Steven Scharf - "Eliminated" Technologies

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Date: 5/19/2009 10:09 PM
Subject: "Eliminated" Technologies
Attachments: FFS Technology Summary May 18 2009.xls

Steve:

Here:

<<FFS Technology Summary May 18 2009.xls>>

is the information you requested concerning technologies that were eliminated from consideration for the FS. I'll give you a shout tomorrow.

Thanks.

Kent

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DRAFT Technology Screening Summary: Focused Feasibility Study, Site Area, Operable Unit 3 (Former Grumman Settling Ponds), Bethpage, New York. (1)

TECHNOLOGY	CONTAMINANT			COMMENTS
	VOCs	PCBs	Metals	
SOILS, LPZ, AND PERCHED WATER				
Excavation w/off-site disposal	Y	Y	Y	Retained for all alternatives
Excavation w/on-site treatment	Y	Y	Y	Off-site disposal is more effective and less costly than on-site treatment options considered (soil washing, chemical oxidation, and incineration). Incineration was also eliminated due to the likelihood that the technology would not be acceptable to the NYSDEC, NYSDOH, and/or public.
Stabilization	N	Y	Y	Stabilization is not effective at treating VOCs.
Stabilization enhanced w/Zero-Valent Iron for VOCs only	Y	Y	Y	Retained for Alternatives 2 and 3
Stabilization enhanced w/Zero-Valent Iron for VOCs & PCBs	Y	Y	Y	Retained for Alternative 3 (2'-6'/10') only
In-situ Thermal Remediation	Y	N	N	Retained for Alternatives 2 and 3
In-situ Thermal Remediation (enhanced for PCBs)	Y	Y	N	Overall costs were prohibitive compared to excavating w/off-site disposal for alternatives considered.
Soil Vapor Extraction	Y	N	N	Retained for Alternatives 2 and 3
Multi-phase Extraction	Y	N	Y	Retained for Alternatives 2 and 3
Gravel Cap	Y	Y	Y	Retained for Alternatives 2 and 3
GROUNDWATER				
Pump & Treat	Y	NA	Y	Retained for all alternatives
Stabilization enhanced w/Zero-Valent Iron for VOCs only	Y	NA	Y	Retained for Alternatives 2 and 3
In-situ Thermal Remediation	Y	NA	N	Retained for Alternatives 2 and 3
In-situ Chemical Oxidation w/Permanganate	Y	NA	N	Retained for Alternative 4 only
In-situ Chemical Oxidation w/Persulfate	Y	NA	N	Site-specific bench-scale tests found permanganate to be a more effective oxidant.
Multi-phase Extraction	Y	NA	Y	The OM&M costs will be prohibitive due to the large quantity of water that would have to be extracted, treated, and discharged.
Enhanced Anaerobic Bioremediation	Y	NA	N	Is not compatible with the existing GW IRM due to the generation and release of significant quantities of dissolved iron within the anaerobic zone which would, ultimately, render the groundwater recovery system inoperable.
SOIL VAPOR				
Soil Vapor Extraction	Y	NA	NA	Retained for all alternatives

BOLD: denotes technologies that were not considered for any of the FFS alternatives
NA not applicable because contaminant is not present in the media
Y technology treats contaminant
N technology does not treat contaminant
LPZ low permeability zone soils

Notes:
1. Due to the nature of the Focused Feasibility Study, only technologies considered to be potentially applicable were included in this screening.