

Low-Level Waste Plasma Gasification (NW PlasGas) Demonstration Project – Valve List

Doc. No. ENS-NWPLR-LST-34002

Rev. No. 5

1		2			3		4		5		6		7		8		9				10				11				12				13				14		15	
Valve Tag No.		Valve Code		Valve Size		Valve Type		P&ID Number		Location (Line No. / Equipment No.)		Fluid		Fluid State		Design Conditions		Shared (Y/N)		Process Connection		Materials of Construction		Packing / Seal		Plug / Ball / Disc		Bonnet / Cap		Comment		QTY								
Fluid Code	System No.	Valve No.	Valve Code	Valve Size	Valve Type	P&ID Number	Location (Line No. / Equipment No.)	Fluid	Fluid State	Temp. (°C)	Press. (MPa(g))	Shared (Y/N)	Size	Type	Flange Spec.	Flange Rating	Body	Trim	Packing / Seal	Seat	Plug / Ball / Disc	Bonnet / Cap	Comment	QTY																
AI	17	179	CB	40	Ball valve	ENS-NWPLR-PID-24014	Line 45-17, APCG-075	Air	Gas	38	1965	Y	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	Note 5	1																
AI	17	180	CB	40	Ball valve	ENS-NWPLR-PID-24014	Line 45-17, APCG-076	Air	Gas	38	1965	Y	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	Note 5	1																
AI	17	183	CG	40	Globe valve	ENS-NWPLR-PID-24014	Line 45-17, APCG-078	Instrument air	Gas	38	1965	Y	40	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	Note 5	1																
AI	17	190	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-086	Instrument air	Gas	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1																
AI	17	195	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-091	Instrument air	Gas	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	BALL	CS (ASTM A105/A216 WCB)	-	1																
AI	17	177	CB	25	Ball valve	ENS-NWPLR-PID-24014	Line 25-17, AICK-078	Instrument air	Gas	38	1965	N	25	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1																
AI	17	154	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-090	Instrument air	Gas	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	BALL	CS (ASTM A105/A216 WCB)	-	1																

1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16			
Valve Tag No.		Valve Code		Valve Size		Valve Type		P&ID Number		Location (Line No. / Equipment No.)		Fluid		Fluid State		Design Conditions		Operating Conditions		SSC Safety Class		Actuator		Process Connection		Materials of Construction		Packing / Seal		Bonnet / Cap		QTY	
Fluid Code	System No.	Valve No.	Valve Code	Valve Size	Valve Type	P&ID Number	Location (Line No. / Equipment No.)	Fluid	Fluid State	Temp. (°C)	Press. (MPa(g))	Shared (Y/N)	Size	Type	Flange Spec.	Flange Rating	Body	Trim	Packing / Seal	Seat	Plug / Ball / Disc	Bonnet / Cap	Comment	QTY									
AI	17	175	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-088	Instrument air	Gas	N	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1								
AI	17	178	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-089	Instrument air	Gas	N	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1								
AI	17	191	CB	15	Ball valve	ENS-NWPLR-PID-24014	Line 15-17, AICK-087	Instrument air	Gas	N	38	1965	N	15	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1								
AP	17	196	CB	40	Ball valve	ENS-NWPLR-PID-24014	Line 45-17, APCG-074	Plant air	Gas	Y	38	1965	N	40	RF	CS, ASTM A105, ASME B16.5	150#	CS (ASTM A105/A216 WCB)	316 SS BALL and STEM	FLEXIBLE GRAPHITE	RTFE	FLOATING BALL	CS (ASTM A105/A216 WCB)	-	1								

Notes

- The scrubbing solution composition will change over time due to the chemical reactions taking place in the scrubber. At the end of phase 1, the composition (w/w) will be 67.67% water, 1.05% KCl and 30.78% K₂CO₃. At the end of phase 2, the scrubber off-gas, changes over time due to chemical reactions taking place in the scrubber. The gas compositions (w/w) are as follows: 1.3% CO₂, 0.1% HCl, 51.9% O₂ and 48.7% N₂ at the start of the process, and 74% CO₂, 0.02% HCl.
- The scrubber off-gas, changes over time due to chemical reactions taking place in the scrubber. The gas compositions (w/w) are as follows: 1.3% CO₂, 0.1% HCl, 51.9% O₂ and 48.7% N₂ at the start of the process, and 74% CO₂, 0.02% HCl.
- Process verification operates and valve sizes to be determined during design of HVAC system.
- Y = Valve is shared between the NW PlasGas and CWOPOG Facilities, and utilized in both facilities. N = Valve is only utilized in the NW PlasGas Facility.
- This valve is shared between the NW PlasGas and CWOPOG Facilities, not as a result of integration of the two facilities, but rather as a result of one centralized instrument air supply system servicing all plasma gasification facilities in V-H2 Building. That system is incorporated into the NW PlasGas Facility.