



Our ref EN2011/0007
Your ref

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Dear Mr Fanning

The Public Environmental Report (PER) for the SILL 80 Ilmenite Project was received on 28 January 2012. Review of the PER by this Department, other government agencies and the public has revealed a number of areas where information in the PER is insufficient to enable an adequate assessment of environmental impacts from the Project.

As discussed with you at our offices on Thursday 1 March, while the period to request further information has closed, the alternative would be to complete the Assessment Report within the legislative timeframes. An Assessment Report written at this stage would need to make clear that due to a lack of information presented in the PER, the Environment and Heritage Division (EHD) is unable to conclude that the project can proceed without unacceptable environmental impacts.

Following our meeting, you requested that the assessment process be stopped to enable you to provide the information required to complete assessment of this Project. Attachment A details the necessary information we require to complete the Assessment Report.

Once I am satisfied that the necessary information has been received, the EHD will be guided by the provisions outlined in the Environmental Assessment Administrative Procedures for submission of further information to the PER. Under this process, EHD will circulate the further information to approval agencies for comment, and complete the assessment report for this proposal for approval by the Minister for Natural Resources, Environment and Heritage. This process will conclude 28 days from when the further information is accepted.

In the first instance, any questions of clarification in relation to this matter should be directed to Lisa Bradley on (08) 8924 4136.

Yours sincerely

Matt Darcey
Executive Director, Environment and Heritage

6 March 2012

Attachment A

Further Information Required – SILL80 Ilmenite Project 6 March 2012

The following issues are being raised because they are environmentally relevant and have not been adequately addressed in the PER. Information on these environmental issues is necessary to facilitate examination required under the *Environmental Assessment (EA) Act*

Water Management

Leading practice in overall site water management has not been demonstrated in the PER. An updated Water Management Plan is required that complies with the requirements of the Department of Resources Advisory Note *Water Management Plan Guide 2008*. To complete assessment of the Project, the following information is required:

- Surface Water Catchment areas, runoff and relevant watershed information – plans and images showing all contours, drainage lines and significant features, including existing pastoral lease water storage infrastructure;
- Water Management infrastructure – detail the type, numbers, storage capacity and construction details, dimensions and design of water management infrastructure e.g. ponds, tanks, pipes;
- Conceptual water balance taking into account inputs, outputs and interactions between surface and ground water, surface area stores and total catchment surface area per store/pit/dam;
- Water account for proposed operation which include modelled scenarios for periods of high and low rainfall;
- Overview of surface water monitoring program with maps showing locations of statutory and operational monitoring sites and details of site, sample type, parameters measured and frequency;
- Overview of groundwater occurrence locally and location of existing bores and whether groundwater monitoring would be required;
- Overview of biological/aquatic monitoring program and sample monitoring program including maps of monitoring sites and frequency;
- Water quality trigger levels; and
- Commitments to continuous improvement (e.g. maximising water recycling, minimising raw water usage) with defined objectives and completion dates.

Surface Water Extraction

It has not been demonstrated how extraction from the Roper River would not exceed the threshold level of 20% of flow at any time in any part of the river (NT Water Allocation Planning Framework, 2006). The monitoring arrangements described in the PER do not demonstrate that natural flows at, and downstream of the extraction

point are not reduced by more than 20% and take into account the combined effect of all extractions within the catchment. The following information is required to complete assessment of this Project:

- Define annual extraction limits and extraction regime;
- Demonstrate how extraction limits and monitoring will show that natural river flow is not reduced at any time by more than 20% at the extraction site due to the combined effects of all extractions within the catchment;
- Demonstrate how extraction limits and monitoring will show that natural river flow is not reduced at any time by more than 20% at Roper Bar due to the combined effects of all extractions within the catchment
- Detail monitoring programs that would confirm a nominal 20% limit is adequate to prevent unacceptable impact on the downstream aquatic environment and prevent unacceptable impact to the water supply to the downstream community Ngukurr;
- Provide an assessment and report on the impact on salinity downstream from the extraction point caused by increased extraction by the Project; and
- Provide location and details of alternative water sources or additional on-site water storage to minimise potential environmental impacts associated with surface water extraction during low flows.

Note that Water Resources Branch (NRETAS) should be consulted in providing modelling of flow regimes near the extraction site. Contact details are: Ian Smith, ph: 08 8999 3630

Water Quality

In the PER an assumption is made that water quality would not be affected unless greater than 20% of inflows are extracted from the extraction site. Monitoring and auditing provided in the PER focused on extraction rates as a surrogate for quality rather than a surface water quality program. The following information is to be provided to complete assessment of this Project:

- Historical downstream water quality data at Ngukurr to describe existing baseline conditions and natural variations;
- surface water quality monitoring program included in an updated Water Management Plan that is consistent with the Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ, 2000b) including sample sites, frequency, parameters;
- identification of alternative water supply for the Ngukurr community in the event water quality deterioration (e.g. increased salinity) is detected.

Water Re-Use

In the PER it was stated that a bulk sample would be performed in March/April 2012 to test the system's capabilities for water consumption and recycling and figures could not be provided until the system was assessed. Details on how raw water consumption will be minimised and re-use maximised, including design and location details on the proposed dewatering screened dams, must be provided. Clarify how the mostly dry waste regolith, after it has been through the screened dams, would remain dry during the wet season or when new waste from the wash trommels are being continually added. Informed quantitative water volume estimates, based on

results of the bulk sample testing, are to be incorporated into the conceptual site water balance.

Erosion and Sediment Control

An Erosion and Sediment Control Plan that complies with Land Resources requirements must be provided to complete assessment of this Project. This includes:

- where clean surface water runoff would be diverted away from disturbed areas;
- interception of runoff from disturbed areas into sediment control structures;
- location, size, capacity and designs required for sediment basins, silt fences, mulch bunds and catchment drains;
- proposed maintenance schedule and management of erosion and sediment controls; and
- proposed erosion and sediment control of haul roads, pipelines and other structures that may change surface water patterns.

The content required for an ESCP can be found on the Department's website: http://www.nretas.nt.gov.au/_data/assets/pdf_file/0018/12924/ErosionandSedimentControl.pdf

The development of the plan should consider the IECA Best Practice Erosion and Sediment Control Guidelines 2008 as a guide to the type of information, detail and data that should be included in an ESCP.

Deposit Geochemistry

It is expected geochemical characterisation has been conducted on representative samples of the ilmenite resource as well as the waste regolith as part of exploration and feasibility studies. While not specifically requested in the PER Guidelines, geochemical characterisation of the regolith must be provided to determine whether certain elements occur at elevated concentrations, solubility of dissolved constituents and how these results may impact water quality and management. This would also inform what elements should be included in site water quality monitoring programs.

Current Land Use

The Mining Lease overlaps an existing Perpetual Pastoral Lease 1161, which is sub-leased from Traditional Owners through the Namul Namul Aboriginal Corporation. There was little discussion in the PER on how mining activities may impact the current pastoral land use. The homestead is one kilometre north east of the processing site and stock yards, one kilometre north west of the processing site and these should be provided on a general project plan (e.g. included in Figure 5-1, PER). The Numul Numul property has been sub-leased since 2001 and significant infrastructure and property improvement has been invested during that time. Information is required detailing how pastoral infrastructure will not be disturbed by the proposed mining activity and access is maintained to enable an operating pastoral business. The following information should be provided:

- Conduct a risk assessment on potential social, environmental and economic impacts to the current land use and provide mitigation measures to reduce those risks;
- Provide a general plan of the project infrastructure with key pastoral activity areas (including homestead, holistic management improved paddocks and stock yards);
- Provide detail on how the commitments made in the Social Cultural Aspects Report (Appendix D, PER) have been implemented to date and in the future. This includes how disruption to landowners and third parties would be minimised and communication to ensure access and pastoral business is maintained;
- Provide details of the social management plan that would be developed for the SILL80 Project to ensure strategies are in place to address social impacts (as mentioned in section 6.4.3.2, PER);
- Formal agreement of maintaining access to existing infrastructure required to operate a pastoral lease and compensation of disturbance need to be addressed between all relevant stakeholders; and
- Provide details on how Project activities will be managed so that the existing pastoral land use is not compromised e.g. development of road access usage protocols to ensure cattle mustering and access to stockyards is not disrupted.

References

Australian and New Zealand Environment and Conservation Council (ANZECC), 2006, *Australian Guidelines for Water Quality Monitoring and Reporting (2000)*
National Water Quality Management Strategy
http://www.mincos.gov.au/publications/australian_guidelines_for_water_quality_monitoring_and_reporting

Department of Resources (2008) *Water Management Plan Advisory Note*
http://www.nt.gov.au/d/Minerals_Energy/Content/File/Forms_Guidelines/AA7-023_Water_Management_Plan_Guide.pdf

NRETAS, 2006 *Erosion and Sediment Control Content Fact Sheet*
http://www.nretas.nt.gov.au/data/assets/pdf_file/0018/12924/ErosionandSedimentControl.pdf