	VEDANTA LIMITED – VALUE ADDED BUSINESS	Document No:	VL/IMS/PID1/INST/WI/14
	INTEGRATED MANAGEMENT SYSTEM	Revision Date:	05/01/2022
	WORK INSTRUCTION FOR WORKING ON FLARESTACK GAS CONTROL VALVES, QUICK RELEASE VALVE AND LPG BURNER ASSEMBLY.	Revision No:	08
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WORKING ON FLARESTACK GAS CONTROL VALVES, QUICK RELEASE VALVE AND LPG BURNER ASSEMBLY.

Objective: Procedure for working on flare stack gas control valves/Quick release valve and, burner Assembly.

Scope: This procedure applies to flare stack gas control valves, Motorized Valve (MV1), Quick Open Valve (QOV) and LPG burner for GEPL, BF1 and BF2 Flare stacks.

Performance Criteria: Complete flaring of BFG & Avoid Drip Pot Failure due to high Line Pressure.

Reference: Indian Electricity Rule, **RISK /INST/01, RISK/INST/4, RISK/INST/20 & RISK/INST/16, RISK /INST/17**

Aspect for the Activity: Waste generation, Compressed air leakage, LPG leakage.

Identification of Hazards:

Physical Hazard: Temperature, Electric Shock, Exposure to high pressure, Exposure to high noise

Mechanical Hazard: Impact, Falling from height


Chemical Hazard: Gas poisoning, Dust and Fumes, Steam

Hazard due to Human Behaviour/Human error: Not adhering to WI/ PPE, Alcoholism, Touching thermocouple tip with bare hands, Throwing materials from flare stack top, Improper communication, Gas line water sealing Lockout tagout not done. Use on non-certified tools/equipment

Responsibility : Sr. Engineer Instrumentation/Associate / Inst Technicians

PROCEDURE:

- 1) Inform production about the job being carried out by asking for the flare stack to be water sealed and taking proper shutdown protocol and work permit for the equipment ensuring Lock out Tag out arrangement for water seal & key should be with person working at flare stack top.
- 2) Use PPE- dust mask, Safety Belt, CO monitor and hand gloves. Avoid contact with high temperature areas.
- 3) Ensure production has steam purge the flare stack gas line till conspicuous steam is noticed from top of the flare stack & Ensure flare stack control valve (Actuator), motorized valve (MV1) and Quick Open Valve (QOV1) is kept closed after water sealing in manual mode before sending any person on top (flare stack)
- 4) Ensure water sealing of gas line at following for BF1 Flare stack

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- a) BF #1 common main line
 - b) BF #1 Additional Flare stack
 - c) BF #1 flare stack main water seal.
- 5) Ensure water sealing of gas line at following for GEPL FLARESTACK
 - a) GEPL Additional water seal
 - b) GEPL flare stack main water seal.
 - 6) Ensure water sealing of gas line at following for BF2 FLARESTACK
 - a) BF2 flare stack main water sealed
 - 7) Take shutdown of panel by switching of supply and removing incoming supply fuse. Ensure that switch or MCB is off and glass fuses are opened physically. Put LOTO lock on MCB & also removed fuses from PLC Panel for BF1 (BF1 FS BUR IGN ON (XB08- 45)), GEPL (GEPL FS BUR1 IGN ON (XB08-37)& GEPL FS BUR2 IGN ON (XB08-39)).
 - 8) If CO gas levels are not met do not carry out the job till safe levels are reached.
 - 9) Check burner assembly on flarestack top.
 - 10) Inspect physical condition of Electrodes and Ignition cables and make correction according to physical condition, check for thermocouples.
 - 11) Adjust 5mm gap between Ignition electrode and ground path
 - 12) Establish communication between panel room and field location till spark checking activity is completed
 - 13) Place the igniter at a distance ensuring that nobody touches the electrode and the sparking area should be visible
 - 14) Switch ON panel and insert glass fuses & also in the PLC panel (BF1& GEPL)
 - 15) No body should try to check the supply on Ignition system directly by any tools (including multimeter, tester etc).
 - 16) Start ignition and check the sparking on ignition assembly
 - 17) Switch OFF panel and box up ignition chamber.
 - 18) Clear the shutdown and Switch ON panel
 - 19) After Checking the Burners of GEPL Flare Stack & BF1 Flare Stack, Pneumatic Control Valve operation to be checked for 25%,50%,75% & 100% Opening & Closing also Motorized Valve Operation To be Checked from Control room for Open & Close. Quick Open Valve Air & Power Fail Operation to be checked.
 - 20) Clear Work Permit and inform production to break water seal
 - 21) After water seal is broken take actual trials for burning of gas from the panel

Prepared By: Associate Manager– Electrical & Instrumentation PID1	Reviewed & Issued By: Management Representative	Approved By: Head – Electrical & Instrumentation PID1
Signature:	Signature:	Signature:
Date: 05/01/2022	Date: 05/01/2022	Date: 05/01/2022