ntepa Northern Territory Environment Protection Authority

Statement of Reasons

NORTHERN TERRITORY IRON ORE PTY LTD – ROPER VALLEY IRON ORE PROJECT

PROJECT

Northern Territory Iron Ore Pty Ltd (the Proponent), submitted the Notice of Intent (NOI) for the Roper Valley Iron Ore Project (the Project) to the Northern Territory Environment Protection Authority (NT EPA) on 23 March 2017 for consideration under the *Environmental Assessment Act* (EA Act). The proposal involves the mining, beneficiation and shipment of iron ore in the Roper Gulf region of the Northern Territory.

The Project expects to produce 150 – 300 million tonnes of marketable iron ore (56 – 58% Fe) over an approximately 20 year mine life. The Project includes several components:

- mining of iron ore from open pits (3 - 10 pits) within mining areas situated south of the Roper Highway on Exploration Licences EL24101 (Deposit C) and EL24102 (Deposits W and X). The footprint of the proposed mining component is approximately 2500 hectares
- processing (screening, crushing and beneficiation) of iron ore
- a purpose-built barge loading facility located 15 km upstream from the Roper River mouth with a footprint of approximately 100 hectares
- transport of iron ore product from the three mining deposits along up to 235 km of upgraded public roads to the barge loading facility from which it will be barged approximately 40 km offshore in the Gulf of Carpentaria for transhipment to ocean going vessels.

The Project has an estimated maximum annual water requirement of 2000 million litres (ML). The proponent will investigate water source options including extraction from the Roper River and the harvest of surface waters from dams.

On the 29 June 2017 the Project was determined to be controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the relevant controlling provisions being:

- Listed threatened species and communities (sections 18 & 18A)
- Listed migratory species (sections 20 & 20A)
- Commonwealth marine areas (sections 23 & 24A).

The Project is related to the previously assessed and approved action referred to as the Sherwin Creek Iron Ore Project, in which Sherwin Iron Pty Ltd proposed to mine using open cut methods, direct shipping ore from Deposit C of the Sherwin Creek Mining Area (MLA29584) and haul the ore via the Roper and Stuart highways to Darwin Port for export. While the Project includes mining of the approved Deposit C, Deposits W and X were not assessed as part of the Sherwin Creek Iron Ore Project Environmental Impact Statement. The Proponent acquired Sherwin Iron's assets and the Deposit C site is currently in Care and Maintenance.

CONSULTATION

The NOI has been reviewed as a notification under the EA Act in consultation with Northern Territory Government (NTG) advisory bodies and the responsible Minister, in accordance with clause 8(1) of the Environmental Assessment Administrative Procedures.

JUSTIFICATION

Review of the Notice of Intent by the NT EPA and advisory agencies has identified potential for significant impact to the environment. There is uncertainty surrounding potential environmental impacts due to limited information being available at this stage of the assessment process.

Benthic Communities and Habitats

The proposed Project has potential to significantly impact on benthic communities and habitats within areas recognised for conservation significance such as the Roper River, Limmen Bight Marine Park and the Limmen Bight Site of Conservation Significance (SOCS), which supports a number of EPBC Act listed species and is considered one of the most important areas for dugong and migratory shorebirds in the Northern Territory.

Impacts on the Roper River and downstream environments could occur as a result of mining and water extraction (e.g. increased sediment load, reduced water flow), construction and operation of the Barge Loading Facility (BLF) (e.g. disturbance to acid sulphate soils) and transhipment of ore (e.g. spills, dust, disturbance to the water column). Changes in sediment loads could potentially alter environmental conditions (turbidity and sedimentation) at the mouth of the Roper River and subsequently impact estuarine and marine flora and fauna (e.g. seagrass, marine invertebrates). Spillage has the potential to smother biota living on the seafloor and increase turbidity, reducing the light available for photosynthesising biota. Increased shipping as a result of the Project increases the risk of introduction of marine pests.

Marine/Estuarine Fauna

Transport of ore may have direct impacts on marine/estuarine fauna including at least four species of marine turtles, pipefish species and dugong listed under the EPBC Act. Impacts could include collision with vessels, disturbance through light and noise and disturbance to the water column. An increase in particulate matter on mudflats or in the water column from dust and spills could impact the hunting or foraging ability of some fauna, including migratory shorebird species. The mudflats of Limmen Bight support large aggregations of wader birds, including more than 1% of the world's Grey-tailed Tattler and Great Knot.

Marine/Estuarine Environmental Quality

The quality of the marine/estuarine environment has the potential to be significantly impacted by the Project. Potential impacts could come from upstream on the Roper River as a result of mining and water extraction (e.g. increased sediment load, reduced water flow), increased sediment load from the construction and operation of the BLF (e.g. erosion, dust, spills) and transhipment of ore (e.g. spills, dust, disturbance to the water column). There is potential for impacts on the marine/estuarine environmental quality from spills (e.g. hydrocarbons) from all aspects of the Project.

Terrestrial Fauna

The Project has the potential to significantly impact terrestrial fauna. There will be a direct impact from the loss of habitat (~2500 ha) as well as potential indirect impacts on habitat, such as through generation of dust, changes to hydrology and introduction and spread of weeds. There is risk of interaction between terrestrial fauna and vehicles as a result of increased traffic movements, including along the proposed haul route through the Limmen National Park. There is potential for loss of breeding habitat of the Gouldian Finch, which uses lakes and waterholes in the Limmen National Park and potentially breeds in the region.

Landforms

The Project will result in changes to landforms through the formation of pits and waste dumps/piles. At this stage of the assessment process there is uncertainty around the number, dimension and characteristics of the pits and piles. The proposal also includes the possible construction of dams, with uncertainty around the location, number and capacity. There is also potential for changes to landforms through sedimentation and erosion as a result of activities such as mining and the construction of infrastructure and roads.

Hydrological Processes

The Project has potential for significant impacts on hydrological process with an estimated annual water usage of 2000 ML. The Proponent is proposing that water be supplied to the Project by harvesting and/or extracting surface water flows; with the construction of dams and extraction from the Roper River listed as options for investigation. There is uncertainty around water sources for the Project and therefore it is not possible to assess the potential impact on hydrological processes.

Inland Water Environmental Quality

The proposed use of water has the potential to have a significant impact upon inland water environmental quality as a result of decreased flows and reduction in water quality. The Project has potential to result in erosion and increase turbidity and sedimentation downstream. The Project could potentially impact inland water environmental quality through spills of hazardous substances (e.g. hydrocarbons). There is uncertainty around the volumes and nature of potential pollutants and their management. There is uncertainty around the potential for production of acidic and metalliferous drainage which could potentially significantly impact upon inland water environmental quality.

Aquatic Habitat

The potential impacts on hydrological processes and inland water environmental quality discussed above could significantly impact upon aquatic habitat, through changes to water flow and volume, and water quality. There is uncertainty around water sources and potential discharges.

Aquatic Fauna

Potential impacts to aquatic habitat identified above could significantly impact aquatic fauna. Aquatic fauna species that may be impacted include conservation significant freshwater sawfishes, and restricted populations of *Cinetodus froggatti* (Small-mouthed Catfish) and *Thryssa scratchleyi* (Freshwater Anchovy). Loss of flow, shrinkage of waterholes and changes in water chemistry during the Dry season, constitute the most environmentally challenging conditions for aquatic biota in the monsoon tropics, which could be exacerbated by the mine operations.

Air Quality and Greenhouse Gases

The mining and transport of ore are likely to produce significant quantities of dust with a potential for significant impact on air quality. There is uncertainty surrounding how this will be managed, including along public roads.

Social, Economic and Cultural Surrounds

The Project is located in a remote region with significant cultural and conservation values and land uses including cattle grazing, conservation, tourism, Aboriginal living and recreational areas, recreational and commercial (prawn, mud carb and barramundi) fishing and horticulture. Given the scale of the Project, its significant water requirement and operation in areas accessible to the general public such as public roads (including through the Limmen National Park) and the Roper River, impacts on the social and cultural surrounds are likely.

Human Health

The Project will involve significant numbers of employees (150-300). The Limmen National Park attracts some 17 000 – 20 000 visitors each year with access via the Roper Highway. Substantial components of the proposed operation are in areas with public access (e.g. the ~235 km of public roads and the Roper River used to transport ore). Therefore, there is potential for the Project to impact upon human health.

DECISION

The Roper Valley Iron Ore Project has the potential for significant impacts on the environment and its environmental significance is such that an Environmental Impact Statement is necessary with respect to the proposed action.

DR PAUL VOGEL

CHAIRMAN

NORTHERN TERRITORY ENVIRONMENT PROTECTION AUTHORITY

20 JULY 2017