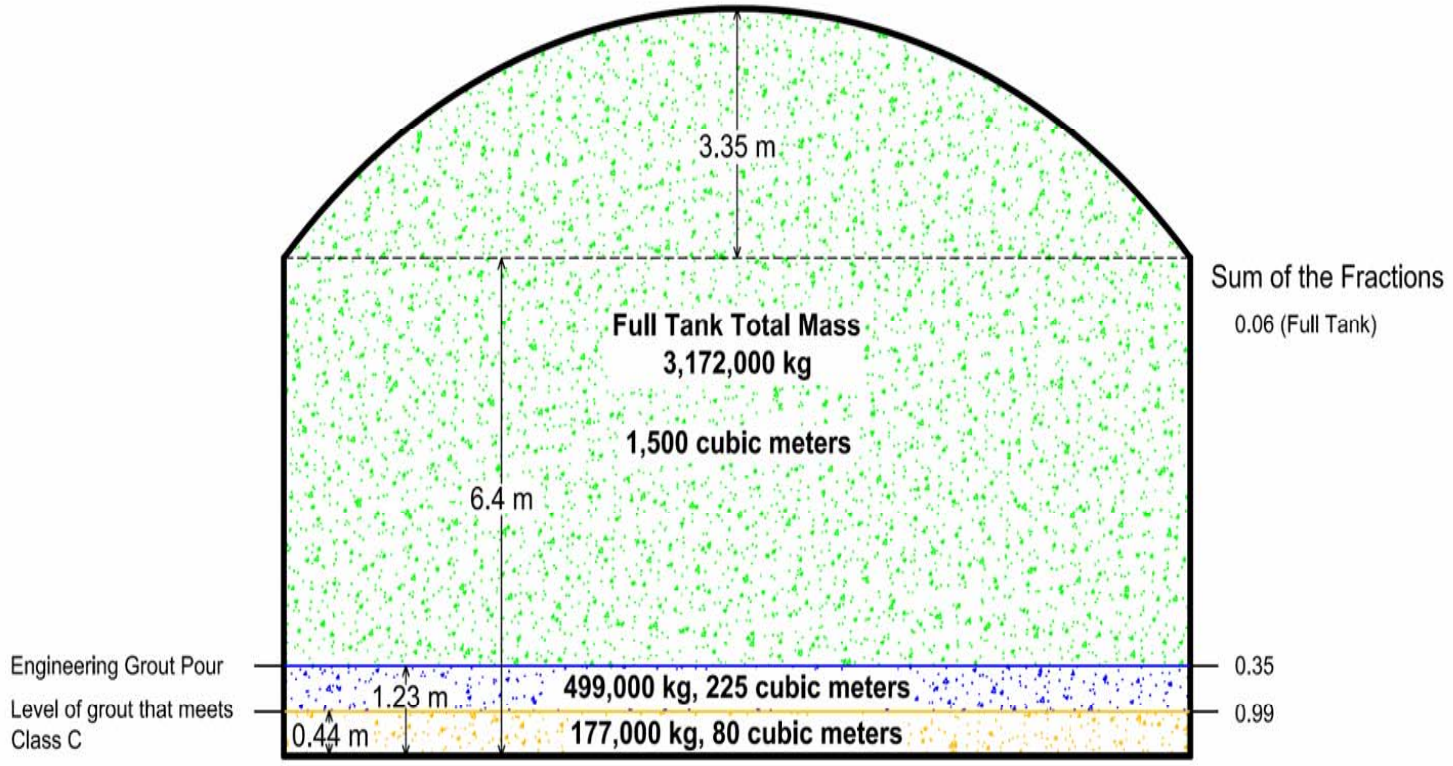
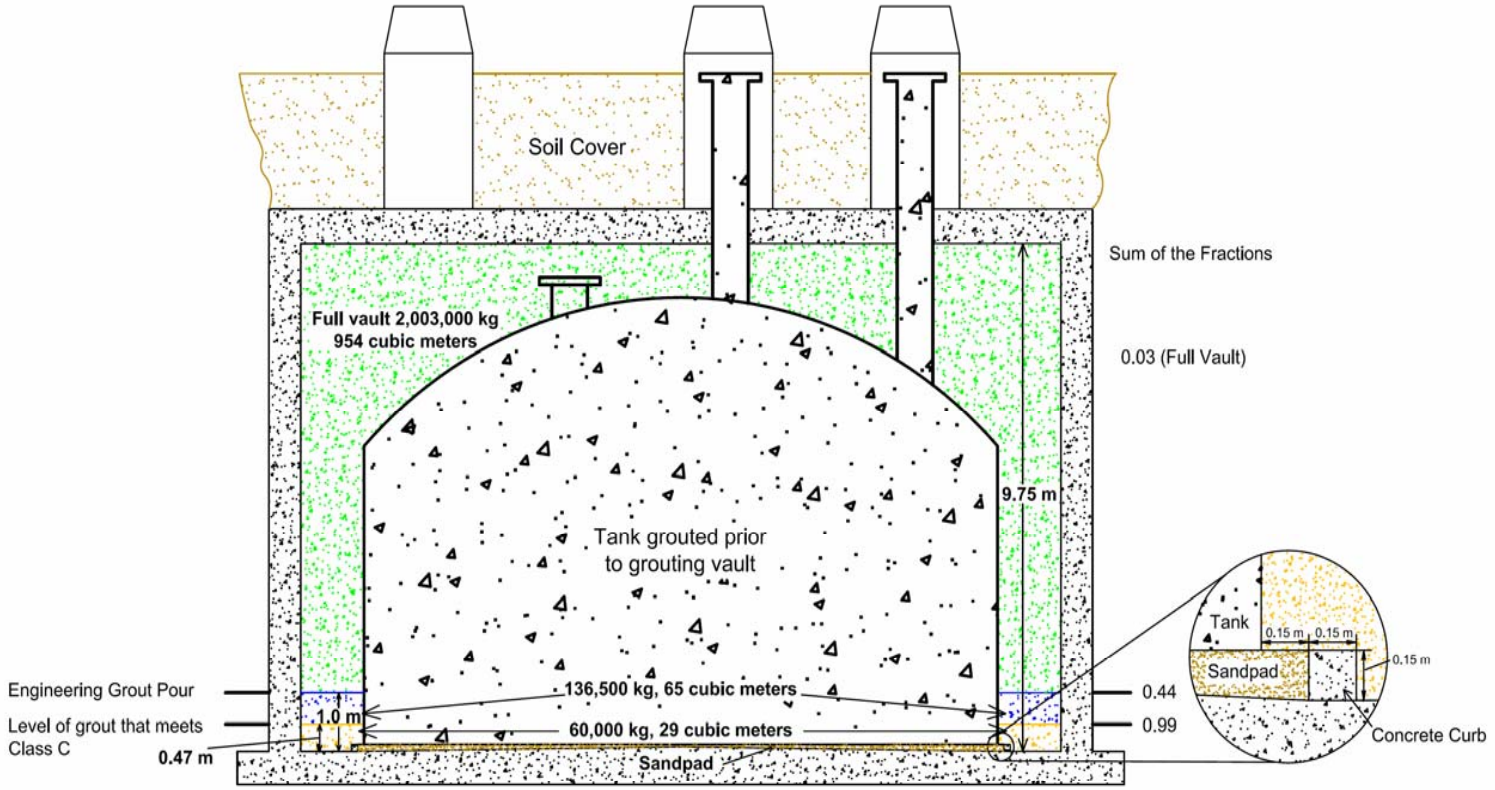
Public Meeting – NRC & DOE ***Location – NRC Headquarters, Rockville, MD*** ***One White Flint North, Room O13-B4***	
Date	***Time***
Wednesday ***February 1, 2006***	***9:00 a.m. – 2:00 p.m.***

Session Time	***Topic***	
	Registration at One White Flint North, Room O13-B4	
9:00 a.m.	*Welcome and Introductions*	*NRC*
9:10 a.m.	*Discussion of RAI 17 on implementation of the draft NRC guidance on concentration averaging to determine TFF final waste form (Slides 2—13)*	*DOE/NRC*
9:40 a.m.	*Discussion and clarification of RAI 2 related to tank inventories (Slides 14—15)*	*DOE/NRC*
10:00 a.m.	*Discussion and clarification of RAI 5 related to tank and tank system cleaning effectiveness (Slides 16—19)*	*DOE/NRC*
10:30 a.m.	*Break*	
10:45 a.m.	*Discussion and clarification of assumptions and information related to the modeling presented in the TFF Performance Assessment (RAIs 10—15) (Slides 20—30)*	*DOE/NRC*
12:00 p.m.	*Break*	
1:00 p.m.	*Discussion and clarification of sandpad inventories and modeling (RAIs 1, 3, 4) (Slides 31—41)*	*DOE/NRC*
1:45 p.m.	*Public Comments*	*Public*
2:00 p.m.	*Adjourn*	

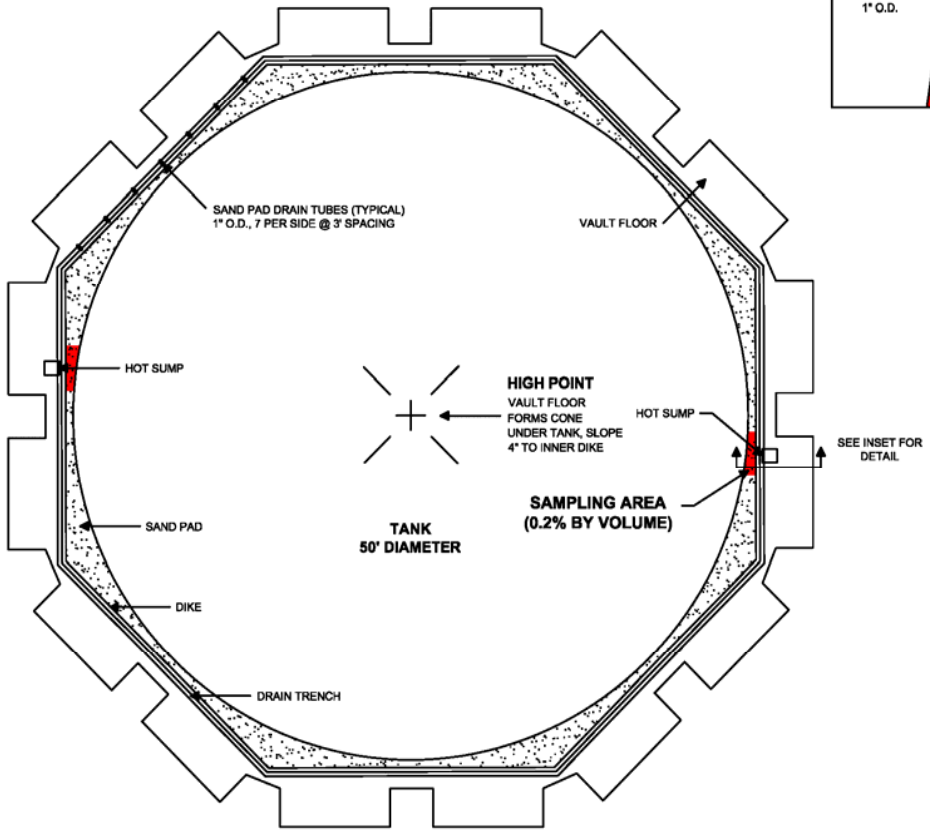
RAI 17 Classification

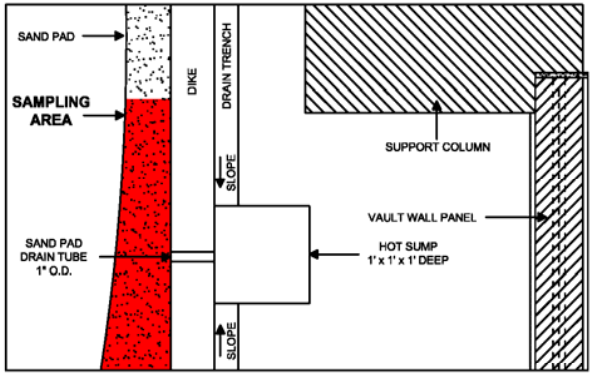


Cross-sectional view of 300,000-gal tank.

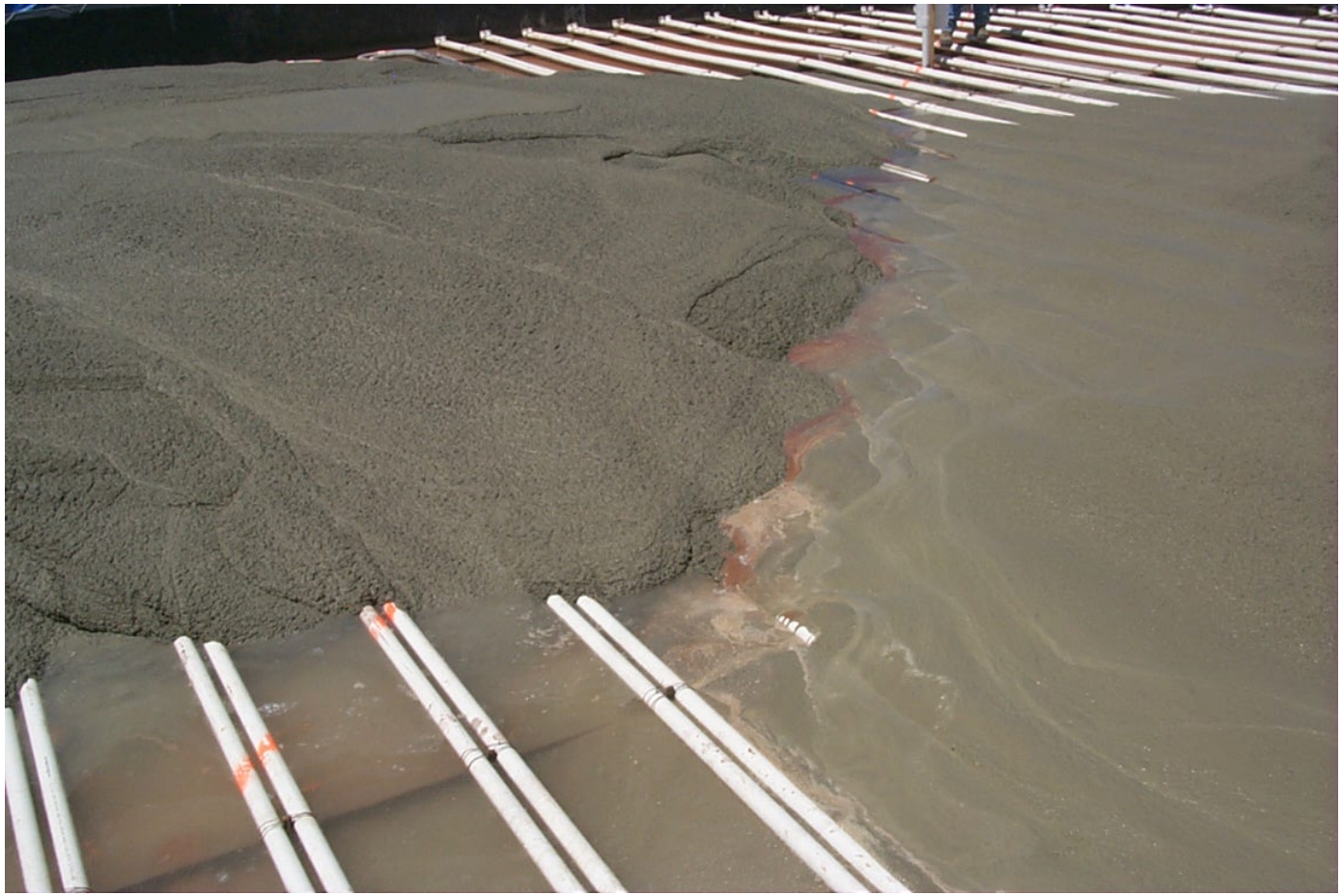


Cross-sectional view of typical tank and vault. Calculations are based on dimensions of the smallest tank vault and the highest detected amount of radioactivity (from Tank WM-182).


SAND PAD DRAIN TUBES (TYPICAL)
1" O.D., 7 PER SIDE @ 3' SPACING
VAULT FLOOR
HOT SUMP
HIGH POINT
VAULT FLOOR
FORMS CONE
UNDER TANK, SLOPE
4" TO INNER DIKE
HOT SUMP
SEE INSET FOR
DETAIL
SAMPLING AREA
(0.2% BY VOLUME)
SAND PAD
TANK
50' DIAMETER
DIKE
DRAIN TRENCH

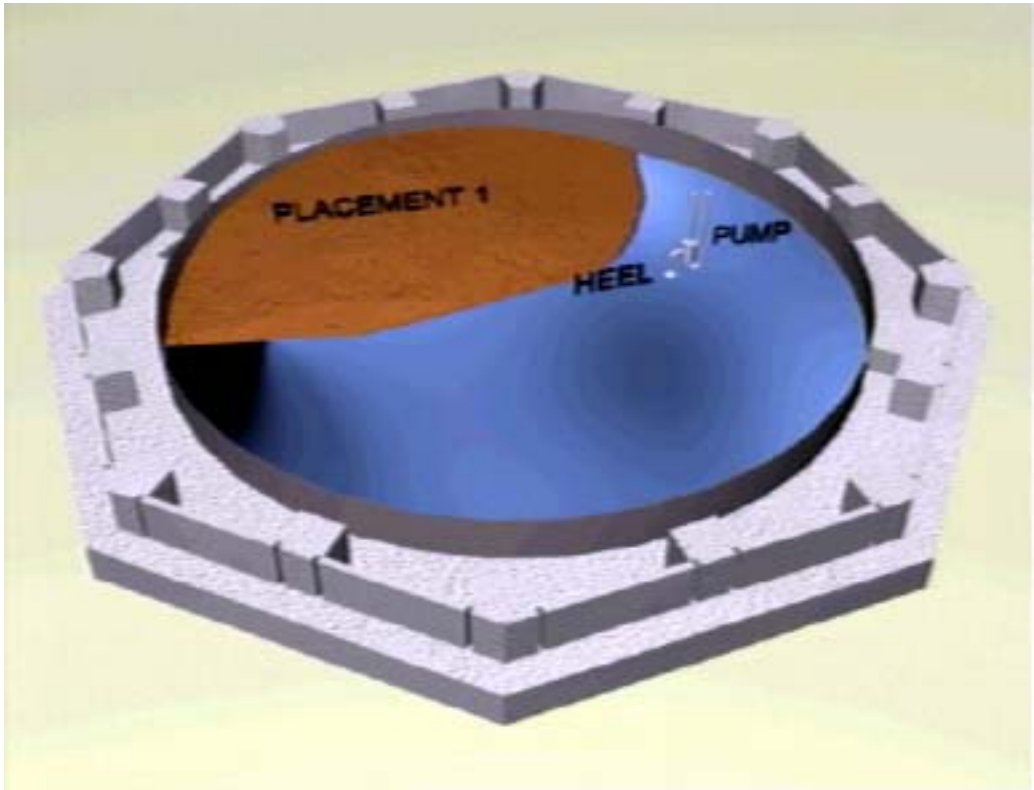

SAND PAD
SAMPLING
AREA
DIKE
DRAIN TRENCH
SLOPE
SUPPORT COLUMN
VAULT WALL PANEL
SAND PAD
DRAIN TUBE
1" O.D.
HOT SUMP
1' x 1' x 1' DEEP
SLOPE

Placements 1 and 2

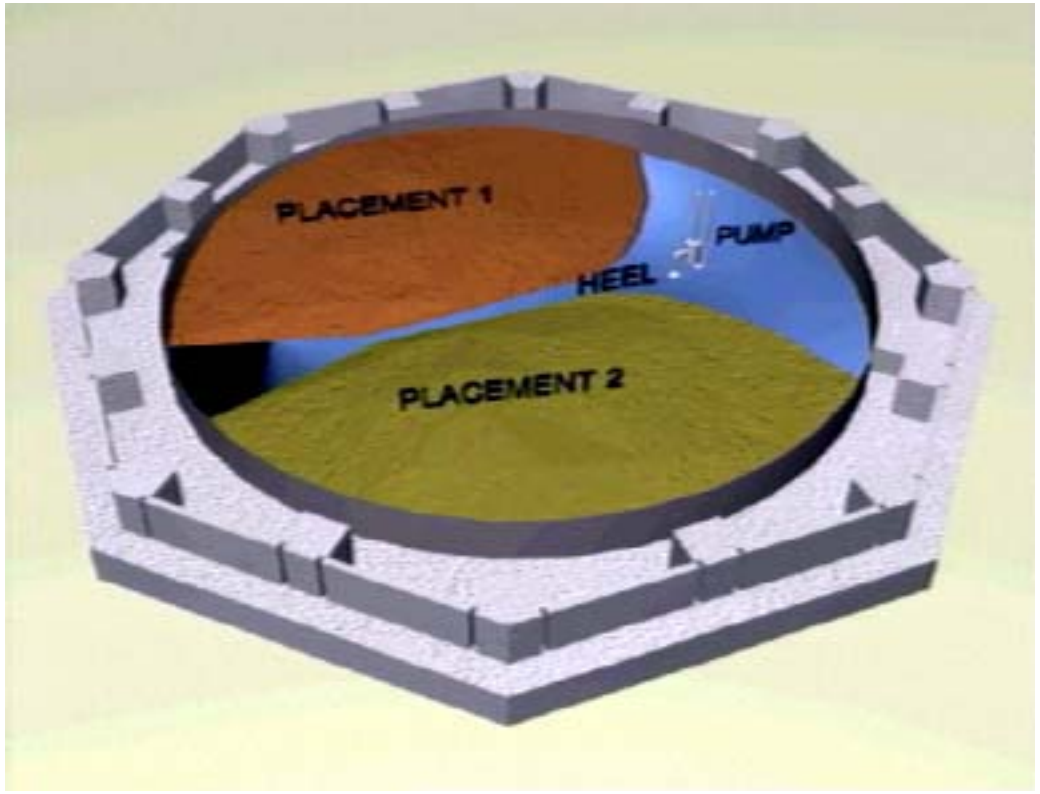


Placement 5

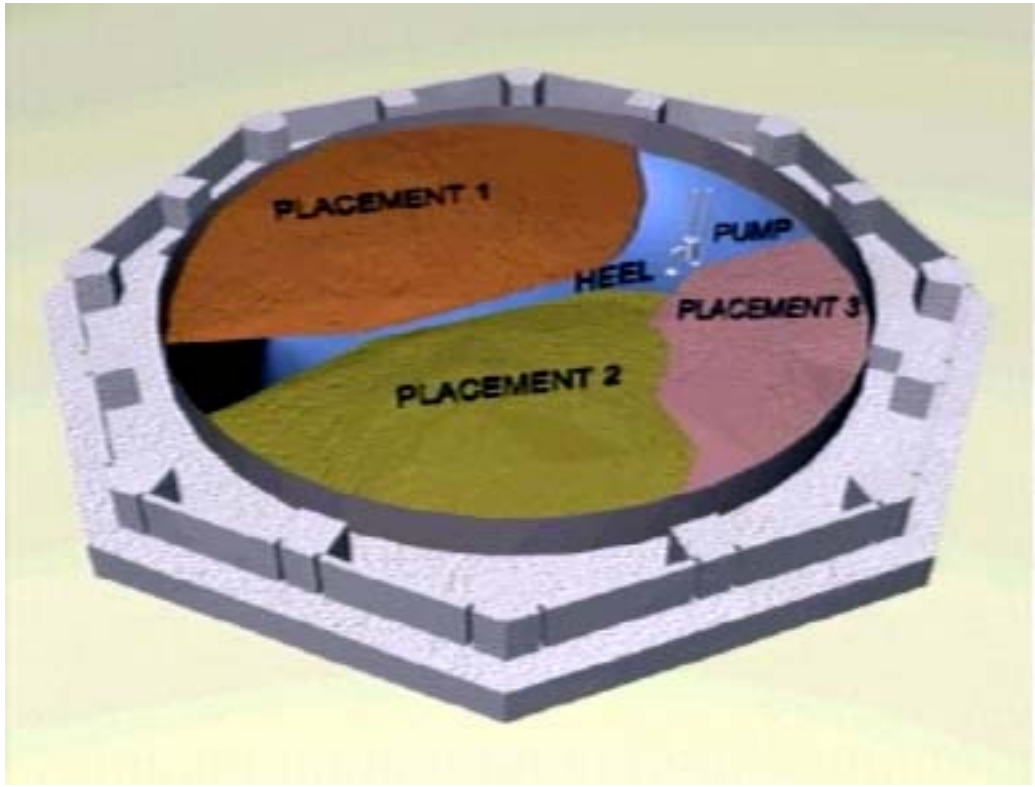
Placement 1



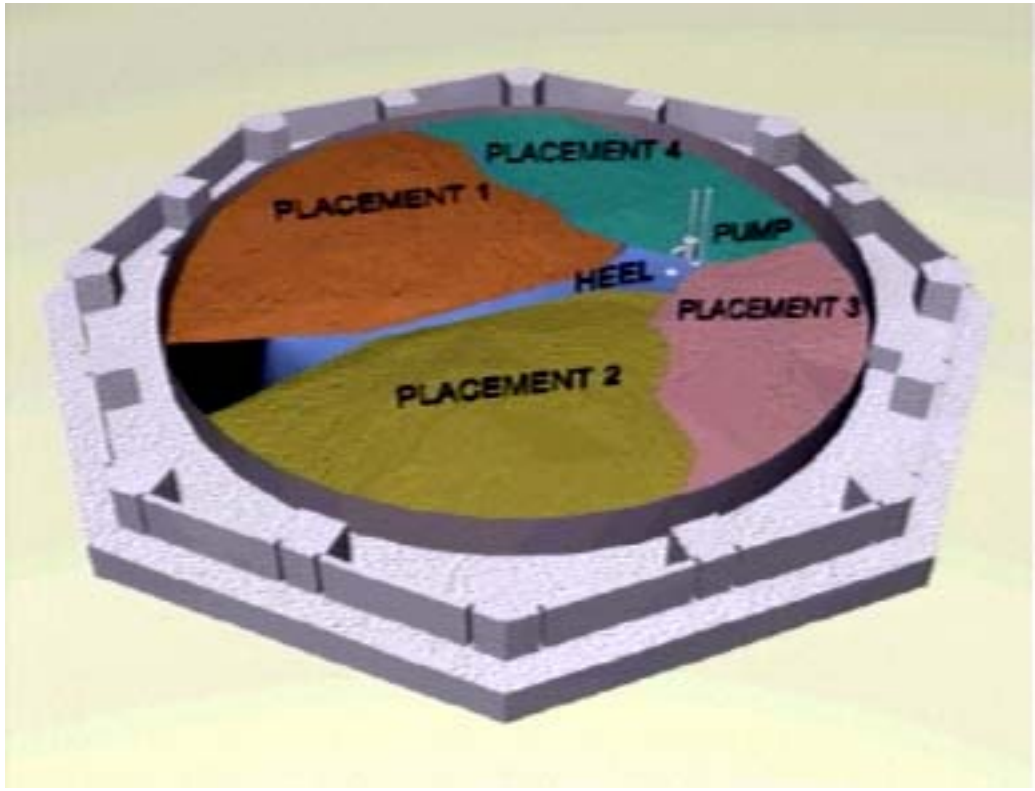
Placement 2



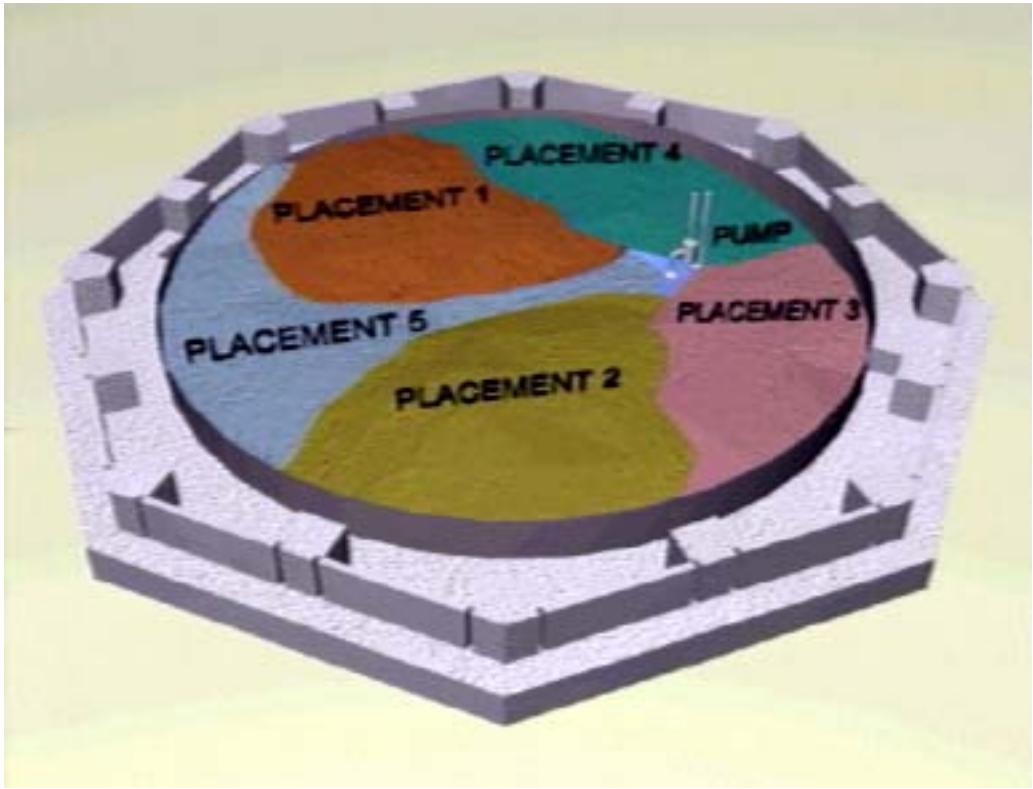
Placement 3



Placement 4



Placement 5


PLACEMENT 4
PLACEMENT 1
PUMP
PLACEMENT 3
PLACEMENT 5
PLACEMENT 2

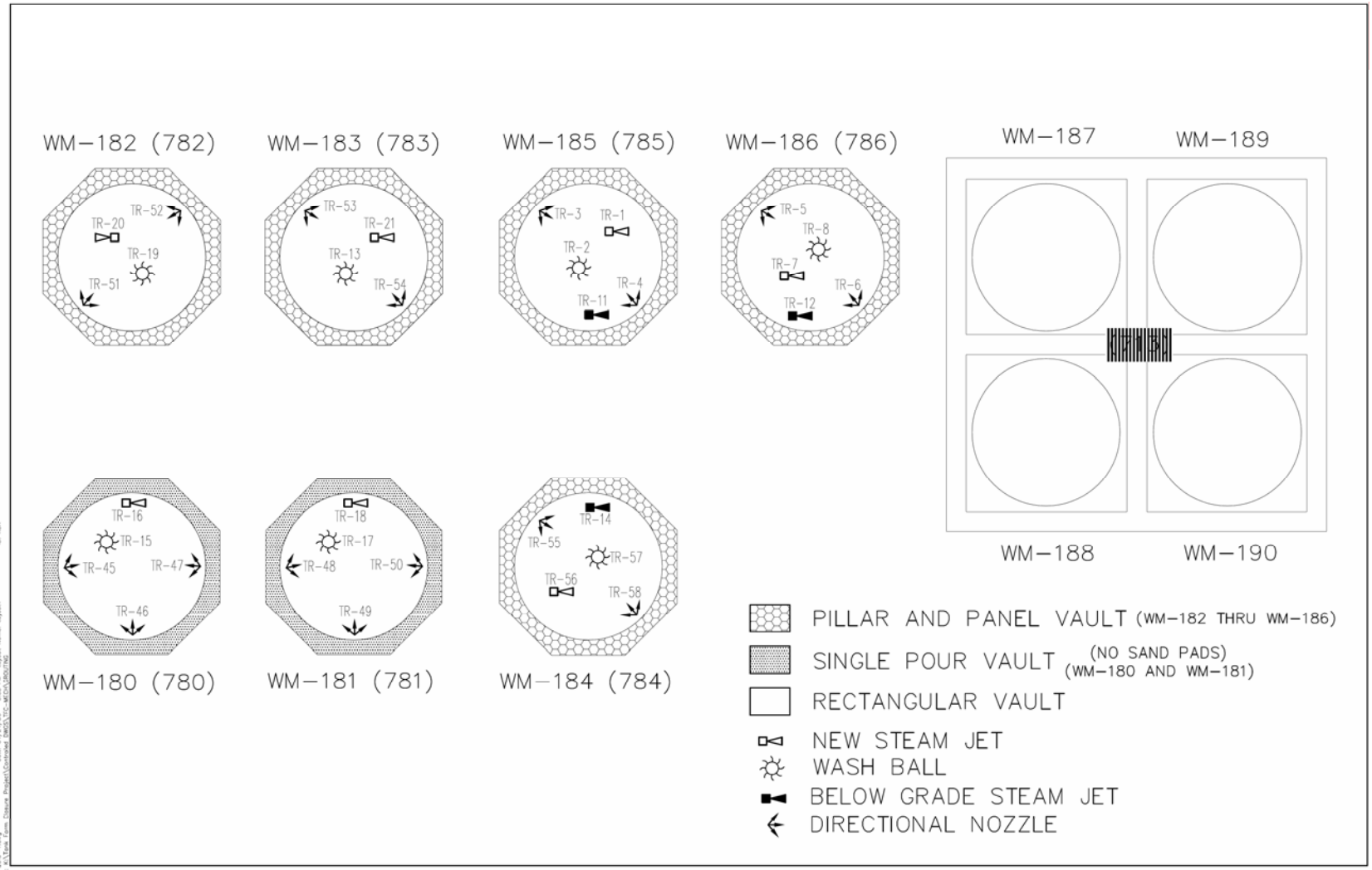
Grouting Mock-up Results

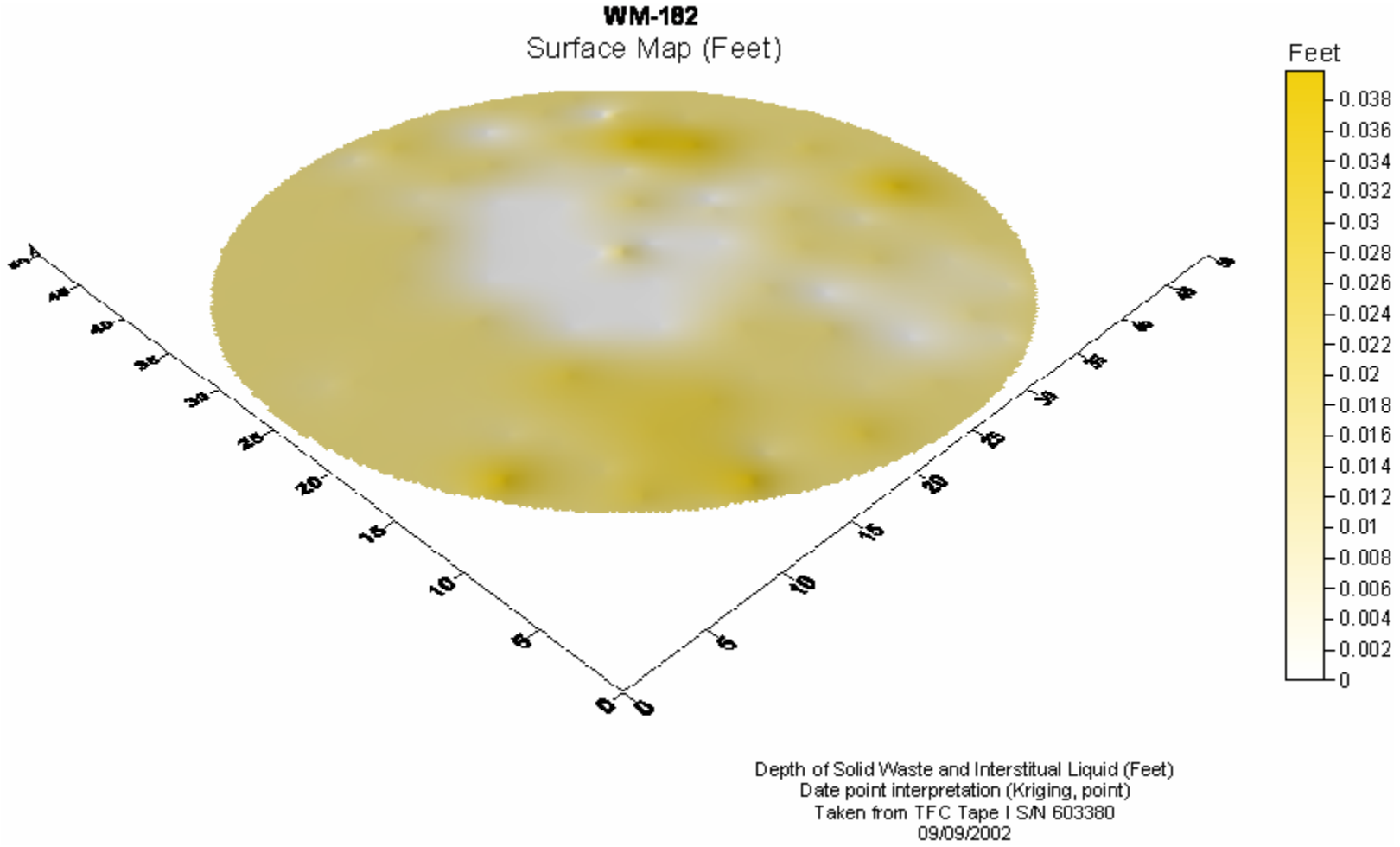
RAI 2

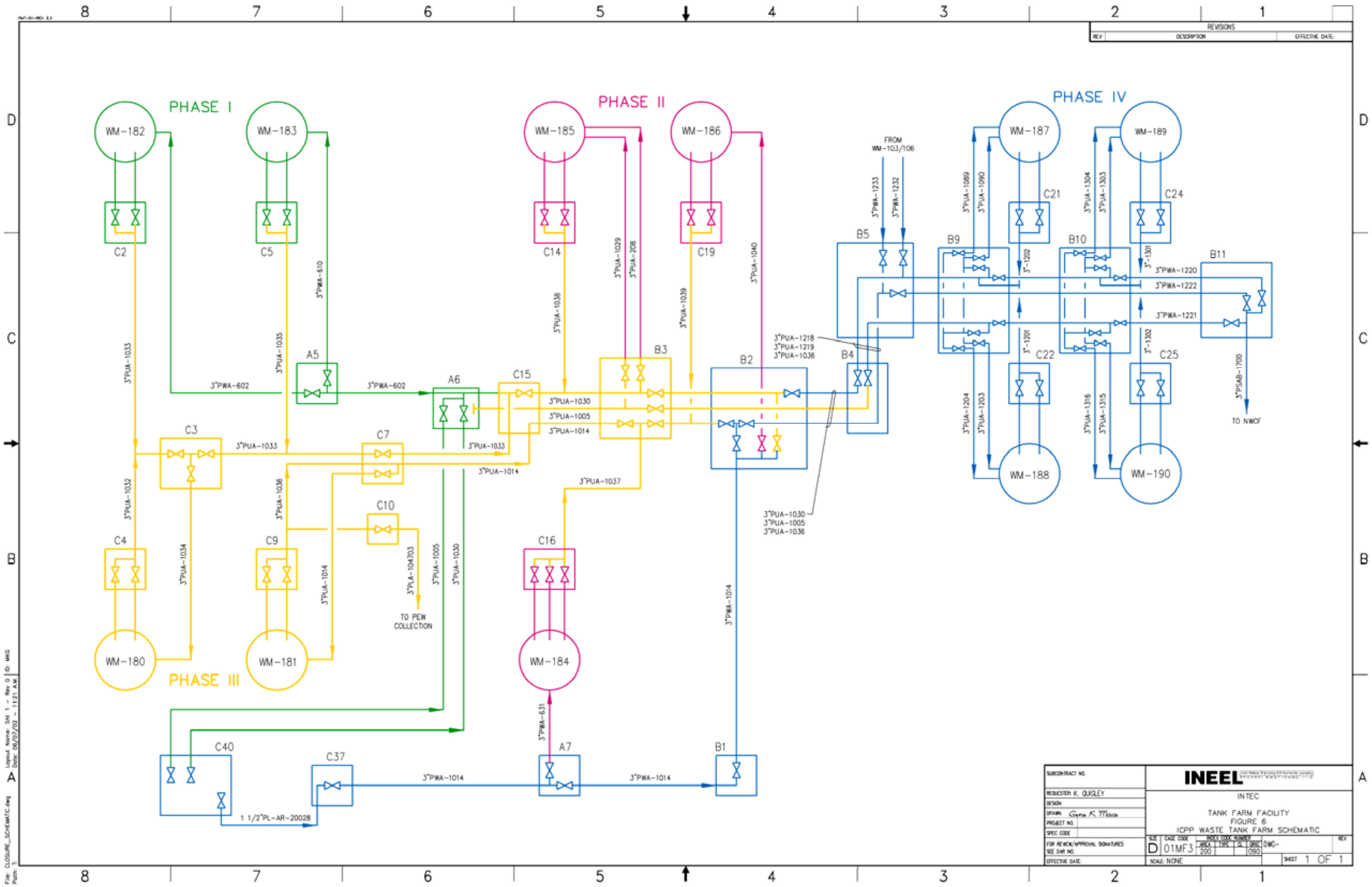
Nuclide	WM-183 post-cleaning solid data (2005) (Ci/kg)	WM-183 post-cleaning solid data (2003) (Ci/kg)	WM-182 Solid (Ci/kg)	WM-183 Solids (Ci/kg)	WM-188 Solids (Ci/kg)	WM-188 Solids (Ci/kg)	WM-188 Solids (Ci/kg)	WM-188 Solids (Ci/kg)
^{241}Am	3.35E-04	3.40E-04	8.50E-04	2.50E-04	1.50E-04	2.20E-04	2.70E-04	
^{137}Cs	7.50E-01	1.20E+00	4.20E-01	8.80E-01	1.30E+00	2.70E+00	2.20E+00	3.70E+00
^{154}Eu	9.10E-05	7.90E-05	2.30E-04	7.90E-04				
^{3}H			1.20E-05	3.40E-05				
^{94}Nb		1.70E-04			8.10E-04	6.30E-03	2.00E-03	5.60E-03
^{237}Np	1.00E-05		1.70E-06	1.80E-06	4.70E-06	2.20E-06	1.60E-06	
^{238}Pu	9.70E-03	1.00E-02	1.90E-02	4.00E-03	6.90E-03	9.10E-03	7.10E-03	
^{239}Pu	3.20E-03	2.80E-03	1.50E-03	1.30E-03	3.30E-04	5.30E-04	4.30E-04	
^{90}Sr	1.50E-02	2.40E-02	2.30E-01	1.90E-01	5.00E+00	8.00E+00	3.50E+00	
^{99}Tc	1.10E-04	6.20E-04	2.60E-03		5.30E-03	3.80E-03	4.40E-03	
^{234}U		3.00E-06		3.40E-06				
^{129}I	8.40E-07	6.20E-07						
^{14}C	2.20E-05							
^{63}Ni	2.00E-04							

No analytical data is decayed

RAI 5

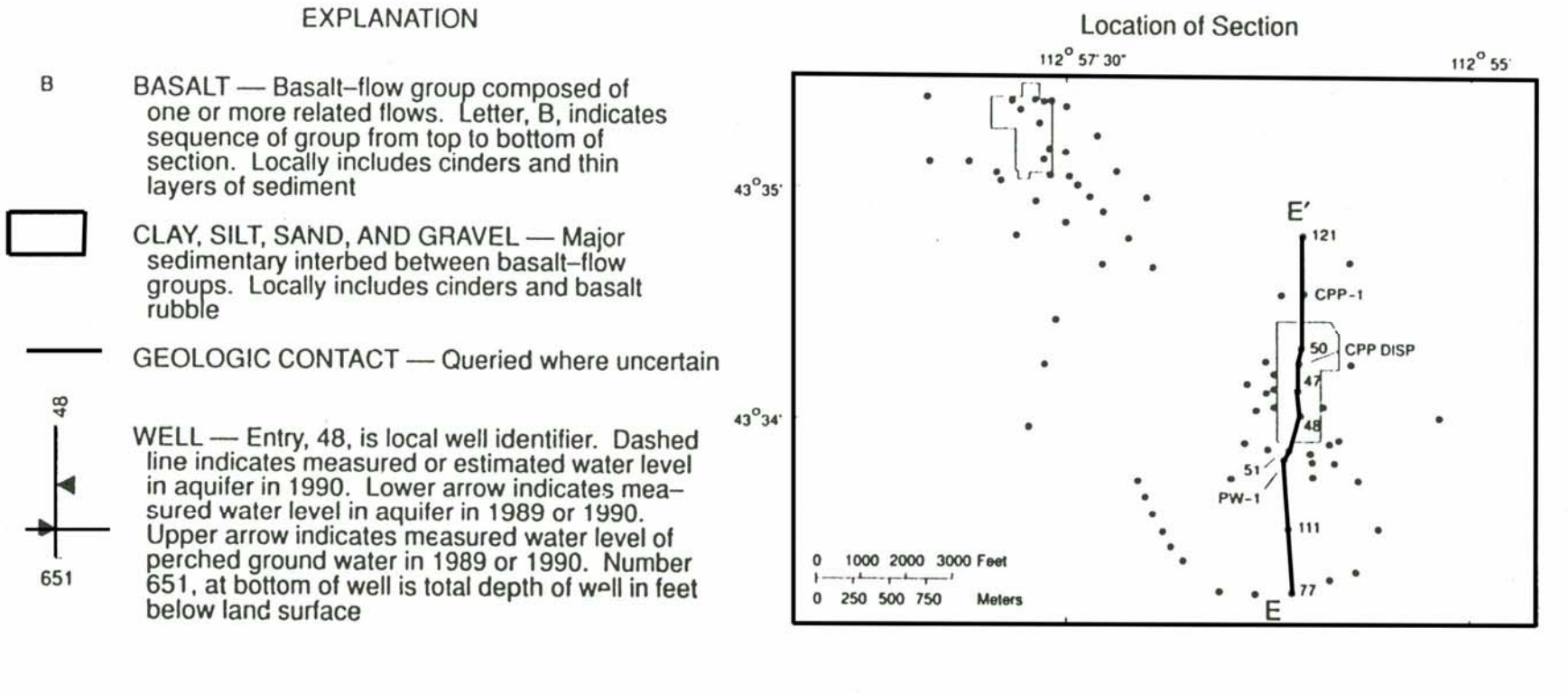

WM–182 (782)
TR–52
TR–20
TR–19
TR–51
WM–183 (783)
TR–53
TR–21
TR–13
TR–54
WM–185 (785)
TR–3
TR–1
TR–2
TR–4
TR–11
WM–186 (786)
TR–5
TR–8
TR–7
TR–6
TR–12
WM–187
WM–189
WM–188
WM–190
WM–180 (780)
TR–16
TR–15
TR–45
TR–47
TR–46
WM–181 (781)
TR–18
TR–17
TR–48
TR–50
TR–49
WM–184 (784)
TR–14
TR–55
TR–57
TR–56
TR–58
PILLAR AND PANEL VAULT (WM–182 THRU WM–186)
SINGLE POUR VAULT (NO SAND PADS) (WM–180 AND WM–181)
RECTANGULAR VAULT
NEW STEAM JET
WASH BALL
BELOW GRADE STEAM JET
DIRECTIONAL NOZZLE


WM-182
Surface Map (Feet)
Feet
0.038
0.036
0.034
0.032
0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
0
5
10
15
20
25
30
35
40
45
50
Depth of Solid Waste and Interstitual Liquid (Feet)
Date point interpretation (Kriging, point)
Taken from TFC Tape I S/N 603380
09/09/2002

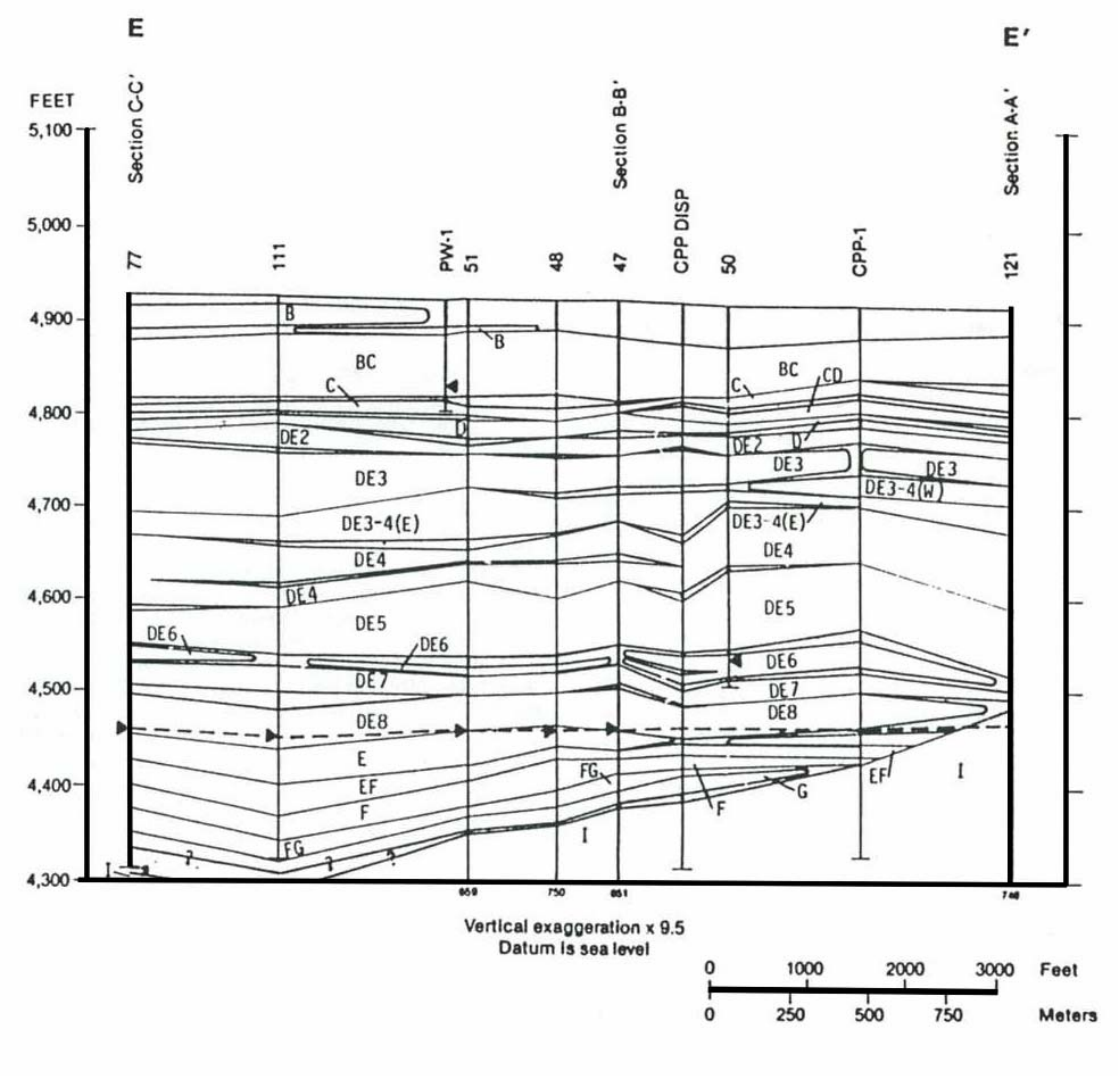


PHASE I
PHASE II
PHASE III
PHASE IV
WM-180
WM-181
WM-182
WM-183
WM-184
WM-185
WM-186
WM-187
WM-188
WM-189
WM-190
TO PEW COLLECTION
TO NWCF
FROM WM-103/106
INEEL
INTEC
TANK FARM FACILITY
FIGURE 6
ICPP WASTE TANK FARM SCHEMATIC

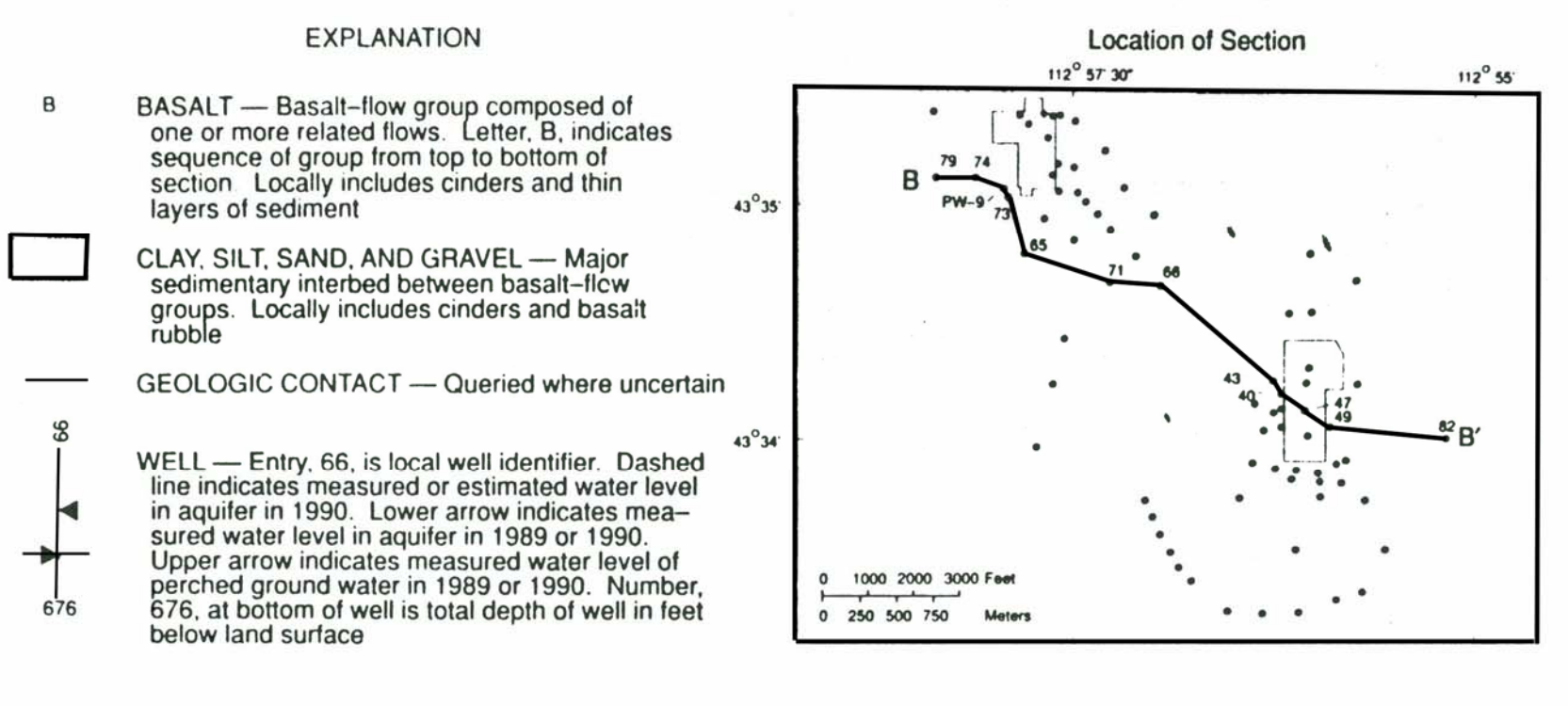
RAIs 10—15



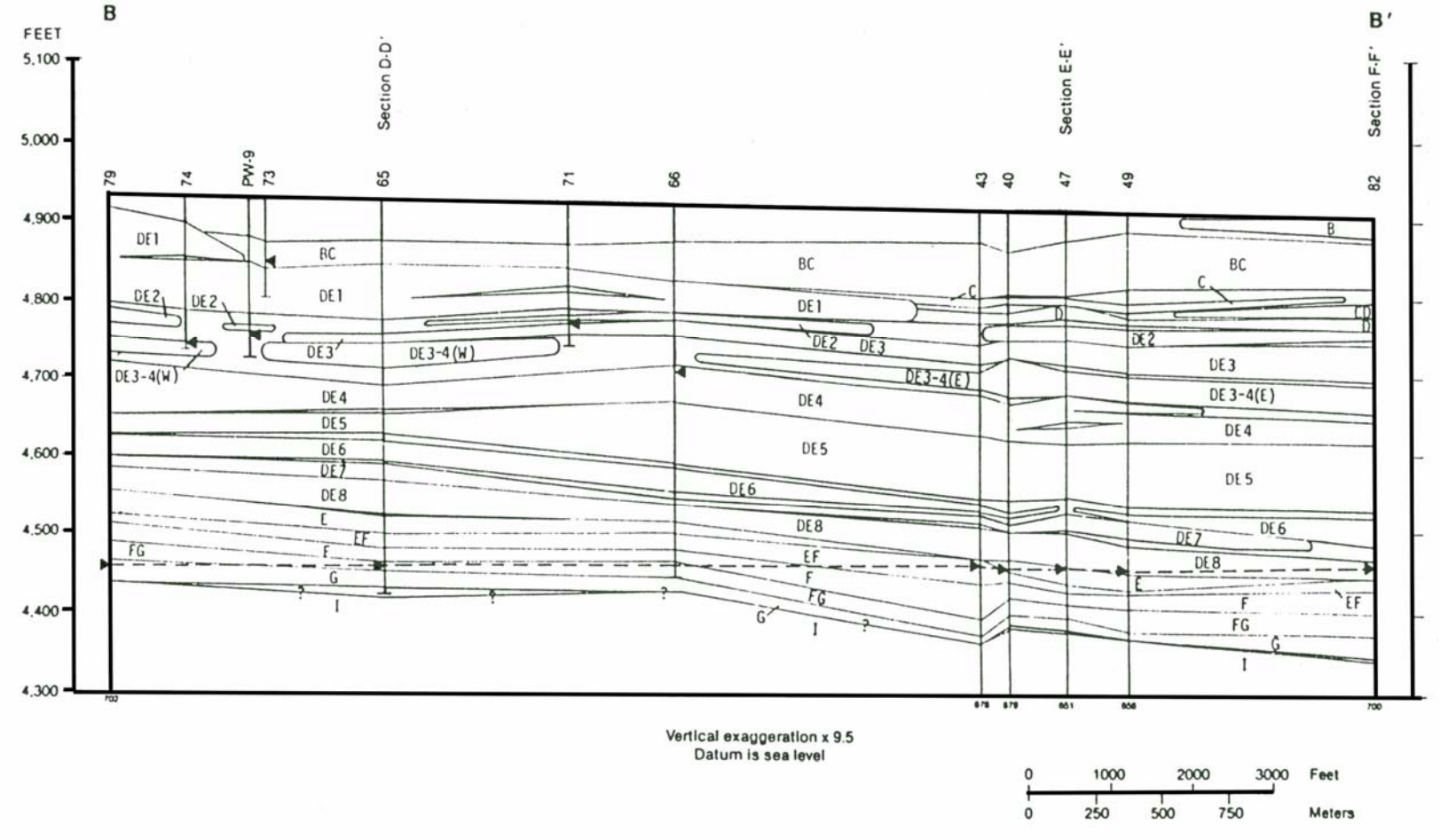
North-south cross-section location (Anderson 1991)



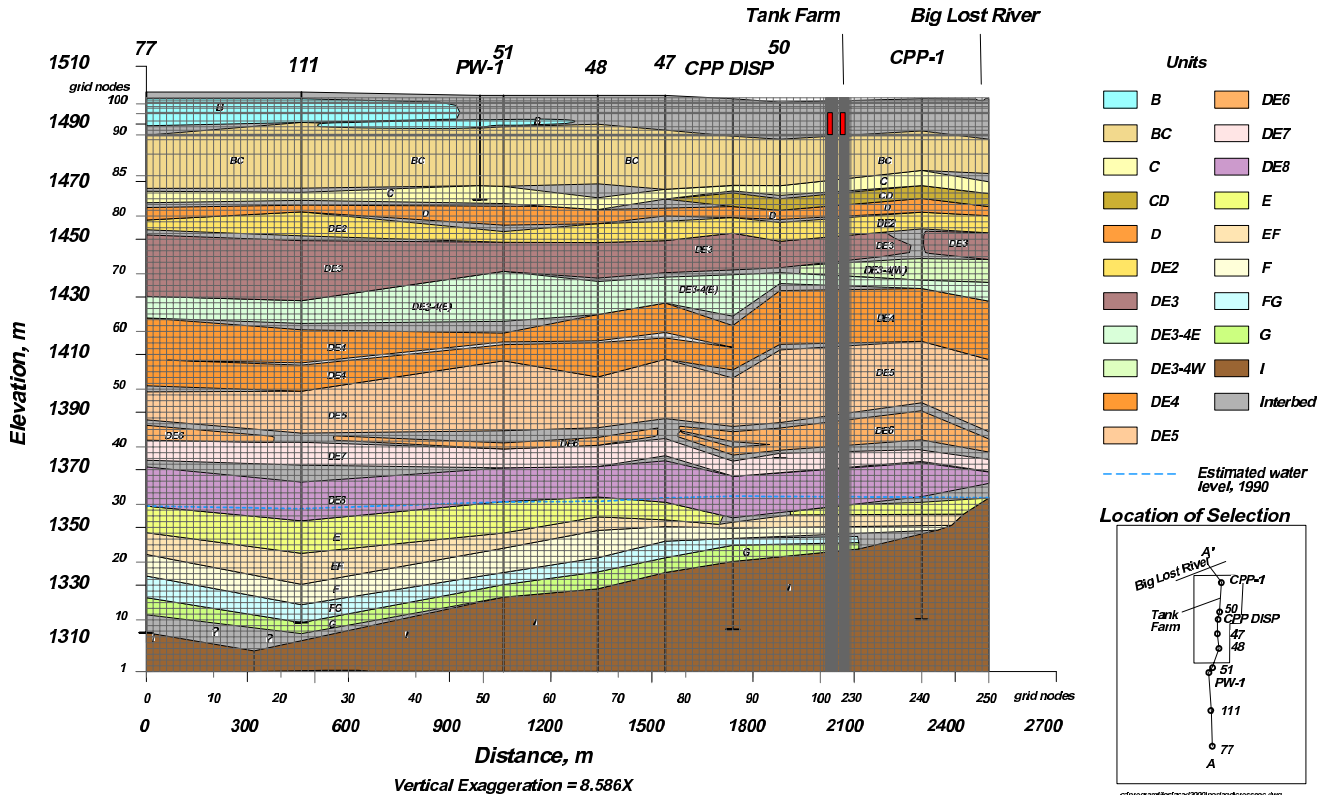
North-south cross-section (Anderson 1991)



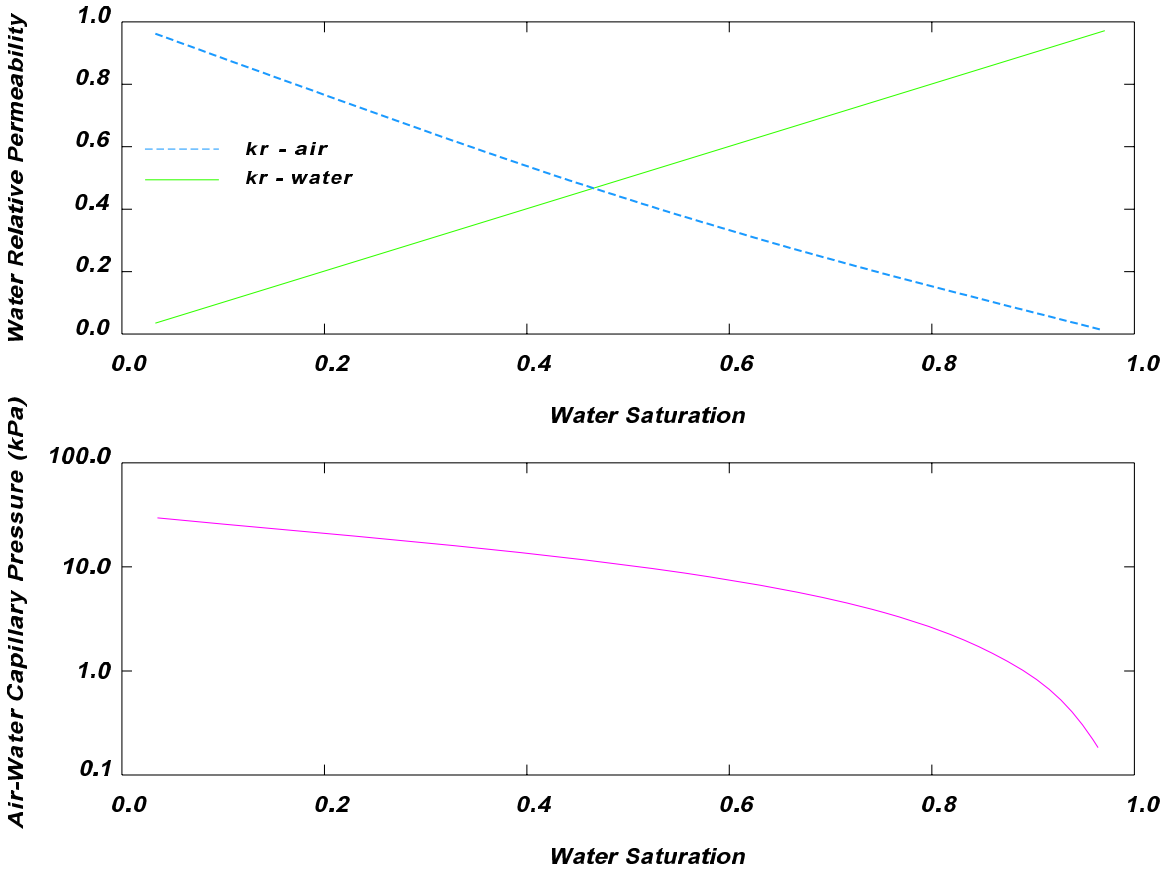
East-west cross-section location (Anderson 1991)



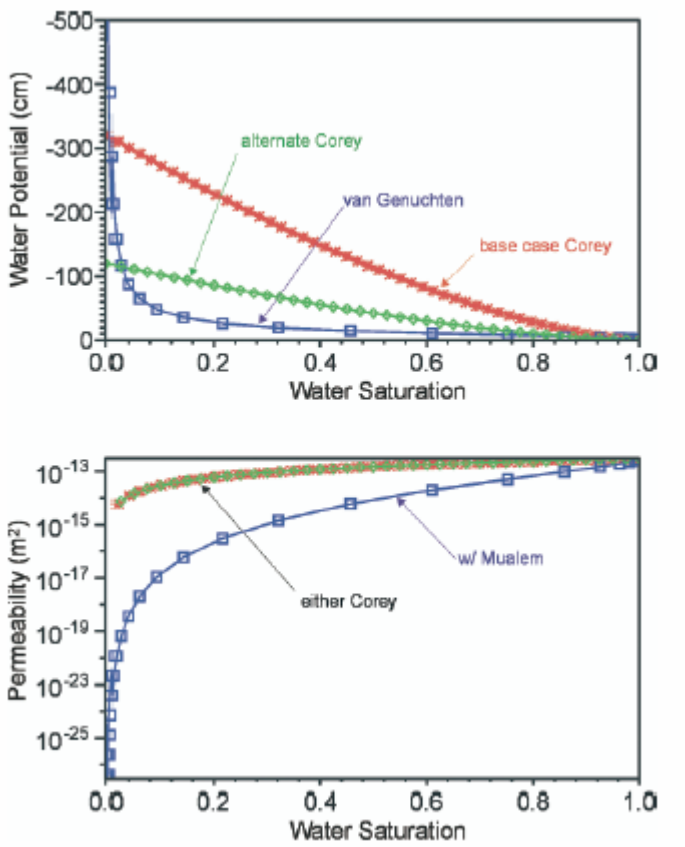
East-west cross-section (Anderson 1991)



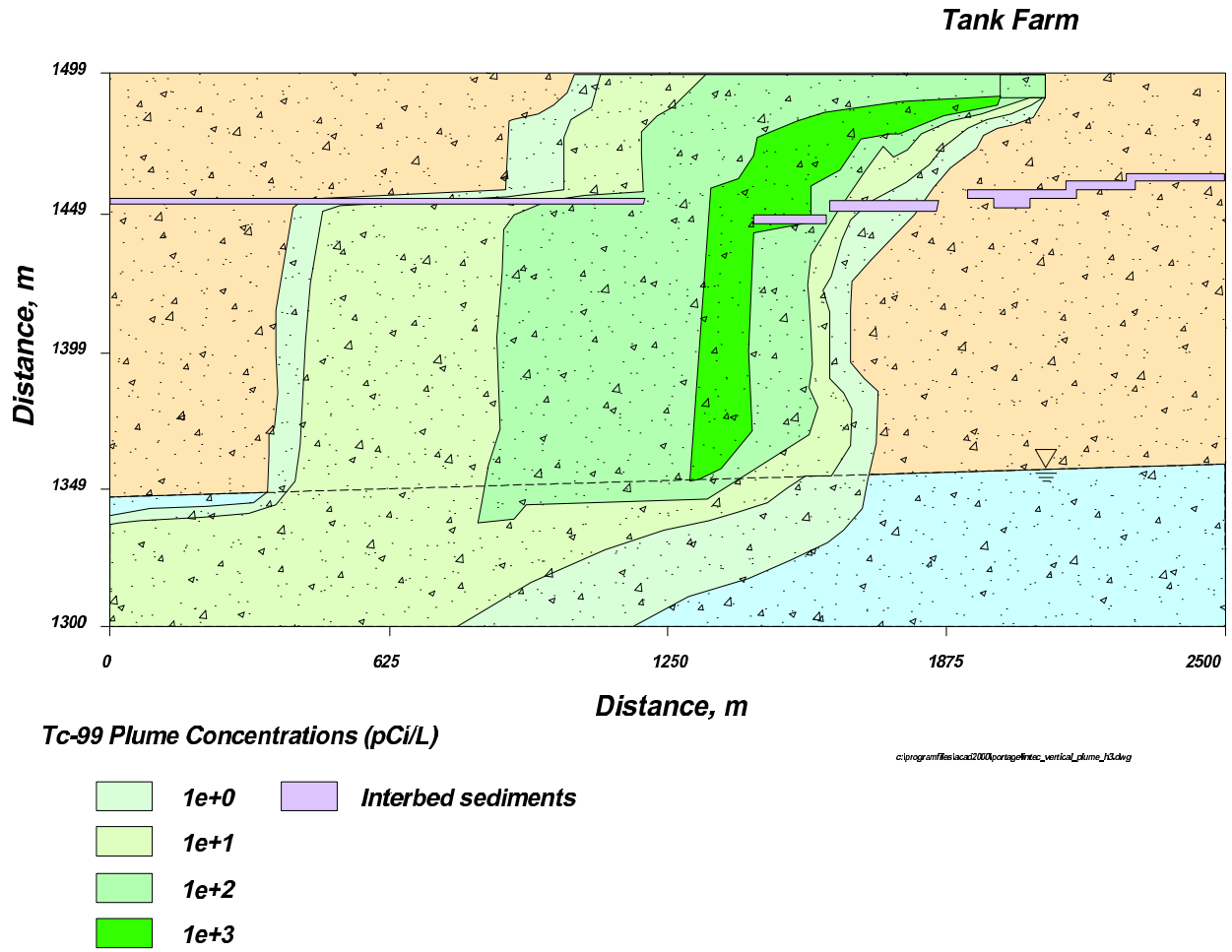
Model grid superimposed on geologic cross-section for groundwater model (from the TFF Performance Assessment)



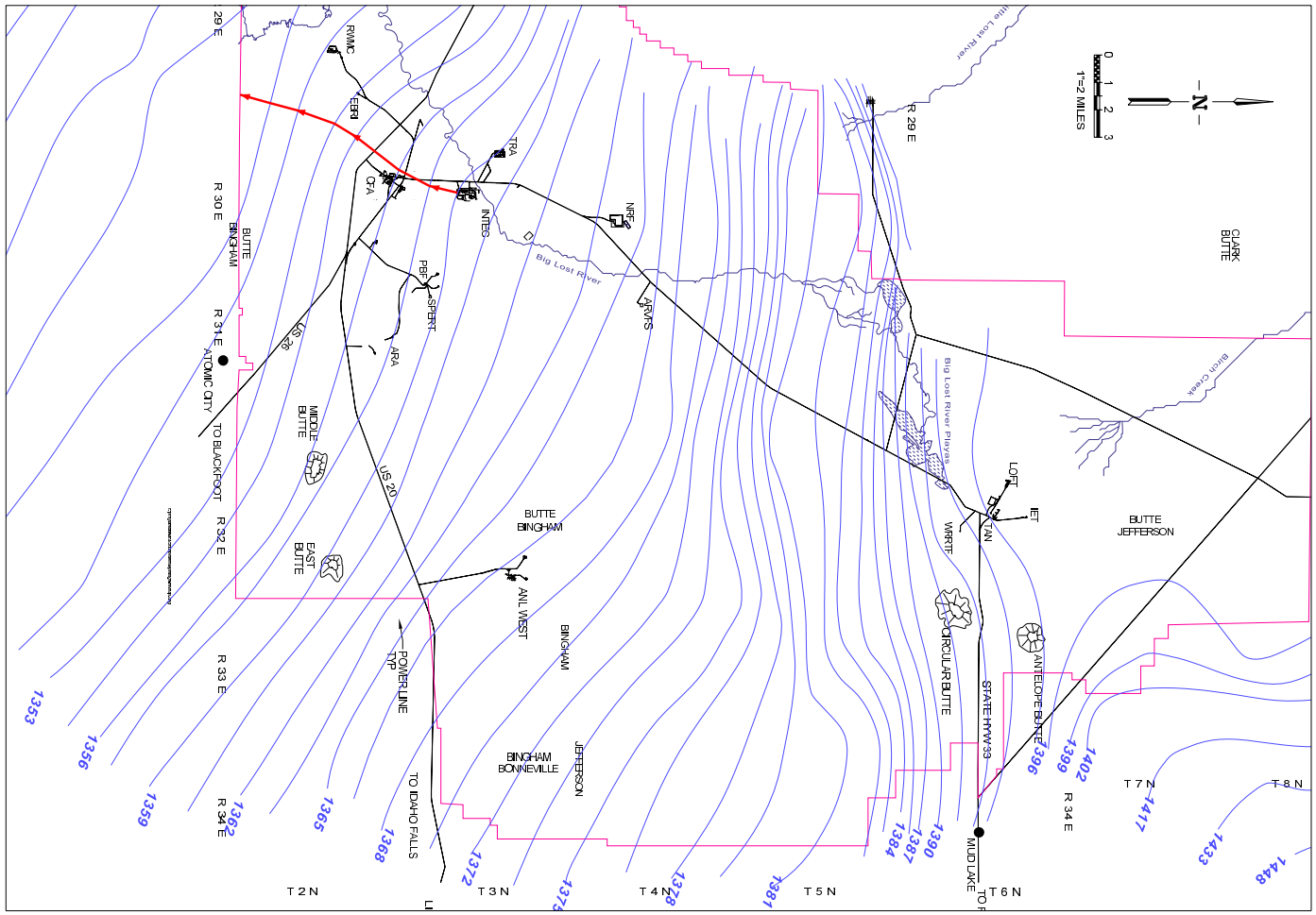
Basalt moisture curves (from the TFF Performance Assessment)



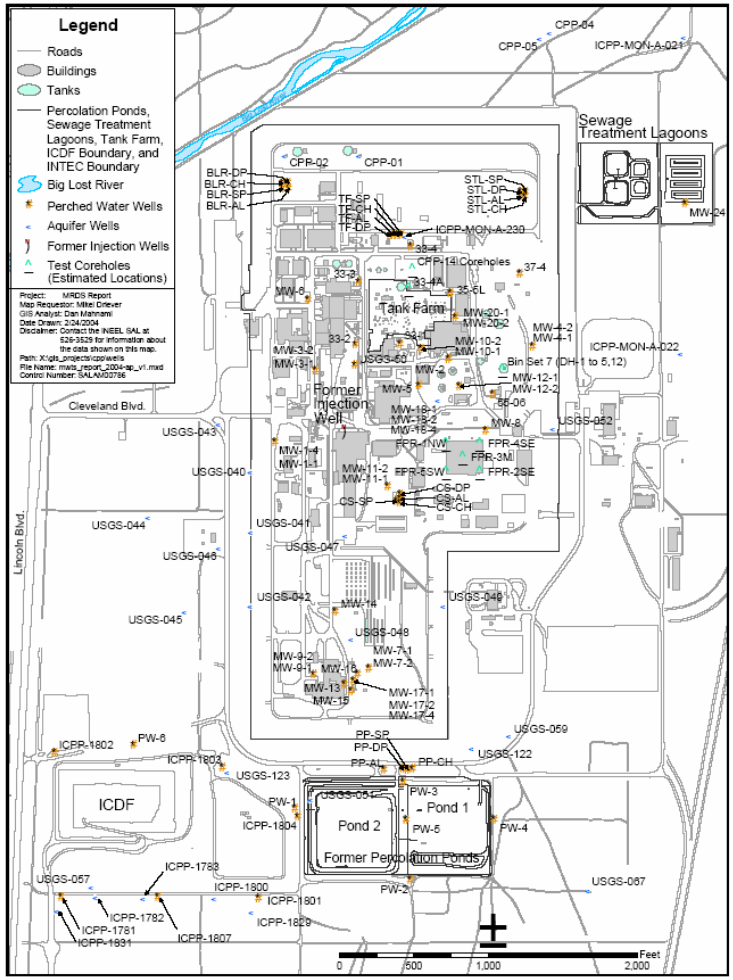
Constitutive relationship curves for three representations of fracture basalt



Groundwater modeling domain showing ^{99}Tc concentrations and location of maximum concentrations (all concentrations based on a unit source inventory) (from the TFF Performance Assessment)

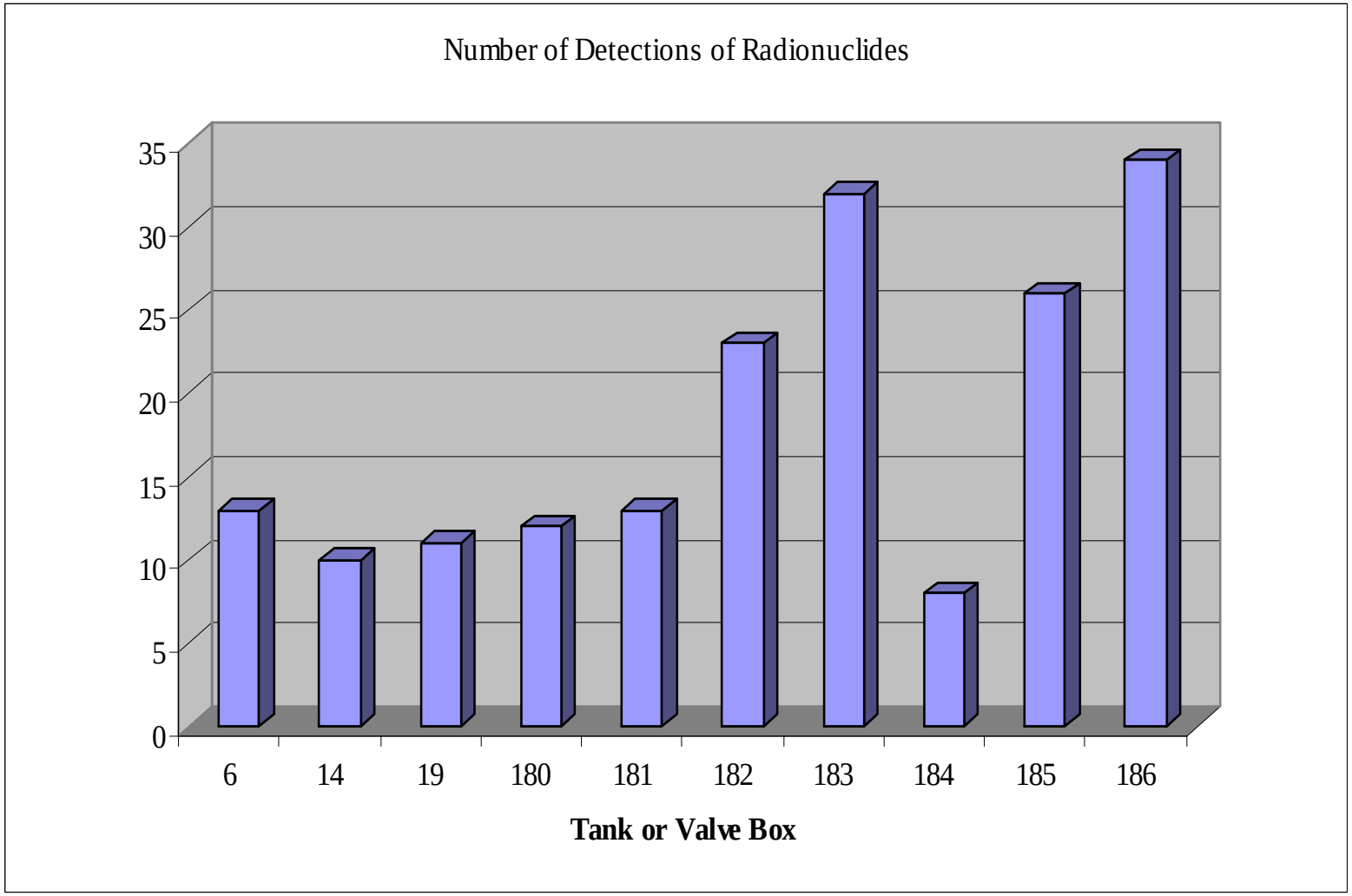


Potentiometric map of the regional basalt aquifer (from the TFF Composite Analysis)

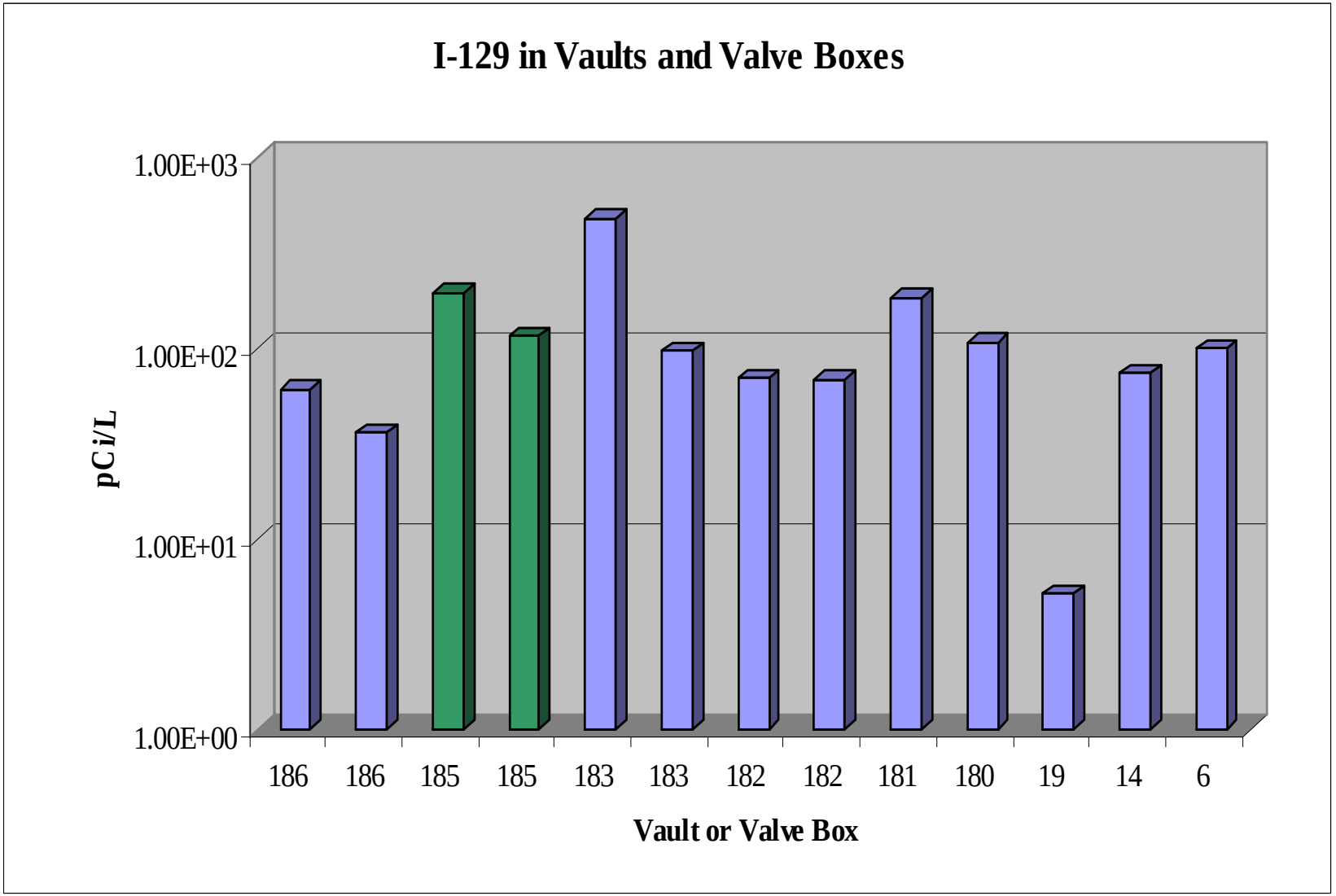


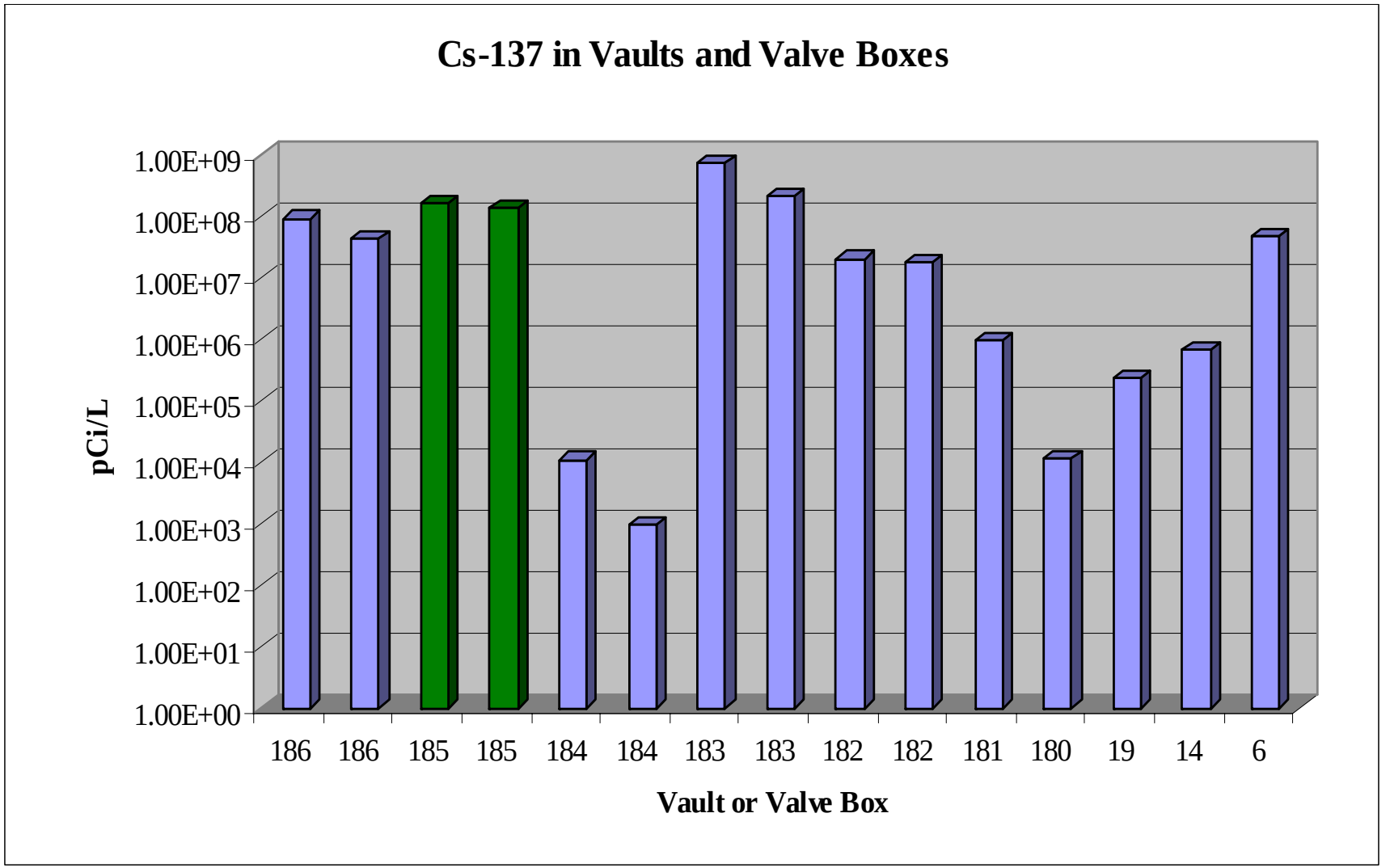
INTEC well locations (ICP/EXT-04-00244)

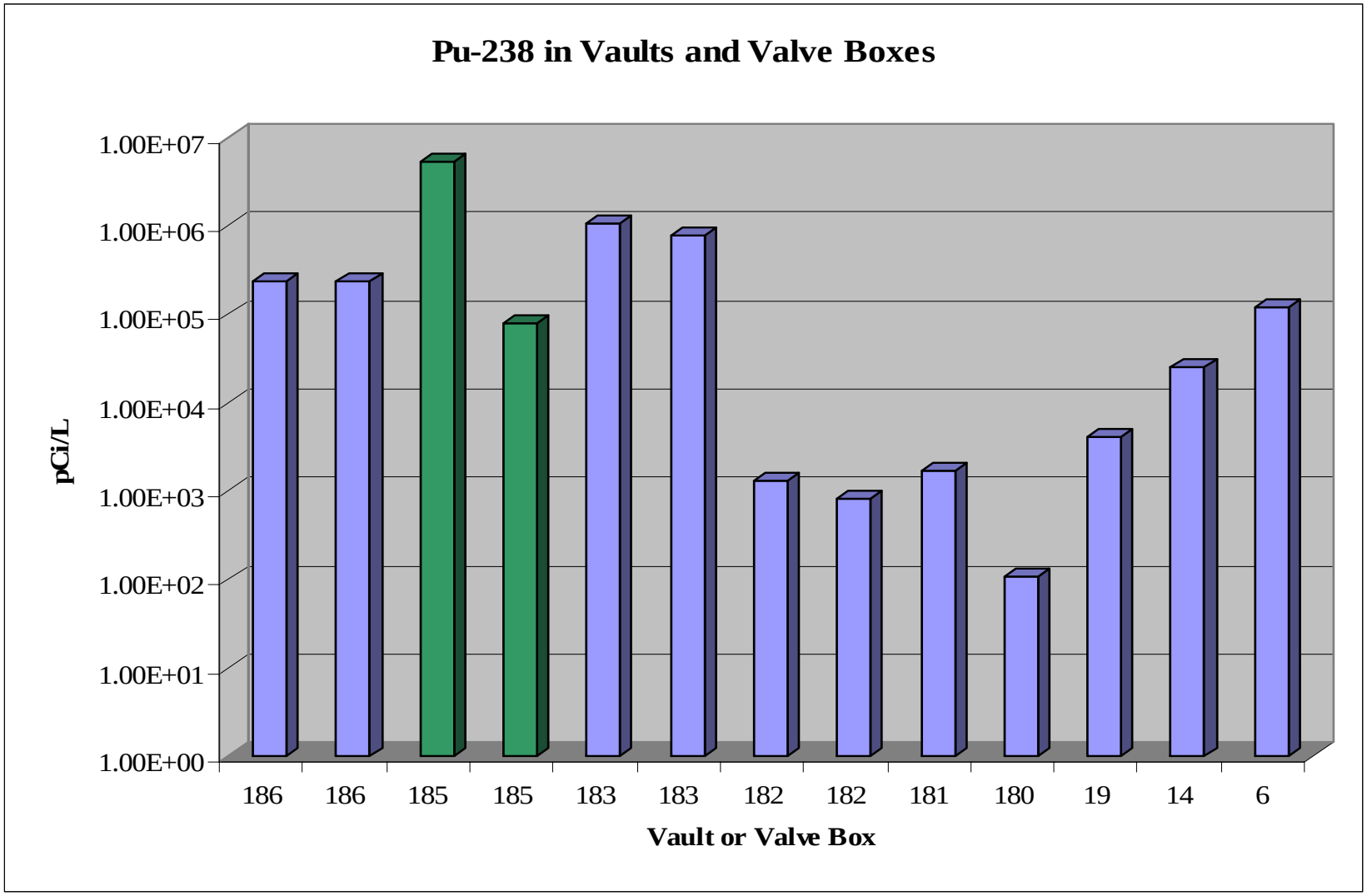
RAIs 1, 3, 4 Sandpads

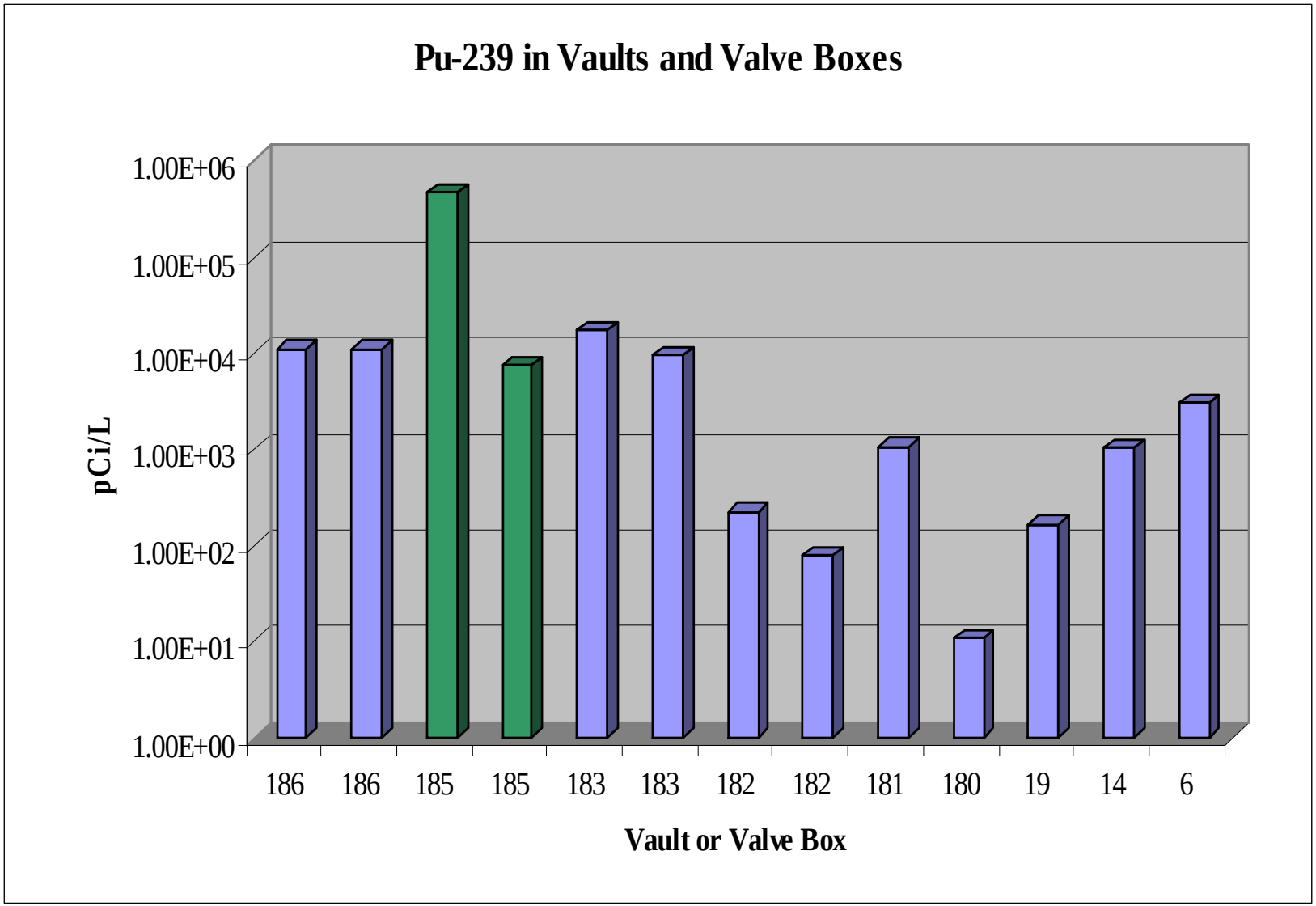

Number of Detections of Radionuclides
35
30
25
20
15
10
5
0
6
14
19
180
181
182
183
184
185
186
Tank or Valve Box

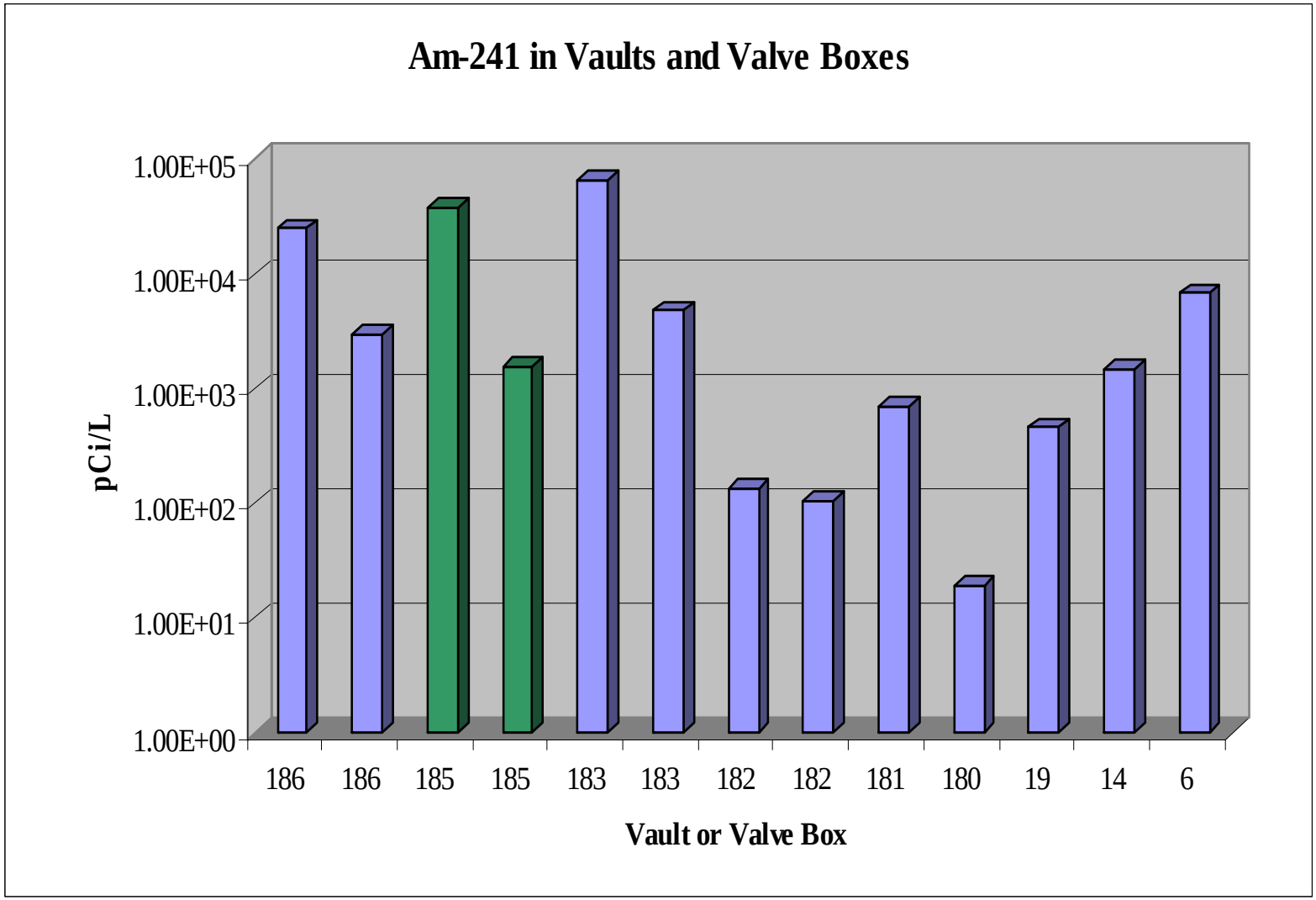
Nuclide	Highest Concentration (pCi/L)	Concentration in WM-185 (pCi/L)	Source	Number of Detections	Rank of Tank Vault WM-185
^{63}Ni	1.26E+05	2.83E+04	WM-183	12(15)	4
^{241}Pu	7.66E+05	8.77E+04	WM-186	11(15)	2
^{241}Am	6.62E+04	3.84E+04	WM-183	13 (15)	2
^{239}Pu	4.74E+05	4.74E+05	WM-185	13 (15)	1
^{238}Pu	5.32E+06	5.32E+06	WM-185	13 (15)	1
^{237}Np	1.01E+03	ND	WM-182	7 (15)	ND
^{234}U	2.30E+03	ND	WM-183	7 (15)	ND
^{154}Eu	4.53E+05	1.00E+05	WM-186	8 (15)	3
^{137}Cs	7.32E+08	1.64E+08	WM-183	15 (15)	3
^{129}I	4.88E+02	1.96E+02	WM-183	13 (15)	2
^{99}Tc	4.18E+04	1.08E+04	WM-183	11 (15)	3
^{90}Sr	9.62E+07	3.40E+07	WM-184	14 (15)	4
^{3}H	5.66E+04	1.88E+04	WM-183	12 (15)	2

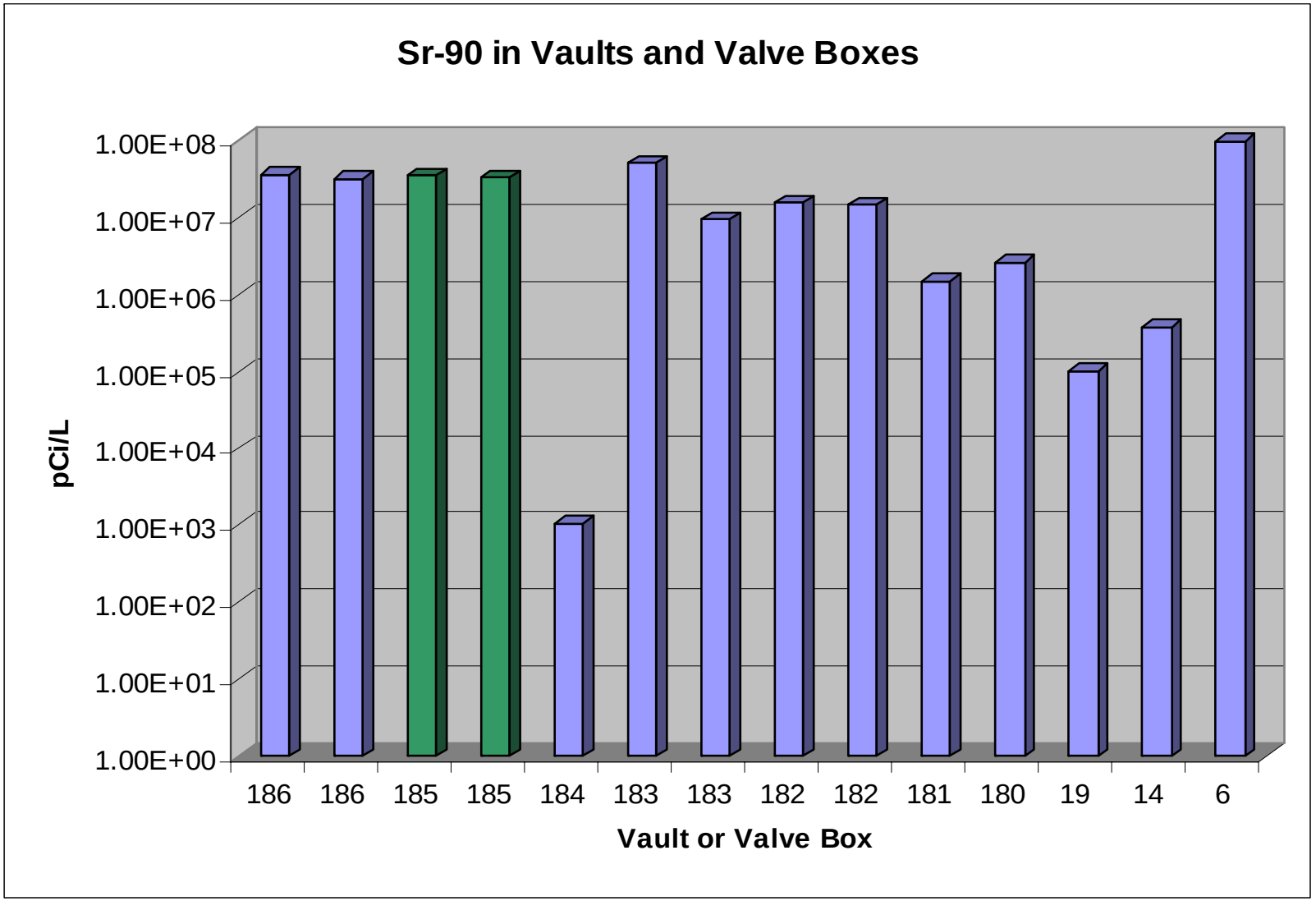

I-129 in Vaults and Valve Boxes
1.00E+03
1.00E+02
1.00E+01
1.00E+00
pCi/L
186
186
185
185
183
183
182
182
181
180
19
14
6
Vault or Valve Box

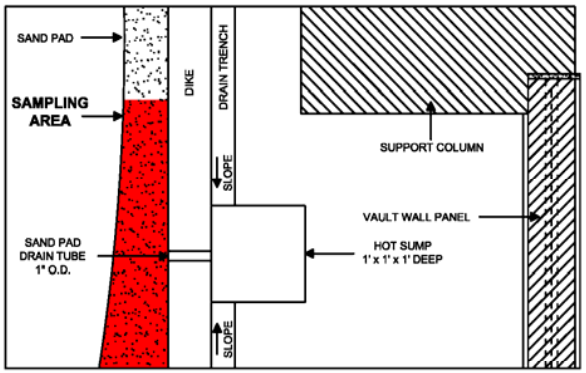

Cs-137 in Vaults and Valve Boxes
pCi/L
1.00E+09
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
186
186
185
185
184
184
183
183
182
182
181
180
19
14
6
Vault or Valve Box

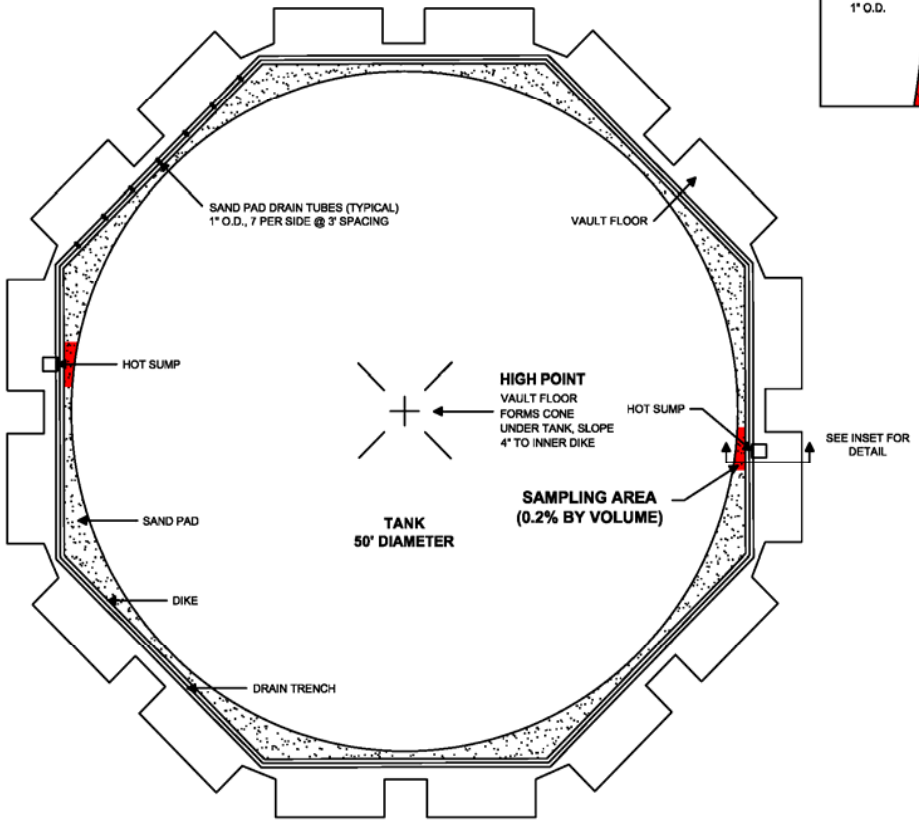

Pu-238 in Vaults and Valve Boxes
pCi/L
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
186
186
185
185
183
183
182
182
181
180
19
14
6
Vault or Valve Box


Pu-239 in Vaults and Valve Boxes
pCi/L
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
186
186
185
185
183
183
182
182
181
180
19
14
6
Vault or Valve Box


Am-241 in Vaults and Valve Boxes
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
pCi/L
186
186
185
185
183
183
182
182
181
180
19
14
6
Vault or Valve Box


Sr-90 in Vaults and Valve Boxes
pCi/L
1.00E+08
1.00E+07
1.00E+06
1.00E+05
1.00E+04
1.00E+03
1.00E+02
1.00E+01
1.00E+00
186
186
185
185
184
183
183
182
182
181
180
19
14
6
Vault or Valve Box


SAND PAD
SAMPLING AREA
DIKE
DRAIN TRENCH
SLOPE
SUPPORT COLUMN
VAULT WALL PANEL
SAND PAD DRAIN TUBE 1" O.D.
HOT SUMP 1' x 1' x 1' DEEP
SLOPE


SAND PAD DRAIN TUBES (TYPICAL) 1" O.D., 7 PER SIDE @ 3' SPACING
VAULT FLOOR
HOT SUMP
HIGH POINT
VAULT FLOOR FORMS CONE UNDER TANK, SLOPE 4" TO INNER DIKE
HOT SUMP
SEE INSET FOR DETAIL
SAMPLING AREA (0.2% BY VOLUME)
SAND PAD
TANK 50' DIAMETER
DIKE
DRAIN TRENCH