ERRATUM

ANSI/ANS-55.1-2021
Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants

The volume per day for a high-purity radwaste demineralizer is listed in Table 4 as 1 (0.28) with units of [ft^3/day (m^3/day)]. The value in metric units should be 0.028 (not 0.28). This is a typographical error. The corrected table is shown below:

Table 4 – Boiling Water Reactor Radioactive Solid Waste Processing Design Basis Inputs

Solid Waste Source	Design Basis Normalized Input[a] [ft^3/day (m^3/day)]	Notes
Bead Resin		
1. High-purity radwaste demineralizer	**1 (0.028)**	b
2. Low-purity radwaste demineralizer	2 (0.056)	c, d
3. Distillate demineralizer	0.49 (0.014)	e
4. Deep bed condensate polisher	$N_1 V_1/1100$	f, g
Filter Sludge		
5. Reactor water cleanup (RWCU) filter/demineralizer	1.4 (0.04)	h
6. Spent-fuel pool filter/demineralizer	13 (0.037)	i
7. High-purity waste filter	1 (0.028)	j
8. Low-purity waste filter	5 (0.142)	c, k
9. Ultrasonic resin cleaner (URC) overflow filter	$0.3N_1$	f, l
10. Powdered resin precoat condensate polishers	$1.5N_2$	m
Concentrates		
11. Low purity	8 (0.227)	c, n
12. Detergent	2.5 (0.071)	o
13. Deep bed condensate polisher Na$_2$SO$_4$	$N_1 V_2/60$	p

[a] The volumes V and number N of batches per the following nomenclature:
   V_1 = condensate polisher resin volume [ft^3 (m^3)].
   V_2 = Na$_a$SO$_4$ evaporator concentrate batch volume [ft^3 (m^3)].
   N_1 = number of deep bed condensate polisher vessels in service.
   N_2 = number of condensate polishing filter demineralizer vessels in service.

Footnotes [b] through [p] provide the bases for the design basis normalized input. See Regulatory Guide 1.143, "Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants," Rev. 2, U.S. Nuclear Regulatory Commission (Nov. 2001). Appropriate adjustment to these values should be made for differences in liquid radwaste system design.

[b]26,000 gal/day (98,410 ℓ/day) at 5 μmho/cm processed through the high-purity demineralizer.
[c]Low-purity wastes are processed via Source 11 or Sources 2 and 8.
[d]6,000 gal/day (22,710 ℓ/day) at 50 μmho/cm processed through the low-purity demineralizer.
[e]180 ft^3 (5.11 m^3) polishing demineralizer changed once per year.
[f]Deep bed condensate polisher wastes are processed via Sources 4, 9, and 13.
[g]Deep bed condensate polisher resin life of 3 yr.
[h]5 ft^3 (0.14 m^3)/backwash—7.4 lb (33.6 kg)—normal backwash rate of two per week, 169 ft^2 (15.7 m^2) surface area of the RWCU filter unit.
[i]13 ft^3 (0.37 m^3)/backwash—242 lb (110 kg)—normal backwash rate of one in 10 days, 550 ft^2 (51.1 m^2) unit.
[j]11,000 gal/day (41,635 ℓ/day) at 10 ppm suspended solids and 0.1 lb crud/lb filter aid/ft^3 (0.05 kg crud/kg filter aid/m^3) processed through the high-purity filter.
[k]6,000 gal/day (22,710 ℓ/day) at 100 ppm suspended solids and 0.1 lb crud/lb (0.05 kg crud/kg) filter aid and 10 lb filter aid/ft^3 (160 kg/m^3).
[l]15,000 gal/day (55,775 ℓ/day)/URC at 30 ppm suspended solids and 0.1 lb crud/lb (0.05 kg crud/kg) filter aid and 10 lb filter aid/ft^3 (160 kg/m^3).
[m]15 ft^3 (42 m^3)/backwash at 330 lb/unit (150 kg/unit). Normal run length of 10 days, 1500 ft^2/unit (139.35 m^2/unit) at 4 gal/min·ft^2 (2.72 ℓ/s·m^3).
[n]6,000 gal/day (22,710 ℓ/day) at 100:1 feed-to-concentrate ratio.
[o]300 gal/day (1,135 ℓ/day) for 365 days and 3,000 gal/day (11,355 ℓ/day) for 30 days at 15:1 feed-to-concentrate ratio.
[p]Normal deep bed condensate polisher run length of 60 days with 1,200 lb (545.45 kg) of Na$_2$SO$_4$ per regeneration of a 180-ft^3 (5.10-m^3) polisher and a 25% concentration of evaporator concentrates.