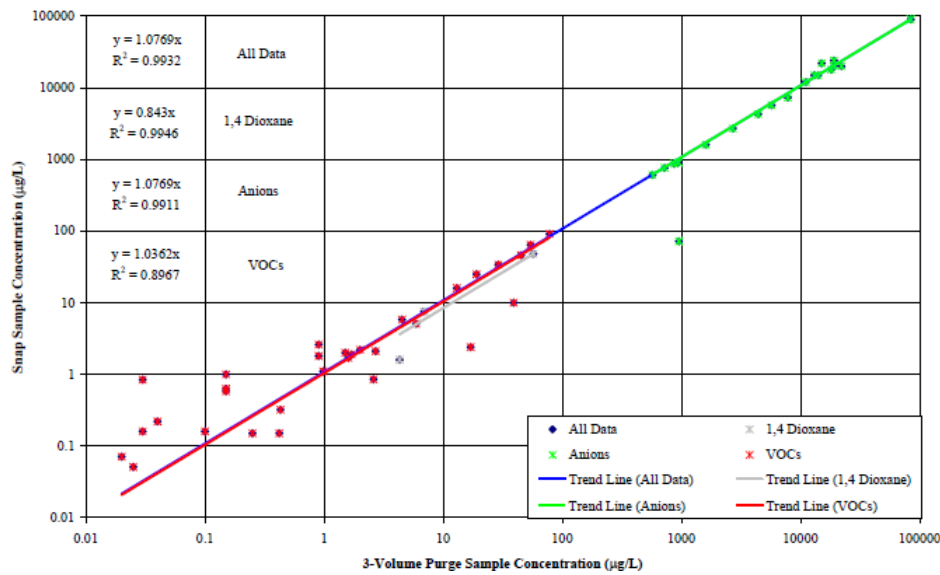
“...Comparisons involving the Snap Sampler™ ... indicate that the VOC data set for this sampler may be more consistently representative of the actual VOC concentrations in the well at the time of sample collection.”

“...VOC data indicate that minimizing VOC sample transfer can result in more accurate detection of VOC concentrations present in the well water.”

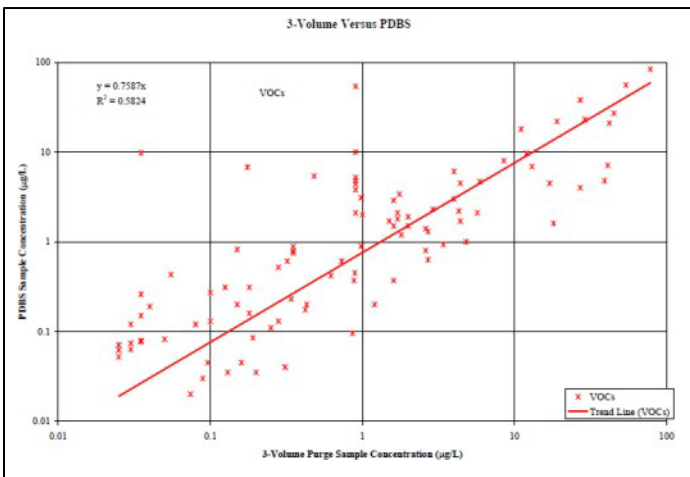
“The Snap Sampler™ appears to be a technically viable method for monitoring all of the compounds it was tested for in this demonstration.”

The following graphically represents the comparison between volume-base purging and the Snap Sampler. The illustration also shows the slope and correlation coefficients of the regression, illustrating that the Snap Sampler compared most closely with the traditional comparator method. Other passive methods showed poorer recovery and poorer correlation with the traditional method. While other methods were generally correlative with the traditional methods, the Snap Sampler performed best in the data comparisons.

3-Volume Versus Snap Sampler



3-Volume Versus PDBS



3 vol purge vs:	Y-slope (RECOVERY)	R ² (SCATTER)
Snap	1.04	0.90
PDB	0.75	0.58
RPPS	0.63	0.70
HS	0.59	0.50