

APPLICATION FOR UNITED STATES
NUCLEAR REGULATORY COMMISSION CERTIFICATION
PORTSMOUTH GASEOUS DIFFUSION PLANT
USEC-02

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3.2.8.3 Administrative Controls, Surveillance Requirements, and General Limiting Conditions for Operation

The information in this section has been deleted. Administrative controls, surveillance requirements and limiting conditions for operation that are required for the safe operation of systems, structures and components have been specified in the TSR portion of the Application.

Table 3.2-1 UF₆ Cylinder Fill, Temperature, and Assay Limits

Size Code	Container code/ ANSI N14.1 model number	Description	Off-site shipments fill limit	Heel limits	% ²³⁵ U assay	On-site use fill limit	Heating (°F) temperature operating/ maximum	% ²³⁵ U assay	H/U ratio
	U-tube 1/4 in.	Hap 2-valve				10 g		100	
	U-tube 3/8 in.	Hap 2-valve				30 g		100	
	U-tube 1/4 in.	Hap 3-valve				22 g		100	
	U-tube 3/8 in.	Hap 3-valve				34 g		100	
HT	910	1/4 in. Hoke tube				9 g		100	
HT	910	5/8 in. Hoke tube			100	65 g		100	
HT	970	5/8 in. Hoke tube			100	65 g		100	
PF		P-10 tube	12 g		100	20 g Sm-12-g Lg-38g		100	
99	990	Buggy cold trap		20 g	100	1500 g		100	
1H	01	1 in. Samp. con.			100	206 g		100	
1S	972/1S	1 in. Samp. cont.	454 g		100	454 g		100	
2S	03/2S	3 in. Harshaw type	2175 g**	20 g	100	2175 g**		100	
5L	AL	5 in. Aluminum		45 g	100	55 lb (24,947 g)	220/235	100	
5S	ST	5 in. Steel		45 g	100	55 lb (24,947 g)	220/235	100	
5A	CS/5A	5 in. Monel	54.9 lb (24,902 g)	45 g	100	55.67 lb (25,250 g)*	220/235	100	
5B	5N/5B	5 in. Nickel	54.9 lb (24,902 g)	45 g	100	55.67 lb (25,250 g)*	220/235	100	
8H	08	8 in. Helium		227 g		245.00 lb	220/235	70	0.088
8S	08	8 in. Steel				245 lb (111,130 kg)	220/235	96.65	0.088
8A	08/8A	8 in. Monel	255 lb (115,665 kg)	227 g	12.5	255 lb (115,665 kg)	220/235	97.65	0.088

Table 3.2-1 (Continued)

Size code	Container code/ ANSI N14.1 model number	Description	Off-site shipments fill limit	Heel limits	% ²³⁵ U assay	On-site use fill limit	Heating (°F) temperature operating/ maximum	% ²³⁵ U assay	H/U ratio
10	10			454 g		350 lb (158.756 kg)		70	0.088
12	12A	12 in., 1 valve (3/4 in.)	460 lb (208.651 kg)	454 g	5.0	460 lb (208.651 kg)	235/250	40.0	0.088
12	12MD	12 in., 2 valve (1 in.)	460 lb (208.651 kg)	454 g	5.0	460 lb (208.651 kg)	235/250	40.0	0.088
12	12FN	12 in., 2 valve (1 in.)				430 lb (195.0 kg)	235/250	40.0	0.088
13	12B	12 in., 2 valve (3/4 in.)	460 lb (208.651 kg)	454 g	5.0	460 lb (208.651 kg)	235/250	40.0	0.088
3A	30/30A	2-1/2 T, Concave	4950 lb (2,245 kg)	25 lb	5.0+	4950 lb	235/250	5.0	0.088
3B	30/30B	2-1/2 T, Convex	5020 lb (2,277 kg)	25 lb	5.0+	5020 lb	235/250	5.0	0.088
4A	48/48A	10-T, Heavy wall				21,030 lb	235/250	4.5	0.088
	(Cylinder Nos. 1-5000					(Previously filled cylinders with 21,031-22,000 lb)	220/235		
4X	X/48X	10-T, Heavy wall	21,030 lb (9,539 kg)	50 lb	4.5+	Private or DOE owned	235/250	4.5****	0.088
4B	T/48T	10-T, Thin wall	Tails storage	50 lb		20,700 lb (9,389 kg)	220/235	3.0	0.3
	(Cylinder Nos. 5001-9230								
4F	F/48F	14-T, Heavy wall	27,030 (12,260 kg)	50 lb	4.5+	27,030 lb (12,260 kg)	220/235	4.5	0.088
	(Cylinder Nos. 9231-9660)								
4Y	Y/48Y	14-T, Heavy wall	27,560 lb (12,500 kg)	50 lb	4.5+	27,560 lb (12,500 kg)	235/250	4.5	0.088
	(Cylinder Nos. 9661-9999)								

Table 3.2-1 (continued)

Size code	Container code/ ANSI N14.1 model number	Description	Off-site shipments fill limit	Heel limits	% ²³⁵ U assay	On-site use fill limit	Heating (°F) temperature operating/ maximum	% ²³⁵ U assay	H/U ratio
4Y	OM/480M Allied (Cylinder Nos. AC001-400)	14-T, Thin wall	27,030 (12,260 kg)	50 lb	4.5+	27,030 (12,260 kg)	220/235	4.5	0.088
4G	OM/48G (Cylinder Nos. 111820 and below)	14-T, Thin wall	Tails storage	50 lb		26,070 lb	200/210	3.0	0.3
4G	OM/48G (Cylinder Nos. 111821 and above)	14-T, Thin wall	26,840 lb***	50 lb		28,000 lb	220/235	3.0	0.3
4G	HX/48H, 48HX (Cylinder Nos. 15001-151000)	14-T, Thin wall w/skirt	Tails storage	50 lb		27,030 (12,260 kg)	220/235	3.0	0.3
4G	H/48H (Cylinders Nos. 151001-15XXXX)	14-T Thin wall w/skirt	Tails storage	50 lb		27,030 (12,260 kg)	220/235	3.0	0.3

* Includes the amount which on-plant limit may be exceeded to accomplish sampling operations and yet fill the cylinder as full as possible. Temperature should be controlled to a maximum of 235°F.

** Fill limit for stamped cylinder is 2200 g. Fill limit for older, unstamped containers is 2175 g.

*** Fill limit may be higher but must not exceed a 95% liquid volume based on actual cylinder volume.

**** 5.0% U assay for properly identified intraplast 10-ton cylinders.

+ H/U - 0.088

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SECTION 2.1 SPECIFIC TSRS FOR X-342, X-343, AND X-344 FACILITIES

2.1.3 LIMITING CONTROL SETTINGS, LIMITING CONDITIONS FOR OPERATION, SURVEILLANCES

2.1.3.15 Receiving Cylinder Fill Weights

APPLICABILITY: Autoclave Operational Mode IV

LCO: Receiving UF₆ cylinder fill weight shall be ≤ standard fill weight given in the table below.

Size Code	Description	Standard Fill Limit
1S	1S sample bomb	454 g
2S	2S sample bomb (unstamped)	2175 g
2S	2S sample bomb (stamped with 2200 g)	2200 g
5L	5 inch Aluminum	55 lbs (24,947 g)
5S	5 inch Steel	55 lbs (24,947 g)
5A	5 inch Monel	54.9 lbs (24,902 g)
5B	5 inch Nickel	54.9 lbs (24,902 g)
8H	8 inch Helium	245.00 lbs
8S	8 inch Steel	245 lbs (111.130 kg)
8A	8 inch Monel	255 lbs (115.665 kg)
10	10 inch	350 lbs (158.756 kg)
12A	12 inch, 1 valve (¾ inch)	460 lbs (208.651 kg)
12MD	12 inch, 2 valve (1 inch)	460 lbs (208.651 kg)
12FN	12 inch, 2 valve (1 inch)	430 lbs (195.0 kg)
12B	12 inch, 2 valve (¾ inch)	460 lbs (208.651 kg)
30A	2.5 TON	4950 lbs
30B	2.5 TON	5020 lbs
48A 1-5000	10 TON HW	21,030 lbs
48X	10 TON HW	21, 030 lbs