Base Load Power Hub (BLPH)

Master Alarm Database

Document Number: 123A90-DDL-IN-LIS-40027

Document Class: Class 2

Rev.	Date	Description	Prepared	Reviewed	Approved
03	04/08/2025	Accepted for Construction (AFC)	DCA	LCA	CGI
02	04/03/2025	Accepted for Construction (AFC)	DCA	LCA	DLO
01	30/09/2024	Accepted for Construction (AFC)	DCA	LCA	DLO
00	07/08/2024	Issue for Review (IFR)	DCA	LCA	DLO

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13	Master Alarm Database - Workshop	X	X	X	X				
14	Master Alarm Database - Workshop	X	X	X	X				
15	Master Alarm Database - Workshop	X	X	X	X				
16	Master Alarm Database - Workshop	X	X	X	X				
17	Master Alarm Database - Workshop	X	X	X	X				
18	Master Alarm Database - Workshop	X	X	X	X				
19	Master Alarm Database - Workshop	X	X	X	X				
20	Master Alarm Database - Workshop	X	X	X	X				
21	Master Alarm Database - Workshop	X	X	X	X				
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32	Master Alarm Database - Workshop	X	X	X	X				
33	Master Alarm Database - Workshop	X	X	X	X				
34	Master Alarm Database - Workshop	X	X	X	X				
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39	Master Alarm Database - Workshop	X	X	X	X				
40	Master Alarm Database - Workshop	X	X	X	X				
41	Master Alarm Database - Workshop	X	X	X	X				
42	Master Alarm Database - Workshop	X	X	X	X				
43	Master Alarm Database - Workshop	X	X	X	X				
44	Master Alarm Database - Workshop	X	X	X	X				
45	Master Alarm Database - Workshop	X	X	X	X				
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69	Master Alarm Database - Workshop	X	X	X	X				
70	Master Alarm Database - Workshop	X	X	X	X				
71	Master Alarm Database - Workshop	X	X	X	X				

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		00	01	02	03				
72	Workshop - Action Close-Out			X	X				
73	Workshop - Action Close-Out			X	X				
74	Attribute Descriptions	X	X	X	X				
75	Attribute Descriptions	X	X	X	X				
76	Attribute List of Values	X	X	X	X				
77	Attribute List of Values	X	X	X	X				
78	Attribute Units of Meas	X	X	X	X				
79	Attribute Units of Meas	X	X	X	X				
80	Attribute Units of Meas	X	X	X	X				
81	Attribute Units of Meas	X	X	X	X				

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Revision / Change Log

Rev.	Description
00	ISSUE FOR REVIEW (IFR)
01	ACCEPTED FOR CONSTRUCTION (AFC)
02	ACCEPTED FOR CONSTRUCTION (AFC)
03	ACCEPTED FOR CONSTRUCTION (AFC)

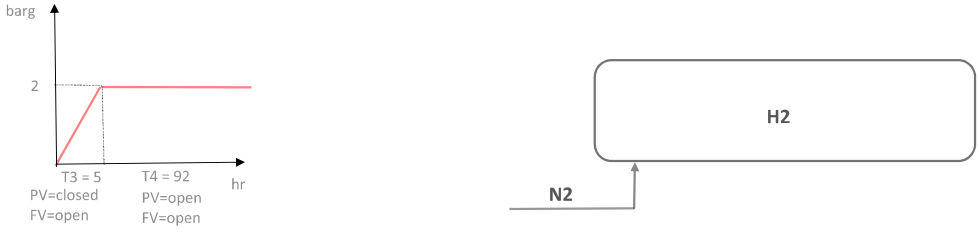
HOLDS LIST

No.	Description
1.	Deleted
2.	High alarm threshold 55-LT-001 has been added and shall be categorized
3.	Deleted
4.	Low and High alarm threshold for ultrasonic H2 detectors shall be defined during commissioning
5.	High alarm threshold for manual call point (MFA, ASD, ESDD, ESD, MOB) shall be defined during commissioning
6.	Deleted
7.	Set point 3.8 of fault alarm shall be confirmed during commissioning

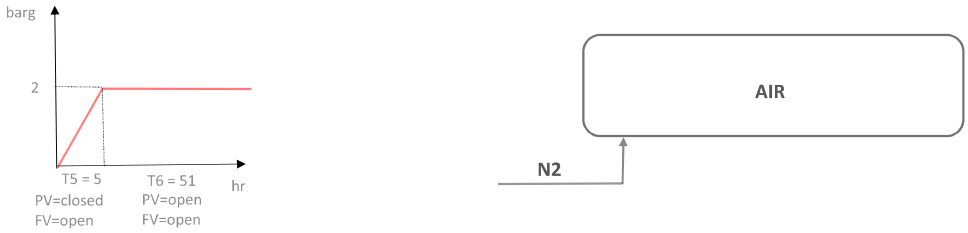
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Notes

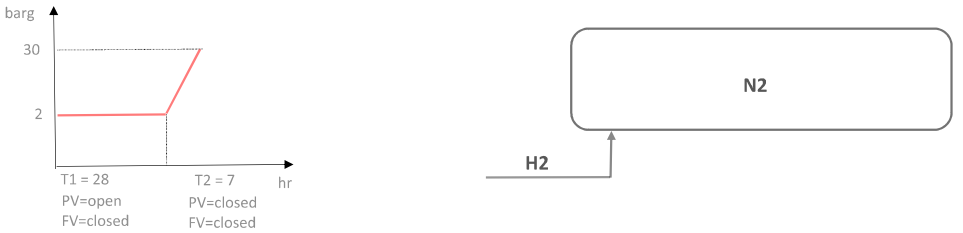
1) PURGING MODE AFTER SHUTDOWN (H2 DISPLACEMENT)



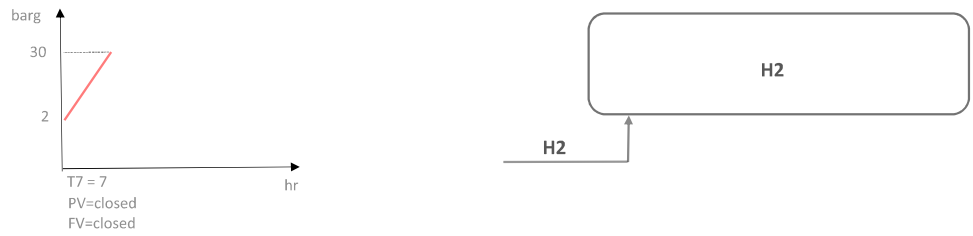
2) PURGING MODE AFTER MAINTENANCE (AIR DISPLACEMENT)



3) PROCESS START-UP CHARGING MODE

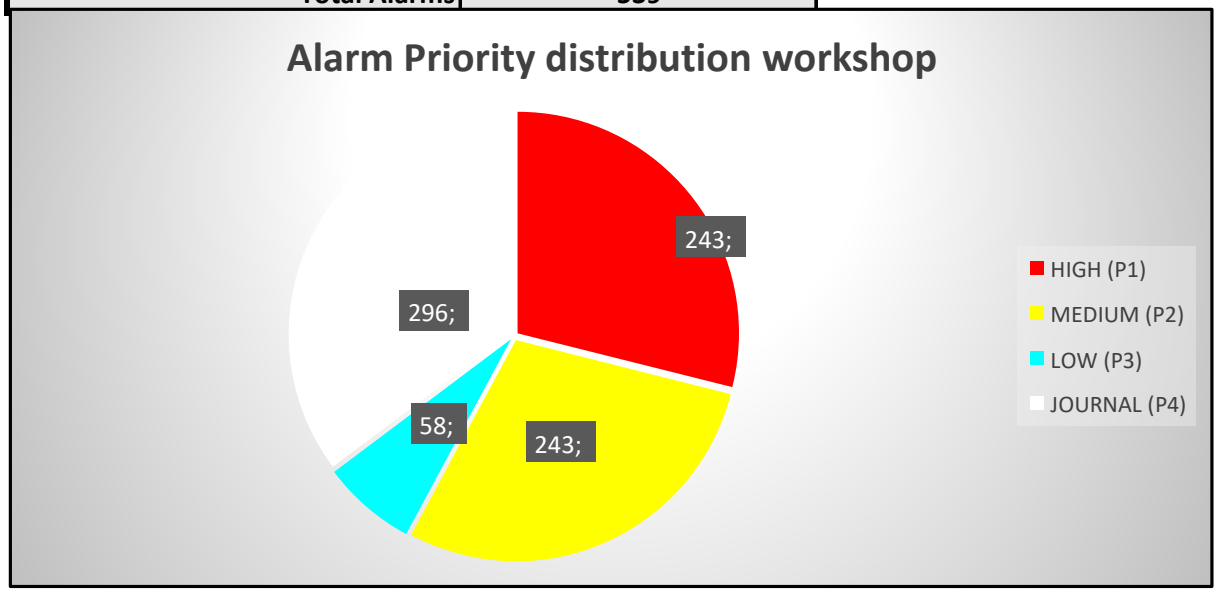


4) PROCESS CHARGING MODE



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Alarm Priority summary workshop			IEC 62682:2022
Alarm Priority	**Number of alarms**	**Alarm Priority Distribution**	**Alarm Priority Distribution**
HIGH (P1)	**243**	**29%**	**5%**
MEDIUM (P2)	**243**	**29%**	**15%**
LOW (P3)	**58**	**7%**	**85%**
JOURNAL (P4)	**296**	**35%**	
Total Categorised	**840**	**100%**	
Total Alarms	**539**		



Workshop Attendees

Attendance List			
Project Name: Base Load Power Hub (BLPH) PROJECT	Date: 05/11/2024	Location: Rosetti Marino (MI)	
Name	Discipline	Company	Signature
HAMANT PATEL	PROCESS	CW.	
STEPHEN BREMMER	Package Lead	CW	
Marta Imondi	Project Engineer	cw	
CLAUDIA GIUNCHI	PROJ. ENG	ROS	
LOREDANA CALABRESE	INSTR.	ROS	
EUNICE LOW	OPERATIONS	CW	(ONLINE)
JAMIE McALLISTER	OPERATIONS	CW	(ONLINE)
EDWIN KLOM	ELECTRICAL ARCHITECTUR / OP	CW	(ONLINE)
PAUL WILLIAMSON	C&I	CW	
PHILIP ROBINSON	INSTRUMENT	CW.	
Mischa Tolsma	Operations	Shell / CW	

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Variable Entity Name	Status	Facilitator note	Description	PEFS	Purpose of Measurement	ESP Notification Type	Trip Point Value	Proposed ESP Priority	Priority Rational	Reason for Value	Potential Impact	Inside Operator Action	Outside Operator Action	Escalation/Notification
Tag name or Tag nur Progress tracker (% completion)	Status in	(optional) Temporary note using during ISU	Short description, should	PEFS or P&ID document numbe	Why is this variable measured? (to measure,	Standardized n	Limit at	Priority of t	Why has the alarm priorit	Reason for setting the limit at its specific value. For example, 'wi	Describe what will happen if limit is exceeded / if o	Actions the operator must take to bring a variable back to within it normal op	Actions the operator must take to bring a variable back to withi	Support that the operator can call in to bring a variable back to
20-XA-001	Propose d		A-20000 Electrolyser PKG confirmed gas alarm -	P&ID (123A90-DDL-PR-PID-80011)	To activate ESD-1D on H2 gas detection in A-20000 Electrolyser package	GAS_HI_CONF		P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
20-XA-001	Propose d	Bad_Input_F&G	A-20000 Electrolyser PKG confirmed gas alarm -	P&ID (123A90-DDL-PR-PID-80011)	To activate ESD-1D on H2 gas detection in A-20000 Electrolyser package	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
20-XS-001	Propose d	Bad_Output_Channel	SHUT-DOWN A-20000 Electrolyser PKG	P&ID (123A90-DDL-PR-PID-80011)	To shutdown A-20000 Electrolyser package	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
20-XA-002	Propose d	Bad_Input_F&G	A-20000 Electrolyser PKG confirmed smoke alarm -	P&ID (123A90-DDL-PR-PID-80011)	To activate ESD-1D on smoke detection in A-20000 Electrolyser package	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
20-XA-002	Propose d		A-20000 Electrolyser PKG confirmed smoke alarm -	P&ID (123A90-DDL-PR-PID-80011)	To activate ESD-1D on smoke detection in A-20000 Electrolyser package	SMOKE_CONF		P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
20-XA-003	In progress	trip	A-20000 Electrolyser PKG Fault	P&ID (123A90-DDL-PR-PID-80011)	To notify on electrolyser package trip	DISC					No consequences because the safety logic will activate: 1. Electrolyzer package shutdown 2. Water treatment package shutdown 3. Sea water pumps P-50001A/B shutdown	1. Operator can: 2. Check sis graphic, sis cause and effec. 3. Confirm all sis initiated actions are complete as per cause and effects matrix. 4. Take necessary actions as per site emergency response plan. 5. Monitor process conditions.		
20-XA-003	Propose d	Bad_Input_Trip	A-20000 Electrolyser PKG Fault	P&ID (123A90-DDL-PR-PID-80011)	To notify on electrolyser package trip	IO_FAIL		P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
25-BDV-005	Propose d	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-005 - Vessel V-25001A Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80015)	To alarm on blown down valve position discrepancy - Vessel V-25001A	DISCRP		P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.		
25-BDY-005	Propose d	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-005 solenoid - Vessel V-25001A Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80015)	To monitor blown down valve solenoid failure - Vessel V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance		
25-ZAH-005	Propose d	check afterwards if shouldn't be P3	V-25001A BlowDown Open	P&ID (123A90-DDL-PR-PID-80015)	To notify of incorrect opening of blowdown valve	DISC		P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.		
25-ZSH-005	Propose d	Bad_Valve_Open_BDV	BDV valve 25-BDV-005 open position - Vessel V-25001A Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80015)	To monitor blown down valve position - Vessel V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
25-ZSL-005	Propose d	Bad_Valve_Close_BDV	BDV valve 25-BDV-005 closed position - Vessel V-25001A Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80015)	To monitor blown down valve position - Vessel V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		
25-BDV-007	Propose d	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-007 - Vessel V-25001B Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80016)	To alarm on blown down valve position discrepancy - Vessel V-25001B	DISCRP		P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.		
25-BDY-007	Propose d	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-007 solenoid - Vessel V-25001B Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80016)	To monitor blown down valve solenoid failure - Vessel V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance		
25-ZAH-007	Propose d		V-25001B BlowDown Open	P&ID (123A90-DDL-PR-PID-80016)	To notify of incorrect opening of blowdown valve	DISC		P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.		
25-ZSH-007	Propose d	Bad_Valve_Open_BDV	BDV valve 25-BDV-007 open position - Vessel V-25001B Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80016)	To monitor blown down valve position - Vessel V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
25-ZSL-007	Propose d	Bad_Valve_Close_BDV	BDV valve 25-BDV-007 closed position- Vessel V-25001B Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80016)	To monitor blown down valve position - Vessel V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		
25-BDV-010	Propose d	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-010 - Vessel V-25001C Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80017)	To alarm on blown down valve position discrepancy - Vessel V-25001C	DISCRP		P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.		
25-BDY-010	Propose d	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-010 solenoid - Vessel V-25001C Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80017)	To monitor blown down valve solenoid failure - Vessel V-25001C	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance		
25-ZAH-010	Propose d		V-25001C BlowDown Open	P&ID (123A90-DDL-PR-PID-80017)	To notify of incorrect opening of blowdown valve	DISC		P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.		

25-ZSH-010	Proposed	Bad_Valve_Open_BDV	BDV valve 25-BDV-010 open position - Vessel V-25001C Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80017)	To monitor blown down valve position - Vessel V-25001C	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-010	Proposed	Bad_Valve_Close_BDV	BDV valve 25-BDV-010 closed position- Vessel V-25001C Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80017)	To monitor blown down valve position - Vessel V-25001C	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-BDV-013	Proposed	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-013 - Vessel V-25001D Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80018)	To alarm on blown down valve position discrepancy - Vessel V-25001D	DISCRP	P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-BDY-013	Proposed	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-013 solenoid - Vessel V-25001D Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80018)	To monitor blown down valve solenoid failure - Vessel V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance
25-ZAH-013	Proposed		V-25001D BlowDown Open	P&ID (123A90-DDL-PR-PID-80018)	To notify of incorrect opening of blowdown valve	DISC	P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH-013	Proposed	Bad_Valve_Open_BDV	BDV valve 25-BDV-013 open position - Vessel V-25001D Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80018)	To monitor blown down valve position - Vessel V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-013	Proposed	Bad_Valve_Close_BDV	BDV valve 25-BDV-013 closed position - Vessel V-25001D Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80018)	To monitor blown down valve position - Vessel V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-BDV-016	Proposed	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-016 - Vessel V-25001E Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80019)	To alarm on blown down valve position discrepancy - Vessel V-25001E	DISCRP	P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-BDY-016	Proposed	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-016 solenoid - Vessel V-25001E Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80019)	To monitor blown down valve solenoid failure - Vessel V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance
25-ZAH-016	Proposed		V-25001E BlowDown Open	P&ID (123A90-DDL-PR-PID-80019)	To notify of incorrect opening of blowdown valve	DISC	P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH-016	Proposed	Bad_Valve_Open_BDV	BDV valve 25-BDV-016 open position - Vessel V-25001E Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80019)	To monitor blown down valve position - Vessel V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-016	Proposed	Bad_Valve_Close_BDV	BDV valve 25-BDV-016 closed position - Vessel V-25001E Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80019)	To monitor blown down valve position - Vessel V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-BDV-019	Proposed	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-019 - Vessel V-25001F Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80020)	To alarm on blown down valve position discrepancy - Vessel V-25001F	DISCRP	P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-BDY-019	Proposed	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-019 solenoid - Vessel V-25001F Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80020)	To monitor blown down valve solenoid failure - Vessel V-25001F	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance
25-ZAH-019	Proposed		V-25001F BlowDown Open	P&ID (123A90-DDL-PR-PID-80020)	To notify of incorrect opening of blowdown valve	DISC	P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH 019	Proposed	Bad_Valve_Open_BDV	BDV valve 25-BDV-019 open position - Vessel V-25001F Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80020)	To monitor blown down valve position - Vessel V-25001F	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-019	Proposed	Bad_Valve_Close_BDV	BDV valve 25-BDV-019 closed position- Vessel V-25001F Hydrogen vent system	P&ID (123A90-DDL-PR-PID-80020)	To monitor blown down valve position - Vessel V-25001F	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-BDV-022	Proposed	Bad_Valve_Disrp_BDV	BDV valve 25-BDV-022 - Hyrogen from vessels outlet header vent system	P&ID (123A90-DDL-PR-PID-80014)	To alarm on blown down valve position discrepancy - Header Vent	DISCRP	P4 - Alert	dg4b - Target alert for SCE fail-safe without demand	1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Blow down valve open without demand - loss of H2 to vent	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-BDY-022	Proposed	Bad_Valve_Solenoid_BDV	BDV valve 25-BDV-022 solenoid - Hyrogen from vessels outlet header vent system	P&ID (123A90-DDL-PR-PID-80014)	To monitor blown down valve solenoid failure - Header Vent	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Incorrect opening: vent H2 dispertion. Cause: 1. Loss of channel redundancy 2. Loss of both channels - leading to BDV opening	Potential blow down valve open without demand	1. Inform maintenance
25-ZAH-022	Proposed		H2 Storage BlowDown Open	P&ID (123A90-DDL-PR-PID-80014)	To notify of incorrect opening of blowdown valve	DISC	P4 - Alert	t4e minor: maintenance follow up required	Alarm on incorrect BDV opening (BDV failure, or loss of instrument air) Note - there is flow measurement on vent system Alarm does not active for: 1. ASD activation 2. ESD-1D activation	Blowdown valve 25-BDV-022 has failed open and will vent hydrogen	1. Try manually closing the valve 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH-022	Proposed	Bad_Valve_Open_BDV	BDV valve 25-BDV-022 open position - Hyrogen from vessels outlet header vent system	P&ID (123A90-DDL-PR-PID-80014)	To monitor blown down valve position - Header Vent	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-022	Proposed	Bad_Valve_Close_BDV	BDV valve 25-BDV-022 closed position - Hyrogen from vessels outlet header vent system	P&ID (123A90-DDL-PR-PID-80014)	To monitor blown down valve position - Header Vent	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect valve opening is apparent from H2 vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance

25-FT-031	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To control nitrogen purge flow - V-25001A	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance
25-FV-031	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-031 - Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001A vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-FY-031	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-031 positioner - Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To control valve position - Nitrogen purge to V-25001A vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSH-031	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-031 open position - Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - Nitrogen purge to V-25001A vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSL-031	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-031 closed position - Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - Nitrogen purge to V-25001A vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance
25-ZT-031	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-031 position transmitter- Nitrogen to V-25001A vessel	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - Nitrogen purge to V-25001A vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-FT-032	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To control nitrogen purge flow - V-25001B	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance
25-FV-032	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-032- Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001B vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-FY-032	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-032 positioner - Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To control valve position - Nitrogen purge to V-25001B vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSH-032	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-032 open position - Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - Nitrogen purge to V-25001B vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSL-032	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-032 closed position - Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - Nitrogen purge to V-25001B vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance
25-ZT-032	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-032 position transmitter - Nitrogen to V-25001B vessel	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - Nitrogen purge to V-25001B vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-FT-033	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To control nitrogen purge flow - V-25001C	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance
25-FV-033	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-033 - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001C vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-FY-033	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-033 positioner - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To control valve position - Nitrogen purge to V-25001C vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSH-033	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-033 open position - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - Nitrogen purge to V-25001C vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSL-033	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-033 closed position - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - Nitrogen purge to V-25001C vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance
25-ZT-033	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-033 position transmitter - Nitrogen to V-25001C vessel	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - Nitrogen purge to V-25001C vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance
25-FT-034	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To control nitrogen purge flow - V-25001D	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance
25-FV-034	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-034 - Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001D vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-FY-034	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-034 positioner- Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To control valve position - Nitrogen purge to V-25001D vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance
25-ZSH-034	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-034 open position - Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - Nitrogen purge to V-25001D vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance

25-ZSL-034	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-034 open position - Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - Nitrogen purge to V-25001D vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance		
25-ZT-034	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-034 position transmitter-Nitrogen to V-25001D vessel	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - Nitrogen purge to V-25001D vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance		
25-FT-036	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To control nitrogen purge flow - V-25001E	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance		
25-FV-036	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-036 - Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001E vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.		
25-FY-036	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-036 positioner - Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To control valve position - Nitrogen purge to V-25001E vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance		
25-ZSH-036	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-036 open position - Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - Nitrogen purge to V-25001E vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance		
25-ZSL-036	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-036 closed position - Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - Nitrogen purge to V-25001E vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance		
25-ZT-036	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-036 position transmitter-Nitrogen to V-25001F vessel	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - Nitrogen purge to V-25001E vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance		
25-FT-038	Proposed	Bad_Input_Control	Flow measure - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To control nitrogen purge flow - V-25001F	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	Loss of nitrogen flow control - unable to purge vessel or provide purge flow totalization 1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Isolate hydrogen storage vessel (unable to confirm N2 purge success) 2. Inform maintenance		
25-FV-038	Proposed	Bad_Valve_Disrp_N2toHydrStor	Control Valve 25-FV-038 - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To alarm on nitrogen purge valve position discrepancy - Nitrogen to V-25001F vessel	DISCRP		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Not closed on demand: potential H2 backflow is prevented with this FCV, a non-return valve and a combined SDV on the nitrogen purge supply. Not open: purge failure is monitored by purge sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: potential H2 backflow to nitrogen header; Not open: no nitrogen purge	1. If required, attempt to close valve manually. 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.		
25-FY-038	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-FV-038 positioner - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To control valve position - Nitrogen purge to V-25001F vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Loss of control will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen purge	1. Inform maintenance		
25-ZSH-038	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-FV-038 open position - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - Nitrogen purge to V-25001F vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential inability to use nitrogen purge	1. Inform maintenance		
25-ZSL-038	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-FV-038 closed position - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - Nitrogen purge to V-25001F vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring; potential inability to monitor backflow risk (valve not closed alarm) or inability to use nitrogen purge	1. Inform maintenance		
25-ZT-038	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-FV-038 position transmitter - Nitrogen to V-25001E vessel	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - Nitrogen purge to V-25001F vessel	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen purge	1. Inform maintenance		
25-PT-001	Proposed		H2 Storage Inlet Pres	P&ID (123A90-DDL-PR-PID-80013)	To monitor hydrogen storage vessel inlet pressure	HI	33	P4 - Alert	t4a minor: Pre-trip alert for RAM Yellow Asset hazard	Pressure is limited on maximum electrolyser discharge pressure (PSV set at 36 barg) Cause: Blocked discharge toward all six hydrogen storage vessels High pressure from electrolyser	Potential PSD on high high inlet pressure which will prevent charging the hydrogen storage vessels	1. Check XV's to hydrogen vessel that are charging 2. Check electrolyser package operation / discharge pressure 3. Inform maintenance/intervention team.		
25-PT-001	Proposed	Bad_Input_Monitoring	H2 Storage Inlet Pres	P&ID (123A90-DDL-PR-PID-80013)	To monitor hydrogen storage vessel inlet pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
25-PI001_002	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-001 and 25-PI-002 - Hydrogen Storage Vessel (inlet) Press	P&ID (123A90-DDL-PR-PID-80013)	To monitor deviation between 25-PI-001 and 25-PI-002 - Hydrogen Storage Vessel (inlet) Press	DEV	± 2.5	P4 - Alert	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	No process safety impact - design pressure is higher than electrolyzer max. supply pressure. 1. Loss of monitoring functionality (for 25-PI-001 fault) 2. Loss of safety functionality (for 25-PI-002 fault): as per hazop action 1.7, in case of high pressure there are the following consequences: - 36 barg (set point of PSV on electrolyser) H2 from electrolyser. - design pressure of storage system is 40 barg, no hazardous consequences.	Potential spurious trip due to faulty high reading on 25-PI-002	1. Check if 25-PI-002 is reading incorrectly high - consider override if incorrect. 2. Inform maintenance of discrepancy between control and trip transmitter		
25-PT-002	Proposed		H2 Storage Inlet Pres	P&ID (123A90-DDL-PR-PID-80013)	To activate PSD on high high hydrogen storage vessel inlet pressure	HI_HI	36	P4 - Alert	t4d minor: Trip with no significant impact	Pressure is limited on maximum electrolyser discharge pressure (PSV set at 36 barg) PSD activation: Close 25-SDV-001 on H2 header to storage tanks, shutdown electrolyzer package A-20000, shutdown seawater lift pump P-50001A, shutdown seawater lift pump P-50001B Cause: Blocked discharge toward all six hydrogen storage vessels High pressure from electrolyser	PSD has occurred on high high inlet pressure which will prevent charging the hydrogen storage vessels	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Check XV's to hydrogen vessel that are charging 3. Check electrolyser package operation / discharge pressure 4. Inform maintenance/intervention team.		
25-PT-002	Proposed	Bad_Input_Trip	H2 Storage Inlet Pres	P&ID (123A90-DDL-PR-PID-80013)	To activate PSD on high high hydrogen storage vessel inlet pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
25-PT-002_MOS	MOS Repeat		25-PT-002 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
25-PT-002_MOS ACTIVE	Proposed		25-PT-002 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		

25-PT-004	Proposed		V-25001A Pressure	P&ID (123A90-DDL-PR-PID-80015)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.	
25-PT-004	Proposed	Bad_Input_Trip	V-25001A Pressure	P&ID (123A90-DDL-PR-PID-80015)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
25-PT-004_MOS	MOS Repeat		25-PT-004 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
25-PT-004_MOS ACTIVE	Proposed		25-PT-004 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
25-PI004_035	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-004 and 25-PI-035 - Hydrogen Storage Vessel A V-25001A Press	P&ID (123A90-DDL-PR-PID-80015)	To monitor deviation between 25-PI-004 and 25-PI-035 - Hydrogen Storage Vessel A V-25001A Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-035 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-004 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-004	1. Compare transmitters to determine of purge was successful - 25-PI-035 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-004 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter	
25-PT-006	Proposed		V-25001B Pressure	P&ID (123A90-DDL-PR-PID-80016)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.	
25-PT-006	Proposed	Bad_Input_Trip	V-25001B Pressure	P&ID (123A90-DDL-PR-PID-80016)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
25-PT-006_MOS	MOS Repeat		25-PT-006 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
25-PT-006_MOS ACTIVE	Proposed		25-PT-006 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
25-PI006_037	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-006 and 25-PI-037 - Hydrogen Storage Vessel B V-25001B Press	P&ID (123A90-DDL-PR-PID-80016)	To monitor deviation between 25-PI-006 and 25-PI-037 - Hydrogen Storage Vessel B V-25001B Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-037 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-006 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-006	1. Compare transmitters to determine of purge was successful - 25-PI-037 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-006 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter	
25-PT-008	Proposed		V-25001C Pressure	P&ID (123A90-DDL-PR-PID-80017)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.	
25-PT-008	Proposed	Bad_Input_Trip	V-25001C Pressure	P&ID (123A90-DDL-PR-PID-80017)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
25-PT-008_MOS	MOS Repeat		25-PT-008 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
25-PT-008_MOS ACTIVE	Proposed		25-PT-008 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
25-PI008_040	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-008 and 25-PI-040 - Hydrogen Storage Vessel C V-25001C Press	P&ID (123A90-DDL-PR-PID-80017)	To monitor deviation between 25-PI-008 and 25-PI-040 - Hydrogen Storage Vessel C V-25001C Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-040 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-008 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-008	1. Compare transmitters to determine of purge was successful - 25-PI-040 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-008 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter	
25-PT-009	Proposed		V-25001D Pressure	P&ID (123A90-DDL-PR-PID-80018)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.	
25-PT-009	Proposed	Bad_Input_Trip	V-25001D Pressure	P&ID (123A90-DDL-PR-PID-80018)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
25-PT-009_MOS	MOS Repeat		25-PT-009 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
25-PT-009_MOS ACTIVE	Proposed		25-PT-009 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

25-PI009_043	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-009 and 25-PI-043 - Hydrogen Storage Vessel D V-25001D Press	P&ID (123A90-DDL-PR-PID-80018)	To monitor deviation between 25-PI-009 and 25-PI-043 - Hydrogen Storage Vessel D V-25001D Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-043 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-009 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-009	1. Compare transmitters to determine of purge was successful - 25-PI-043 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-009 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter		
25-PT-011	Proposed		V-25001E Pressure	P&ID (123A90-DDL-PR-PID-80019)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.		
25-PT-011	Proposed	Bad_Input_Trip	V-25001E Pressure	P&ID (123A90-DDL-PR-PID-80019)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
25-PT-011_MOS	MOS Repeat		25-PT-011 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
25-PT-011_MOS ACTIVE	Proposed		25-PT-011 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
25-PI011_046	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-011 and 25-PI-046 - Hydrogen Storage Vessel E V-25001E Press	P&ID (123A90-DDL-PR-PID-80019)	To monitor deviation between 25-PI-011 and 25-PI-046 - Hydrogen Storage Vessel E V-25001E Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-046 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-011 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-011	1. Compare transmitters to determine of purge was successful - 25-PI-046 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-011 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter		
25-PT-012	Proposed		V-25001F Pressure	P&ID (123A90-DDL-PR-PID-80020)	To activate ESD-1D on high high hydrogen storage vessel pressure	HI_HI	38	P4 - Alert	t4d minor: Trip with no significant impact	Protect vessel against overpressurization during fire scenario Vessel cannot be overpressurized by upstream electrolyser ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	ESD-1D depressurization on high high pressure to prevent LOPC during fire	1. Monitor BLHP depressurization 2. Follow site emergency response plan for fire scenario 3. Confirm all SIS initiated actions are complete as per cause and effects matrix. 4. Inform maintenance/intervention team.		
25-PT-012	Proposed	Bad_Input_Trip	V-25001F Pressure	P&ID (123A90-DDL-PR-PID-80020)	To activate ESD-1D on high high hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
25-PT-012_MOS	MOS Repeat		25-PT-012 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
25-PT-012_MOS ACTIVE	Proposed		25-PT-012 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
25-PI012_049	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-012 and 25-PI-049 - Hydrogen Storage Vessel F V-25001F Press	P&ID (123A90-DDL-PR-PID-80020)	To monitor deviation between 25-PI-012 and 25-PI-049 - Hydrogen Storage Vessel F V-25001F Press	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	Consequences: 1. Loss of control functionality during process charging/discharging and purging modes (for 25-PI-049 fault). The relative logics managed the process in automatic mode. 2. Loss of safety functionality (for 25-PI-012 fault): as per hazop action 1.7, in case of high pressure there are the following safeguards: - pressure safety valve designed for fire case - F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential incorrect purging; Potential spurious trip due to faulty high reading on 25-PI-012	1. Compare transmitters to determine of purge was successful - 25-PI-049 reliable 2. If unsuccessfull, consider shutting in hydrogen storage vessel 3. Check if 25-PI-012 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter		
25-PT-035	Proposed	Bad_Input_Monitoring	V-25001A Pressure	P&ID (123A90-DDL-PR-PID-80015)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
25-PT-035	Proposed		V-25001A Pressure	P&ID (123A90-DDL-PR-PID-80015)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.		
25-PT-035	Proposed		V-25001A Pressure	P&ID (123A90-DDL-PR-PID-80015)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.		
25-PV-035	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-035 -Vessel V-25001A	P&ID (123A90-DDL-PR-PID-80015)	To alarm on control valve position discrepancy - V-25001A Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance		
25-PY-035	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-035 positioner -Vessel V-25001A	P&ID (123A90-DDL-PR-PID-80015)	To control valve position - V-25001A Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance		
25-ZSH-035	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-035 open position - Vessel V-25001A	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - V-25001A Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
25-ZSL-035	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-035 closed position - Vessel V-25001A	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - V-25001A Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		

25-ZT-035	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-035 position transmitter - Vessel V-25001A	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - V-25001A Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-PT-037	Proposed	Bad_Input_Monitoring	V-25001B Pressure	P&ID (123A90-DDL-PR-PID-80016)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance
25-PT-037	Proposed		V-25001B Pressure	P&ID (123A90-DDL-PR-PID-80016)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.
25-PT-037	Proposed		V-25001B Pressure	P&ID (123A90-DDL-PR-PID-80016)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.
25-PV-037	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-037 -Vessel V-25001B	P&ID (123A90-DDL-PR-PID-80016)	To alarm on control valve position discrepancy - V-25001B Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance
25-PY-037	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-037 positioner - Vessel V-25001B	P&ID (123A90-DDL-PR-PID-80016)	To control valve position - V-25001B Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-ZSH-037	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-037 open position - Vessel V-25001B	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - V-25001B Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-037	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-037 closed position - Vessel V-25001B	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - V-25001B Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-037	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-037 position transmitter - Vessel V-25001B	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - V-25001B Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-PT-040	Proposed	Bad_Input_Monitoring	V-25001C Pressure	P&ID (123A90-DDL-PR-PID-80017)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance
25-PT-040	Proposed		V-25001C Pressure	P&ID (123A90-DDL-PR-PID-80017)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.
25-PT-040	Proposed		V-25001C Pressure	P&ID (123A90-DDL-PR-PID-80017)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.
25-PV-040	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-040 -Vessel V-25001C	P&ID (123A90-DDL-PR-PID-80017)	To alarm on control valve position discrepancy - V-25001C Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance
25-PY-040	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-040 positioner - Vessel V-25001C	P&ID (123A90-DDL-PR-PID-80017)	To control valve position - V-25001C Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-ZSH-040	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-040 open position -Vessel V-25001C	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - V-25001C Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-040	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-040 closed position -Vessel V-25001C	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - V-25001C Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-040	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-040 position transmitter - Vessel V-25001C	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - V-25001C Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-PT-043	Proposed	Bad_Input_Monitoring	V-25001D Pressure	P&ID (123A90-DDL-PR-PID-80018)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance
25-PT-043	Proposed		V-25001D Pressure	P&ID (123A90-DDL-PR-PID-80018)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.
25-PT-043	Proposed		V-25001D Pressure	P&ID (123A90-DDL-PR-PID-80018)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.

25-PV-043	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-043 -Vessel V-25001D	P&ID (123A90-DDL-PR-PID-80018)	To alarm on control valve position discrepancy - V-25001D Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance
25-PY-043	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-043 positioner - Vessel V-25001D	P&ID (123A90-DDL-PR-PID-80018)	To control valve position - V-25001D Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-ZSH-043	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-043 open position - Vessel V-25001D	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - V-25001D Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-043	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-043 closed position -Vessel V-25001D	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - V-25001D Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-043	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-043 position transmitter - Vessel V-25001D	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - V-25001D Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-PT-046	Proposed	Bad_Input_Monitoring	V-25001E Pressure	P&ID (123A90-DDL-PR-PID-80019)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance
25-PT-046	Proposed		V-25001E Pressure	P&ID (123A90-DDL-PR-PID-80019)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.
25-PT-046	Proposed		V-25001E Pressure	P&ID (123A90-DDL-PR-PID-80019)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.
25-PV-046	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-046 -Vessel V-25001E	P&ID (123A90-DDL-PR-PID-80019)	To alarm on control valve position discrepancy - V-25001E Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance
25-PY-046	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-046 positioner - Vessel V-25001E	P&ID (123A90-DDL-PR-PID-80019)	To control valve position - V-25001E Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-ZSH-046	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-046 open position - Vessel V-25001E	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - V-25001E Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-046	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-046 closed position - Vessel V-25001E	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - V-25001E Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-046	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-046 position transmitter - Vessel V-25001E	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - V-25001E Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-PT-049	Proposed	Bad_Input_Monitoring	V-25001F Pressure	P&ID (123A90-DDL-PR-PID-80020)	To monitor hydrogen storage vessel pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance
25-PT-049	Proposed		V-25001F Pressure	P&ID (123A90-DDL-PR-PID-80020)	To monitor hydrogen storage vessel pressure	LO	4	P4 - Alert	t4e minor: reduced process/equipment performance	State based alarm for normal operation Not valid during purging mode cause: Leakage of hydrogen from the vessel V-25001A	Vessel is empty below minimum charge level (4.5 barg minimum)	1. Check 25PIC035 Mode, Setpoint, Output 2. Check hydrogen supply to vessel 25XV004 open and 25-PT-001 3. Check if vessel is no longer lined up to header - 25XV006 closed 4. Inform maintenance/intervention team.
25-PT-049	Proposed		V-25001F Pressure	P&ID (123A90-DDL-PR-PID-80020)	To monitor hydrogen storage vessel pressure	LO_LO	1.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	State based alarm - only active during purging (after charging has reached 2 barg). Automatic logic isolates the vessel using the FV inlet and PV outlet control valves when the T1, T4 or T6 time is expired. Valid only during purging and process stat-up charging modes when the 2 barg has been reached cause: Once the desired pressure of 2 barg has been reached, should the pressure inside the vessel V-25001A under purging operation fall below the set point of 2 barg	Unsuccessfull purge cycle - could lead to fuel cell damage due to nitrogen in hydrogen	1. Ensure vessel is isolated: confirm 25-FV-031 and 25-PV-035 control valves are closed 2. Determine cause of purge failure, and restart purge cycle for this vessel 3. Potential causes: insufficient supply, passing PV valve 4. Nitrogen purge T4 and T6: Check nitrogen package and header 5. Hydrogen purge T1: Check hydrogen supply from electrolyser 6. Inform maintenance/intervention team.
25-PV-049	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-049 -Vessel V-25001F	P&ID (123A90-DDL-PR-PID-80020)	To alarm on control valve position discrepancy - V-25001F Pressure control	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective purge sequence	1. Check impact on purge flow / sequence 2. Inform maintenance
25-PY-049	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-049 positioner - Vessel V-25001F	P&ID (123A90-DDL-PR-PID-80020)	To control valve position - V-25001F Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use nitrogen or H2 purge	1. Inform maintenance
25-ZSH-049	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-049 open position - Vessel V-25001F	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - V-25001F Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-049	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-049 closed position - Vessel V-25001F	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - V-25001F Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-049	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-049 position transmitter - Vessel V-25001F	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - V-25001F Pressure control	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored via flow totalizer to ensure adequate purging. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring; potential inability to use nitrogen or H2 purge	1. Inform maintenance

25-PT-055A	Proposed		H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	HI	7	x None	n7b - no alarm: condition already alarmed	Normal operating at 6 barg (up to 6.5 barg), trip at (80-PT-002) at 9 barg, PSV lifts at 10 barg. No pre-alarm configured, as trip will occur before operator can respond. Pressure response is extremely quick (expect 0.5 seconds from high to high high) cause: Malfunction of pressure control loop. Note - hydrogen storage vessel line up and switch over should use ramping to minimize disturbances on pressure control	Potential trip on high high pressure to protect against fuel cell damage	1. Check 25PIC055A/B Mode, Setpoint, Output 2. Manually close 25-SDV-023 shutdown valve. 3. Monitor process conditions. 4. Inform maintenance/intervention team.
25-PT-055A	Proposed	Bad_Input_Control	H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Select B transmitter for control 2. Inform maintenance
25-PT-055A	Proposed		H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	LO	3	P3 - Target	t3a Sign.Econ.: Pre-trip alarm for RAM Yellow Asset hazard	Not valid when 25-PV-055A and 25-PV-055B are in closed position No consequence,due to fact that fuel cell package has its safety in case of H2 low pressure	Potential trip (80-PT-002) on low low hydrogen supply pressure (trip fuel cell, electrolyser and sea water pumps)	1. Switch to full hydrogen storage vessel 2. Check 25PIC035 Mode, Setpoint, Output 3. Check XV's from hydrogen vessels 4. Check 25XV006 open, 25SDV023 open, 25BDV022 closed, 80XV001 closed 5. Stop fuel cell (move facility into standby) 6. Inform maintenance/intervention team.
25-PV-055A	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-055A - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To alarm on control valve position discrepancy - H2 to Fuel Cell	DISCRP		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential trip on high high or low low H2 pressure	1. Inform maintenance
25-PY-055A	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-055A positioner - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability run Fuel Cell	1. Inform maintenance
25-ZSH-055A	Proposed	Bad_Valve_Open_NonCrit	Control Valve 25-PV-055A open position- H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-055A	Proposed	Bad_Valve_Close_NonCrit	Control Valve 25-PV-055A closed position - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-055A	Proposed	Bad_Valve_PositionFB_NonCrit	Control Valve 25-PV-055A position transmitter - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-PI055A_055B/80-PT-002	Proposed	Bad_Input_MVC	Differential Pressure between 25-PI-055A, 25-PI-055B and 80-PT-002- H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80012/14)	To monitor deviation between 25-PI-055A, 25-PI-055B and 80-PT-002- H2 to Fuel Cell Package	DEV	± 5	P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Consequences: 1. Loss of control functionality (for 25-PI-055A or 25-PI-055B fault). As per hazop action 3.2.5, there are the following safeguards: - 80-PT-002 high high pressure trip of PSD closing 25SDV023 and 80-PSV-001 pressure safety valve set point at 10BARG. - 80-PT-002 low low pressure trip fuel cell and electrolyzer. 2. Loss of safety functionality (for 80-PI-002 fault): in case of high high pressure the 80-PSV-001 will discharge, in case of low low pressure F&G detection system will trigger ESD 1D and open all BDV valves on V25001A-F.	Potential failure to trip due to faulty low reading on 25-PI-003; Potential spurious trip due to faulty high reading on 25-PI-002	1. Confirm if 80-PT-002 is reading incorrecly low: shut in Fuel Cell if required. 2. Assess if 25-PI-055A or 25-PI-055B is reliable: select reliable transmitter for control 3. Check if 25-PI-002 is reading incorrectly high - consider override if incorrect. 4. Inform maintenance of discrepancy between control and trip transmitter
25-PT-055B	Proposed		H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	HI	7	x None	n7b - no alarm: condition already alarmed	Normal operating at 6 barg (up to 6.5 barg), trip at (80-PT-002) at 9 barg, PSV lifts at 10 barg. No pre-alarm configured, as trip will occur before operator can respond. Pressure response is extremely quick (expect 0.5 seconds from high to high high) cause: Malfunction of pressure control loop. Note - hydrogen storage vessel line up and switch over should use ramping to minimize disturbances on pressure control	Potential trip on high high pressure to protect against fuel cell damage	1. Check 25PIC055A/B Mode, Setpoint, Output 2. Manually close 25-SDV-023 shutdown valve. 3. Monitor process conditions. 4. Inform maintenance/intervention team.
25-PT-055B	Proposed	Bad_Input_Control	H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Select A transmitter for control 2. Inform maintenance
25-PT-055B	Proposed		H2 Storage Outlet Pres	P&ID (123A90-DDL-PR-PID-80014)	To control hydrogen storage outlet pressure	LO	3	x None	n7b - no alarm: condition already alarmed	Already alarmed by A transmitter, can be used as back up if A transmitter fails. Not valid when 25-PV-055A and 25-PV-055B are in closed position No consequence,due to fact that fuel cell package has its safety in case of H2 low pressure	Potential trip (80-PT-002) on low low hydrogen supply pressure (trip fuel cell, electrolyser and sea water pumps)	1. Switch to full hydrogen storage vessel 2. Check 25PIC035 Mode, Setpoint, Output 3. Check XV's from hydrogen vessels 4. Check 25SDV023 open, 25BDV022 closed, 80XV001 closed 5. Stop fuel cell (move facility into standby) 6. Inform maintenance/intervention team.
25-PV-055B	Proposed	Bad_Valve_Disrp_NonCrit	Control Valve 25-PV-055B -H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To alarm on control valve position discrepancy - H2 to Fuel Cell	DISCRP		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential trip on high high or low low H2 pressure	1. Inform maintenance
25-PY-055B	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 25-PV-055B positioner H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability run Fuel Cell	1. Inform maintenance
25-ZSH-055B	Proposed	Bad_Valve_Open_NonCrit	Control valve 25-PV-055B open position - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance
25-ZSL-055B	Proposed	Bad_Valve_Close_NonCrit	Pressure Control 25-PV-055B closed position -H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZT-055B	Proposed	Bad_Valve_PositionFB_NonCrit	Control valve 25-PV-055B position transmitter -H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To monitor control valve position - H2 to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring	1. Inform maintenance
25-SDV-001	Proposed	Bad_Valve_Disrp_SDV	Shut-down Valve 25-SDV-001 - Hyrogen to vessels inlet header	P&ID (123A90-DDL-PR-PID-80013)	To alarm on shut down valve position discrepancy - H2 to Hydr.Stor.Vessel Inlet Header	DISCRP		P2 - Standard	s2b Cumm.Degr.: Last alarm for RAM Yellow HSE hazard (no trip)	Not closed on demand: unsuccessfull trip Not open on demand: Purge sequence is monitored via flow totalizer to ensure adequate purging. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: H2 vessels not isolated on trip; Not open: inability to purge or charge H2 to Hydr. Storage Vessels	1. If required, attempt to close valve manually, or consider ESD-1D 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-SDY-001	Proposed	Bad_Valve_Solenoid_SDV	Shut-down Valve 25-SDV-001 solenoid - Hyrogen to vessels inlet header	P&ID (123A90-DDL-PR-PID-80013)	To monitor shut down valve solenoid failure - H2 to Hydr.Stor.Vessel Inlet Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge and charge sequences are monitored by sequence and pressure transmitters. Cause: 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to purge or charge H2 to Hydr. Storage Vessels	1. Inform maintenance

25-ZAL-001	Proposed		H2 Storage Inlet Closed	P&ID (123A90-DDL-PR-PID-80013)	To notify of incorrect closure of shutdown valve	DISC		x Log	j5a - retain event for troubleshooting	Alarm on incorrect SDV closure (SDV failure, or loss of instrument air) Alarm does not active for following causes: 1. ASD activation 2. ESD-1D activation 3. Relevant PSD activation 3.a HI HI pressure on H2 inlet header (25-PT-002) 3.b HI HI and LO LO pressure on FC package inlet line	Unable to charge H2 storage vessels	1. Check SDV - attempt to open manually if required 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH-001	Proposed	Bad_Valve_Open_SDV	Shut-down Valve 25-SDV-001 open position- Hyrogen to vessels inlet header	P&ID (123A90-DDL-PR-PID-80013)	To monitor shut down valve position - H2 to Hydr.Stor.Vessel Inlet Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZSL-001	Proposed	Bad_Valve_Close_SDV	Shut-down Valve 25-SDV-001 closed position - Hyrogen to vessels inlet header	P&ID (123A90-DDL-PR-PID-80013)	To monitor shut down valve position - H2 to Hydr.Stor.Vessel Inlet Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-SDV-023	Proposed	Bad_Valve_Disrp_SDV	Shut-down Valve 25-SDV-023 - Hyrogen from vessels outlet header	P&ID (123A90-DDL-PR-PID-80014)	To alarm on shut down valve position discrepancy - H2 from Hydr.Stor.Vessel to Fuel Cell	DISCRP		P2 - Standard	s2b Cumm.Degr.: Last alarm for RAM Yellow HSE hazard (no trip)	Not closed on demand: unsuccessfull trip Not open on demand: feed is monitored with pressure transmitter. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: Fuel Cell not isolated on trip; Not open: inability to feed H2 to fuel cell	1. If required, attempt to close valve manually, or consider ESD-1D 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.
25-SDY-023	Proposed	Bad_Valve_Solenoid_SDV	Shut-down Valve 25-SDV-023 solenoid- Hyrogen from vessels outlet header	P&ID (123A90-DDL-PR-PID-80014)	To monitor shut down valve solenoid failure - H2 from Hydr.Stor.Vessel to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-ZAL-023	Proposed		H2 Storage Outlet Closed	P&ID (123A90-DDL-PR-PID-80014)	To notify of incorrect closure of shutdown valve	DISC		x Log	j5a - retain event for troubleshooting	Alarm on incorrect SDV closure (SDV failure, or loss of instrument air) Alarm does not active for: 1. Asd activation 2. ESD-1D activation 3. Relevant PSD activeated 3.a HI HI and LO LO pressure on FC package inlet line	Unable to feed H2 to fuel cell	1. Check SDV - attempt to open manually if required 2. Check instrument air supply 63-PT-003/4 3. Inform maintenance/intervention team.
25-ZSH-023	Proposed	Bad_Valve_Open_SDV	Shut-down Valve 25-SDV-023 open position- Hyrogen from vessels outlet header	P&ID (123A90-DDL-PR-PID-80014)	To monitor shut down valve position - H2 from Hydr.Stor.Vessel to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of open position monitoring	1. Inform maintenance
25-ZSL-023	Proposed	Bad_Valve_Close_SDV	Shut-down Valve 25-SDV-023 closed position - Hyrogen from vessels outlet header	P&ID (123A90-DDL-PR-PID-80014)	To monitor shut down valve position - H2 from Hydr.Stor.Vessel to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance
25-T1AAH	Proposed		V-25001A H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T1BAH	Proposed		V-25001B H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T1CAH	Proposed		V-25001C H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T1DAH	Proposed		V-25001D H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T1EAH	Proposed		V-25001E H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T1FAH	Proposed		V-25001F H2 Purge timer	123A90-DDL-PR-RE-80031	To notify that the H2 purge for Process Start-up charging has completed	HI	28	x None	n7c - no alarm: status indicator (e.g. pump running)	Start up purge timer completed (start up purge replaces nitrogen with hydrogen) No consequences due to the automatic logic that close the XV inlet and PV outlet valves Notification activates only during process start-up charging mode	n.a. notification of sequence completion.	1. none - take note that H2 start up purge is complete
25-T2AAH	Proposed		V-25001A H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T2BAH	Proposed		V-25001B H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T2CAH	Proposed		V-25001C H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
43-LT-001_MOS	MOS Repeat		43-LT-001 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required

43-LT-001_MOS ACTIVE	Proposed		43-LT-001 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
43-LT-003	Proposed		H2 Vent Seal Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor H2 Vent Seal Level	HI	650	x None	n7a - no alarm: no significant consequence.	Level is filled manually with water/glycol mixture; Gooseneck prevents overfilling.	n.a. no significant consequence	1. n.a.	
43-LT-003	Proposed	Bad_Input_Monitoring	H2 Vent Seal Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor H2 Vent Seal Level	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
43-LT-003	Proposed		H2 Vent Seal Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor H2 Vent Seal Level	LL	200	P2 - Standard	s2b Cumm.Degr.: Last alarm for RAM Yellow HSE hazard (no trip)	Loss of barrier - insufficient level to maintain seal and risk of oxygen ingress in case of loss of nitrogen vent No immediate process safety risk due to nitrogen to vent system cause: During maintenance: Wrong filling operation / wrong draining operation During normal operation: Evaporation	Insufficient level to maintain seal of vent system	1. Confirm low level from level trend	1. Inform 'supervisor' - Consider putting platform in standby ESD-1 (don't blowdown)
43-LT-003	Proposed		H2 Vent Seal Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor H2 Vent Seal Level	LO	Hold 3	P4 - Alert	t4e minor: maintenance follow up required	LO alarm for 20 days remaining at normal evaporation rate No immediate process safety risk due to nitrogen to vent system cause: During maintenance: Wrong filling operation / wrong draining operation During normal operation: Evaporation	Level top up required to maintain seal of vent system	1. Confirm low level from level trend 2. During maintenance: ensure vessel is sufficiently filled 3. During normal operation: flag valve for maintenance	1. Inform maintenance/intervention team.
43-PT-001	Proposed		V-43001 H2 Vent KO Drum Pres	P&ID (123A90-DDL-PR-PID-80027)	To monitor V-43001 H2 Vent Knock Out Drum Pressure	HI	1.5	P2 - Standard	s2c Cumm.Degr.: Last alarm for RAM Red hazard (no trip)	Limit set above maximum expected back pressure during normal operation. High pressure can indicate blockage due too bird activity, or freezing of hydrogen vent liquid seal High pressure will also occur during blowdown or relief scenario. Vent system has been sized to cope with all relief scenarios	Blow down or Failure of vent system - may be unable to vent or properly purge	1. No action required during blowdown 2. Check for vent flow 43FI001 - no action required if there is still flow 3. Check electrical heat tracing on hydrogen vent	1. Inform 'supervisor' - Consider putting platform in standby (don't blowdown)
43-PT-001	Proposed	Bad_Input_Monitoring	V-43001 H2 Vent KO Drum Pres	P&ID (123A90-DDL-PR-PID-80027)	To monitor V-43001 H2 Vent Knock Out Drum Pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-AI-023	Not started		Filtered Water Conductivity	1724000448-PR-PID-00013 Sht 3		HI							
50-AI-024	Not started		Fresh Water Conductivity	1724000448-PR-PID-00013 Sht 4		HI							
50-AI-024	Not started		Fresh Water Conductivity	1724000448-PR-PID-00013 Sht 4		HI_HI							
50-AI-026	Not started		Fresh Water TH	1724000448-PR-PID-00013 Sht 5		HI							
50-AI-026	Not started		Fresh Water TH	1724000448-PR-PID-00013 Sht 5		HI_HI							
50-AIC-027	Not started		Fresh Water pH Control	1724000448-PR-PID-00013 Sht 5		HI							
50-AIC-027	Not started		Fresh Water pH Control	1724000448-PR-PID-00013 Sht 5		HI_HI							
50-AIC-027	Not started		Fresh Water pH Control	1724000448-PR-PID-00013 Sht 5		LO							
50-AIC-027	Not started		Fresh Water pH Control	1724000448-PR-PID-00013 Sht 5		LO_LO							
50-FI-020	Not started		Water Treatment Inlet Flow	1724000448-PR-PID-00013 Sht 2		HI							
50-FI-020	Not started		Water Treatment Inlet Flow	1724000448-PR-PID-00013 Sht 2		LO							
50-FI-022	Not started		P50003A Discharge Flow	1724000448-PR-PID-00013 Sht 3		HI							
50-FI-022	Not started		P50003A Discharge Flow	1724000448-PR-PID-00013 Sht 3		LO							
50-FI-023	Not started		P50003B Discharge Flow	1724000448-PR-PID-00013 Sht 3		HI							
50-FI-023	Not started		P50003B Discharge Flow	1724000448-PR-PID-00013 Sht 3		LO							
950-MFA-04102	Proposed	Bad_Input_F&G	FZ-04 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-04102_MOS	MOS Repeat		950-MFA-04102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-04102_MOS ACTIVE	Proposed		950-MFA-04102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-04201	Proposed		FZ-04 Manual fire alarm (MFA) B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400 ITER container	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-04201	Proposed	Bad_Input_F&G	FZ-04 Manual fire alarm (MFA) B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-04201_MOS	MOS Repeat		950-MFA-04201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-04201_MOS ACTIVE	Proposed		950-MFA-04201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-04202	Proposed		FZ-04 Manual fire alarm (MFA) B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-300 AC UPS container	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-04202	Proposed	Bad_Input_F&G	FZ-04 Manual fire alarm (MFA) B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-04202_MOS	MOS Repeat		950-MFA-04202 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-04202_MOS ACTIVE	Proposed		950-MFA-04202 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

950-MFA-04203	Proposed		FZ-04 Manual fire alarm (MFA) B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-200 LV SWGR container	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-04203	Proposed	Bad_Input_F&G	FZ-04 Manual fire alarm (MFA) B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-04203_MOS	MOS Repeat		950-MFA-04203 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-04203_MOS ACTIVE	Proposed		950-MFA-04203 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-05101	Proposed		FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
25-T2DAH	Proposed		V-25001D H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T2EAH	Proposed		V-25001E H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T2FAH	Proposed		V-25001F H2 Press.SU Fault	123A90-DDL-PR-RE-80031	To notify that the Process Start-up charging has failed to fully pressurize the vessel	HI	7	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the XV inlet valve Alarm active only during process start-up charging mode cause: Expired time to pressurize with H2 the vessel during process start-up charging mode without reaching 30 barg	Process start-up charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T3AAH	Proposed		V-25001A Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T3BAH	Proposed		V-25001B Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T3CAH	Proposed		V-25001C Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T3DAH	Proposed		V-25001D Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T3EAH	Proposed		V-25001E Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T3FAH	Proposed		V-25001F Nitr. Press.SD Fault	123A90-DDL-PR-RE-80031	To notify that the post-shutdown purge has failed to pressurize vessel to 2 bar	HI	5	P4 - Alert	t4e minor: reduced process/equipment performance	Automatic logic will close the FV inlet valve Alarm active only during purging mode after shutdown (for H2 displacement) cause: Expired time to purge with N2 during purging mode after shutdown (for H2 displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 flow to vessel (flow indication, flow valve position) 2. Check N2 supply pressure 64-PT-031A/B 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5AAH	Proposed		V-25001A Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5BAH	Proposed		V-25001B Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5CAH	Proposed		V-25001C Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5DAH	Proposed		V-25001D Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5EAH	Proposed		V-25001E Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T5FAH	Proposed		V-25001F Nitr. Press.Maint Fault	123A90-DDL-PR-RE-80031	To notify that the post-maintenance purge has failed to pressurize vessel to 2 barg	HI	5	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the FV inlet valve Alarm active only during purging mode after maintenance (for air displacement) cause: Expired time to purge with N2 during purging mode after maintenance (for air displacement) for the vessel without reaching 2 barg	Unsuccesfull pressurization - cannot start N2 purge	1. Check N2 supply pressure 64-PT-031A/B 2. Monitor process conditions. 3. Check vessel PCV (should still be closed) - N2 send to vent too early 4. Inform maintenance/intervention team.
25-T7AAH	Proposed		V-25001A H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.

25-T7BAH	Proposed		V-25001B H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T7CAH	Proposed		V-25001C H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T7DAH	Proposed		V-25001D H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T7EAH	Proposed		V-25001E H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-T7FAH	Proposed		V-25001F H2 Press. Fault	123A90-DDL-PR-RE-80031	To notify that the Process charging has failed to fully charge vessel	HI	7	P4 - Alert	t4e minor: maintenance follow up required	Automatic logic will close the XV inlet valve Alarm active only during process charging mode cause: Expired time to pressurize with H2 the vessel during process charging mode without reaching 30 barg	Process charging has failed to fully charge vessel - insufficient H2 stored	1. Investigate H2 inlet pressure 25-PT-001 / 25-SDV-001 / electrolyzer operation 2. Check vessel inlet and outlet XV's 3. Check vessel PCV (should be closed) - H2 send to vent 4. Inform maintenance/intervention team.
25-XV-004	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-004 - Vessel V-25001A Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80015)	To alarm on control valve position discrepancy - H2 to V-25001A	DISCRP		x Log	J5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-004	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-004 solenoid- Vessel V-25001A Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80015)	To control valve position - H2 to V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSH-004	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-004 open position - Vessel V-25001A Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - H2 to V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-004	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-004 closed position - Vessel V-25001A Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - H2 to V-25001A	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-XV-006	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-006 - Vessel V-25001A Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80015)	To alarm on control valve position discrepancy - V-25001A to Fuel Cell	DISCRP		x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XY-006	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-006 solenoid- Vessel V-25001A Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80015)	To control valve position - V-25001A to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-006	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-006 open position - Vessel V-25001A Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - V-25001A to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSL-006	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-006 closed position - Vessel V-25001A Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80015)	To monitor control valve position - V-25001A to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XV-008	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-008 - Vessel V-25001B Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80016)	To alarm on control valve position discrepancy - H2 to V-25001B	DISCRP		x Log	j5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-008	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-008 solenoid -Vessel V-25001B Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80016)	To control valve position - H2 to V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSH-008	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-008 open position- Vessel V-25001B Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - H2 to V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-008	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-008 closed position- Vessel V-25001B Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - H2 to V-25001B	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-XV-009	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-009 - Vessel V-25001B Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80016)	To alarm on control valve position discrepancy - V-25001B to Fuel Cell	DISCRP		x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XY-009	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-009 solenoid - Vessel V-25001B Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80016)	To control valve position - V-25001B to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-009	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-009 - Vessel V-25001B Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - V-25001B to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSL-009	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-009 closed position - Vessel V-25001B Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80016)	To monitor control valve position - V-25001B to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XV-011	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-011 - Vessel V-25001C Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80017)	To alarm on control valve position discrepancy - H2 to V-25001C	DISCRP		x Log	j5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-011	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-011 solenoid- Vessel V-25001C Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80017)	To control valve position - H2 to V-25001C	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSH-011	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-011 open position- Vessel V-25001C Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - H2 to V-25001C	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-011	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-011 closed position- Vessel V-25001C Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - H2 to V-25001C	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance

25-XV-012	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-012 - Vessel V-25001C Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80017)	To alarm on control valve position discrepancy - V-25001C to Fuel Cell	DISCRP	x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XY-012	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-012 solenoid - Vessel V-25001C Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80017)	To control valve position - V-25001C to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-012	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-012 open position - Vessel V-25001C Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - V-25001C to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSL-012	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-012 closed position - Vessel V-25001C Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80017)	To monitor control valve position - V-25001C to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XV-014	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-014 - Vessel V-25001D Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80018)	To alarm on control valve position discrepancy - H2 to V-25001D	DISCRP	x Log	j5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-014	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-014 solenoid- Vessel V-25001D Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80018)	To control valve position - H2 to V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSH-014	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-014 open position - Vessel V-25001D Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - H2 to V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-014	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-014 closed position - Vessel V-25001D Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - H2 to V-25001D	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-XV-015	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-015 - Vessel V-25001D Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80018)	To alarm on control valve position discrepancy - V-25001D to Fuel Cell	DISCRP	x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XY-015	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-015 solenoid - Vessel V-25001D Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80018)	To control valve position - V-25001D to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-015	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-015 open position - Vessel V-25001D Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - V-25001D to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSL-015	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-015 closed position - Vessel V-25001D Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - V-25001D to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XV-017	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-017 - Vessel V-25001E Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80019)	To alarm on control valve position discrepancy - H2 to V-25001E	DISCRP	x Log	j5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-017	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-017 solenoid - Vessel V-25001E Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80019)	To control valve position - H2 to V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSH-017	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-017 open position- Vessel V-25001E Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - H2 to V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-017	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-017 closed position- Vessel V-25001E Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - H2 to V-25001E	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-XV-018	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-018 - Vessel V-25001E Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80019)	To alarm on control valve position discrepancy - V-25001E to Fuel Cell	DISCRP	x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XY-018	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-018 solenoid - Vessel V-25001E Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80019)	To control valve position - V-25001E to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-018	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-018 open position- Vessel V-25001E Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - V-25001E to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSL-018	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-018 closed position- Vessel V-25001E Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80019)	To monitor control valve position - V-25001E to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-XV-020	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-020 - Vessel V-25001F Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80020)	To alarm on control valve position discrepancy - H2 to V-25001F	DISCRP	x Log	j5a - retain event for troubleshooting	Hydrogen charging is monitored & alarmed by sequence Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen charging	1. Inform maintenance
25-XY-020	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-020 solenoid - Vessel V-25001F Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80020)	To control valve position - V-25001F to Fuel Cell	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance
25-ZSH-020	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-020 open position- Vessel V-25001F Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - H2 to V-25001F	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-ZSL-020	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-020 closed position - Vessel V-25001F Hydrogen inlet	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - H2 to V-25001F	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Hydrogen charging is monitored & alarmed by sequence 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen charging	1. Inform maintenance
25-XV-021	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-021 - Vessel V-25001F Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80020)	To alarm on control valve position discrepancy - V-25001F to Fuel Cell	DISCRP	x Log	j5a - retain event for troubleshooting	Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential ineffective hydrogen supply to fuel cell	1. Inform maintenance

25-XY-021	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-021 solenoid - Vessel V-25001F Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80020)	To control valve position - V-25001F to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance	
25-ZSH-021	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-021 open position - Vessel V-25001F Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - V-25001F to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance	
25-ZSL-021	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-021 closed position- Vessel V-25001F Hydrogen outlet	P&ID (123A90-DDL-PR-PID-80020)	To monitor control valve position - V-25001F to Fuel Cell	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring; potential ineffective hydrogen supply to fuel cell	1. Inform maintenance	
25-XV-024	Proposed	Bad_Valve_Disrp_NonCrit	On-Off valve 25-XV-024 - Hydrogen to Vessels vented	P&ID (123A90-DDL-PR-PID-80018)	To alarm on control valve position discrepancy - Hydrogen to Storage header vent	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Venting is monitored via vent flow 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential H2 venting	1. Check impact on hydrogen venting 2. Inform maintenance	
25-XY-024	Proposed	Bad_Valve_Solenoid_NonCrit	On-Off valve 25-XV-024 solenoid - Hydrogen to Vessels vented	P&ID (123A90-DDL-PR-PID-80018)	To control valve position - Hydrogen to Storage header vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use Hydrogen vent	1. Inform maintenance	
25-ZSH-024	Proposed	Bad_Valve_Open_NonCrit	On-Off valve 25-XV-024 open position- Hydrogen to Vessels vented	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position - Hydrogen to Storage header vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance	
25-ZSL-024	Proposed	Bad_Valve_Close_NonCrit	On-Off valve 25-XV-024 closed position - Hydrogen to Vessels vented	P&ID (123A90-DDL-PR-PID-80018)	To monitor control valve position- Hydrogen to Storage header vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
25-ZSH-055A_B	Proposed		25-PV-055A and 25-PV-055B both open - H2 to Fuel Cell Package	P&ID (123A90-DDL-PR-PID-80014)	To notify that both valves are open	DISC		x None	n7d - no alarm: system decommissioned / tag to be deleted	alarm no longer required, valves are not both 100%, rather B valve is for low flow operation (old cause: Malfunction of pressure control loop or valves forced open in manual mode by operator)	n.a. not required	1. n.a.	
43-FT-001	Proposed		H2 Vent Flow	P&ID (123A90-DDL-PR-PID-80029)	To monitor vent flow	HI	900	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm indicates PSV opening; the limit is set above typical purge and off-spec H2 flowrates. No process safety risk: vent system has been sized to cope all relief scenarios	Significant hydrogen venting is taking place from hydrogen storage vessel	1. Check blowdown valve opening on hydrogen storage vessels 2. Check for sudden pressure drop on hydrogen storage vessels 3. Check hydrogen storage pressure control valves 4. Consider if a PSV may have lifted (note - this only occurs during fire) 5. Inform maintenance/intervention team.	
43-FT-001	Proposed	Bad_Input_Monitoring	H2 Vent Flow	P&ID (123A90-DDL-PR-PID-80029)	To monitor vent flow	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
43-LT-001	Proposed		V-43001 H2 Vent KO Drum Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor and protect V-43001 H2 Vent Knock Out Drum Level	HI-HI	650	P2 - Standard	s2d Cumm.Degr.: Trip alarm with significant residual risk (by exception)	PSD activation: 1. Electrolyzer package shutdown 2. Water treatment package shutdown 3. Sea water pumps P-50001A/B shutdown Cause: Electrolyser water production	Trip facility on high KO drum level to prevent liquid overflow to vent	1. Verify level - could indicate failure in electrolyzer package	1. Inform 'supervisor' - KO drum requires manual draining
43-LT-001	Proposed	Bad_Input_Trip	V-43001 H2 Vent KO Drum Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor and protect V-43001 H2 Vent Knock Out Drum Level	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
43-LT-001	Proposed		V-43001 H2 Vent KO Drum Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor and protect V-43001 H2 Vent Knock Out Drum Level	LO	200	P2 - Standard	dg2b - Standard alarm for significant SCE degradation	KO drum should be filled prior to start up to minimum 300mm. Alarm set at 250mm. Seal is required to ensure that no H2 will pass to the closed drain, e.g. due to a passing BLPH-MV-409 cause: During maintenance: Operator has not stopped the draining disposal operation when required During normal operation: Evaporation	Loss of liquid seal - potential of H2 passing by BLPH-MV-409 (Locked closed drain valve)	1. During maintenance: ensure vessel is filled to minimum of 300mm 2. During normal operation: flag valve for maintenance, monitor level, ensure sufficient nitrogen in vent 3. Inform maintenance/intervention team.	
43-LT-001	Proposed		V-43001 H2 Vent KO Drum Level	P&ID (123A90-DDL-PR-PID-80027)	To monitor and protect V-43001 H2 Vent Knock Out Drum Level- Prealarm	HI	500						
50-FI-024	Not started		Fresh Water Flow	1724000448-PR-PID-00013 Sht 4		LO							
50-FI-026	Not started		S50010 Discharge Flow	1724000448-PR-PID-00013 Sht 5		HI							
50-FI-026	Not started		S50010 Discharge Flow	1724000448-PR-PID-00013 Sht 5		LO							
55-LT-001	Not started		Vessel T-55001 level	P&ID (123A90-DDL-PR-PID-80026)	To control vessel T-55001 level	HI	Hold 2				Possible overfilling of the tank	1. Operator can: 1. Inform maintenance/intervention team. 2. Monitor process conditions.	
55-LT-001	In progress	Bad_Input_Control	Vessel T-55001 level	P&ID (123A90-DDL-PR-PID-80026)	To control vessel T-55001 level	IO_FAIL	3.8 (Hold 7)		dg0a - Priority follows process alarm but is at least Target Alarm	1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Inform maintenance	
55-LT-001	Not started		Vessel T-55001 level	P&ID (123A90-DDL-PR-PID-80026)	To control vessel T-55001 level	LO	300			Alarm valid only during maintenance	No consequence since the tank has been fully emptied	1. Operator can: 1. Inform maintenance/intervention team.	
50-LI-020	Not started		T50006 Filtered Water Tank Level	1724000448-PR-PID-00013 Sht 2		HI							
50-LI-020	Not started		T50006 Filtered Water Tank Level	1724000448-PR-PID-00013 Sht 2		LO							
50-LI-020	Not started		T50006 Filtered Water Tank Level	1724000448-PR-PID-00013 Sht 2		LO_LO							
50-LI-021	Not started		T50008 Fresh Water Tank Level	1724000448-PR-PID-00013 Sht 5		HI							
50-LI-021	Not started		T50008 Fresh Water Tank Level	1724000448-PR-PID-00013 Sht 5		LO							
50-LI-021	Not started		T50008 Fresh Water Tank Level	1724000448-PR-PID-00013 Sht 5		LO_LO							
50-LI-022	Not started		T50002 Caustic Soda Tank Level	1724000448-PR-PID-00013 Sht 6		LO							
50-LI-022	Not started		T50002 Caustic Soda Tank Level	1724000448-PR-PID-00013 Sht 6		LO_LO							
50-LI-023	Not started		T50003 Anti Scaling Tank Level	1724000448-PR-PID-00013 Sht 6		LO							
50-LI-023	Not started		T50003 Anti Scaling Tank Level	1724000448-PR-PID-00013 Sht 6		LO_LO							
50-LI-024	Not started		T50004 Biocide Tank Level	1724000448-PR-PID-00013 Sht 7		LO							
50-LI-024	Not started		T50004 Biocide Tank Level	1724000448-PR-PID-00013 Sht 7		LO_LO							
50-PT-001	Not started		Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)		HI	7				No consequence due to 50-PSV-006 discharge.	1. Operator can: 1. Manually stop the sea water pump P-50001A 2. Inform maintenance/intervention team. 3. Monitor process conditions.	
50-PT-001	In progress	Bad_Input_Monitoring	Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)		IO_FAIL	3.8 (Hold 7)		dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-PT-001	Not started		Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)		LO	4				No consequence, since there is a stand-BY pump	1. Operator can: 1. Inform maintenance/intervention team. 2. Monitor process conditions.	

50-PT-002	Not started		Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	HI	7				No consequence due to 50-PSV-007 discharge.	1. Operator can: 1. Manually stop the sea water pump P-50001B 2. Inform maintenance/intervention team. 3. Monitor process conditions.	
50-PT-002	In progress	Bad_Input_Monitoring	Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	IO_FAIL	3.8 (Hold 7)	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy		Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-PT-002	Not started		Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	LO	4				No consequence, since there is a stand-BY pump	1. Operator can: 1. Inform maintenance/intervention team. 2. Monitor process conditions.	
50-PT-014	Not started		Water disposal header to caisson B-50014	P&ID (123A90-DDL-PR-PID-80025)	HI	0.5				Delay in drainage operation	1. Operator can: 1. Inform maintenance/intervention team.	
50-PT-014	In progress	Bad_Input_Monitoring	Water disposal header to caisson B-50014	P&ID (123A90-DDL-PR-PID-80025)	IO_FAIL	3.8 (Hold 7)	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy		Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-PDI-024	Not started		S50002/3A Cartridge Filter dP	1724000448-PR-PID-00013 Sht 3	HI							
50-PDI-029	Not started		S50002/3B Cartridge Filter dP	1724000448-PR-PID-00013 Sht 3	HI							
50-PDI-052	Not started		S50001 Sand Filter dP	1724000448-PR-PID-00013 Sht 2	HI							
50-PI-020	Not started		Water treatment Inlet Pressure	1724000448-PR-PID-00013 Sht 2	LO							
50-PI-025	Not started		P50003A Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO							
50-PI-026	Not started		S50003A Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO							
50-PI-026	Not started		S50003A Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO_LO							
50-PI-027	Not started		P50003B Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO							
50-PI-028	Not started		S50003B Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO							
50-PI-028	Not started		S50003B Discharge Pressure	1724000448-PR-PID-00013 Sht 3	LO_LO							
50-PI-041	Not started		S50010 Discharge Pressure	1724000448-PR-PID-00013 Sht 5	HI							
50-PI-041	Not started		S50010 Discharge Pressure	1724000448-PR-PID-00013 Sht 5	LO							
50-PI-047	Not started		P50009A/B Discharge Pressure	1724000448-PR-PID-00013 Sht 5	HI							
50-PI-047	Not started		P50009A/B Discharge Pressure	1724000448-PR-PID-00013 Sht 5	LO							
50-PIC-030	Not started		P50004A Discharge Pressure	1724000448-PR-PID-00013 Sht 4	HI							
50-PIC-030	Not started		P50004A Discharge Pressure	1724000448-PR-PID-00013 Sht 4	LO							
50-PIC-032	Not started		P50004B Discharge Pressure	1724000448-PR-PID-00013 Sht 4	HI							
50-PIC-032	Not started		P50004B Discharge Pressure	1724000448-PR-PID-00013 Sht 4	LO							
50-TT-001	In progress	Bad_Input_Monitoring	Sea water from lift pump P-50001A/B	P&ID (123A90-DDL-PR-PID-80022)	IO_FAIL	3.8 (Hold 7)	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy		Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-TDI-002	Not started		Difference Temperature T2 - T1	P&ID (123A90-DDL-PR-PID-80025)	HI	10				Possible discharge of water towards sea at a temperature higher than the permitted one	1. Operator can: 1. Monitor 50-TT-001 and 50-TT-002 temperature indication. 2. Evaluete the possibility to stop electrolyser package	
50-TT-002	In progress	Bad_Input_Monitoring	Water disposal header to caisson B-50014	P&ID (123A90-DDL-PR-PID-80025)	IO_FAIL	3.8 (Hold 7)	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy		Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
50-TAAH-020	Not started		H50001 Electric Heater Temp	1724000448-PR-PID-00013 Sht 2	DISC							
50-TI-020	Not started		Electric Heater Outlet Temp	1724000448-PR-PID-00013 Sht 2	HI							
50-TI-020	Not started		Electric Heater Outlet Temp	1724000448-PR-PID-00013 Sht 2	HI_HI							
50-TI-020	Not started		Electric Heater Outlet Temp	1724000448-PR-PID-00013 Sht 2	LO							
50-XA-001	Proposed		A-500003 Sea water treatment PKG confirmed gas alarm	P&ID (123A90-DDL-PR-PID-80022)	To activate ESD-1D on H2 gas detection in A-500003 Sea water treatment package	GAS_HI_CONF	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
50-XA-001	Proposed	Bad_Input_F&G	A-500003 Sea water treatment PKG confirmed gas alarm	P&ID (123A90-DDL-PR-PID-80022)	To activate ESD-1D on H2 gas detection in A-500003 Sea water treatment package	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
50-XV-001	In progress	Bad_Valve_Disrp_NonCrit	Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To alarm on control valve position discrepancy - P-50001A Sea water supply	DISCRP			Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect control	1. Process impact TBD 2. Inform maintenance	
50-XY-001	Proposed	Bad_Valve_Solenoid_NonCrit	Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To control valve position - P-50001A Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control	1. Inform maintenance	
50-ZSH-001	Proposed	Bad_Valve_Open_NonCrit	Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001A Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance	
50-ZSL-001	Proposed	Bad_Valve_Close_NonCrit	Sea water from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001A Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
50-XA-002	Proposed	Bad_Input_F&G	A-500003 Sea water treatment PKG confirmed smoke alarm	P&ID (123A90-DDL-PR-PID-80022)	To activate ESD-1D on smoke detection in A-500003 Sea water treatment package	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	

50-XA-002	Proposed		A-500003 Sea water treatment PKG confirmed smoke alarm	P&ID (123A90-DDL-PR-PID-80022)	To activate ESD-1D on smoke detection in A-500003 Sea water treatment package	SMOKE_CONF	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
50-XV-002	In progress	Bad_Valve_Disrp_NonCrit	Sea water recirculation from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To alarm on control valve position discrepancy - P-50001A Recirculation	DISCRP			Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect control	1. Process impact TBD 2. Inform maintenance		
50-XY-002	Proposed	Bad_Valve_Solenoid_NonCrit	Sea water recirculation from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To control valve position - P-50001A Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control	1. Inform maintenance		
50-ZSH-002	Proposed	Bad_Valve_Open_NonCrit	Sea water recirculation from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001A Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
50-ZSL-002	Proposed	Bad_Valve_Close_NonCrit	Sea water recirculation from pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001A Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		
50-XA-003	In progress	trip	A-500003 Sea water treatment PKG Fault alarm	P&ID (123A90-DDL-PR-PID-80022)	To notify on sea water treatment package package trip	DISC				No consequences because the safety logic will activate: 1. Electrolyzer package shutdown 2. Water treatment package shutdown 3. Sea water pumps P-50001A/B shutdown	1. Operator can: 2. Check sis graphic, sis cause and effec. 3. Confirm all sis initiated actions are complete as per cause and effects matrix. 4. Take necessary actions as per site emergency response plan. 5. Monitor process conditions.		
50-XA-003	Proposed	Bad_Input_Trip	A-500003 Sea water treatment PKG Fault alarm	P&ID (123A90-DDL-PR-PID-80022)	To notify on sea water treatment package package trip	IO_FAIL	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
50-XV-003	In progress	Bad_Valve_Disrp_NonCrit	Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To alarm on control valve position discrepancy - P-50001B Sea water supply	DISCRP			Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect control	1. Process impact TBD 2. Inform maintenance		
50-XY-003	Proposed	Bad_Valve_Solenoid_NonCrit	Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To control valve position - P-50001B Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control	1. Inform maintenance		
50-ZSH-003	Proposed	Bad_Valve_Open_NonCrit	Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001B Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
50-ZSL-003	Proposed	Bad_Valve_Close_NonCrit	Sea water from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001B Sea water supply	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		
50-XV-004	In progress	Bad_Valve_Disrp_NonCrit	Sea water recirculation from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To alarm on control valve position discrepancy - P-50001B Recirculation	DISCRP			Incorrect position will be apparent from process alarms Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect control	1. Process impact TBD 2. Inform maintenance		
50-XY-004	Proposed	Bad_Valve_Solenoid_NonCrit	Sea water recirculation from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To control valve position - P-50001B Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control	1. Inform maintenance		
50-ZSH-004	Proposed	Bad_Valve_Open_NonCrit	Sea water recirculation from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001B Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
50-ZSL-004	Proposed	Bad_Valve_Close_NonCrit	Sea water recirculation from pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To monitor control valve position - P-50001B Recirculation	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		
50-XA-004A	In progress	trip	Fault/Tripped status sea water pump P-50001A	P&ID (123A90-DDL-PR-PID-80021)		DISC				No consequence, since there is a stand-BY pump	1. Operator can: 1. Inform maintenance		
50-XA-004B	In progress	trip	Fault/Tripped status sea water pump P-50001B	P&ID (123A90-DDL-PR-PID-80021)		DISC				No consequence, since there is a stand-BY pump	1. Operator can: 1. Inform maintenance		
50-XA-020	Not started		Water Treatment Container alarm	1724000448-PR-PID-00013 Sht 3		DISC							
50-XA-A50003	Not started		A50003 Sea Water Coarse Filter	1724000448-PR-PID-00013 Sht 2		DISC							
50-XA-S50001	Not started		S50001 Sand Filter	1724000448-PR-PID-00013 Sht 2		DISC							
50-XA-S50004	Not started		S50004 Softening Filter	1724000448-PR-PID-00013 Sht 5		DISC							
50-XA-S50010	Not started		S50010 UV Sterilizer	1724000448-PR-PID-00013 Sht 5		DISC							
50-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN A-500003 Sea water treatment PKG	P&ID (123A90-DDL-PR-PID-80022)	To shutdown A-500003 Sea water treatment package	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
50-XZAL-021	Not started		50-XV-021 Valve	1724000448-PR-PID-00013 Sht 3		DISC							
50-XZAL-022	Not started		50-XV-022 Valve	1724000448-PR-PID-00013 Sht 3		DISC							
63-AI-051	Not started		Dew Point Instrument Air	1724000428-PR-PID-00019		HI							
63-PI003_004	Proposed	Bad_Input_MVC	Differential Pressure between 63-PI-003 and 63-PI-004 - Instrument air to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor deviation between 63-PI-003 and 63-PI-004 - Instrument air to distribution header	DEV	± 2.5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	No safety impact - loss of instrument air will cause trip on low nitrogen pressure. Consequences: 1. Loss of monitoring functionality (for 63-PI-003 fault). 2. Loss of safety functionality (for 63-PI-004 fault): in case of loss instrument air the 64-PT-002 low low pressure will activate ESD1.1D.	Potential spurious trip due to faulty low reading on 63-PI-004	1. Check if 63-PI-004 is reading incorrectly low - consider override if incorrect. 2. Inform maintenance of discrepancy between control and trip transmitter		
63-PT-004	Proposed	Bad_Input_Trip	Instrument Air Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To activate ESD-1D on low low instrument air pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
63-PT-004	Proposed		Instrument Air Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To activate ESD-1D on low low instrument air pressure	LO_LO	4	P3 - Target	t3d Sign.Econ.: Trip with escalation	ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cel	ESD1.1D has occurred due to low low instrument air pressure	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Confirm low pressure on instrument air receiver 63-PI-064 3. Start instrument air compressor if possible 4. Check pre-filter dP 63-PDI-051 - switch over if required 5. Check post-filter dP 63-PDI-062 - switch over if required 6. Inform maintenance/intervention team.	1. Check line up of instrument air package	
63-PT-004_BYPASS	Proposed		63-PT-004 Start-up Bypass Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON		P3 - Target	t3e Sign.Econ.: Alarm with significant economic impact	cause: 1 hour remaining to start-UP bypass removing	Start-up bypass timer expiring and device being put back in operation.	1. Confirm with the field operator if start-up bypass timer needs extending beyond the remaining 1 hour and extend the start-UP bypass timer if required.		
63-PT-004_BYPASS ACTIVE	Proposed		63-PT-004 Start-up Bypass applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		x Log	j5a - retain event for troubleshooting	Start up bypass applied as required	No consequences	1. Confirm that the correct start-UP bypass has been applied and remove when no longer required.		
63-PT-004_MOS	MOS Repeat		63-PT-004 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		MOS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		

63-PT-004_MOS ACTIVE	Proposed		63-PT-004 MOS applied	123A90-DDL-IN-PRO-40010		MOS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
63-PT-003	Proposed	Bad_Input_Monitoring	Instrument Air Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To monitor instrument air pressure	IO_FAIL	3.8 (Hold 7)	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance	
63-PT-003	Proposed		Instrument Air Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To monitor instrument air pressure	LO	4.5	P3 - Target	t3a Sign.Econ.: Pre-trip alarm for RAM Yellow Asset hazard	No process safety risk due to 63-PT004 that in case of low low pressure activates the ESD1.1D cause: Malfunction of the upstream instrument air package	Potential ESD1.1D on low low instrument air pressure	1. Confirm low pressure on instrument air receiver 63-PI-064 2. Start instrument air compressor if possible 3. Check pre-filter dP 63-PDI-051 - switch over if required 4. Check post-filter dP 63-PDI-062 - switch over if required 5. Inform maintenance/intervention team.	1. Check line up of instrument air package
63-PDI-051	Not started		S63001A/B Dryer pre-filter dP	1724000428-PR-PID-00019		HI	0.5						
63-PDI-062	Not started		S63002A/B Dryer after-filter dP	1724000428-PR-PID-00019		HI	0.5						
63-PI-064	Not started		V63001 Instrument Air Receiver Pressure	1724000428-PR-PID-00019		LO	TBD						
63-TI-051	Not started		Dryer inlet temperature	1724000428-PR-PID-00019		HI	40						
63-XA-003	Proposed		Instrument Air Pck Fault	P&ID (123A90-DDL-PR-PID-80027)	To notify on instrument air package trip	DISC		P3 - Target	t3d Sign.Econ.: Trip with escalation	Safety logic will activate: Instrument air package shutdown cause: A-63000 instrument air pkg cumulative critical faults	Instrument air package has tripped - no instrument air production and potential ESD1.1D on low low instrument air pressure	1. Confirm all sis initiated actions are complete as per cause and effects matrix. 2. Monitor process conditions and establish cause of trip 3. Inform maintenance/intervention team.	
63-XA-003	Proposed	Bad_Input_Trip	Instrument Air Pck Fault	P&ID (123A90-DDL-PR-PID-80027)	To notify on instrument air package trip	IO_FAIL		P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
63-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN A-63000 Instrument air PKG	P&ID (123A90-DDL-PR-PID-80027)	To shutdown A-63000 Instrument air package	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
64-AI-051	Not started		Oxygen in Nitrogen	1724000437-PR-PID-00018		HI							
64-AI-051	Not started		Oxygen in Nitrogen	1724000437-PR-PID-00018		HI_HI							
64-PT-002	Proposed	Bad_Input_Trip	Nitrogen Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To activate ESD-1D on low low nitrogen package outlet pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
64-PT-002	Proposed		Nitrogen Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To activate ESD-1D on low low nitrogen package outlet pressure	LO	4	x Log	j5a - retain event for troubleshooting	Closure of 64-SDV-001 valve during purging opration cause: No flow from N2 package A-64000 High consumption during purging operation	Automatic closure of 64-SDV-001	1. No action required (automated action)	
64-PT-002	Proposed		Nitrogen Hdr Pres	P&ID (123A90-DDL-PR-PID-80027)	To activate ESD-1D on low low nitrogen package outlet pressure	LO_LO	3.5	P2 - Standard	s2d Cumm.Degr.: Trip alarm with significant residual risk (by exception)	HMA-CFA - ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cel cause: Malfunction of pressure control loop Nitrogen package failure Instrument air package failure	ESD1.1D (Depressurization) on low low nitrogen pressure	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Check 64PIC031A/B Mode, Setpoint, Output 3. Confirm low pressure on nitrogen receiver 64-PI-059 4. Start nitrogen package / PSA if possible 5. Check post-filter dP 64-PDI-056 and switch over if required 6. Check for low instrument air pressure on 63-PI-003 and 63-PI-064 7. Inform maintenance/intervention team.	1. Check line up of nitrogen package
64-PT-002_BYPASS	Proposed		64-PT-002 Start-up Bypass Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON		P3 - Target	t3e Sign.Econ.: Alarm with significant economic impact	cause: 1 hour remaining to start-UP bypass removing	Start-up bypass timer expiring and device being put back in operation.	1. Confirm with the field operator if start-up bypass timer needs extending beyond the remaining 1 hour and extend the start-UP bypass timer if required.	
64-PT-002_BYPASS ACTIVE	Proposed		64-PT-002 Start-up Bypass applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		x Log	j5a - retain event for troubleshooting	Start up bypass applied as required	No consequences	1. Confirm that the correct start-UP bypass has been applied and remove when no longer required.	
64-PT-002_MOS	MOS Repeat		64-PT-002 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
64-PT-002_MOS ACTIVE	Proposed		64-PT-002 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
64-PI_002_031A_031B	Proposed	Bad_Input_MVC	Differential Pressure between 64-PI-002, 64-PI-031A and 64-PI-031B - N2 to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor deviation between 64-PI-002, 64-PI-031A and 64-PI-031B - N2 to distribution header	DEV	± 5	P3 - Target	t3b Sign.Econ.: Last alarm prior to a RAM Yellow Asset hazard	No immediate process safety impact: 1. Loss of control functionality (for 64-PI-031A and 64-PI-031B fault). The 64-PT-002 low low pressure will activate ESD1.1D in case of low low pressure. The 64-PSV-001 will discharge in case of high high pressure. 2. Loss of safety functionality (for 64-PI-002 fault): in case of low low pressure no nitrogen is sent to vent header, but the water inside the vent Q-43004 wil be a barrier for air.	Potential spurious trip due to faulty low reading on 63-PI-002	1. Assess if 64-PI-031A or 64-PI-031B is reliable: select reliable transmitter for control 2. Check if 64-PI-002 is reading incorrectly low - consider override if incorrect. 3. Inform maintenance of discrepancy between control and trip transmitter	
64-PT-031A	Proposed		Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	HI	8	x None	n7a - no alarm: no significant consequence.	No process safety risk due to the 64-PSV-001 discharge; Nitrogen package limited on pressure: nitrogen receiver pressure is protected at 8 Bar, maximum pressure from instrument air + 1 bar pressure drop = 8.5 bar. Following is potential cause but unlikely: High pressure can also indicate backflow from hydrogen storage vessel (at max. 30 barg). Protected via 64-SDV-001 and FCV on hydrogen vessel. Cause: Malfunction of pressure control loop	No significant impact	1. Check 64PIC031A/B - should be fully closed 2. Check 64-SDV-001 - should be fully closed 3. Check/close FCV's to hydrogen storage tanks 4. Inform maintenance/intervention team.	
64-PT-031A	Proposed	Bad_Input_Control	Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Select B transmitter for control 2. Inform maintenance	
64-PT-031A	Proposed	rather rely on nitrogen receiver low pressure alarm within package	Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	LO	6	x None	n7b - no alarm: condition already alarmed	No process safety risk due to 64-PT002 that in case of low low pressure activates the ESD1.1D cause: Malfunction of pressure control loop	Potential ESD1.1D (Depressurization) on low low nitrogen pressure	1. Check 64PIC031A/B Mode, Setpoint, Output 2. Confirm low pressure on nitrogen receiver 64-PI-059 3. Start nitrogen package / PSA if possible 4. Check post-filter dP 64-PDI-056 and switch over if required 5. Check for low instrument air pressure on 63-PI-003 and 63-PI-064 6. Inform maintenance/intervention team.	1. Check line up of nitrogen package
64-PV-031A	Proposed	Bad_Valve_Disrp_NonCrit	Pressure Control valve 64-PV-031A -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To alarm on pressure control valve position discrepancy - Nitrogen Header Pressure	DISCRP		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential trip on low low nitrogen pressure	1. Inform maintenance	
64-PY-031A	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 64-PV-031A positioner -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control - potential trip on low low nitrogen pressure	1. Inform maintenance	
64-ZSH-031A	Proposed	Bad_Valve_Open_NonCrit	Pressure Control valve 64-PV-031A open position -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance	
64-ZSL-031A	Proposed	Bad_Valve_Close_NonCrit	Pressure Control valve 64-PV-031A closed position -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
64-ZT-031A	Proposed	Bad_Valve_PositionFB_NonCrit	Pressure Control valve 64-PV-031A position transmitter -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring	1. Inform maintenance	

64-PT-031B	Proposed		Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	HI	8	x None	n7a - no alarm: no significant consequence.	No process safety risk due to the 64-PSV-001 discharge; Nitrogen package limited on pressure: nitrogen receiver pressure is protected at 8 Bar, maximum pressure from instrument air + 1 bar pressure drop = 8.5 bar. Following is potential cause but unlikely: High pressure can also indicate backflow from hydrogen storage vessel (at max. 30 barg). Protected via 64-SDV-001 and FCV on hydrogen vessel. Cause: Malfunction of pressure control loop	No significant impact	1. Check 64PIC031A/B - should be fully closed 2. Check 64-SDV-001 - should be fully closed 3. Check/close FCV's to hydrogen storage tanks 4. Inform maintenance/intervention team.	
64-PT-031B	Proposed	Bad_Input_Control	Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	IO_FAIL		P3 - Target	dg0a - Priority follows process alarm but is at least Target Alarm	1. Loss of monitoring and control functionality 2. Loss of channel redundancy	Potential loss of monitoring and control functionality	1. Select A transmitter for control 2. Inform maintenance	
64-PT-031B	Proposed	rather rely on nitrogen receiver low pressure alarm within package	Nitrogen Hdr Pres Ctl	P&ID (123A90-DDL-PR-PID-80027)	To control nitrogen package outlet pressure	LO	6	x None	n7b - no alarm: condition already alarmed	No process safety risk due to 64-PT002 that in case of low low pressure activates the ESD1.1D cause: Malfunction of pressure control loop	Potential ESD1.1D (Depressurization) on low low nitrogen pressure	2. Confirm low pressure on nitrogen receiver 64-PI-059 3. Start nitrogen package / PSA if possible 4. Check post-filter dP 64-PDI-056 and switch over if required 5. Check for low instrument air pressure on 63-PI-003 and 63-PI-064 6. Check 64PIC031A/B Mode, Setpoint, Output 7. Inform maintenance/intervention team.	1. Check line up of nitrogen package
64-PV-031B	Proposed	Bad_Valve_Disrp_NonCrit	Pressure Control valve 64-PV-031B -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To alarm on pressure control valve position discrepancy - Nitrogen Header Pressure	DISCRP		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential trip on low low nitrogen pressure	1. Inform maintenance	
64-PY-031B	Proposed	Bad_Valve_Positioner_NonCrit	Control Valve 64-PV-031B positioner - N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarm/trip 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control - potential trip on low low nitrogen pressure	1. Inform maintenance	
64-ZSH-031B	Proposed	Bad_Valve_Open_NonCrit	Pressure Control valve 64-PV-031B open position -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor on control valve position	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance	
64-ZSL-031B	Proposed	Bad_Valve_Close_NonCrit	Pressure Control valve 64-PV-031B closed position -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
64-ZT-031B	Proposed	Bad_Valve_PositionFB_NonCrit	Pressure Control valve 64-PV-031B position transmitter -N2 pressure control to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To monitor control valve position - Nitrogen Header Pressure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Incorrect position will be apparent from process alarms 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of position monitoring	1. Inform maintenance	
64-PDI-056	Not started		S64001A/B PSA after filter dP	1724000437-PR-PID-00018		HI							
64-PI-051	Not started		Nitrogen Package Inlet Pressure	1724000437-PR-PID-00018		LO	8						
64-PI-052	Not started		C64001A PSA Pressure	1724000437-PR-PID-00018		HI							
64-PI-052	Not started		C64001A PSA Pressure	1724000437-PR-PID-00018		LO	8						
64-PI-053	Not started		C64001B PSA Pressure	1724000437-PR-PID-00018		HI							
64-PI-053	Not started		C64001B PSA Pressure	1724000437-PR-PID-00018		LO	8						
64-PI-057	Not started		Nitrogen Package Outlet Pressure	1724000437-PR-PID-00018		LO	7.5						
64-PI-059	Not started		V64001 N2 Receiver Pressure	1724000437-PR-PID-00018		LO	7.5						
64-SDV-001	Proposed	Bad_Valve_Disrp_SDV	Shut-down valve - N2 to Hyrogen vessels inlet header	P&ID (123A90-DDL-PR-PID-80027)	To alarm on shut down valve position discrepancy - Nitrogen to Hydr.Stor.Vessel Nitrogen Header	DISCRP		P2 - Standard	s2b Cumm.Degr.: Last alarm for RAM Yellow HSE hazard (no trip)	Not closed on demand: unsuccessfull isolation of nitrogen supply to hydr. Storage vessels Not open on demand: Purge sequence is monitored via flow totalizer to ensure adequate purging. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Not closed: Nitrogen header not isolated on demand; Not open: inability to purge nitrogen to Hydr. Storage Vessels	1. If required, attempt to close valve manually, or consider ESD-1D 2. Request/develop mitigation plan 3. Inform maintenance/intervention team.	
64-SDY-001	Proposed	Bad_Valve_Solenoid_SDV	Shut-down Valve 64-SDV-001 solenoid- N2 to Hyrogen vessels inlet header	P&ID (123A90-DDL-PR-PID-80027)	To monitor shut down valve solenoid failure - Nitrogen to Hydr.Stor.Vessel Nitrogen Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored by sequence and pressure transmitters. Cause: 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to purge nitrogen to Hydr. Storage Vessels	1. Inform maintenance	
64-ZAH-001	Proposed		Nitr Purge to HydrVsl Open	P&ID (123A90-DDL-PR-PID-80027)	To monitor hydrogen storage purge SDV position	DISC		P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Closure of the SDV is essential outside of a purge mode to prevent backflow from the hydrogen storage vessel (potentially at 30 barg) to the Nitrogen header (normally at 7 barg) Alarm suppressed during purging mode Cause: ASD activation ESD-1D activation SDV valve failt to close on demand	Risk of hydrogen back flow from storage vessel nitrogen	1. Manually close 64SDV001 2. Ensure all FCV's on Hydrogen storage vessel purge are closed 3. Inform maintenance/intervention team.	
64-ZSH-001	Proposed	Bad_Valve_Open_SDV	Shut-down Valve 64-SDV-001 open position - N2 to Hyrogen vessels inlet header	P&ID (123A90-DDL-PR-PID-80027)	To monitor shut down valve position - Nitrogen to Hydr.Stor.Vessel Nitrogen Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored by sequence and pressure transmitters. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
64-ZSL-001	Proposed	Bad_Valve_Close_SDV	Shut-down Valve 64-SDV-001 closed position - N2 to Hyrogen vessels inlet header	P&ID (123A90-DDL-PR-PID-80027)	To monitor shut down valve position - Nitrogen to Hydr.Stor.Vessel Nitrogen Header	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Purge sequence is monitored by sequence and pressure transmitters. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance	
64-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN U-64000 Nitrogen PKG	P&ID (123A90-DDL-PR-PID-80027)	To shutdown U-64000 Nitrogen package	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
64-XA-003	Proposed		Nitrogen Pkg Fault	P&ID (123A90-DDL-PR-PID-80027)	To notify on nitrogen package trip	DISC		P3 - Target	t3d Sign.Econ.: Trip with escalation	No consequences because the safety logic will activate: Nitrogen package shutdown cause: U-64000 nitrogen pkg cumulative critical faults	Nitrogen package has tripped - no nitrogen production and potential ESD1.1D on low low nitrogen pressure	1. Confirm all sis initiated actions are complete as per cause and effects matrix. 2. Monitor process conditions and establish cause of trip 3. Inform maintenance/intervention team.	
64-XA-003	Proposed	Bad_Input_Trip	Nitrogen Pkg Fault	P&ID (123A90-DDL-PR-PID-80027)	To notify on nitrogen package trip	IO_FAIL		P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
64-ZSH-031A_B	Proposed		64-PV-031A and 64-PV-031B both open - N2 to distribution header	P&ID (123A90-DDL-PR-PID-80027)	To notify that both valves are open	DISC		x None	n7a - no alarm: no significant consequence.	No significant consequence The 64-PSV-001 will discharge in case of high high pressure.	n.a. no significant consequence	1. n.a.	
70-XA-001	Proposed		ASD Activation from FGS to SIS	123A90-DDL-IN-CE-40000	To transfer ASD status from FGS (Fire and Gas System) to SIS (Trip system)	DISC		x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-002	Proposed		ESD-1D Activation from FGS to SIS	123A90-DDL-IN-CE-40000	To transfer ESD-1D status from FGS (Fire and Gas System) to SIS (Trip system)	DISC		x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-003	Proposed		SHUT-DOWN A-20000 Electrolyser PKG	123A90-DDL-IN-CE-40000	To transfer electrolyzer shut down status from FGS (Fire and Gas System) to SIS (Trip system)	DISC		x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	

70-XA-004	Proposed		Inhibit B-300 battery charging	123A90-DDL-IN-CE-40000	To transfer inhibit B-300 battery charging status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-005	Proposed		H2 confirmed in open area from FGS system	123A90-DDL-IN-CE-40000	To transfer confirmed H2 in open area status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-006	Proposed		H2/Smoke confirmed inside B-100 HV/MV SWGR room	123A90-DDL-IN-CE-40000	To transfer confirmed H2/smoke in B-100 status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-007	Proposed		H2/Smoke confirmed inside B-200 LV SWGR room	123A90-DDL-IN-CE-40000	To transfer confirmed H2/smoke in B-200 status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-008	Proposed		Inhibit B-100 battery charging	123A90-DDL-IN-CE-40000	To transfer inhibit B-100 battery charging status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-010	Proposed		H2/Smoke confirmed in A-50003 Sea water treatment PKG	123A90-DDL-IN-CE-40000	To transfer confirmed H2/smoke in Water Trmt Pckg status from FGS (Fire and Gas System) to SIS (Trip system)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the FGS used to trigger the relevant actions by the SIS. Initiating conditions (e.g. confirmed fire) are alarmed.	n.a. output from FGS.	1. n.a.	
70-XA-051	Proposed		FGS Panel Ventilation Fan Fault	1724000594-IN-DG-00021	To notify on FGS Panel Ventilation Fan Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel high temperature and possible loss of functionality	Potential panel high temperature and possible loss of functionality	1. Inform maintenance	
70-XA-051	Proposed	Bad_Input_Diagnostic	FGS Panel Ventilation Fan Fault	1724000594-IN-DG-00021	To notify on FGS Panel Ventilation Fan Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
70-XA-052	Proposed		FGS Panel Power supply & Diodes failure	1724000594-IN-DG-00021	To notify on FGS Panel Power supply & Diodes failure	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance	
70-XA-052	Proposed	Bad_Input_Diagnostic	FGS Panel Power supply & Diodes failure	1724000594-IN-DG-00021	To notify on FGS Panel Power supply & Diodes failure	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
70-XA-053	Proposed		FGS Panel Cumulative Breaker Fault	1724000594-IN-DG-00021	To notify on FGS Panel Cumulative Breaker Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
70-XA-053	Proposed	Bad_Input_Diagnostic	FGS Panel Cumulative Breaker Fault	1724000594-IN-DG-00021	To notify on FGS Panel Cumulative Breaker Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
70-XA-054	Proposed		FGS Panel High Temperature Alarm	1724000594-IN-DG-00021	To notify on FGS Panel High Temperature Alarm	DISC	P2 - Standard	dg2a - Standard alarm for significant system degradation	FGS panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential ASD on FGS system fault	1. Check B-400 container HVAC - start if required 2. Inform supervisor - potential ASD activation due to faulty FGS	
70-XA-054	Proposed	Bad_Input_Diagnostic	FGS Panel High Temperature Alarm	1724000594-IN-DG-00021	To notify on FGS Panel High Temperature Alarm	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
72-XA-001	Proposed		Wave-off light system fault	123A90-DDL-IN-CE-40000	To monitor for wave-off light system fault	DISC	P2 - Standard	dg2b - Standard alarm for significant SCE degradation	Loss of navids ucp panel The wave-off light indicates that it is not safe to approach the platform. Loss of the wave-off light will prevent staff from determining if it is safe to approach the platform.	Loss of NAVIDS wave-off light	1. Inform supervisor of loss of NAVID system and wave-off light	
72-XA-001	Proposed	Bad_Output_F&G_Alarm	Wave-off light system fault	123A90-DDL-IN-CE-40000	To monitor for wave-off light system fault	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	cause: 1. No wave-off lights activation. 2. Loss of safety functionality 3. Loss of channel redundancy	Wave of lights fault detection failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
72-XS-001	Proposed	Bad_Output_F&G_Alarm	Wave-off lights activation	123A90-DDL-IN-CE-40002	To activate wave of lights	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No wave-off lights activation. 2. Loss of safety functionality 3. Loss of channel redundancy	Wave of lights activation failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
72-XS-002	Proposed	Bad_Output_F&G_Alarm	Electrical isolation visibility meter not suitable for zone IIC (or IIB+H2)	123A90-DDL-IN-CE-40002	To activate electrical isolation visibility meter not suitable for zone IIC (or IIB+H2)	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No wave-off lights activation. 2. Loss of safety functionality 3. Loss of channel redundancy	Electrical isolation visibility meter failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
77-HFD-001	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 1 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To alarm on F&G Damper position discrepancy - AHU 1 B-100	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-001	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 1 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To control F&G Damper - AHU 1 B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-001	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 1 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To monitor F&G Damper position - AHU 1 B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-002	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 2 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To alarm on F&G Damper position discrepancy - AHU 2 B-100	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-002	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 2 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To control F&G Damper - AHU 2 B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-002	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 2 - B-100 Container	P&ID (1724000049-HV-PID-00039)	To monitor F&G Damper position - AHU 2 B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-003	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper Common - B-100 Container	P&ID (1724000049-HV-PID-00039)	To alarm on F&G Damper position discrepancy - Common B-100	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-003	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper Common - B-100 Container	P&ID (1724000049-HV-PID-00039)	To control F&G Damper - Common B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-003	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper Common - B-100 Container	P&ID (1724000049-HV-PID-00039)	To monitor F&G Damper position - Common B-100	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-004	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 3 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To alarm on F&G Damper position discrepancy - AHU 3 B-200	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team

77-HY-004	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 3 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To control F&G Damper - AHU 3 B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-004	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 3 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To monitor F&G Damper position - AHU 3 B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-005	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 4 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To alarm on F&G Damper position discrepancy - AHU 4 B-200	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-005	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 4 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To control F&G Damper - AHU 4 B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-005	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 4 - B-200 Container	P&ID (1724000049-HV-PID-00040)	To monitor F&G Damper position - AHU 4 B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-006	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper Common - B-200 Container	P&ID (1724000049-HV-PID-00040)	To alarm on F&G Damper position discrepancy - Common B-200	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-006	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper Common - B-200 Container	P&ID (1724000049-HV-PID-00040)	To control F&G Damper - Common B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-006	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper Common - B-200 Container	P&ID (1724000049-HV-PID-00040)	To monitor F&G Damper position - Common B-200	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-007	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To alarm on F&G Damper position discrepancy - AHU 5 B-300	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-007	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To control F&G Damper - AHU 5 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-007	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To monitor F&G Damper position - AHU 5 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-008	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To alarm on F&G Damper position discrepancy - AHU 5 B-300	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-008	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To control F&G Damper - AHU 5 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-008	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 5 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To monitor F&G Damper position - AHU 5 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-009	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To alarm on F&G Damper position discrepancy - AHU 6 B-300	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-009	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To control F&G Damper - AHU 6 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-009	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To monitor F&G Damper position - AHU 6 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-010	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To alarm on F&G Damper position discrepancy - AHU 6 B-300	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-010	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To control F&G Damper - AHU 6 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-010	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 6 - B-300 Container	P&ID (1724000049-HV-PID-00041)	To monitor F&G Damper position - AHU 6 B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-011	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper Common - B-300 Container	P&ID (1724000049-HV-PID-00041)	To alarm on F&G Damper position discrepancy - Common B-300	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team
77-HY-011	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper Common - B-300 Container	P&ID (1724000049-HV-PID-00041)	To control F&G Damper - Common B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance	
77-ZSL-011	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper Common - B-300 Container	P&ID (1724000049-HV-PID-00041)	To monitor F&G Damper position - Common B-300	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring	
77-HFD-012	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To alarm on F&G Damper position discrepancy - AHU 7 B-400	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening	1. Inform maintenance team

77-HY-012	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To control F&G Damper - AHU 7 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance		
77-ZSL-012	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To monitor F&G Damper position - AHU 7 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring		
77-HFD-013	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To alarm on F&G Damper position discrepancy - AHU 7 B-400	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening		1. Inform maintenance team
77-HY-013	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To control F&G Damper - AHU 7 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance		
77-ZSL-013	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 7 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To monitor F&G Damper position - AHU 7 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring		
77-HFD-014	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To alarm on F&G Damper position discrepancy - AHU 8 B-400	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening		1. Inform maintenance team
77-HY-014	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To control F&G Damper - AHU 8 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance		
77-ZSL-014	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To monitor F&G Damper position - AHU 8 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring		
77-HFD-015	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To alarm on F&G Damper position discrepancy - AHU 8 B-400	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening		1. Inform maintenance team
77-HY-015	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To control F&G Damper - AHU 8 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance		
77-ZSL-015	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper AHU 8 - B-400 Container	P&ID (1724000049-HV-PID-00042)	To monitor F&G Damper position - AHU 8 B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring		
77-HFD-016	Proposed	Bad_Valve_Disrp_HVAC	Fire and Gas Damper Common - B-400 Container	P&ID (1724000049-HV-PID-00042)	To alarm on F&G Damper position discrepancy - Common B-400	DISCRP	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	Only used to close ventilation during gas release: discrepancy is failure to close on demand. 1. Incorrect closure: no air relief 2. Incorrect opening: room not segregated. In case of F&G detection the safety logic will activate ESD-1.D	Potential ESD-1D depressurization to prevent escalation of F&G indicent	1. Activate manual F&G damper closure/opening		1. Inform maintenance team
77-HY-016	Proposed	Bad_Valve_Positioner_Damper	Fire and Gas Damper Common - B-400 Container	P&ID (1724000049-HV-PID-00042)	To control F&G Damper - Common B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Damper failure will be apparent from room temperature alarm 1. Loss of functionality 2. Loss of channel redundancy	Potential damper closure without demand	1. Inform maintenance		
77-ZSL-016	Proposed	Bad_Valve_Close_HVAC	Fire and Gas Damper Common - B-400 Container	P&ID (1724000049-HV-PID-00042)	To monitor F&G Damper position - Common B-400	IO_FAIL	P4 - Alert	fg4 - Target alert F&G degradation (maintenance required, e.g. dirty optics)	Incorrect valve closing is not apparent from other indications, but valve will still operate on demand. 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of damper closed position monitoring	1. Inform maintenance of loss of damper position monitoring		
77-XA-001	Proposed		HVAC B-100 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-100 HV container operation	DISC	P4 - Alert	t4e minor: maintenance follow up required	No process safety risk because the safety logic will activate: Shutdown HVAC system of B-100 (HV container) cause: HVAC B-100 container cumulative critical faults	Insufficient ventilation - leading to increased equipment temperature and degradation	1. Inform maintenance/intervention team of loss of HVAC		
77-XA-001	Proposed	Bad_Input_Monitoring	HVAC B-100 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-100 HV container operation	IO_FAIL	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
77-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN HVAC B-100 container	123A90-DDL-IN-CE-40000	To shutdown HVAC B-100 container	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
77-XA-002	Proposed		HVAC B-200 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-200 LV container operation	DISC	P4 - Alert	t4e minor: maintenance follow up required	No process safety risk because the safety logic will activate: Shutdown HVAC system of B-200 (LV container) cause: HVAC B-200 container cumulative critical faults	Insufficient ventilation - leading to increased equipment temperature and degradation	1. Inform maintenance/intervention team of loss of HVAC		
77-XA-002	Proposed	Bad_Input_Monitoring	HVAC B-200 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-200 LV container operation	IO_FAIL	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
77-XS-002	Proposed	Bad_Output_Channel	SHUT-DOWN HVAC B-200 container	123A90-DDL-IN-CE-40000	To shutdown HVAC B-200 container	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
77-XA-003	Proposed		HVAC B-300 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-300 UPS container operation	DISC	P3 - Target	t3a Sign.Econ.: Pre-trip alarm for RAM Yellow Asset hazard	Risk of H2 build up due from battery if HVAC fails (potential trip on H2 detector) No process safety risk because the safety logic will activate: Shutdown HVAC system of B-300 (UPS container) cause: HVAC B-300 container cumulative critical faults	Insufficient ventilation - leading to increased equipment temperature and degradation, potential H2 build up from battery	1. Inform maintenance/intervention team of loss of HVAC		
77-XA-003	Proposed	Bad_Input_Monitoring	HVAC B-300 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-300 UPS container operation	IO_FAIL	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
77-XS-003	Proposed	Bad_Output_Channel	SHUT-DOWN HVAC B-300 container	123A90-DDL-IN-CE-40000	To shutdown HVAC B-300 container	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
77-XA-004	Proposed		HVAC B-400 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-400 ITER container operation	DISC	P4 - Alert	t4e minor: maintenance follow up required	No process safety risk because the safety logic will activate: Shutdown HVAC system of B-400 (ITER container) cause: HVAC B-400 container cumulative critical faults	Insufficient ventilation - leading to increased equipment temperature and degradation	1. Inform maintenance/intervention team of loss of HVAC		
77-XA-004	Proposed	Bad_Input_Monitoring	HVAC B-400 container Fault	123A90-DDL-IN-CE-40000	To monitor HVAC of B-400 ITER container operation	IO_FAIL	P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of monitoring functionality	1. Develop alternative monitoring plan 2. Inform maintenance		
77-XS-004	Proposed	Bad_Output_Channel	SHUT-DOWN HVAC B-400 container	123A90-DDL-IN-CE-40000	To shutdown HVAC B-400 container	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
79-XA-001	Proposed		ASD Activation from SIS to FGS	123A90-DDL-IN-CE-40002	To transfer ASD status from SIS (Trip system) to FGS (Fire and Gas System)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the SIS used to trigger the relevant actions by the FGS. Initiating conditions (e.g. High High Pressure) are alarmed.	n.a. output from SIS.	1. n.a.		
79-XA-002	Proposed		ESD-1D Activation from SIS to FGS	123A90-DDL-IN-CE-40002	To transfer ESD-1D status from SIS (Trip system) to FGS (Fire and Gas System)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the SIS used to trigger the relevant actions by the FGS. Initiating conditions (e.g. High High Pressure) are alarmed.	n.a. output from SIS.	1. n.a.		
79-XA-003	Proposed		ESD-1 Activation from SIS to FGS	123A90-DDL-IN-CE-40002	To transfer ESD-1 status from SIS (Trip system) to FGS (Fire and Gas System)	DISC	x Log	j5a - retain event for troubleshooting	This signal represents an output status of the SIS used to trigger the relevant actions by the FGS. Initiating conditions (e.g. High High Pressure) are alarmed.	n.a. output from SIS.	1. n.a.		

79-XA-004	Proposed		MOB Activation from SIS to FGS	123A90-DDL-IN-CE-40002	To transfer MOB status from SIS (Trip system) to FGS (Fire and Gas System)	DISC		x Log	j5a - retain event for troubleshooting	This signal represents an output status of the SIS used to trigger the relevant actions by the FGS. Initiating conditions (e.g. High High Pressure) are alarmed.	n.a. output from SIS.	1. n.a.		
79-XA-005	Proposed		Loss of on-shore communication	123A90-DDL-IN-CE-40000	To alarm and trip on loss of communication	DISC		P3 - Target	t3e Sign.Econ.: Alarm with significant economic impact	Indicates that there is (or rather was) a loss of communication. After timer expiry (6 hrs), the system will activate ESD-1D. Spurious activation of this alarm indicates intermittent problems and requires follow up to prevent trip. No process safety risk because the safety logic will activate the ESD-1D: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Potential ESD-1D if loss of communication continues	1. Inform maintenance/intervention team of loss of communication		
79-XA-005	Proposed		Loss of on-shore communication	123A90-DDL-IN-CE-40000	To alarm and trip on loss of communication	IO_FAIL		P4 - Alert	dg0b - Priority is set one level below process alarm but is at least Target Alert	Loss of channel redundancy	Loss of channel redundancy - no immediate impact	1. Inform maintenance		
79-XS-010	Proposed	Bad_Output_Channel	Elect. Isolation soft. Cables communication CAT 6A	123A90-DDL-IN-CE-40000	To activate Elect. Isolation soft. Cables communication CAT 6A	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
79-XA-051	Proposed		SIS Panel Ventilation Fan Fault	1724000594-IN-DG-00021	To notify on SIS Panel Ventilation Fan Fault	DISC		P4 - Alert	dg4a - Target alert for system maintenance	Panel high temperature and possible loss of functionality	Potential panel high temperature and possible loss of functionality	1. Inform maintenance		
79-XA-051	Proposed	Bad_Input_Diagnostic	SIS Panel Ventilation Fan Fault	1724000594-IN-DG-00021	To notify on SIS Panel Ventilation Fan Fault	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action		
79-XA-052	Proposed		SIS Panel Power supply & Diodes failure	1724000594-IN-DG-00021	To notify on SIS Panel Power supply & Diodes failure	DISC		P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance		
79-XA-052	Proposed	Bad_Input_Diagnostic	SIS Panel Power supply & Diodes failure	1724000594-IN-DG-00021	To notify on SIS Panel Power supply & Diodes failure	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action		
79-XA-053	Proposed		SIS Panel Cumulative Breaker Fault	1724000594-IN-DG-00021	To notify on SIS Panel Cumulative Breaker Fault	DISC		P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance		
79-XA-053	Proposed	Bad_Input_Diagnostic	SIS Panel Cumulative Breaker Fault	1724000594-IN-DG-00021	To notify on SIS Panel Cumulative Breaker Fault	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action		
79-XA-054	Proposed		SIS Panel High Temperature Alarm	1724000594-IN-DG-00021	To notify on SIS Panel High Temperature Alarm	DISC		P2 - Standard	dg2a - Standard alarm for significant system degradation	SIS panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential ASD on SIS system fault	1. Check B-400 container HVAC - start if required 2. Inform supervisor - potential ASD activation due to faulty FGS		
79-XA-054	Proposed	Bad_Input_Diagnostic	SIS Panel High Temperature Alarm	1724000594-IN-DG-00021	To notify on SIS Panel High Temperature Alarm	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action		
80-PT-002	Proposed		Fuel Cell Package Inlet Press	P&ID (123A90-DDL-PR-PID-80012)	To protect fuel cell against low low and high high hydrogen pressure	HI_HI	9	P3 - Target	t3d Sign.Econ.: Trip with escalation	PSD activation: Close SDV valves 25-SDV-023 and 25-SDV-001 and shutdown fuel cell package, shutdown of water treatment package, electrolyser package and seawater lift pumps cause: 25XV006 driven open/inadvertently opened by operator blph-MV-016 left in closed position on Downstream line blockage in line within fuel cell package	Trip feed to electrolyser and PSD to protect against overpresurization	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Check hydrogen supply from storage vessels & associated XV's 3. Check for blockage in fuel cell 4. Inform maintenance/intervention team.	1. Check valve line up during commisioning (BLPH-MV-016 closed)	
80-PT-002	Proposed	Bad_Input_Trip	Fuel Cell Package Inlet Press	P&ID (123A90-DDL-PR-PID-80012)	To protect fuel cell against low low and high high hydrogen pressure	IO_FAIL	3.8 (Hold 7)	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance		1. Develop mitigation plan and consider applying MOS
80-PT-002	Proposed		Fuel Cell Package Inlet Press	P&ID (123A90-DDL-PR-PID-80012)	To protect fuel cell against low low and high high hydrogen pressure	LO_LO	2	P3 - Target	t3d Sign.Econ.: Trip with escalation	PSD activation: Close SDV valves 25-SDV-023 and 25-SDV-001 and shutdown fuel cell package, shutdown of water treatment package, electrolyser package and seawater lift pumps cause: 25XV006 driven inadvertently close by operator	Trip feed to electrolyser and PSD to protect electrolyser	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Switch to full hydrogen storage vessel 3. Check 25PIC035 Mode, Setpoint, Output 4. Check XV's from hydrogen vessels 5. Check 25XV006 open, 25SDV023 open, 25BDV022 closed, 80XV001 closed 6. Leave fuel cell stopped (move facility into standby) 7. Inform maintenance/intervention team.		
80-PT-002_BYPASS	Proposed		80-PT-002 Start-up Bypass Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON		P3 - Target	t3e Sign.Econ.: Alarm with significant economic impact	cause: 1 hour remaining to start-UP bypass removing	Start-up bypass timer expiring and device being put back in operation.	1. Confirm with the field operator if start-up bypass timer needs extending beyond the remaining 1 hour and extend the start-UP bypass timer if required.		
80-PT-002_BYPASS ACTIVE	Proposed		80-PT-002 Start-up Bypass applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		x Log	j5a - retain event for troubleshooting	Start up bypass applied as required	No consequences	1. Confirm that the correct start-UP bypass has been applied and remove when no longer required.		
80-PT-002_MOS	MOS Repeat		80-PT-002 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
80-PT-002_MOS ACTIVE	Proposed		80-PT-002 MOS applied	123A90-DDL-IN-PRO-40010		MOS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
80-XA-001	Proposed		A-80000 Fuel cell PKG confirmed gas alarm	P&ID (123A90-DDL-PR-PID-80012)	To activate ESD-1D on H2 gas detection in A-80000 Fuel cell package	GAS_HI_CONF		P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.	
80-XA-001	Proposed	Bad_Input_F&G	A-80000 Fuel cell PKG confirmed gas alarm	P&ID (123A90-DDL-PR-PID-80012)	To activate ESD-1D on H2 gas detection in A-80000 Fuel cell package	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
80-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN A-80000 Fuel cell PKG	P&ID (123A90-DDL-PR-PID-80012)	To shutdown A-80000 Fuel cell PKG	IO_FAIL		x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity		
80-XV-001	Proposed	Bad_Valve_Disrp_NonCrit	Hyrogen storage to A-80000 Package vent system	P&ID (123A90-DDL-PR-PID-80012)	To alarm on control valve position discrepancy - Hydrogen to Fuel Cell vent	DISCRP		P4 - Alert	t4e minor: reduced process/equipment performance	Venting is monitored via vent flow 1. Incorrect opening: vent H2 dispertion. Cause: Incorrect valve opening. Loss of instrument air. Valve sticking or faulty actuator / solenoid / filter regulator / limit switch.	Incorrect pressure control - potential H2 venting	1. Check impact on hydrogen venting 2. Inform maintenance		
80-XY-001	Proposed	Bad_Valve_Solenoid_NonCrit	Hyrogen storage to A-80000 Package vent system	P&ID (123A90-DDL-PR-PID-80012)	To control valve position - Hydrogen to Fuel Cell vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of control; potential inability to use Hydrogen vent	1. Inform maintenance		
80-ZSH-001	Proposed	Bad_Valve_Open_NonCrit	Hyrogen storage to A-80000 Package vent system	P&ID (123A90-DDL-PR-PID-80012)	To monitor on XV valve position - Hydrogen to Fuel Cell vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of open position monitoring	1. Inform maintenance		
80-ZSL-001	Proposed	Bad_Valve_Close_NonCrit	Hyrogen storage to A-80000 Package vent system	P&ID (123A90-DDL-PR-PID-80012)	To monitor control valve position - Hydrogen to Fuel Cell vent	IO_FAIL		x Log	J5d- PTM - event required for proactive technical monitoring	Venting is monitored via vent flow 1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of close position monitoring	1. Inform maintenance		

80-XA-002	Proposed	Bad_Input_F&G	A-80000 Fuel cell PKG confirmed smoke alarm	P&ID (123A90-DDL-PR-PID-80012)	To activate ESD-1D on smoke detection in A-80000 Fuel cell package	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
80-XA-002	Proposed		A-80000 Fuel cell PKG confirmed smoke alarm	P&ID (123A90-DDL-PR-PID-80012)	To activate ESD-1D on smoke detection in A-80000 Fuel cell package	SMOKE_CONF	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
80-XA-003	Proposed		Fuel cell PKG UCP fault	P&ID (123A90-DDL-PR-PID-80012)	To notify on fuel cell package trip	DISC	P3 - Target	t3d Sign.Econ.: Trip with escalation	Safety logic will activate: 1. Close 25-SDV-023 on outlet H2 header to fuel cell 2. Shutdown fuel cell package A-80000 cause: A-80000 fuel cell pkg cumulative critical faults	Fuell cell package has tripped - no electricity production	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Monitor process conditions and establish cause of trip 3. Inform maintenance/intervention team.	
80-XA-003	Proposed	Bad_Input_Trip	Fuel cell PKG UCP fault	P&ID (123A90-DDL-PR-PID-80012)	To notify on fuel cell package trip	IO_FAIL	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
81-XS-001	Proposed	Bad_Output_Channel	OPEN WIND FARM INCOMING CIRCUIT BREAKERS	123A90-DDL-IN-CE-40000	To open Wind Farm incoming circuit breaker	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
82-XS-001	Proposed	Bad_Output_Channel	OPEN SOLAR INCOMING CIRCUIT BREAKERS	123A90-DDL-IN-CE-40000	To open Solar incoming circuit breaker	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
82-XS-002	Proposed	Bad_Output_Channel	OPEN BESS A-85000 INCOMING CIRCUIT BREAKERS	123A90-DDL-IN-CE-40000	To open BESS A-85000 incoming circuit breaker	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
82-XS-003	Proposed	Bad_Output_Channel	OPEN FUEL CELL A-80000 INCOMING CIRCUIT BREAKERS	123A90-DDL-IN-CE-40000	To open Fuel Cell A-80000 incoming circuit breaker	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
83-XS-001A	Proposed	Bad_Output_Channel	SHUTDOWN SEAWATER LIFT PUMP P-50001A	P&ID (123A90-DDL-PR-PID-80021)	To shutdown Seawater lift pump P-50001A	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
83-XS-001B	Proposed	Bad_Output_Channel	SHUTDOWN SEAWATER LIFT PUMP P-50001B	P&ID (123A90-DDL-PR-PID-80021)	To shutdown Seawater lift pump P-50001B	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-001	Proposed	Bad_Output_Channel	ELECT. ISOLATION UPS POWER UCP (WATER TREAT. A-50000)	123A90-DDL-IN-CE-40000	To isolate UPS POWER UCP (WATER TREAT. A-50000)	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-002	Proposed	Bad_Output_Channel	ELECT. ISOLATION UPS POWER UCP (NITROGEN A-64000)	123A90-DDL-IN-CE-40000	To isolate UPS power UCP (NITROGEN A-64000)	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-003	Proposed	Bad_Output_Channel	ELECT. ISOLATION UPS POWER UCP (INSTRUMENT AIR A-63000)	123A90-DDL-IN-CE-40000	To isolate UPS power UCP (INSTRUMENT AIR A-63000)	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-004	Proposed	Bad_Output_Channel	ELECT. ISOLATION UPS POWER UCP HVAC B-100	123A90-DDL-IN-CE-40000	To isolate UPS power UCP HVAC B-100	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-005	Proposed	Bad_Output_Channel	ELECT. ISOLATION UPS POWER UCP HVAC B-200	123A90-DDL-IN-CE-40000	To isolate UPS power UCP HVAC B-200	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-006	Proposed	Bad_Output_Channel	DISCONNECT DC UPS (B-100 CONTAINER)	123A90-DDL-IN-CE-40000	To disconnect DC UPS (B-100 CONTAINER)	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-007A	Proposed	Bad_Output_Channel	DISCONNECT AC UPS UP-200F3 BATTERIES A	123A90-DDL-IN-CE-40000	To disconnect AC UPS UP-200F3 Batteries A	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-007B	Proposed	Bad_Output_Channel	DISCONNECT AC UPS UP-200F3 BATTERIES B	123A90-DDL-IN-CE-40000	To disconnect AC UPS UP-200F3 Batteries B	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-008A	Proposed	Bad_Output_Channel	DISCONNECT AC UPS UP-200F4 BATTERIES A	123A90-DDL-IN-CE-40000	To disconnect AC UPS UP-200F4 Batteries A	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-008B	Proposed	Bad_Output_Channel	DISCONNECT AC UPS UP-200F4 BATTERIES B	123A90-DDL-IN-CE-40000	To disconnect AC UPS UP-200F4 Batteries B	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-009	Proposed	Bad_Output_Channel	INHIBIT. BATTERY CHARGING B-100	123A90-DDL-IN-CE-40000	To inhibit battery charging B-100	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-010	Proposed	Bad_Output_Channel	INHIBIT. BATTERY CHARGING AC UPS UP-200F3 BATTERIES	123A90-DDL-IN-CE-40000	To inhibit battery charging AC UPS UP-200F3	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
84-XS-011	Proposed	Bad_Output_Channel	INHIBIT. BATTERY CHARGING AC UPS UP-200F4 BATTERIES	123A90-DDL-IN-CE-40000	To inhibit battery charging AC UPS UP-200F4	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
85-XA-001	Proposed		A-85000 BESS PKG confirmed gas alarm	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in A-85000 BESS package	GAS_HI_CONF	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
85-XA-001	Proposed	Bad_Input_F&G	A-85000 BESS PKG confirmed gas alarm	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in A-85000 BESS package	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
85-XS-001	Proposed	Bad_Output_Channel	SHUT-DOWN A-85000 BESS PKG	123A90-DDL-IN-CE-40000	To shutdown A-85000 BESS package	IO_FAIL	x Log	j5a - retain event for troubleshooting	Loss of channel redundancy	No immediate impact - Loss of channel redundancy	1. Maintenance to check output card / wiring at next opportunity	
85-XA-002	Proposed	Bad_Input_F&G	A-85000 BESS PKG confirmed fire alarm	123A90-DDL-IN-CE-40002	To activate ESD-1D on smoke detection in A-85000 BESS package	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
85-XA-002	Proposed		A-85000 BESS PKG confirmed fire alarm	123A90-DDL-IN-CE-40002	To activate ESD-1D on smoke detection in A-85000 BESS package	SMOKE_CONF	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
85-XA-003	Proposed		A-85000 BESS PKG UCP fault	123A90-DDL-IN-CE-40000	To notify on Battery Energy Storage System package trip	DISC	P3 - Target	t3d Sign.Econ.: Trip with escalation	No process safety risk because the safety logic will activate: Shutdown BESS package A-85000 cause: A-85000 bess pkg cumulative critical faults	BESS unavailable to provide power during transition from wind power to H2 fuell cell power	1. Confirm all SIS initiated actions are complete as per cause and effects matrix. 2. Monitor process conditions and establish cause of trip 3. Inform maintenance/intervention team.	
85-XA-003	Proposed	Bad_Input_Trip	A-85000 BESS PKG UCP fault	123A90-DDL-IN-CE-40000	To notify on Battery Energy Storage System package trip	IO_FAIL	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS

85-XA-004	Proposed		A-85000 BESS Thermal run away	123A90-DDL-IN-CE-40000	To activate ESD-1 on Battery Energy Storage System Thermal Run Away	DISC	P1 - Critical	fg1 - Critical F&G alarm	No process safety risk because the safety logic will activate the ESD-1: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cell cause: A-85000 bess thermal run away	BESS thermal run away - risk of fire	1. If manned: inform personel on platform to investigate BESS 2. If unmanned: check adjacend F&G detectors and initiate ESD-1 if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no thermal run away is detected; raise notification to inhibit detector.
85-XA-004	Proposed	Bad_Input_Trip	A-85000 BESS Thermal run away	123A90-DDL-IN-CE-40000	To activate ESD-1 on Battery Energy Storage System Thermal Run Away	IO_FAIL	P3 - Target	t3d Sign.Econ.: Trip with escalation	1. Loss of monitoring and safety functionality 2. Loss of channel redundancy	Potential spurious trip on bad trip input	1. Inform maintenance	1. Develop mitigation plan and consider applying MOS
87-XA-051	Proposed		PCS Panel Ventilation Fan Fault	1724000594-IN-DG-00020	To notify on PCS Panel Ventilation Fan Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel high temperature	Potential panel high temperature	1. Inform maintenance		
87-XA-051	Proposed	Bad_Input_Diagnostic	PCS Panel Ventilation Fan Fault	1724000594-IN-DG-00020	To notify on PCS Panel Ventilation Fan Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-052	Proposed		PCS Panel Power supply & Diodes failure	1724000594-IN-DG-00020	To notify on PCS Panel Power supply & Diodes failure	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance	
87-XA-052	Proposed	Bad_Input_Diagnostic	PCS Panel Power supply & Diodes failure	1724000594-IN-DG-00020	To notify on PCS Panel Power supply & Diodes failure	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-053	Proposed		PCS Panel Cumulative Breaker Fault	1724000594-IN-DG-00020	To notify on PCS Panel Cumulative Breaker Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
87-XA-053	Proposed	Bad_Input_Diagnostic	PCS Panel Cumulative Breaker Fault	1724000594-IN-DG-00020	To notify on PCS Panel Cumulative Breaker Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-054	Proposed		PCS Panel High Temperature Alarm	1724000594-IN-DG-00020	To notify on PCS Panel High Temperature Alarm	DISC	P4 - Alert	dg6c - PTM – reduced equipment performance with no immediate threat	Panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential equipment degradation	1. Check B-400 container HVAC - start if required 2. Inform maintenance	
87-XA-054	Proposed	Bad_Input_Diagnostic	PCS Panel High Temperature Alarm	1724000594-IN-DG-00020	To notify on PCS Panel High Temperature Alarm	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-061	Proposed		NETWORK Panel Ventilation Fan Fault (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Ventilation Fan Fault (Offshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel high temperature	Potential panel high temperature	1. Inform maintenance	
87-XA-061	Proposed	Bad_Input_Diagnostic	NETWORK Panel Ventilation Fan Fault (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Ventilation Fan Fault (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-062	Proposed		NETWORK Panel Power supply & Diodes failure (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Power supply & Diodes failure (Offshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance	
87-XA-062	Proposed	Bad_Input_Diagnostic	NETWORK Panel Power supply & Diodes failure (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Power supply & Diodes failure (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-063	Proposed		NETWORK Panel Cumulative Breaker Fault (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Cumulative Breaker Fault (Offshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
87-XA-063	Proposed	Bad_Input_Diagnostic	NETWORK Panel Cumulative Breaker Fault (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel Cumulative Breaker Fault (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-064	Proposed		NETWORK Panel High Temperature Alarm (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel High Temperature Alarm (Offshore)	DISC	P4 - Alert	dg6c - PTM – reduced equipment performance with no immediate threat	Panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential equipment degradation	1. Check B-400 container HVAC - start if required 2. Inform maintenance	
87-XA-064	Proposed	Bad_Input_Diagnostic	NETWORK Panel High Temperature Alarm (Offshore)	1724000594-IN-DG-00022	To notify on NETWORK Panel High Temperature Alarm (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-073	Proposed		SERVER Panel Cumulative Breaker Fault (Offshore)	1724000594-IN-DG-00022	To notify on SERVER Panel Cumulative Breaker Fault (Offshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
87-XA-073	Proposed	Bad_Input_Diagnostic	SERVER Panel Cumulative Breaker Fault (Offshore)	1724000594-IN-DG-00022	To notify on SERVER Panel Cumulative Breaker Fault (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-074	Proposed		SERVER Panel High Temperature Alarm (Offshore)	1724000594-IN-DG-00022	To notify on SERVER Panel High Temperature Alarm (Offshore)	DISC	P4 - Alert	dg6c - PTM – reduced equipment performance with no immediate threat	Panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential equipment degradation	1. Check B-400 container HVAC - start if required 2. Inform maintenance	
87-XA-074	Proposed	Bad_Input_Diagnostic	SERVER Panel High Temperature Alarm (Offshore)	1724000594-IN-DG-00022	To notify on SERVER Panel High Temperature Alarm (Offshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-082	Proposed		NET/SERVER Panel Power supply & Diodes failure (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel Power supply & Diodes failure (Onshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance	
87-XA-082	Proposed	Bad_Input_Diagnostic	NET/SERVER Panel Power supply & Diodes failure (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel Power supply & Diodes failure (Onshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-083	Proposed		NET/SERVER Panel Cumulative Breaker Fault (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel Cumulative Breaker Fault (Onshore)	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
87-XA-083	Proposed	Bad_Input_Diagnostic	NET/SERVER Panel Cumulative Breaker Fault (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel Cumulative Breaker Fault (Onshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-084	Proposed		NET/SERVER Panel High Temperature Alarm (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel High Temperature Alarm (Onshore)	DISC	P4 - Alert	dg6c - PTM – reduced equipment performance with no immediate threat	Panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential equipment degradation	1. Check B-400 container HVAC - start if required 2. Inform maintenance	
87-XA-084	Proposed	Bad_Input_Diagnostic	NET/SERVER Panel High Temperature Alarm (Onshore)	1724000594-IN-DG-00023	To notify on NET/SERVER Panel High Temperature Alarm (Onshore)	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-091	Proposed		EMCS Panel Ventilation Fan Fault	1724000594-IN-DG-00024	To notify on EMCS Panel Ventilation Fan Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel high temperature	Potential panel high temperature	1. Inform maintenance	
87-XA-091	Proposed	Bad_Input_Diagnostic	EMCS Panel Ventilation Fan Fault	1724000594-IN-DG-00024	To notify on EMCS Panel Ventilation Fan Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-092	Proposed		EMCS Panel Power supply & Diodes failure	1724000594-IN-DG-00024	To notify on EMCS Panel Power supply & Diodes failure	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality Cause: Power supply & diodes failure	Potential loss of functionality	1. Inform maintenance	
87-XA-092	Proposed	Bad_Input_Diagnostic	EMCS Panel Power supply & Diodes failure	1724000594-IN-DG-00024	To notify on EMCS Panel Power supply & Diodes failure	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-093	Proposed		EMCS Panel Cumulative Breaker Fault	1724000594-IN-DG-00024	To notify on EMCS Panel Cumulative Breaker Fault	DISC	P4 - Alert	dg4a - Target alert for system maintenance	Panel possible loss of functionality cause: Cumulative breaker fault	Potential loss of functionality	1. Inform maintenance	
87-XA-093	Proposed	Bad_Input_Diagnostic	EMCS Panel Cumulative Breaker Fault	1724000594-IN-DG-00024	To notify on EMCS Panel Cumulative Breaker Fault	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	
87-XA-094	Proposed		EMCS Panel High Temperature Alarm	1724000594-IN-DG-00024	To notify on EMCS Panel High Temperature Alarm	DISC	P4 - Alert	dg6c - PTM – reduced equipment performance with no immediate threat	Panel high temperature and possible loss of functionality cause: Ventilation fan fault HVAC fault	Potential equipment degradation	1. Check B-400 container HVAC - start if required 2. Inform maintenance	
87-XA-094	Proposed	Bad_Input_Diagnostic	EMCS Panel High Temperature Alarm	1724000594-IN-DG-00024	To notify on EMCS Panel High Temperature Alarm	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Loss of diagnostic monitoring functionality	1. Maintenance action	

950-ASD-01101	Proposed		FZ-01 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ASD HMA-MA Asd activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ASD-01101	Proposed	Bad_Input_F&G	FZ-01 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ASD manual push button failure - cannot activate ASD when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ASD-01101_MOS	MOS Repeat		950-ASD-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ASD-01101_MOS ACTIVE	Proposed		950-ASD-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ASD-03101	Proposed		FZ-03 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ASD HMA-MA Asd activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ASD-03101	Proposed	Bad_Input_F&G	FZ-03 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ASD manual push button failure - cannot activate ASD when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ASD-03101_MOS	MOS Repeat		950-ASD-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ASD-03101_MOS ACTIVE	Proposed		950-ASD-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ASD-04101	Proposed		FZ-04 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ASD HMA-MA Asd activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ASD-04101	Proposed	Bad_Input_F&G	FZ-04 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ASD manual push button failure - cannot activate ASD when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ASD-04101_MOS	MOS Repeat		950-ASD-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ASD-04101_MOS ACTIVE	Proposed		950-ASD-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ASD-06101	Proposed		FZ-06 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ASD HMA-MA Asd activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ASD-06101	Proposed	Bad_Input_F&G	FZ-06 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ASD manual push button failure - cannot activate ASD when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ASD-06101_MOS	MOS Repeat		950-ASD-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ASD-06101_MOS ACTIVE	Proposed		950-ASD-06101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ASD-07101	Proposed		FZ-07 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in FZ-07	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ASD HMA-MA Asd activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ASD-07101	Proposed	Bad_Input_F&G	FZ-07 abandon shutdown (ASD)	123A90-DDL-IN-CE-40000	To alarm on manual Abandon Shut Down activation in FZ-07	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ASD manual push button failure - cannot activate ASD when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ASD-07101_MOS	MOS Repeat		950-ASD-07101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ASD-07101_MOS ACTIVE	Proposed		950-ASD-07101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESD-01101	Proposed		FZ-01 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1 HMA-MA ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESD-01101	Proposed	Bad_Input_F&G	FZ-01 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit

950-ESD-01101_MOS	MOS Repeat		950-ESD-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESD-01101_MOS ACTIVE	Proposed		950-ESD-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESD-03101	Proposed		FZ-03 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1 HMA-MA ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESD-03101	Proposed	Bad_Input_F&G	FZ-03 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ESD-03101_MOS	MOS Repeat		950-ESD-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESD-03101_MOS ACTIVE	Proposed		950-ESD-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESD-04101	Proposed		FZ-04 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1 HMA-MA ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESD-04101	Proposed	Bad_Input_F&G	FZ-04 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ESD-04101_MOS	MOS Repeat		950-ESD-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESD-04101_MOS ACTIVE	Proposed		950-ESD-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESD-06101	Proposed		FZ-06 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1 HMA-MA ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESD-06101	Proposed	Bad_Input_F&G	FZ-06 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ESD-06101_MOS	MOS Repeat		950-ESD-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESD-07101	Proposed		FZ-07 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in FZ-07	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1 HMA-MA ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cel	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESD-07101	Proposed	Bad_Input_F&G	FZ-07 emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1 activation in FZ-07	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ESD-07101_MOS	MOS Repeat		950-ESD-07101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESD-07101_MOS ACTIVE	Proposed		950-ESD-07101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESDD-01101	Proposed		FZ-01 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1D HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD
950-ESDD-01101	Proposed	Bad_Input_F&G	FZ-01 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-ESDD-01101_MOS	MOS Repeat		950-ESDD-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-ESDD-01101_MOS ACTIVE	Proposed		950-ESDD-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESDD-03101	Proposed		FZ-03 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1D HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD

950-ESDD-03101	Proposed	Bad_Input_F&G	FZ-03 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESDD-03101_MOS	MOS Repeat		950-ESDD-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESDD-03101_MOS ACTIVE	Proposed		950-ESDD-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-ESDD-04101	Proposed		FZ-04 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1D HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD	
950-ESDD-04101	Proposed	Bad_Input_F&G	FZ-04 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESDD-04101_MOS	MOS Repeat		950-ESDD-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESDD-04101_MOS ACTIVE	Proposed		950-ESDD-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-ESDD-06101	Proposed		FZ-06 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1D HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD	
950-ESDD-06101	Proposed	Bad_Input_F&G	FZ-06 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESDD-06101_MOS	MOS Repeat		950-ESDD-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESDD-06101_MOS ACTIVE	Proposed		950-ESDD-06101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-ESDD-07101	Proposed		FZ-07 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in FZ-07	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Alarm active only during maintenance local pushbutton to activate ESD-1D HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Ensure platform is evacuated as per ERP 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual ASD	
950-ESDD-07101	Proposed	Bad_Input_F&G	FZ-07 depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To alarm on manual ESD-1D Depressurization activation in FZ-07	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESDD-07101_MOS	MOS Repeat		950-ESDD-07101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESDD-07101_MOS ACTIVE	Proposed		950-ESDD-07101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-ESDD-REM	Not started		On-shore depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To notify on manual on-shore ESD-1D Depressurization activation	HI			HMA-MA		ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	1. Operator can: 2. take necessary actions as per site emergency response plan. 3. Monitor process conditions.	
950-ESDD-REM	Proposed	Bad_Input_F&G	On-shore depress. emergency shut down (ESDD)	123A90-DDL-IN-CE-40000	To notify on manual on-shore ESD-1D Depressurization activation	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: should not occur - software button Instrument fault Channel fault	ESD-1D manual push button failure - cannot activate ESD-1D when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESDD-REM_MOS	MOS Repeat		950-ESDD-REM MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESDD-REM_MOS ACTIVE	Proposed		950-ESDD-REM MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-ESD-REM	Not started		On-shore emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To notify on manual on-shore ESD-1 activation	HI			HMA-MA		ESD-1 activation: 1. Blph process shutdown 2. Blph energized: yes upss, yes wind farm, yes bess, yes solar, no fuel cell	1. Operator can: 2. take necessary actions as per site emergency response plan. 3. Monitor process conditions.	
950-ESD-REM	Proposed	Bad_Input_F&G	On-shore emergency shut down (ESD)	123A90-DDL-IN-CE-40000	To notify on manual on-shore ESD-1 activation	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: should not occur - software button Instrument fault Channel fault	ESD-1 manual push button failure - cannot activate ESD-1 when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-ESD-REM_MOS	MOS Repeat		950-ESD-REM MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-ESD-REM_MOS ACTIVE	Proposed		950-ESD-REM MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-01101	Proposed		FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.

950-FDZ-01101	Proposed	Bad_Input_F&G	FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-01101_MOS	MOS Repeat		950-FDZ-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-01101_MOS ACTIVE	Proposed		950-FDZ-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-01101_4	Proposed		FZ-01 Flame detect. in fuel cell package area - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Flame detection in fuel cell area	FLAME_CONF	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-FDZ-01102	Proposed		FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-01102	Proposed	Bad_Input_F&G	FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-01102_MOS	MOS Repeat		950-FDZ-01102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-01102_MOS ACTIVE	Proposed		950-FDZ-01102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-01103	Proposed		FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-01103	Proposed	Bad_Input_F&G	FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-01103_MOS	MOS Repeat		950-FDZ-01103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-01103_MOS ACTIVE	Proposed		950-FDZ-01103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-01104	Proposed		FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-01104	Proposed	Bad_Input_F&G	FZ-01 Flame detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-01104_MOS	MOS Repeat		950-FDZ-01104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-02101	Proposed		FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-02101	Proposed	Bad_Input_F&G	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-02101_MOS	MOS Repeat		950-FDZ-02101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-02101_MOS ACTIVE	Proposed		950-FDZ-02101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-02101_4	Proposed		FZ-02 Flame detect. in hydrogen storage vessels area - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Flame detection in hydrogen storage vessels area	FLAME_CONF	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-FDZ-02102	Proposed		FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-02102	Proposed	Bad_Input_F&G	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	

950-FDZ-02102_MOS	MOS Repeat	950-FDZ-02102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-02103	Proposed	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-02103	Proposed Bad_Input_F&G	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-02104	Proposed	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-02104	Proposed Bad_Input_F&G	FZ-02 Flame detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-03101	Proposed	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-03101	Proposed Bad_Input_F&G	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-03101_MOS	MOS Repeat	950-FDZ-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-03101_MOS ACTIVE	Proposed	950-FDZ-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-03101_4	Proposed	FZ-03 Flame detect. in electrolyzer package area - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Flame detection in electrolyzer package area	FLAME_CONF	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
950-FDZ-03102	Proposed	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-03102	Proposed Bad_Input_F&G	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-03102_MOS	MOS Repeat	950-FDZ-03102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-03102_MOS ACTIVE	Proposed	950-FDZ-03102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-03103	Proposed	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-03103	Proposed Bad_Input_F&G	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-03103_MOS	MOS Repeat	950-FDZ-03103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-03103_MOS ACTIVE	Proposed	950-FDZ-03103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-03104	Proposed	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-03104	Proposed Bad_Input_F&G	FZ-03 Flame detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-03104_MOS	MOS Repeat	950-FDZ-03104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-03104_MOS ACTIVE	Proposed	950-FDZ-03104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		

950-FDZ-04101	Proposed		FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-04101	Proposed	Bad_Input_F&G	FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-04101_MOS	MOS Repeat		950-FDZ-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-04101_MOS ACTIVE	Proposed		950-FDZ-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-04101_4	Proposed		FZ-04 Flame detect. in B-400/B-300/B-200 area - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Flame detection in B-400/B-300/B-200 area	FLAME_CONF	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-FDZ-04102	Proposed		FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-04102	Proposed	Bad_Input_F&G	FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-04102_MOS	MOS Repeat		950-FDZ-04102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-04102_MOS ACTIVE	Proposed		950-FDZ-04102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-04103	Proposed		FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-04103	Proposed	Bad_Input_F&G	FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-04103_MOS	MOS Repeat		950-FDZ-04103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-04103_MOS ACTIVE	Proposed		950-FDZ-04103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-04104	Proposed		FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-04104	Proposed	Bad_Input_F&G	FZ-04 Flame detect. in B-400/B-300/B-200 area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-04104_MOS	MOS Repeat		950-FDZ-04104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-04104_MOS ACTIVE	Proposed		950-FDZ-04104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-05101	Proposed		FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.
950-FDZ-05101	Proposed	Bad_Input_F&G	FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-FDZ-05101_MOS	MOS Repeat		950-FDZ-05101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-FDZ-05101_MOS ACTIVE	Proposed		950-FDZ-05101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-FDZ-05101_6	Proposed		FZ-05 Flame detect. In Bess area - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Flame detection in BESS area	FLAME_CONF	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-FDZ-05102	Proposed		FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.

950-FDZ-05102	Proposed	Bad_Input_F&G	FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-05102_MOS	MOS Repeat		950-FDZ-05102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-05102_MOS ACTIVE	Proposed		950-FDZ-05102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-05103	Proposed		FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.	
950-FDZ-05103	Proposed	Bad_Input_F&G	FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-05103_MOS	MOS Repeat		950-FDZ-05103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-05103_MOS ACTIVE	Proposed		950-FDZ-05103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-05104	Proposed		FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.	
950-FDZ-05104	Proposed	Bad_Input_F&G	FZ-05 Flame detect. in bess area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-05104_MOS	MOS Repeat		950-FDZ-05104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-05104_MOS ACTIVE	Proposed		950-FDZ-05104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-06101	Proposed		FZ-06 Flame detect. in B-100/Transformer area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-100/Transformer area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.	
950-FDZ-06101	Proposed	Bad_Input_F&G	FZ-06 Flame detect. in B-100/Transformer area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-06101_MOS	MOS Repeat		950-FDZ-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-06101_MOS ACTIVE	Proposed		950-FDZ-06101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-06102	Proposed		FZ-06 Flame detect. in B-100/Transformer area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-100/Transformer area	HI_FLAME	20	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed fire resulting in visual and audible alarms	Fire has been detected in area.	1. If manned: inform personel on platform to investigate potential fire as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no flame is detected; raise notification to inhibit detector.	
950-FDZ-06102	Proposed	Bad_Input_F&G	FZ-06 Flame detect. in B-100/Transformer area	123A90-DDL-SAF-DL-30027	To alarm on Flame detection in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-FDZ-06102_MOS	MOS Repeat		950-FDZ-06102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-06102_MOS ACTIVE	Proposed		950-FDZ-06102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-01104_MOS ACTIVE	Proposed		950-FDZ-01104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-02102_MOS ACTIVE	Proposed		950-FDZ-02102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-02103_MOS	MOS Repeat		950-FDZ-02103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-02103_MOS ACTIVE	Proposed		950-FDZ-02103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-FDZ-02104_MOS	MOS Repeat		950-FDZ-02104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-FDZ-02104_MOS ACTIVE	Proposed		950-FDZ-02104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		

950-FDZ-06101_2	Proposed		FZ-06 Flame detect. in B-100/Transformer area - CONFIRMED		To activate ESD-1D on Flame detection in B-100/Transformer area	FLAME_CONF		P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Fire in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of fire at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-01101	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01101	Proposed	Bad_Input_F&G	FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-01101	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01101_MOS	MOS Repeat		950-GDZ-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-01101_MOS ACTIVE	Proposed		950-GDZ-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-01101_3	Proposed		FZ-01 H2 confirmed in fuel cell package area -	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in fuel cell area	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-01102	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01102	Proposed	Bad_Input_F&G	FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-01102	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01102_MOS	MOS Repeat		950-GDZ-01102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-01102_MOS ACTIVE	Proposed		950-GDZ-01102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-01103	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01103	Proposed	Bad_Input_F&G	FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-01103	Proposed		FZ-01 H2 detect. in fuel cell package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in fuel cell area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-01103_MOS	MOS Repeat		950-GDZ-01103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-01103_MOS ACTIVE	Proposed		950-GDZ-01103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GD-02101_MOS	MOS Repeat		950-GD-02101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02101	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02101	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	

950-GDZ-02101	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02101_MOS ACTIVE	Proposed		950-GD-02101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02102	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02102	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02102	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02102_MOS	MOS Repeat		950-GDZ-02102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02102_MOS ACTIVE	Proposed		950-GDZ-02102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02103	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02103	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02103	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02103_MOS	MOS Repeat		950-GDZ-02103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02103_MOS ACTIVE	Proposed		950-GDZ-02103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02104	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02104	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02104	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02104_MOS	MOS Repeat		950-GDZ-02104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02104_MOS ACTIVE	Proposed		950-GDZ-02104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02105	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02105	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02105	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.

950-GDZ-02105_MOS	MOS Repeat	950-GDZ-02105 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-02105_MOS ACTIVE	Proposed	950-GDZ-02105 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02106	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02106	Proposed Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02106	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02106_MOS	MOS Repeat	950-GDZ-02106 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-02106_MOS ACTIVE	Proposed	950-GDZ-02106 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02107	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02107	Proposed Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02107	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02107_MOS	MOS Repeat	950-GDZ-02107 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-02107_MOS ACTIVE	Proposed	950-GDZ-02107 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02108	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02108	Proposed Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02108	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02108_MOS	MOS Repeat	950-GDZ-02108 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-02108_MOS ACTIVE	Proposed	950-GDZ-02108 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02109	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02109	Proposed Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02109	Proposed	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02109_MOS	MOS Repeat	950-GDZ-02109 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		

950-GDZ-02109_MOS ACTIVE	Proposed		950-GDZ-02109 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02110	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02110	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02110	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02110_MOS	MOS Repeat		950-GDZ-02110 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02110_MOS ACTIVE	Proposed		950-GDZ-02110 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02111	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02111	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02111	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02111_MOS	MOS Repeat		950-GDZ-02111 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02111_MOS ACTIVE	Proposed		950-GDZ-02111 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02112	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02112	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02112	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02112_MOS	MOS Repeat		950-GDZ-02112 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02112_MOS ACTIVE	Proposed		950-GDZ-02112 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02113	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02113	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02113	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02113_MOS	MOS Repeat		950-GDZ-02113 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02113_MOS ACTIVE	Proposed		950-GDZ-02113 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

950-GDZ-02114	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02114	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02114	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02115	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02115	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02115	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02115_MOS	MOS Repeat		950-GDZ-02115 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02115_MOS ACTIVE	Proposed		950-GDZ-02115 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02116	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02116	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02116	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02116_MOS	MOS Repeat		950-GDZ-02116 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02116_MOS ACTIVE	Proposed		950-GDZ-02116 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02117	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02117	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02117	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02117_MOS	MOS Repeat		950-GDZ-02117 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02117_MOS ACTIVE	Proposed		950-GDZ-02117 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02101_20	Proposed		FZ-02 H2 confirmed in hydrogen storage vessels area -	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in hydrogen storage vessels area	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.

950-GDZ-02118	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02118	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02118	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02118_MOS	MOS Repeat		950-GDZ-02118 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02118_MOS ACTIVE	Proposed		950-GDZ-02118 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02119	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02119	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02119	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02119_MOS	MOS Repeat		950-GDZ-02119 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02119_MOS ACTIVE	Proposed		950-GDZ-02119 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02120	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02120	Proposed	Bad_Input_F&G	FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-02120	Proposed		FZ-02 H2 detect. in hydrogen storage vessels area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in hydrogen storage vessels area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-02120_MOS	MOS Repeat		950-GDZ-02120 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02120_MOS ACTIVE	Proposed		950-GDZ-02120 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03101	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03101	Proposed	Bad_Input_F&G	FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03101	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03101_MOS	MOS Repeat		950-GDZ-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03101_MOS ACTIVE	Proposed		950-GDZ-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

950-GDZ-03101_5	Proposed		FZ-03 H2 confirmed in electrolyzer package area	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in electrolyzer package area	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-03102	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03102	Proposed	Bad_Input_F&G	FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03102	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03102_MOS	MOS Repeat		950-GDZ-03102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03102_MOS ACTIVE	Proposed		950-GDZ-03102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03103	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	HI_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03103	Proposed	Bad_Input_F&G	FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03103	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	LO_GAS	Hold 4	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03103_MOS	MOS Repeat		950-GDZ-03103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03103_MOS ACTIVE	Proposed		950-GDZ-03103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03104	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03104	Proposed	Bad_Input_F&G	FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03104	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03104_MOS	MOS Repeat		950-GDZ-03104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03104_MOS ACTIVE	Proposed		950-GDZ-03104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03105	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03105	Proposed	Bad_Input_F&G	FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03105	Proposed		FZ-03 H2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in electrolyzer package area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03105_MOS	MOS Repeat		950-GDZ-03105 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	

950-GDZ-03105_MOS ACTIVE	Proposed		950-GDZ-03105 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03107	Proposed		FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	HI_GAS	23	P1 - Critical	fg1 - Critical F&G alarm	Warning - O2 release detected from electrolyzer HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed gas resulting in visual and audible alarms	Oxygen gas release in area	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03107	Proposed	Bad_Input_F&G	FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03107_MOS	MOS Repeat		950-GDZ-03107 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03107_MOS ACTIVE	Proposed		950-GDZ-03107 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03107_3	Proposed		FZ-03 O2 confirmed in electrolyzer package area	123A90-DDL-IN-CE-40002	To activate ESD-1D on Oxygen gas detection in electrolyzer package area	GAS_HI_CONF	23	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Oxygen gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of Oxygen gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-03108	Proposed		FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	HI_GAS	23	P1 - Critical	fg1 - Critical F&G alarm	Warning - O2 release detected from electrolyzer HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed gas resulting in visual and audible alarms	Oxygen gas release in area	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03108	Proposed	Bad_Input_F&G	FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03108_MOS	MOS Repeat		950-GDZ-03108 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03108_MOS ACTIVE	Proposed		950-GDZ-03108 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-03109	Proposed		FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	HI_GAS	23	P1 - Critical	fg1 - Critical F&G alarm	Warning - O2 release detected from electrolyzer HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed gas resulting in visual and audible alarms	Oxygen gas release in area	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-03109	Proposed	Bad_Input_F&G	FZ-03 O2 detect. in electrolyzer package area	123A90-DDL-SAF-DL-30027	To alarm on Oxygen gas detection in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-03109_MOS	MOS Repeat		950-GDZ-03109 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-03109_MOS ACTIVE	Proposed		950-GDZ-03109 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04201	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04201	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04201	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04201_MOS	MOS Repeat		950-GDZ-04201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04201_MOS ACTIVE	Proposed		950-GDZ-04201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04201_3	Proposed		FZ-04 H2 detect. in B-400 ITER HVAC air intake CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-400 HVAC air intake	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04202	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.

950-GDZ-04202	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04202	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04202_MOS	MOS Repeat		950-GDZ-04202 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04202_MOS ACTIVE	Proposed		950-GDZ-04202 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04203	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04203	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04203	Proposed		FZ-04 H2 detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04203_MOS	MOS Repeat		950-GDZ-04203 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04203_MOS ACTIVE	Proposed		950-GDZ-04203 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04204	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04204	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04204	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04204_MOS	MOS Repeat		950-GDZ-04204 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04204_MOS ACTIVE	Proposed		950-GDZ-04204 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04204_3	Proposed		FZ-04 H2 confirmed in B-400 ITER container	123A90-DDL-IN-CE-40002	To activate ASD on H2 gas detection in B-400 ITER container	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ASD (Abandon Shutdhown) activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04205	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04205	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04205	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04205_MOS	MOS Repeat		950-GDZ-04205 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04205_MOS ACTIVE	Proposed		950-GDZ-04205 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

950-GDZ-04206	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04206	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04206	Proposed		FZ-04 H2 detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-400 ITER container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04206_MOS	MOS Repeat		950-GDZ-04206 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04206_MOS ACTIVE	Proposed		950-GDZ-04206 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04207	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04207	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04207	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04207_MOS	MOS Repeat		950-GDZ-04207 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04207_MOS ACTIVE	Proposed		950-GDZ-04207 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04207_3	Proposed		FZ-04 H2 confirmed in B-300 AC UPS container air intake	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-300 HVAC air intake	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04208	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04208	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04208	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04208_MOS	MOS Repeat		950-GDZ-04208 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04208_MOS ACTIVE	Proposed		950-GDZ-04208 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04209	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04209	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04209	Proposed		FZ-04 H2 detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04209_MOS	MOS Repeat		950-GDZ-04209 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	

950-GDZ-04209_MOS ACTIVE	Proposed		950-GDZ-04209 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04210	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04210	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04210	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04210_MOS	MOS Repeat		950-GDZ-04210 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04210_MOS ACTIVE	Proposed		950-GDZ-04210 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04210_3	Proposed		FZ-04 H2 confirmed in B-300 AC UPS container	123A90-DDL-IN-CE-40002	To activate ASD on H2 gas detection in B-300 AC UPS container	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ASD instead of ESD-1D (if there's also gas outside of room; hydrogen can be generated by UPS itself) ASD (Abandon Shutdhown) activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04211	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04211	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04211	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04211_MOS	MOS Repeat		950-GDZ-04211 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04211_MOS ACTIVE	Proposed		950-GDZ-04211 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04212	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04212	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04212	Proposed		FZ-04 H2 detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-300 AC UPS container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04212_MOS	MOS Repeat		950-GDZ-04212 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04212_MOS ACTIVE	Proposed		950-GDZ-04212 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04213	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04213	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04213	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.

950-GDZ-04213_MOS	MOS Repeat		950-GDZ-04213 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04213_MOS ACTIVE	Proposed		950-GDZ-04213 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04213_3	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-200 HVAC air intake	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04214	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04214	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04214	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04214_MOS	MOS Repeat		950-GDZ-04214 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04214_MOS ACTIVE	Proposed		950-GDZ-04214 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04215	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04215	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04215	Proposed		FZ-04 H2 detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04215_MOS	MOS Repeat		950-GDZ-04215 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04215_MOS ACTIVE	Proposed		950-GDZ-04215 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04216	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04216	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-04216	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04216_MOS	MOS Repeat		950-GDZ-04216 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-04216_MOS ACTIVE	Proposed		950-GDZ-04216 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-04216_3	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-200 LV SWGR container	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-04217	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.

950-GDZ-04217	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-GDZ-04217	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04217_MOS	MOS Repeat		950-GDZ-04217 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-04217_MOS ACTIVE	Proposed		950-GDZ-04217 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-GDZ-04218	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04218	Proposed	Bad_Input_F&G	FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-GDZ-04218	Proposed		FZ-04 H2 detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-200 LV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-04218_MOS	MOS Repeat		950-GDZ-04218 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-04218_MOS ACTIVE	Proposed		950-GDZ-04218 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-GDZ-05101	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05101	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-GDZ-05101	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05101_MOS	MOS Repeat		950-GDZ-05101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-05101_MOS ACTIVE	Proposed		950-GDZ-05101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-GDZ-05101_6	Proposed		FZ-05 H2 detect. in Bess area CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in BESS area	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
950-GDZ-05102	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05102	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-GDZ-05102	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05102_MOS	MOS Repeat		950-GDZ-05102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-GDZ-05102_MOS ACTIVE	Proposed		950-GDZ-05102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		

950-GDZ-05103	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05103	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-05103	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05103_MOS	MOS Repeat		950-GDZ-05103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-05103_MOS ACTIVE	Proposed		950-GDZ-05103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-05104	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05104	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-05104	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05104_MOS	MOS Repeat		950-GDZ-05104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-05104_MOS ACTIVE	Proposed		950-GDZ-05104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-05105	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05105	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-05105	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05105_MOS	MOS Repeat		950-GDZ-05105 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-05105_MOS ACTIVE	Proposed		950-GDZ-05105 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-05106	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05106	Proposed	Bad_Input_F&G	FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-05106	Proposed		FZ-05 H2 detect. in Bess area	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in BESS area	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-05106_MOS	MOS Repeat		950-GDZ-05106 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-05106_MOS ACTIVE	Proposed		950-GDZ-05106 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	

950-GDZ-06201	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06201	Proposed Bad_Input_F&G	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06201	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06201_MOS	MOS Repeat	950-GDZ-06201 MOS Timer has xx (Hold 7) hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-06201_MOS ACTIVE	Proposed	950-GDZ-06201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-06201_3	Proposed	FZ-06 H2 detect. in B-100 HV/MV SWGR HVAC air intake CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-100 HVAC air intake	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-06202	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06202	Proposed Bad_Input_F&G	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06202	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06202_MOS	MOS Repeat	950-GDZ-06202 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-06202_MOS ACTIVE	Proposed	950-GDZ-06202 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-06203	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06203	Proposed Bad_Input_F&G	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06203	Proposed	FZ-06 H2 detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HVAC air intake	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06203_MOS	MOS Repeat	950-GDZ-06203 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-06203_MOS ACTIVE	Proposed	950-GDZ-06203 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-06204	Proposed	FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06204	Proposed Bad_Input_F&G	FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06204	Proposed	FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06204_MOS	MOS Repeat	950-GDZ-06204 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	

950-GDZ-06204_MOS ACTIVE	Proposed		950-GDZ-06204 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-06204_3	Proposed		FZ-06 H2 detect. in B-100 HV/MV SWGR container- CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on H2 gas detection in B-100 HV/MV SWGR container	GAS_HI_CONF	10	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed H2 gas release in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-GDZ-06205	Proposed		FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06205	Proposed	Bad_Input_F&G	FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06205	Proposed		FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06205_MOS	MOS Repeat		950-GDZ-06205 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-06205_MOS ACTIVE	Proposed		950-GDZ-06205 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-06206	Proposed		FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	HI_GAS	10	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 2 H2 gas detection - second indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas release in area.	1. If manned: check adjacend detectors and ensure platform is evacuated as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06206	Proposed	Bad_Input_F&G	FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-GDZ-06206	Proposed		FZ-06 H2 detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on H2 gas detection in B-100 HV/MV SWGR container	LO_GAS	5	P1 - Critical	fg1 - Critical F&G alarm	Alarm level 1 H2 gas detection - first indication of gas release HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed H2 gas resulting in visual and audible alarms	H2 gas has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no gas is detected; raise notification to inhibit detector.
950-GDZ-06206_MOS	MOS Repeat		950-GDZ-06206 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-06206_MOS ACTIVE	Proposed		950-GDZ-06206 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-GDZ-02114_MOS	MOS Repeat		950-GDZ-02114 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-GDZ-02114_MOS ACTIVE	Proposed		950-GDZ-02114 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-01101	Proposed		FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-01101	Proposed	Bad_Input_F&G	FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-01101_MOS	MOS Repeat		950-MFA-01101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-01101_MOS ACTIVE	Proposed		950-MFA-01101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-01102	Proposed		FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-01102	Proposed	Bad_Input_F&G	FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-01102_MOS	MOS Repeat		950-MFA-01102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-01102_MOS ACTIVE	Proposed		950-MFA-01102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-01103	Proposed		FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-01103	Proposed	Bad_Input_F&G	FZ-01 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	

950-MFA-01103_MOS	MOS Repeat		950-MFA-01103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-01103_MOS ACTIVE	Proposed		950-MFA-01103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-02101	Proposed		FZ-02 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in hydrogen storage vessels area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-02101	Proposed	Bad_Input_F&G	FZ-02 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in hydrogen storage vessels area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-02101_MOS	MOS Repeat		950-MFA-02101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-02101_MOS ACTIVE	Proposed		950-MFA-02101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-03101	Proposed		FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-03101	Proposed	Bad_Input_F&G	FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-03101_MOS	MOS Repeat		950-MFA-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-03101_MOS ACTIVE	Proposed		950-MFA-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-03102	Proposed		FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-03102	Proposed	Bad_Input_F&G	FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-03102_MOS	MOS Repeat		950-MFA-03102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-03102_MOS ACTIVE	Proposed		950-MFA-03102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-03103	Proposed		FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-03103	Proposed	Bad_Input_F&G	FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-03103_MOS	MOS Repeat		950-MFA-03103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-03103_MOS ACTIVE	Proposed		950-MFA-03103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-03104	Proposed		FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-03104	Proposed	Bad_Input_F&G	FZ-03 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-03104_MOS	MOS Repeat		950-MFA-03104 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-03104_MOS ACTIVE	Proposed		950-MFA-03104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-04101	Proposed		FZ-04 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-04101	Proposed	Bad_Input_F&G	FZ-04 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-04101_MOS	MOS Repeat		950-MFA-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON					MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-04101_MOS ACTIVE	Proposed		950-MFA-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-04102	Proposed		FZ-04 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-05101	Proposed	Bad_Input_F&G	FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit

950-MFA-05101_MOS	MOS Repeat		950-MFA-05101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-05101_MOS ACTIVE	Proposed		950-MFA-05101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-05102	Proposed		FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-05102	Proposed	Bad_Input_F&G	FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-05102_MOS	MOS Repeat		950-MFA-05102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-05102_MOS ACTIVE	Proposed		950-MFA-05102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-05103	Proposed		FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-05103	Proposed	Bad_Input_F&G	FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-05103_MOS	MOS Repeat		950-MFA-05103 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-05103_MOS ACTIVE	Proposed		950-MFA-05103 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-05104	Proposed		FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-05104	Proposed	Bad_Input_F&G	FZ-05 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in BESS area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-05104_MOS	MOS Repeat		950-MFA-05104 MOS Timer has xx (Hold 7) hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-05104_MOS ACTIVE	Proposed		950-MFA-05104 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-05201	Proposed		FZ-05 Manual fire alarm (MFA) water treat. pkg	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in Water Treat. Pkg	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-05201	Proposed	Bad_Input_F&G	FZ-05 Manual fire alarm (MFA) water treat. pkg	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in Water Treat. Pkg	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-05201_MOS	MOS Repeat		950-MFA-05201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-05201_MOS ACTIVE	Proposed		950-MFA-05201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-06101	Proposed		FZ-06 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-06101	Proposed	Bad_Input_F&G	FZ-06 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-06101_MOS	MOS Repeat		950-MFA-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-06101_MOS ACTIVE	Proposed		950-MFA-06101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-06102	Proposed		FZ-06 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-06102	Proposed	Bad_Input_F&G	FZ-06 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-MFA-06102_MOS	MOS Repeat		950-MFA-06102 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
950-MFA-06102_MOS ACTIVE	Proposed		950-MFA-06102 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-MFA-06201	Proposed		FZ-06 Manual fire alarm (MFA) B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100 HV/MV SWGR container	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm
950-MFA-06201	Proposed	Bad_Input_F&G	FZ-06 Manual fire alarm (MFA) B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on manual fire alarm activation in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit

950-MFA-06201_MOS	MOS Repeat		950-MFA-06201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-06201_MOS ACTIVE	Proposed		950-MFA-06201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MFA-07101	Proposed		FZ-07 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30028	To alarm on manual fire alarm activation in FZ-07	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA Initiation of Manual Fire Alarm resulting in red beacons and audible alarms activation	Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Assess if the situation is escalating by monitoring DCS and F&G. 3. Work in line with Emergency Response procedure. 4. if unmanned: inform supervisor of spurious manual fire alarm	
950-MFA-07101	Proposed	Bad_Input_F&G	FZ-07 Manual fire alarm (MFA)	123A90-DDL-SAF-DL-30028	To alarm on manual fire alarm activation in FZ-07	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Manual Fire Alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MFA-07101_MOS	MOS Repeat		950-MFA-07101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MFA-07101_MOS ACTIVE	Proposed		950-MFA-07101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MOB-01101	Proposed		FZ-01 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in fuel cell package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Valid during maintenance mode only HMA-MA Mob activation: 1. Activation of both amber and red beacons 2. Activation of sounders	Potential Man Over Board - Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Take necessary actions as per site emergency response plan. 3. if unmanned: inform supervisor of spurious man over board alarm	
950-MOB-01101	Proposed	Bad_Input_F&G	FZ-01 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in fuel cell package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Man Over Board failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MOB-03101	Proposed		FZ-03 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in electrolyzer package area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Valid during maintenance mode only HMA-MA Mob activation: 1. Activation of both amber and red beacons 2. Activation of sounders	Potential Man Over Board - Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Take necessary actions as per site emergency response plan. 3. if unmanned: inform supervisor of spurious man over board alarm	
950-MOB-03101	Proposed	Bad_Input_F&G	FZ-03 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in electrolyzer package area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Man Over Board failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MOB-03101_MOS	MOS Repeat		950-MOB-03101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MOB-03101_MOS ACTIVE	Proposed		950-MOB-03101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MOB-04101	Proposed		FZ-04 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in B-400/B-300/B-200 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Valid during maintenance mode only HMA-MA Mob activation: 1. Activation of both amber and red beacons 2. Activation of sounders	Potential Man Over Board - Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Take necessary actions as per site emergency response plan. 3. if unmanned: inform supervisor of spurious man over board alarm	
950-MOB-04101	Proposed	Bad_Input_F&G	FZ-04 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in B-400/B-300/B-200 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Man Over Board failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MOB-04101_MOS	MOS Repeat		950-MOB-04101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MOB-04101_MOS ACTIVE	Proposed		950-MOB-04101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MOB-06101	Proposed		FZ-06 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in B-100/Transformer area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Valid during maintenance mode only HMA-MA Mob activation: 1. Activation of both amber and red beacons 2. Activation of sounders	Potential Man Over Board - Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Take necessary actions as per site emergency response plan. 3. if unmanned: inform supervisor of spurious man over board alarm	
950-MOB-06101	Proposed	Bad_Input_F&G	FZ-06 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in B-100/Transformer area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Man Over Board failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MOB-06101_MOS	MOS Repeat		950-MOB-06101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MOB-06101_MOS ACTIVE	Proposed		950-MOB-06101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-MOB-07101	Proposed		FZ-07 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in FZ-07 area	HI	Hold 5	P1 - Critical	fg1 - Critical F&G alarm	Valid during maintenance mode only HMA-MA Mob activation: 1. Activation of both amber and red beacons 2. Activation of sounders	Potential Man Over Board - Escalation of the incident in line with major accident hazard (MAH) register	1. If manned: Confirm location and contact staff to investigate 2. Take necessary actions as per site emergency response plan. 3. if unmanned: inform supervisor of spurious man over board alarm	
950-MOB-07101	Proposed	Bad_Input_F&G	FZ-07 Man over board (MOB)	123A90-DDL-IN-CE-40000	To alarm on Man Over Board activation in FZ-07 area	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: Instrument fault Channel fault	Man Over Board failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit	
950-MOB-07101_MOS	MOS Repeat		950-MOB-07101 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-MOB-07101_MOS ACTIVE	Proposed		950-MOB-07101 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-04201	Proposed		FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.

950-SDZ-04201	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure			
950-SDZ-04201_3	Proposed		FZ-04 Smoke detect. in B-400 HVAC air intake - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ASD on Smoke detection in B-400 HVAC air intake	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ASD (Abandon Shutdhown) activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.	
950-SDZ-04201_MOS	MOS Repeat		950-SDZ-04201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required			
950-SDZ-04201_MOS ACTIVE	Proposed		950-SDZ-04201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.			
950-SDZ-04202	Proposed		FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.	
950-SDZ-04202	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure			
950-SDZ-04202_MOS	MOS Repeat		950-SDZ-04202 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required			
950-SDZ-04202_MOS ACTIVE	Proposed		950-SDZ-04202 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.			
950-SDZ-04203	Proposed		FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.	
950-SDZ-04203	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure			
950-SDZ-04203_MOS	MOS Repeat		950-SDZ-04203 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required			
950-SDZ-04203_MOS ACTIVE	Proposed		950-SDZ-04203 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.			
950-SDZ-04204	Proposed		FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.	
950-SDZ-04204	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure			
950-SDZ-04204_3	Proposed		FZ-04 Smoke detect. in B-400 ITER container - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Smoke detection in B-400 ITER container	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.	
950-SDZ-04204_MOS	MOS Repeat		950-SDZ-04204 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required			
950-SDZ-04204_MOS ACTIVE	Proposed		950-SDZ-04204 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.			
950-SDZ-04205	Proposed		FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.	
950-SDZ-04205	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure			
950-SDZ-04205_MOS	MOS Repeat		950-SDZ-04205 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required			
950-SDZ-04205_MOS ACTIVE	Proposed		950-SDZ-04205 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.			
950-SDZ-04206	Proposed		FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.	

950-SDZ-04206	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-400 ITER container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-400 ITER container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04206_MOS	MOS Repeat		950-SDZ-04206 MOS Timer has xx (Hold 7) hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04206_MOS ACTIVE	Proposed		950-SDZ-04206 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04207	Proposed		FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04207	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04207_3	Proposed		FZ-04 Smoke detect. in B-300 HVAC air intake - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ASD on Smoke detection in B-300 HVAC air intake	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ASD (Abandon Shutdhown) activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.		
950-SDZ-04207_MOS	MOS Repeat		950-SDZ-04207 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04207_MOS ACTIVE	Proposed		950-SDZ-04207 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04208	Proposed		FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04208	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04208_MOS	MOS Repeat		950-SDZ-04208 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04208_MOS ACTIVE	Proposed		950-SDZ-04208 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04209	Proposed		FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04209	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04209_MOS	MOS Repeat		950-SDZ-04209 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04209_MOS ACTIVE	Proposed		950-SDZ-04209 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04210	Proposed		FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04210	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04210_3	Proposed		FZ-04 Smoke detect. in B-300 AC UPS container - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ASD on Smoke detection in B-300 AC UPS container	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ASD (Abandon Shutdhown) activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph de-energized: no ups, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.		
950-SDZ-04210_MOS	MOS Repeat		950-SDZ-04210 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04210_MOS ACTIVE	Proposed		950-SDZ-04210 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04211	Proposed		FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		

950-SDZ-04211	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04211_MOS	MOS Repeat		950-SDZ-04211 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04211_MOS ACTIVE	Proposed		950-SDZ-04211 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04212	Proposed		FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04212	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-300 AC UPS container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04212_MOS	MOS Repeat		950-SDZ-04212 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04212_MOS ACTIVE	Proposed		950-SDZ-04212 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04213	Proposed		FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04213	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04213_3	Proposed		FZ-04 Smoke detect. in B-200 HVAC air intake - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D n Smoke detection in B-200 HVAC air intake	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.		
950-SDZ-04213_MOS	MOS Repeat		950-SDZ-04213 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04213_MOS ACTIVE	Proposed		950-SDZ-04213 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04214	Proposed		FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04214	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04214_MOS	MOS Repeat		950-SDZ-04214 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04214_MOS ACTIVE	Proposed		950-SDZ-04214 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04215	Proposed		FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04215	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				
950-SDZ-04215_MOS	MOS Repeat		950-SDZ-04215 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required				
950-SDZ-04215_MOS ACTIVE	Proposed		950-SDZ-04215 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.				
950-SDZ-04216	Proposed		FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.		
950-SDZ-04216	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure				

950-SDZ-04216_3	Proposed		FZ-04 Smoke detect. in B-200 LV SWGR container - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Smoke detection in B-200 LV SWGR container	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-SDZ-04216_MOS	MOS Repeat		950-SDZ-04216 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-SDZ-04216_MOS ACTIVE	Proposed		950-SDZ-04216 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-04217	Proposed		FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-04217	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-SDZ-04217_MOS	MOS Repeat		950-SDZ-04217 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-SDZ-04217_MOS ACTIVE	Proposed		950-SDZ-04217 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-04218	Proposed		FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-04218	Proposed	Bad_Input_F&G	FZ-04 Smoke detect. in B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-200 LV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-SDZ-04218_MOS	MOS Repeat		950-SDZ-04218 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-SDZ-04218_MOS ACTIVE	Proposed		950-SDZ-04218 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-06201	Proposed		FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06201	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-SDZ-06201_3	Proposed		FZ-06 Smoke detect. in B-100 HVAC air intake - CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Smoke detection in B-100 HVAC air intake	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.	1. Work in line with Emergency Response procedure.
950-SDZ-06201_MOS	MOS Repeat		950-SDZ-06201 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-SDZ-06201_MOS ACTIVE	Proposed		950-SDZ-06201 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-06202	Proposed		FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06202	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-SDZ-06202_MOS	MOS Repeat		950-SDZ-06202 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	
950-SDZ-06202_MOS ACTIVE	Proposed		950-SDZ-06202 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.	
950-SDZ-06203	Proposed		FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.	1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06203	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HVAC air intake	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HVAC air intake	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure	
950-SDZ-06203_MOS	MOS Repeat		950-SDZ-06203 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required	

950-SDZ-06203_MOS ACTIVE	Proposed		950-SDZ-06203 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-SDZ-06204	Proposed		FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06204	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-SDZ-06204_3	Proposed		FZ-06 Smoke detect. In B-100 HV/MV SWGR container- CONFIRMED	123A90-DDL-IN-CE-40002	To activate ESD-1D on Smoke detection in B-100 HV/MV SWGR container	SMOKE_CONF	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA ESD-1D activation: 1. Blph process shutdown 2. Blph depressurization 3. Blph safety loads energized: yes upss, no wind farm, no bess, no solar, no fuel cell	Confirmed Smoke in area	1. If manned: ensure platform is evacuated as per ERP 2. if unmanned: inform supervisor of H2 gas release at platform 3. Confirm all F&G and ESD initiated actions are complete as per cause and effects matrix.		1. Work in line with Emergency Response procedure.
950-SDZ-06204_MOS	MOS Repeat		950-SDZ-06204 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-SDZ-06204_MOS ACTIVE	Proposed		950-SDZ-06204 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-SDZ-06205	Proposed		FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06205	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-SDZ-06205_MOS	MOS Repeat		950-SDZ-06205 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-SDZ-06205_MOS ACTIVE	Proposed		950-SDZ-06205 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-SDZ-06206	Proposed		FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	HI_SMOKE	48	P1 - Critical	fg1 - Critical F&G alarm	HMA-MA 1. Potential escalation of safety incident. 2. Initiation of confirmed smoke resulting in visual and audible alarms	Smoke has been detected in area.	1. If manned: inform personel on platform to investigate potential gas release as per ERP 2. If unmanned: check adjacend detectors and initiate ESD-1D if required 3. Inform supervisor of the situation.		1. Work in line with Emergency Response procedure. 2. If no smoke is detected; raise notification to inhibit detector.
950-SDZ-06206	Proposed	Bad_Input_F&G	FZ-06 Smoke detect. in B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To alarm on Smoke detection in B-100 HV/MV SWGR container	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	F&G confirmed on 1 fault + 1 true F&G detection in zone HMA-CFA 1. Less F&G zone coverage. 2. Degradation of the F&G logic voting. 3. Loss of channel redundancy cause: Instrument fault Channel fault	Reduced F&G coverage, potential for spurious trip	1. Inform maintenance. 2. If confirmed fault, consider implementing override as per override procedure		
950-SDZ-06206_MOS	MOS Repeat		950-SDZ-06206 MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON				MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required		
950-SDZ-06206_MOS ACTIVE	Proposed		950-SDZ-06206 MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON		P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.		
950-XL-01101	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-01	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-01102	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-01	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-02101	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-02	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-02102	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-02	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-03101	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-03	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-03102	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-03	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		
950-XL-03103	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-03	IO_FAIL		P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit		

950-XL-03104	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-03	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04101	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04102	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04103	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04104	Proposed	Bad_Output_F&G_Alarm	FZ-01 Optical fire alarm	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04201	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical gas alarm B-400 ITER container	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-04 B-400 ITER container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04202	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical fire alarm B-400 ITER container	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-04 B-400 ITER container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04203	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical gas alarm B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-04 B-300 AC UPS container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04204	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical fire alarm B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-04 AC UPS container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04205	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical gas alarm B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-04 B-200 LV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-04206	Proposed	Bad_Output_F&G_Alarm	FZ-04 Optical fire alarm B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-04 B-200 LV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-05201	Proposed	Bad_Output_F&G_Alarm	FZ-05 Optical gas alarm water treat. pkg	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-05 water treat. Pkg	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-05202	Proposed	Bad_Output_F&G_Alarm	FZ-05 Optical fire alarm water treat. pkg	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-05 water treat. Pkg	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-06101	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-06	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-06102	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-06	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-06103	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-06	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-06104	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical gas alarm	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-06	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-06201	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical gas alarm B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To activate local optical gas alarm in FZ-06 B-100 HV/MV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit

950-XL-06202	Proposed	Bad_Output_F&G_Alarm	FZ-06 Optical fire alarm B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To activate local optical fire alarm in FZ-06 B-100 HV/MV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-07101	Proposed	Bad_Output_F&G_Alarm	FZ-07 Optical gas alarm	123A90-DDL-SAF-DL-30028	To activate local optical gas alarm in FZ-07	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical gas alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XL-07102	Proposed	Bad_Output_F&G_Alarm	FZ-07 Optical fire alarm	123A90-DDL-SAF-DL-30028	To activate local optical fire alarm in FZ-07	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Optical fire alarm failure - cannot alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-01101	Proposed	Bad_Output_F&G_Alarm	FZ-01 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-01	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-01102	Proposed	Bad_Output_F&G_Alarm	FZ-01 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-01	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-02101	Proposed	Bad_Output_F&G_Alarm	FZ-02 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-02	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-03101	Proposed	Bad_Output_F&G_Alarm	FZ-03 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-03	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-03102	Proposed	Bad_Output_F&G_Alarm	FZ-03 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-03	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-04101	Proposed	Bad_Output_F&G_Alarm	FZ-04 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-04102	Proposed	Bad_Output_F&G_Alarm	FZ-04 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-04	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-04201	Proposed	Bad_Output_F&G_Alarm	FZ-04 Acoustic fire&gas alarm B-400 ITER container	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-04 B-400 ITER container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-04202	Proposed	Bad_Output_F&G_Alarm	FZ-04 Acoustic fire&gas alarm B-300 AC UPS container	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-04 B-300 AC UPS container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-04203	Proposed	Bad_Output_F&G_Alarm	FZ-04 Acoustic fire&gas alarm B-200 LV SWGR container	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-04 B-200 LV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-05101	Proposed	Bad_Output_F&G_Alarm	FZ-05 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-05	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-05102	Proposed	Bad_Output_F&G_Alarm	FZ-05 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-05	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-05103	Proposed	Bad_Output_F&G_Alarm	FZ-05 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-05	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-05104	Proposed	Bad_Output_F&G_Alarm	FZ-05 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-05	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-05201	Proposed	Bad_Output_F&G_Alarm	FZ-05 Acoustic fire&gas alarm water treat. pkg	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-05 water treat. Pkg	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit

950-XZ-06101	Proposed	Bad_Output_F&G_Alarm	FZ-06 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-06	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-06201	Proposed	Bad_Output_F&G_Alarm	FZ-06 Acoustic fire&gas alarm B-100 HV/MV SWGR container	123A90-DDL-SAF-DL-30027	To activate local acoustic fire & gas alarm in FZ-06 B-100 HV/MV SWGR container	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
950-XZ-07101	Proposed	Bad_Output_F&G_Alarm	FZ-07 Acoustic fire&gas alarm	123A90-DDL-SAF-DL-30028	To activate local acoustic fire & gas alarm in FZ-07	IO_FAIL	P2 - Standard	fg2 - Standard F&G failure (fatal fault condition – no F&G alarm)	HMA-CFA 1. compromise safety of plant personnel cause: 1. No fire zone optical alarm indication. 2. Loss of safety functionality 3. Loss of channel redundancy	Acoustic F&G alarm failure - cannot sound alarm when required	1. Inform maintenance. 2. Inform supervisor - to prepare notice before next platform visit
B100-TDC-001	Proposed		B-100 HV/MV SWGR container primary door open	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR container primary door	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B100-TDC-001	Proposed	Bad_Input_Diagnostic	B-100 HV/MV SWGR container primary door open	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR container primary door	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B100-TDC-002	Proposed		B-100 HV/MV SWGR container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR container emergency door	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B100-TDC-002	Proposed	Bad_Input_Diagnostic	B-100 HV/MV SWGR container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR container emergency door	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B100-TIR-001	Proposed		B-100 HV/MV SWGR rcontainer motion detection	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR rcontainer motion detection	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring movement within container	1. Inform maintenance/intervention team.
B100-TIR-001	Proposed	Bad_Input_Diagnostic	B-100 HV/MV SWGR rcontainer motion detection	123A90-DDL-TL-SP-45007	To monitor B-100 HV/MV SWGR rcontainer motion detection	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of presence detection	1. Maintenance action
B200-TDC-001	Proposed		B-200 LV SWGR container primary door open	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container primary door	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B200-TDC-001	Proposed	Bad_Input_Diagnostic	B-200 LV SWGR container primary door open	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container primary door	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B200-TDC-002	Proposed		B-200 LV SWGR container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container emergency	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B200-TDC-002	Proposed	Bad_Input_Diagnostic	B-200 LV SWGR container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container emergency	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B200-TIR-001	Proposed		B-200 LV SWGR container motion detection	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container motion detection	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring movement within container	1. Inform maintenance/intervention team.
B200-TIR-001	Proposed	Bad_Input_Diagnostic	B-200 LV SWGR container motion detection	123A90-DDL-TL-SP-45007	To monitor B-200 LV SWGR container motion detection	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of presence detection	1. Maintenance action
B300-TDC-001	Proposed		B-300 UPS container primary door open	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container primary door open	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B300-TDC-001	Proposed	Bad_Input_Diagnostic	B-300 UPS container primary door open	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container primary door open	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B300-TDC-002	Proposed		B-300 UPS container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container emergency door open	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B300-TDC-002	Proposed	Bad_Input_Diagnostic	B-300 UPS container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container emergency door open	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B300-TIR-001	Proposed		B-300 UPS container motion detection	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container motion detection	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring movement within container	1. Inform maintenance/intervention team.
B300-TIR-001	Proposed	Bad_Input_Diagnostic	B-300 UPS container motion detection	123A90-DDL-TL-SP-45007	To monitor B-300 UPS container motion detection	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of presence detection	1. Maintenance action
B400-TDC-001	Proposed		B-400 I&T equip. container primary door open	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container primary door open	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.

B400-TDC-001	Proposed	Bad_Input_Diagnostic	B-400 I&T equip. container primary door open	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container primary door open	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B400-TDC-002	Proposed		B-400 I&T equip. container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container emergency door open	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Door position to be checked prior to departure from platform. Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring door position	1. Inform maintenance/intervention team.
B400-TDC-002	Proposed	Bad_Input_Diagnostic	B-400 I&T equip. container emergency door open	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container emergency door open	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of door position detection	1. Maintenance action
B400-TIR-001	Proposed		B-400 I&T equip. container motion detection	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container motion detection	DISC	x Log	J5d- PTM - event required for proactive technical monitoring	Alarm valid only in unmanned conditions (no maintenance phase) Platform is monitored via marine rader, unauthorised approach is therefore identified before entry onto platform and into containers.	n.a. used for monitoring movement within container	1. Inform maintenance/intervention team.
B400-TIR-001	Proposed	Bad_Input_Diagnostic	B-400 I&T equip. container motion detection	123A90-DDL-TL-SP-45007	To monitor B-400 I&T equip. container motion detection	IO_FAIL	x Log	J5d- PTM - event required for proactive technical monitoring	1. Loss of monitoring functionality 2. Loss of channel redundancy	Potential loss of presence detection	1. Maintenance action
Enable/Disable_MOS	MOS Repeat		Enable/Disable MOS Timer has 1 hour to expiration.	123A90-DDL-IN-PRO-40010		BYPASS_ON			MOS timer expiring and device being put back in operation.	Potential trip if transmitter is in fault or demand state	1. If manned: Confirm with the field operator if mos timer needs extending beyond the remaining 1 hour and extend the mos timer if required. 2. If unmanned: Check override register and extend if required
Enable/Disable_MOS ACTIVE	Proposed		Enable/Disable MOS applied	123A90-DDL-IN-PRO-40010		BYPASS_ON	P4 - Alert	t4e minor: maintenance follow up required	Cause: MOS is applied as per Permit to Work/risk assessment	No consequences - MOS applied by operator	1. Confirm that the correct mos has been applied and remove when no longer required.
950-ESD-06101_MOS ACTIVE	**Proposed**		**950-ESD-06101 MOS applied**	**123A90-DDL-IN-PRO-40010**		**BYPASS_ON**	**P4 - Alert**	**t4e minor: maintenance follow up required**	**Cause: MOS is applied as per Permit to Work/risk assessment**	**No consequences - MOS applied by operator**	**1. Confirm that the correct mos has been applied and remove when no longer required.**

ID	Action	Feedback/Close out comment	Complete	Responsible	Note	Tags	Action close-out
13	Shoreside watchdog		-	Loredana	consider watchdog on shore side to pick up loss of comms prior to shutdown; time to trip to be reviewed (should be long for operations to be able to respond)	79-XA-005: DISC	RM= Proposed time is 24 hours as per doc. "Process Safety Cause and Effect Matrix" n° 123A90-DDL-IN-CE-40000 rev. 04
12	Alarm on FV 'not closed'		-	Loredana	consider alarm on FV 'not closed' position if not in purging mode	64-ZAH-001: DISC	RM= Confirmed, see doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.4.7 and 4.4.8)
11	Alarm on SDV 'not closed'		-	Loredana	Move alarm to SDV 'not closed' rahter than alarming on 'open'	64-ZAH-001: DISC	RM= Confirmed, see doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.4.7 and 4.4.8)
10	Check package alarm		-	Loredana	rather rely on nitrogen receiver low pressure alarm within package	64-PT-031A: LO	Operator can be alerted by 64-PAL-057 and 64-PALL-057 Low/Low Low Pressure Alarms inside Nitrogen package. See doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.8.2)
7	Add vent flow to PTM plan		-	Michael	Rather than relying on alarm, it is more effective to regularly check the H2 vent flow	43-FT-001: HI	
1	Confirm against Electrolyser package Pressure		-	Hamant	Confirm maximum electrolyser outlet package	25-PT-001: HI	
2	Controlability		-	Hamant	this PC & associated header control will require some good ramp control (expect disturbances)	25-PT-055A: HI	
4	Design purge failure		-	Loredana	Use flow totalizer (based on current flow indication) that there was insufficient flow during purge.	25-T1AAH: HI	RM= Confirmed, see doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.4.7 and 4.4.8)
5	Investigate earlier alarm on rate of change		-	Loredana	make the alarm slightly smarter by checking increase over time, rather than alarming at end of timer	25-T3AAH: HI	RM= Confirmed, see doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.4.7 and 4.4.8)
9	Purge flow totalizer alarm		-	Loredana	recognize that purge was unsuccesfull based on flow	25-PT-035: LO_LO	RM= Confirmed, see doc. "Process Control Logics Description" n° 123A90-DDL-IN-RE-40095 rev.02. (par. 4.4.7 and 4.4.8)

					25-PT-004_MOS: BYPASS_ON 25-PT-006_MOS: BYPASS_ON 25-PT-008_MOS: BYPASS_ON 25-PT-009_MOS: BYPASS_ON 25-PT-011_MOS: BYPASS_ON 25-PT-012_MOS: BYPASS_ON 43-LT-001_MOS: BYPASS_ON 63-PT-004_MOS: MOS_ON 64-PT-002_MOS: BYPASS_ON 80-PT-002_MOS: BYPASS_ON 950-ASD-01101_MOS: BYPASS_ON 950-ASD-03101_MOS: BYPASS_ON 950-ASD-04101_MOS: BYPASS_ON 950-ASD-06101_MOS: BYPASS_ON 950-ASD-07101_MOS: BYPASS_ON 950-ESD-01101_MOS: BYPASS_ON 950-ESD-03101_MOS: BYPASS_ON 950-ESD-04101_MOS: BYPASS_ON 950-ESD-06101_MOS: BYPASS_ON 950-ESD-07101_MOS: BYPASS_ON 950-ESDD-01101_MOS: BYPASS_ON 950-ESDD-03101_MOS: BYPASS_ON 950-ESDD-04101_MOS: BYPASS_ON 950-ESDD-06101_MOS: BYPASS_ON 950-ESDD-07101_MOS: BYPASS_ON 950-ESDD-REM_MOS: BYPASS_ON 950-ESD-REM_MOS: BYPASS_ON
14	remove MOS expiry timer	-	Michael	Recommended to remove functionality, and rather manage MOS via SIS override register	950-FDZ-01101_MOS: BYPASS_ON
6	Review update of SIF C&E	-	Hamant	Check reducing trip to fuel cell only, and remove shutdown of water treatment package, electrolyser package and seawater lift pumps	80-PT-002: LO_LO

ATTRIBUTE NAME	ATTRIBUTE DESCRIPTION
TAG NUMBER	Tag Number per the Tag Numbering Specification for the initiating device
LOOP ID	Instrument, Fire & Gas or Telecommunications loop identifier
ALARM TYPE	Identifies the type of alarm - see available list of values
ALARM CONDITION	Identifies the alarm condition - see available list of values
SERVICE DESCRIPTION	Meaningful description of the service / duty of the device - to enhance the information held in the I/O tag number
ALARM SOURCE DOCUMENT	Document number which defines the alarm requirement. Only 1 document number needs to be given and the first document on which the alarm is shown should be given using the order below starting at 1 and working down: 1. P&ID 2. Process Description 3. Serial Link Definition
ALARM SOURCE DOCUMENT REV	Revision of Alarm Source Document used
ALARM GROUP	Identifies alarms that make up a group including overall group alarm - See guideline document
SET POINT	The process value at which the alarm is activated. The setting must be in the same units as the ICSS Range e.g. in % for level, not barg, mm etc.
SET POINT UOM	The engineering units of the alarm setpoint. These must be the same units as the ICSS Range e.g. in % for level, not barg, mm etc.
DISCRETE ALARM STATE	TRUE or FALSE or N/A **TRUE**: The alarm condition is indicated when the tag is TRUE (1). **FALSE**: The alarm condition is indicated when the tag is FALSE (0). **N/A**: Analogue derived alarm, field not applicable.
INITIATING CAUSES(S)	Text describing the initiating causes of alarm and the independent sources of operating data that could be used to confirm the cause.
INVALID OPERATION MODES	State if an alarm is invalid for any operating modes and across the operating envelope
CONSEQUENCE DESCRIPTION (WITHIN PACKAGE BOUNDARIES)	Text describing the worst case unmitigated consequence based on the causes identified
TIME TO EVENT (TTE)	TTE is the amount of time (in minutes) between the activation of an alarm and the point at which operator action can no longer influence the consequence. The suggested TTE periods that can be entered are listed below. However, the TTE will be discussed and agreed during alarm rationalisation and may differ from the values below. 10 minutes 30 minutes 60 minutes 90 minutes 2 hours 6 hours 12 hours 24 hours 48 hours 72 hours
OPERATOR RESPONSE TIME (ORT)	ORT shall only be populated for packages that have serial communication with the ICSS. ORT is the Total time required for the operator to complete the following: a. correctly analyse an alarm. b. identify the initiating cause. c. verify by checking other indications to validate accuracy of the identified alarm. d. acknowledge alarm to convey to system that operator has verified alarm. e. ascertain the potential consequences. f. take all necessary actions to avoid escalation of the abnormal situation and prevent the potential consequences related to the alarm. g. monitor the effectiveness of the response actions to ensure the consequence has been averted. i.e. where there is a long process response time, this should be factored into the ORT determination
URGENCY	Urgency shall only be populated for packages that have serial communication with the ICSS. a. Urgency is the difference between TTE and ORT and represents how much time an operator has available before beginning alarm response. b. For Serial packages, Urgency shall be categorised into three bands Urgency TTE - ORT Immediate > 5 minutes and ≤ 10 minutes Prompt 10 minutes to 30 minutes Soon > 30 minutes to end of shift

ATTRIBUTE NAME	ATTRIBUTE DESCRIPTION
ALARM PRIORITY	Alarm Priority shall only be populated for packages that have serial communication with the ICSS. The table below should be used as initial basis to determine alarm priority. Event consequence --> Large Medium Small Urgency Immediate P1 P1 P2 Urgency Prompt P1 P2 P3 Urgency Soon P2 P3 P3

ATTRIBUTE NAME	ATTRIBUTE DESCRIPTION
OPERATOR RESPONSE (IF KNOWN)	With respect to the package, accepting the supplier does not have knowledge of the wider impact to the facility, what response is required by the operator to prevent the consequence described.
LOOP DIAGRAM DOC NO	This is the drawing which shows the wiring and termination details of the field device which will provide the status on which the alarm will be generated.
RELATED DOCUMENTS	Reference of documents that use alarm. For example control narratives and C&E charts
ALARM CATEGORISATION FLAGS	Highly Managed Alarms (HMA) Sub-categories: **SRA - Safety Related Alarms** - SRA assignment shall include, but not be restricted to, alarms which are formally documented as providing quantified risk reduction (safety or environmental), for example, by a LOPA or QRA study. **CFA - Critical Fault Alarms** - The following alarms shall be categorised as critical fault alarms. 1. Alarm indicating unavailability of emergency systems e.g. firewater pumps. 2. Alarm indicating loss of temporary refuge pressurisation. 3. Alarm indicating control or protective systems running on batteries. 4. Alarm indicating low instrument air pressure to a site or unit. 5. Alarm indicating dangerous SIF failure e.g. partial stroke test failure, SIF instrument failure diagnostic. 6. Alarm indicating unavailability or failure of F&G detector e.g. beam block alarm on line-of-sight gas detector. 7. Alarm indicating bad PV on SRA or BPCS layer of protection. 8. Alarm indicating degraded redundancy in an SIS or F&G logic solver. 9. Others as deemed appropriate by alarm class owners. **MA - Mitigation (F&G alarms)** - The following alarms shall be categorised as mitigation alarms. 1. Fire detection alarms. 2. Flammable gas detection alarms. 3. Toxic gas detection alarms. 4. Manual call point activation alarms. 5. O2 deficient atmosphere alarms. 6. Safety shower or eyebath activation alarms. 7. Imminent collision detection alarms.
ALARM DESIGN ORIGIN	Examples an alarm can originate from: HAZOP, LOPA, P&ID development, Mechanical Package, Instrument Package, Electrical Package, Process Safety Package, Control Narrative, D&ID, F&G etc.
BASIS OF ALARM SETTING	Rules are often used to determine the alarm setting ex: 60% of trip value etc.
REVISION CONTROL	Revision Number - Approved modifications to an ARM database entry shall result in a new revision of the record.

ATTRIBUTE NAME	ACCEPTED ATTRIBUTE VALUE	ATTRIBUTE VALUE DESCRIPTION
ALARM CONDITION	COMM_FAILURE	Communication Alarm
ALARM CONDITION	DEV	Voted transmitter Deviation Alarm (e.g. 2oo3)
ALARM CONDITION	DISC	Discrete Input Alarm
ALARM CONDITION	FAIL	Valve or Motor Failure Alarm (Valve fail to Open / Close ; Motor failed to start)
ALARM CONDITION	GRP	Group Alarm (See section 5.0)
ALARM CONDITION	HI	Analogue High Alarm
ALARM CONDITION	HI_HI	Analogue High High Alarm
ALARM CONDITION	I/O_FAIL	I/O Fail Alarm: Generated when the status of any I/O point becomes unhealthy.
ALARM CONDITION	INST_FAIL	Instrument Fail Alarm: Generated when the status of any instrument point becomes unhealthy.
ALARM CONDITION	LO	Analogue Low Alarm
ALARM CONDITION	LO_LO	Analogue Low Low Alarm
ALARM CONDITION	MCC_AVAIL	Motor Available Signal
ALARM CONDITION	MCC_RUN	Motor Running Signal - The motor is running.
ALARM CONDITION	MCC_TRIPPED	Motor Trip Alarm - The motor has tripped
ALARM CONDITION	MCC_TCS	MCC Trip Circuit Supervisory Alarm
ALARM CONDITION	OOR	Out Of Range Alarm
ALARM CONDITION	SYS	System Alarm
ALARM CONDITION	RATE	Analogue Rate of Change Alarm
ALARM CONDITION	DISCRP	Valve Input to Output Discrepancy - The valve command and output signal mismatch (for a given time) Surge and Motor Operated Valves (MOV) only
ALARM CONDITION	DISC	F&G Detector - Flame / Smoke / Heat / MAC / Oil Mist Discrete Alarm
ALARM CONDITION	HI_GAS	F&G Detector - Hi Gas Alarm
ALARM CONDITION	LO_GAS	F&G Detector - Lo Gas Alarm
ALARM CONDITION	GAS_HI_CONF	F&G PT Voted Detector - Confirmed High Gas Alarm
ALARM CONDITION	GAS_LO_CONF	F&G LOS Voted Detector - Confirmed Low Gas Alarm
ALARM CONDITION	FLAME_CONF	Flame Confirmed Alarm
ALARM CONDITION	HEAT_CONF	F&G Voted Confirmed Heat Alarm
ALARM CONDITION	OIL_MST_CONF	F&G Voted Confirmed Oil Mist Alarm
ALARM CONDITION	SMOKE_CONF	F&G Voted Detector - Smoke Confirmed
ALARM CONDITION	EXTNG_FAIL	F&G Extinguishant Failure Alarm
ALARM CONDITION	BEAM_BLOCK	F&G Detector - Beam Block
ALARM CONDITION	BEAM_MAINT	F&G Detector - SIS Maintenance, Pre-Warning
ALARM CONDITION	MAINT_SIGNAL	F&G Detector - Maintenance
ALARM CONDITION	MAINT_BG_IR	F&G Detector - Maint. Background IR
ALARM CONDITION	MAINT_OINTG	F&G Detector - Maint. Overall Integrity
ALARM CONDITION	MAINT_OPTIC	F&G Detector - Optical Maintenance
ALARM CONDITION	BYPASS_ON	F&G - Bypass Alarm
ALARM CONDITION	GENERAL_FAULT	F&G Detector - Fault General
ALARM CONDITION	IO_FAIL	F&G Transmitter and Detectors I/O Fail alarm due to Bad PV
ALARM CONDITION	BYPASS_FAIL	F&G Detector - Bypass Failed
ALARM TYPE	ABSOLUTE	Absolute - comparison of variable signal against a defined alarm setting.
ALARM TYPE	BAD MEASUREMENT	Bad measurement - variable is outside its pre-set range.
ALARM TYPE	BIT PATTERN	Bit pattern - comparison of digital signals against a predefined pattern.
ALARM TYPE	CALCULATED	Calculated - comparison of the output of a functional calculation with a defined alarm setting.
ALARM TYPE	SYSTEM	System - faults within the automation system.
ALARM TYPE	DEVIATION	Deviation - comparison of the difference between two variables to a predefined setting.
ALARM TYPE	DISCREPANCY	Discrepancy - comparison of expected plant state against actual plant state.
ALARM TYPE	FIRST UP FAULT	First up fault alarm - indicates the initiating trip in a cascade of trip events.
ALARM TYPE	GROUP ALARM	Group alarm - indicates that at least one of several abnormal conditions, identified by a group of initiators is present.
ALARM TYPE	RATE OF CHANGE	Rate of change - the rate of change of a variable exceeds a defined setting.
ALARM TYPE	STATISTICAL ALARM	Statistical alarms - generated on statistical processing of a process variable or variables.
DISCRETE ALARM STATE	TRUE	
DISCRETE ALARM STATE	FALSE	
DISCRETE ALARM STATE	N/A	

ATTRIBUTE NAME	ACCEPTED ATTRIBUTE VALUE	ATTRIBUTE VALUE DESCRIPTION
TIME TO EVENT (TTE)	10 minutes	
TIME TO EVENT (TTE)	30 minutes	
TIME TO EVENT (TTE)	60 minutes	
TIME TO EVENT (TTE)	90 minutes	
TIME TO EVENT (TTE)	2 hours	
TIME TO EVENT (TTE)	6 hours	
TIME TO EVENT (TTE)	12 hours	
TIME TO EVENT (TTE)	24 hours	
TIME TO EVENT (TTE)	48 hours	
TIME TO EVENT (TTE)	72 hours	
URGENCY	IMMEDIATE	> 5 minutes and ≤ 10 minutes
URGENCY	PROMPT	10 minutes to 30 minutes
URGENCY	SOON	> 30 minutes to end of shift
ALARM PRIORITY	P0	Mitigation
ALARM PRIORITY	P1	High
ALARM PRIORITY	P2	Medium
ALARM PRIORITY	P3	Low
ALARM PRIORITY	P4	Event
ALARM CATEGORISATION FLAGS	HMA-MA	Fire / Flammable Gas / Toxic Gas detection alarms, Manual Call Point activation, O2 deficient atmosphere, Safety Shower or Eyebath Activation, Imminent Collision detection alarms.
ALARM CATEGORISATION FLAGS	HMA-SRA	SRA assignment shall include, but not be restricted to, alarms which are formally documented as providing quantified risk reduction (safety or environmental), for example, by a LOPA or QRA study.
ALARM CATEGORISATION FLAGS	HMA-CFA	Alarms indicating unavailability of emergency systems e.g. firewater pumps, loss of temporary refuge protection, control or protective system running on batteries, low instrument air pressure to a site or unit, dangerous SIF Failure e.g. partial stroke test failure, SIF instrument failure diagnostic, unavailability or failure of F&G detector e.g. beam block alarm on line-of-sight gas detector.
ALARM CATEGORISATION FLAGS	NON-HMA	Alarms which do not meet the criteria of an HMA shall be categorised as non-HMAs.

ATTRIBUTE NAME	UOM PARAMETER	UNIT OF MEASURE	SYMBOL
SET POINT	ANGLE	DEGREE (ANGLE)	°
SET POINT	ANGULAR VELOCITY	REVOLUTION PER MINUTE	RPM
SET POINT	DENSITY	DEGREE PER API GRAVITY	API
SET POINT	DENSITY	DENIER	tex
SET POINT	DENSITY	DENIER PER FILAMENT	den/filament
SET POINT	DENSITY	GRAM PER CUBIC CENTIMETRE	g/cm³
SET POINT	DENSITY	GRAM PER MOLE	g/mol
SET POINT	DENSITY	KILOGRAM PER CUBIC METRE	kg/m³
SET POINT	DENSITY	KILOGRAM PER CUBIC METRE (15 °C : 101325 KPA)	KG1
SET POINT	DENSITY	MICROGRAM PER CUBIC CENTIMETRE	µg/cm³
SET POINT	DENSITY	MILLIGRAM PER CUBIC CENTIMETRE	mg/cm³
SET POINT	DENSITY	MILLIGRAM PER CUBIC METRE	mg/m³
SET POINT	DENSITY	POUND PER CUBIC INCH	lb/in³
SET POINT	DENSITY	RELATIVE DENSITY (DRY AIR)	RDA
SET POINT	DENSITY	RELATIVE DENSITY (WATER 60°F)	RDW
SET POINT	DENSITY	SPECIFIC GRAVITY	SG
SET POINT	DIMENSIONLESS RATIO	Count of Debris Particles	Debris Particles
SET POINT	DIMENSIONLESS RATIO	INDEX	index
SET POINT	DIMENSIONLESS RATIO	MOLE FRACTION	MOM
SET POINT	DIMENSIONLESS RATIO	PER MILLE	%0
SET POINT	DIMENSIONLESS RATIO	PERCENT	%
SET POINT	DIMENSIONLESS RATIO	RATIO	Ratio
SET POINT	ELECTRICAL CAPACITANCE	FARAD	F
SET POINT	ELECTRICAL CURRENT	MILLIAMPERE	mA
SET POINT	ELECTRICAL POTENTIAL	VOLT	V
SET POINT	FLOWRATE - MASS	KILOGRAM PER HOUR	kg/hr
SET POINT	FLOWRATE - MASS	KILOGRAM PER MINUTE	kg/min
SET POINT	FLOWRATE - MASS	KILOGRAM PER SECOND	kg/s
SET POINT	FLOWRATE - MASS	LONG TONNE (2240 POUNDS) PER DAY	LT/d
SET POINT	FLOWRATE - MASS	LONG TONNE (2240 POUNDS) PER DAY	LTD (annual avg)
SET POINT	FLOWRATE - MASS	MILLION TONNE PER ANNUM	Mt/a
SET POINT	FLOWRATE - MASS	POUND PER DAY	lb/d
SET POINT	FLOWRATE - MASS	POUND PER HOUR	lb/h
SET POINT	FLOWRATE - MASS	POUND PER MINUTE	lb/min
SET POINT	FLOWRATE - MASS	SHORT TONNE (2000 POUNDS) PER DAY	ST/d
SET POINT	FLOWRATE - MASS	THOUSAND POUNDS PER HOUR	Mlb/h
SET POINT	FLOWRATE - MASS	TON PER DAY	ton/d
SET POINT	FLOWRATE - MASS	TON PER YEAR	te/yr
SET POINT	FLOWRATE - MASS	TONNE PER DAY	t/d
SET POINT	FLOWRATE - MASS	TONNE PER HOUR	t/h
SET POINT	FLOWRATE - MASS	TONNE PER MINUTE	t/min
SET POINT	FLOWRATE - MOLAR	KILOGRAM MOLE PER HOUR	kmol/h

ATTRIBUTE NAME	UOM PARAMETER	UNIT OF MEASURE	SYMBOL
SET POINT	FLOWRATE - VOLUMETRIC	BARREL PER DAY	bbl/d
SET POINT	FLOWRATE - VOLUMETRIC	BARREL PER DAY	bpd
SET POINT	FLOWRATE - VOLUMETRIC	BARREL PER HOUR	bph
SET POINT	FLOWRATE - VOLUMETRIC	BARREL PER MINUTE	bpm
SET POINT	FLOWRATE - VOLUMETRIC	BILLION STANDARD CUBIC FEET PER DAY	Bcf/d
SET POINT	FLOWRATE - VOLUMETRIC	cubic centimetre per minute	cc/min
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC CENTIMETRE PER SECOND	cm^3/s
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC CENTIMETRE PER STROKE	cm^3/stroke
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC FEET PER MINUTE	cfm
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER DAY	m^3/d
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER DAY (NORMAL)	Nm^3/d
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER DAY (STANDARD)	Sm^3/d
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER HOUR	m^3/h
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER HOUR (NORMAL)	Not
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER HOUR (NORMAL)	Nm^3/h
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER HOUR (STANDARD)	Sm^3/h
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER MINUTE	m^3/min
SET POINT	FLOWRATE - VOLUMETRIC	CUBIC METRE PER SECOND	m^3/s
SET POINT	FLOWRATE - VOLUMETRIC	GALLON (U.S.) PER MINUTE	g/min
SET POINT	FLOWRATE - VOLUMETRIC	LITRE PER DAY	l/d
SET POINT	FLOWRATE - VOLUMETRIC	LITRE PER HOUR	l/h
SET POINT	FLOWRATE - VOLUMETRIC	LITRE PER MINUTE	l/min
SET POINT	FLOWRATE - VOLUMETRIC	MILLION BARRELS PER DAY	MMbpd
SET POINT	FLOWRATE - VOLUMETRIC	MILLION CUBIC FEET PER DAY	MMcfd
SET POINT	FLOWRATE - VOLUMETRIC	MILLION CUBIC FEET PER HOUR	MMcfh
SET POINT	FLOWRATE - VOLUMETRIC	MILLION STANDARD CUBIC FEET PER DAY	MMscf/d
SET POINT	FLOWRATE - VOLUMETRIC	MILLION STANDARD CUBIC METRES PER DAY	$MMsm^3/d$
SET POINT	FLOWRATE - VOLUMETRIC	STANDARD CUBIC FEET PER DAY	scf/d
SET POINT	FLOWRATE - VOLUMETRIC	STANDARD CUBIC FEET PER HOUR	scf/h
SET POINT	FLOWRATE - VOLUMETRIC	STANDARD CUBIC FEET PER MINUTE	scf/min
SET POINT	FLOWRATE - VOLUMETRIC	US GALLON PER DAY	GPD
SET POINT	FLOWRATE - VOLUMETRIC	US GALLON PER HOUR	GPH
SET POINT	FLOWRATE - VOLUMETRIC	US GALLON PER MINUTE	GPM
SET POINT	LENGTH	AWG	awg
SET POINT	LENGTH	CENTIMETRE	cm
SET POINT	LENGTH	FOOT	ft
SET POINT	LENGTH	INCH	in
SET POINT	LENGTH	KILOMETRE	km
SET POINT	LENGTH	METRE	m
SET POINT	LENGTH	MICRON	micron
SET POINT	LENGTH	MILE (STATUTE)	mi
SET POINT	LENGTH	MILLIMETRE	mm
SET POINT	LENGTH	NANOMETRE	nm
SET POINT	LENGTH	YARD	yd

ATTRIBUTE NAME	UOM PARAMETER	UNIT OF MEASURE	SYMBOL
SET POINT	MASS	GRAM	g
SET POINT	MASS	GRAM GOLD	GAU
SET POINT	MASS	HUNDREDWEIGHT	cwt
SET POINT	MASS	HUNDREDWEIGHT (SHORT)	HV
SET POINT	MASS	KILOGRAM	kg
SET POINT	MASS	METRIC TON	tonnes
SET POINT	MASS	MILLIMOLE	mmol
SET POINT	MASS	MOLE	mol
SET POINT	MASS	OUNCE (AVDP)	oz
SET POINT	MASS	OUNCE TROY	toz
SET POINT	MASS	POUND	lb
SET POINT	MASS	POUND (TROY)	TX
SET POINT	MASS	POUND MOLE	lbmol
SET POINT	MASS	TON (LONG) MASS	LT
SET POINT	MASS	TON (SHORT) MASS	ST
SET POINT	MASS	TONNE (METRIC TON)	te
SET POINT	MOMENTUM (RHOV2)	KILOGRAM PER METRE PER SECOND SQUARED	kg/m s²
SET POINT	POWER	BTU PER HOUR	BTU/h
SET POINT	POWER	FOOT POUND FORCE PER SECOND	ft lb/s
SET POINT	POWER	HORSEPOWER	hp
SET POINT	POWER	HORSEPOWER (METRIC)	hp (metric)
SET POINT	POWER	HORSEPOWER HOUR	hp h
SET POINT	POWER	JOULE PER SECOND	J/s
SET POINT	POWER	KILOCALORIE PER HOUR	kcal/h
SET POINT	POWER	KILOGRAM-CALORIE PER MINUTE	kcal/min
SET POINT	POWER	KILOVOLT AMPERE	Kva
SET POINT	POWER	KILOVOLT-AMPERE REACTIVE	kvar
SET POINT	POWER	KILOWATT	kW
SET POINT	POWER	MEGAJOULE PER HOUR	MJ/h
SET POINT	POWER	MEGAWATT	MW
SET POINT	POWER	MILLION BTU PER DAY	MMBTU/d
SET POINT	POWER	MILLION BTU PER HOUR	MMBTU/h
SET POINT	POWER	VOLT AMPERE	VA
SET POINT	POWER	WATT	W
SET POINT	PRESSURE	ATMOSPHERE	atm
SET POINT	PRESSURE	BAR (ABSOLUTE)	bara
SET POINT	PRESSURE	Bar (differential pressure)	bar
SET POINT	PRESSURE	BAR (GAUGE)	barg
SET POINT	PRESSURE	INCH OF MERCURY	in Hg
SET POINT	PRESSURE	INCH WATER GAUGE	in WG
SET POINT	PRESSURE	KILOGRAM PER SQUARE CENTIMETRE	kgf/cm²
SET POINT	PRESSURE	KILOGRAM-FORCE PER SQUARE CENTIMETRE ABSOLUTE	kgf/cm²a
SET POINT	PRESSURE	KILOGRAM-FORCE PER SQUARE CENTIMETRE GAUGE	kgf/cm²g
SET POINT	PRESSURE	KILOGRAM-FORCE PER SQUARE METRE	kgf/m²

ATTRIBUTE NAME	UOM PARAMETER	UNIT OF MEASURE	SYMBOL
SET POINT	PRESSURE	KILOPASCAL	kPa
SET POINT	PRESSURE	KILOPASCAL ABSOLUTE	kPaa
SET POINT	PRESSURE	KILOPASCAL GAUGE	kPag
SET POINT	PRESSURE	MEGAPASCAL	MPa
SET POINT	PRESSURE	METRE BAR PER SECOND	MBZ
SET POINT	PRESSURE	METRE PASCAL PER SECOND	MPZ
SET POINT	PRESSURE	MILLIBAR	mbar
SET POINT	PRESSURE	MILLIBAR ABSOLUTE	mbara
SET POINT	PRESSURE	MILLIBAR GAUGE	mbarg
SET POINT	PRESSURE	MILLIGRAM PER SQUARE CENTIMETRE	mg/cm²
SET POINT	PRESSURE	MILLINEWTON PER METRE SQUARED	mN/m²
SET POINT	PRESSURE	MM OF MERCURY	mm Hg
SET POINT	PRESSURE	MM WATER GAUGE	mm WG
SET POINT	PRESSURE	NEWTON PER SQUARE METRE	N/m²
SET POINT	PRESSURE	PASCAL	Pa
SET POINT	PRESSURE	POUND PER SQUARE FOOT	lb/ft²
SET POINT	PRESSURE	POUND PER SQUARE INCH DIFFERENTIAL	PSID
SET POINT	PRESSURE	POUND PER SQUARE INCH PER HUNDRED FEET	psi/100ft
SET POINT	PRESSURE	POUND-FORCE PER SQUARE INCH	PSI
SET POINT	PRESSURE	POUND-FORCE PER SQUARE INCH ABSOLUTE	PSIA
SET POINT	PRESSURE	POUND-FORCE PER SQUARE INCH GAUGE	PSIG
SET POINT	TEMPERATURE	DEGREE CELSIUS	°C
SET POINT	TEMPERATURE	DEGREE FAHRENHEIT	°F
SET POINT	TEMPERATURE	DEGREE RANKINE	°R
SET POINT	TEMPERATURE	KELVIN	K
SET POINT	VELOCITY	CENTIMETRE PER SECOND	cm/s
SET POINT	VELOCITY	FEET PER HOUR	ft/h
SET POINT	VELOCITY	FEET PER MINUTE	ft/min
SET POINT	VELOCITY	FEET PER SECOND	ft/s
SET POINT	VELOCITY	INCH PER SECOND	in/s
SET POINT	VELOCITY	KILOMETRE PER HOUR	km/h
SET POINT	VELOCITY	KILOMETRE PER MINUTE	km/min
SET POINT	VELOCITY	KNOT PER HOUR	kn
SET POINT	VELOCITY	METRE PER MINUTE	m/min
SET POINT	VELOCITY	METRE PER SECOND	m/s
SET POINT	VELOCITY	METRE PER WEEK	m/wk
SET POINT	VELOCITY	MILE PER HOUR	mph
SET POINT	VELOCITY	MILE PER MINUTE	mi/min
SET POINT	VELOCITY	MILLIMETRE PER HOUR	mm/h
SET POINT	VELOCITY	MILLIMETRE PER SECOND	mm/s
SET POINT	VELOCITY	MILLIMETRE PER YEAR	mm/a
SET POINT	VISCOSITY - DYNAMIC	CENTIPOISE	cP
SET POINT	VISCOSITY - DYNAMIC	PASCAL SECOND	Pa s
SET POINT	VISCOSITY - DYNAMIC	POISE	P
SET POINT	VOLUME	CUBIC METRE	m³