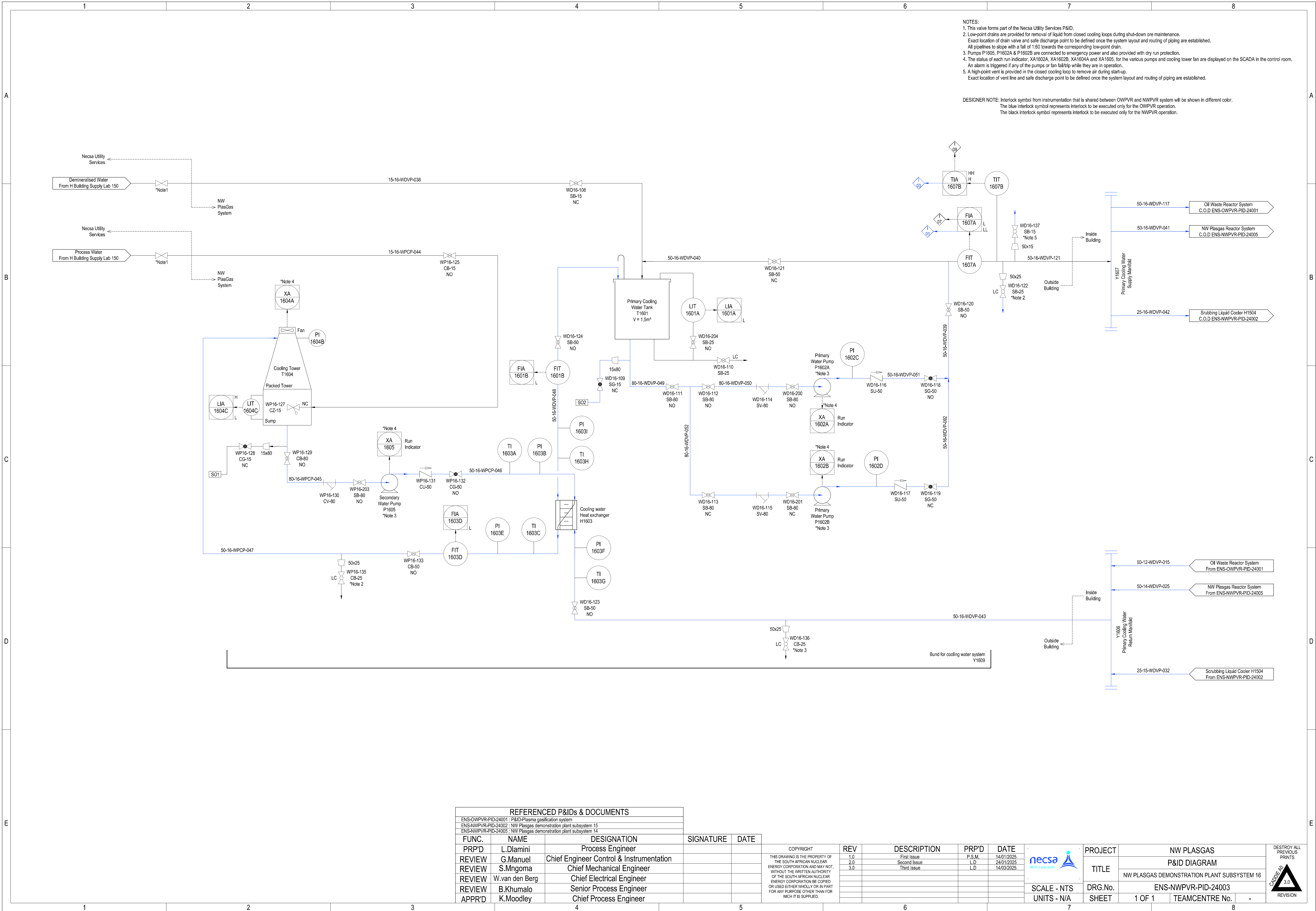




- NOTES:
1. This valve forms part of the Necsa Utility Services P&ID.
 2. Low-point drains are provided for removal of liquid from closed cooling loops during shut-down or maintenance. Exact location of drain valve and safe discharge point to be defined once the system layout and routing of piping are established. All pipelines to slope with a fall of 1:60 towards the corresponding low-point drain.
 3. Pumps P1605, P1602A & P1602B are connected to emergency power and also provided with dry run protection.
 4. The status of each run indicator, XA1602A, XA1602B, XA1604A and XA1605, for the various pumps and cooling tower fan are displayed on the SCADA in the control room. An alarm is triggered if any of the pumps or fan fail/trip while they are in operation.
 5. A high-point vent is provided in the closed cooling loop to remove air during start-up. Exact location of vent line and safe discharge point to be defined once the system layout and routing of piping are established.

DESIGNER NOTE: Interlock symbol from instrumentation that is shared between OWPVR and NWPVR system will be shown in different color.
The blue interlock symbol represents interlock to be executed only for the OWPVR operation.
The black interlock symbol represents interlock to be executed only for the NWPVR operation.

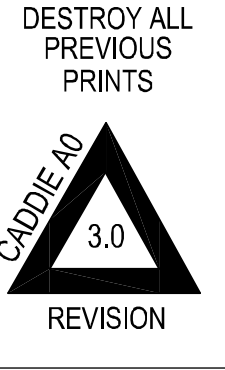
REFERENCED P&IDs & DOCUMENTS				
ENS-OWPVR-PID-24001 : P&ID-Plasma gasification system				
ENS-NWPVR-PID-24002 : NW Plasgas demonstration plant subsystem 15				
ENS-NWPVR-PID-24005 : NW Plasgas demonstration plant subsystem 14				
FUNC.	NAME	DESIGNATION	SIGNATURE	DATE
PRP'D	L.Dlamini	Process Engineer		
REVIEW	G.Manuel	Chief Engineer Control & Instrumentation		
REVIEW	S.Mngoma	Chief Mechanical Engineer		
REVIEW	W.van den Berg	Chief Electrical Engineer		
REVIEW	B.Khumalo	Senior Process Engineer		
APPR'D	K.Moodley	Chief Process Engineer		

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REV	DESCRIPTION	PRP'D	DATE
1.0	First Issue	P.S.M.	14/01/2025
2.0	Second Issue	L.D	24/01/2025
3.0	Third Issue	L.D	14/03/2025



PROJECT	NW PLASGAS
TITLE	P&ID DIAGRAM
DRG.No.	NW PLASGAS DEMONSTRATION PLANT SUBSYSTEM 16
SHEET	1 OF 1
TEAMCENTRE No.	-



ENS-NWPVR-PID-24003