

The Andhra Petrochemicals Limited
Visakhapatnam

Compliance report on an external safety audit recommendation -2020

S. No	Recommendations	Compliance
1	Process interlock bypass written down procedure to be made available to the operation group in DCS control room.	Process interlock bypass procedure is kept in DCS. Complied.
2	In occupational health centre there is no doctor. It is recommended to engage one at the earliest.	Dr. V. C.S. Reddy appointed, and he was joined on 01.01.2021. Complied.
3	There is no risk assessment register. It is recommended to develop the register.	Register provided. Complied
4	For the naphtha tanker bearing the AP 35 W 1199 the <i>TREM</i> card was found not available with driver. Also, the jumpers were found missing from the tank to unloading hose at naphtha Unloading area.	Availability of <i>TREM</i> cards is being ensured. Bonding/earthing followed strictly while tankers unloading, and earth interlock system provided. Complied.
5	For the naphtha tanker driver transport of hazardous chemicals training certificates were not available. It is recommended to prepare a check list and make a practice of checking the security itself.	Availability of Hazardous chemicals Training Certificate at drivers is being ensured and checklist is maintaining at the security. Complied.
6	There is no evidence of briefing to the visitors at Security gate. It is recommended to present safety brief including Do's and Don'ts to visitors.	Safety briefing to the visitors at security gate is being followed. Complied.
7	Lux level record verified and mentioned requirement as 100-150 lux level for all areas. Study to be done for individual areas and maintain required lux level (Example control room 200-300 lux.	Illumination study carried out and improved the lux levels. Complied.
8	As evidenced in the DCS control room, updated operating manuals are not available. One manual shown to us was last updated in 1989 & the other in 2008. Pl refer OISD-GDN206 for further guidance on updating operating manuals.	Revised operating manuals provided in the control room. Complied.
9	Methodology to identify training needs is to be developed.	Training methodology is in place. Complied.
10	Fire waters monitor no, W/F-27 (near tank farm area) was found inside a fencing hindering easy approach during emergency.	Approach to WM -27 is provided. Complied.
11	Provision of Clean agent flooding system may be examined as per OISD- STD-163 (clause-6.3)	Fire balls provided and we will review for flooding system.
12	No stencilling of testing of lifting tool in Fire water pump house was evidenced. In DG shed, the stencilling shows the testing date has expired.	Testing details are dispalyed. Complied.
13	In Technical building smoke detectors are not installed. Smoke detectors to be installed.	Smoke detectors are provided in Technical building. Complied.
14	Heavy leakage observed in LHS area pumping station. Leakage should be arrested. (Fire Safety)	Pump seals replaced with new ones. Leakage arrested. Complied.
15	No flame proof fittings dedicated only to testing labs were evidenced in QC section. May please take a view w.r.t. recommendations of OISD-GDN-211. Fire safety	We will review with HPCL.


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16	The organization please examine adopting Process Safety Management (PSM) for all round improvement of Safety & employees' moral.	Most of the PSM elements are being adopted and we will review for adopting PSM.
17	It is suggested to install Dead Man Valve in Propylene Horton Sphere drain line. This will improve safety while draining water from the Horton Spheres	Our designers have given block and bleed valve system to have safe draining of the water in Propylene. Complied
18	Some of the alarms in the DCS control panel were not functioning. For Ex: In the control room on DCS panel, 01 Syngas 1 Aux console ESD 05 (Total plant common alarm), PAL 5879 (instrument air pressure at battery limit is low) are not working since March'2020. Auxillary console 3/7 about 15 alarms are found not functioning.	Annunciation card replaced and now all are working well. Complied.
19	Need to focus on the shift operations logs. For Ex: It was written on 07.10.2020 A shift Aldol pump pressure checking I/P and there was no continuity in the next shift log.	Shift operation log continuity being followed. Complied
20	On 13.10.2020 it was written in the log that LV 3414 bypass open condition and there was no continuity in the next shift log	Completed jobs update being maintained in the logbook. Complied.
21	DM plant caustic pump pressure gauge drain point is in the HCL pump dyke area (DM Plant area)	Drain relocated to Caustic Dyke. Complied.
22	HCl L- 885 P3 A pump discharge is having 1 ½ inch line with ball valve in place of a pressure gauge which can be easily opened by anyone in DM Plant area.	Dummy provided. Complied
23	No pressure gauge HCl L-855 P3 B pump discharge in DM Plant area. Pressure gauge line drain valve is corroded. No isolation valve and handle.	Pressure gauge provided. Complied.
24	HCl P-885 P 3A pump suction spool is corroded at DM Plant area. HCl tank L 855 G7 vent line was corroded and detached. Vapours spills on the tank shell were observed.	Corroded spool replaced with new one & vent removed. Complied.
25	Caustic pump P-805 A gland was leaking and found formation of crystals in DM Plant area. Floor is getting damaged. It is recommended to arrest the gland leaks.	Gland leak arrested. Complied
26	The LSHS ring main pump oil seal is leaking and found LSHS at the pump (M3 2 A & B) base pumps at DM Plant area. It is recommended to attend the oil seal leak.	Both ring main pump oil seals replaced with new seals. Complied.
27	L-851 LSHS pump discharge pressure gauge was found not working at DM Plant area.	Gauge calibration done and it is working well. Complied.
28	Boiler L-851 (old boiler) water level gauge glass platform was found very congested at DM Plant area It is recommended to extend the platform for safe operation and maintenance jobs.	Platform extension will be reviewed.
29	C-851C IR air compressor Lube oil was found leaking at DM Plant area. It is recommended to attend the lube oil leak.	Oil leak rectified. Complied.
30	Pump's dyke is not provided for all loading pumps to contain spills at Loading Station.	Work is under progress.

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31	All the drain lines dummies were found in open position at Loading Station.	All drain dummies were normalized. Complied
32	P- 806 B pressure gauge drain tubing was found leaking at Loading Station.	Rectified. Complied.
33	No separate sample points provided at Loading Station.	Sample point arranged. Complied
34	Unused power cable was found not dressed at P-806 B pump at Loading Station	Cables dressed. completed.
35	Sample point valve stem was found broken at Loading Station.	Rectified. Complied
36	Blinds found kept open and the product P-807A and B pumps sample points isolation valve stems for broken at Loading Station.	Drain dummies were provided. & broken valve rectified. Complied.
37	J-448 B pump discharge safety valve was found passing at Loading Station.	Rectified. Complied
38	Normal Butyraldehyde pump suction lines jumpers was found missing at Loading Station	Jumpers provided. Complied
39	C0-Rich gas compressors (J-102A, B, C) lube oil leakage observed. Local panel for Compressor J-102 A/B for TAH-653B showing alarm high O/C outlet temperature. J-102A, temperature interlock bypassed (Trip setting is 143 °C) where observed manual temperature gauge reading is 150°C. Impact to be analysed.	<ul style="list-style-type: none"> ▪ Lube oil leaks rectified. ▪ Interlock normalised ▪ Temperature gauge calibrated. ▪ Complied
40	In some of the Chemical vessel in syngas plant, the chemical vessels are not properly tagged with vessel no & service. MSDS also not displayed e.g., in Morpholine & Hydrazine tanks. Pl refer OISD-STD-114.	Details are displayed on the vessels. Complied
41	A checklist for checking incoming TTs are not available with security. A checklist for checking incoming TTs to be made available with security.	Checklist is prepared and made available at security for monitoring the incoming TTs. Complied
42	Head counting system at any instance to be made available. Access control for contract people may also be thought of similar to company employees.	Contract workmen attendance registers available at Time office and Security office. Complied
43	No evidence of medical emergency plan available. It is recommended to develop.	Incorporated in On -Site emergency plan. Complied.
44	The present available ambulance is of 2006 model. It is recommended to procure one ambulance with latest facilities.	We will replace at the earliest.
45	It is recommended to have MOU with the outside hospitals in case of emergency. (Emergency Preparedness)	We have MOU with R K Hospital, Gajuwaka. Complied.
46	The mock drill review points compliances records are to be maintained. (Emergency Preparedness)	Mock drill remarks being recorded. Complied
47	Cable gallery for MRSS & DCS room is Haphazard. Electrical cables joints are on weak points. It was observed that some of cable joints in cable gallery where man cannot access in case of fire. CO2 flooding system to be provided.	Will be provided at the earliest.
48	Fire resistant coating have not been applied for non FRLS cables in gallery. Fire resistant coating to be applied for non FRLS cables in gallery. Electrical cables joints to be made easily available for checking the condition.	We will be reviewed.

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49	UPS-5 I/C SFU (Exhaust fan fixing for VSG panel) was found kept open and electrical work going on simultaneously in the back side near live part. All the safety measures were found not in place as per cold work permit number 57639.	Rectified. Safety precautions are being ensured during the maintenance. Complied
50	Transformer daily record book noted readings for every hour WTI & OT1 temperature although same reading noted in 8 hours shift time. Propre access for taking reading staircase is not available.	Access for taking the readings was provided. Hourly readings are being monitored. Complied.
51	It should be ensured that electrical gloves for 11 KV are tested at least once in six months as per IS or at a frequency recommended by the manufacturers for leak current at prescribed test voltage or are replaced with new ones having valid test certificates.	Old gloves removed and new gloves were arranged. Complied.
52	Gravels have not been spread uniformly in switchyard. Gravels should be spread uniformly in switchyard for meeting touch and step potential and crushed stones to provide a high resistance layer so that it can act as insulation between foot and the ground.	Rectified. Complied
53	132 KV switchyard incoming side Isolator foundation found cracks. Immediate rectification to be done to avoid collapse of equipment or major failure.	Rectified. Complied.
54	2500 KVA UPS load -4 WTI & OTI temperature red pointer is maximum side. Purpose of red pointer is whenever transformer temperature rises, black pointer pushes the red pointer.	Pointer adjustment done. Complied.
55	Distribution Transformer Silica gel breather found outdated. Blue Silica gel has cobalt chloride which allows the blue silica gel to change its colour to pink when it reached maximized absorption capacity. Orange silica gel has methyl violet which is capable of changing from orange to green or orange to colourless. Cobalt chloride is Hazardous. It is recommended for further replacement of new blue silica gel by Orange silica gel for new installations and existing new replacement.	Noted. We will procure orange silica gel for replacement in future.
56	Distribution transformers oil sweating observed. Leakage to be arrested.	Will be attended during next opportunity / Shutdown.
57	Rubbers mats found full of dust. Cleaning of rubber mats needs to be done.	Rectified. Complied.
58	In MRSS control room, smoke detector panel was showing ground fault alarm. It has to be rectified immediately.	Rectified. Complied
59	3.3KV HT panel was found showing rectifier fail, pre-trip alarm. The circuit to be studied and fault to be diagnosed.	Rectified the fault indication. Complied.
60	Smoke detectors are not provided in MRSS UPS battery room. Smoke detectors to be provided in MRSS UPS battery room. Hydrogen detectors was also found not working condition. It should be made functional.	Hydrogen detector problem rectified. Procurement action taken for Smoke detectors installation in battery rooms.
61	Hazardous area classification layout available in the records is not legible to distinguish Zone 0, 1 and 2. This should be corrected and made legible to ensure that the area is classified as per IS 5572.	Will be reviewed.
62	Housekeeping in MRSS room and DG area are in poor condition. Standard housekeeping to be maintained.	Good housekeeping being followed. Complied.

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63	The workman handling lathe machine in general workshop was found not using adequate PPEs. The workmen should use proper PPEs.	Refresher training has been given and ensuring of PPE while working. Complied.
64	Mirrors at blind corners have not been provided to avoid any accidents at all the 5 corners. Mirrors at blind corners may be provided to avoid any accidents at all the 5 corners.	Road safety mirrors are provided. Complied.
65	In occupational health centre housekeeping is poor and hygiene is to be further improved.	Rectified & ensuring hygiene at OHC. Complied.
66	At 01 area -deerator platform railing repair welding job is being carried on. No proper platform was provided. One welder found welding by bending forward in presence of supervisor without any safety belt. There is a trip and fall hazard. It is recommended to train the supervisors to identify the hazards and also to conduct job safety analysis before commencing such jobs.	Refresher training has been arranged and ensuring safety rules at the workplace by the area maintenance incharge. Complied.
67	At 01 area deaerator platform railing repair job, one grinder was found grinding without face shield. It is recommended to provide face shield to the grinders.	Supervisors are being ensured for wearing of face shield at the workplace. Complied.
68	At 06 CO2 removal area eye shower #9 no caps for the eye washers and the valve handle were broken.	Rectified. Complied.
69	At G-103 tank pump P-408B area chain Pulley block without safety latch was anchored to a rope and at the other end of the rope hot work was being carried on.	Unsafe work practice was eliminated, and safe practice is being ensured. Complied.
70	Housekeeping was found poor at Workshop. Housekeeping at Warehouse be well maintained. It is recommended to conduct housekeeping campaign on regular basis.	Good housekeeping is being followed. Complied.
71	It was found that the heavy weight items stored in racks at more than 5'-0" height at Warehouse. It is recommended to keep all the heavy items on the ground level to avoid any incidents during the handling.	Rectified. Complied.
72	One damaged 1-ton wire rope sling and one 2 T x 2 meters web sling were found kept in the rack at Workshop. It is recommended to discard such damaged slings to avoid any further usage. Also, one chain pulley block PV 2385573 B 1 Mt tested on 20.10.2020 and found the safety latch damaged. Safety latches to be ensured	Damaged slings was discarded. Safety latches provided. Complied
73	Housekeeping was found poor at Naphtha unloading area. Standard housekeeping to be maintained.	Good Housekeeping is being maintained. Complied.
74	The floor found damaged in front of computer in laboratory. It is recommended to repair the floor to avoid any trip and fall incidents.	Rectified. Complied
75	Housekeeping in MRSS room and DG area are in poor condition. Standard housekeeping to be maintained.	Rectified. Complied


 (K. NARASAPPA)
 MANAGER OF THE FACTORY