

Statement of Reasons

TNG LIMITED – DARWIN REFINERY

PROJECT

The Proponent, TNG Limited, proposes to construct and operate the Darwin Refinery at Middle Arm, Darwin Harbour. The Darwin Refinery would process magnetite concentrate railed 1400 km from the Mt Peake Project, which is located 280 km northwest of Alice Springs.

The Darwin Refinery would produce vanadium pentoxide, titanium dioxide pigment and pig iron. The products would be exported via East Arm Wharf to international customers. The Darwin Refinery and associated access roads, supporting infrastructure and services comprise a development footprint of approximately 140 ha; 35 ha has been disturbed previously by extractive activities.

Construction of the Darwin Refinery is scheduled to commence in late 2016, with first production in late 2018, subject to statutory approvals and approval of the Mount Peake Project. The design life of the Darwin Refinery would be 40 years, which is longer than the current estimated 15 year production life of the Mount Peake Project. The Darwin Refinery is expected to process 894 000 t per annum of magnetite concentrate during years one to four, increasing to 1 788 000 t per annum from year 5 onwards.

The Proponent submitted the Notice of Intent (NOI) for the Darwin Refinery to the Northern Territory Environment Protection Authority (NT EPA) on 27 October 2015 for consideration under the *Environmental Assessment Act* (EA Act).

CONSULTATION

NT EPA staff have reviewed the NOI in consultation with Northern Territory Government (NTG) advisory bodies, as required by clause 8(1) of the Environmental Assessment Administrative Procedures.

JUSTIFICATION

Consultation with NTG advisory bodies identified that there is a risk of significant impact to the environment from the Darwin Refinery. In particular:

- The proposed Darwin Refinery site is located immediately adjacent to the Elizabeth River, Darwin Harbour. Darwin Harbour is recognised nationally for significant mangrove communities¹ and biodiversity values.² The NOI stated that the Darwin Refinery would not impact the coastal fringes, including the mangrove communities, because dewatering during construction, clearing of wetland habitat or operational waste discharges would not occur. However, vegetation clearing activities and the operation of the Darwin Refinery, including the transport and loading of product at the site, would require procedures to

¹ Northern Territory Government. *Sites of Conservation Significance Darwin Harbour*. Available at: http://www.lrm.nt.gov.au/_data/assets/pdf_file/0020/13934/06_darwin.pdf

² Smit, N., Penny, S.S. and Griffiths, A.D., 2012. Assessment of marine biodiversity and habitat mapping in the Weddell region, Darwin Harbour. Report to the Department of Lands, Planning and Environment. Department of Land Resource Management, Palmerston. Available at: http://www.lrm.nt.gov.au/_data/assets/pdf_file/0006/350385/Weddell-Marine-Biodiversity-and-habitats-2012-optimised.pdf

address potential uncontrolled emissions or discharges, dust and spills entering the Elizabeth River.

- The proposed Darwin Refinery is situated within 3 km of the suburb of Bellamack and within 4 km of the proposed Weddell urban area. There is the potential competing interest in respect of the siting of heavy industry and proximity to residential areas. The potential impact of noise, lighting and emissions from the operations on existing residents and the proposed action impacting the potential future development of the area.
- Atmospheric emissions from the Darwin Refinery are expected to be comprised of carbon dioxide, nitrogen, water and oxygen; it is unknown whether particular noxious or toxic emissions are anticipated. The NOI identified that further information is required to define and quantify the atmospheric emissions generated from the refinery process, including modelling and the identification of and potential exposure to sensitive receptors.
- The NOI identified that the waste streams generated during the operations of the Darwin Refinery and disposal options are currently unknown. There is a risk that inappropriate identification of waste streams and poor waste management could result in a significant impact on the environment.
- Risks associated with the transportation of hazardous goods on public roads and increased traffic combined with existing and future traffic, such as traffic to the INPEX site.
- The Darwin Refinery will require significant quantities of gas (62 PJ per annum), and other services, to operate. It is likely that this will increase the demand and/or impact on existing services and infrastructure, including water supplies. The NTG advisory bodies identified that the NOI lacked sufficient information to address service requirements, including availability of gas and capacity of current infrastructure/services to meet the demands of the Darwin Refinery.

DECISION

The NT EPA considers that there is a risk of significant impact to the environment from the proposed action and a number of risks cannot be adequately characterised without further studies and a more comprehensive assessment. Therefore, the proposed action requires assessment under the EA Act at the level of an Environmental Impact Statement.



HON GARY NAIRN AO
MEMBER

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

15th JANUARY 2016