

Inspection Record – Dutyholder Report			
Emergency response exercise (LC11)			
Inspection ID	IR-52888	Inspection Date(s)	03/10/2023 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
			GREEN
LC 11 - Emergency arrangements			GREEN
System (s) – where applicable			
Inspector(s) taking part in Inspection			
Lead Inspector			
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Attending			
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[REDACTED]	[REDACTED]	Office for Nuclear Regulation
[REDACTED]	[REDACTED]	Office for Nuclear Regulation

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## 1. Scope

### 1.1 Aim of Inspection

Demonstration of Springfields site emergency arrangements.

Planned emergency exercise demonstration covering the site response to an incident involving safety and security. This is a planned inspection and addresses the requirements of the site Nuclear Licence Condition 11 Emergency Arrangements as well as the requirement of the site COMAH permit and Security plan.

### 1.2 Inspection Scope

As stated above. This is a planned intervention looking at Springfields Fuel ability to respond to an incident entailing both safety and security. The scope of exercise Daytona is contained in the document section. The exercise scenario consist of a worker mishandling a UF6 loaded cylinder and causing a release of HF and potential radiological contamination. The focus will be on the rescue of casualties, protection of public and workers as well as maintaining the security on site during the response assuming that the act could be malevolent or caused to divert attention from another security threat.

### 1.3 Relevant Regulatory Guidance

The following regulatory guidance corresponds with this inspection

<b>Name</b>
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## 2. Summary Statement

Springfields Nuclear Fuels Ltd undertook a level 1 (site level) emergency exercise on 3rd of October 2023 to demonstrate the site emergency arrangements as required by its site licence under the site Licence Condition 11 'Emergency Arrangements' and the enactment of the site security plan.

The exercise Daytona scenario proposed by the site entailed the recovery of an injured person following the loss of Uranium Hexafluoride containment within the cylinder washing facility. The dutyholder's scenario was realistic and challenging and required the

emergency response to consider and control the chemotoxic and radiological hazards posed by the uranium hexafluoride release.

Whilst the exercise was mainly based around a safety emergency, ONR also considered the response incorporating sufficient considerations of the security element.

ONR has 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.

Exercise Daytona's declared objectives were achieved and the emergency situation was brought under control in a timely manner with the support of the external emergency services.

ONR identified some areas of good practice and made some observations which will be followed during routine regulatory engagements with the site.

The licensee demonstrated that adequate arrangements are in place as required to comply with the requirements of its site licence condition 11, and on the basis of the level 1 exercise observed and the evidence seen this intervention was rated 'green'.

### 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

#### 3.2 Record

##### Evidence

Exercise scenario and preparationSpringfields Nuclear Fuels Ltd's scenario was based around a member of staff failing to connect correctly a uranium hexafluoride cylinder in the cylinder washing facility.

Additional information was

injected as part of the exercise including another worker in the same facility being trapped between cylinders whilst escaping the scene of the accident and a group of visitor forced to find refuge in another building near the facility. The dutyholder declared the following eight objectives for this exercise: Mobilise, deploy, and direct appropriate resources in the most effective and timely manner in order to achieve control and recovery, to anticipate credible further deterioration or development in the situation.

Demonstrate the site's ability to mitigate the threats posed to Public, Personnel, Environment, Plant and Security.

Identify promptly the risks to the Public, Personnel, Environment, Plant and Security implications. Establish and maintain a comprehensive understanding of the situation, to cater for worst credible developments. Establish and maintain clear lines of communication with all parties involved in the incident. Make adequate arrangements to notify all external agencies and regulators, and for responding to public and media enquiries. Rescue of contaminated casualty. Demonstrate the use of mobile decontamination facilities As seen in the emergency exercise objectives the site emergency response needed maintain focus on several strand i.e., the immediate emergency, the site security and potential for escalation that could threaten workers and member of the public. Exercise Daytona scenario was judged adequate to demonstrate the adequacy of the licensee's arrangements for safety and security. Exercise observation ONR observed the emergency response demonstration from two key locations:

Emergency Control Centre

Forward Control Point

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

The assessment of the exercise encompassed LC11 compliance and meeting of the exercise security objectives. On this occasion the safety and security aspects of the exercise were considered jointly and no formal additional security assessment was undertaken. During the exercise, the following salient points were observed:

The implementation of the emergency arrangements was swift and executed at the different locations in an orderly manner. The roll call was completed rapidly with all personnel accounted for to the exception of the two casualties and included the visitors group which was identified and located on site. The Emergency Control Centre was established well with the security initially leading and passing the information to the Emergency Controller on arrival. Similarly the Forward Control Point was established in a suitable location and rapidly operational. The communication was excellent with example of three way communication being observed in the Emergency Control Room and at the Forward Control Point. The Emergency Controller communicated decisively and clearly during adequately spaced and timed focus time. Similar good communication was identified with the emergency responders fire and ambulance services. The situational awareness was established at an early stage of the exercise and maintained throughout the exercise. The correct safety and security focuses were identified from the start of the emergency with the priority given to the rescue of casualties and the potential security threat part of the focus points, including the potential for a malicious act and the need to preserve the scene. There was a clearly delineated and balanced role and responsibility

between the front line and the Emergency Control Centre which was reflected in the decision making. For example the decision to proceed with a snatch rescue which was the right decision was made at the front line and whilst kept informed it did rely on the Emergency Control Centre. This enabled both parties to maintain their own area of focus and promptly rescuing and potentially limiting the exposure of the casualty. Whilst the above constitute a robust demonstration of the dutyholder capability to respond to an emergency and fulfil most of the declared objectives of exercise Daytona, a number of areas were identified and highlighted to Springfields Nuclear Fuel as requiring improvements.

There was a long and unexplained delay in calling the emergency services (estimated to 12-17 minutes). As stated in the site arrangements the alert should have been given as a priority. On this occasion it did not occur and the delay could have been detrimental to the rescue of the casualty. There was some confusion regarding the Personal Protection Equipment and application of the rule from rescuing to handling and decontaminating the casualties. For example, the emergency services were decontaminating the casualty without Personal Protective Equipment. The Personal Protective Equipment requirements should have been clearer and strictly adhere to prevent exposing the emergency services to chemotoxic and/or radiological contamination. The monitoring team was deployed without up to date accurate map of the site which meant that the monitoring took longer than expected and the team encountered obstacles that prevented a swift monitoring of the perimeter, for example fences were not marked on the maps and required the team to undertake detour to access some of the monitoring areas. The main shortfall in achieving the objectives of the exercise reside with maintaining the site security during the emergency. The assumption was made from the beginning of the emergency that this could be a malicious act and might entail some form of diversion. However, the line of enquiry was not followed and the security team did not mobilise to discount the potential scenario for escalation. For example, the incident could have been a diversion and could be used to enable an attack on the site vital area. Whilst discussed and part of the focus area, the security team did not proceed to check and gain some assurance that, for example an intruder had gained access to the site vital areas. In the Emergency Control Centre, ONR observed that the sole occupier of the security control room was overwhelmed with excessive demands and could have maintained the monitoring the site video system.

[REDACTED] In addition to the assessment of the site emergency response, ONR identified two opportunities Springfields Fuel might wish to consider:

On this occasion the Emergency Control Centre communication cell was unmanned during the exercise. It might be judicious to exercise this element, in particular to simulate the social media communication flow which could add another dimension to the response and in some instances impair substantially the emergency services response (e.g. local school mobbed by parents, traffic flow reducing site access, press attending site etc...). The cybersecurity element could be considered in future exercises as a precursor or in addition of a security or safety event to test the resilience of the site. For example, a cyberattack might disable part of the communication system.

## **Judgement**

It is the opinion of the ONR inspectors observing the demonstration exercise that Springfields Nuclear Fuels Ltd demonstrated that its emergency response was effective to bring the situation under control adequately in an acceptable timeframe. Despite some areas for improvement, the site demonstrated that adequate emergency arrangements are in place as required under Licence Condition 11 and its site security plan, and successfully achieved the declared objectives of the emergency exercise. On this basis this intervention is rated 'GREEN'

## Observations / Advice

The main observations made from ONR witnessing the site exercise Daytona is that whilst the site demonstrated some good practice and ability to respond to an emergency, consideration and improvements are needed, in particular regarding the maintenance of site security in an emergency situation. The following areas should be considered:

- Security response to secure vital areas and maintain the integrity of the site in an emergency situation other than a security event. This should include consideration of the security room manning in emergency and ability to monitor the site video system.

- Review the communication of the alert to the emergency services

- Clarity of the Personal Protective Equipment in use at the front line and for handling and decontamination of casualties

ONR will follow up these observations during future site engagements.

Peripheral to the demonstration exercise ONR identified two opportunities the dutyholder might wish to follow up. Springfields Nuclear Fuels Ltd might wish to exercise the communication and in particular social media aspect of the emergency and might consider introducing a cyber security element to test the resilience of the emergency response.

## 3.3 Regulatory Issues

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

Issue	Title
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