

12th February 2023

Northern Territory Environment Protection Authority

GPO Box 3675

Darwin NT 0801

Dear Sir/Ms

I am seriously concerned that the Singleton horticulture proposal poses a significant and unacceptable impact to the environment including the human environment.

The proposal poses risk of serious or irreversible environmental harm including to groundwater dependent ecosystems, sacred sites, habitat for threatened species, including the bilby and to human health.

the NT Water Act 1992 does not provide the same level of public involvement as the NTEPA Act, resulting in the views of the 23,355 people who petitioned the Controller to refuse the licence, not even being acknowledged in the Controller's Notice of Decision.

Australia is the driest continent and the water table below this proposal is expected to fall by 30 to 50 meters over the life of the project This is mining water.

It is well understood that arid and semi-arid environments in Australia are already undergoing ecosystem collapse from the impacts of climate change, such as changes to temperature and precipitation, and regional factors such as land clearing and habitat loss, invasive species and impacts from agriculture and industry, including water extraction. The substantial groundwater extraction associated with this Project, as well as the land clearing it requires, will further threaten these at-risk ecosystems.

Australia makes up 5% of the worlds landmass yet we have 34% of the Worlds Uranium reserves including in the NT.

The water extracted will inevitably contain Uranium and its progeny or daughters including Thorium, Radium, Radon, Lead 210 and Polonium 210.

These radioactive elements will be absorbed by the leaves and roots of the fruit and vegetables grown thus entering the food chain.

Polonium 210 is more radioactive than Cesium137. Most people have heard of Cesium137 and fear it greatly because of its ability to cause genetic mutation, leukemia and cancer. Radioactivity of Caesium 137 is 34TBq per gram

=34,000 GBq per gram which is 3,400 times more than 50 year old High level nuclear waste.

Polonium 210 at 166 TBq per gram is 4.88 times more dangerous than Cesium 137.

Health consequences

Embryos 50 times more vulnerable to genetic mutation than adults

Children; 10 times more vulnerable to genetic mutation than adults

Latency period for tumour formation and leukaemia shorter in children than in adults.

And shorter still in embryos.

Genetic mutations passed on to succeeding generations.
Permissible releases of radioactive material and decay products or progeny cumulative on grass, leaf vegetables, grain, fruit, berries, tobacco leaves, soil and water.
Bio accumulation and concentration by animals in milk and flesh.
Bio accumulation and concentration in fish, crustaceans and mammals.
Bio accumulation and concentration in plants.
Average life expectancy in Ukraine and Belarus has REDUCED 4 yrs to age 68
Each year 6000 babies are born with “Chernobyl Heart” Half of them die!
Alpha particles can rip through 2000 DNA Helixes, 200 nerve cells & 39 sperm cells.
Beta particles can rip through 43 Human egg cells, 838 sperm cells, 4,300 nerve cells and 43,000 DNA helixes!

Between 1982 and 2010, the number of new cancer cases in Australia more than doubled (from 47,388 to 116,580 cases).
In the 5 years from 2004 to 2008, the age-standardised incidence rate of all cancers combined was:

□ significantly higher for Aboriginal and Torres Strait Islander Australians than their non-Indigenous counterparts (461 and 434 per 100,000 respectively) (New South Wales, Queensland, Western Australia and the Northern Territory).

This is because 26.3% of NT population is Aboriginal.

Cancer and other neoplasms cost our health care system \$3,000 million in 2013-14

Do not be fooled; uranium mining, gas fracking and extraction of underground water containing radioactive materials is merely a conduit to the contamination of our hinterland for all time.

The Project is located in the Arid Zone of the NT, and specifically within the Western Davenport Water Control District. Groundwater recharge in the Western Davenport region is “highly episodic” and “rare, peak rainfall years contribute disproportionately to groundwater recharge while in an annual year, minimal, if any, groundwater recharge occurs”. There have only been three significant recharge events in the last 100 years. It is simply irresponsible to grant a licence of this volume in these circumstances. Cooke and Keane assessed the impacts of salinity to the area in their report, “The Risk of Salinity due to Irrigation Developments in the Western Davenport Basin, Northern Territory.” The authors conclude Singleton Station and the surrounding area is at ‘high risk’ of increased salinity after 30 years of groundwater extraction which will have “very significant implications for long-term viability of irrigated horticulture.” Key findings in this report were ignored by the proponent in their referral to the NT EPA.

I respectfully request that you ensure that the most rigorous level of environmental impact assessment (Tier 3) is applied.

Thank you for taking the time to consider this letter. I look forward to your response.

Yours sincerely