Delivery Overview Group

March 2017
# Agenda

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<tr>
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<th>Agenda Item</th>
<th>Time</th>
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<tbody>
<tr>
<td>1.</td>
<td>Registration and coffee</td>
<td>10:00</td>
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<td>2.</td>
<td>Welcome</td>
<td>10:30</td>
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<td>3.</td>
<td>Regulator and government perspectives on the National Waste Programme</td>
<td>10:45</td>
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<td>4.</td>
<td>Waste producer updates</td>
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<td>5.</td>
<td>Lunch and extended networking time</td>
<td>12:35</td>
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<td>6.</td>
<td>Update on BSSD and Paris-Brussels implementation</td>
<td>13:30</td>
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<td>7.</td>
<td>Status of UK nuclear industry infrastructure (group work and feedback / discussion)</td>
<td>13:40</td>
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<td>8.</td>
<td>Break</td>
<td>14:40</td>
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<td>9.</td>
<td>FY17/18 work programme for the National Waste Programme and opportunities to get involved</td>
<td>15:00</td>
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<td>10.</td>
<td>AOB</td>
<td>15:45</td>
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Regulatory and Government Perspectives on the National Waste Programme
Waste Producer Updates
<table>
<thead>
<tr>
<th>Waste Producer</th>
<th>EDF Nuclear Generation Limited</th>
<th>Date</th>
<th>10/03/2017 for March meeting</th>
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<tbody>
<tr>
<td><strong>Successes (past 6 months)</strong></td>
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<td><strong>Opportunities</strong></td>
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<tr>
<td>• Successful incineration of washed tritiated desiccant at Fawley – experience will be used to review BAT.</td>
<td>• Revised framework contracts for radioactive waste services following expression of interest to numerous suppliers.</td>
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<td>• Themed inspection on characterisation reinforced our development plan.</td>
<td>• Revised company KPI in shadow mode – increased focus on waste avoidance and diversion.</td>
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<td>• Pilot training delivered to site practitioners on source and fate of key radionuclides; characterisation; activity assessment/fingerprinting and clearance/exemption.</td>
<td>• Inventory tool to be developed with in-house IT department following review of various commercial options and operational experience.</td>
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<td>• New fleet waste assay service with Nuvia used at Torness (data may be useful for fingerprint validation).</td>
<td>• Permits being revised to allow transfers and disposals to non-SLC waste sites of tritiated oils and other suitable ILW.</td>
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<td>• Wide-Ranging Duty of Care audit completed at TradeBE Fawley and Winfrith facilities - report being drafted.</td>
<td>• Launching standardised method for activity assessment of surface contaminated objects.</td>
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<td>• Final Letter of Compliance achieved for Sizewell B spent resins.</td>
<td>• New governance on waste storage, monitoring and inspection to be issued (does not cover engineering aspects)</td>
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<td>• Transfer of unsorted containerised legacy wastes (x 9 FHISOs) to Winfrith for sorting/segregation and sentencing.</td>
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<td>• Disposal of sludges from Hinkley Point B and Hartlepool (£450k and £150k for one consignment).</td>
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<td><strong>Failures / Issues (past 6 months)</strong></td>
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<td><strong>Threats</strong></td>
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<td>• Drum fell from pallet during non-compliant fork-lift movements at Fawley incinerator – we have reinforced standards to EDF sites and shared OPEX.</td>
<td>• Transport loading arrangements - we are assessing company resource requirements / extent of condition – two sites have attended LLWR waste loading training.</td>
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<td>• Risks - leakage of new/old pipework active effluent systems to ground – these can lead to top-tier environmental events</td>
<td>• Unconfirmed rumours that the ONR-RMT is concerned about the transport of drums and may prefer the use of ISO containers?</td>
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<td><strong>Focus areas for next 6 months</strong></td>
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<td>• Develop functional oversight programme for Q3/4</td>
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<td>• Further training – Decision Making</td>
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<td>• Problematic waste IPT</td>
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<td>• In-house inventory tool</td>
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<td>• Engaging with wider business on BAT for Decommissioning</td>
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<td>Waste Producer SOFT Analysis – Delivery Overview Group</td>
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<td>• HAW/ LoC management training developments</td>
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<td>• Issue new Activity Assessment governance and fingerprint validation process</td>
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<td>• BAT review for management of desiccant</td>
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<td>Waste Producer:</td>
<td>Magnox Ltd</td>
<td>Date:</td>
<td>March 2017</td>
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### Successes (past 6 months)

- All diversion targets met or exceeded. Diversion at year end is 93%. Metallic target increased significantly via JWMP11 (despite hitting JWMP10 target mid-year).
- First of a kind consignment of super-compacted Bradwell FED pucks successfully shipped to LLWR. Excellent collaboration between Magnox, LLWR and Tradebel-Inutec.
- Disposability approvals received from LLWR for disposal of remaining LLW FED (phase 2) from Bradwell. Drums in the process of being shipped for supercompaction.
- VLLW route opened at Dungeness (ten sites now using the route).
- Good collaboration with LLWR and good progress on TRS drums project. Optioneering concluded.

### Opportunities

- Optimised disposal to LLWR (make best use of existing assets) – e.g. mixing FED/ solids; wet wastes (sludge, resins, sand and gravel).
- Progress moving towards risk-based disposability
- Develop routes for problematic wastes.
- Develop routes for borderline ILW/LLW and SL-ILW.
- Potential diversion of ~900 drums of contact handleable ILW from Harwell to the LLW repository following characterisation and assessment against Discrete Items criteria.

### Failures / Issues (past 6 months)

- Issues with TC12 containers (test failure) impacted waste consignment schedules.
- EA Warning Letter received regarding failure to apply a revised fingerprint to equipment used for waste clearance.
- Discrete items issue regarding Trawsfynydd ponds scabbling waste, as a consequence of a change in fingerprint. Three HHISOs quarantined at LLWR pending the outcome of investigations by Magnox and LLWR.

### Threats

- Insufficient volumes of waste in various categories to support disposal of full containers (LLW, VLLW and asbestos VLLW). Good segregation practices and the requirement for high packing efficiencies is creating difficulties in completing containers for disposal (this is particularly notable in projects with large items of waste).
- Waste Loading Plans.

### Focus areas for next 6 months

- Preparations for Harwell LETP land remediation project waste consignments.
- TRS Drums acceptance in principle for disposal to LLWR.
- Complete remaining Bradwell FED Phase 2 activities (operational safety case and transport licence).
- Dungeness wet waste strategy (optimised disposal).
- Chapelcross top ducts project
- Chapelcross graphite HHISOs to LLWR
- Mobilise FED to LLWR projects for Oldbury and Sizewell
- Magnox company-wide wet waste strategy (building on Dungeness as the lead site).
## Successes (past 6 months)
- Strong diversion performance during the second half of FY16; with the FY targets of 2365te of metal recycled, 1100m³ diverted for incineration and 8363m³ diverted for specified landfill disposal all scheduled to be met. Enhanced capabilities for the diversion of bulk wood, plastic and asbestos contaminated wastes implemented. Overall 91% of material diverted away from LLWR disposal.
- Good progress made with fully integrating the site decommissioning and waste management functions into a single Remediation business unit and developing a Remediation value chain approach. Series of Management of Changes implemented, and a range of value chain programme / project optimisations progressed.
- Review of Post-closure Radiological Safety Case for the on-site specified landfill capability undertaken. This enables an extension to the acceptable activity range and will support the efficient disposal of material from the remaining Pile chimney.
- Commissioning of the enhanced ILW assay instrumentation has indicated that up to 20% of the currently packaged waste may be suitable for management as LLW.
- Detailed analysis of the packages of waste generated during the decommissioning of the WAGR facility, in conjunction with LLWR, has demonstrated that approximately 50% may be suitable for disposal at LLWR. This will free up storage space to support the management of items removed from high hazard legacy facilities. Analysis of the AGR graphite stream also indicates a proportion may be suitable for disposal at LLWR.
- A number of improvements have been made in the management of inert, non-radioactive excavated materials, including formalisation of re-use options under the CL:AIRE Code of Practice.
- Arrangements for complying with the most recent LLWR WAC fully implemented.

## Failures / Issues (past 6 months)
- Local contamination event, following the internal site transfer of material to the on-site metal recycling facility resulted in a short term cessation of operations.
- Reliability issues experienced with the container overpack and associated trailer.
- Service supplier did not have capability to mechanically handle transferred waste.

## Opportunities
- Further develop and improve Remediation value chain following integration of decommissioning and waste management functions.
- Reviews of the BATs for LA-LLW/VLLW metal and process wastes.
- Development of improved options to manage challenging metallic items.
- Management of short-lived ILW / boundary wastes.
- Development of appropriate site end state (initially assessing high level options).

## Threats
- Inappropriate consignment of material.
- Implementation of the European BBSD exemption criteria (£1.7bn impact).

## Focus areas for next 6 months
All the opportunities noted above will be progressed. There will be a focus on improving the effectiveness and efficiency of the Remediation value chain, including ensuring there is an appropriate make/buy balance.
### Waste Producer SOFT Analysis – Delivery Overview Group

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<tr>
<th>Waste Producer: National Waste Programme</th>
<th>Date: March 2017</th>
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#### Successes (past 6 months)
- Strong waste diversion behaviour across the nuclear industry (88% diversion across the industry at end Feb 2017, with over 11,000m³ waste diverted against 1580m³ disposed in the same period).
- Progress has been made on a wide range of collaborative projects. Projects on a review of international approaches to radiological classification, discrete items feasibility study and review of actual versus forecast arisings have been completed.
- Projects on short-lived ILW and the Strategic Review 2016 are due to complete by the end of March 2017.
- Progress has been made on maturing the governance arrangements.
- There has been participation in the Problematic Waste and Near-Surface Disposal Integrated Project Teams.
- Training modules on Waste Loading Plan Awareness (e-learning) and key LLWR waste acceptance forms (WCH, WEN, WCI (Dis) – self-directed learning workbooks) have been made available. The Waste Loading Plan classroom module has been delivered to two cohorts in this period.

#### Opportunities
- Collaborative opportunities for FY17/18 have been identified with waste producers, RWM and other stakeholders.
- Increased metallic supply chain capabilities – including capabilities for more highly contaminated metals - available under the new framework.
- Availability of different treatment and disposal capabilities to support management of more complex wastes and problematic wastes.
- More optimised use of the LLWR site given that the site has now both Environmental Permit and Planning consent.

#### Failures / Issues (past 6 months)
- There has been slower take up of the training modules than anticipated – the NWP are actively seeking greater engagement with waste producers and are undertaking a review of the training framework.

#### Threats
- Mis-consignment of waste could potentially close waste management routes.
- There are uncertainties regarding the impact of the implementation of legislation changes (such as the revised Paris-Brussels Convention protocols, the Basic Safety Standards Directive and Brexit) on the nuclear industry.

#### Focus areas for next 6 months
- Commence work scopes for FY17/18 – boundary wastes, principles for decay storage, buffer storage benefits and credible options, review of training / qualifications for waste management, collaborative project with RWM on capability and capacity of supply chain for management of HAW.
- Ongoing improvement of governance arrangements (including review of the NWP Blueprint).
Update on Paris-Brussels Convention and Basic Safety Standards Directive Implementation
Status of UK nuclear industry infrastructure
Infrastructure status (1)

• Capacity, capability and availability of waste management infrastructure vital to NWP mission.

• Importance to strategy implementation recognised in LLW National Strategy.

• Area of significant interest for stakeholders.
Infrastructure status (2)

• We want to start a conversation about this topic to understand stakeholder perspectives.
• No preconceptions – want to understand what our different stakeholders think.
• May initiate some further work.

Task – on tables, think about / discuss and answer questions on sheets provided (30 mins). Feedback and discussion to follow (25 mins).

What is meant by infrastructure status?

What could be some measures of this?

How could measures be shared with stakeholders?
FY17/18 work programme for the National Waste Programme and opportunities to get involved
Forward programme

• We want to share our plans for the coming FY.

• Will focus on 4 projects:
  - Boundary waste
  - Decay storage principles
  - Buffer storage benefits and credible options
  - Review of training and qualification for waste management.

• We want to understand:
  - Views / ideas on scopes
  - How you want to be involved.
# Groups

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<th>A</th>
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<th>D</th>
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</table>
| Peter Welch  
Dennis Thompson  
David Nicholson  
Charles Mason  
Becky Ruddy  
Phil Matthews  
Stephen Pendleton  
Terry Selby  
Craig Broadbent | Judith Pomfret  
Martin Walkingshaw  
George Daval  
Marc Flynn  
Joshua Cattell  
Caroline Hill  
Colin Mackie  
Damian Seath  
Liz Sargent  
Mark Pailing | David Loudon  
Craig Ashton  
Jim Cochrane  
Andy Sealby  
Allan Wilson  
Ruth Fitzgerald  
Steve Smith  
Paul Langham  
Shaun Robarts  
Chris Macey | Richard Clarke  
Andy Bicknell  
David Nicholson  
Gareth Gars  
Anna MacDonald  
Gary Clarke  
Darren Crosbee  
Bav Thakar  
Chris Westwood |

| Start at: Decay Storage | Start at: Training and Qualification | Start at: Boundary Waste | Start at: Buffer Storage |
AOB