

APPENDIX E

DECOMMISSIONING

COST ESTIMATE

Table E-1 Facility Description Summary

(References to DP section)

1. NMED license number and type.

Thermo Eberline LLC SO067-36, Storage Only.

2. Types and quantities of materials authorized under the licenses listed above.

See Decommissioning Plan Section 2.1.1, Table 2-1

3. Description of how licensed materials are used.

See Decommissioning Plan, Sections 2.1.2 & 2.2.2

4. Description of facility, including buildings, rooms, grounds, and description of where particular types of materials are used.

See Decommissioning Plan, Section 2.2.2

5. Quantities of materials or waste accumulated before shipping or disposal.

See Decommissioning Plan, Appendix B

6. Volume of contaminated material, including that in the subsurface, containing residual radioactivity that will require remediation.

Conservatively estimated at up to 125 cubic yards of soil and remediation waste

(Section 11.2 indicates 22 cyds of impacted soil in-place require removal by overexcavation resulting in up to 125 cyds of LLRW to be generated to achieve background.)

TABLE E-2: Number and Estimated Volume of Contaminated Facility Components

Component	Number (Count/Units)	Locations	Estimated Volume (ft ³)
None. Contaminated facility components are limited to concrete foundation adjacent to the former High Range Calibration Well.	1	PAOC-6 Former Calibration Room	2ft around a 7ft x 12 ft cut in the floor slab- assume 1 ft thickness = 76 ft ³ (say up to 3 cyds)
Total			81

TABLE E-3: Type Estimated Volume of Radioactive Materials & Waste

Waste Type	Volume (Cubic Feet)*
Stored Material (none)	0
Soil, Concrete & IDW*	3,375
Total	3,375

*Estimated volume is packaged volume for disposal

**TABLE E-4: Packaging, Shipping, and Disposal of Radioactive Wastes
(Including Labor Costs)**

Equipment/Supplies	Quantity (Cubic Feet)	Unit Cost (\$/Cubic Foot)	Total Estimated Cost
Contaminated Soil & Concrete	3,375	\$ 110.00	\$ 371,250
TOTAL			\$ 371,250

Table E-5: Decommissioning Planning and Execution (Workdays)

Activity	Labor Category Senior Health Physicist	Labor Category Health Physicist	Labor Category Project Manager/ QA Manager	Labor Category Senior Field Technician	Labor Category Radiation Tech	Labor Category Graphics & Data Management
Planning & Execution of Site Decommissioning						
DP-1 Buildings						
Building Demo, Oversight & Waste Management	20	20	20	20	60	10
Subtotal DP-1	20	20	20	20	60	10
DP-2 Foundations & Land						
Foundation & Surface Removal, Waste Management & Post-Removal Surveys	10	20	20	30	30	5
Removal of surface contamination, if encountered	20	20	20	20	20	5
Subtotal DP-2	30	40	40	50	50	10
DP-3 Subsurface Soil & FSS						
Preparation for Subsurface Soil Removal	14	14	30	14	14	14
Subsurface Soil Removal, Oversight, Post-Removal Testing & Waste Management	20	35	35	40	40	10
Post-Removal Groundwater Testing	2	2	2	2	2	2
Final Status Survey (FSS)	30	60	60	60	120	20
Subtotal DP-3	66	111	127	116	176	46
Decommissioning Reporting & License Termination						
Prepare & File Draft Decommissioning Report (DR)	10	20	20	10	5	10
Modify Draft DR to Final & File for License Termination	5	5	5			5
Subtotal Reporting	15	25	25	10	5	15
TOTALS	131	196	212	196	291	81

TABLE E-6: Total Labor Costs by Major Decommissioning Task

Activity	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category	Labor Category
Task	Senior Health Physicist	Health Physicist	Project Manager/QA Manager	Senior Field Technician	Radiation Tech	Graphics & Data Managerment
DP-1 Building Demo	20	20	20	20	60	10
DP-2 Foundation & Land	30	40	40	50	50	10
DP-3 Subsurface Soil & FSS	66	111	127	116	176	46
Decommissioning Reporting & LT	15	25	25	10	5	15
Subtotal (Days)	131	196	212	196	291	81
Cost per Day	\$ 1,840.00	\$ 1,480.00	\$ 1,840.00	\$ 1,350.00	\$ 1,250.00	\$ 600.00
Subtotal Labor Cost	\$ 241,040.00	\$ 290,080.00	\$ 390,080.00	\$ 264,600.00	\$ 363,750.00	\$ 48,600.00
Total Labor Cost	\$ 1,598,150.00					

TABLE E-7: Equipment/Supply Costs

Equipment/Supplies	Quantity (weeks/units)	Unit Cost (\$)	Total Equipment/ Supply Cost
L Model 3 w/ 44	36	\$ 175	\$ 6,300
L Model 26 Frisker	36	\$ 175	\$ 6,300
L Model 19	36	\$ 200	\$ 7,200
L 3030	36	\$ 300	\$ 10,800
Pelican Case	36	\$ 50	\$ 1,800
Air Sampler	36	\$ 200	\$ 7,200
L Model 9	36	\$ 300	\$ 10,800
L Model 2350 w/ 3x3 NaI	36	\$ 400	\$ 14,400
L Model 2221 w/ 43-89	36	\$ 300	\$ 10,800
L Model 2200 w/ 44-1 Beta Scintillator	36	\$ 300	\$ 10,800
L Model 2360 w/ 43-93	36	\$ 300	\$ 10,800
Personal Electronic Dosimeters	36	\$ 75	\$ 2,700
Gamma Neutron Survey Meter w/ 42-41L probe	36	\$ 500	\$ 18,000
Model 239-1F, 2360 Floor Monitor	36	\$ 500	\$ 18,000
ISOCS	36	\$ 3,600	\$ 129,600
Portable GPS unit	36	\$ 500	\$ 18,000
TLDs	36	\$ 25	\$ 900
Fidler NaI Detector #2, #3	36	\$ 400	\$ 14,400
Soil Sampling Tools	8	\$ 75	\$ 600
Decontamination	36	\$ 50	\$ 1,800
PPE Level D	72	\$ 25	\$ 1,800
PPE Level C	72	\$ 50	\$ 3,600
Subtotal			\$ 306,600
Miscellaneous Supplies (7.5%)			\$ 22,995
Specialized Access Equipment (Man lifts, Harnesses, etc.) 10%			\$ 30,660
Total			\$ 360,255

TABLE E-8: Laboratory Costs**(Includes Scoping, Site Characterization & FSS Surveys)**

Activity	Total Samples	Cost/Analysis	Total Cost
Soil & Water	200	\$ 675.00	\$ 135,000
Shipments	12	\$ 150.00	\$ 1,800
TOTAL			\$ 136,800

TABLE E-9: Miscellaneous Costs

Cost Item	Total Cost
License Fees	\$ 7,600
Subcontractors - Excavation	\$ 150,000
Subcontractors- Trucking Services	\$ 150,000
Subcontractors- General Construction	\$ 80,000
TOTAL	\$ 387,600

TABLE E-10: Total Estimated Decommissioning Cost

Task/Component	Cost	Percentage
Radiological Materials & Waste Disposal (Table E-4)	\$ 371,250	13%
Total Labor Decommissioning Services (Table E-7)	\$ 1,598,150	56%
Equipment/Supply Costs (Table E-8)	\$ 360,255	13%
Laboratory Costs (Table E-9)	\$ 136,800	5%
Miscellaneous Costs - Subcontractors (Table E-10)	\$ 387,600	14%
SUBTOTAL	\$ 2,854,055	100%
NM GST (Santa Fe 8.1875%)	\$ 233,676	
SUBTOTAL	\$ 3,087,731	
25% Contingency	\$ 771,969	
TOTAL DECOMMISSIONING COST ESTIMATE	\$ 3,859,699	