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Minister for Environment
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Dear Minister,

Wiluna uranium mine, Toro Energy Limited – appeal against recommendations in EPA's report

We act for the Conservation Council of Western Australia (**CCWA**).

On 21 May 2012, the Environmental Protection Authority (**EPA**) published its report (**Report 1437**) recommending that the Wiluna uranium mine proposal (**Wiluna Uranium Mine**) by Toro Energy Limited (**Toro**) be implemented subject to conditions.

We hereby lodge an appeal on behalf of CCWA against the content and recommendations in Report 1437 under section 100(1)(d) of the *Environmental Protection Act 1986* (WA) (**EP Act**).

The main grounds of appeal are as follows:

- (a) There remains a high level of uncertainty about potentially significant environmental impacts and risks associated with the proposed Wiluna Uranium Mine, which have not been satisfactorily addressed by Toro or the EPA.
- (b) The EPA has failed to properly apply the precautionary principle.
- (c) The EPA has taken into account irrelevant considerations, such as avoiding holding up Toro's investment decision.
- (d) There have been major flaws in the assessment process including a failure to comply with the EPA's own procedures, a denial of procedural fairness and a lack of transparency.
- (e) The EPA has unacceptably deferred its responsibilities under the EP Act to other government agencies.

- (f) There are good policy reasons for the proposal not to be implemented, such as high-level nuclear waste, nuclear accidents and weapons proliferation.
- (g) There are major problems with the current regulatory framework (as identified by recent independent reviews) and a decision should not be made as to whether the proposal should be implemented until at least such time as these problems have been addressed.

Each of the grounds of appeal is discussed below. However, please refer to the joint submission dated 31 October 2011 by CCWA, the Australian Conservation Foundation, the Anti Nuclear Alliance of WA and the Wilderness Society (**Joint Submission**) (Appendix 1)¹ for further detail.

On this basis, we submit that the Minister should remit the proposal to the EPA for reassessment under section 101(1)(d)(i) of the EP Act. We submit that the EPA should reassess the Wiluna Uranium Mine by way of a public inquiry under section 40(2)(c) of the EP Act. Further, the reassessment should not occur until such time as Toro provides further information about the environmental impacts of the proposed Wiluna Uranium Mine to address the numerous gaps and deficiencies in the information provided to date. If the Minister were to decide whether the proposal should be implemented or not in the absence of further satisfactory information from Toro and reassessment by the EPA, we submit that the only decision that he could make is that the proposed Wiluna Uranium Mine should not be implemented.

However, should the Minister decide, in the absence of further information and reassessment by the EPA, that the proposed Wiluna Uranium Mine may be implemented subject to conditions (a decision which CCWA strongly opposes), we submit that the conditions recommended by the EPA in Report 1437 are seriously inadequate (as outlined below) and the Minister should vary the EPA's recommendations by changing the implementation conditions under section 101(1)(d)(ii) of the EP Act.

Potentially significant environmental impacts and risks have not been satisfactorily addressed

There is a high level of uncertainty about potentially significant environmental impacts and risks associated with the proposed Wiluna Uranium Mine, many of which have not been satisfactorily addressed by Toro or the EPA. We set out several examples below, however please refer to Joint Submission for further detail. Please also refer to the section below on the application of the precautionary principle.

¹ Note that documentation provided by the EPA and Toro has not been included as supporting documentation as this information is already publically available.

Radioactive tailings from uranium concentration

There has not been a uranium mine in Australia which has been successfully rehabilitated to the point where radiation at the site is at typical background levels or, no higher than pre-mining levels.² Indeed, no uranium mine or mill site has been satisfactorily remediated on a permanent basis anywhere in the world.³

In light of this, any proponent wishing to operate a uranium mine clearly faces a substantial hurdle in demonstrating that it will remediate the mine site to an acceptable standard. Toro has not come close to demonstrating that it will meet such a standard.

For instance, Toro has said that it intends to walk away from the Wiluna site 10 years after mining has finished,⁴ yet the Ranger uranium mine in the Northern Territory is subject to a condition requiring that tailings be physically isolated from the environment for no less than 10,000 years.⁵ Additionally, any seepage of solutes from the Ranger tailings repositories are required to ensure no detrimental impacts for at least 10,000 years.⁶ It must also be pointed out that the half-life of the U-238 isotope, the dominant uranium isotope, has a half-life of 4.5 billion years – meaning the tailings will effectively remain radioactive in perpetuity and much longer than even the time of 10,000 years.

We note that the Legislative Council of Western Australia passed the following motion on 23 May 2012:⁷

That this house recommends, should the government proceed with its intention to license uranium mining in Western Australia, the government adopt equivalent or better environmental management regulatory requirements for any future uranium mine in Western Australia as exists under commonwealth and Northern Territory legislation for the operation of the Ranger uranium mine in the Northern Territory with regard to the disposal of radioactive tailings, including the requirements that –

- (a) the tailings are physically isolated from the environment for at least 10,000 years;
- and

² Mudd, G. M. & Diesendorf, M., 2010, Uranium Mining, Nuclear Power and Sustainability – Rhetoric versus Reality. In “Sustainable Mining 2010 Conference”, Australasian Institute of Mining and Metallurgy (AusIMM), Kalgoorlie, Western Australia, Australia, August 2010, pp. 315-340 (Appendix 2).

³ Spitz, K & Trudinger, J, 2008, *Mining and the Environment: from Ore to Metal*, CRC Press, December 2008, p. 568.

⁴ “Toro will aim to complete relinquishment of tenure within 10 years after cessation of mining.”: Toro, 2011, ERMP document Part 2, Part 26: Post-Mining Land Use and Closure Objectives, page 16-26 at 5.2.

⁵ Commonwealth Government, 30 June 1999, Environmental Requirements of the Commonwealth of Australia for the Operation of Ranger Uranium Mine, retrieved from www.environment.gov.au/ssd/about/legislation/pubs/ranger-ers.pdf. (Appendix 3)

⁶ Ibid.

⁷ Western Australia, *Parliamentary Debates*, Legislative council, 23 May 2012, 2995-6 (Alison Xamon) (Appendix 4).

- (b) any contaminants arising from the tailings do not result in any detrimental environmental impacts for at least 10,000 years.

We submit that Toro's proposal to maintain responsibility for the proposed Wiluna Uranium Mine site for only 10 years after closure of the mine is inadequate. Should the proposed Wiluna Uranium Mine proceed, Western Australian taxpayers should not bear the costs of securing or rehabilitating the proposed Wiluna Uranium Mine from this date onwards, especially given the large amount of community opposition to uranium mining.⁸ Any conditions imposed on the proposal should specify that Toro (or any subsequent tenement holders) will remain entirely responsible for the environmental management of the site for 10,000 years.

It is clear Toro intends to leave the community with a contaminated site as defined under the *Contaminated Sites Act 2003* (WA) and this is not best practice or consistent with the Mine Closure Guidelines adopted by both the EPA and DMP.

Toro's modelling indicates that it is likely that there will be leakage from the tailings storage facility after 1,000 years.⁹ Clearly, this does not meet the standards required of the Ranger uranium mine in the Northern Territory, the standards in the Legislative Council's motion or current State government policy of meeting "world's best practice" in proposed uranium mining.

We submit that the proposed Wiluna Uranium Mine should not be implemented unless Toro can provide a commitment that the tailings will be physically, chemically, biologically and radiologically isolated from the environment for no less than 10,000 years and demonstrate that this will be the case, based on extensive field, laboratory and modelling studies (and demonstrate an ability to finance such an endeavour). The EPA should make this a minimum mandatory requirement – as it is for the Ranger uranium project. Failure to do so is an abject failure to ensure high environmental protection standards.

An experiment conducted in response to submissions failed to demonstrate that the proposed in-pit cut off walls in the calcrete geology could prevent groundwater egress through the excavation and consequently the stored tailings. The consultants summarised the results as "promising".¹⁰ There is therefore a significant risk that Toro's has underestimated groundwater contamination.

The Objective of the State's Mine Closure Guidelines is to ensure that "for every mine in Western Australia a planning process is in place so that a mine can be closed, decommissioned

⁸ Poll from April 2011, as cited in the Joint Submission, section 7.

⁹ Toro, 2012, *Appendix C: Mine Closure and Tailings*, p. C-6.

¹⁰ Toro, 2012, *Appendix B: Mine Dewatering*, p. B-9.

and rehabilitated in an ecologically sustainable manner, consistent with agreed post-mining outcomes and land uses, and without unacceptable liability to the State.”¹¹

It is clear the EPA has ignored its own guidelines in assessing this proposal. There are no agreed post-mining outcomes and land-uses (even provisional ones) and an ongoing liability to the State appears to be inevitable given Toro’s own disclosures.

Transport of uranium oxide concentrate

There are a number of potential environmental impacts and risks associated with the transport of uranium oxide concentrate as proposed by Toro, including the risk of truck accidents and transport security risks. As noted in the Joint Submission, The ERMP and the draft Transport Management Plan that Toro provided as part of the ERMP did not address these risks adequately.

For instance, Toro did not provide any data, analysis or risk analysis on the frequency of truck accidents, despite the fact that there is evidence of regular accidents both in the transport of radioactive materials in Australia and in the transport of toxic chemicals and other substances in Western Australia. As noted in the Joint Submission, The Australian Nuclear Science and Technology Organisation has acknowledged that there are 1-2 accidents or “incidents” every year involving the transportation of radioactive materials.¹² There were 28 serious transport and handling accidents reported in WA during 2009/10 including an LNG tanker roll over, a spill of 35,000 litres of cyanide, a number of acid and acid-waste spills and other serious accidents involving ammonium nitrate, flammable gas and other toxic and hazardous materials.¹³

Further, there are real questions about the capacity to respond to any transport accidents. In a submission to a 2010 Senate inquiry, the Northern Territory government stated that “[t]here [was] very limited capacity within the Northern Territory hospital network outside of Darwin to respond to any radioactive waste incident or accident...The Port of Darwin does not have the resource capacity (expertise or equipment) to respond to a radioactive incident.”¹⁴

Toro has also failed to address risks associated with transport security. For instance, the ERMP (Appendix I) is silent on measures to be taken in the event of a security breach and on measures that could be taken to reduce the risk of a security breach. Further Toro stated that “[i]n the case of loss of containment and security risks]...the environmental impacts would be

¹¹ DMP & EPA, *Guidelines for Preparing Mine Closure Plans*, June 2011 (Appendix 5), http://www.dmp.wa.gov.au/documents/Mine_Closure%282%29.pdf.

¹² ANSTO, 2003, Submission To The Joint Select Committee on the Transportation and Storage of Nuclear Waste, Lucas Heights, Sydney, http://www.ansto.gov.au/_data/assets/pdf_file/0017/34910/transport.pdf. (Appendix 6).

¹³ Legislative Council, Question on notice, Tuesday, 9 November 2010, 3012- Hon Robin Chapple. Answers from the Minister for Mines and Petroleum the Hon. Norman Moore- received Thursday 2 December 2010 (Appendix 7).

¹⁴ “Yellowcake on road to disaster”, *Northern Territory News*, 26 May 2012, http://aap.newscentre.com.au/acf/120526/library/nuclear_issues/all.shtml. (Appendix 8)

low.”¹⁵ No explanations are given for the assertion that "environmental impacts would be low," nor are the potential social impacts adequately addressed. One can envisage a scenario involving theft of radioactive materials followed by their use in a 'dirty' radiation bomb – a scenario with potentially significant environmental and social impacts.

We note that Toro's Transport Management Plan provided as part of the ERMP was stated to be a “preliminary draft that will be progressively developed and finalised for assessment by relevant government regulators for the transport of Uranium Oxide.”¹⁶

It is unclear from Report 1437 whether Toro has subsequently provided a finalised version of the Transport Management Plan or not. The Report states that “[t]he proponent **has** prepared a [Transport Management Plan] which **would** include an Emergency Response Plan (ERP) to address incident management in the event of spillage.”¹⁷ This sentence is internally contradictory – the word “has”, on the one hand, suggests that Toro has prepared a Transport Management Plan, but the word “would”, on the other hand, suggests that the Transport Management Plan has not yet been prepared.

If Toro has indeed *failed* to provide a finalised version of the Transport Management Plan, we submit that the environmental impacts of the Wiluna Uranium Mine with regard to the transport of uranium oxide concentrate have still not been adequately addressed. It is unacceptable to allow the proposal to be implemented but to leave these significant issues to be resolved at a later date.

If Toro *has* provided a finalised version of the Transport Management Plan to the EPA, we submit that the environmental impact assessment process has been flawed in another respect in that the public has not had the opportunity to see this document or comment on it. Additionally, in this sense, the EPA has failed to take into account a relevant consideration, namely the public's comments on the finalised Transport Management Plan, in making its decision. This issue is discussed further below.

Radiation and health

Another risk associated with the Wiluna Uranium Mine which has not been adequately addressed is the risk of radiation exposure.

Toro seeks to downplay the risk of radiation exposure in Appendix D: Further information about Radiation issues.¹⁸ Toro has failed to acknowledge that there are well-founded concerns about the increased risk of exposure to the public and workers. Whether or not Toro believes low levels of radiation to be safe, there are legitimate concerns that anything above background radiation is simply an unacceptable risk. This view is supported by the leading international

¹⁵ Toro, 2011, Appendix I: Technical Report – transport study, p.6.

¹⁶ Toro, 2011, ERMP document, Part 2, Transport Management Plan (section 15), p. 15-5.

¹⁷ EPA, Report 1437, 21 May 2012, p.22.

¹⁸ Toro, 2012, Appendix D: Further information about Radiation issues, p. D-4.

agencies on radiation and health.¹⁹ The risk of exposure to radiation is a risk that Toro are asking the community to take, not a risk that Toro's board of directors will be taking.

We also note that there are serious issues with regard to Toro's credibility and whether it will manage any radiation risks appropriately if the proposal is implemented. For instance, there has been a statement made, and signed by forty-five Australian doctors,²⁰ that raises concerns about Toro's involvement in and financial support for speaking tours for fringe scientists, such as Dr Doug Boreham from Canada, who argue that radiation is not only safe but can be good for your health.²¹ This view has been dismissed in reports published by the United Nations Scientific Committee on the Effects of Atomic Radiation (**UNSCEAR**), the Committee on the Biological Effects of Ionising Radiation (**BEIR**), and the National Academy of Sciences US, all of which conclude that increased exposure to radiation increases the risk of contracting cancer.²² Nuclear Radiologist Dr Karamoskos states: "To promote such marginal views without any counter-balance is self-serving and irresponsible and it may be time for governments to step in to provide that balance. Recent research has heightened rather than lessened concern about the adverse health impacts of low-level radiation."²³

As noted in the Joint Submission, Toro has done nothing to promote the overwhelming weight of scientific opinion that there is no threshold below which radiation is harmless or beneficial.²⁴

Biodiversity

Another example of an area where Toro and the EPA have failed to address the potential environmental impacts of Wiluna Uranium Mine is biodiversity.

¹⁹ UNSCEAR, 2010, Report of the United Nations Scientific Committee on the Effects of Atomic Radiation, http://www.unscear.org/docs/reports/2010/UNSCEAR_2010_Report_M.pdf (Appendix 9); BEIR, 2006, Health Risks From Exposure To Low Levels Of Ionizing Radiation, the National Academies Press; Brenner, J.B. et al, 2003, Cancer risks attributable to low doses of ionizing radiation: Assessing what we really know, *PNAS* November 25, 2003 vol. 100 no. 24 13761-13766 (Appendix 10).

²⁰ Medical Association for the Prevention of War, May 2012, Toro Energy Promotes Radiation Junk Science, <http://www.mapw.org.au/news/doctors-slam-uranium-miner-over-junk-science-radiation-safety>. (Appendix 11).

²¹ See e.g. 2012 Pay Dirt Conference Speaker Profile, Doug Boreham, <http://www.paydirtsuraniumconference.com/prof-doug-boreham/>. (Appendix 12).

²² UNSCEAR, 2010, Report of the United Nations Scientific Committee on the Effects of Atomic Radiation, http://www.unscear.org/docs/reports/2010/UNSCEAR_2010_Report_M.pdf; BEIR, 2006, Health Risks From Exposure To Low Levels Of Ionizing Radiation, the National Academies Press; Brenner, J.B. et al, 2003, Cancer risks attributable to low doses of ionizing radiation: Assessing what we really know, *PNAS* November 25, 2003 vol. 100 no. 24 13761-13766.

²³ Karamoskos, P., Radiating risk and undermining public health, Online Opinion, 13 December 2010, www.onlineopinion.com.au/view.asp?article=11358. (Appendix 13).

²⁴ Even the smallest radiation doses can induce fatal cancers. Thus the UN Scientific Committee on the Effects of Atomic Radiation states that: "The current balance of available evidence tends to favour a non-threshold response for the mutational component of radiation-associated cancer induction at low doses and low dose rates." Likewise, the Committee on the Biological Effects of Ionising Radiation, US National Academy of Sciences, notes that "the risk of cancer proceeds in a linear fashion at lower doses without a threshold and ... the smallest dose has the potential to cause a small increase in risk to humans."

For instance, as noted in the Joint Submission, the major biodiversity issue with this proposal is the ecological integrity of the Lake Way–Marmion salina drainage ecosystem. The ERMP document indicates that there are at least two new species of Brine Shrimp (*Parartemia*) and a unique genus of Ostracod, endemic to this system. The ERMP document has not demonstrated that the locally endemic part of the stygofauna is protected outside the sphere of impact.

The blooming of Lake Way response to rainfall from Cyclone Ilona in December 1988 triggered a significant breeding response from water-birds that depend on the inland salinas for reproduction, including Red-necked Avocets, Gull-billed Terns and possibly Whiskered Terns, as well as attracting migratory shorebirds. These lakes may also potentially provide the conditions that would support breeding Banded Stilts in other years.

Contrary to the position presented in the ERMP, Lake Way and Lake Marmion were connected by surface water flow following the passage of Cyclone Bobby.

Uranium mining and tailings disposal in this region would occur below the water-table and would be connected to the above and below ground aquatic ecosystems following the cessation of mining, if not during the operation phase. There is a significant risk of contaminating the aquatic ecosystems with changes in water chemistry, including the mobilisation of radioactive compounds.

Given that the major risks are associated with both the intermittent surface and subterranean aquatic systems it seems totally illogical that the baseline radiation ecology was based solely on terrestrial flora (mulga/*Tecticornia* shrubs) and an effectively meaningless sample of 'station roadkill'.

There is no data in the assessment on the current radio-ecology of key receptors in the Lake Way environment such as stygofauna organisms of salina macro-invertebrates. The application of the ERICA model (by Toro and the EPA) to assess risks to non-human biota in the context of the arid and saline Lake Way ecosystems is totally irrelevant. No doubt mosses would be heavily contaminated if there were any in this arid area. The algal mats that drive the aquatic ecosystem in this area may well be at least as vulnerable as mosses and lichens and as producer organisms may have the capacity to transfer radiation through the foodchain.

The ecosystem should have been examined for its current background exposure to radioactive elements and radiation movement from cryptogamic / microbial mat producers, aquatic macro-invertebrates and stygofauna to aquatic birds.

The proponents cannot argue that this work could not be carried out as the lake was dry. Heavy rainfall in the eastern Murchison during February/March 2011 and again in March 2012 provided two hydro-periods and the opportunity for in-situ investigation of the aquatic biota.

The Chairman of the EPA was alerted to this fact (and of the necessity to utilise the conditions) by CCWA.²⁵

An understanding of the radiation ecology of the Lake Way-Marmion system is essential to assess and manage uranium mining. The aquatic macro-invertebrates and stygofauna should have been road-tested as potential key ecological indicators. This work was not done despite the opportunity being available and the project should not now be approved in its absence.

During flooding, the presence of biological blooms and the more regular thin salt crusts on Lake Way and at Centipede suggests the lake is biologically productive. Toro has not shown any data on aquatic macro invertebrates high endomycity, or ecological cross sections. This must be addressed and there needs to be a clear commitment and a demonstrated capacity to restore the Lake to its current level of biological diversity and health following any future mining activity.

Stygofauna

As noted in the Joint Submission, the Yilgarn calcretes have been described as “islands under the desert” because of the high numbers of endemic taxa and the diversity of species.²⁶

There have been some studies about the movements of stygofauna that give rise to concern in the face of uranium mining that stygofauna may not be able to travel between calcrete aquifers as there are (in some instances) clay formations which hinder their passage. Further, studies have found unique stygofauna species restricted to particular calcretes a very short distance apart.

A study by Humphrey et al. found that “[t]he calcrete aquifers support diverse biological communities of obligate groundwater animals, largely endemic to a given calcrete body.”²⁷ Further, it found that “[t]he calcretes are effectively isolated from each other in respect of stygofauna, and each calcrete, even those separated by only a few hundred metres, contain separate species.”²⁸

With the exploration activities and interests in uranium deposits in calcrete the impacts on stygofauna species and populations should be a major consideration. The Yilgarn region is an area where there have been some studies done but more research needs to be done to understand the impacts of uranium mining on their habitat, their adaptability and survival.

The current information provided by Toro is deficient in this key area and is an unacceptable basis for any project approved.

²⁵ Email to Dr Paul Vogel from Mia Pepper (CCWA) dated 10 March 2011 (Appendix 14).

²⁶ Cooper, S.J.B., Hinze, S., Leys, R., Watts C. H. S. and Humphreys W. F., 2002, Islands under the desert: molecular systematics and evolutionary origins of stygobitic water beetles (Coleoptera : Dytiscidae) from central Western Australia, *Invertebrate Systematics* 16(4) 589 – 590.

²⁷ Humphreys, W.F., Watts, C.H.S., Cooper, S.J.B., Leijs, R., Groundwater estuaries of salt lakes: buried pools of endemic biodiversity on the western plateau, Australia, *Hydrobiologia*, 626, 79-95, p. 80 (Appendix 15).

²⁸ *Ibid.*, p. 91.

The EPA states in Report 1437 that “a number of stygofauna species were identified within the pit drawdown areas.”²⁹ However, the EPA has nonetheless recommended that the proposal be implemented and stated that the potential impacts on stygofauna can be managed by controlling the groundwater drawdown around the pits, amongst other things. The EPA has based its recommendation on its conclusion that “stygofauna species found within the pit areas are likely to be more widespread.”³⁰ However, the EPA has drawn its conclusions about the risks to stygofauna biodiversity based on a sampling program with low statistical power. The EPA’s conclusions contradict the published data on local endemism in calcrete aquifers, as discussed above.

Water

A final example of an area where Toro and the EPA have failed to properly address the potential environmental impacts of the proposal is in relation to water. As noted in the Joint Submission, the proposal requires a huge amount of water – up to 2.5 gigalitres per annum, which means that the project is four times more water intensive than Olympic Dam per tonne of uranium.

The EPA at page 33 of Report 1437 states that “[o]n the advice from the [Department of Water] the EPA considers that it is unlikely that mining would impact this supply [the Wiluna Town Water Supply] as the water supply is located approximately 12km north and upgradient of the Lake Way deposit”.³¹

We submit that there is no guarantee, and there is no evidence provided that the EPA, DOW or Toro understand the interaction between the water sources in the area. They acknowledge the existence of the various bores and palaeochannels but make no indication they understand the interaction between the bores, the overall impact from all existing water users including existing mines, and make no attempt to address the rate of recharge and abstraction.

The EPA also states that “from year seven onwards the total water supply would be 1.1GL/a source from the mine dewatering (0.4GL/a) and the West Creek borefield (0.7GL/a). The balance of water required (1.4GL/a) would need to be from alternative regional groundwater resources.”³²

The EPA acknowledges therefore that this project will need to find more water after seven years. If that problem has already been identified then it should be the proponent and the EPA's responsibility to make an environmental assessment of any alternative regional groundwater resources now. The EPA’s conclusions in relation to the water supply and consumption are based on hopeful predictions, known shortfalls and little hydrogeological understanding of the region, the existing rate of abstraction and recharge and very little analysis of increased impacts by any future uranium mine at Wiluna.

²⁹ EPA, Report 1437, 21 May 2012, p. vii.

³⁰ EPA, Report 1437, 21 May 2012, p. 47.

³¹ EPA, Report 1437, 21 May 2012, p. 33.

³² EPA, Report 1437, 21 May 2012, p. 33.

EPA has failed to properly apply the precautionary principle

The object of the EP Act is to protect the environment of the State, having regard to certain principles including the precautionary principle.³³

The EP Act sets out the content of the precautionary principle as follows:

1. *The precautionary principle*

Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

In the application of the precautionary principle, decisions should be guided by –

- (a) careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and
- (b) an assessment of the risk-weighted consequences of various options.

The EPA states in its *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002* (**Administrative Procedures 2002**) that its objectives for environmental impact assessment are, amongst other things, “to ensure that best practicable measures are taken to minimise adverse impacts on the environment, and that proposals meet relevant environmental objectives and standards to protect the environment, and **implement the principles of sustainability**” [emphasis added].³⁴

One of the principles of sustainability is the precautionary principle. Thus, the EPA itself considers that its role is to ensure that proposals implement the precautionary principle.

The EPA states in Report 1437 that it has considered various principles including the precautionary principle in relation to the Wiluna Uranium Mine, yet it provides no detail as to how such principles were considered or applied.³⁵ We submit that there is evidence that the EPA has *not* properly applied the precautionary principle to this proposal.

For instance, in the case of potential impacts on *Tecticornia* species, the EPA acknowledges that there are threats of serious or irreversible damage to what are likely to be new *Tecticornia* species:³⁶

The EPA notes however that some *Tecticornia* species could have very specific habitat requirements based on hydrology, salinity and landform, and that a considerable number of

³³ *Environmental Protection Act 1986* (WA) s 4A.

³⁴ EPA, *Environmental Impact Assessment (Part IV Division 1) Administrative Procedures 2002*, p. 4.

³⁵ EPA, Report 1437, 21 May 2012, pp. ii, 50 and Appendix 3.

³⁶ EPA, Report 1437, 21 May 2012, p. 42.

specimens collected in the surveys could not be identified as known species within the existing taxonomic knowledge on *Tecticornia* species and are likely to represent some new species.

The EPA continues:³⁷

Based on the current extent of surveys and taxonomic knowledge of *Tecticornia* species, the DEC has advised that the proposal could result in the loss of unidentified *Tecticornia* species from direct disturbance or groundwater drawdown.

Despite the fact that even the EPA recognises that the proposal would potentially result in the loss of new *Tecticornia* species, the EPA's response is that the proposal could nonetheless be implemented and that the risks to *Tecticornia* species can be managed through certain conditions, which are lacking in several respects (as discussed further below).

According to a recent article in the *Herald Sun*, the EPA Chairman, Dr Paul Vogel, indicated that the reason the EPA chose to deal with risks to *Tecticornia* species in this manner was that there was a lack of full scientific certainty about *Tecticornia* species and the EPA did not want to hold up Toro's investment decision.

In the article Dr Vogel is quoted as stating:³⁸

“There aren't many people who are experts in this so there is a high level of uncertainty about whether there are new species (of tecticornia at the project).”

The EPA did not want to hold up Toro's plans and decided the condition of further research would be enough to protect the possible new species.

“They (Toro) got to a stage where they had collected so much stuff and there was so much uncertainty about taxonomy that couldn't be resolved any time soon, we thought, if that's an 18-month research program, we shouldn't be holding up the investment decision.”

We submit that the EPA has failed to properly apply the precautionary principle, for instance by using the lack of full scientific certainty with regard to the taxonomy of *Tecticornia* species as a reason for recommending that the proposed Wiluna Uranium Mine be implemented. This is a serious deficiency with regard to the environmental impact assessment of the proposed Wiluna Uranium Mine. Accordingly, we submit that a reassessment of the proposal is required.

Another area where we submit the EPA has failed to properly apply the precautionary principle is in the area of stygofauna. As discussed above, “a number of stygofauna species were

³⁷ EPA, Report 1437, 21 May 2012, p. 42.

³⁸ Le May, R., “New species likely at uranium site – EPA”, *The Australian*, 22 May 2012, <http://www.theaustralian.com.au/news/breaking-news/new-species-likely-at-uranium-site-epa/story-fn3dxity-1226363886876>. (Appendix 16).

identified within the pit drawdown areas.”³⁹ Studies have found that unique stygofauna species are restricted to particular calcretes only a few hundred metres apart. Despite this, the EPA has said that it is of the view that “stygofauna species found within the pit areas are likely to be more widespread”⁴⁰ and has recommended that the proposal be implemented.

We submit that in light of the discrepancy between the EPA’s view and the published data, there is at least uncertainty as to the impacts of the proposed Wiluna Uranium Mine on stygofauna. We submit that it would be contrary to the precautionary principle to allow the proposal to be implemented in these circumstances.

EPA has taken into account irrelevant considerations, such as avoiding holding up Toro’s investment decision

We submit that, in making its decision as to whether the Wiluna Uranium Mine should be implemented, the EPA has taken into account irrelevant considerations.

For instance, as discussed above, Dr Vogel is quoted in a *Herald Sun* article as stating that “[t]hey (Toro) got to a stage where they had collected so much stuff and there was so much uncertainty about taxonomy that couldn’t be resolved any time soon, we thought, if that’s an 18-month research program, we shouldn’t be holding up the investment decision.”⁴¹

We submit that holding up Toro’s investment decision is an irrelevant consideration in determining whether the Wiluna Uranium Mine should be implemented or not.

If the EPA considers that a proposal referred to it is likely to have a significant effect on the environment, it is required under section 44(1) of the EP Act to report to the Minister on:

- (a) the environmental factors relevant to the proposal; and
- (b) the conditions and procedures, if any, to which any implementation of that proposal should be subject.

In *Coastal Waters Alliance of Western Australia Incorporated v Environmental Protection Authority*,⁴² the Supreme Court of Western Australia held that the EPA was bound only to consider environmental factors in preparing its report and that issues such as economic loss and commercial considerations were not relevant environmental factors.

In that case, the Supreme Court found that the EPA had exceeded its powers in relation to a proposal for sand dredging by taking into account irrelevant considerations such as the State’s obligations and the proponent’s rights under the State Agreement Act, the proponent’s desire

³⁹ EPA, Report 1437, 21 May 2012, p. vii.

⁴⁰ EPA, Report 1437, 21 May 2012, p. 47.

⁴¹ Le May, R., “New species likely at uranium site – EPA”, *The Australian*, 22 May 2012, <http://www.theaustralian.com.au/news/breaking-news/new-species-likely-at-uranium-site-epa/story-fn3dxity-1226363886876>.

⁴² 90 LGERA 136 (Appendix 17).

for access to more shell sand resources to fulfil its contractual obligations, the employment opportunities of its workforce and the State's obligations to provide an alternative supply of shell sand to the proponent.

We submit that in this case, holding up Toro's investment decision is similarly not an environmental factor, in accordance with the Supreme Court's decision in *Coastal Waters Alliance*. We submit therefore that the EPA has exceeded its powers by taking into account irrelevant considerations and that the proposal must now be reassessed.

There have been major flaws in the assessment process including a failure to comply with the EPA's procedures, a denial of procedural fairness and a lack of transparency

We submit that there have been major flaws in the environmental impact assessment of the Wiluna Uranium Mine which have undermined the integrity of, and public participation in, the process. Such flaws include, but are not limited to, a failure to comply with the EPA's own procedures, a denial of procedural fairness and a lack of transparency.

As discussed above, there are substantial gaps in the information provided by Toro. The ERMP document is deficient in a number of major ways, as outlined in Joint Submission. The EPA itself acknowledged these deficiencies by requesting that Toro provide additional information after the ERMP document was published. Nonetheless, the EPA released the ERMP document to the public despite these clear inadequacies and it was only this incomplete document which the public had the opportunity to comment on during the public comment period between 25 July 2011 and 31 October 2011.

The EPA's act of releasing an incomplete ERMP to the public was inconsistent with the EPA's own Administrative Procedures 2002.

Clause 5.5.4 of the Administrative Procedures 2002 states as follows:

When the EPA is satisfied the ERMP **has addressed all of the environmental factors and studies identified in the Environmental Scoping document**, the proponent will be required to release it for a public review period normally between 10 and 12 weeks. [emphasis added]

We submit that the EPA either was not, or should not have been, satisfied that Toro's ERMP document had addressed all of the environmental factors and that the ERMP document should therefore not have been released to the public until such time as the ERMP document addressed all the environmental factors and studies identified in the Environmental Scoping document. This concern was raised with the EPA during the assessment process⁴³ but the EPA took no action to address this concern.

⁴³ Meeting between CCWA and EPA on 9 February 2012.

We understand that following the EPA's requests for additional information, Toro did provide further information to the EPA. Despite the fact that the EPA has the power to release additional information to the public and despite repeated requests from CCWA, the EPA refused to provide any of this additional information to the public until such time as the EPA released its report.⁴⁴ As such, the public had no opportunity to review the additional information and to make submissions on it during the public comment process and before the EPA made its recommendations that the Wiluna Uranium Mine should be implemented. This raises serious concerns about the transparency and adequacy of the public review process.

The EPA has now, at the same time as releasing Report 1437, released extensive additional information provided by Toro, namely a series of appendices – Appendix A: Water; Appendix B: Mine Dewatering; Appendix C: Mine Closure and Tailings; Appendix D: Radiation; Appendix E: Subterranean Fauna; and Appendix F: Tecticornia. Toro's response to the public submissions has also been released. It is unclear whether Toro has provided other additional information to the EPA which has still not been released to the public.

Toro's Appendices A-F deal with many of the key environmental issues relating to the Wiluna Uranium Mine and are over 400 pages in length in total, while Toro's response to public submissions is 184 pages long. We submit that these additional documents contain substantial new information about the proposal and about the potential environmental impacts and risks of the proposal.

Indeed, the additional material provided by Toro is arguably so substantial that the nature of the proposal is materially different from that outlined in the ERMP document. For example, it is now proposed that the floor of the tailings facility will now be lined with impervious material. This was not in the original proposal and will change the outcomes of tailings management (e.g. drying rates). The efficacy of the cut of walls in the calcrete areas is now questionable.

The additional documents were not made available to the public during the assessment period and therefore were not part of the public environmental review.

It is widely recognised that decisions of administrative authorities should be made in accordance with the principles of procedural fairness. Indeed, the EPA itself has even proposed to amend its *Environmental Impact Assessment Administrative Procedures 2010* (**Administrative Procedures 2010**) to include an express right to procedural fairness.

Procedural fairness requires that the decision-maker disclose material evidence to the parties and provide the parties with a reasonable opportunity to make representations on that material evidence *before* making a decision.

We submit that the EPA has denied the public procedural fairness by refusing to allow the public the opportunity to review Toro's additional information and comment on such

⁴⁴ Meeting between CCWA and EPA on 9 February 2012.

information before the EPA decided in Report 1437 that the proposed Wiluna Uranium Mine should be implemented subject to conditions.

It is clearly not sufficient that the EPA has released additional information provided by Toro to the public *after* it has already made its decision. Not only does this deny the public procedural fairness but it also indicates that the EPA has failed to take into account a relevant consideration, namely the public's comments on the additional documents, in making its decision.

We also note that the public has a mere 14 days to lodge an appeal against the EPA's recommendations from the date that the EPA releases its report. By releasing the proponent's additional information to the public at the same time that it released its report, the EPA has effectively only given the public 14 days to review and analyse Toro's extensive additional information (totalling almost 600 pages of material) before the appeals deadline closes. This is clearly an inadequate amount of time, especially since much of the information provided in Toro's additional documentation is of a highly technical nature and requires expert advice to be sourced. The EPA's practice with regard to Toro's additional information thus has not only compromised the assessment process itself but has compromised the appeals process as well.

Finally, we note that the EPA and Toro have failed to properly consider submissions made during the public process, by treating over 2,000 submissions (majority of which were unique) as one single submission and failing to acknowledge or respond to those submitters. This is a failure of due process by the EPA in assessing this project.

In light of these major flaws in the assessment of the Wiluna Uranium Mine, we submit that the proposal requires reassessment by the EPA. Given the high level of public concern about uranium mining in Western Australia and about the Wiluna Uranium Mine specifically – there were over 2,000 submissions against the proposal – we submit that such reassessment should be by way of a public inquiry.

EPA has unacceptably deferred its responsibilities under the EP Act to other government agencies

In several parts of Report 1437, the EPA states that it is unnecessary for it to recommend conditions on the Wiluna Uranium Mine because the existing regulatory framework is adequate or other agencies have the ability to regulate the proposal.

For instance, on page iv. of Report 1437, the EPA states:

The EPA considers that the existing regulatory framework is comprehensive in regard to transport of [uranium oxide concentrate] and therefore considers it unnecessary to recommend conditions in regard to transport.

Matters relating to monitoring as well as public availability of plans and results can be addressed under existing legislation.

Similarly, on page v of Report 1437, the EPA states:

Based on the design, monitoring and maintenance information provided by the proponent and the advice provided by the [Department of Mines and Petroleum (DMP)], the EPA is satisfied that the [tailings storage facility] can be operated and managed in a safe and secure manner, and can be adequately regulated by the DMP and the Radiological Council.

Further, the report states at Page 51:

The EPA considers that the existing regulatory framework provides a comprehensive legislative system for the regulation of the uranium mine and transport of uranium oxide concentrate, and therefore considers it not necessary to recommend conditions in regard to transport and radiation management activities under the EP Act.

It is a central part of Western Australian environmental law that the EPA has the power and responsibility to assess proposals in Western Australia which are likely to have a significant effect on the environment. The EPA is set up as an independent body with specialist expertise in the area of environmental impact assessment.

As noted above, in assessing a proposal, the EPA is to identify key environmental factors that are relevant to the proposal, assess the proposal against those key environmental factors and, recommend whether the proposal should be implemented or not.⁴⁵ Where it does recommend that a proposal be implemented, it is to provide recommendations about any conditions to which the proposal should be subject.⁴⁶

It is a general principle of administrative law that where a discretionary power is vested in a designated authority, that power may be exercised only by that authority and not sub-delegated to some other body. The EPA's deferring of its responsibilities to other decision-makers such as the DMP and the Radiological Council arguably breaches this principle against sub-delegation.

It is also problematic for several practical reasons:

- (a) The other decision-makers do not have the same expertise as the EPA to assess environmental impacts (nor do they necessarily have the resources);
- (b) Other decision-makers are charged with industry promotion and have a conflict of interest;

⁴⁵ *Environmental Protection Act 1986* (WA) s 44(2a).

⁴⁶ *Environmental Protection Act 1986* (WA) s 44(2a).

- (c) The other decision-makers may decide not to assess environmental impacts adequately or at all. If this happens, the EPA cannot force the decision-makers to reconsider the environment, or even revoke its own decision;
- (d) The other decision-makers do not have the same powers as the EPA to require the proponent to provide information with regard to environmental impact assessment;
- (e) The public is excluded from many other decision-making processes.

The fact that other decision-making processes may apply and thus cause duplication is not a valid reason for the EPA to refuse to perform its statutory function. If duplication is a legitimate concern, then it needs to be addressed by Parliament and not by the EPA.

We submit that if the Wiluna Uranium Mine were to be implemented, then far more conditions would need to be imposed on the proposal after a proper reassessment had been done, particularly in relation to the potential radiation impacts of the proposal. (See further below.) It is unacceptable to allow the proposal to be implemented but to leave these issues to be resolved by other government agencies, which do not have the same expertise or functions with regard to environmental impact assessment, at a later date.

Existing regulatory framework is inadequate

We submit that there are major problems with the current regulatory framework for uranium mining, mining generally and stygofauna protection, as identified by recent independent reviews. We submit therefore that a decision should not be made as to whether the Wiluna Uranium Mine proposal should be implemented until at least such time as these problems have been addressed.

Uranium mining

In November 2008, the Liberal-National Government lifted an eight-year ban on uranium mining in Western Australia.⁴⁷

In May 2010, the Minister for Mines and Petroleum, the Hon. Norman Moore, stated that “best practice regulation will govern any future uranium mining.”⁴⁸

However, a review of uranium mining regulation in Western Australia conducted in April 2012 by the Uranium Advisory Group stated that “[a]t present, **the overwhelming conclusion** of

⁴⁷ Premier of Western Australia; Minister for State Development, 17 November 2008, *Liberal-National Government lifts uranium mining ban*, retrieved from <http://www.mediastatements.wa.gov.au/Pages/default.aspx?ItemId=130890>. (Appendix 18).

⁴⁸ Minister for Mines and Petroleum, 20 May 2012, *State Budget 2010-11: World’s best practice will rule uranium sector* [Media statement], retrieved from <http://www.mediastatements.wa.gov.au/Pages/WACabinetMinistersSearch.aspx?ItemId=133544&search=uranium&admin=Barnett&minister=Moore>. (Appendix 19).

the review **is that the current framework**, albeit robust and subject to regular updating with national guidelines **does not fully deliver World Best Practice.**⁴⁹ [emphasis added]

The Uranium Advisory Group (UAG) identified a number of areas where the existing regulatory framework was inadequate, including “the uneven adherence to risk-based assessments, the lack of legislative and policy support for open publication of regulatory compliance data, and the lack of the required quality management systems in some agencies.”⁵⁰

It is in this context that the EPA has recommended that the proposed Wiluna Uranium Mine, the first proposal of its kind in Western Australia, be implemented. Clearly, if the Minister were now to decide that the proposed Wiluna Uranium Mine be implemented, the government would be renegeing on its promise that best practice regulation would govern any future uranium mining.

The UAG is not the only source of criticism of the existing regulatory framework for uranium mining.

As noted in the Joint Submission, Nick Tsurikov, a consultant at Calytrix Consulting, in a 2009 report entitled “Uranium Exploration: Safety, Environmental, Social and Regulatory Considerations”, set out a number of key issues regarding radiation management and standards in Western Australia, including:

- inadequacies in radiation management plans approved prior to 2008;
- incorrect assumptions and false values in relation to radiation management regulations;
- inconsistency between regulations on dose limits in guidelines and regulations;
- uncertainties regarding applicable regulations for the transport of uranium core samples and on limitations of uranium concentration in materials being transported;
- the need to establish an effective system of inspections of uranium exploration sites and uranium mines;
- a skills shortage of radiation safety officers and insufficient accredited training programs to address this;
- contradictions in radiological rehabilitation requirements.

In addition to these criticisms of the regulation of uranium mining in Western Australia specifically, there have been criticisms of the uranium mining industry across the country.

For instance, a 2003 Senate inquiry described the uranium mining industry as an industry characterised by “a pattern of underperformance and non-compliance” and concluded

⁴⁹ Uranium Advisory Group, April 2012, *Independent Review of Uranium Mining Regulation*, retrieved from http://www.dmp.wa.gov.au/documents/UAG000408v05_April_12-pmd_v2.pdf, p. vii. (Appendix 20).

⁵⁰ Ibid.

“changes were necessary in order to protect the environment and its inhabitants from serious or irreversible damage.”⁵¹

Mining generally in Western Australia

Not only is the regulatory framework with regard to uranium mining inadequate, we submit that the regulatory regime for mining in Western Australia is also seriously lacking.

For instance, as noted in the Joint Submission, in a review of the State’s regulatory regime for mining in Western Australia,⁵² the Western Australian Auditor General identified a number of key areas where the government agencies that regulate the mining industry are overwhelmed and are failing to adequately monitor and assess mining compliance and environmental performance.

Some key areas of concern that have been identified by the Auditor General include:

- DMP's planning and management of its inspections did not define the frequency of inspections needed to assure compliance with conditions; did not include risk assessment to select sites; did not have clear inspections guidelines or criteria to ensure consistency with inspections, and did not have clear controls to ensure inspection reports are consistent with authorised enforcement action.⁵³
- Environmental enforcement has weaknesses: the enforcement policy relies on voluntary compliance and staff are advised to apply the lowest level of enforcement action that will achieve compliance, placing too much reliance on staff judgment – this results in inconsistent and inappropriate action.⁵⁴

One specific area which we submit is particularly lacking is in the regulation of tailings. The Guidelines on the Safe Design and Operating Standards for Tailings Storage (**Tailings Guidelines**)⁵⁵ date back to 1999. CCWA has met with the DMP on two separate occasions in 2012 to discuss the UAG and the outcomes of their investigation into WA uranium regulations.

In those meeting it was acknowledged that there are deficiencies in the Tailings Guidelines, which are also referred to in the UAG report.⁵⁶ The UAG report commented that the DMP was upgrading the Tailings Guidelines but that the draft document they were privy to suggests

⁵¹ Inquiry into Environmental Regulation of Uranium Mining (2003). Senate Environment, Communications, Information Technology and the Arts References Committee (ECITA) References Committee. (Appendix 21).

⁵² Western Australian Auditor General, 'Ensuring Compliance with Conditions on Mining', Report 8, September 2011, www.audit.wa.gov.au/reports/pdfreports/report2011_08.pdf. (Appendix 22).

⁵³ Ibid, pp. 27-29.

⁵⁴ Ibid, pp. 29-30.

⁵⁵ Department of Minerals and Energy, Guidelines on the Safe Design and Operating Standards for Tailings Storage, May 1999, http://www.dmp.wa.gov.au/documents/Guidelines/MSH_G_SafeDesignAndOperatingStandardsForTailingsStorage.pdf.

⁵⁶ Uranium Advisory Group, April 2012, *Independent Review of Uranium Mining Regulation*, retrieved from http://www.dmp.wa.gov.au/documents/UAG000408v05_April_12-pmd_v2.pdf, p. 61.

that the changes are still “lacking protocols for dealing with this specific type of wastes”. The report goes on to suggest other areas that must be addressed with regard to tailings guidelines. We submit that this is another example of existing regulations that are deficient, out-dated and do not meet world’s best practice.

Stygofauna

As noted in the Joint Submission, the EPA is currently undertaking a review of its position on subterranean fauna. In CCWA’s view, this is an appropriate move towards the more effective protection of stygofauna, which to date has been sadly ineffective. CCWA met with the EPA to discuss this review on 5 October 2011. In that discussion the following issues were raised:

- The general ineffectiveness of current monitoring programs and documentation of the impact on subterranean populations.
- Lack of independent and peer reviewed studies.
- Limited understanding about the impacts on populations and species.
- Occurrence of species outside the footprint of development.
- Information standardisation.

While the EPA's position is under review and changes are being considered to the current management systems, an approval of the Wiluna mine would essentially leave the population of stygofauna at Lake Way to be protected under part of the WA environmental impact assessment process that the EPA has already identified as weak and in need of redress. With the high number of taxa at Lake Way and Centipede, an approval to mine at Lake Way may be an approval that causes the extinction of a number of endemic species of Stygofauna in that ecosystem. This is a key issue of concern that needs attention.

In light of these many inadequacies in the existing regulation of uranium mining, mining generally and stygofauna protection, we submit that it is not appropriate for a uranium mining proposal such as the Wiluna Uranium Mine, which requires the highest level of regulation, to be implemented.

There are good policy reasons for the proposal not to be taken into account, such as high-level nuclear waste, nuclear accidents and weapons proliferation

The proposed Wiluna Uranium Mine raises not only local environmental issues, but also much broader issues such as the global implications of uranium export – including high-level nuclear waste, nuclear accidents and weapons proliferation. We submit that these issues ought to be taken into account when determining whether the proposed Wiluna Uranium Mine should be implemented and indeed are good policy reasons for the proposed Wiluna Uranium Mine not to be implemented.

As noted in the Joint Submission, uranium exported from Wiluna will at best end up as high-level nuclear waste. At worst it will end up as fissile (explosive) material used in nuclear

weapons. There is also the potential for uranium exported by Toro to be implicated in a nuclear disaster such as that unfolding in Fukushima, Japan.

As noted, no country has a repository for high-level nuclear waste. With regard to safeguards against weapons proliferation, the recently-retired Director General of the International Atomic Energy Agency (IAEA), Dr Mohamed El Baradei, has noted that the IAEA's basic inspection rights are "fairly limited", that the safeguards regime suffers from "vulnerabilities" and "clearly needs reinforcement", and that the safeguards system runs on a "shoestring budget".⁵⁷

Toro has stated that it has "initiated sales discussions with potential customers"⁵⁸ but has not provided details of who those potential customers are. We submit that Toro should be required to provide such details so that the broader implications of the Wiluna Uranium Mine can be assessed. For instance, are the potential customers located in nuclear weapons states? Are they in states that are blocking the Comprehensive Test Ban Treaty and the Fissile Material Cut-Off Treaty? Are they in undemocratic, secretive or repressive states? Are they in states that have not signed the Nuclear Non-Proliferation Treaty?

We submit that the proposed Wiluna Uranium Mine should be reassessed by way of a public inquiry so that these important issues can be properly addressed.

Conditions recommended by EPA are seriously inadequate

As discussed above, we submit that there have been such serious problems with the environmental impact assessment of the Wiluna Uranium Mine to date that the proposal requires reassessment. Further, we submit that the conditions recommended by the EPA in Report 1437 are seriously inadequate.

For instance, as discussed above, the Western Australian government made a commitment in May 2010 that best practice regulation would govern any future uranium mining. Further, the Legislative Council of Western Australia recently passed a motion, and it is Liberal party policy, that the government adopt equivalent or better environmental management regulatory requirements for any future uranium mine in Western Australia as exists under commonwealth and Northern Territory legislation for the operation of the Ranger uranium mine in the Northern Territory with regard to the disposal of radioactive tailings, including the requirements that –

- (a) the tailings are physically isolated from the environment for at least 10,000 years; and
- (b) any contaminants arising from the tailings do not result in any detrimental environmental impacts for at least 10,000 years.

⁵⁷ Statements from Dr. El Baradei posted at www.iaea.org/About/dg/elbaradei/index.html.

⁵⁸ Mining Journal Online, Company News: Toro Energy, 6 April 2011, <http://www.mining-journal.com/company-news/toro-energy>.

It is quite extraordinary in this context that the EPA has not recommended that *any* conditions be imposed on the proposal with regard to the potential impacts of radiation. Clearly the EPA's recommendations with regard to conditions fall well short of the government's supposed commitment to best practice regulation.

We submit that, at the very least, the Wiluna Uranium Mine should be subject to a condition that the tailings will be physically, chemically, biologically and radiologically isolated from the environment for no less than 10,000 years and that (a) any contaminants arising from the tailings do not result in any detrimental environmental impacts for at least 10,000 years.

In addition to the EPA not having recommended that any conditions be imposed with regard to certain environmental impacts, such as radiation, we submit that the conditions that the EPA has recommended are lacking in numerous respects. We set out several examples below.

Tecticornia

As discussed above, despite the acknowledged risk that the Wiluna Uranium Mine will potentially cause the loss of new *Tecticornia* species which have never been found anywhere else other than in the project area, the EPA has nonetheless recommended that the proposal be implemented, subject to conditions which are relatively weak.

For instance, Conditions 6-2 and 6-3 impose an obligation on Toro to prepare a Vegetation and Flora Monitoring Plan prior to ground-disturbing activities and to implement that plan. However, under Condition 6-4, if the results of the monitoring indicate a decline in the health of the *Tecticornia* species, then Toro is not obliged to stop its ground-disturbing activities; it is merely required to provide a report to the CEO within 21 days of the decline.

Similarly, under Condition 6-5, even once the CEO receives Toro's report as required under Condition 6-4 and determines that the decline in health of the *Tecticornia* species has been caused by the activities undertaken in implementing the proposal, Toro is not necessarily required to stop its ground-disturbing activities – it is merely required to implement remedial actions *as proposed by Toro* and to continue to implement such actions until the CEO determines.

Another weakness of Condition 6-2 is that the general obligation to prepare a Vegetation and Flora Monitoring Plan prior to ground-disturbing activities is subject to the exception “unless otherwise approved by the CEO.” We submit that Toro should in *all* cases be required to prepare a Vegetation and Flora Monitoring Plan prior to ground-disturbing activities – there should be no exception.

Further, although Toro is required to prepare the Vegetation and Flora Monitoring Plan for approval by the CEO, Conditions 6-2 and 6-3 are worded in such a way that it is not clear that this plan must be approved *prior* to ground-disturbing activities. Additionally, there is no public involvement in the process of deciding on the content of the Vegetation and Flora Monitoring Plan, which we submit there should be.

Finally, there is some question about whether these conditions referring to “*Tecticornia* dominated vegetation” are even enforceable given that they do not refer to the specific species of *Tecticornia* which must be protected – they may be void for uncertainty. We submit that the area of vegetation to be protected needs to be represented on a map.

These comments about the weakness of Conditions 6-2 to 6-5 can be applied equally to Conditions 7-1 to 7-4.

General conditions

The EPA’s proposed Condition 4-1 under the heading “Compliance Reporting” requires Toro to prepare a compliance assessment plan to the satisfaction of the CEO of the OEPA. Toro is then to report in accordance with that plan. However, Toro has a large degree of discretion in determining the content of the compliance assessment plan – it is up to Toro to determine how frequently the reports are provided to the OEPA, the approach and timing of compliance assessments, how potential non-compliances are reported, to what extent the reports are made publically available and so forth.

Obviously the compliance assessment plan must be to the satisfaction of the CEO of the OEPA, but there is no provision for public involvement in determining whether the compliance assessment plan is acceptable or not. We submit that there should be public involvement in this process given the unique nature of this proposal and the high level of community concern about uranium mining and about the proposed Wiluna Uranium Mine specifically. We also submit that Condition 4 itself should provide for the manner in which Toro’s compliance reports are to be made publically available – this should not be left up to Toro to determine.

Another weakness of Condition 4 is that even where there is a potential non-compliance, condition 4-3 merely requires Toro to notify the CEO of the OEPA within seven days of that non-compliance being known. Seven days is a long time to pass before any non-compliance is reported to the OEPA. We submit that it is too long and that it should be reduced to 24 hours. Further, we submit that the Condition should specify that where there is a non-compliance, Toro must undertake such remedial action as specified by the CEO of the OEPA and must cease its operations until otherwise directed by the CEO, should the CEO deem this necessary.

There are also a number of weaknesses with Condition 5, which provides for certain of Toro’s data to be made available to the public. For instance, under Condition 5.2, Toro is able to request that certain data not be released to the public – thereby removing transparency around the environmental impacts of the proposal. We submit that where such a request is made, the public should be notified and should be able to provide submissions as to why the information should be released.

Further, Condition 5-1 only requires “validated environmental data” to be made publically available. We submit that the condition should require that all environmental data be made

publically available, validated or otherwise, including raw data (on request). We submit that the condition needs to be strengthened in this manner in order to allow the public to determine which assumptions Toro has made and whether Toro has analysed the raw data correctly.

Conclusion

For all of the above reasons, we submit that the Minister should remit the Wiluna Uranium Mine proposal to the EPA for reassessment under section 101(1)(d)(i) of the EP Act by way of a public inquiry. The reassessment should not occur until such time as Toro provides further information about the environmental impacts of the Wiluna Uranium Mine to address the many gaps and deficiencies in the information provided to date.

However, should the Minister be of the view, and ultimately decide, that the Wiluna Uranium Mine may be implemented subject to conditions (a decision which CCWA strongly opposes), we submit that the conditions recommended by the EPA in Report 1437 are seriously inadequate and the Minister should vary the EPA's recommendations by changing the implementation conditions under section 101(1)(d)(ii) of the EP Act to make them far more stringent. CCWA respectfully requests that it and other stakeholders be offered the opportunity for further comment on any new or amended conditions.

Thank you for considering this appeal.

Should you require any further information, I can be reached on 9221 3030, at jsmith@edowa.org.au or at the address listed above. Please note that I am only in the office on Wednesdays and Fridays, however a message can be left for me at other times. Alternatively, you can contact Mia Pepper at CCWA on 9420 7266 or 0415 380 808.

Yours faithfully,

Jessica Smith
Outreach Solicitor
Environmental Defender's Office WA (Inc)

Appendices attached