Published on 27 May 2008 Statement No. 768

STATEMENT TO AMEND CONDITIONS APPLYING TO A PROPOSAL (PURSUANT TO THE PROVISIONS OF SECTION 46 OF THE ENVIRONMENTAL PROTECTION ACT 1986)

DUPLICATION OF SYNTHETIC RUTILE PLANT CAPACITY
CAPEL

Proposal: The processing of mineral sands, disposal of the wastes generated and rehabilitation of the site.

Proponent: Iluka Resources Limited,

Proponent Address: Level 23, 140 St Georges Terrace, Perth

Assessment Number: 1628

Previous Assessment Number: 664

Previous Statement Number: 291 (published on 12 November 1992)

Report of the Environmental Protection Authority: Bulletins, 225, 650 1244

Previous Report of the Environmental Protection Authority: Bulletin 650

The implementation of the proposal to which the above reports of the Environmental Protection Authority relate is subject to the following conditions and procedures.

Note: (Implementation conditions from previous Ministerial Statements that have been retained are contained within this Statement).

1 Proposal Implementation

1-1 The proponent shall implement the proposal as documented and described in Schedule 1 of this statement subject to the conditions, commitments and procedures of this statement.

2 Proponent Environmental Management Commitments

2-1 The proponent shall fulfil the environmental management commitments contained in Schedule 2 of this statement.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment under sections 38(6) or 38(7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.

3-2 The proponent shall notify the Chief Executive Officer of the Department of Environment and Conservation (CEO) of any change of the name and address of the proponent for the serving of a notice or other correspondence within 30 days of such change.

4 Compliance Reporting

4-1 The proponent shall submit to the CEO an annual environmental compliance report relating to the previous twelve-month period, the first report to be submitted within 15 months after the commencement of ground disturbing activities and thereafter annually, unless required by the CEO to report more frequently.

4-2 The environmental compliance reports shall address each element of an audit program approved by the CEO and shall be prepared and submitted in a format acceptable to the CEO.

4-3 The environmental compliance reports shall:

1. be endorsed by signature of the proponent's Chief Executive Officer or a person, approved in writing by the CEO, delegated to sign on behalf of the proponent's Chief Executive Officer;

2. state whether the proponent has complied with each condition, procedure and commitment contained in this statement;

3. provide verifiable evidence of compliance with each condition, procedure and commitment contained in this statement;

4. state whether the proponent has complied with each key action contained in any environmental management plan or program required by this statement;

5. provide verifiable evidence of conformance with each key action contained in any environmental management plan or program required by this statement;

6. identify all non-compliances and non-conformances and describe the corrective and preventative actions taken in relation to each non-compliance or non-conformance;

7. provide an assessment of the effectiveness of all corrective and preventative actions taken; and

8. describe the state of implementation of the proposal.

4-4 The proponent shall make the environmental compliance reports required by condition 4-1 publicly available in a manner approved by the CEO.

5 Performance Review

5-1 The proponent shall submit a performance review report every five years commencing within five years following the issue of this statement, to the Environmental Protection Authority, which addresses:

1. the major environmental issues associated with implementing the project; the environmental objectives for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those objectives;
2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
3. significant improvements gained in environmental management, including the use of external peer reviews;
4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
5. the proposed environmental objectives over the next five years, including improvements in technology and management processes.

5-2 The proponent shall make the Performance Review reports required by condition 5-1 publicly available in a manner approved by the CEO.

6 Decommissioning and Rehabilitation

6-1 At least six months prior to the anticipated date of commencement of decommissioning, or at a time approved by the Environmental Protection Authority, the proponent shall prepare a decommissioning and rehabilitation plan designed to ensure that the site is suitable for future land uses, prepared on advice of the Environmental Protection Authority and the Department of Industry and Resources, for approval of the CEO.

The Decommissioning and Rehabilitation Plan shall set out procedures and measures for:

1. removal or, if appropriate, retention of plant and infrastructure agreed in consultation with relevant stakeholders;
2. rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and

3. identification of contaminated areas, including provision of evidence of notification and proposed management measures to relevant statutory authorities.

6-2 The proponent shall implement the Decommissioning and Rehabilitation Plan required by condition 6-1 until such time as the Minister for the Environment determines, on advice of the CEO, that the proponent's decommissioning responsibilities have been fulfilled.

6-3 The proponent shall make the Decommissioning and Rehabilitation Plan required by condition 6-1 publicly available in a manner approved by the CEO.

Notes

1. Where a condition states "on advice of the Environmental Protection Authority", the Environmental Protection Authority will provide that advice to the Department of Environment and Conservation for the preparation of written notice to the proponent.

2. The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment and Conservation.

3. The Minister for the Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment and Conservation over the fulfilment of the requirements of the conditions.

David Templeman MLA
MINISTER FOR THE ENVIRONMENT; CLIMATE CHANGE; PEEL

Schedule 1

The Proposal (Assessment No. 1628)

The processing of mineral sands and disposal of the wastes generated, and rehabilitation of the site.

Table 1 – Key Proposal Characteristics.

COMPONENT	**INCORPORATING**	**OUTPUT/ EMISSIONS**
Mineral sands mine		noise, dust, clay fines, sand tails
North Capel Separation Mill		non-magnetic fines
Synthetic Rutile Plants 1 and 2	• electricity co-generation plant	dust, hydrogen, H_2S, SO_2 and ammonium chloride vapour
	• char generation	sinter and char
	• acid effluent holding dams	acid effluent (prior to neutralisation)
	• neutralised acid effluent trials	neutralised waste gas scrubber liquor
	• stores and workshop	
Class 1 inert landfill site		iron oxide, ammonium chloride, naturally radioactive substances
Artificial wetland		discharge from biological filter to Elgin Drain
Products	heavy mineral concentrate; ilmenite; synthetic rutile.	900,000 tonnes per annum; 500,000 tonnes per annum; 300,000 tonnes per annum.

Figure (attached)

Figure 1 - Proposal Location

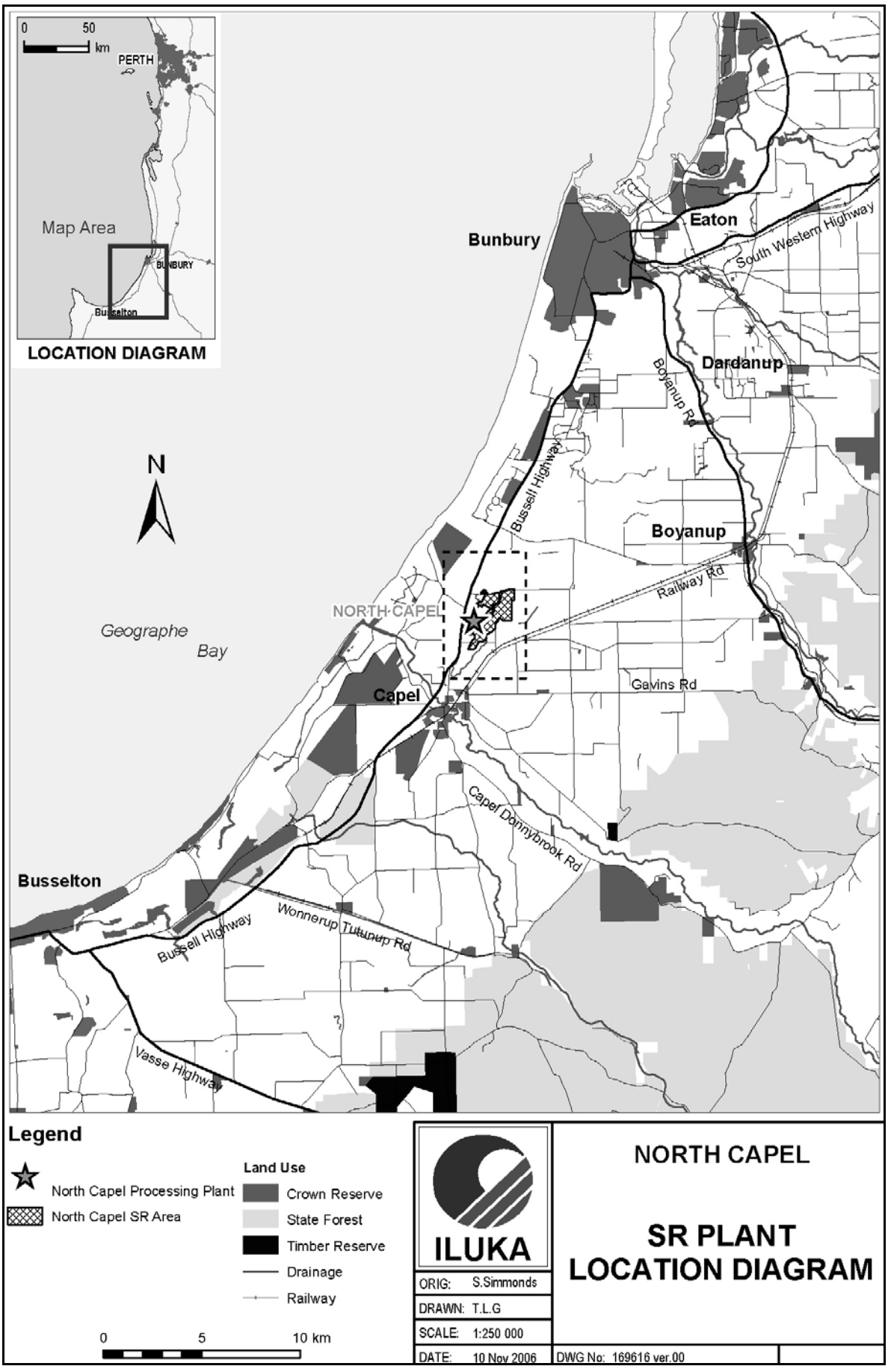

Figure 1: Proposal Location

Schedule 2

Proponent
Environmental Management Commitments

Edited December 2006

DUPLICATION OF SYNTHETIC RUTILE PLANT CAPACITY, CAPEL

(Assessment No. 1628)

ILUKA RESOURCES LIMITED

SR1 Ministerial Commitments (2007 Amendment)

Site	Number	Former Number	Commitment
SR1	1	1	All solid wastes will be placed into final disposal sites which are at least one metre above the height of the winter water table.
SR1	2	2	As part of normal procedure, all solid wastes will be compacted during disposal and their upper surfaces will be sloped so as to facilitate rainwater to flow off the solids without soaking in. All solid wastes will be covered by a 30 to 50 centimetre thick layer of clay, wherever necessary, to prevent rainwater from entering. This capping will be carried out using normal engineering practices and will be ongoing throughout the life of waste disposal operation.
SR1	3	11	As a final effluent quality polishing step Iluka will manage the biological filter to further lower the concentration of ammonium ions prior to the discharge of effluent into the Elgin Drain.
SR1	4	13	Prior to final plant closure Iluka will submit a closure plan which details the removal or alternative use, subject to agreed final land use, of all items of plant and treatment of effluent pond contents. Final land use for the area will be determined in consultation with relevant stakeholders, Prior to decommissioning and closure of site, Iluka will obtain the prior approval of the Radiological Council and the State Mining Engineer.
SR1	5	18	Most feed materials entering the plant, together with the final product, will be carted in covered dump trucks. Sulphuric acid will be delivered in sealed tankers and lime will arrive within pressurised sealed tankers. Solid waste will be moved by standard covered dump trucks, but self-elevating scrapers may be able to pick up and move the iron oxide solid wastes.
SR1	6	26	Where dried neutralised effluent solids are not used as a fertiliser or for soil amendment in mine rehabilitation they shall be disposed of in surface pits.
SR1	7	29	Biological filters will be installed for the final removal of nutrients and heavy metals.

Site	Number	Former Number	Commitment
SR1	9	36	Management techniques to be used to improve the quality of final liquid effluent prior to discharge include: • addition of a controlled quantity of lime (calcium oxide) to modify the pH and chemistry of the liquid effluent. pH will be raised to about 9.5, at which point the amount of dissolved Manganese will be reduced to the lowest possible equilibrium levels. Other metals including copper, chromium and nickel will also precipitate out of solution. • biological/wetland filters will be incorporated into the second solution storage dam and into the 600m long drain which takes liquid effluent from the dam discharge point to the Elgin Drain. These 2 filter areas will be zones of high biological activity. Water depth will be maintained at about 30cm so that interactions between plants, algae, micro-organisms and the water will be maximised. Metal concentrations will be greatly reduced and nutrients (P, N and S) will also be removed. • Management to reduce the iron content of underground bore water, from which all plant process water is derived, will also occur. The bore water will be transferred to a concrete storage tank. By exposure to the air, ferrous iron (Fe++) will be converted to ferric iron (Fe+++) and form an insoluble iron oxide (Fe2O3). This material will accumulate at the bottom of the tank and will be removed for disposal on land. Should further management of general water quality be required, there are 3 additional options available: • limestone or similar material could be laid in the 600m drain leading to Elgin Drain. This would cause a rise in pH and some calcium and carbonate ions to pass into solution, this increasing the alkalinity and assisting in further precipitation of dissolved metals; • installation of a sand filter;
SR1	10	37	Within the entire plan tsite, wherever there are storage or piping facilities for liquids, the ground surface will be bitumen or concrete-surfaced, with bunds to prevent the escape of liquid to the outside. Spilled liquids will then be subjected to one of the following management options: • recycling; • dilution and discharge to the Elgin Drain; • adding to the plant's normal liquid effluent treatment systems.
SR1	11	41	Acid leaching of upgraded ilmenite generates small amounts of H2S gas. Ventilation hoods above each acid leach tank will be inter-connected and subjected to suction so that a mixture of outside air and emitted gas will be constantly removed from above the tanks. This gas will normally be passed to the after-burner of the main gas cleaning section and be discharged with the kiln exhaust gases.
Site	**Number**	**Former Number**	**Commitment**
SR1	12	42	Under abnormal conditions, this gas would be directly ventilated to the atmosphere via the emergency acid

			leach ventilation stack. Should this occur, Iluka will notify the community pursuant to the Community Relations Policy.
SR1	13	63	Rehabilitation of the main North Capel mining pit and of solid waste disposal pits will ensure that the long term rural usage of the land will continue.
SR!	14	66	Upon decommissioning, the structural units of the plant will be sold for scrap or for continued use elsewhere. The plant site itself could become the location of other small industries. All dams and pits will be covered by one metre of clean sand taken from mined sand tailings close to the plant site. The solar drying area will be contoured prior to receiving a cover of mixed topsoil and solid effluent wastes. All recontoured or filled-in areas will be replanted to pasture species appropriate to grazing land use in the area.
SR1	15	67	Rehabilitation of residue disposal areas utilised by the SR Plants will be conducted using techniques considered the most appropriate for the site and which meets the final landform and land use as agreed upon after consultation with relevant stakeholders which may include the government departments or private landholders".
SR1	16	68	Iluka will undertake ongoing management of their land. This will involve grazing management and maintenance of replanted trees. Appropriate advice will be sought from the Department of Agriculture and the Department of Environment and Conservation.
SR1	17	69	Pipe leakage will be monitored in three ways: • visual observation at regular intervals will ensure pipe security; • the discharge end of each pipe carrying an undesirable liquid effluent will be fitted with pressure and/or flow monitoring devices. Hence any sudden reduction in pressure or flow will register a warning in the plant's central control room; • the production and consumption figures of all intermediate and final liquids and solids will be calculated.

SR2 Ministerial Commitments (2007 amendment)

Site	Number	Former Number	Commitment
Impact on Water Resources Groundwater Consumption			
SR2	1	4	Water consumption will be minimised through recycling, dry scrubbing of gases and re-using saline water at appropriate locations.
Site Run-Off Groundwater Quality – Dam Leakage			
SR2	2	13	The company will maintain strict procedures to check the integrity of primary membranes in dams before being placed in use or returned to use.
Process Liquor Transport			
SR2	3	14	Overland pipelines of saline or acidic liquor will be run in lined troughs draining to instrumented recovery sumps.
SR2	4	15	Where pipelines cannot be treated to secondary containment the pipe will be continuous and will be of a high integrity material.
Material Spillage and Storage			
SR2	6	19	Sulphuric acid will be transported in steel road tankers and transferred to a steel storage vessel in a secondary containment bunded enclosure. The transfer point will be designed to contain spillage during transfer.
SR2	7	20	Sulphur and ammonium chloride will be transported in conventional road transport and will be stored under cover on concrete flooring.
	8	21	Lime will be transported in a steel road tanker and transferred to a steel storage silo. The transfer point will drain to local effluent pondage.
Equipment Failure			
SR2	9	22	Processing equipment and plant pipe runs handling liquids other than water will be bunded and serviced by automatically activated recovery sumps.
Impact on Air Quality Fugitive Dust Emissions			
SR2	10	36	All trucks transporting dry material to, from and around the plant site will be required to cover potentially

Site	Number	Former Number	Commitment
			dusty loads to minimise wind disturbance of materials carried.
Odour Control			
SR2	11	43	The company will investigate any odour which may originate from the plant and will take action to manage the making or release of odorous materials.
Socio-economic Impact			
SR2	12	52	The company will maintain a local priority policy in terms of employment and supply of goods and services.
SR2	13	54	The company will require road transport contractor to supply and maintain the appropriate fleet to minimise spillage, noise and dust on the roads.
SR2	14	55	The company will have in place drills designed to handle the following emergency situations: • spillage of sulphuric acid; • spillage of quicklime; • fire, injury. These drills will be set up as part of the employee's regular training and updated as and when required.
Management and administration			
SR2	15	57	The company will produce an area management plan which clearly defines short, medium and long term objectives, management and monitoring procedures. It will incorporate commitments, communication and licensing conditions and will identify responsibilities and accountabilities.
SR2	16	58	The company will include environmental responsibilities in the job descriptions of all employees.
SR2	17	59	The company will ensure that all employees receive sufficient training in environmental management procedures and practices to carry out their duties.
SR2	18	60	The company will maintain a reporting procedure to promptly identify non compliance or potential non compliance to senior management and government authorities.
SR2	19	61	The company will conduct audits on environmental performance and practices at intervals not exceeding two years.