

Submission on Referral

Provaris Energy Ltd – Tiwi H2 Project

This submission is made under regulation 53 of the Environment Protection Regulations 2020

Government authority: Power and Water Corporation

Summary:

- *Potential for contamination of the community drinking water source and borefield* - PWC has concerns in regards to the general proximity of the H2 production precinct footprint to the current production bore wellhead protection zones.
- *Transmission mains* - A transmission line corridor for power is proposed parallel to an existing road and very close to existing PWC water supply production bores and both power and underground water mains transmission infrastructure.
- *Construction water* - There is ambiguity regarding construction water for the initial phases of construction.

Section of Referral	Theme or issue	Comment
Main report – section 9.3	Protection of groundwater resource.	<ul style="list-style-type: none"> • <i>Potential for contamination of the community drinking water source and borefield</i> - PWC has concerns in regards to the general proximity of the H2 production precinct footprint to the current production bore wellhead protection zones (see figure 9.3 of main report), particularly currently unequipped but likely future production bore (RN040186) which appears to be immediately adjacent to the precinct. Power and Water’s major concern relates to potential for contamination of the groundwater source from storage or use of hazardous substances within the precinct. Hazardous substances required for Hydrogen processing are listed (Table 5-1) and whilst storage and handling of these substances are proposed to be undertaken in accordance with Australian standards and guidelines (Section 5.8) any accidental spills in this area could be detrimental to Pirlangimpi’s drinking water supply. Power and Water pumps water from an unconfined aquifer system at relatively shallow depths. While groundwater flow gradients are believed to be generally away from the bores (& towards the ocean), there is still significant potential for spilled contaminants to impact the drinking water source and borefield. Documentation provided does not specifically address this potential risk, though Provaris notes that it will evaluate the potential of contamination of the water source from project activities. <p>Similarly potential risk mitigation options are not discussed, though documentation states ‘<i>Provaris is in consultation with PWC in regards to this and would be willing to establish new wellheads, at its cost, to avoid any impacts on the Pirlangimpi water supply.</i>’ This particular bore (RN040186) has already been tested and proven to provide adequate volumes for future needs of the community. Replacement would be highly problematic and costly and there is no guarantee that any new bore that would be drilled, would be successful at providing adequate volumes of water to the community. Power and Water’s preference in this</p>

Section of Referral	Theme or issue	Comment
		<p>regard is that the project footprint is relocated away from this wellhead protection zone and that no new bores are drilled to replace this bore.</p> <p>Power and Water requires assurance and certainty that the proposed development will not impact the viability of the drinking water source and borefield. This should be in the format of a groundwater contaminant (fate and transport) risk assessment by an appropriately qualified and experienced practitioner. Power and Water also requests further clarification regarding the stated offer to 'establish new wellheads'.</p>
		<ul style="list-style-type: none"> • <i>Transmission mains</i> - A power transmission line corridor is proposed along Pirlangimpi road and as per figure 9.3 – main report, is very close to existing water supply production bores and other PWC transmission infrastructure (power and underground water mains). PWC would appreciate clarification as to how Provaris Energy's proposed power transmission lines will interact with current PWC infrastructure?
		<ul style="list-style-type: none"> • <i>Construction water</i> - With regards to construction water there is ambiguity regarding construction water for the initial phases of construction. Power and Water assumes that prior to commissioning of the proposed desalination facility water will initially be sourced from groundwater bores, whilst the desalination plant is being commissioned. Clarification is requested regarding proposed supply bore location, estimated volumes and pumping duration, as prolonged use could potentially impact community water resource security.