

					Planned due	Actual comple	tion	
Issue number	Case ID	Assigned to	Status	Issue Priority		date	Due in X days	Description
4063731_0002	406373	1	Closed - Transfer to IP Plan	Level 1	30/04/2015	5 25/0	03/2015 Completed	The site has adopted a controlled oxidation procedure for the propane treaters in order to make those vessels safe for entry prior to inspection and molecular sieve removal. The approach taken is reasonable but the system of work implemented has not been assessed to determine whether it reduces the risk of fire and explosion to ALARP. In order to comply with Regulation 4 of the COMAH Regulations, Shell U.K. Limited should carry out a suitable and sufficient process safety risk assessment of the controlled oxidation procedure taking into account the role of persons performing the tasks required.
								Where a 'Vital' service required an electrical supply this would be provided by either; one or more UPS systems or from two independent sources of supply. This basis of design was found to be entirely qualitative; neither the required safety integrity of the electrical supplies, based on the risk reduction required by the equipment that is reliant on the electrical supply to function, nor the actual safety integrity of the supplies was known. Therefore Shell UK Limited was unable to demonstrate that the associated risk had been reduced to ALARP. Shell UK Limited should, for those electrical power supplies to equipment classified as 'Vital' for safety critical reasons: i.Determine, through quantified assessment, the required safety integrity of the electrical supplies based on the risk reduction claimed for all measures that are reliant on the electrical supply to function;
								ii.Determine, through quantified assessment, the actual safety integrity of such electrical supplies;
								iii. Develop a time-bound action plan to resolve any risk gap, so far as reasonably practicable, between required integrity (from i above) and that currently achieved (from i above).
4063731_0005	406373	1	Closed - Transfer to IP Plan	Level 1	27/05/2016	06/0		You are reminded that the greater the initial level of risk under consideration, the greater the degree of rigour HSE requires of the arguments purporting to show that those risks have been reduced ALARP. Shell UK Limited should provide a copy of the assessment together with the action plan (where required) to HSE by 30th November 2014.
								Shell UK Limited was unable to demonstrate that the inspection, maintenance and testing strategy and associated procedure(s) for the electrical power system earthing and protection was consistent with relevant benchmark standards. The management system for the deferment / cancellation of IMT tasks associated with safety critical elements of the electrical power distribution system was inadequate. Shell UK Limited should:
								i.develop associated procedure(s) and IMT documentation for the electrical power system earthing to ensure alignment with the requirements of relevant benchmark standards;
								ii.develop associated procedure(s) and IMT documentation for the electrical power system protection to ensure adequate coverage and function and alignment with the requirements of relevant benchmark standards;
			Closed -					iii.review, and revise as required, IMT work management procedures to ensure that deferment / cancellation of IMT tasks associated with safety critical elements of the electrical power distribution system has suitable and sufficient assessment of the associated risk made together with appropriate approval;
4063731_0006	406373		Transfer to IP Plan	Level 1	15/01/2016	15/0	1/2016 Completed	Shell UK Limited should complete this action and provide evidence of completion through submission of the revised procedure(s) and IMT documentation to the HSE by 30th November 2014.
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Shell UK Limited, Mossmorran Issues for last 3 years

Closed -4063731 0007 Withdrawn 30/04/2015 18/03/2015 Completed Level 1 Closed -4063731 0008 Resolved Level 1 27/02/2015 27/02/2015 Completed Closed -4063731_0009 Withdrawn Level 1 30/04/2015 18/03/2015 Completed Closed -4063731_0010 Resolved Level 1 27/02/2015 27/02/2015 Completed Closed -Transfer to IP 4063731_0011 406373 Level 1 30/04/2015 Plan 28/04/2015 Completed Closed -4063731 0012 406373 Resolved 20/02/2015 20/02/2015 Completed Level 1 Closed 4063731 0013 20/02/2015 Resolved Level 1 20/02/2015 Completed

Shell is required to provide suitable and sufficient demonstration of the way in which it achieves compliance with applicable regulation and relevant benchmark standards in relation to the design of the HV and Primary LV distribution systems. See letter dated 28/2/14 & accompanying report by Leigh Williams for full details. (SHUKL/Elec/160114/LW1 - Electrical Systems & Equipment: Design - 30 Nov 2014.)

Full text of action follows:

Shell UK Limited was unable to provide suitable and sufficient demonstration of the way in which it achieves compliance with applicable regulation and relevant benchmark standards in relation to the design of the HV and Primary LV distribution systems. Shell UK Limited should:

i.for the Braefoot Bay Site, demonstrate, through the provision of up to date protection co-ordination information, that the HV/Primary LV protection arrangements ensures protection is provided for all foreseeable fault scenarios and provides adequate selectivity;

ii.demonstrate, through the provision of up to date short-circuit / earth-fault current magnitude (peak, break and steady state) and circuit disconnection times for the HV and Primary LV distribution system, that the associated switchgear, transformers and HV cabling is of adequate strength and capability to withstand the applicable fault current magnitude and duration. Short circuit current magnitude should be calculated in accordance with BS EN 60909;

iii.demonstrate, through design assessment and associated calculation (where required), that the HV and Primary LV distribution system earthing arrangements meet the functional and safety criteria defined within relevant good practice BS 7430[R4] and BS 50522[R5]. This should include relevant information to validate any assumptions made;

iv.following the assessments completed in (i), (ii) and (iii) develop a risk based, time-bound, action plan to resolve any issue that has been identified;

v. Following the assessments completed in (iii) update relevant periodic IMT documentation to reflect the calculated maximum allowable earth resistance values (i.e. pass / fail criteria).

Shell UK Limited should: should provide the following as evidence of completion of this action by 30th November 2014:

?For part (i) a copy of exemplar protection co-ordination information;

?For part (ii) a copy of the switchgear capability assessment, including available fault currents, disconnection times and equipment ratings;

?For part (iii) a copy of the design assessment and associated calculations;

?For part (iv) a copy (where required) of the action plan;

?For part (v) a copy of the updated IMT documentation.

Provide the CA with the details of the nominated sample area(s) for which inspection of STOPAQ treated areas will be carried out for ongoing integrity assurance. In addition, provide the scheme of inspection and techniques to be utilised. (COMAH Regulation 4) (From inspection on 2&3 Oct 2013).

Procedures / documentation reviewed associated with "Personal Isolations" did not provide suitable and sufficient demonstration of the way in which the Company achieves compliance with applicable regulation and relevant benchmark standards in relation to the safe operation of the LV electrical distribution systems. Shell UK Limited should review, and modify as required, relevant Company procedures to ensure alignment with the requirements of applicable regulation and relevant benchmark standards in relation to the safe operation of the LV electrical distribution systems. As a minimum the specific issues identified with the relevant section of this report (para 39) should be addressed.

Shell UK Limited should complete this action and provide evidence of completion through submission of the revised procedure(s) to the HSE by 30th November 2014. (SHUKL/Elec/160114/LW3 - Electrical Systems & Equipment: Safe Operation / Safe Systems of Work)

[Legal: COMAH Regulations 1999, Regulation 4, EAWR Regulation 4,12, 13, 14 & 16]

The site management team and LOLER Focal Point should review the CA analysis of Shell lifting plans in relation to the good practice requirements of BS7121. Shell should use the review to identify the necessary improvements to procedures on site. (From inspection on 2&3 Oct 2013).

The company has undertaken an assessment of risk to persons in occupied buildings at Mossmorran to an appropriate standard. Within their occupied buildings risk assessment (OBRA) the company recognises the need for an as low as is reasonably practicable or ALARP demonstration where the risk is tolerable if ALARP but for some reason it has not undertaken this for each building in this risk region. In compliance with regulation 4 of Control of Major Accident Hazards Regulations 1999 (as amended) the company should review and complete its OBRA using an appropriate standard such as the 'Guidance for the location and design of occupied buildings on chemical manufacturing sites', Chemical Industries Association, 3rd edition, 2010 (CIA Guidance). In completing this action the company is advised to look at section 4.20 in the CIA Guidance which applies to action plans for existing buildings. Finally, it is recommended that the company check the data contained in the current OBRA for transcription errors. The compliance date for this action is 30 January 2015.

The company utilise explosion risk contour plots as the datum upon which decisions are made to locate portable occupied buildings at the site. Upon examination of these plots at Mossmorran it appeared that they were not to an accurate scale. In compliance with regulation 4 of the Control of Major Accident Hazards Regulations 1999 (as amended) the company should review and if necessary revise these contour plots to ensure that they accurately reflect the scaling of the plant on the ground. The compliance date for this action is 30 January 2015.

The company has two portable buildings located in an area to the north east of the main site, previously used by contractors. At the time of the inspection it was not possible to determine whether these two portable buildings were occupied nor whether they were located in an appropriate area of the site in accordance with the company's internal standard i.e. in the purple region where the individual risk of explosion is =1.00E-07/yr. In compliance with regulation 4 of Control of Major Accident Hazards Regulations 1999 (as amended) the company should confirm whether the portable buildings are occupied and whether they are located in an appropriate area where the risk to persons in those portable buildings from fire or explosion is as low as is reasonably practicable. The compliance date for this action is 30 January 2015.

4063731_0014	4063731	Closed - Transfer to IP Plan	Level 1	30/09/2015	23/09/2015 Completed
4063731_0015	4063731	Closed - Resolved	Level 1	27/03/2015	18/03/2015 Completed
4063731_0016	4063731	Closed - Transfer to IP Plan	Level 1	21/08/2015	24/00/2015 0
		Closed - Transfer to IP	*	21/00/2015	21/08/2015 Completed
4063731_0017	4063731	Plan	Level 1	06/05/2016	06/05/2016 Completed
		Closed -			
4063731_0018	4063731	Closed - Transfer to IP Plan Closed -	Level 1	30/04/2015	30/04/2015 Completed
4063731_0018 4063731_0019	406373	Transfer to IP Plan Closed - Transfer to IP Plan	Level 1	30/04/2015 30/04/2015	30/04/2015 Completed 30/04/2015 Completed
		Transfer to IP Plan Closed - Transfer to IP			
4063731_0019	406373	Transfer to IP Plan Closed - Transfer to IP Plan Closed - Transfer to IP Plan Plan	Level 1	30/04/2015	30/04/2015 Completed
4063731_0019	406373	Transfer to IP Plan Closed - Transfer to IP Plan Closed - Transfer to IP	Level 1	30/04/2015	30/04/2015 Completed

Action 1: Identify the relevant safety critical tasks associated with the Major Accident Hazard Scenarios for Shell Mossmorran

End date: 09 January 2015

COMAH, Regulations 4 and 8

In the context of major accident hazards, safety-critical tasks can be defined as those activities where human action or inaction has the potential to initiate, escalate, recover from, or mitigate the consequences of, a major accident. They should align closely with full range of major accident hazard scenarios identified within the safety reports (not just the representative set of scenarios) and should encompass the full range of tasks where humans interact with those scenarios - i.e. including maintenance/inspection/testing activities and abnormal/upset conditions, as well as normal operational activities.

Shell Mossmorran should provide the CA with a list of safety critical tasks associated with their major accident hazard scenarios.

Action 2: Shell Mossmorran to provide a description of how human error will be identified in the HAZOP process.

Reference:HF2/121114

End date: 30 January 2015

Action 3: Shell Mossmorran to provide a clear statement of how they propose to review the outcomes of the completed HAZOPs to inform the program of safety critical task analysis work and demonstrate the link between the management of human performance and the control of major accident hazards.

Reference: HF3/121114

End date: 30 January 2015

ACTION LEGAL No.1-ME [3/12/2014]: Findings from sample inspections of STOPAQ

Provide the CA with written confirmation of the findings for the sample inspections of STOPAQ performance during 2015 by 31st March 2016.

(COMAH Regulation 15)

ACTION LEGAL No.2-ME [3/12/2014]: Rim seals on tanks T3401 and T3402

Shell are required to explain in writing to the CA the reasons for the delay in re-instating the primary rim seal on tanks T3401 and T3402. Shell should also provide details of what measures are in place to ensure the safe operation of the tanks. You should include what monitoring is been carried out, by whom and how this is undertaken. In addition please describe what the trigger points are and the actions your staff will initiate if these triggers points are reached. Please provide this information by 31st March 2015.

(COMAH Regulations 4 and 15)

ACTION LEGAL No.3-ME[3/12/2014]: Gasoline tank action update

Confirm in writing to the CA the progress made on the 17 actions detailed in the Inspection Analysis Report for the gasoline tanks (EP201304213700 - ZMM-IAR-13-007

rev. 1) by 31st March 2015. (COMAH Regulation 15)

ACTION LEGAL No.4-ME[3/12/2014]: Report on bursting disc failures at Braefoot Bay

On completion of the investigation into bursting disc failures on the LPG pipelines, provide in writing a copy of the report together with its findings and recommendations

to the CA by 31st March 2015. (COMAH Regulation 15)

ACTION LEGAL SHELL/MM/PS/030615/1

Following the failure of the primary rim seal on gasoline tanks T3401 and T3402 the company undertook a risk assessment and raised a deviation to enable it to continue to operate these tanks until August 2015. At the inspection on 3rd June 2015 the company informed the Competent Authority (CA) that it had initiated a review of this deviation which it hoped would allow it to continue to operate both these tanks until 2017 at which time the primary rim seals would be replaced. In compliance with Regulation 5(2) of the Control of Major Accident Hazards Regulations 2015 the company should provide to the CA a copy of the revised deviation and risk assessment.

This action legal must be completed by 31 August 2015.

Action 1: Management of Organisational Change

(Ref: SHELL/NSP/010616/01)

Your safety management system should require identification and analysis of safety implications of the proposed organisational changes (see COMAH 2015 Schedule 2). As part of your demonstration under COMAH Regulation 5(2) that you have taken all necessary measures to prevent, control and mitigate major accidents at the St Fergus, Mossmorran and Braefoot Bay establishments, you should provide the Competent Authority with a detailed assessment of the proposed changes in:

i.Roles

ii.Resource

iii.Function

iv.Competence

v.Experience

For the key areas of:

a)operational control, including performing safety critical tasks:

b)handling and controlling plant and equipment in upset and emergency conditions;

c)maintenance of safety critical equipment for prevention, control and mitigation of major accident hazard;

d)investigation of underlying causes of failure of safety critical equipment;

e)process engineering support for safe operation of major hazard establishments;

f)process engineering support for modification and change to site operations;

g)day to day health and safety management and support for safe site operations;

h)day to day environmental management and support for safe site operations; i)process safety technical support for operations, modifications, changes, investigations, studies.

Whilst this list is not exhaustive, it highlights some of the key areas you should be focussing on.

You should also refer to guidance available at http://www.hse.gov.uk/humanfactors/topics/orgchange.htm

Please provide me with a copy of the above assessment by 10th August 2016. [COMAH 2015 Regulation 5(2)]

Closed -Transfer to IP

Level 1

31/01/2017

31/01/2017 Completed

4063731_0022

Shell UK Limited, Mossmorran Issues for last 3 years

40	63731_0023	4063731	Closed - Transfer to IP Plan	Level 1	09/09/2016	02/09/2016 Completed	Action 1: Conduct a preliminary review of all the MAH critical limit alarms at FNGL and identify the alarms that rely on operator response. (Ref: SHELL/MM/HF/020216/01) Shell should provide a list of all the MAH critical limit alarms that rely on operator response. For MAH critical limit alarms that have no layers of protection and rely solely [COMAH 5(2); end date 30 June 2016]
							Action 2: Conduct a preliminary review of MAH critical limit alarms that rely on operator response and demonstrate that the Control Room Operator has sufficient time to respond to the alarm. (Ref: SHELL/MM/HF/020216/02) Detail: The following sections detail the requirements by which Shell could demonstrate compliance with Action 2. Shell should select a sample of MAH critical limit alarms that rely on operator response, and for each alarm:
400	63731_0024	4063731	Closed - Transfer to IP Plan	Level 1	30/09/2016		(1)Explain how the alarm has been prioritised with reference to time and consequence; (2)Explain how Shell arrived at the time available (where did it come from, who decided it, how was it derived for inclusion in the Variable Table); (3)For the sample of high criticality alarms, demonstrate that there is sufficient time to respond to the alarm, on a case-by-case basis (this should be considered in the (4)CA expectation is that you will draw upon competent technical support in alarm design and management to address this action.
	63731_0025 63731_0026	4063731 4063731	Closed - Transfer to IP Plan Open - New	Level 1 Level 1	09/09/2016 17/08/2018 -		Action 1: Update the Written Scheme of examination for T3401 to include the rejection criteria for primary and secondary rim seals (Reference: SHELL/MM/ME/270316/01) End date: 30th August 2016 The site should update the WSE for T3401 to include the rejection criteria for primary and secondary rim seals. This will ensure that the inspector is fully aware of what they are supposed to be inspecting and when they identify a fault they can discuss this with the responsible person. The site should supply a copy of the updated WSE for T3401.