

# ***NAPL FLUTe Method***

presented

by

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The NAPL FLUTE system uses a simple trick. The unique capability is that of emplacing a flexible hole liner through the interior of a push rod, and then removing the rod while the liner dilates in the hole, but not in the rod.

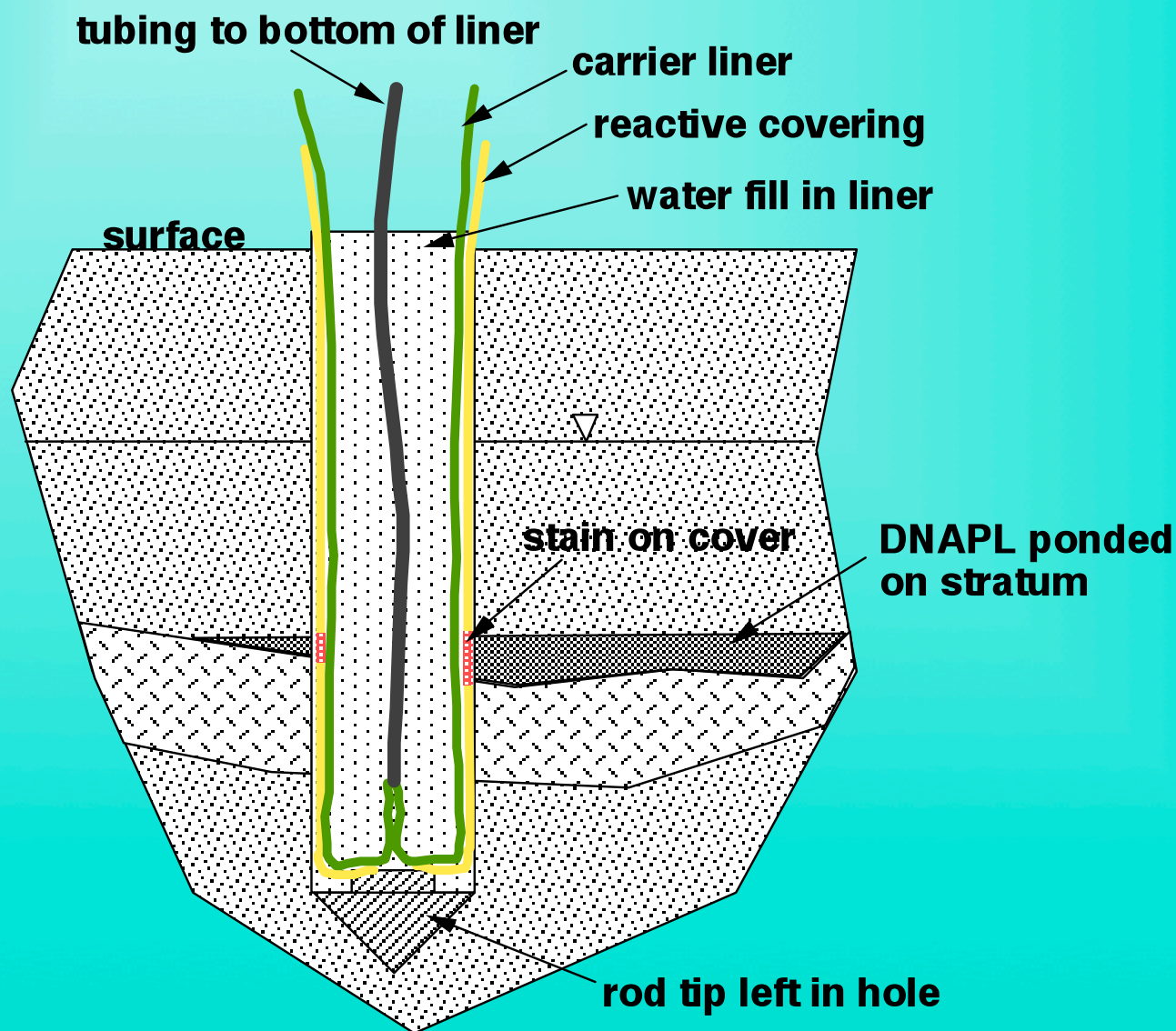
## Presentation will cover:

- Description of *a NAPL FLUTE*
- Characteristics of the method
- Geometry of the system
- Method of installation
- Removal procedure
- Experience with the system

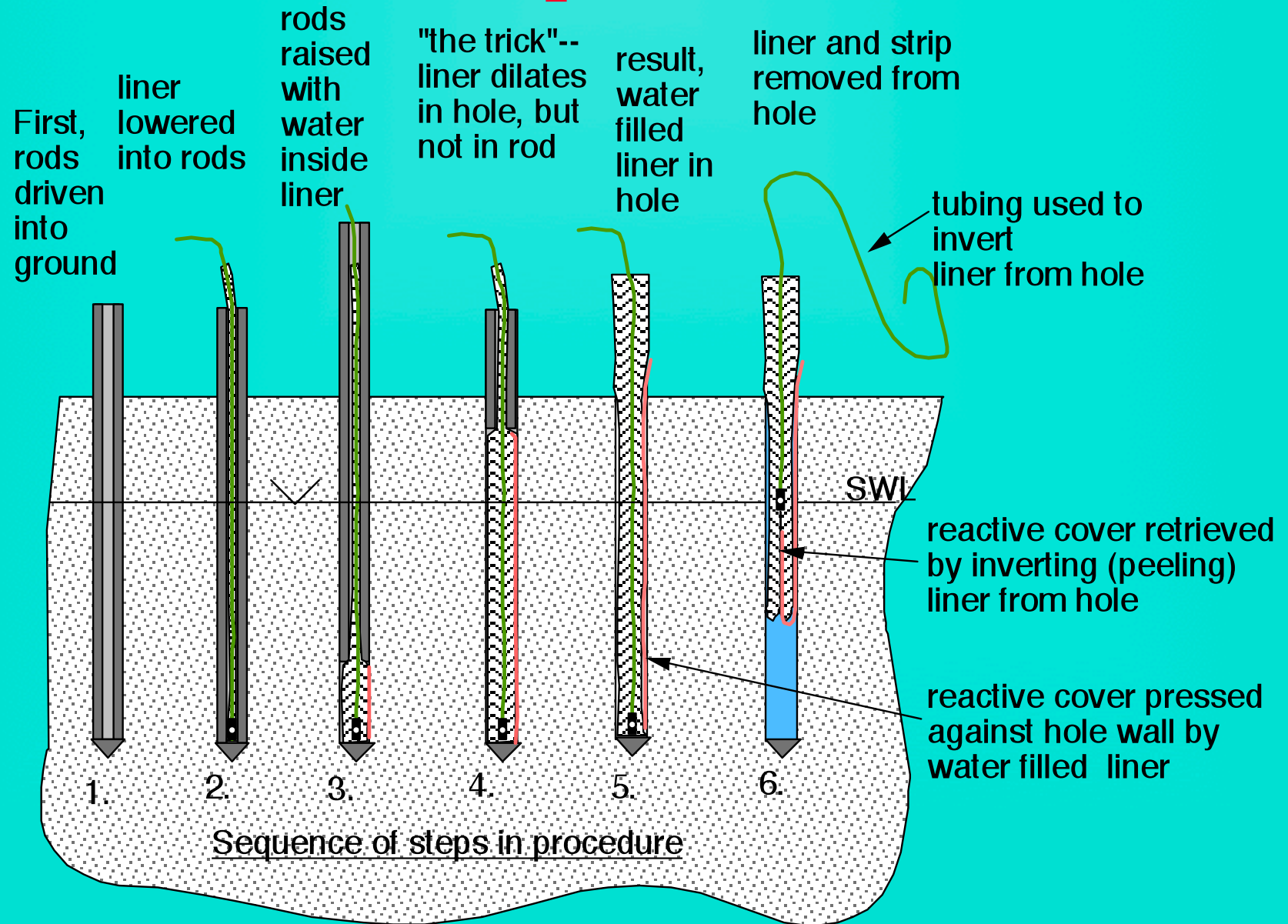
## The *NAPL FLUTE* has nice features:

- Can be installed through the interior of cone penetrometer rods, Geoprobe rods, or sonic driven casing (the easy access)
- Allows a 2-D free product map in a single hole
- Seals the hole while the reaction occurs
- Is easily removed
- Is easily read
- Is inexpensive

# The in situ geometry/components



# The installation procedure is "slick"



# The installation procedure is fast

- Punch the rods to depth (time?)
- Slide the liner into position (2 min.)
- Pull the rods (~2 min./rod)
- Wait for the reaction (1/2 hr.-1 hr.)
- Remove the liner (3 min.)
- Peel the cover out of the liner (5 min.)



# Experience with the method

- First installation at SRS in Oct. 1998
- Second installations at Cape Canaveral, '99
- Other installations by Westinghouse SRS, '99
- Creosote site Stockton, CA, 99
- 9 installations at Ft. Meade, MD, 2000
- Mapping of solvents in sonic core, Florida, 2000
- Long Beach, CA; New Jersey; Pennsylvania; .....  
2000 and 2001. Over 300 installations now.



# Installation in Geoprobe at Ft. Meade





## Color reaction from third hole in MD





## Color reaction in fourth hole in MD





# DNAPL in 3" core hole in NJ





# Deeper in Hole in NJ





# Core extrusion into reactive cover from sonic casing



## Several patents are pending on the method:

- The method of installation in a push rod or driven casing is patented.
- The color reactive material for subsurface and surface use is pending.



Thanks for considering  
the  
*NAPL FLUTE*

Questions:  
Call 888-333-2433  
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See our web site: **flut.com** for other  
*FLUTE* methods