



Office for Nuclear Regulation (ONR) Quarterly Site Report for Springfields Fuels Limited

Report for period 1 January – 31 March 2015

Foreword

This report is issued as part of ONR's commitment to make information about inspection and regulatory activities relating to the above site available to the public. Reports are distributed quarterly to members of the Springfields Fuels Limited Site Stakeholder Group and are available on the ONR website (<http://www.onr.org.uk/llc/>).

Site inspectors from ONR usually attend the Springfields Fuels Limited Site Stakeholder Group meetings and will respond to any questions raised there. Any person wishing to inquire about matters covered by this report should contact ONR.

TABLE OF CONTENTS

1	INSPECTIONS	3
2	ROUTINE MATTERS	3, 4, 5, 6, 7 & 8
3	NON-ROUTINE MATTERS	8
4	REGULATORY ACTIVITY	8
5	NEWS FROM ONR	9
6	CONTACTS	9

1 INSPECTIONS

1.1 Dates of inspections

The ONR Nominated Site Inspector and other ONR Inspectors conducted interventions on the following dates during the quarter:

January	19, 26, 27 & 28
February	10
March	5, 12 & 25

On 9 January, ONR inspectors met with the licensee and Lancashire County Council emergency planning staff at their office in Preston, to discuss the proposed scope of the forthcoming combined Level One ('on site) and Level Two ('off site') emergency exercise.

On 16 January, the nominated site inspector and a specialist inspector met with the Nuclear Decommissioning Authority, at their office in Risley, to discuss the future funding of decommissioning projects and legacy uranic residue processing operations at Springfields.

On 10 February, the Deputy Chief Inspector responsible for the regulation of nuclear safety at Springfields, accompanied by the nominated site inspector, met with the Managing Director and visited the uranic residue processing facilities. The remaining lifetime of the ageing legacy uranic residue processing facilities at Springfields is a matter of significant regulatory interest. ONR expressed strong support for the licensee's view that these facilities are a 'unique national asset', undertaking valuable hazard reduction work, by processing legacy uranic residues from Springfields and a range of other nuclear licensed sites, stabilising and recovering uranium from mixed residues

On 11 February, the nominated site inspector participated in both the Emergency Planning Consultative Committee meeting, then together with ONR specialist inspectors, at the combined Level One ('on site) and Level Two ('off site') emergency exercise planning meeting, held at Lancashire Police HQ, Hutton, to provide regulatory advice on a range of 'on' and 'off site' emergency planning matters. ONR supported the licensee's proposal to combine the observed 'on' and 'off' site emergency exercises in 2015.

2 ROUTINE MATTERS

2.1 Inspections

Inspections are undertaken as part of the process for monitoring compliance with:

- the conditions attached by ONR to the nuclear site licence granted under the Nuclear Installations Act 1965 (NIA65) (as amended);
- the Energy Act 2013
- the Health and Safety at Work Act 1974 (HSWA74); and
- regulations made under HSWA74, for example The Ionising Radiations Regulations 1999 (IRR99) and The Management of Health and Safety at Work Regulations 1999 (MHSWR99).

The inspections entail monitoring licensee's actions on the site in relation to incidents, operations, maintenance, projects, modifications, safety case changes and any other matters that may affect safety. The licensee is required to make and implement adequate arrangements under the conditions attached to the licence in order to ensure legal

compliance. Inspections seek to judge both the adequacy of these arrangements and their implementation.

In this period, routine inspections of Springfields Fuels Limited covered the following:

Longevity of the valuable Springfields uranic residue processing facilities.

On 19 January, a meeting was held with the Managing Director, to discuss the longevity of the Springfields uranic residue processing facilities and to understand the perspective of the licensee. The remaining lifetime of the ageing legacy uranic residue processing facilities at Springfields is a matter of significant regulatory interest. At the meeting with the Managing Director, ONR strongly supported the licensee's view that these facilities are a 'unique national asset', undertaking valuable hazard reduction work, by processing legacy uranic residues from Springfields and a range of other nuclear licensed sites, stabilising and recovering uranium from mixed residues. ONR encouraged the licensee to maximise the limited future use of the legacy uranic residue chemical processing facilities, maximising hazard reduction of a range of legacy uranic residue materials. ONR advised the licensee to ensure that timely funding was secured, to enable these facilities to operate for an additional eighteen months or so, extending beyond the current plan to shut these facilities in about a year's time. At this meeting, it was concluded that the licensee was giving appropriate attention to the implementation of the processing and disposition of legacy uranic materials, which would otherwise become legacy radioactive wastes. ONR reinforced this regulatory advice to the licensee at the meeting between the ONR Deputy Chief Inspector and the Managing Director on 10 February

System Inspection of the Implementation of the Nuclear Safety Case.

On 27 January, the nominated site inspector conducted a planned system inspection of the licensee's implementation of the nuclear safety case at the Enriched Uranic Residue Recovery Plant. A meeting to review the implementation of the Enriched Uranic Residues Recovery Plant safety case was followed by a plant inspection of the facility. The intervention was focused on inspection of the six key licence conditions which related to a system inspection of the implementation of the safety case. The plant inspection included discussions with plant operations and maintenance staff. The nominated site inspector was content that the licensee had adequately demonstrated the implementation of the nuclear safety case at the Enriched Uranic Residue Processing Facility. A number of new plant operators were being trained, as part of the site redeployment process, (resulting from the cessation of uranium hexafluoride production) and effective arrangements were found to be being implemented to address the training needs of the new plant operators, including criticality safety training. Good practice in alarm management principles was being implemented, to improve the clarity of alarms associated with the key safety mechanisms and to reduce spurious alarms. A broad range of hazard reduction measures were being implemented, as part of continuous improvement. Regulatory advice was provided on several matters, notably the need to fully test safety mechanisms, prior to the return to operations, which had not been fully tested during plant shutdown periods. The licensee promptly implemented arrangements to rectify the shortfall observed in the maintenance of a safety mechanism and arranged to communicate the learning site wide.

Joint inspection with the Environment Agency.

On 26 January, an ONR specialist inspector participated in a joint inspection with the Environment Agency, to discuss the very low levels of uranium in the water and sediments in the Deepdale Brook. The licensee presented monitoring data extending over a number of years, with current levels being lower than those in previous years but still exceeding a recognised drinking water standard (World Health Organisation). Based on the evidence

presented at this meeting and data provided prior to the meeting, the ONR specialist inspector was satisfied that the licensee was taking appropriate and proportionate action to investigate the very low levels of uranium found in Deepdale Brook. The licensee's actions were in accord with the expectations in the ONR Safety Assessment Principles and the published Joint Regulators Land Quality Expectations paper. The site licensee duly demonstrated a commitment to develop and implement a corrective action strategy, pending the outcome of the licensee's ongoing investigation.

Disposal of radioactive waste and decommissioning.

At the quarterly regulatory review meeting between the licensee, the regulators and the National Nuclear Laboratory Limited tenant organisation, held on 28 January, the licensee reported to ONR continuing acceptable performance in maintaining authorised disposals of low and very low level solid radioactive wastes from the site, as well as an adequate response to a range of other topics of regulatory interest, including the progress of decommissioning projects. There was good dialogue between the licensee, the tenant organisation and the regulators.

Organisational Capability.

On 31 March 2014, the licensee had informed ONR and the workforce that the closure of the uranium hexafluoride production plant, and its supporting facilities, had been brought forward from 2016, such that production operations ceased at the end of August 2014. The plant is now completing the process of having the radioactive materials cleaned out, before being placed into 'Care and Maintenance'. The facility is to be maintained for a possible restart of uranium hexafluoride production, at a future medium term date and a project to potentially restart the plant in the future has been discussed with the regulators in this quarter, with an acceptable outcome. As a consequence of the cessation of uranium hexafluoride production, reductions in the workforce were implemented in two tranches, at the end of December 2014 and at the end of March 2015. ONR remained content with the licensee's management of the nuclear safety aspects of these organisational changes, associated with reductions in the site workforce.

A reactive meeting was held on 12 March, at the request of the Managing Director, to discuss some forthcoming senior level organisational changes within the licensee's organisation, around the interface between the licensee and the Westinghouse parent body organisation. The changes would be duly assessed in advance, in compliance with the licensee's organisational capability arrangements and discussed further with ONR, when the detail of the proposed changes had been established. The licensee demonstrated effective knowledge of the ONR regulatory requirements for independent nuclear safety advice to the Managing Director from within the licensee.

Inspection of the site radiation source store.

On 12 March, the nominated site inspector and a specialist inspector inspected aspects of improvements to radioactive source storage and disposal arrangements, including an inspection of the site radioactive source store, with a positive outcome, rated as good. Since a previous inspection in 2014, the site radiation source store had undergone refurbishment. Radiation sources were much more clearly organised, uniquely numbered and located within improved local storage facilities. The licensee had encouragingly identified a number of radiation sources for disposal. The contract for the disposal was shown by the licensee and the disposal was shortly to be undertaken by a suitable contractor. Radiation source records sampled were in good order.

Fire Safety.

On 11 March, a specialist ONR inspector inspected aspects of fire safety at the Enriched Uranic Residue Processing Plant, with an overall acceptable outcome. The purpose of this Intervention was to inspect the general fire safety provisions and to inspect compliance with aspects of the Regulatory Reform (Fire Safety) Regulations 2005. The inspection was part of a planned series of interventions across all licensed sites.

The building owner had ownership of the fire risk assessments and it was their responsibility to manage the close out of actions identified within the fire risk assessment. Emergency lighting had been upgraded within office areas and there was a plan to carry through this upgrade into the main process areas; this was a good example of proactively managing fire safety and associated systems.

There was some demolition of older buildings planned and other buildings were being used for other purposes, plans were well advanced for these works and the specialist inspector was confident that arrangements were in place to ensure that fire safety was considered within the design, not as a later addition.

The specialist inspector will monitor the licensee's close out of some minor matters which arose during the site inspection.

Provision of regulatory advice on ALARP, (reducing radiation risks to As Low As Reasonably Practicable).

At the request of the licensee, the nominated site inspector and a specialist inspector provided regulatory advice on the interpretation of ALARP, at a site meeting with the licensee's (and the National Nuclear Laboratory Limited tenant organisation) radiation protection specialists on 12 March.

Regulatory advice was provided on the need to consider a range of risks e.g. radiation protection, criticality safety and conventional safety, when deciding on an ALARP approach and for each aspect of safety not to work in isolation. The final decision should be an informed judgement, based on the knowledge and experience of those involved. Making a brief record (e.g. in a risk assessment) of the reasons why that approach was chosen can help to clarify the rationale behind the justification. This can also be used to record occasions where what would be considered to be 'reasonably practicable' precautions were not taken (e.g. due to more significant conventional safety hazards). Reference was made to ONR published procedures and to industry guidance (e.g. NS-TAST-GD-005, on the ONR web site at http://www.onr.org.uk/operational/tech_asst_guides/ns-tast-gd-005.pdf). The need for more scrutiny at higher predicted or potential doses and the need to have an effective review when trigger levels were reached (e.g. total dose, contamination surveys) to highlight cumulative effects of several minor jobs or deviation from anticipated conditions. Several examples were used by ONR to discuss some of the issues that might need to be considered when deciding what is the ALARP approach. Regulatory advice was also provided with examples when licensees had failed to reduce radiation doses to ALARP, which may inform the licensee's understanding of the boundaries of ALARP, could be found in the examples of enforcement action which were included in the appendix attached to the ONR inspection guidance on The Ionising Radiations Regulations 1999. This inspection guidance was on the ONR web site at http://www.onr.org.uk/operational/tech_insp_guides/ns-insp-gd-054.pdf. An example was also discussed, where a "time at risk" argument had been applied by a licensee in support of an ALARP case, which had been challenged but eventually accepted by ONR, in order to demonstrate the potential for "time at risk" to be a potential component of the demonstration of an ALARP safety case. ONR was very encouraged that the licensee and a tenant

organisation had chosen to engage with ONR, in a very open and constructive manner, to discuss the broad topic of ALARP, discussing examples from both the licensee and ONR of modern interpretations of ALARP. There was very open and effective engagement with the community of Springfields Radiation Protection Advisers and Health Physicists, representing both the licensee and the National Nuclear Laboratory Limited tenant organisation

ONR Transport Compliance & Transport Permissioning.

ONR regulates radioactive materials transport through the Transport Compliance and Transport Permissioning sub-programmes, within the Cross-ONR Programme. On 5 March, two ONR Transport specialist inspectors conducted a site inspection, inspecting one of the radioactive materials transport packages used by the licensee. This package design approval is currently being periodically reviewed by ONR. About fifteen months ago, ONR were notified of an incident in France, with a failure of one of the lifting lugs used to lift this type of transport package. This led ONR to advise an enhanced inspection and testing regime, to confirm whether there was an underlying problem or that the incident was a “one off”. The licensee, together with other users of this particular type of radioactive materials transport package, have recently been able to demonstrate that it was a “one off” incident, prudently introducing enhanced inspection arrangements for this type of package, to reduce the likelihood of any recurrence. The proposed enhancements to the routine package inspection and maintenance arrangements are being reviewed by ONR as part of the periodic package design assessment renewal process.

ONR Safeguards.

There were six Euratom safeguards inspections in this period, with no concerns raised to date. The Electronic Data Authentication System (EDAS) was installed and began operation. Data from EDAS, which is used to independently verify the authenticity of operators’ information, continue to be collected.

COMAH regulation.

A site intervention was made to verify progress with maintenance of the two large diesel tanks on site and assessments of mechanical equipment in hazardous areas. Both actions were progressing according to the agreed timetable.

The cessation of uranium hexafluoride production resulted in significant changes to the COMAH safety report, which was last submitted in 2013. Springfields produced an addendum to the report, which was assessed by a specialist predictive inspector. Springfields were then asked to clarify some aspects of the addendum. They also stated that there were no other previously un-assessed major accident scenarios on site that should be now considered. This addendum has now been accepted and the next safety report (due in 2018) will reflect these changes.

Two further COMAH visits took place – one to inspect some process safety issues, focused on chemical handling and hydrogen storage; the other to inspect secondary containment (bunds, etc.) across the site. Both site inspections were constructive and helped to verify the contents of the 2013 COMAH safety report.

On 12 March, at a meeting with the Managing Director, the nominated site inspector provided regulatory advice on the regulation of COMAH matters, where ONR was the ‘joint competent authority’ with the Environment Agency, with HSE Hazardous Installations Directorate acting on behalf of ONR, in support of the ‘joined up’ regulation of the licensee by ONR.

General comment.

In general, ONR judged the arrangements made and implemented by the site in response to safety requirements to be adequate in the areas inspected. However, where improvements were considered necessary, the licensee made satisfactory commitments to address the issues, and the site inspector will monitor progress during future visits. On 18 December, the nominated site inspector reviewed seven medium term regulatory issues relating to Springfields, closing out three of those issues. The licensee was also taking measures which should enable the four current remaining regulatory issues to be closed out during 2015, which was acceptable to ONR. Where necessary, ONR will take formal regulatory enforcement action to ensure that appropriate remedial measures are implemented to reasonably practicable timescales.

2.2 Other work

Meetings with the safety representatives.

Meetings continue to be routinely held with the licensee's safety representatives and during plant inspections by ONR inspectors, to support their function of representing employees and receiving information on matters affecting their health, safety and welfare at work.

The effective work of the safety representatives continues to make a valuable contribution to the site safety culture.

3 NON-ROUTINE MATTERS

Licensees are required to have arrangements to respond to non-routine matters and events. ONR inspectors judge the adequacy of the licensee's response, including actions taken to implement any necessary improvements.

On 12 March, a reactive inspection was made to discuss a minor event at the National Nuclear Laboratory Limited tenant facility on the site, during the processing of a small quantity of unirradiated uranium carbide fuel pellets, which had been received from Dounreay. The nominated site inspector met with the licensee and the National Nuclear Laboratory Limited tenant organisation, to discuss, with the aid of photographs, the event where the uranium carbide powder had heated up, within the fume cupboard, which had then led to partial melting of the fire resistant sheet on the base of the fume cupboard. The operator's prompt actions resulted in the material being quickly cooled and returned into containment. The response to this minor event was judged to be appropriate; the relevant organisations were informed, with the licensee duly overseeing a timely investigation by the tenant organisation.

4 REGULATORY ACTIVITY

ONR inspectors may issue formal documents to ensure compliance with regulatory requirements. Under nuclear site licence conditions, ONR issues regulatory documents, which either permit an activity or require some form of action to be taken; these are usually collectively termed 'Licence Instruments' (LIs), but can take other forms. In addition, inspectors may issue Enforcement Notices to secure improvements to safety.

No enforcement notices were issued in this period. No Licence Instruments were issued in this period.

Reports detailing regulatory decisions can be found on the ONR website at <http://www.onr.org.uk/pars/>.

5 NEWS FROM ONR

Insight into ONR's work as an independent regulator of the nuclear industry can be found in ONR's Quarterly News. The online publication (<http://www.onr.org.uk/onr-quarterly-report.htm>) reports on the key themes and developments in each of ONR's regulatory programmes and provides an update about the ongoing changes at ONR. <http://www.onr.org.uk/index.htm>. For the latest news and updates from ONR, visit the website and sign up for our ebulletin at (<http://www.onr.org.uk/ebulletin/index.htm>).

6 CONTACTS

Office for Nuclear Regulation
Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Website: www.onr.org.uk
Email: ONREnquiries@onr.gsi.gov.uk

This document is issued by the Office for Nuclear Regulation (ONR). For further information about ONR, or to report inconsistencies or inaccuracies in this publication, please visit <http://www.onr.org.uk/feedback.htm>.

© Office for Nuclear Regulation, 2015

If you wish to reuse this information visit www.onr.org.uk/copyright for details.

Published April 2015

For published documents, the electronic copy on the ONR website remains the most current publicly available version and copying or printing renders this document uncontrolled.