



**FACILITY INTEGRITY
TOPSIDES PROCESS INTEGRITY MANAGEMENT SYSTEM**

OPERATOR:

INSPECTION DATE(S):

FACILITY(S):

No	Prompt	Guide Notes	Comments /Status
1	Process Integrity Management Policy		<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Tick one (✓)
1.1	<p>Is there a policy statement, and / or any other record of the arrangements for managing process safety, or is it rolled into the overall SMS?</p> <p>If so, is it adequately defined, communicated and put into practice?</p> <p>Is process integrity adequately included in an SMS improvement programme?</p> <p>What are the facility integrity plans / strategies and performance standards?</p>	<p>A good policy statement, or record of arrangements, would include principles such as:</p> <ol style="list-style-type: none"> 1. policy frame work that is clear and understandable and specific. 2. Should lay down objectives, performance standards and performance indicators. 3. Systems, assets and equipment to be monitored by specific programmes should be clearly identified. 4. The process of validation & verification should be clearly defined. 	



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2	Planning of Process Integrity Management System		<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Tick one (✓)
2.1	What are the facility integrity plans / strategies and performance standards?	1. This may include 2. Vessel Inspections using NDT, UT, Holiday or Radiography at set frequencies 3. Piping and Pipeline inspection plans 4. Haz Area Equipment a annual survey 5. Painting and structural surveys 6. PSV Recalibration 7. Testing Equipment Calibration 8. DCS / Safety System Software Validation 9. Safety Integrity Level Validation	
2.2	How are the various integrity control measures implemented on site?	10. This may be through: 11. Developed procedures 12. Maintenance system job plans and frequencies 13. Maintenance/Inspection Campaigns through contracted services 14. Contingency plans 15. Assurance Plans 16. Performance Standards	



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2.3	Are responsibilities / accountabilities for process integrity adequately defined and allocated between operational and technical functions? How is technical support provided, and how is the adequacy of this support assessed?	17. There should be sufficient resources and expertise in-house or contracted for process safety requirements. 18. Responsibilities for process integrity: 19. should be assigned, and accountability reinforced through job descriptions. 20. should be allocated between operational and technical functions, with a nominated technical custodian for process integrity.	
3	Process Integrity Competence Management		<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Tick one (✓)
3.1	Training content for process personnel What safety-related process-specific training requirements have been defined for process personnel?	Training records should include common general training on: Process-specific equipment Operational procedures Management of Change procedures Techniques for Hazards Analysis and Risk Assessment. Training should be frequent enough to maintain skills and frequencies should be specified. Training records should be maintained and audited for comparison with the schedule.	



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3.2	<p>Training content for other relevant personnel What safety-related process-specific training requirements have been defined for maintenance personnel and others such as contractor organisations?</p>	<p>Training for maintenance personnel in process areas should focus on standard maintenance operations; specific hazardous locations work, equipment-specific or practical techniques etc.</p> <p>Contractor organisations should be provided with process hazard and site-specific information necessary for them to train their employees.</p>	
3.3	<p>Training Responsibilities & Programme Evaluation Who is responsible for developing / validating training material, carrying out training, reviewing needs?</p>	<p>Training effectiveness and competence may be determined by a variety of means, including written / oral testing, demonstrations in the field, random spot-checking, and incident reviews.</p> <p>Training materials may be developed and carried out by internal qualified subject matter experts or external specialist/accreditation organizations.</p>	



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3.4	<p>Competence How is competence established / assured?</p>	<p>Competence includes knowledge, skills, experience, and personal qualities.</p> <p>Training does not guarantee competence, but it contributes towards it; it can be categorised into “general” and “specific” training. General training includes those subjects with which everyone at the facility should be familiar. Specific training covers core or trade skills.</p> <p>Competence assessment of core / trade skills Through leading educational and specialist bodies, such as OPITO and AEITO/ACEPT who set competence criteria on which qualifications can be based.</p> <p>Competence assessment schemes are available for process and maintenance technicians, Many operating companies have formal in-house schemes based on on-the-job training, off-the-job-training, CBTAs and internal assessment criteria.</p>	



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3.5	<p>Identification of basic / underlying causes in process incidents</p> <p>Is there a defined methodology for establishing basic causes?</p> <p>How has this been applied for operator recent process-related incidents?</p>	<p>Process incidents are due to technical system failures or human factors. Of the two, human causes are less discernable, as they are usually rooted deeper in the organisation's design, decision-making, and management functions.</p> <p>Human factor topics of particular relevance to process integrity include:</p> <ul style="list-style-type: none"> ergonomic design of plant, control & alarm systems style and content of operating procedures management of fatigue and shift work shift / crew change communications, and actions intended to establish a positive safety culture, including active monitoring. <p>Investigation procedures should address both immediate and underlying causes, including human factors.</p>	-



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4	Monitoring of process systems and procedures		<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Tick one (✓)
4.1	Arrangements What monitoring arrangements are in place for key risk control procedures?	This may be through active monitoring which utilises an organisation feedback, suggestions, and near-miss reporting on its performance and is perceived as a means of reinforcing positive achievement, not penalising failure after the event. Ascertain if the operator is monitoring the achievement of specific plans and objectives, the application of the SMS, and compliance with performance standards, which should provide a basis for “good” decisions about improvements in risk control and the SMS.	
4.2	Allocation of responsibilities How have responsibilities been allocated between onshore and offshore staff?	Operators usually allocate responsibilities for monitoring at different levels in the management chain, and an appropriate level of detail. In general, managers monitor the achievement of objectives and compliance with standards for which their subordinates are responsible. Managers and supervisors responsible for direct implementation of standards should monitor compliance in detail. Above this immediate level of control, monitoring needs to be more selective, but provide assurance that adequate first line monitoring is taking place.	



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4.3	<p>Content of monitoring programmes Do the formal monitoring arrangements include:</p> <ul style="list-style-type: none"> (a) change control (b) isolation practices (c) control of locked valves (d) control of overrides on process protection systems (e) adequacy of local risk assessments etc.? 	<p>Clarify what the operator has in place, noting that various forms and levels of active monitoring may include:</p> <ul style="list-style-type: none"> examination of work and behaviour systematic examination of premises, plant and equipment by managers, supervisors, HSR's, or other employees to ensure continued operation of workplace risk precautions the operation of audit systems routine monitoring of progress towards specific objectives e.g. training / competence assurance objectives. <p>Many of these topics are not specific to process integrity, but are equally applicable to all areas.</p> <p>Topics which are of particular relevance to process integrity, however, include: Permit to Work Systems, isolation standards, change control, HAZOP close out, procedural controls for process plant protection systems, controls at HP / LP interfaces, operating procedures, workplace risk assessments etc.</p>	



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4.4	Records What records are kept, how are the results reviewed, and actions implemented?	Collect samples of these records and analyse to evaluate usefulness / relevance to effective process integrity. Some examples of records are listed below: Inspection plans Inspection Reports and their close-outs Work Orders Job Details/Plans Written Schemes of Examination Audit Checklists Etc	
4.5	Procedures What integrity assessment procedures and guidelines are in place?	Relevant procedures and documentation may include Well Integrity Manual Pressure Integrity Manual Subsea Flowline Integrity Manual Corrosion Integrity Manual Structural Integrity Manual Small Bore Piping Integrity manual Critical Function Testing Management Manual Electrical Integrity Manual Fire and Safety Systems Integrity Manual Mechanical Integrity Manual Lifting Equipment Manual Training & Competency Manuals	



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5	Audit and review of process plant and management systems		<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> Tick one (✓)
5.1	Audit scope How is process integrity catered for in the audit programme?	<p>Auditing is the structured process of collecting independent information on the efficiency, effectiveness, and reliability of the total SMS, and drawing up plans for corrective action.</p> <p>Auditing supports monitoring by providing managers with information on how effectively the SMS is being implemented. Auditing frequencies vary and often carried out annually or longer.</p> <p>Auditing is aimed at ensuring that appropriate management arrangements are in place, adequate risk control systems are implemented, and workplace precautions are in place.</p> <p>Various methods can achieve this, and some parts of the system do not need to be audited as often as others. Broad categories available are:</p> <p>Process safety auditing, which focuses on specific hazards (e.g. hardware systems).</p> <p>SMS auditing, which involves assessment and verification of the management systems that ensure ongoing control (e.g. the management systems in place to ensure that pressure relief devices have been designed, installed, operated, and maintained in accordance with company standards).</p>	



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5.2	Audit implementation What process management audits have been carried out in the past 3 years, and how have they been organised?	Aim to form a judgement on the adequacy of these audits	
5.3	Review of audits How are process-related audits and monitoring activities reviewed, and improvement programmes developed?	Reviewing should be based on information from measuring (i.e. active and reactive monitoring) and auditing activities. Operators should clarify how their process integrity programs are included in their review process. In all reviewing activities, the results should be specific remedial actions which establish who is responsible for implementation, and set deadlines for completion.	
5.4	Reviews of process plant What reviews have been carried out of process plant against current standards?	As standards change, it is a good practice to review the adequacy of existing plant against current standards from time to time (say every 5 years).	



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5.5	<p>Audit and Review</p> <p>What arrangements are in place to review the effectiveness of the facility integrity management system?</p> <p>What audits of the facility integrity management system have been undertaken?</p> <p>Have recommendations arising from audits and reviews been implemented?</p>	<p>Review should include evaluation of the effectiveness of existing equipment and techniques, and an evaluation of the benefits to be gained by adopting newer equipment and improved techniques, such as</p> <p>Periodic audits and Opportunistic inspection Regular checks on data gathering activities of Corrosion Monitoring Loss of Containment incidents Monitoring of SCE Performance including Hazardous Area Equipment Surveys Monitoring Maintenance effectiveness, SCE Breakdown and CFT Backlog Checks on quality of inspection report Supervision of non destructive inspection activities Fault analysis and reporting Audits scheduling and planning</p>	

Legend:



- complies



- partially complies (incomplete system)



- non compliance (major failing or Key elements missing)



- Not Tested / No Evidence

(Please send the completed prompt sheets to T3 EA with 3 good practices and 3 practices with deficiencies/major failures)

INSPECTION CARRIED OUT BY:

Name:

Signature:.....