

Tank Farm Vadose Zone Project

November, 2001

Tony Knepp

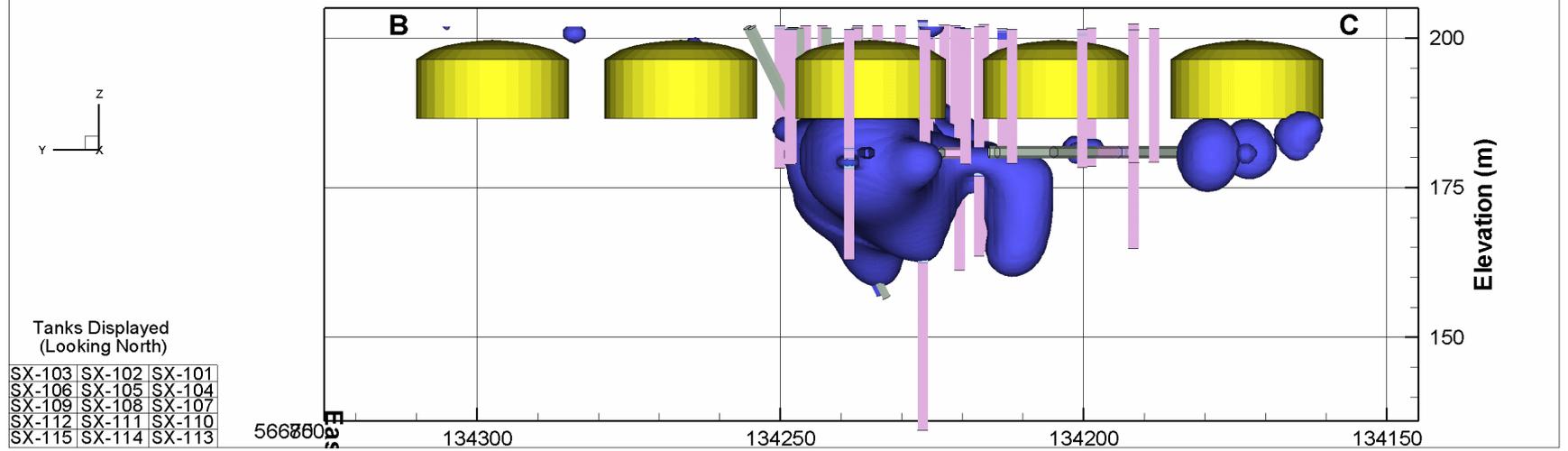
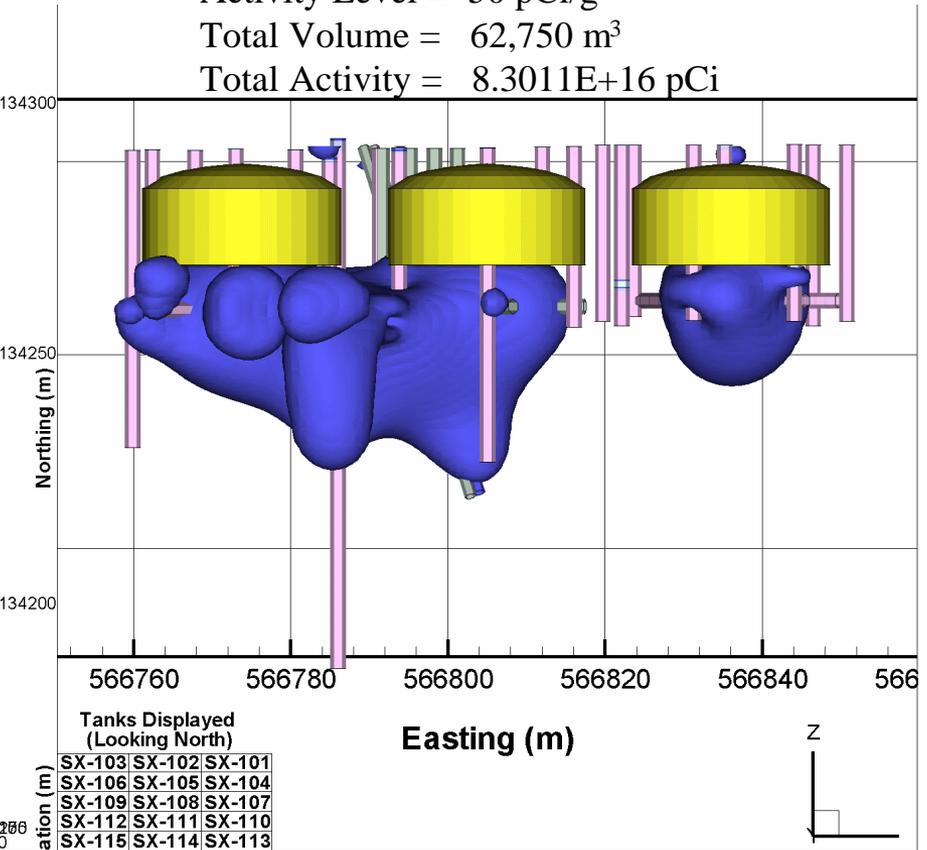
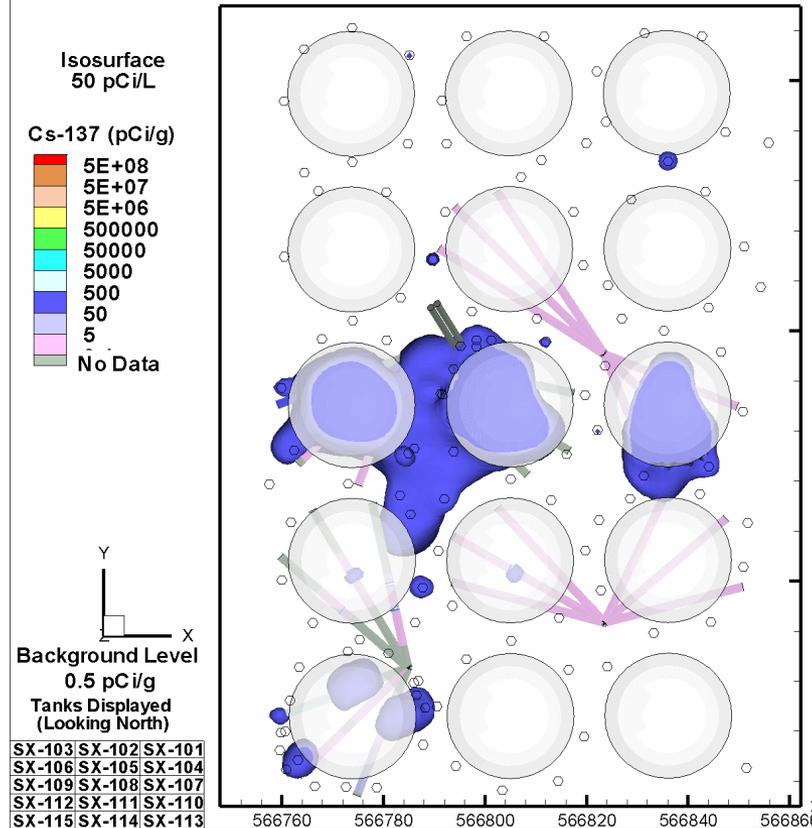
Scope of the SST Vadose Project

- Implement the RCRA corrective action Program
 - Provide data to support interim measures and interim corrective measures decisions
 - Implement such measures, as appropriate
 - Provide data to support tank waste retrieval and closure decisions
- Coordinate with the Hanford Site GW/VZ program (science and technology, EMSP, etc.)

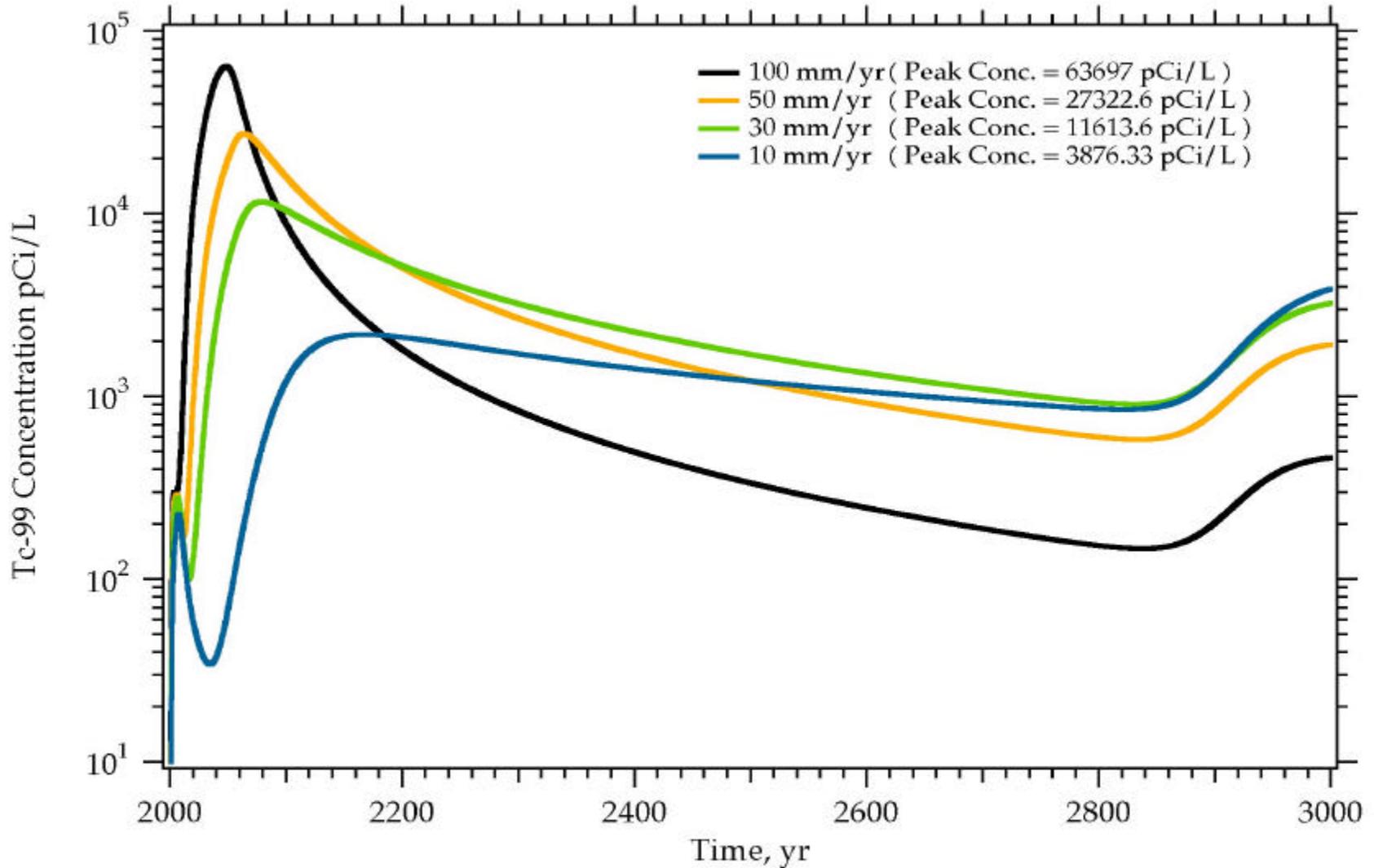
Waste Management Area Approach

Waste Management Area	FY00	FY01	FY02	FY03	FY04	FY05	FY06
S-SX	Field/Lab	Reporting					
B/BX/BY	Planning	Field/Lab	Reporting				
T, TX/TY		Planning	Field/Lab	Field/Lab	Reporting		
A/AX, C, U				Planning	Field/Lab	Field/Lab	Reporting
Phase 2						Planning	Field/Lab
Interim Measures		200 West	200 East				
Interim Corrective Measures					X	X	X

Activity Level = 50 pCi/g
 Total Volume = 62,750 m³
 Total Activity = 8.3011E+16 pCi



Averaged Tc-99 Concentrations at the WMA Boundary – Preliminary Results



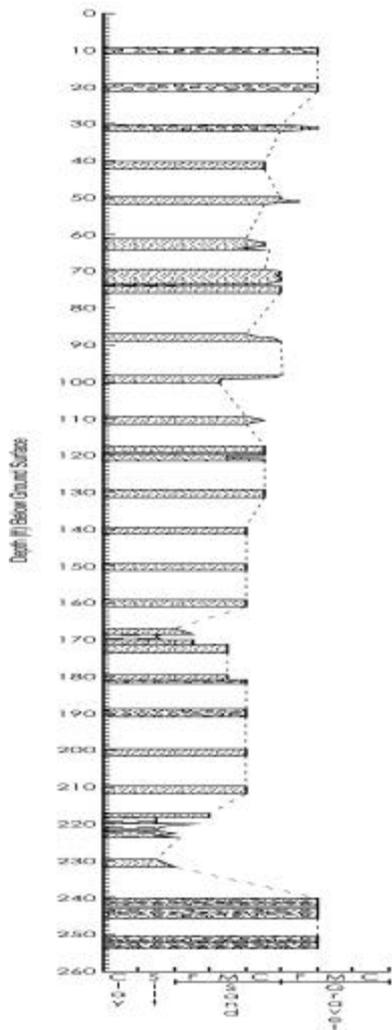
BX-102 Results (1)

Moisture

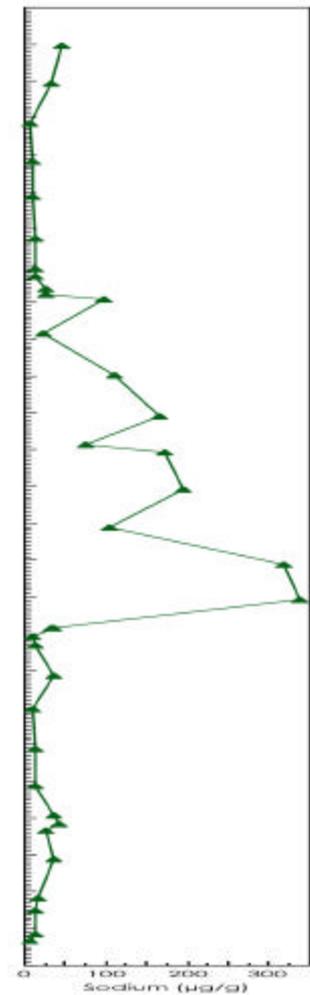
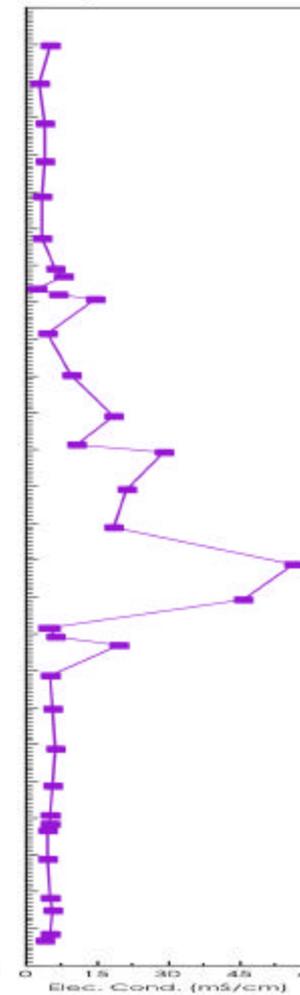
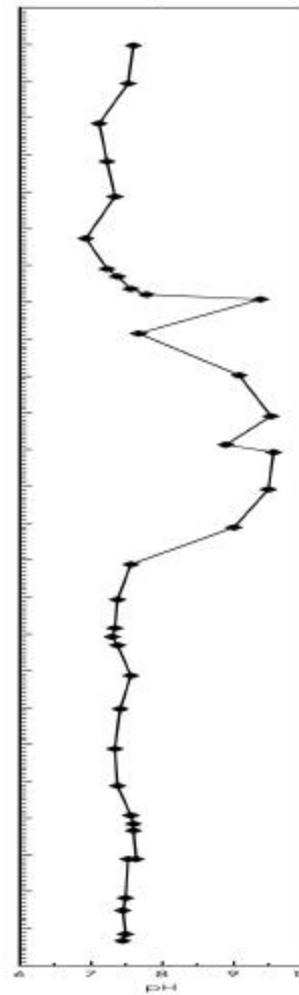
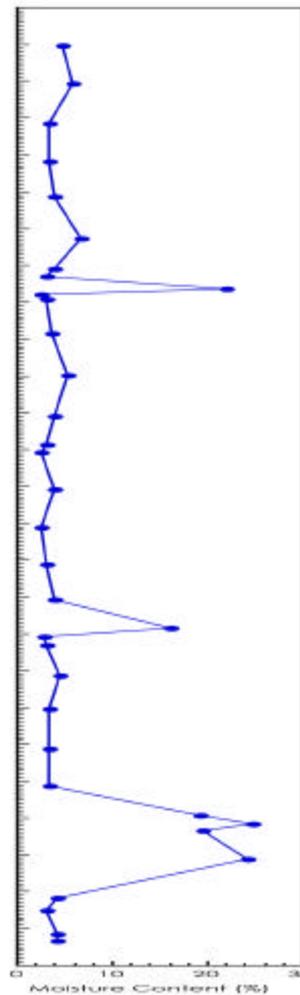
pH

E. Cond.

Na



Borehole BX102 (Well 299-E33-45)



(%)

mS/cm

ug/g

BX-102 (2)

TC-99

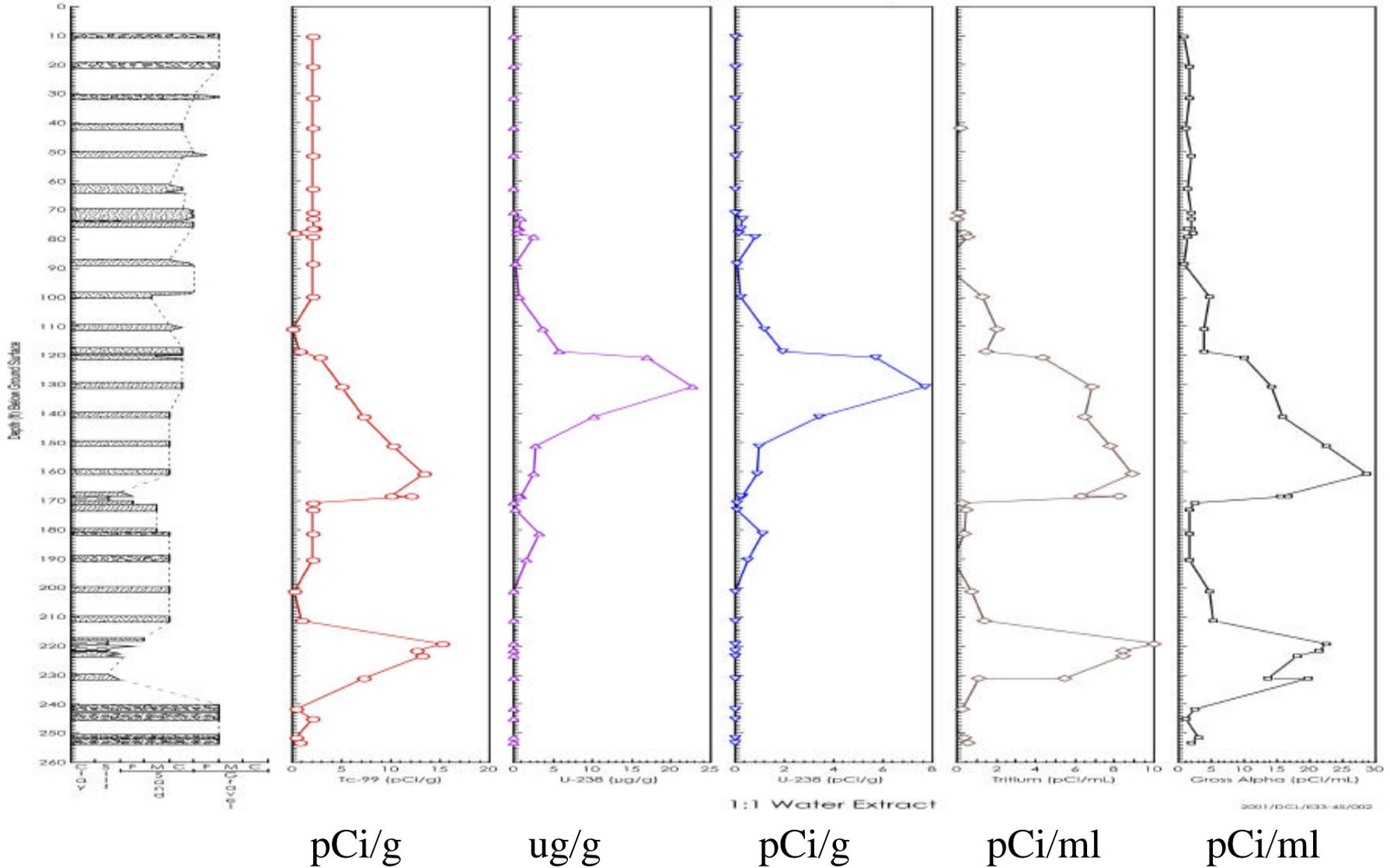
U-238

U-238

Tritium

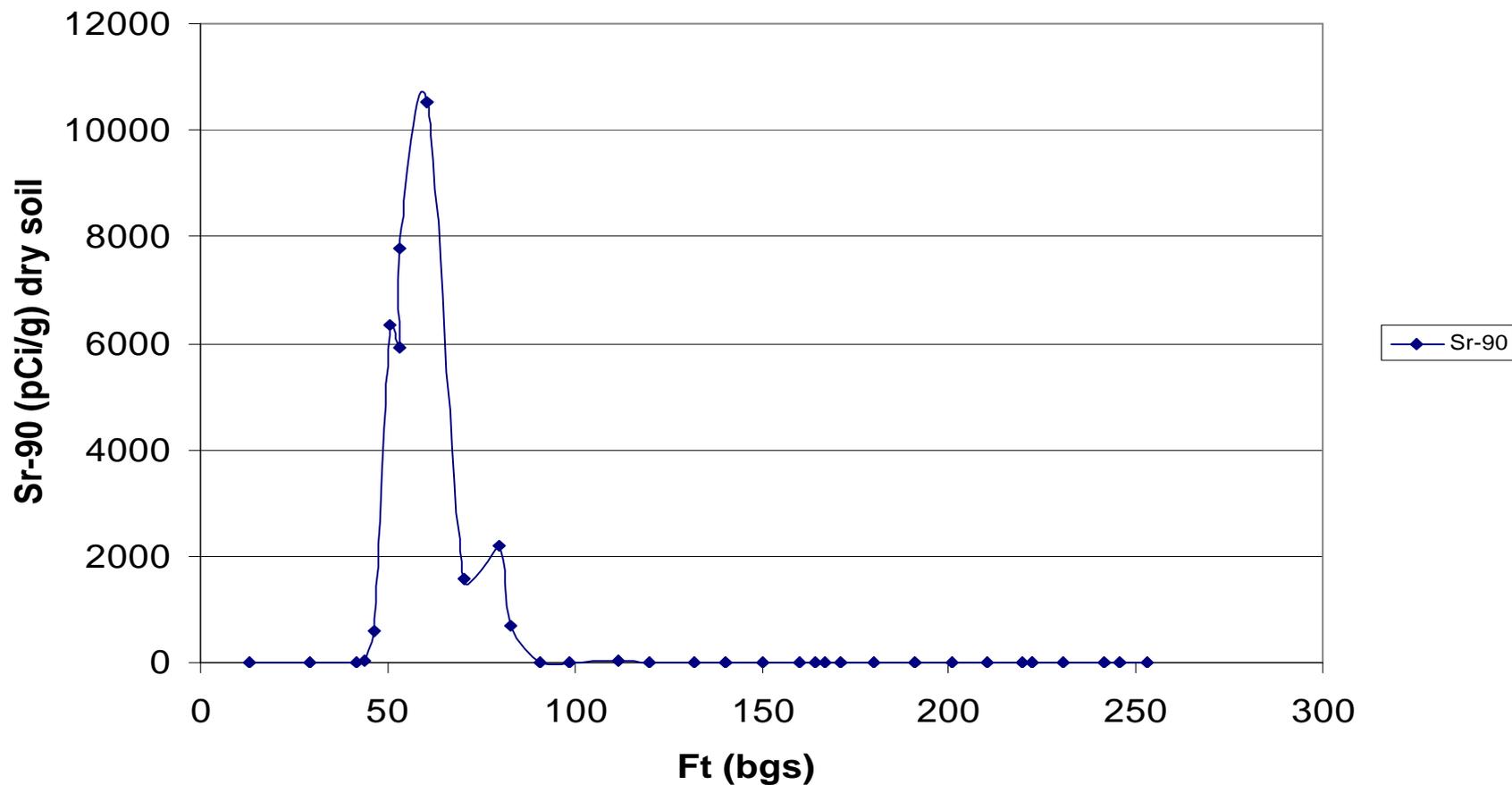
G. Alpha

Borehole BX102 (Well 299-E33-45)



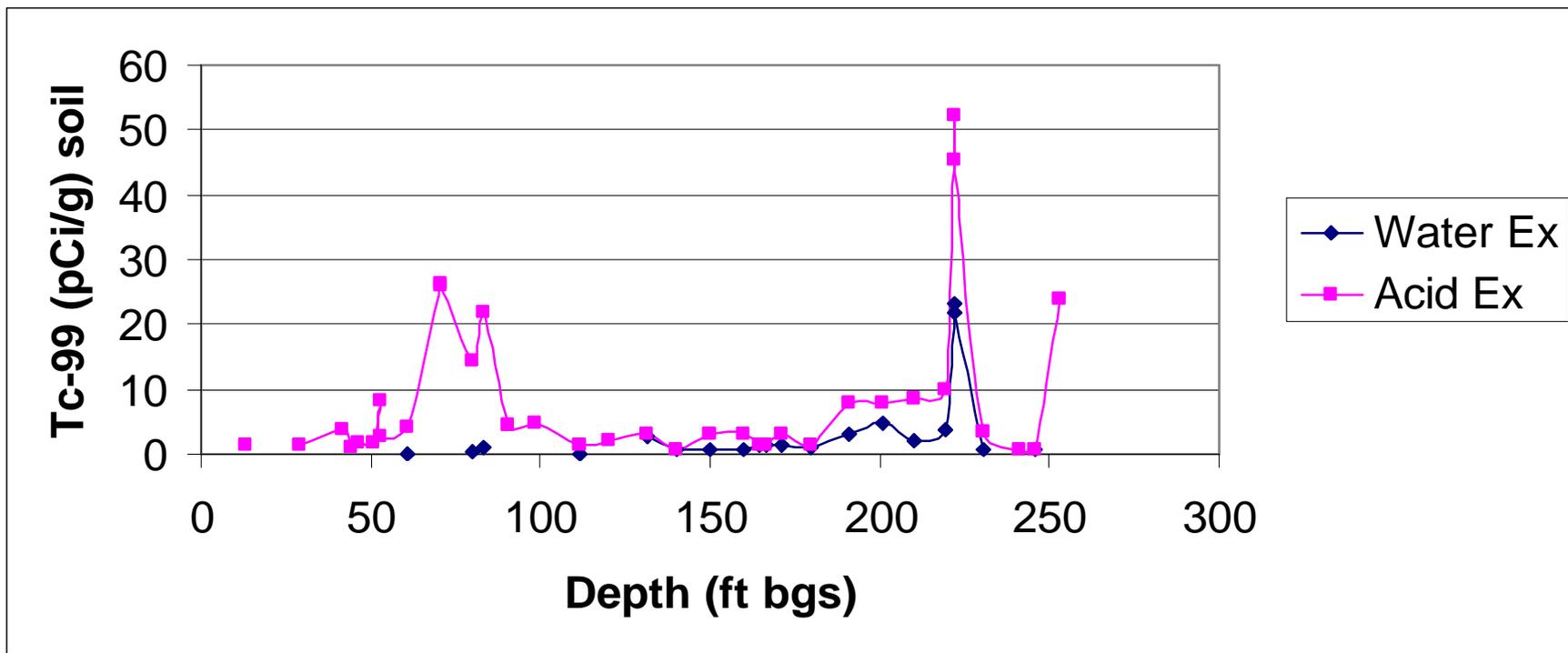
B-110 (1)

Sr-90 in B-110 Vadose Sediments



B-110 (2)

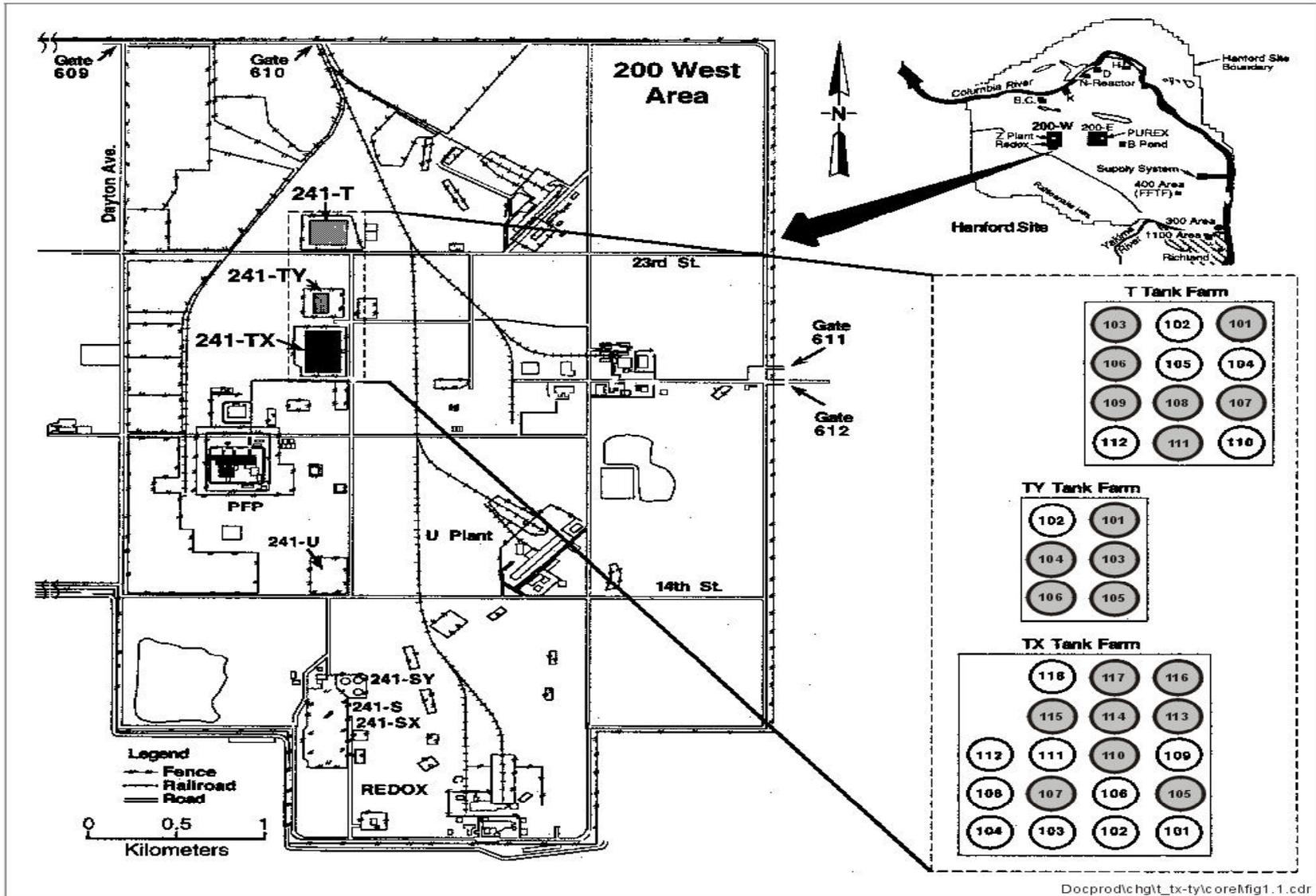
Tc-99



Remaining Field Work in B/BX Tank Farm

- Cone Penetrometer sampling in B/BX Tank Farms
 - Approximately 30 pushes

TX Tank Farm



Note: Shaded tanks are assumed or confirmed leaking tanks.

Field Work

- Drill 3 Holes in TX Tank Farm in FY02
- Holes down to ~150 feet
- Sampling every ~10 feet
- Continue Characterization in T/TX/TY Tank Farms in FY03
- Characterization of other tank farms in FY04 and beyond

FY02 Major Milestones

- Issue of WMA S/SX Field Investigation Report (FIR) to Ecology (TPA M-45-55-T01) by 1/31/02
- Complete drilling 3 boreholes in TX Farm (PI ORP-13(5b) by 9/30/02
- Complete installation of 6 RCRA monitoring wells by 9/30/02
- Perform modeling for WMA B/BX/BY FIR by 6/30/02
- Complete run-on controls and waterline testing in 200 East Area SST farms (Potential Superstrech)