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|  | **VEDANTA LIMITED –**  **VALUE ADDED BUSINESS** | **Format No.:** | **FRMT/MR/10** |
| **INTEGRATED MANAGEMENT SYSTEM** | **Revision Date:** | **10.07.2023** |
| **HAZARD IDENTIFICATION** | **Revision No.:** | **03** |
| **Page No.:** | **1 of 1** |

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| **Departmental Use Only** | |
| **Revision No: 02** | **Unit: PID1** |
| **Revision Date: 10.07.2023** | **Dept.: Production** |

A. Work activity information

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| **Sr.No.** | **Details** | **Remark** |
| 1) | Task being carried out, their duration and Frequency: | Hot blast stove operation  (Water sealing, connecting, steam purging & gas valve draining)  As and when required |
| 2) | Location (s) where the work is carried out. | H B S area |
| 3) | Who normally/occasionally carried out the task? | Company`s & contract employees |
| 4) | Who else may be affected by the work (For example visitors, subcontractors, the public) | Visitors & subcontractors |
| 5) | a) Has the personnel trained for performing the task  b) Any special training required | Yes |
| 6) | Is the written systems of work mandatory? If yes state, the procedure no. | Yes  VL/IMS/PID1/PROD/WI/09 |
| 7) | Is the work permit required for the task? | No |
| 8) | Plant and machinery that may be used:  Eg : crusher, conveyor, crane, heavy earthing equipment, Truck etc, | NIL |
| 9) | Any electrically operated hand tools are used | Yes |
| 10) | Manufacturers or supplier’s instructions for operation and maintenance plant machinery and powered hand tools are available or not: | Nil |
| 11) | Chain block, tools and shackles such as wire rope, hydraulic jack etc are used. | No |
| 12) | What materials are handled? Size, shape, surface character and weight of materials that may be handled: | Gas & water |
| 13) | Is the material is required to be moved by hand. If yes Distance and heights of the place where materials have to move by hand. | No |
| 14) | Services used Eg: compressed air, oxygen, acetylene,  LPG gas, hydraulic oil, welding electrode for welding | Yes |
| 15) | Physical form of substances encountered during the work (For example fume, gas, vapour, liquid, dust/powder, solid): | Liquid & Gas |
| 16) | Content and recommendations of safety data sheets relating to substances used or encountered:  (This is applicable in case of chemical material) | NIL |
| 17) | a) Relevant acts, regulations and standards relating to the work being done, the plant and machinery used, and the materials used or encountered:  b) Is the activity is reviewed for compliance to statutory requirement | Factory act  Yes |
| 18) | What is the data (s) required to be monitored during the activity and the frequency of monitoring? | NIL |
| 19) | Any information available from within and outside the organization on incident, accident and ill health experience associated with the work being done, equipment and substances used: | Yes |

2. From the above activity information hazards are to be identified and recorded below using Appendix 'A' of SP/41

1. At 13.25 in BF2 HBS No2 it was observed that back drafting through air line of Diesel burner.
2. On 25.10.2012, at around 12.45 hrs, when Mr. Sajjan Sawant and Mr. B.V.S. Kumar were checking for gas leakage at BF2 HBS area, there was a sudden attack of Honeybees on them while climbing the steps towards Stove no. 1 dome. Immediately they rushed down and got rescued from the further attack. They were administered First aid at PID dispensary after which they reported to work.
3. On 30/5/18, during site visit, it was observed that BF 1 HBS gate was not locked. Being a gas prone area, the gate is to be locked and key kept at control room. Informed Prod HOD regarding the same.

Root cause: Access control not in place

CAPA: Immediately locks were placed back

1. On 28.06.2019 At 4:10 hrs. (C shift-27.06.2019), Bf2 HBS Stv-1 was on BLAST. After ~5 min of blast cycle, St-1chimney valve was showing intermediate position and hot blast pressure started coming down. Immediately Stv-2 taken on blast and command given for Stv-1 isolation. Stv-1 chimney was still showing intermediate. It was closed from site. System was in auto when chimney valve showed intermediate during on blast cycle and at site chimney port was open.
2. On 11.01.2020 at around 09:30 hrs. BF#1 HBV-02 hydraulic line replacement job was in progress. While removing the hydraulic hose, oil splashed and entered the eye of Mr. Lav Yadav (Gate pass no: - 1244) of business partner M/s. Concord Hydraulics. He was immediately taken to Dispensary where first aid treatment was given, and he resumed duty.
3. On 12.05.2021 Mr. Ramesh Saroj (Vaman employee) was engaged in shifting the HBS 1 checker bricks, during shifting time his left eye turned red. So, he was further referred to dispensary. He was wearing all his PPE during working time.

Cause: Entering of dust particle through minor gap of the safety goggle.

Contributory cause:

Due to the heavy wind outside HBS 1 top during manually shifting of bricks at that time particle enter in eye.

CAPA: 1) Fully covered goggle to be used while shifting the material at height area were wind flow high

2) Training to be given to all related employees

**Hazards identified**

1. BF Gas poisoning
2. Fall of person causing injury
3. Fire & Explosion
4. Human Behavior -Nonuse of PPE, WI
5. Improper house keeping
6. Inadequate local lighting
7. Human Behavior -Forgetting what the sequence was of opening the valve
8. Attack by bees/insects
9. (all valves are electrically operated or manually)Incomplete isolation process (Zero energy state not ensured)
10. Contact with hot surface
11. Contact with hot blast

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| **Prepared By:** | **Reviewed By:** |
| **Signature:** | **Signature:** |
| **Review Date: 10.07.2023** | **Review Date: 10.07.2023** |