

Inspection Record – Dutyholder Report			
LC11 Emergency Arrangements Regulator Evaluated Demonstration Exercise			
Inspection ID	IR-53535	Inspection Date(s)	18/09/2024 For 1 Days
Dutyholder	Westinghouse Springfields	Site	Springfields Works
Inspection Type	Announced Planned	Site Area / Group	
ONR Purpose	Nuclear Safety	Inspection Source	
Subject (s) of Inspection			
Activity			RAG Rating
LC 11 - Emergency arrangements			AMBER
System (s) – where applicable			
Inspector(s) taking part in Inspection			
Lead Inspector			
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Attending			
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1. Scope

1.1 Aim of Inspection

The aim of this inspection was to observe a demonstration of the Springfields Fuels Ltd extant emergency arrangements to confirm the sites ability to respond to significant emergency events and hence compliance to the made arrangements, for: Licence Condition 11 (Emergency arrangements).

1.2 Inspection Scope

To observe and make a judgement of the adequacy of the station's emergency response arrangements and capability to a realistic but challenging simulated scenario.

SFL's implementation of their LC11 arrangements and will focus on LC11(5) (Rehearsals). Additionally the exercise will demonstrate elements of emergency planning requirements from Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) 2019 and the Control of Major Accident Hazard (COMAH) Regulations 2015.

Whilst the demonstration exercises elements of both the sites emergency plans (level 1) and the local authorities off site plans (Level 2) to an off site emergency under Radiation (Emergency Preparedness and Public Information) Regulations (REPPiR) 2019, this report only covers the findings related to the implementation of the licensees, SFL's, emergency plans.

1.3 Relevant Regulatory Guidance

The following regulatory guidance corresponds with this inspection

Name

2. Summary Statement

Springfields Nuclear Fuels undertook a level 1 (on site) and level 2 (off site) emergency exercise on 18 September 2024 to demonstrate the site emergency arrangements as

required by its site licence under the site Licence Condition 11 'Emergency Arrangements'. This report under the site license obligations covers the level 1 element of the exercise. The offsite site level 2 response under local authority emergency planning is detailed in a separate contact record. The exercise Heron 9 scenario proposed by the site encompassed both safety aspects (a hydrogen explosion leading to mass casualties and a criticality incident with radiological risks) and security aspects (a malicious actor). I consider the licensee's scenario suitably challenging and realistic to the extent required to test the exercise objectives. ONR observed the exercise in several key locations to assess the adequacy of the arrangements, the capability and capacity of the licensee to respond to the emergency effectively and swiftly.

Whilst ONR identified some areas of good practice, I consider that the exercise objectives were only partially achieved. It is my opinion that the site failed to demonstrate adequate welfare consideration of casualties and persons at risk, including the lack of timely medical assistance to the casualties. Demonstration of the site's ability to mitigate the threats posed to public and personnel is a primary objective for the exercise and mandate for the level 1 response under the sites LC11 emergency arrangements. Coupled with other exercise observations I have therefore rated this intervention 'Amber' - Seek Improvement.

3. Record & Judgement

3.1 Staff seen as part of Inspection

The following principal staff were seen as part of this inspection

Name	Role	Company
[REDACTED]	[REDACTED]	Springfields Fuels Ltd

3.2 Record

Evidence

This intervention report under the site license emergency planning obligations (LC11) covers the on-site level 1 safety element of the exercise. The offsite site level 2 response under local authority emergency planning obligations (REPPiR 19) is detailed in a separate contact record CM9 2024/390058.

ONR assessment on the implementation of the site security emergency plan (Fundamental Security Principle 10) is recorded in WIRED IR-53460.

Exercise scenario and preparation

Springfields Nuclear Fuels scenario encompassed both safety aspects (a hydrogen explosion leading to mass casualties and a criticality incident with radiological risks) and security aspects (a malicious actor). The scenario had potential for escalation and required for the site emergency response to tackle both aspects at once, gathering information to gain sufficient understanding of the situation and making decisions to balance the risk to workers and members of the public. On this basis the proposed scenario was judged adequate to demonstrate the adequacy of the licensee's arrangements for safety and security.

The emergency response was limited to the site response (Level 1) with attendance of the emergency services i.e., fire and rescue and armed police response teams.

The scenario information is recorded on CM9 (reference 2024/45669).

The exercise objectives are recorded on CM9 (reference 2024/45668).

ONRs exercise observation locations

ONR observed the emergency response demonstration from four key locations i.e.:

[REDACTED] the facility affected by the initial blast and key muster point.

Forward Command post (FCP) [REDACTED]

[REDACTED] Emergency Control Centre.

[REDACTED] ONR observed the reception at site and direction of emergency services to the FCP.

The exercise was assessed in line with ONR guidance NS-INSP-GD-011 LC 11 Emergency Arrangements and the intervention covered aspects of LC11 (specifically sections 4, 5 and 6) and looked at the interfaces and performance of the licensee with the external emergency services as well as internally within the different entities that form part of its arrangements.

Exercise assessment

During the exercise, the following positive points were observed:

Windows were closed after site warning siren in accordance with arrangements.

There was good communication by SFL security team relaying clear and concise detailed METHANE information to Lancashire Fire and Rescue Service (LFRS) on arrival.

Inter-agency communication was good at the FCP, relaying clear and concise information.

Site incident commander set up the response and commanding the FCP scene. We noted appropriate challenge to the LFIC in terms of ensuring the Emergency Control Centre (ECC) were content before agreeing actions.

Good visibility of the National Inter-Agency Liaison Officer (NILO) and liaison between North West Ambulance Service (NWS) and LFRS's.

Good communication between Ambulance NILO and FRS's.

Attentive welfare checks at the [REDACTED]. The conditions at the muster point were very warm, with many occupants standing. We noted this became a real test,

when one occupant overheated and requiring additional attention.

Dynamic approach to roll call – with updates made to the roll call list to take account to casualties (real and role played).

Involvement of numerous organisation to make the exercise work.

Notwithstanding the above positive observations, the following areas for improvement were observed:

Emergency Services – reception and initial liaison

Ambulance first arrived at east gate 09:25 was seen leaving at 09:53, only to return again at 10:07 before entering the site. The reason for the ambulance leaving site is unknown and the site have been asked to account. Presently, I consider this a potential delay getting NWAS to the FCP and casualties.

LFRS wasn't given clear rendezvous point for arrival at site which delayed the response and included a further delay of 15 minutes whilst awaiting confirmation of escort arrangements.

Delivery of the ECC People / Persons mandate

The casualties in [REDACTED] were not attended to by NWAS for the duration of the exercise. Based upon the exercised casualty injuries, it would be conceivable that some of these casualties condition would worsen to the extent of being life threatening. I consider contributing factors to be:

No obvious discussion within ECC regarding welfare of casualties (e.g. the need to prioritise and confirm professional medical attention has arrived and being delivered).

[REDACTED] prompted ECC on at least two occasions that casualties needed attention, but this was not actively followed up by the ECC.

The decision to rescue people from building [REDACTED] was unnecessarily protracted (see below). Evacuation would have permitted NWAS to treat casualties without risk concern of the [REDACTED].

It took 40 minutes for ambulance to arrive at FCP (see above point). There was no obvious querying, concern or prioritisation within ECC about this delay. Once the ambulance arrived at the FCP, they did not attend to [REDACTED] casualties as they were awaiting ECC approval to enter the building. Again, there was no querying, concern or prioritisation by the ECC to ensure the casualties were attended to by NWAS.

ECC focus was on accounting (i.e. numbers) of casualties rather than welfare of those injured.

There was no indication that the ECC/HR cell was gathering names, making plans to contact families (particularly in case of the deceased).

The risk to [REDACTED] occupants from structural collapse was not addressed in a timely fashion and the [REDACTED] evacuation was poorly managed. I consider contributing factors to be:

The Duty Manager (at FCP) requested evacuation at 09:36 and this wasn't effected by the ECC until after 11:06.

Whilst the ECC called in a structural engineer to the ECC to consider the structural integrity of [REDACTED], this was time consuming and led to delay. Utilisation of eye witness statements (e.g. report of fire/smoke), CCTV (simulated), contact with building controller and requests from the Duty Manager would provide a more timely indicator of building status and the need for early evacuation (those that could be) via a safe exit route in the building.

Communication between security and the FCP SIC was poor. The evacuation was not properly communicated meaning the SIC was unaware of who and where people were being evacuated.

Different evacuation routes were given by ECC and site security. The escape route taken led past the emergency services, which could have resulted in obstruction and increased trip hazards. At this point it had been confirmed that hydrogen had dissipated, therefore the alternative route would have been safer.

CPR for the second FCP casualty was not started for about 5 mins after the first casualty.

FCP Command and Control

FCP Command and control structure between incident commanders was not clear leading to confusion as to who had primacy.

LRFS was unaware of the site emergency command structure, this was briefed 40 minutes after arrival.

Hazard information not fully understood by LFIC, particularly the hazards involved in the event of a criticality.

NILO (National Interagency Liaison Officer for NWAS) very active and prominent. However, Ambulance Operational Commander wearing "Ambulance Officer" tabard who was much less visible. The lack of visibility of the Ambulance Operational Commander hindered effective communications.

FCP Observations

Possible malicious activity information was not relayed to FCP.

There was limited evidence that the hydrogen fire had been extinguished, or hydrogen gas had been isolated.

Transport space constraints at FCP – 2 Ambulances and 2 fire appliances arriving within a minute in vicinity of a number of active pedestrians in the area (potential for impact with pedestrians).

ECC Observations

Early attendees to the ECC could start to populate the boards with the as know

information whilst awaiting the full ECC complement to arrive. There was a period at the beginning where people were arriving at the ECC and it wasn't clear what the nature of the event was until the first protocol brief was given.

The situation boards read as an event log rather than focusing specifically on the current situation. The situation board should show the event and response as known at that point in time, not a history.

The writing on the situation boards was very small. I would question its readability for the EC and others within the ECC.

I noted that there were magnetic markers available to record location of the emergency services on the map. These were not used.

The available and requested resources should be identified on the situation board. Where they have been requested, but not yet arrived, an ETA should be given.

At the end of each brief, the EC asked for any additional information from ECC members (correct procedure) – on too many occasions the additional information that was offered fell short of the ECs expectations and the EC needed to request follow up clarifications. Preferably a) the information should be presented to the boards before the brief i.e. additional information at end of briefs should be by exception and significance – in this exercise it was the norm, b) the individual offering the additional information should understand the context of the information to the emerging event, anticipate and get clarifications prior to offering the information. As a consequence, I observed was the EC frequently asking for clarifications and then immediately asking for an action to be placed on the actions board which led to an overload of the actions board operator. I noted that not all the requested actions got put up on the actions board.

The EC appeared too involved in the detailed discussions. These discussion should be delegated to the deputy with the EC taking the bigger picture view such as to whether the mandates are being adequately fulfilled.

Emergency Declaration status:

At 10:30 the incident status was changed from category B "Site Incident" to category D "Offsite COMAH Incident", this decision being conservatively based upon unsubstantiated reports into the ECC of damage to local buildings.

SFL should consider if the category D status should have been called earlier. I note that prior to damage information being fed into the ECC, there was no pro-active action by the ECC to determine extent damage and if this went beyond the boundary. The change of status starts the offsite (level 2) response.

Level 1 / Level 2 response interface

Although ONRs assessment of the Level 2 response is detailed in contact record 2024/390058, I have recorded below those aspects that relate to the SFL site support of the level 2 response.

There was an inability of the Strategic Command Centre (SCC) and its constituents (e.g. STAC) to be able to contact the ECC. This was evidenced by the inability of the level 2 responders to contact the site when the SFL technical representatives failed to arrive at the SCC to support the level 2 response.

The level 2 exercise response was hampered by the non-attendance SFL technical representatives to support the SCG and STAC. Communications from the site

(2024/45824) indicate this would appear to be due to a shortfall in the exercise planning and compounded the above communications issue above.

Resilience Direct was not used by SFL during the exercise. Reviewing the response (2024/45824) this would appear to be due to an insufficient number of trained RD operators to support both the exercise running and the exercise participation. The number and ongoing training programme for RD operators should be reviewed to ensure that support to wider emergency response operation can be supported, including during demonstration exercises.

Judgement

I consider that the exercise objectives were only partially achieved. It is my opinion that the site failed to demonstrate adequate welfare consideration of casualties and persons at risk, including the lack of timely medical assistance to the casualties. Demonstration of the site's ability to mitigate the threats posed to public and personnel is a primary objective for the exercise and mandate for the level 1 response under the sites LC11 emergency arrangements.

The command and control structure at the FCP was not clear to those participating from supporting services.

Support to the level 2 response was not adequately demonstrated due to lack of SFL technical SQEP attendance at the SCC and a failure of communication channels between site and the SCC. Coupled with other exercise observations I have therefore rated this intervention 'Amber' - Seek Improvement.

I have considered the need for re-demonstration of these areas and judge that demonstration at the next annual exercise will suffice coupled with monitoring corrective action progress through level 3 and 4 regulatory issues.

Observations / Advice

Detailed within the main evidence of report.

3.3 Regulatory Issues

The following regulatory issues were raised, reviewed or closed as a result of this inspection.

Issue	Title
RI-12281	SFL - Exercise Heron 9 - Exercising of ECC Mandate
RI-12282	SFL - Exercise Heron 9 - FCP Command and control
RI-12283	SFL - Exercise Heron 9 - Level 1 / Level 2 interface arrangements
RI-12284	SFL - Exercise Heron 9 - Level 1 / Level 2 interface arrangements (L4 actions)