

Inspection Record – Dutyholder Report			
ACP and Safeguards accountancy focused inspection (MBA QBS3)			
Inspection ID	IR-52502	Inspection Date(s)	05/07/2023 For 1 Days
Dutyholder	Westinghouse Springfields	Site	Springfields Works
Inspection Type	Announced Planned	Site Area / Group	
ONR Purpose	Safeguards	Inspection Source	
Subject (s) of Inspection			
Activity			RAG Rating
NSR19 Reg11 - Accounting records			GREEN
NSR19 Reg12 - Accounting reports			GREEN
NSR19 Reg09 - Operation of an accountancy and control plan			GREEN
NSR19 Reg14 - Inventory change report			GREEN
FSE 3 Competence Management			GREEN
NSR19 Reg10 - Operating records			GREEN
NSR19 Reg06 - Accountancy and control of qualifying nuclear material			GREEN
FSE 7 Nuclear Material Tracking			GREEN
FSE 8 Data Processing and Control			GREEN
FSE 6 Measurement Programme and Control			GREEN
FSE 10 Quality Assurance and Control for NMACS			GREEN
System (s) – where applicable			
Inspector(s) taking part in Inspection			
Lead Inspector [REDACTED]			
Attending [REDACTED] [REDACTED] Office for Nuclear Regulation			

[REDACTED]

[REDACTED]

[REDACTED]

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1. Scope

1.1 Aim of Inspection

ONR nuclear safeguards inspectors conducted a nuclear material accountancy focused compliance inspection of the Material Balance Area QBS3 - "████████ Enriched Uranium Residues Recovery Plant (EURRP), ██████████ Hex Cylinder Wash Plant, A26 & ██████████ Decontamination Facilities" on the 05 July 2023.

The purpose of this inspection was to seek evidence in support of Springfields Fuels Limited's compliance with The Nuclear Safeguards (EU Exit) Regulations 2019 (NSR19). ONR formed regulatory judgements and provided a rating in line with ONR's inspection rating guidance of Springfields Fuels Limited's compliance against 6(1-4), 9, 10(1), 11(1-4), 12(1-2) and 14 in NSR19.

To form effective regulatory judgements on Springfields Fuels Limited's compliance with the NSR19 regulations listed above, inspectors considered the ONR guidance for the assessment of Nuclear Material Accountancy, Control and Safeguards (ONMACS) and the expectations within. There was a particular focus on FSEs 3, 6, 7, 8 and 10.

1.2 Inspection Scope

ONR sought to draw an independent and informed regulatory judgement that the nuclear material accountancy and control arrangements within the MBA QBS3 are implemented in a manner, which is proportionate to, and appropriate for the qualifying nuclear facility. This included:

1. Seeking evidence that accountancy reports provided to the ONR under regulation 14 are traceable and accurate to the supporting source documentation. As part of this inspectors examined the underpinning operating and accounting records for the accountancy sample (which will be provided later) as well as perform physical verification for a sample of qualifying nuclear material.
2. Seeking evidence of the implementation of local arrangements described and referenced in the Accountancy and Control Plan (ACP) for the collection, recording, and processing of accountancy data (including operating and accounting records), and integration with site-wide data processing systems for generating the accountancy reports. As part of this ONR conducted a plant walkdown and hold discussions with relevant Springfields Fuels Limited personnel who have nuclear material accountancy and control responsibilities.

ONR requested discussions with relevant staff and provision of relevant NMAC&S arrangements prior to the intervention.

Planning for the intervention

The following interactions were requested of the operator in support of this inspection:

- Springfields Fuels Limited arranged a pre-inspection meeting on 27 June 2023 to talk through the scope, provision of documents, once clarified and confirm inspection logistics

- Springfields Fuels Limited provided copies of the documents listed in Annex 2 and copies of the Springfields Fuels Limited arrangements applicable to the inspection scope
- ONR provided Springfields Fuels Limited with an accountancy sample list

1.3 Relevant Regulatory Guidance

The following regulatory guidance corresponds with this inspection

Name
SAFEGUARDS TECHNICAL INSPECTION GUIDE
General Inspection Guide
ONR Nuclear Material Accountancy, Control, and Safeguards Assessment Principles (ONMACS)
Nuclear Material Accountancy Technical Assessment Guide Safeguards

2. Summary Statement

This inspection comprised of discussions with Springfields Fuels Ltd personnel, sampling of documentation, implementation of arrangements and a plant walk down.

I identified no shortfalls in the information described in the Accountancy and Control Plan (ACP) and other relevant arrangements for the Material Balance Area (MBA) QBS3 - Enriched Uranium Residues Recovery Plant (EURRP) and hex cylinder wash plant and decontamination facilities. I observed appropriate implementation of these arrangements on site. I made three observations related to inaccurate or inappropriate references in the written arrangement (ACP and BTC).

Based on the evidence sampled, I judged that Springfields Fuels Ltd is implementing adequate arrangements to collect, record and process accountancy data including operating and accounting records and integration with site-wide data processing systems for generating the accountancy reports, in line with ONR Fundamental Safeguards Expectations (FSE) 6, 7, 8, 10 and 3.

Based on the plant walk down and discussions I held with the key staff on plant and within the safeguards team, I judge that Springfields Fuels Ltd is implementing the arrangements described in their ACP as required by Nuclear Safeguards (EU Exit) Regulations 2019 (NSR19) regulation 9 and that the implementation of these arrangements is supporting the accountancy and control of qualifying nuclear material within the MBA QBS3 as required by regulation 6 of NSR19.

I was satisfied that the documentation reviewed, the records sampled, and evidence collected were adequate; therefore, I judge Springfields Fuels Ltd to be compliant against NSR19 regulations 6 (1-4), 9, 10 (1), 11 (1-4), 12 (1-2) and 14.

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
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.
[REDACTED]	[REDACTED]	Springfields Fuels Ltd.

3.2 Record

Evidence

This intervention focused on the Nuclear Material Accountancy and Control (NMAC) arrangements as described by Springfields Fuels Ltd in their revised ACP (SSI 945) which can be found at CM9 2023/7202. The ACP was revised in January 2023 as requested by level 2 Regulatory Issue (RI 10819). The initial version was assessed by the ONR and judged non-compliant with NSR19 (see CM9 2022/23399).

The intervention focused on the MBA QBS3, specifically EURRP because some shortfalls were identified during the ACP assessment at this facility, that Springfields Fuels Ltd addressed defining some new local arrangements for the identification and tracking of samples of Qualifying Nuclear material (QNM).

FSE 6 - Measurement programme and control

Prior to the inspection, I reviewed the relevant arrangements referenced in the Springfields Fuels Ltd's ACP relating to FSE 6: SSI 923 about weigh scale management, SSI 639 about measurement control programmes. I sought evidence in support of the implementation of the operator's arrangements to ensure appropriate performance of the weigh scales referenced 633-JW137, 633-JW139, 633-JW145 and 633-JW141. These scales provide NMAC data. I queried the reliability of these weigh scales to the material

custodian, they confirmed that they were generally reliable. These weight scales are maintained and calibrated by the provider Mettler Toledo as agreed by service contract with Springfields Fuels Ltd. The Maximo system permits staff to be kept informed of the deadlines for scales calibration and current calibration status. I was provided with screen copies of Maximo pages demonstrating that the scales were accurately referenced and located, and that a programme was established for their calibration. I reviewed the four last calibration work orders for the four NMA weigh scales located at EURRP. I was satisfied that the arrangements and procedures described in Springfields Fuels Ltd.'s ACP were appropriate and properly implemented in the facility and that they met regulatory expectations of FSE 6.

However, I was informed by Springfields Fuels Ltd. that the NMA scale 633-JW137, referenced in the BTC for QBS3 was recently moved to a new location on site, which makes the appendix 2 of the BTC about measurement points and weigh scales inaccurate.

OBSERVATION - The appendix 2 in QBS3 BTCs will be corrected by Springfields Fuels Ltd in the next revision in January 2024.

FSE 7 - Nuclear material tracking

Prior to the inspection, I reviewed the relevant arrangements referenced in the Springfields Fuels Ltd's ACP relating to FSE 7: SSI 532 which is the Nuclear Material Control, Accountancy and Safeguards (NMCAS) standards manual, the SSI 264 about the use of Shop Delivery Notes (SDN) for the movement of Qualifying Nuclear Material (QNM) at Springfields site, and about the roles and responsibilities associated with it, the local accountancy guides that describe the processes for tracking and accounting for QNM respectively at EURRP and at the cylinder wash plant. I sampled several claims in the Springfields Fuels Ltd's ACP relevant to their implementation of arrangements for FSE 7, specifically for the identification and tracking of QNM and NMAC discrepancies.

I asked the deputy plant manager and material custodian how Springfields Fuels Ltd is assured that they use unique IDs. The operator explained how the QNM is given a unique ID, how the QNM can be submitted to changes through the process at EURRP and how the QNM were tracked in NUMIS all along the process. When an ID is logged in the system, the system operates a check with all the IDs that already exist in the system.

Under the regulatory issue 10820, I raised some shortfalls at EURRP regarding the identification of samples that were not unique (When samples were sent for analysis to another MBA, they were given the same ID as the drum there were taken from) and with an inaccurate location of the QNM (Some drums were given the same location ID at the same period of storage by an operator). Springfields Fuels Ltd. has put in place new local arrangements for the identification and tracking of samples of Qualifying Nuclear material (QNM). The staff involved in the sampling activities and in the tracking of QNM was trained against the arrangements in place, and briefed on the importance of the principle of unique identification and location of the QNM.

I queried workers about the management of samples and was satisfied that they had a clear understanding of the new arrangements in place. During the plant walk down, I sampled six locations, some of which were empty, and requested the evidence of what

was logged into the NUMIS accountancy system for these locations. I was satisfied the information was accurate and I observed no use of a same location ID for several items.

I also requested a demonstration of the implementation of the new arrangements for the identification of samples into NUMIS. I sampled three drums recently processed and stored and was shown the related samples IDs in the system. The material custodian was able to adequately demonstrate how these samples were uniquely identified and tracked, even when several samples were taken from a same drum.

In my opinion, the arrangements and evidence seen were in line with the expectations of NSR19 regulation 6 (including schedule 2) and FSE 7 and were properly implemented.

FSE 8 - Data processing and control and FSE 10 - Quality assurance and control for NMACS

Prior to the inspection, I reviewed the relevant arrangements referenced in the Springfields Fuels Ltd's ACP relating to FSE 8; SSI 532 which is the Nuclear Material Control, Accountancy and Safeguards (NMCAS) standards manual, the job aid 02 about the production of Inventory Change Reports (ICR) and SSI 529 describing the process for advance notification of imports & exports to the ONR.

When I requested the Job aid 03 about the PIL and MBR generation referenced in the ACP, I was informed by Springfields Fuels Ltd that the document was not applicable anymore, its contents having been captured in the new local instruction 266 on nuclear material accountancy arrangements during and after PIT.

OBSERVATION - The reference 68 in the ACP will be reviewed by Springfields Fuels Ltd in the next revision of the document in January 2024.

When I reviewed the SSI 532, I observed that a table of reference at the end of the document referred to SSI 529 as "Advance Notification to European Commission of Imports & Exports". This title refers inappropriately to the European Commission. I checked the original SSI 529 and was satisfied that it was not referring to the European Commission.

OBSERVATION - The reference to SSI 529 in SSI 532 will be changed by Springfields Fuels Ltd in the next revision of the document in January 2024.

I sampled forty seven (47) lines from the QBS3 February until May Inventory Changes Reports (ICR) and requested operating records (source documents) for these. These lines were sampled based on their Inventory Change (IC) codes considered of interest (such as change in particular obligation, category change, new measurement or isotope adjustment) or due to an identified issue surrounding incorrect CRC number in correction chains. Springfields Fuels Ltd provided the source documents during the inspection, I reviewed some of them to ensure that key data elements reconciled with the respective ICRs. Springfields Fuels Ltd provided me with adequate further explanation where requested. I judged that the ICR lines reflect the physical reality captured within the operating records provided and that the nuclear material accounting performed is adequate, and that the arrangements and evidence seen were in line with the expectations

of NSR19. However, there were some unorthodox interpretations of NSR 19 which did not appear to be logical. As this was outside the scope of this inspection, I will spend more time trying to understand this during our regular Level 4 accountancy meetings

FSE 3 - Competence management

Prior to the inspection, I reviewed the relevant arrangements referenced in the Springfields Fuels Ltd's ACP relating to FSE 3. The ACP states that those who carry out nuclear material accountancy or safeguards roles must undertake appropriate training pertaining to their role. The accountancy and safeguards standards (SSI 532) details the roles that are important to NMACS. Role Proficiency Graphs (RPG) are used to capture and track competence and training for employees with NMA responsibilities. RPGs are reviewed and updated on a regular basis, usually annually. I considered the recent change of head of security and safeguards. During an LC36 inspection in February 2023, the NMACS governance structure appeared provisionally not to be properly resourced, as the new person promoted at the role has no qualification in or experience of security and safeguards. However, we were satisfied that the operator has put in place the appropriate actions to mitigate the risks associated to this nomination and remain compliant with the FSE 1 -Leadership and management for NMACS- and FSE 3 – Competence management.

I gathered evidence of how the provisionally reorganised decision-making process was implemented since February 2023. The safeguards and security deputies were empowered so that they can support the new head to take decisions in respect of NMACS requirements. Some support by experts from Westinghouse is available, to limit the workload and responsibilities transferred to the deputies, but this support was used for aspects related to security only, not for safeguards matters as it was not necessary.

A weekly assessment of the head of security and safeguards is performed by each deputy who are both Suitably Qualified and Experience Persons (SQEP) in their area of activities. The safeguards deputy is also a site wide expert in their area of competence and identified as such in the SSI 791 - SFL site wide roles and experts baseline document. This assessment is monitored through the Role Proficiency Graph (RPG) process by the line manager in cooperation with the deputies.

I sampled the head of security and safeguards's RPG and reviewed evidence of their appointment, training sessions and assessment.

Based on the evidence sampled at the time of the inspection, I consider that the provisional arrangements in place for training and assessment of the head of security and safeguards were adequately implemented. I also consider that Springfields Fuels Ltd has adequately implemented their arrangements to manage the competence of those with assigned NMACS roles and responsibilities in line with the claims made within the Springfields Fuels Ltd's ACP.

Judgement

Overall, I did not identify any shortfalls against NSR19, or fundamental safeguards expectations as described by the ONMACS. On the basis of the evidence sampled at the time of the inspection, I am satisfied that Springfields Fuels Ltd has demonstrated that

their arrangements sampled are fit for purpose and being implemented in a proportionate and appropriate manner.

FSE 6

Based on the arrangements and the evidence I sampled as part of this intervention, I am satisfied that Springfields Fuels Ltd has appropriately implemented its arrangements for measurement programme and control, and meet my expectations as described by FSE 6 and therefore award a rating of GREEN – no formal action.

FSE 7

Based on the arrangements and the evidence sampled as part of this intervention and using regulatory intelligence, I am satisfied that Springfields Fuels Ltd has adequate arrangements for the identification, quantification, tracking of the QNM in the facilities, and that these arrangements are appropriately implemented.

I am satisfied that Springfields Fuels Ltd. is meeting ONR's regulatory expectations outlined in FSE 7 and therefore award a rating of GREEN – no formal action.

FSE 8 & 10

Based on the sampling undertaken, I judge that the Springfields Fuels Ltd's NUMIS accountancy system is fit for purpose and meets the functional requirements associated with data processing and control and that the system is implemented, and delivers NMACS function, in-line with the claims made within Springfields Fuels Ltd's ACP and arrangements.

I also judge that from the evidence sampled Springfields Fuels Ltd's NMACS fulfils ONR's regulatory expectations outlined in FSE 8 and FSE 10 and therefore award a rating of GREEN – no formal action.

FSE 3

Based on the arrangements and the evidence I sampled as part of this intervention and using regulatory intelligence, I am satisfied that Springfields Fuels Ltd has appropriately implemented its arrangements for competence management of personnel with responsibilities in NMACS and meet my expectations as described by FSE 3 and therefore award a rating of GREEN – no formal action.

Observations / Advice

Based on the sample inspected during the intervention, I judge that Springfields Fuels Ltd. is implementing their arrangements for accountancy, control and safeguards of their qualifying nuclear material at QBS3 in line with the regulatory expectations, in particular FSE 6, 7, 8, 10 and 3, and is compliant with NSR19 regulations 6, 9, 10, 11, 12, and 14. I identified no shortfalls, I made three observations related to inaccurate or inappropriate references in the written arrangement (SSI 532, ACP and BTC). I have gained assurance on the implementation of the revised ACP and have presented the finding to the site lead with the recommendation of closure of the RI 10819. Upon consideration of the ONR guidance on inspection ratings, I judge that a rating of GREEN (no formal action) is appropriate

3.3 Regulatory Issues

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

Issue	Title
RI-10819	Springfields Fuels Limited to address the shortfalls identified in the ACP.
RI-10820	Springfields Fuels Limited to review and address the minor shortfalls noted during the ACP assessment.