O VHM Limited

Why the Goschen Rare Earths and Mineral Sands Project was referred

On 10 October 2018, the Victorian Minister for Planning decided that an Environment Effects Statement {EES) was required for the proposed Goschen Rare Earths and Mineral Sands Project.

Reasons for the Minister's decision

The project has the potential for a range of significant environmental effects. In particular, the project, as proposed, is likely to have significant effects on:

- A very large extent of native vegetation and associated biodiversity values, including listed threatened species and communities
- Surface water and groundwater (ie hydrology, quality, availability) and protected beneficial uses
- Existing land uses, amenity (ie air quality, noise and traffic) and landscape values of the project area and those associated with the broader area
- Aboriginal cultural heritage values

An integrated assessment is necessary to ensure the range of likely adverse effects and related uncertainties are sufficiently investigated, in terms of both their extent and significance, and how significant effects can be avoided and minimised to acceptable levels.

An EES would enable a transparent and rigorous process for consideration of potentially significant adverse effects of the project, prior to any relevant statutory decision-making, including under the *Mineral Resources (Sustainable Development) Act 1990, Aboriginal Heritage Act 2006* and *Water Act 1989.*

The Goschen project was also referred to Federal government under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Federal Minister for the Environment determined that the project is a controlled action needing approval under the EPBC Act due to:

- Ramsar wetlands (sections 16 and 178)
- Listed threatened species and communities (sections 18 and 18A)
- Radiation (sections 21 and 22A)

The Goschen project will be assessed under the assessment bilateral agreement with Victoria.

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	2018 Referral	Project to be assessed in EES
get minerals	Mineral sands and rare earth	No change
Dre reserve 198.7 Mt		198.7 Mt
Project area	8,300 hectares	1,479 hectares
Project life	30 years	~20 years
throughput	5-10 Mtpa	5 Mtpa (+/- 10 percent)
Processing	 Mining Unit Plant (MUP) Wet Concentrator Plant (WCP) Mineral Separation Plant (MSP) Phase 1: MUP WCP Rare earth mineral concentrate flotation circuit Feed Preparation Plant (FPP) Phase 1A: Hydrometallurgical circuit Phase 2: as per Phase 1& 1A plus: MSP 	
Products	Zircon and rutile concentrate Titanium concentrate Rare earth mineral concentrate	 Phase 1: Zircon/titania heavy mineral concentrate (HMC) REMC Products Phase 1A: as per 1 plus Mixed rare earth carbonate concentrate Phase 2: as per 1 & 1A plus Premium zircon Zircon concentrate HiTi/rutile HiTi leucoxene LoTi leucoxene Low chrome ilmenite
Dewatering	Mine pit dewatering	No groundwater dewatering Dewatering limited to tailings in pit
Vater supply from Murray River and groundwater from local bore field		Pump station at Kangaroo Lake (Goulburn Murray Water) with 37-kilometre water supply pipeline
equirements	Up to 5.5 GL/annum	~4.7 GL/annum
of products	Rail or road transport	No change
Power Under investigation - access to high voltage transmission, solar or on site power station		Dual fuel on site generators with future ambitions to utilise solar power - diesel and gas (with LNG storage)
Port	To be determined	Port of Melbourne (current preferred)