

## HAZOP Review

- Identify the appropriate HAZOP start-date. The plant design should be appropriately ‘frozen’ to reduce the risk of future significant changes that would require a re-HAZOP.
- Assess the HAZOP duration and, for a long review, identify the daily/weekly meeting schedule required to maintaining attendee effectiveness – e.g. 6hr days, 4 days per week.
- Enable the attendees to prepare for the HAZOP by issuing a pack of the relevant documents and drawings before the HAZOP (preferably one week earlier) and allowing them time for familiarisation. The documentation issued to the attendees should include:
  - Terms of Reference / HAZOP Scope/ Node list (**Critical**)
  - Drawings - a set of A3-sized P&IDs for each attendee (**Critical**),
- Provide useful supporting documents to be accessed during the meeting, such as Process Description, plant layout drawings, C&E Chart / Alarm-Trip Schedule, etc.
- Prepare the HAZOP Minutes software/template for this specific meeting and pre-load the available details (attendees list, document/drawing reference numbers, Node descriptions, etc.)

## Identify Attendees

- The attendees should have an appropriate level of decision-making authority for their role in the meeting.
  - Avoid duplication of meeting roles by Contractor/Client/Management/Consultant etc.
  - Full time attendance is only required by those with **Critical** roles
  - Limit number of long-term attendees to 10
- **Facilitator** – this should be a competent person, experienced in the role, familiar with the operation being reviewed and independent of the project team - potentially provided by 3<sup>rd</sup>-party (**Critical** role)
- **Scribe** – a technically competent person, typically resourced locally and dedicated for this role during the HAZOP. They should be familiar with the software to be used to minute the meeting. (**Critical** role)
- **Process** – Contractor or client representative familiar with the plant design details (**Critical** role)
- **Operations** – Client or contractor representative familiar with the plant operation (**Critical** role)
- **Instrument/Control** –process control and trip logic (**Vital** role)
- **Project management** –to provide scope guidance (Useful role)
- **Mechanical, Electrical and other disciplines** to attend part-time (as required)

## Facilities

- Provide a PC/laptop and projector to display the minutes during the meeting. Optionally, provide a second PC/projector to display PDF copies of the P&ID drawings/documents
- Those documents and drawings provided in PDF format should have ‘bookmarks’ and searchable text to aid navigation using a suitable PDF Reader. The PDF Reader used should be able to markup the PDF files to highlight Nodes and add other comments.
  - Alternatively, provide hard-copies of the P&IDs and reference material (including an A1-sized set of P&ID drawings) for display in the room. These will be marked-up with appropriate Nodes and other comments during the HAZOP (see Facilities comments below).
- Provide an appropriately-sized room with table and chairs for each attendee and (where required) with suitable provision for A1-sized P&IDs to be used. Check that the room is not too small or too big. The seating layout should consider that the attendees will be focussing on the screen for extended periods.
- Appropriate pens/pads etc. for the attendees, including a range of coloured highlighters for mark-up of Nodes on the attendee’s P&IDs sets.
- Ensure that lunch and mid-session refreshments are provided for the attendees on each day