

## TABLE 6

### MISCELLANEOUS RADIOACTIVE WASTE IN SOIL, SUMMARY

Table 6 lists the various locations on the plantsite containing radioactivity (greater than one curie) resulting from spills, equipment failure, etc. In many cases the accumulations at these sites result from efforts undertaken to prevent migration of radioactivity to flowing surface streams (such as creating temporary retention ponds, diking, backfilling, etc.); the activity given in Part 1 is the amount remaining after cleanup or removal operations and after radioactive decay through 1975. In addition to the sites listed in Table 6, Part 1, 31 other locations, each containing radioactivity estimated to be less than 1 curie, exist on the plantsite. Most of these are marked with pylons or are within posted or controlled areas. All of these sites are listed in Table 10 beginning on p. A-86.

Part 2 contains information concerning buried radioactivity in backfilled seepage basins in 100-R reactor area.

Locations on the plantsite containing radioactivity resulting from ongoing operations, such as seepage basins, stream beds, the swamp, retention ponds, etc., are not included in Table 6 or Table 10.

TABLE 6 (CONTINUED)

## 1. In Disposal Sites

Location	Description	Source of Activity	Treatment	Date of Release	Activity	Ci <sup>a</sup>
200-F (281-3F)	Earthen retention basin (2 x 10 <sup>4</sup> ft <sup>2</sup> )	Algae, etc., from cleaning delaying basin 281-5F; cooling water from equipment failure	Herbicides on sides of basin, asphalt emulsion	Startup to 1973	α, β, γ	5 - 10
200-F	North seepage basin (4 x 10 <sup>4</sup> ft <sup>2</sup> )	Miscellaneous	Inactive	Startup to 1955	α, β, γ	~1
200-F (241-F)	Soil adjacent to Tank 8 and fill line encasement	Leak of fill line encasement	Under study	4/61	<sup>137</sup> Cs <sup>90</sup> Sr <sup>147</sup> Pm Other α,β,γ	~5000 100-5000 <sup>b</sup> <250 <sup>b</sup> <10
200-H (281-3H)	Same as 281-3F				α, β, γ	10 - 30
200-H	Storm sewer, east of area (2 x 10 <sup>5</sup> ft <sup>2</sup> )	Tank car leak	150' backfilled	4/58	β, γ	~1
200-H	Temporary retention pond (~10 <sup>5</sup> ft <sup>2</sup> )	Release from contaminated segregated cooling water to temporary impoundment	Pond backfilled	9/56, 5/60, 11/65	β, γ	~5
200-H (241-H)	Soil under tank 16 (~3 x 10 <sup>4</sup> ft <sup>2</sup> )	Tank leak	Pumped ground water	9/60	β, γ (primarily <sup>137</sup> Cs)	10 - 500
200-H (241-H)	Surface soil above Tank 9 (~1 x 10 <sup>3</sup> ft <sup>2</sup> )	Tank riser overflow	Soil excavated and replaced	5/67	β, γ (primarily <sup>137</sup> Cs)	75 - 100
200-H	Two temporary retention ponds, and storm sewer	Tank riser overflow (same as above) and backflush line failure	Soil excavated, banks of ditch (emulsified)	5/67, 2/69	β, γ (primarily <sup>137</sup> Cs)	5 - 10
700-A	Ground beneath E-Wing, 773-A (~10 <sup>3</sup> ft <sup>2</sup> )	Leak from high-level caves separator pit to storm sewer	Storm sewer disconnected backfilled	12/71	α, γ ( <sup>244</sup> Cm)	6

a. Curies remaining

b. 5000 Ci of <sup>90</sup>Sr and 250 Ci of <sup>147</sup>Pm are upper limits based on the estimate of 5000 Ci of <sup>137</sup>Cs from radiation measurements. Investigation and monitoring of the contaminated zone are being continued.

TABLE 6 (CONTINUED)

2. *In Earth Filled Seepage Basins in R Area<sup>a</sup>*

<u>Year</u>	<u>Beta</u>
1957	2130
1958	533
1959	35
Total	<u>2698<sup>b</sup></u>

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- a. The 100-R seepage basins received about 2700 Ci of gross beta activity resulting from the failure of an experimental fuel assembly in an isolated section of the 100-R Area fuel and target storage basin in 1957. Five of the six basins were backfilled and areas where activity migration was observed were capped and diked with clay. The 100-R reactor was shut down and placed in a standby status in 1964.
- b. Estimated to contain 900 Ci of cesium-137 (~600 Ci at end of 1975, corrected for decay) and 200 Ci of strontium-90 (~125 Ci at end of 1975, corrected for decay).