

Installation and Sampling of
Groundwater Monitoring Wells at
the Suspected Mustard Agent
Burial Site

Presented By:



EXPLANATION OF MUSTARD
AGENT

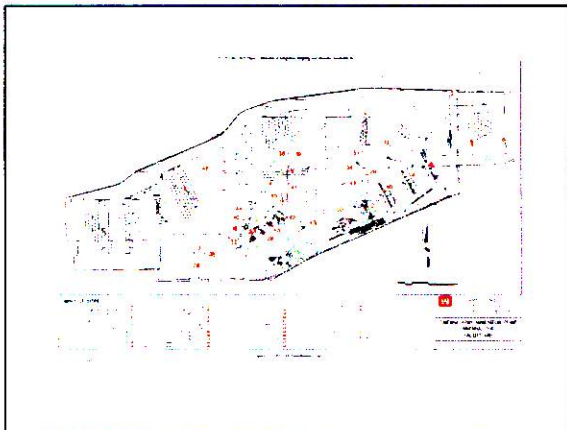
- Mustard Agent is a blister agent that causes harm to body tissues
- Mustard Agent is not a gas; it is a thick molasses-like oily liquid with an odor of garlic, onion, or mustard
- Mustard Agent will break down into
 - Thiodiglycol
 - 1,4-oxathiane
 - 1,4-dithiane

BRIEF HISTORY

- After World War II, it was reported that Mustard Agent was buried west of the NACA Test Area
 - In 1969, 1 empty drum and 7 empty cans were found with no evidence of contamination
 - An undocumented source reported that the site was actually several hundred yards to the south

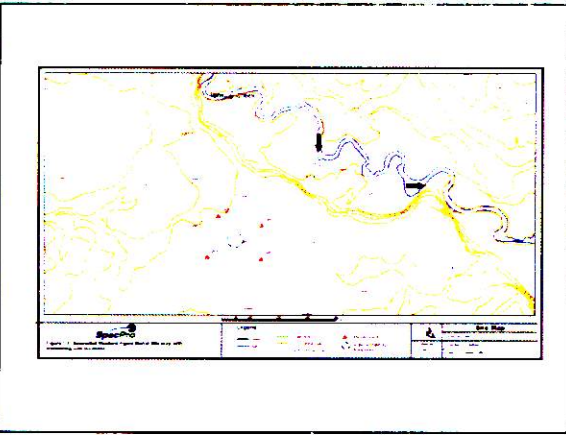
BRIEF HISTORY (Continued)

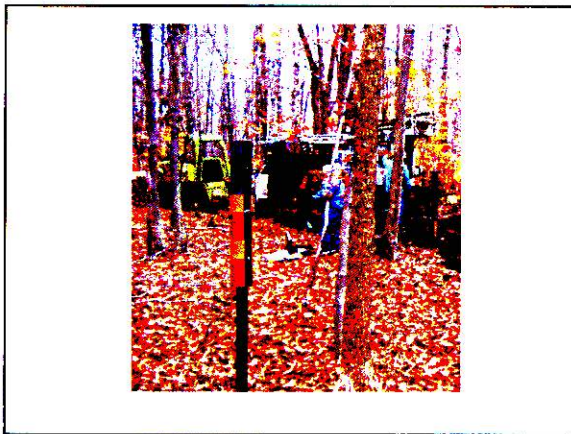
- The second location was investigated
 - The site was fenced in 1969, only remnants of the cyclone fence remain
 - Surface soil samples were taken and tested for thiodiglycol in 1996
 - No thiodiglycol was found
 - A geophysical study was done at this site in 1998
 - The site was additionally marked with Seibert stakes in 1998



PROJECT DESCRIPTION

- Installed four groundwater monitoring wells outside the suspected burial area
- A groundwater sample from each well was analyzed for mustard agent breakdown products
- The downgradient well was also sampled for metals, explosives, pesticides and other chemicals







Show video of Safety Officer
Bob Faye





RESULTS

- No Mustard Agent breakdown products were detected
- All results for the downgradient well sample were either not detected or below site-wide background levels (except barium and beryllium, which were below the state and federal drinking water standards)

FUTURE PLANS

- Continue monitoring groundwater levels to determine seasonal variations in groundwater flow
- Install and sample 2 additional wells for Mustard Agent breakdown products
- Place additional signs and Seibert Stakes surrounding the location
- Enforce site restrictions (no digging)
