necsa – We're in your world – South African Nuclear Energy Corporation SOC Limited	Low-Level Waste Plasma Gasification (NW PlasGas) Demonstration Project – Valve List	Doc. No.	ENS-NWPVR-LST-24002
		Rev. No.	5

6. List of Control Valves

1	2			3	4	5	6	7	8		G		10		11	12 Note 3	13				14						15	
Notes	Valve Tag No.	Valve Type	Control Instrument	Control Valve Specification Sheet	PGID Number	Line Number / Equipment Number	Fluid	Fluid State	Design Conditions		Operating Conditions		SSC Safety Class		Fail Position	Shared (Y/N)	Process Connection				Materials of Construction						Valve Certification	
									Temp. [°C]	Press. [kPa(g)]	Temp. [°C]	Press. [kPa(g)]	Nuclear (N)	Chemical (C)			Size	Type	Flange Spec.	Flange Rating	Body	Trim	Packing / Seal	Seat	Plug / Ball /	Bonnet / Cap		QTY
-	FV1510J	Globe Valve	FICA1510J	ENS-NWPVR-SPE-25004	ENS-NWPVR-PID-24004	Line 25-13-GSVP-012	Oxygen	Gas	38	24820	Amb	400	Non-classified	SC-2	FC	N	25	SW	SS, ASTM A182- F304/304L, ASME B16.5	1500#	SS (ASTM A182-F316/316L)	316 SS	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS (ASTM A182-F316/316L)	ATEX Rated	1
1	TV1406	Globe Valve	TICA1406	ENS-NWPVR-SPE-25006	ENS-NWPVR-PID-24005	Line 15-15-KOVP-030	Aqueous KOH solution	Liquid	93	1585	35	120	SC-3	SC-2	FO	N	15	RF	SS, ASTM A182- F304/304L, ASME B16.5	150#	SS (ASTM A351- CF8M)	316 SS	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS (ASTM A351-CF8M)	-	1
1	FV1501C	Globe Valve	FICA1501C	ENS-NWPVR-SPE-25005	ENS-NWPVR-PID-24002	Line 25-15-KOVP-029	Aqueous KOH solution	Liquid	93	1585	35	120	SC-3	SC-2	FO	N	25	RF	SS, ASTM A182- F304/304L, ASME B16.5	150#	SS (ASTM A351- CF8M)	316 SS	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS (ASTM A351-CF8M)	-	1
-	PCV1301B	Pressure Regulator	N/A	ENS-NWPVR-SPE-24006	ENS-NWPVR-PID-24004	Line 15-13-GAVP-010	Argon	Gas	38	24820	Amb	600 / 400	Non-classified	SC-3	FO	N	15	SW	SS, ASTM A182- F304/304L, ASME B16.5	1500#	SS (ASTM A182-F316/316L)	SS (ASTM A182-F316/316L)	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS, ASTM A182- F304/304L, ASME B16.5	-	1
-	PCV1302B	Pressure Regulator	N/A	ENS-NWPVR-SPE-24005	ENS-NWPVR-PID-24004	Line 15-13-NHVP-011	Nitrogen	Gas	38	24820	Amb	600 / 400	Non-classified	SC-3	FO	N	15	SW	SS, ASTM A182- F304/304L, ASME B16.5	1500#	SS (ASTM A182-F316/A351-CF8M)	SS (ASTM A182-F316/A351-CF8M)	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS (ASTM A182- F316/A351-CF8M)	-	1
-	PCV1303B	Pressure Regulator	N/A	ENS-NWPVR-SPE-24007	ENS-NWPVR-PID-24004	Line 25-13-GSVP-012	Oxygen	Gas	38	24820	Amb	600 / 400	Non-classified	SC-3	FO	N	25	SW	SS, ASTM A182- F304/304L, ASME B16.5	1500#	SS (ASTM A182-F316/316L)	316 SS, HARDFACE SEAT, API 602 TRIM #12	CORROSION-INHIBITED, DIE-FORMED FLEXIBLE GRAPHITE with ANTI-EXTRUSION RINGS	PTFE	Disc, 316 SS	SS (ASTM A182-F316/316L)	ATEX Rated	1
																											TOTAL	6

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% K_2CO_3.

1 At the end of phase 2, the composition will be 58.87% water, 1.79% KCl, and 38.04% $KHCO_3$. At the end of the final phase, the composition will be 62.52% water, 4.26% KCl, and 31.20% $KHCO_3$.

2 Valve size to be determined and valve to be specified during design of HVAC System.

3 Y = Valve is shared between the NW PlasGas and CWOPG Facilities, and utilized in both facilities. N = Valve is only utilized in the NW PlasGas Facility.

4 PCV1708, PCV1709 and PCV1710 will service the PTFE Facility exclusively, but they are included in this List since there is a centralized instrument air supply system for all plasma gasification facilities in V-H2 Building and that system is incorporated into the NW PlasGas Facility.

5 The pressure regulator PCV1706 will be supplied together with pump P1514, as per the ENS-NWPVR-SPE-24014

6 The pressure regulator PCV1707 will be supplied together with pump P1515, as per the ENS-NWPVR-SPE-24015

7 The pressure regulator PCV1708 will be supplied together with pump P83156, as per the ENS-FDP-SPE-24010

8 The pressure regulator PCV1709 will be supplied together with pump P83166, as per the ENS-FDP-SPE-24012

9 The pressure regulator PCV1710 will be supplied together with pump P83165, as per the ENS-FDP-SPE-24011

Open