Table 1
Review of PAC Recommendations

Recommendation		Comment
	Air Quality	
1	The Commission recommends that any development consent for the project should include conditions requiring: ▪ the applicant to comply with the relevant emissions criteria at all residential receivers. In this regard it will be important to clarify whether the NO_2 emissions listed in Table 28 of the EIS (Part 2 Air Quality volume) represent the incremental or cumulative impact levels, as it presently suggests it is both (p56 vol 1 part 2); ▪ the applicant to benchmark the design and the emissions controls against best practice standards; ▪ emissions validation reports to be provided prior to commissioning (to demonstrate the design will comply with the EPA's Impact Assessment Criteria) and during operations (to demonstrate the commissioned facility is complying with the relevant standards and predictions); ▪ detailed and comprehensive management, monitoring and reporting, including an integrated reactive and predictive management and monitoring system.	The results presented in *Table 28* are the cumulative maximum 1-hour and annual average NO_2 concentrations. The emissions from the stack would initially comprise of a mixture of oxides of nitrogen (NOx; a combination of NO and NO_2). An assumption that 100% of the NO is instantaneously converted (oxidised) to NO_2 is unrealistic and thus overly conservative. A refined Level 2 approach was used, known as the ozone limiting method (OLM), as described in *Section 9.6.2* of the Pacific Environment air assessment and was used to derive a cumulative assessment. This method combines the total NOx predictions with contemporaneous ozone and NO_2 concentrations to produce final cumulative value.[1] The Applicant can confirm a commitment to benchmarking the design and the emissions controls against best practice standards. In accordance with the negotiated outcome with the Environment Protection Authority (EPA), updated dispersion modelling will be completed to confirm emission criteria can be achieved as part of an application for an Environment Protection Licence (EPL). The Applicant intends on preparing an Air Quality Management Plan in which all management measures, monitoring procedures and reporting requirements will be documented.
	Water	
2	Prior to determination of the application, the applicant is to assess the probability and consequences of any contaminated discharges from the chemical storage areas and the feasibility (including costs) of covering the bunded tanks. The objective of these additional investigations is to avoid generating additional potentially contaminated water in the bunded area, which would need to be managed during rain events.	The Applicant understands its obligations to appropriately review, assess and manage the risks associated with the DZP in accordance with the relevant Hazardous Industry Planning Advisory Papers (HIPAPs). This will necessarily include assessment of potential for spillage from tanks on the DZP Site. The Applicant will supply the information requested as soon as practical but wishes to note the following: • Many of the chemical storage tanks, for instance the sulphuric acid and solvent storage tanks, are already designed to be covered as it is either unsafe or detrimental to the process to allow the addition of incidental water via rainfall and / or to minimise fugitive emissions. • Any storage tanks which currently are uncovered will normally operate with 'freeboard' exceeding 45cm (the design 1 in 10,000 rainfall event). Therefore, the potential for spillage as a result of rainfall is extremely low. • Bunded areas surrounding the storage tanks has been designed to comply with Australian Standards to ensure that, as a minimum, each bunded area provides for at least 110% capacity of the largest storage vessel. • The purpose of a bunded area within a process plant is to control breaches of integrity of the process vessels. Standard operating procedures then exist to reclaim any spillage into the bunded area. Most bunds are designed with automated liquor reclaim pumps that activate on a level within the bund, including to reclaim rainfall. • Any overflows from the bunded areas are then contained by the stormwater runoff facilities (ponds) for the entire process facility. These are designed to contain runoff from major rain events. The Applicant notes the concern raised by the PAC, however, the likelihood of a major rain event resulting in overtopping of a storage tank, and where the process ceases to operate such that runoff collected within the bunds is not automatically reclaimed into the process, and where that liquor then overflows the bund, runs to the site stormwater runoff capture pond and subsequently overflows it, is extremely low.
3	The water management plan for the site should include a pipe leak detection and maintenance program and should also be required to demonstrate that the design of the Liquid Residue Storage Facility will have sufficient capacity to contain the probable maximum flood event during all years of mining and decommissioning (as is proposed in the application). These calculations will need to demonstrate: ▪ how runoff from the Salt Encapsulation Cell is managed and contained; ▪ that any stormwater in the bunded tank farm would be contained; and ▪ how ongoing liquid waste generated would be managed while the water levels are evaporating.	As part of standard operating procedures, the Applicant will implement an inspection schedule for pipes and other Mine infrastructure. Leak detection will form part of this inspection framework which will be documented in the Water Management Plan (WMP). Water balance modelling undertaken as part of the development application has demonstrated that the Liquid Residue Storage Facility (LRSF) will retain sufficient capacity for the storage of liquid residue. These calculations, revised to account for a likely reduction in water consumption of the DZP, will be reviewed and presented in the WMP. The WMP will also include the following to address the specific PAC recommendations. • Detailed descriptions of drainage within and off the Salt Encapsulation Cells (noting the salt will always be placed within completed, internally draining cells and therefore will not discharge from the site). • Confirmation as to the location and capacity of bunds with respect to the respective tank(s) capacities or runoff generating potential (noting there has been no modification to commitments noted in the EIS and Surface Water Assessment for bunding of all tanks and reagent storage areas. • Procedures for monitoring liquid residue storage and LRSF capacity over the life of the DZP along with contingency management strategies should LRSF capacity diminish (noting the freeboard included in the LRSF design accounts for more than double the 1 in 10 000 year rainfall predictions).

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
		Water (Cont'd)
4	The permeability of the sediments and geology underlying the proposed liquid storage facilities should be confirmed to justified (sic) the detailed design of liquid residue storage facilities, prior to determination of the application.	The EIS and Soils and Land Capability Assessment justify the location of the four individual LRSF areas on the basis of the topography, vegetation and underlying Soil Landscape Units (SLUs). The Soils and Land Capability Assessment which accompanied the EIS provides the results of analyses completed on the physical and geotechnical properties of these SLUs with the Wongarbon, Ballimore and specific areas of Belowrie chosen as appropriate for LRSF construction on the basis of these properties. The use of a HDPE liner above a floor of compacted clay or weathered rock has been proposed in lieu of (and equivalent to) the prepared clay or weathered rock floor of the LRSF achieving a permeability of ≤1 x 10^{-9}m/s over 900mm or greater. Risks of liner rupture or ripping have been accounted for by way of a commitment to the preparation and implementation of a *Cell and Liner Construction Protocol* and *Liner Integrity Testing Protocol*. Furthermore, follow-up sampling and geotechnical analyses are ongoing and will continue as part of the final engineering design of the LRSF. On the basis that the location of the LRSF has taken into account critical parameters of the local setting, will be constructed to achieve standard design requirements, and will be constructed and operated in accordance with stringent quality controlling protocols, it is suggested that further detail on base material permeability is not necessary prior to determination.
5	Conditions of consent should specify appropriate long term maintenance funding and legal records are put in place prior to the commencement of operations on the site and are regularly reviewed and updated over the life of the project, and upon closure of the mine, to ensure the waste materials are appropriately contained in perpetuity.	As demonstrated in the EIS (*Section 2.17*), the Applicant has made a strong commitment to the rehabilitation of the DZP Site, with consideration given to the specific challenges posed by the different activities, i.e. open cut mine, waste rock emplacement, SRSF, LRSF, Salt Encapsulation Cells. This notwithstanding, the Applicant acknowledges it has a responsibility to ensure that an appropriate security and funding mechanism is in place to ensure that, in the event that the Applicant is unable, the DZP Site can be rehabilitated to eliminate any long-term liabilities to the environment. An established and appropriate mechanism for this security and funding is provided through the rehabilitation security required by the Department of Trade & Investment, Regional Infrastructure & Services (DTRIS) as a condition of mining lease. This would ensure that the security established is suitable to rehabilitate or remediate any environmental liability resultant from the approved operations, and would only be refunded to the Applicant on satisfaction of achievement of specified and approved closure criteria. The basis for the calculation of the security, using the DTIRIS Rehabilitation Cost Estimator (RCE), will be documented in the Rehabilitation Plan (Mining Operations Plan) to be completed for the DZP.
		Transport
6	AZL be required to undertake a feasibility study of Option A within 2 years of the commencement of operations on site and to implement Option A should the study determine that it is feasible	The Applicant has no issue with this recommendation, however, requests that the timeframe used is 'within 3 years of the commencement of operations on site' as noted in the recommendation in the main body of the report (p. 17).
7	The feasibility study be required to consider the feasibility of Option A over both the proposed 20 year mine life and long term mine life (approximately 70 years and in addition to the usual matters, include consultation with the local community and Taronga Western Plain Zoo and monitoring of truck impacts (including noise impacts, traffic impacts, accident statistics etc.) on nearby residents, the zoo and other impacted parties.	The Applicant has no issue with this recommendation.
8	If Option A is pursued AZL is to be required to develop a detailed schedule, in accordance with the relevant rail authorities, to: ▪ Reduce the potential amenity impacts of the train trips, by minimising the use of the railway at night; and ▪ Reduce the potential traffic impacts of the train trips on key level crossings, such as the Cobra Street (Mitchell Highway) intersection, by minimising the use of the railway during peak traffic periods.	The Applicant has no issue with this recommendation.
9	If Option B is pursued AZL be required to pay section 94 contributions in relation to the pavement life of Boothenba Road. Further AZL should be required to undertake a review of access controls for all accesses and roads intersecting with Boothenba Road and implement any recommendations prior to the commencement of operations.	The Applicant has entered into a Voluntary Planning Agreement (VPA) with Dubbo City Council. Section 7 of the VPA specifically excludes the application of Section 94 to the development.
10	AZL be required to undertake a traffic safety audit of the intersection of the Newell Highway and Obley Road prior to the commencement of operations (and then every 3 years) and to implement the findings of the audit. The audit should review the designated speed limit on Obley Road outside the Western Plains Zoo.	The Applicant has no issue with the recommendation.

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
		Transport (Cont'd)
11	AZL be required to prepare a construction and operational traffic management plan for the project which details measures to reduce the traffic impacts of the project, including but not limited to: ▪ Minimising the construction traffic impacts of the project ▪ Staging shift changes outside of the peak traffic hours 8.00am — 9.00am and 3.00pm — 4.00pm and so as not to coincide for school bus drop off / pick up times ▪ Restricting heavy vehicle movements to/from the site to the day period, unless there is an emergency ▪ Preparing and implementing a Drivers Code of Conduct for the project; and ▪ Monitoring the effectiveness of these measures.	The Applicant has previously stated its intention to prepare and implement both a Construction Traffic Management Plan and Operational Traffic Management Plan for the DZP. The plans would document the measures to minimise construction traffic impacts, stage shift changes outside of the peak traffic hours, implement a Drivers Code of Conduct, and monitor the effectiveness of these measures As has been previously stated, the proposed restriction on approved hours for heavy vehicle transport are considered unreasonable and unjustified. While the Applicant strongly states its case for reconsideration of the recommendation restricting road transport below, the Applicant draws attention to critical issues regarding the recommended restrictions which are unclear. 1. The DPE and PAC refer to the 'day period' when recommending restricted hours of operation. It is unclear as to the specific period that this refers. The Industrial Noise Policy (INP) refers to the day time period as 7:00am to 6:00pm, however, the relevance of the INP in this instance is minimal given it considers noise generated from industrial or commercial sources on the site of a facility or development. The NSW Road Noise Policy (RNP) refers to the day period as 7:00am to 10:00pm, which is potentially more relevant given the policy refers to road transport. However, the EIS has confirmed that the transport operations would be compliant with the noise criteria nominated by RNP for the night time period and hence the rationale to restrictions based on road noise periods and criteria is questionable. The DPE and PAC may have a separate classification of the 'day period', however, this has not been presented in any correspondence or reports to date. Informal advice received from officers of the DPE suggests the DPE / PAC consider the day period to be 7:00am to 6:00pm, and this has formed the basis for the discussion below. 2. The DPE and PAC refer to restricting heavy vehicle movements 'to/from the site'. As written, this implies the entire NSW road network is included which is considered unreasonable. For the purpose of our response, it has been assumed that the DPE / PAC **did not** intend to extend the restriction to the entire NSW road network. The local road section of the Road Transport Route (Obley Road / Toongi Road / Boothenba Road) has been assumed as the target of the restrictions. The EIS (through specialist assessments on Noise and Traffic Impacts) has confirmed that: • local roads would be upgraded to achieve a standard more than suitable for the truck type, number and hours of operation, • impacts on traffic flows and intersection performance would be minimised (and further reduced by effective scheduling of truck movements); and • transport could be completed without exceeding road noise criteria traffic established in accordance with the NSW Road Noise Policy. The EIS and subsequent Response to Submissions (RTS) also document the considerable effort to provide road design and procedural measures which would to ensure that noise and amenity impacts will be minimised, e.g. inclusion of an asphaltic concrete seal over the road in the vicinity of the Taronga Western Plains Zoo and residential receivers near the Toongi Road intersection. The Applicant notes that on the basis of the EIS, RTS and subsequent discussions, Transport for NSW (TfNSW), the NSW road authority, has not raised an objection to the proposed 24 hour haulage. Noting the position of TfNSW, it is difficult for the Applicant to understand the position of DPE and the PAC given neither has provided justification for the decision to restrict hours of transport operations. The above notwithstanding, the Applicant provides further justification for the approval of 24 hour transport operations on the basis of the following. • the logistics of transport to and from the DZP Site; • economic consequences; • interaction with other road users; • scheduling consequences; and • local amenity. **Transport Logistics** It is important to recognise that the Dubbo Zirconia Project is reliant on the importation of significant quantities of reagents to the DZP Site. Many of these will be sourced via NSW ports which are operated 24 hour per day and over which the Applicant has no influence on operation. Critically, the DZP cannot operate in isolation from the reagent supply chain and the conversion of importation and despatch based on a 24 hour operation to transportation restricted to 11 hours creates significant logistical issues. For example: • The restricted hours will likely require the imported reagents to be stockpiled at the point of import (either port or Fletchers Rail Terminal) for longer periods which will have implication on operations at these points. • Restricted transport windows would require the identification and operation of intermediate storage locations, which will reduce overall transport efficiency, as well as have impacts on the environment at and surrounding those locations.

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
		Transport (Cont'd)
11	AZL be required to prepare a construction and operational traffic management plan for the project which details measures to reduce the traffic impacts of the project, including but not limited to: ▪ Minimising the construction traffic impacts of the project ▪ Staging shift changes outside of the peak traffic hours 8.00am — 9.00am and 3.00pm — 4.00pm and so as not to coincide for school bus drop off / pick up times ▪ Restricting heavy vehicle movements to/from the site to the day period, unless there is an emergency ▪ Preparing and implementing a Drivers Code of Conduct for the project; and ▪ Monitoring the effectiveness of these measures. (Cont'd)	• As the transition between 24 hours transport and 11 hour transport would take effect at Dubbo, Dubbo would become the logical storage and staging point for deliveries to the DZP Site. The Applicant is not aware of a suitable depot or equivalent facility(ies) for this purpose. • Due to the lack of an existing depot for the overnight storage and staging of heavy vehicles, trucks and drivers would take accommodation as available within Dubbo. This would impact on overall availability of such facilities, as well as result in an increase in the movement of heavy vehicles, and storage of hazardous materials, within Dubbo during the night period. Given direct movement between supply point and the DZP has been assessed in the EIS, which demonstrated: • the local road network would be upgraded to a suitable standard; • impacts on traffic flows, intersection performance and other road users (including Taronga Western Plains Zoo) would be minimised; • compliance with road noise criteria would be achieved; and • impacts on Taronga Western Plains Zoo identified and appropriately managed / mitigated, the Applicant strongly believes that the additional impost imposed on transport logistics is unnecessary and unjustified. **Economic Consequences** The restriction on heavy vehicle movements will increase the cost of road haulage. By effectively reducing the hours of available operation by 50%, the number of heavy vehicles required for road haulage will necessarily double. As costs per vehicle such as running costs, vehicle depreciation and maintenance are largely fixed, the total cost of road haulage will increase. Initial estimates suggest the increase in cost would be approximately 15%. It is also likely that additional costs will be incurred to address the logistical issues created by converting a 24 hour supply chain to an 11 hour supply chain. These costs would be especially significant for the supply of limestone where the costs associated with doubling the transport fleet would be greater given these vehicles could not be utilised on the State highway network beyond Dubbo during the 13 hour exclusion period. Given the large transportation task associated with the DZP, the increased costs could run into millions of dollars. This is a significant impost on the Applicant, especially given the EIS and supporting documentation has demonstrates compliance with relevant criteria, accounts for the increase in traffic and addresses concerns over local amenity. **Road User Interaction** The Applicant has made commitments to evenly distribute heavy vehicle movements over 24 hours. The EIS includes a commitment to formalise procedures whereby entry to Obley Road would be restricted each hour. Based on worst-case traffic levels, heavy vehicle movements could normally be scheduled to avoid more than 3 to 4 vehicles operating on Obley Road at any given time. Movements during specific periods of the day, such as when school buses operated, could be minimised or avoided all together. By restricting the hours of transport, the number of heavy vehicles per hour using Obley Road would double (and scheduling issues noted below could result in the hourly rate increasing further). Critically, the period when the DPE and PAC are recommending an increase in the number of heavy vehicles using the local roads correspondents with when the majority of other road users use the road. The interaction between local commuters and heavy vehicles will therefore be maximised by the proposed restriction. Notwithstanding the considerable commitments of the Applicant to upgrade the road, use and maintain high standard vehicles, and manage personnel to the highest standards, the very fact that there will be more interactions between existing and proposed traffic will increase the risk of incident. **Scheduling Consequences** With the increase in the total number of trucks required, the ability of the Applicant to effectively schedule these evenly over the 11 hour window would be compromised. This would further increase the potential interaction between the DZP haulage fleet and local commuters. Consider a preferred round trip between Newcastle and Toongi. • The truck would likely depart Newcastle at 3pm to arrive in Dubbo at 8pm. • The truck would be parked up in Dubbo overnight (location to be determined). • The truck would depart overnight location at 7:00am with approximately 3 hour round trip putting the truck back in Dubbo at 10am. • Return to Newcastle by 3pm for reloading and return or driver change over. This schedule, or similar, would be preferred due to the minimisation of delays the restriction on access to Obley Road could cause. Operator rest and fatigue management would be maintained while avoiding the vehicle and driver being idle for significant periods. A schedule such the above, and others similar, would result in periodic spikes in the number of trucks using the local roads, which would potentially coincide with 'peak' periods of use by local commuters.

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
Transport (Cont'd)		
11	AZL be required to prepare a construction and operational traffic management plan for the project which details measures to reduce the traffic impacts of the project, including but not limited to: ▪ Minimising the construction traffic impacts of the project ▪ Staging shift changes outside of the peak traffic hours 8.00am — 9.00am and 3.00pm — 4.00pm and so as not to coincide for school bus drop off / pick up times ▪ Restricting heavy vehicle movements to/from the site to the day period, unless there is an emergency ▪ Preparing and implementing a Drivers Code of Conduct for the project; and ▪ Monitoring the effectiveness of these measures. (Cont'd)	**Local Amenity** On the basis that the EIS demonstrated night time road noise criteria would be complied with, the roads would be upgraded and maintained to a very high standard (thereby reducing risks of accident), and traffic flows would not be adversely affected, it is assumed the DPE and PAC have relied upon impacts on local amenity as the basis for the restrictions. The Applicant does not agree, however, that the proposed restrictions minimise impacts on local amenity. In fact, the Applicant is almost certain that the restriction imposed will result in impacts on local amenity being increased to a far greater proportion of the community than if 24 hour transportation was approved. • Assumedly, the DPE and PAC have considered the impacts on amenity of those with residences on Obley Road as a result of truck noise. In response the Applicant notes the night time traffic noise criteria would be easily complied with. Furthermore, the Applicant has committed to only using vehicles with the highest standard noise controls, reducing if not eliminating the potential for high intensity noises which could result in sleep disturbance. Furthermore, the Applicant has committed to specific treatments of the road at those locations where night time noise levels would be greatest. By contrast, the increase in the number of truck using Obley Road during peak road use periods, would potentially inconvenience a far greater number of the local community. Furthermore, this increase in day time truck numbers would impact on the performance of the intersection to Taronga Western Plains Zoo (even if upgraded) with extended queues affecting the amenity of this significant tourist feature of western NSW. • In considering Taronga Western Plains Zoo, should night time transport be prohibited, the proposed treatment of Obley Road using asphaltic concrete would become redundant and therefore not be required to be undertaken to meet the RNP criteria. This treatment would have notably reduced traffic noise levels received at the Zoofari Lodge from all vehicles. As a result, traffic noise levels received at this accommodation would be increased (whilst still meeting the required criteria), affecting the amenity of this important tourist attraction.
12	AZL be required to limit rail traffic movements to the day / evening period (outside of night time period) and heavy vehicle movements to daytime hours.	The Applicant has no issue with the recommendation.
Long Term Landform and Final Land Use		
13	Conditions of consent should limit the final land uses of the site to agriculture and biodiversity conservation and an amended land use plan reflecting this requirement should be required prior to commencement of construction on the site.	The Applicant has no issue with the recommendation and includes an amended Land Use Plan (attached).
14	The applicant be required to prepare a Rehabilitation Plan in accordance with DRE guidelines for the approval of the Secretary of NSW Trade and Investment, Regional Infrastructure & Services prior to the commencement of surface disturbing activities within the Mining Lease. The plan is to address all aspects of rehabilitation and mine closure, including post mining land use, rehabilitation objectives, completion criteria and rehabilitation monitoring, and Include a final landform design that is consistent with the surrounding topography of the area and considers natural drainage design and relief patterns and principles.	The Applicant has no issue with the recommendation.
15	Conditions of consent should ensure that: ▪ progressive rehabilitation be undertaken on site as far as practicable within the constraints of the project; and ▪ the rehabilitation and final landform are reviewed and updated at year 15 of the mine life (or at any other stage, at the request of the Secretary) to ensure the proposal is consistent with current standards and best practice.	The Applicant has no issue with the recommendation.
16	AZL be required to comply with detailed performance measures for the Solid Residue Storage Facility, Waste Rock Emplacement and Salt Encapsulation Cells to achieve an undulating landform consistent with the surrounding environment and revegetated suitable for pre mining grazing agricultural land, while ensuring the integrity of the cells is maintained.	The Applicant has no issue with the recommendation. The performance measures, monitoring methods, action triggers and contingency measures will be included in the Rehabilitation Plan (Mining Operations Plan) for the DZP.

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
Long Term Landform and Final Land Use (Cont'd)		
17	AZL is to undertake ongoing monitoring and maintenance of the site post mining in accordance with the approved monitoring and maintenance program until such time as the Department of Planning and Environment and Department of Resources and Energy direct.	The Applicant has no issue with undertaking monitoring and maintenance of the DPZ Site, with the specific methods, triggers and contingency actions to be included in the Rehabilitation Plan (Mining Operations Plan) for the DZP. The Applicant respectfully notes that DTIRIS is the appropriate authority to assess the status of rehabilitation of the DZP, under the conditions of the mining lease which will be granted, and to avoid future confusion suggests that 'direction' be referenced to DTIRIS alone.
18	AZL be required to maintain the agricultural productivity of lands within its control surrounding the project throughout the life of the project and control invasive species (weeds and pest animals) within the total site.	The Applicant has no issue with the recommendation.
Impacts on Taronga Western Plains Zoo		
19	AZL be required to commission a study of the impacts of the increased traffic on Obley Road on TWPZ animals and visitors during the first 6 months of operations. The Study is to be undertaken in conjunction with TWPZ and be submitted to the Secretary within 8 months of the commencement of operations. If the Study identifies adverse impacts AZL shall be required to implement a vertical sound barrier as agreed with the TWPZ to reduce noise impacts to acceptable levels.	The Applicant has no issue with the recommendation.
20	AZL be required to provide a copy of its approved Transport Management Plan and emergency response detail to TWPZ for information following approval.	The Applicant has no issue with the recommendation.
Fossil Hill site		
21	Prior to determination of the subject application AZL should be required to provide additional information which addresses options to relocate the proposed terraced tailing dam to ensure it does not impact on the fossil site. Where no such options are considered viable, a requirement should be imposed on any consent requiring that any excavation work carried out at the site should be inspected by a qualified person for any further geological and paleontological information and, if possible at least one exposure of the local stratigraphy retained for future reference.	The area of fossil deposits over which the LRSF occurs represents a relatively minor area of the overall fossil deposit. On the basis of a reduction in water requirements for the DZP, the Applicant now considers it unlikely that this area will require disturbance. The above notwithstanding, the Applicant references the advice provided by DTIRIS following an inspection of the site which is summarised in *Section 5.1.1* of the RTS and provide in full as *Appendix 7* of the RTS. The Applicant has included Commitments 2.5 and 2.6 to ensure these recommendations are adhered to and does not consider further information is necessary at this time.
Hazards and Risks		
22	Condition of consent should include requirements for a NORM Management Plan, including a Radiation Management Plan and Radioactive Waste Management Plan	The Applicant has already committed to the preparation of a Radiation Management Plan (RMP) and Radioactive Waste Management Plan (RWMP). The requirements of a NORM Management plan, as outlined in the ARPANSA NORM publication, are entirely consistent with the Applicant's existing management plan commitments. Some of the details of the RMP and RWMP are outlined in section 3 of the Specialist Consultant Studies Part 3: Radiation Assessment.
23	Calculations for worker and public exposure to be updated to take account of all potential pathways nominated in ARPANSA Safety Guide prior to determination of the application.	The Applicant has received advice from its radiation consultant who updated the dose assessments by taking account of the additional ARPANSA Safety Guide exposure pathways as recommended. The consultant notes that the doses from the additional exposure pathways, which are included in a separate report, are very low to negligible.[2]
24	The Commission recommends that a comprehensive waste stream monitoring regime be developed prior to final determination of the proposal, to monitor the level of radiation in the materials both before and after mixing to ensure the final waste is well mixed and does not contain hot spots. This information should also be publicly available.	The Applicant, as part of standard operating procedures will regularly monitor all process and waste streams. This will include monitoring of radiation levels prior to and following mixing to form the final solid waste residue. While it is not proposed to publish this process management monitoring, the RMP and RWMP will include trigger levels along with action response plans in the event these trigger levels are exceeded.
25	Conditions of consent should require decommissioning to be undertaken upon completion of mining, with provision of appropriate bonds or securities to ensure this can be completed in the event of financing issues.	The Applicant is aware of its obligations and has presented detailed plans for rehabilitation in the EIS. A Rehabilitation Plan (Mining Operations Plan) will be prepared to document rehabilitation and closure criteria, performance indicators, monitoring methods and contingency management. A Rehabilitation Security will be provided as a requirement of mining lease and maintained by DTIRIS.

Table 1 (Cont'd)
Review of PAC Recommendations

Recommendation		Comment
	Statement of Commitments	
26	The Department should ensure that the commitments made by the applicant in its application are legally binding.	The Applicant has no issue with the recommendation.

Sources:
1. J. Firth – Pacific Environment Limited.
2. J. Hondros – JRHC Enterprises Pty Ltd