

Abnormal Situation Management (ASM)

Abnormal Situation Management ensures a consistent and appropriate approach to preventing and mitigating process upsets, typically requiring operator intervention to either return the process to normal or to prevent further escalation of the upset.

In normal, steady state operations, the Basic Process Control System is sufficient to maintain the plant in a safe state, but once a process upset does occur, operators have several issues:

- How do they identify the abnormal condition?
- Can they understand the cause or causes?
- What are the implications?
- What are the appropriate actions to take, and over what timeframe?

How organization prepare and equip their operators to deal with these difficult and stressful situations is critical to ensuring the return of the plant to a safe state. Many process safety incidents are a result of organizations failing in this area.

ASM is closely linked with Operational Excellence (OE) and within the PTTES OE framework there is a requirement for robust 'Conduct of Operations (COO)' combined with assured 'Operational Discipline (OD)'. COO is the management systems and procedures that are in place and primarily deals with addresses the People, Plant & Processes. Operational Discipline (OD) is how well the COO systems are applied and followed and is associated with organizational and individual behavioral aspects.

Most ASM problems involve both COO and OD issues as the topics are interlinked, see Figure1 for an example of typical areas for attention.

Studies have indicated that abnormal situations can occur daily in large petrochemical facilities.

This means that all plant, in reality, has 2 distinct modes of operation – normal and abnormal.

What do you know about your abnormal operations?

Are you sure Shift 'A' would respond in the same way Shift 'B' and the same way as Shift 'C'?

Are you sure this response is right, and at the right time?



Figure 1 – Example of some ASM Elements

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