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22nd January 2015

Dear Sir/Madam,

**WELSH GOVERNMENT CONSULTATION: REVIEW OF WELSH GOVERNMENT
POLICY ON THE MANAGEMENT AND DISPOSAL OF HIGHER ACTIVITY
RADIOACTIVE WASTE**

Thank you for consulting Natural Resources Wales on the consultation for the review of the current policy on the management and disposal of higher activity radioactive waste.

Natural Resources Wales supports the review process and we provide our responses to the consultation questions overleaf. This follows our previous response to the Welsh Government's call for evidence on a review of this policy, which we provided in June 2014. Our response to that call for evidence is included as an annex.

We look forward to continuing to work with Welsh Government and other stakeholders during the review and subsequent implementation of any policy on the management and disposal of Higher Activity Wastes.

Please contact Ceri Davies if you wish to discuss any aspect of our response in more detail.

Yours sincerely,

**Emyr Roberts
Prif Weithredwr
Chief Executive**

Response to Consultation Questions

QUESTION 1. The Welsh Government is reviewing its current policy on the disposal of higher activity radioactive waste and spent fuel declared as waste. In carrying out this review, the Welsh Government has three options:

- should it seek to adopt a policy for disposal for HAW and spent fuel should it be declared as waste?
- should it retain its existing neutral position of neither supporting nor rejecting a disposal option?
- should it adopt a policy opposing a disposal option for HAW and potentially spent fuel?

Natural Resources Wales' statutory responsibilities include the regulation of the disposal of radioactive wastes from nuclear sites, as well as other 'non-nuclear' premises in Wales. The responsibility of issuing and regulating environmental permits and any associated enforcement activity related to sites generating or disposing of radioactive waste in Wales is the responsibility of NRW.

Over a number of decades, specific industrial activities within Wales have generated a legacy of Higher Activity Waste (HAW) (including high level waste (HLW), intermediate level waste (ILW) and a proportion of low level waste (LLW)) for which existing disposal options are not suitable. In Wales, a proportion of this has arisen from electricity generation from the nuclear power stations at Trawsfynydd and Wylfa, and also from other facilities in Wales where radioactive materials have been historically (and are currently) used in radiochemical manufacture, medicine, industry and research.

A new nuclear power generating facility is proposed in Wales by Horizon Nuclear Power with a reactor design provided by Hitachi GE Nuclear Ltd has been recently confirmed. If built, subject to all the necessary assessments, regulatory approvals and permissions, the facility would generate HAW and Spent Fuel needing management and disposal. Even without new nuclear power facilities being built in Wales, there is a legacy of HAW, as well as the ongoing generation of waste from non-nuclear sources, which needs management and eventual disposal.

Natural Resources Wales considers that the Welsh Government needs to ensure that suitable and effective arrangements exist for the management of HAW that have been, are being, and will be generated at facilities within Wales.

Taking the above into account, and as the lead environmental regulator in Wales with responsibility for the regulation of radioactive waste disposal, Natural Resources Wales considers that:

- Welsh Government should now adopt a clear, definitive policy for the management and disposal of HAW and spent fuel that is declared as wastes from both existing and future sources, that is consistent with its policy of supporting current and future nuclear and non-nuclear facilities in Wales.

QUESTION 2. Should the Welsh Government adopt a policy for geological disposal for the long term management of higher activity radioactive waste and spent fuel declared as waste?

Natural Resources Wales recognises that the UK and Scottish Governments both have a clear policy on the management and disposal of HAW. In England, the preferred policy is for an engineered deep underground geological disposal of these wastes, whereas the Scottish Government policy is opposed to underground geological disposal, favouring instead the long-term management of HAW within near-surface facilities.

Natural Resources Wales recognises that the current Welsh Government policy is neither to support, nor oppose, the UK Government policy of geological disposal for HAW.

Natural Resources Wales is involved in an assortment of multi-regulatory work streams associated with radioactive substances regulation in the UK. We work closely with the Environment Agency, the Office for Nuclear Regulation, the Scottish Environmental Protection Agency, the Nuclear Decommissioning Authority and Radioactive Waste Management Ltd on the complex issues around radioactive waste management and disposal in the United Kingdom.

Through this Natural Resources Wales notes that of those countries in the international community having HAW and spent fuel, the majority are applying (or considering to apply) deep geological disposal as their preferred option. Within the European Community there are a number of member states who have made substantial progress in this area. This includes significant progress in community and stakeholder engagement, geological screening programmes, site identification and selection programmes. In some cases this has progressed to starting the construction phase of a rock laboratory or geological repository.

With this in mind, and as stated in our previous response to the call for evidence on this policy review (refer to Annex 1); we maintain the following, that '*Natural Resources Wales has reviewed the Committee on Radioactive Waste Management (CoRWM) recommendations from 2006 and its statement of 2013, noting their recommendation that geological disposal is the best long term option for the disposal of higher activity radioactive waste and spent fuel declared as waste*'.

Natural Resources Wales acknowledges that based on current evidence worldwide, the most favoured option for the management and disposal of HAW is geological disposal, with the most commonly accepted approach being that of an engineered deep geological repository. As such, we support the proposed approach set out in the consultation, that Welsh Government adopt a policy to favour geological disposal.

Furthermore, we reiterate our comment previously made (Annex 1) that it is essential that '*Welsh Government is in a position to engage with the relevant UK Government departments, regulators and operators to play an effective role in UK radioactive substances policy and strategy development*'.

Should Welsh Government issue a policy favouring geological disposal, it would establish a consistent policy across Wales and England. It would bring an opportunity for a clear,

consistent and joined up approach on the long term management of HAW and spent fuel declared as waste within Wales and England.

This would clarify the common position to all parties involved in radioactive waste disposal in Wales and England, from nuclear operators and regulators to Government departments, enabling further progress to be made in identifying realistic and practicable solutions together for the long term management and disposal of HAW.

QUESTION 3. If the Welsh Government does not adopt a geological disposal policy should it adopt a policy for an alternative disposal route for higher activity radioactive waste and spent fuel declared as waste? If so what policy should it adopt?

As described in our answers to Questions 1 and 2 above, and in our response to the call for evidence (Annex 1), Natural Resources Wales maintains the view that Welsh Government should adopt a policy for geological disposal for the long term management of HAW and spent fuel declared as waste.

Furthermore, as set out in Annex 1, Natural Resources Wales maintains the following opinion; *'that Welsh Government consider including in its policy review the need for interim and long-term storage prior to geological disposal...'*

'This is particularly relevant given the time forecasted to create a geological disposal facility, and that possibly even the next generation of nuclear power facilities may have been decommissioned before the facility is available, including the proposed Wylfa Newydd.'

Natural Resources Wales considers that disposal of these unique waste streams should be distinct from their separate long-term storage, based on the concept of retrievability, i.e. whether the waste can be retrieved or not. In simple terms, we believe that if the material can be retrieved it is storage and if not it is final disposal.

Since there will likely be a need for interim and long term storage, until a final engineered disposal solution is available, we encourage Welsh Government to consider how any future policy for disposal accommodates arrangements for long term storage. We also encourage Welsh Government to bear this in mind should an alternative option to geological disposal for this unique waste stream be considered as part of the policy review.

QUESTION 4. Do you have any other comments on the Welsh Government policy for the disposal of higher activity radioactive waste and spent fuel declared as waste?

We refer to our response to Question 4 in the call for evidence (Annex 1) in that *'If a geological disposal facility were to proceed, the design and management of such a facility and any related interim storage facilities, would need to inspire confidence amongst all affected communities from the earliest stages. Welsh Government would need to consider as part of its review the need for clear Government policy and effective regulation in providing community confidence.'*

Natural Resources Wales acknowledges that if Welsh Government decides that their policy for disposal of HAW and spent fuel (declared as waste) is geological disposal, this does not necessarily mean that such a disposal site would be in Wales.

Natural Resources Wales considers that further evidence would be needed to establish that there is a location with suitable geological conditions to site a geological repository in Wales or that a Welsh community exists that would volunteer to host such a facility. Although Welsh Government may choose to align with the UK Government's policy of geological disposal as the preferred option, the specific circumstances may not favour such a repository to be sited in Wales.

However, as stated in Annex 1, Natural Resources Wales considers that; *'Welsh Government needs to ensure that suitable and effective arrangements exist for the management of higher activity radioactive wastes generated in Wales by existing, and future nuclear facilities and also that from Welsh industry and the medical sector. Wales has benefited socially and economically from the use of these radioactive substances and we agree that Welsh Government has an obligation to participate in the development of a strategy for the management of these wastes.'*

In conclusion, Natural Resources Wales support the Welsh Government's proposal for a definitive policy on the management and disposal of HAW and spent fuel declared as waste. We also support the Welsh Government's proposal, as stated in the policy review document, to favour geological disposal as the preferred solution.

Cyfoeth Naturiol Cymru / Natural Resources Wales

January 2015

Annex 1 - NRW Response to Call for evidence (Submitted June 2014).

Response to Consultation Questions

Natural Resources Wales (NRW) was created in 2013 with a mission to ensure that the environment and natural resources of Wales are sustainably maintained, enhanced, and used, now and in the future. Regulation of business and industry are amongst its statutory responsibilities. This includes the regulation of the disposals of radioactive wastes from nuclear sites, as well as other premises in Wales. All permits relating to sites generating or disposing of radioactive waste in Wales are issued by NRW. Compliance with these permits at nuclear sites is carried out by the Environment Agency specialists on behalf of NRW; however, enforcement is undertaken by NRW.

Q1: Should the Welsh Government review its current policy on HAW disposal?

Natural Resources Wales supports the review, as it is prudent to reconsider policy positions in the event of new developments or evidence. The Welsh Government has expressed support for the development of new nuclear power facilities in Wales, including the proposed Wylfa Newydd site, which is proposed to be sited adjacent to the existing Wylfa nuclear power station on Anglesey.

Natural Resources Wales considers that Welsh Government needs to ensure that suitable and effective arrangements exist for the management of HAW generated in Wales by existing and future nuclear facilities, and also that from Welsh industry and the medical sector. Wales has benefited socially and economically from the use of these radioactive substances, and we agree that Welsh Government has an obligation to participate in the development of a strategy for the management of these wastes.

Natural Resources Wales is aware of the work carried out by CoRWM and the position adopted by Scottish Government, and we will look, following discussion with the Environment Agency, Office for Nuclear Regulation and the Nuclear Decommissioning Authority, to highlight to Welsh Government the most recent relevant information, which may inform subsequent calls for evidence.

Q2: CoRWM carried out extensive work before recommending geological disposal in its report in 2006, and confirmed that recommendation in 2013. In the light of this, if the Welsh Government reviews its current policy, should it limit its considerations to disposal options for HAW geological disposal?

Natural Resources Wales has a service level agreement with the Environment Agency which provides us with a service and we work other bodies. Natural Resources Wales has reviewed the CoRWM recommendations from 2006 and its statement of 2013, and suggests that Welsh Government consider including in its review the need for interim and long-term storage prior to geological disposal. This is particularly relevant given the forecast time to create a geological disposal facility, and that possibly even the next generation of nuclear power stations may have been decommissioned before the facility is available, including Wylfa Newydd.

Q3: If the Welsh Government should consider disposal options other than geological disposal, what should these be?

As mentioned above, Natural Resources Wales suggests that Welsh Government reviews the CoRWM recommendations as part of its evidence gathering, and reviews the options for interim and long-term storage prior to geological disposal. For example, CoRWM recommends that these are not disposal options, but mechanisms for managing wastes over periods that may extend to a further 40 or 50 years. As disposal is "the placing waste in a facility with no intention of retrieving it", other options such as placement in near

surface repositories are clearly not disposal, but long-term storage options, as they are based on the premise of retrievability.

Q4: Do you have any other comments on the Welsh Government policy for disposal of higher activity radioactive waste?

It is not clear to Natural Resources Wales how the Spent Fuel and Radioactive Waste Directive (Council Directive 2011/70/Euratom) will bear on Welsh Government, as the obligations are on Member States; nevertheless, it is likely that Welsh Government will have to contribute positively to the UK programme. Additionally, as a geological disposal facility would be a novel and unique facility in the UK, Natural Resources Wales considers that the Welsh Government should review its position on management of HAW as required by the Directive. Furthermore, it is essential that Welsh Government is in a position to engage with the relevant UK Government departments, regulators and operators, to play an effective role in UK radioactive substances policy and strategy development.

If a geological disposal facility were to proceed, the design and management of such a facility and any related interim storage facilities would need to inspire confidence amongst all affected communities from the earliest stages. Welsh Government would need to consider as part of its review the need for clear Government policy and effective regulation in providing community confidence.

If a community in Wales were to volunteer and be selected for hosting a geological disposal facility, this would require partnership working throughout the UK to enlist the widest knowledge, expertise and skills base as possible in relation to such a facility. Should a site in Wales be selected, Natural Resources Wales would work with other regulators in the UK, including the Office of Nuclear Regulation and the Environment Agency, as well as nuclear operators and relevant bodies such as the Nuclear Decommissioning Authority and Radioactive Waste Management Ltd. Natural Resources Wales would welcome Welsh Government support with regard to this, in the event of any community in Wales volunteering to host a geological disposal facility.

It is equally important that Welsh Government recognises that the resources of England and Wales would need to be deployed in the event of selection of a site in Wales for such a UK national facility. This may require formal agreements in order to allow respective bodies to forward plan resources, and support skill retention and resilience. It will continue to remain for Natural Resources Wales to make the final decisions with respect to the permitting of such a facility in Wales under the Environmental Permitting (England and Wales) Regulations 2010.

Cyfoeth Naturiol Cymru / Natural Resources Wales June 2014