

International Learning and Site Visits – Outline itineraries (Update 29/10/10)

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1. The West Cumbria MRWS Partnership has expressed an interest in visiting a number of waste management organisations and sites overseas in order to gain an insight to the process of hosting a radioactive waste disposal facility. They also hope to meet members of local communities in order to explore issues such as volunteerism, impacts on the host community and community engagement. Such visits would add to their understanding of the management of radioactive waste and the process of finding a site for disposal by both visiting a range of sites and being able to meet other volunteer communities.

2. The NDA has a great deal of experience of working with overseas organisations in the waste management field. NDA also has the knowledge, contacts and organisational capability to develop itineraries that can meet with Partnership members' needs and expectations for this type of international learning.

3. Consequently a number of discussions have taken place between Rhuari Bennett and Stewart Kemp on behalf of the Partnership, and John Mathieson, John Dalton, Jay Redgrove and Trish Reynolds on behalf of the NDA. The aim of these discussions has been to identify the aims and objectives for the visits and to identify whether these can be met through a set of international site visits.

4. Stewart Kemp prepared a very useful set of objectives relating to a possible visit to Waste Isolation Pilot Plant (WIPP) and John Mathieson gave a presentation to the Partnership Steering Group suggesting what could be expected from visiting a range of sites. The Steering Group also nominated three sites they felt it would be appropriate and informative for them to visit

5. The information below relates to the Partnership's proposed site visits overseas for discussion by the Partnership Steering Group. Below are draft timetables for the 3 trips the Partnership has expressed interest in, namely:

- WIPP, Carlsbad, New Mexico,
- Forsmark, Sweden and Olkiluoto, Finland
- Bure, France.

6. The draft timetables are presented as outlines at this stage. If the outline fits with Partnership's thinking on the information and understanding they hope to gain then we can develop the itineraries in more detail. To assist NDA with this we need some indicative dates and a list of topic areas/questions that are of particular interest to the Partnership.

7. The information is set out below showing what the Partnership might gain from the activities undertaken during the visits; these include the objectives prepared by Stewart Kemp. Information is also given the number of days, approximate cost per person and any additional issues that need consideration.

WIPP

Day	Activity	Objective
1	Fly into major US hub and transfer to Albuquerque and drive to Carlsbad	n/a
2	Visit University of Mexico	Some useful evaluation work has been carried out here on WIPP. May also be able to set up a video link with the US Department of Energy's (DoE) Head of Environmental Management, who also used to be the head of WIPP and would have a unique perspective in the site.
3	Visit site: <ul style="list-style-type: none"> • USDoE briefing on background to WIPP • Safety briefing • Underground visit • - Evening meal with key USDoE and WIPP staff 	To view a unique facility – the only operational GDF To understand the management and monitoring arrangements to ensure safe GDF operation, including receipt of waste packages, waste packaging, waste emplacement, quality assurance/testing, arrangements for reporting/communicating monitoring data, and ongoing R&D. To understand the key impacts of WIPP development, both physical and reputational, and how impacts have been addressed by the operator and community. To understand the arrangements for confidence building in the community, including PR and arrangements for deciding and delivering community benefits (CB) (e.g. what is the benefit and who gets it? – and what arrangements are there for 'banking' CB decisions). To understand the key infrastructure issues (inc. transportation and housing issues, and social infrastructure issues). To understand environmental impacts and how these are mitigated To understand arrangements for WIPP closure, including retrievability and recoverability of wastes, ongoing monitoring arrangements and archiving/protecting/securing key information.

		<i>(Some of the above issues will also be addressed on Day 4 from a community perspective)</i>
4	<p>Meeting with local key stakeholders including:</p> <ul style="list-style-type: none"> • equivalent to local stakeholder group • State regulators • Key individuals 	<p>To understand the processes for community oversight and engagement, including inventory control and ongoing GDF construction.</p> <p>To understand ongoing PSE and community engagement arrangements.</p> <p>To understand key concerns within the neighbouring community and wider society about the WIPP development.</p> <p>To understand regulatory oversight and arrangements for operational security.</p>
5	Drive back to Albuquerque and then back to UK	n/a
6	Arrive back in UK	n/a
<p>Issues</p> <ul style="list-style-type: none"> • Correct to assume 4 or 5 people ? • Do they want an NDA person to accompany them? • End of March / early April 2011 (Very latest to fit with the work programme could be June 2011) • Need to take into account any work which might prevent visiting the underground facility when planning timeframe for the visit. • 90 day security clearance requirement • Get clearance for all who are interested – they should bring passport to 10 Dec Partnership meeting • ESTA registration required (cost \$14) • Cost per person estimated to be in the region of £2k • Self drive or driver required ? 		

Finland and Sweden

Day	Activity	Objective
1	Manchester/Newcastle to Stockholm then to Forsmark	n/a
2	Visit facilities –evening dinner with locals	To understand how the management and monitoring arrangements to ensure safe GDF operation, including receipt of waste packages, waste packaging, waste emplacement, quality assurance/testing, arrangements for reporting/communicating monitoring data, and ongoing R&D (Research & Development) is being developed
3	Meeting with locals then p.m. travel to Finland	<p>To understand the key infrastructure issues (inc. transportation and housing issues, and social infrastructure issues).</p> <p>To understand regulatory oversight and arrangements that will be put in place for operational security</p> <p>To understand environmental impacts and how these are intended to be mitigated.</p> <p>To explore issues relating to retrievability and recoverability of wastes, planned monitoring arrangements and archiving/protecting/securing key information</p> <p>To understand the processes for community oversight and engagement, including future inventory control and GDF construction.</p> <p>To understand ongoing PSE and community engagement arrangements.</p> <p>To understand key concerns within the neighbouring community and wider society about the development of a repository.</p> <p>To understand the arrangements for confidence building in the community, including PR and arrangements for deciding and delivering community benefits (e.g. what is the benefit and who gets it? – and what arrangements are there for ‘banking’ CB decisions).</p>

4	Visit facilities; p.m. meet with locals etc. dinner	As for Sweden above.
5	Return home Stockholm - Pori- (or Copenhagen) then Manchester or Newcastle	n/a
<p>Issues</p> <ul style="list-style-type: none"> • Number of people? • Do you want an NDA person to accompany them? • March 2011 onwards (not July as they go on holiday then) • Cost per person estimated to be in the region of £1k • Would Partnership members want to go to Oskarshamn (Äspö, CLAB (Sweden's central interim storage for spent nuclear fuel), etc.) or Forsmark – as John Mathieson pointed out previously there is, SFR and the NPP (Nuclear Power Plant) (SFR is an existing repository and worth seeing) at Forsmark 		

Bure/France

Day	Activity	Objective
1	Fly to Paris and transfer to Bure area (Bar-le-Duc) either by car or train. Evening – dinner with ANDRA (French National Waste Management Organisation)	Meet with ANDRA - standard presentations on radioactive waste management in France, and on the laboratory and the work it is doing (also covered on ANDRA's website www.andra.fr) and copies of literature available from JM: Journal of Information of the Meuse/Haute-Marne URL (underground research laboratory)
2	Tour facilities Centre de la Manche, Morvilliers, Bure	Site selection and Bure Physical aspects – boreholes, headworks etc. The French Law of 1991 on Research in Radioactive Waste Management – championed by Christian Bataille who also steered the volunteer site selection programme
3	Meet with CLIS (in Bar-le-Duc) and other local reps (may meet some on the tours) PM Return to Paris and back to UK.	Local Community interactions – opposition/support – how the CLIS (Local Oversight and Information Group) fits into the process The GIP (Public Interest Group) and Community Benefits – benefit rules, EU Regulations Co-ordination of the mission – such as the social make-up of the area and local socio-economic impact of the URL and how environmental impacts might be mitigated.
3	<u>Alternative for 4 day visit</u> Meet with CLIS (in Bar-le-Duc) and other local reps (may meet some on the tours) More discussions e.g. with the Mayor, GIP etc.	More detail on the topics on day 3 above .
4	Return to Paris and back to UK.	n/a

Issues

- Number of people ?
- Do you want an NDA person to accompany them?
- Date flexible up to June
- Need to take into account any work which might prevent visiting the underground facility when planning timeframe for the visit.
- Cost per person estimated to be in the region of £1k
- Translation will be needed – the UK Embassy in Paris (or DECC / Foreign Office) could recommend

In addition to the site visits proposed by the Partnership there are a number of other opportunities overseas either to visit sites or to meet with waste management organisations, communities and others involved in the process.

Other opportunities for international learning

Opportunity	Objective
Reims Reversibility and Retrievability: A conference and dialogue in planning for geological repositories of radioactive waste. – hosted by ANDRA (the French National Waste Management Organisation) 14 – 17 Dec 2010 Tim Knowles attending and presenting	To gain a better understanding of the issues involved in R&R and to share the UK perspective. The Reims Conference is conducted within the framework of the Nuclear Energy Agency's project "Reversibility and Retrievability in Geological Disposal of Radioactive Waste" (R&R). A wide array of policy makers, civil society stakeholders and experts will be brought together in Reims, France
Sweden Forum for Stakeholder Confidence (FSC) Country visit (<i>liaison and financial support through RWMD-</i>) 4 - 6 May 2011 1. Day one 2. Day two 3. Day three	1. The Added Value program – reflections by Oskarshamn, including discussion and questions 2. Overview of the Swedish NWM program (Ministry of the Environment/the Swedish Council for Nuclear Waste) - Update on the Swedish NWM program (Perspectives from key actors) - Reflections from different actors in the Swedish NWM program on how the need for dialogue, information exchange and transparency in processes has changed during the past 30 years, how this will change in the future phases of the program and what problems can be foreseen. - Brief presentation of the research project: "Communities of practice – the case of the

	<p>Swedish planning and decision making process for final disposal of spent nuclear fuel” - Group discussions on transparency and communication - Community Visit to Forsmark 3. Reflections from local NGOs in Oskarshamn and Östhammar municipalities - The consultation process and EIA - The NWM programme and local economic development - How can Micro, Small and Medium Enterprises (MSME) be the winners of the Östhammar / Oskarshamn NWM investment program - Can my company really profit from this? - How is this investment program going to happen? - Roundtable discussions</p>
<p>Switzerland MoDeRN project (<i>liaison through RWMD – financial support through MoDeRN</i>(Monitoring Developments for Safe Repository Operation and Staged Closure) <i>project</i>) Date 2011 tbc (probably June or later)</p>	<p>This would be a good opportunity to learn more about the potential monitoring of a Geological disposal Facility (GDF) and to experience the well established research sites.</p> <p>The objective of the collaborative project MoDeRN is to take the state-of-the-art of broadly accepted, main monitoring objectives, to develop these to a level of description that is closer to the actual implementation of monitoring during the staged approach of the disposal process, to verify whether such implementation is able to address expert and lay stakeholder expectations, to provide an understanding of monitoring activities and available technologies that can be implemented in a repository context, and to provide recommendations for related, future stakeholder engagement activities.</p> <p>It is being proposed to arrange a trip to Mont Terri Rock Laboratory (an international Research Project for the Hydrogeological, Geochemical and Geotechnical Characterisation of a Clay Formation (Opalinus Clay) and the Grimsel scientific test site in Switzerland (provides an environment which is analogous to that of a repository site so allowing the development and testing of equipment, methodology and models under fully realistic conditions.)</p>

Potential overseas visit locations for MRWS Partnership

John Mathieson
Head of International Relations
Presented to West Cumbrian MRWS Partnership
10 December 2010



Miner

Disposal cavern

Transuranic Waste (similar to UK long-lived ILW)

9,000 shipments as of 7 October 2010

Waste Isolation Pilot Plant

U.S. Department of Energy facility
Designed for permanent disposal of transuranic radioactive waste
2,150 feet deep

NDA

Sweden

Sweden

Forsmark
Ringhals
Oskarshamn
Barsebäck

L/ILW

Spent fuel repository site chosen 2009

CLAB fuel store

Encapsulation lab & plant

NDA

Finland

Oikiluoto Power Plant

Loviisa Power Plant

Spent fuel Posiva

Operational waste TVO

Operational waste Fortum

Oikiluoto
TAMPERE
HELSINKI
Loviisa

POSIVA

Bure URL

ANDRA
le gestionnaire des déchets nucléaires

France

Centre de l'Aube (CSA)

Centre de la Manche (CSM)

Graphite concept?

VLLW Morvilliers

NDA