



DESIGN NOTES:

- 1) Gas samples to be taken from the top and in the middle of the process piping to prevent the condensation of moisture, HF and/or HCl in the sample line.
- 2) Vents to common scrubber header must enter at the top of the ducting to avoid cross contamination.
- 3) V1304 to be equipped with a flange so that the solid particles can be removed from the pot.
- 4) The normal flow for the off-gas from the Plasma Quench H1206 is to be through the Cyclone Y1301 directly to the Liquid Ring Vacuum Pump P1520. When sampling from S04 indicates that the solid particles are not removed sufficiently by Y1301 a different flow path will be selected. This will be done during different demonstration runs until the most efficient of the four flow paths has been identified.
- 5) Rotary airlock drop through valve driven through a reduction gearbox that is powered by an electrically induced motor. Size of rotary valve is dependent on the size of the outlet of the cyclone the supplier to advise on valve size during procurement.
- 6) Same in-line filter as for gas sampling system.

FUNCTION	NAME	DESIGNATION	SIGNATURE	REVISION HISTORY		
PREPARED	Mr N Manilal	Process Engineer		REV	DESCRIPTION	DATE
REVIEWED	Mr W Ludwick	Senior Process Engineer		2	Second Issue	2024/10/24
REVIEWED	Mr BM Khumalo	Senior Process Engineer		3	Update after HAZOP 3 and aligned interlocks as per interlock schedule ENS-OWPVR-LST-24005 R1	2025/01/23
REVIEWED	Mr SR Mngoma	Chief Engineer Mechanical		4	Update after merger between NW PlasGas & WOPG Facilities	2025/02/21
REVIEWED	Dr G Manuel	Chief Engineer Control & Instrumentation		5	Update after HAZOP Close-out Report	2025/03/31
REVIEWED	Mr WJ van den Berg	Chief Engineer Electrical		6	Correct pipe line specification for line -002	2025/04/11
APPROVED	Dr K Moodley	Chief Process Engineer		LIST OF REFERENCED P&IDs & DOCUMENTS		
				1) ENS-OWPVR-LST-24004 – PFD & P&ID Lead Sheet 2) ENS-OWPVR-PID-24001 – P&ID for the Plasma Gasification System of the WOPG Demonstration Facility 3) ENS-OWPVR-PID-24008 – P&ID for the Utilities System of the WOPG Demonstration Facility 4) ENS-NWPVR-PID-24002 – P&ID for the NW PlasGas Demonstration Plant subsystem 5) ENS-NWPVR-PID-24015 – P&ID for the NW PlasGas Demonstration Plant subsystem		



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Classification:
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PROJECT
URANIUM CONTAMINATED WASTE OIL PLASMA GASIFICATION

TITLE
P&ID – PRIMARY SOLIDS CAPTURING SYSTEM

DRG. NO.
ENS-OWPVR-PID-24004

DRAWN BY
W LUDWICK

DATE
2025/04/11

DESTROY ALL PREVIOUS PRINTS

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REVISION

SHEET 1 OF 1