

Attachment 2: Issues raised by the South Australian Government on the mining lease proposal (MLP)

During the consultation period the MLP was circulated to a number of SA Government departments that were deemed relevant based on the information provided. Please find below a table providing issues raised that require points of clarification and/or additional information to enable a comprehensive assessment of the Iron Road MLP, prior to final consideration by the South Australian Government.

#	Topic	MLP Section	Description of issue raised by SA Government	Requirement for applicant in Response Document
Description of Environment				
1	Groundwater	Appendix N	The incorrect water quality guidelines are cited, water quality should be compared against the ANZECC guidelines as stated in DSD's Ministerial Determination MD006.	Provide a response to the issue. Discuss any implications for the MLP as a result of citing the incorrect water quality guidelines.
2	Groundwater	Appendix N, pg 22 of 42	The salinity figure (35,000 mg/L) is not correct for the entire study area, it is correct for the area within the MLP based on the Iron Road (IRD) drilling results. Refer to Appendix A of MLP Appendix N which shows several salinity records below 35,000 mg/L (expressed as EC mS/cm).	Clarify the differences in the description of the existing environment based on the available data. Describe the salinity trends in the study area using supporting maps and data from IRD drilling and WaterConnect.
3	Groundwater	Chapter (Ch) 19	No regional description has been provided for the Tertiary sediments, which extend from the proposed mine site to the proposed Kielpa borefield and to the Musgrave Prescribed Well Area (MPWA).	Provide a description and include comment on the potential for hydraulic connectivity between the proposed mine site and the proposed Kielpa borefield and to the MPWA.
4	Groundwater	Ch 19 Pg 19-4	IRD have described the Tertiary aquifer as including freshwater in the Tertiary beneath the Quaternary lenses in the MPWA. On Page 19-4 of the MLP the following statement contradicts this description, "The lens is defined by a layer of fresh groundwater (salinity limit of 1000 mg/L) within the unconfined Quaternary limestone which overlies tertiary clay, acting as a physical barrier between fresh shallow groundwater and the underlying deeper saline groundwater."	Provide a response to the issue.
5	Groundwater	Ch 19	Regional salinities, outside of the proposed lease area but within the study area, have not been reported. Historical salinities reported for water and mineral wells are in the order of 2,300 to 31,000 mg/L. No comment has been provided regarding the varying salinity or potential impacts.	In the Response Document provide an updated description of the regional groundwater salinity to better reflect the existing environment. Include a map of available groundwater salinity data from WaterConnect and from the IRD drilling program and include the spatial trends.

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6	Geology/ Sterilisation	MLP Sections 2.6 and 3.5	<p>There is no discussion in the MLP in relation to sterilisation of mineral resources which may be covered with permanent structures. The area of the Integrated Waste Landform (IWL) is planned to be located south of the pits, as indicated on Figure 3-1.</p> <p>Figure 3-6 indicates that the IWL overlays a non-magnetic zone, i.e. no iron formation. The potential for the IWL to sterilise mineral resources is not adequately discussed and made clear.</p> <p>The MLP states the IWL will have a footprint of 1,970 Ha and is only sized to hold 54% of the total life of mine waste rock and tailings material (MLP App S, Page 60). Figure 3-19 shows that that the additional waste rock and tailings materials produced by the project will be stored in Extra Zone A (within the pit), and Extra Zone B (northern boundary of IWL). The potential for Extra Zone A (within the pit), and Extra Zone B (northern boundary of IWL) to sterilise mineral resources is not adequately discussed and made clear.</p>	As per the Ministerial Determination 006, section 3.2.1, provide a discussion of the steps that have been taken to ensure proposed mining operations will not sterilise/prevent future extraction of mineral resources. Include evidence to substantiate any conclusions in regards to the potential for sterilisation of future mineral resources or otherwise.
7	Land use	MLP Sections 21.3.1	<p>DSD acknowledges that the MLP includes information about the regional crop production of the Western Eyre Peninsula (page 21-4).</p> <p>However, as per Minerals Regulatory Guidelines MG2a (page 34), for the purpose of understanding the quality of the agricultural land, and in assessing the potential impacts on land use, the MLP should include an estimate of the historic and current level of productivity of land within and adjacent to the proposed lease area (e.g. crop types, harvest quantities and quality).</p>	Provide available information about the historic and current level of productivity of land within and adjacent to the proposed lease area (e.g. crop types, harvest quantities and quality).
8	Surface Water	MLP Ch18 pg18-3 and MLP Appendix H	<p>A technical report titled 'Hydrology and Surface Water Study' and authored by RPS is included as Appendix H to the MLP.</p> <p>Text in the main body of the MLP does not reflect the information contained in Appendix H and as such ambiguity exists as to what information forms the basis of the description of the environment and impact assessment.</p> <p>For example, the RPS technical report has been incorrectly summarized in the main body of the MLP as follows:</p>	<p>Provide an updated description of environment to be consistent with the RPS technical report (Appendix H).</p> <p>The Response Document should reflect the intended meaning of the technical work done by RPS.</p>

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			<ul style="list-style-type: none"> MLP Chapter 18, page 18-3 states "... major rainfall events can also occur in December, January and February during summer storms when in rare circumstances intense daily rainfall can occur." Whereas, RPS Report (Appendix H), page 26 states "major rainfall events statistically occur in the months of December, January and February, when local summer storms are common, causing intense daily rainfalls." 	
9	Noise	MLP Ch 16 pg 16-17 and MLP Appendix L	<p>IRD describes additional noise modelling scenarios at the bottom of page 16-17. One scenario models two locomotives operating at full throttle (as opposed to idling) along the rail line opposite to sensitive receiver 48. It is stated that this scenario will result in no exceedance of noise criteria.</p> <p>It appears that Table 16-6 and Figures 16-7 / 16-8 (and any other relevant figures) have not been updated to reflect the results of this noise modelling scenario.</p> <p>It is unclear if the information in Appendix L reflects the results of this noise modelling scenario and if the maximum modelled noise limits have been reported for sensitive receiver 48.</p>	In the Response Document, provide an updated Table 16-6 and any relevant Figures, containing information that references predicted noise levels inclusive of two locomotives moving at receiver 48, supporting the text on page 16-17.
Description of Operations				
10	Groundwater	MLP Section 3.8.3, pg 3-79	<p>The MLP states that "approximately 95% of the proposed mine site water requirements will be supplied by recycled water".</p> <p>It is stated that there is 95% water re-use efficiency, however DSD notes that the water inputs and outputs from Figure 3-18 are approximately equal.</p> <p>The updated water flow diagram does not depict recycling of water within the mine or processing areas (see Figure 3-18).</p> <p>Dust suppression for haul roads from pit dewatering and the clean water output from the RO plant are not clearly depicted in the process water flow diagram (Figure 3-18).</p>	<p>Clarify the 95% water re-use efficiency statement. Provide detail of how 95% of proposed mine site water requirements will be supplied by recycled water.</p> <p>In the response document, provide a new Figure 3-18 (or a separate figure) that shows how recycled water fits in the water balance.</p> <p>Clarify the inputs and outputs to the RO Plant.</p> <p>Provide a new table showing a water balance of the water inputs and outputs for each year of the</p>

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			<p>It is acknowledged that:</p> <ul style="list-style-type: none"> • Figure 3-18 states the RO Brine used for IWL dust suppression is 3.1 GL/year. • Page 3-39 states 1,963 ML/year fresh water is required for processing ore, with an additional 38ML/year of potable water required for use in the process plant. • Page 3-19 states a list of the RO water outputs which is not consistent with page 3-39. <p>It is unclear what the water input to the RO plant is in ML/a.</p> <p>Water inputs and outputs shown in the process water flow diagram (Figure 3-18) should be presented in a separate single table showing the water inputs and outputs for each year of the mine life (25 years plus 3 years ramp-up).</p>	mine life (25 years plus 3 years ramp-up).
11	Groundwater	MLP Appendix M	In relation to MLP Appendix M titled 'Mine Water Management Numerical Groundwater Flow Model', it is acknowledged that a water budget has been provided for the operational model simulation (Figure 28), however, no water budget has been provided in the MLP for the closure model simulation. Existing Figure 31 provides details for some component of the model water budget but not all (e.g. it does not contain constant head in/out).	Provide in the response document a complete water budget for the closure model simulation.
12	Groundwater	Section 3.8.3 pg 3-79	<p>Table 3-23 discusses the use of flocculent for tailings dewatering.</p> <p>No other discussion is provided regarding the use of flocculent in the mining description.</p>	As required in the Ministerial Determination 006, section 3.5.2, clarify if chemicals are to be used in the beneficiation or processing of ore, and if so, describe the nature and quantities of the chemicals to be used, their reactions with ore and processing water and their ultimate fate.
13	Groundwater	MLP Appendix N	<p>The following reports referenced in Appendix N are not included in the MLP despite being vital to the overall assessment:</p> <ul style="list-style-type: none"> • CEIP Mine Pit Groundwater Management Plan (SKM, 2014c). • CEIP Groundwater Drilling and Aquifer Testing Completion Report (SKM, 2014d). 	For the purpose of assessment and validation of IRDs hydrogeology impact assessment parameters, provide the documents listed as part of the Response Document (or an attachment to the Response Document).
14	Groundwater	MLP	The 'Evidence for linkage or lack of linkage' presented for the	The evidence provided for linkage or lack of

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		Appendix C	environmental aspect groundwater (IM_12_14) is inconsistent with other information in the MLP. The text from IM_12_14 in Appendix C states “seepage modelling indicates a low level of seepage which results in a small elevation of local GW table (33-50mm per year) for life of mine” and is not consistent with Appendix M and N.	linkage for IM_12_14 is interpreted as an increase in groundwater level of 8.25 to 12.5 m over the life of the mine. This is different to the description of seepage provided in Appendix M and N. Provide clarification in the Response Document.
15	Groundwater	Ch 3, pg 3-37, pg 3-38 Figure 3-15	Page 3-37 states that “ex-pit abstraction wells will not be used unless required’. However, the additional information provided in the text on pages 3-37 and 3-38 indicates that ex-pit dewatering abstraction is required at all times. The explanation of Figure 3-15 appears to indicate that approximately 5ML/day is required from ex-pit dewatering during operations.	Clarify the requirement for ex pit dewatering abstraction.
16	Groundwater	Pg 3-65 Figure 3-18 Table 3-23 Pg 3-37	MLP page 3-65 states that “small volumes of groundwater will also be sourced from mine pit dewatering”. MLP Figure 3-18 states that 3.6 GL/year will be required from pit dewatering for the purpose of dust suppression. This statement does not distinguish if this water is from ground water or surface water or a combination. MLP Table 3-23 states that 3,600 ML/year will be sourced from ground water from mine dewatering for dust suppression. This statement attributes 100% of this water to groundwater. MLP Table 3-23 states in-pit run-off of 110 to 440ML/year in an average rainfall year (variability due to changing mine pit extent). MLP page 3-37 states “The groundwater model provides no allowance for removal of water contained in excavated ore and waste rock. The volume of water removed by excavation is approximately 3.6GL/year”. This statement suggests that 3.6GL/year is attributed to water in excavated ore and waste. This is inconsistent with Figure 3-18. The volumes of groundwater required for operations are inconsistently referenced in the MLP.	Provide clarity in regards to the proposed volumes of groundwater and surface water to be sourced from mine pit dewatering. Provide updates to any Figures or Tables as required.

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17	Groundwater	Pg 3-79	<p>Table 3-23 indicates that 12,000 ML/year of groundwater is expected to be used, however, detail is only provided on water output from the RO plant (~2,000 ML/year). As per a previous comment, the RO plant inputs are unclear.</p> <p>It is unclear what the full 12,000 ML/year of groundwater will be used for.</p>	Clarify water usage as per comment.
18	Salt Balance	Figure 3-18	<p>Analysis of Figure 3-18 indicates the following LOM salt inputs:</p> <ul style="list-style-type: none"> Salt inputs to proposed lease area = 11.7 Mt (Pit Dewater) + 9.67 Mt (Water supply borefield) + 4.9 Mt (Ore) + 5.5 Mt (Waste) = 31.77 Mt salt (LOM) <p>Analysis of Figure 3-18 indicates the ultimate fate of salt:</p> <ul style="list-style-type: none"> Ultimate fate of salt = 20 Mt (IWL) + 0.13 Mt (Product) = 20.13 Mt salt (LOM) <p>The ultimate fate of all of the salt entering the proposed lease area is unclear.</p>	Provide information about the ultimate fate of all salt inputs to the proposed lease area.
19	IWL	Section 3.5.2, pg 3-43	The MLP does not adequately discuss a minimum 50m buffer between the IWL and the proposed lease boundary.	Provide justification for the 50m buffer distance. Provide a description of any infrastructure or built features proposed for within the buffer zone.
20	IWL	Chapter 3 Pg 3-53 MLP Appendix S	<p>On page 3-53 of the MLP under the heading “Landform Slope Stability”, the following is stated, “Long-term landform stability is discussed above, with reference to design features and landform modelling”.</p> <p>It is acknowledged that in the previous section of the MLP (page 3-52) Iron Road discusses that Siberia erosion modelling has been undertaken and is based on a 1:100 year storm event. However, it is not clear if additional landform modelling or design to ensure long term IWL stability has been undertaken, for example, geotechnical slope stability.</p> <p>Appendix C of MLP Appendix S, titled “Integrated Waste Landform Geotechnical Stability Technical Note”, page 3, states the following: “The slope stability assessment covered by the Technical Note covers the temporary stability of the IWL during construction and does not</p>	<p>Provide additional information relating to the long term IWL landform stability to support Coffey’s conclusion that global stability of waste dumps is demonstrated by using a conservative ground model.</p> <p>Provide a discussion on all potential failure modes that could cause instability of the IWL.</p> <p>Provide an assessment of any uncertainty relating to the long term IWL landform stability post mine completion.</p>

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			consider the long term global stability of the IWL. However, the global stability of waste dumps was considered by Coffey in the DFS Mine Pit Geotechnical Assessment Report (2014) and demonstrated stability using a conservative ground model.”	
21	IWL	Appendix S MWH Report Section 4.4.1	<p>It is noted that the MWH report in section 4.4.1 states that “the current preferred design provides capacity for 54% of the total LOM waste rock/tailings volume”. This section also discusses additional storage options to address this issue.</p> <p>Table 4-1 states that an additional 3,418 Mt (or 1,554 Mm³) of capacity is required to store the additional waste rock and tailings.</p> <p>It is unclear how the mass and volume for the shortfall in storage capacity in Table 4-1 aligns with the sizes of the proposed ‘extra zones A and B’ in Figure 4-8.</p>	<p>Justify and provide evidence that zones A and B are sufficient in size to store the identified additional waste rock and tailings stated in Table 4-1 of the MWH Report (MLP Appendix S).</p> <p>If zones A and B are not sufficient in size, provide details of the strategies proposed to manage the additional waste rock and tailings.</p>
22	IWL	Appendix S MWH Report	The MWH report estimates 3,370 Mm ³ total volume of combined waste rock and filtered tailings over the life of the mine, based on an assumed dry density of 2.2 t/m ³ . Given that the specific gravity of the solids would be <3.0, and, importantly, that the wastes are loose-dumped, DSD estimates that the dry density would likely be about 1.9 t/m ³ . This would increase the expected total volume of wastes by approximately 16% to about 3,900 Mm ³ .	<p>Provide a response to the issue.</p> <p>Provide a description of the strategies IRD would use to deal with the additional waste rock and tailings should the co-disposed dry density substantially change from the assumptions presented in the MLP.</p>
23	IWL	Ch 3 and Appendix S	<p>The importance of particle size distribution for geotechnical stability of the IWL has not been discussed in the MLP.</p> <p>Government questions whether the IWL mixing ratio of crushed waste rock to tailings is one of the critical parameter that would ensure geotechnical stability of the IWL. Over the operational life of mine there will be varying types and proportions of waste rock being produced, and the nature of the tails may also vary over the life of mine through processing.</p> <p>In government’s review of the MLP and Appendix S, it is noted that site specific laboratory testwork has only been performed on representative samples of the tailings material. Testwork has not been performed on a representative sample of the proposed combined crushed waste rock</p>	<p>Provide in the Response Document a discussion on the proposed particle size distribution within the IWL and the relationship to long term stability of the IWL.</p> <p>Provide a comment on the sensitivity of changes to the mixing ratio of crushed waste rock to tailings on the geotechnical stability of the IWL.</p> <p>Provide information on how IRD intends to ensure that the mixing ratio of crushed waste rock to tailings is managed throughout all phases of the mine, including construction, pre-strip (where tailings may not be generated),</p>

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			and tailings material that will be placed in the IWL.	operations and closure. In the Response Document, discuss the appropriateness of the testwork and slope stability modelling that has been used to inform the design of the IWL. Provide an assessment of any uncertainty that may arise from the level of testwork and modelling that has been used to inform the design of the IWL presented in the MLP. Provide details of any steps that IRD propose to remove any identified uncertainty.
24	Exploration	Ch 3, pg 3-12 to 3-15	Section 3.3 of the MLP gives a historical account of exploration activities conducted on the underlying Exploration License - EL 4849. It does not provide information that details all exploration activities to be undertaken within the application area as a part of the proposed mining operation.	Clarify in the Response Document if IRD intends to conduct any exploration activities on the proposed mining lease during operations. If so, IRD is required to provide information in the response document as per Ministerial Determination 006 and the Minerals Regulatory Guidelines (MG2a).
25	IWL - Tailings	Ch 3 MLP Appendix S	The MLP inconsistently describes the moisture content of the filtered tailings. The MLP and Appendices state multiple figures for the moisture content of the tailings, with a range from 4.2% to 10% being reported. MLP page 3-39 states “that the moisture content of tailings could vary from 4.2% to 9.3% with a base case of 6.8% (GWS 2015)”. Iron Roads reference to GWS 2015 cannot be found in the MLP. An example on page 15-12 of the MLP states “The dewatered tailings stream from the ore processing facility will have a moisture content of approximately 10%”. It is noted that the water balance depicted in Figure 3-18 assumes tailings moisture content of 6.8%.	Provide confirmation of the tailings moisture content parameters used to support, (i) the water balance, (ii) the design of tailings dewatering equipment and (iii) the design of the IWL. In the Response Document, provide additional information to support the assumptions for the moisture content of the filtered tailings, including a discussion on the inconsistency between the MLP Page 3-39 and Appendix S. Clarify the reference to GWS 2015 to support the use of 6.8% as the base case for tailings moisture content. If GWS 2015 refers to a report, provide this report as part of the Response Document.
26	IWL - Tailings	Chapter 3	The detail in the MLP does not fully describe the proposed tailings	In the Response Document provide technical

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			filtration equipment (ie: the tails thickener and subsequent filtration equipment) that would be used to achieve the 6.8% tailings moisture content referenced in the water balance (Figure 3-18).	details about the proposed tailings dewatering and filtration equipment and provide the evidence that this equipment can achieve a tailings moisture content of 6.8%.
27	IWL - Tailings	Chapter 3 and Appendix S	<p>Government questions whether the tailings moisture content is one of the critical parameters to ensure the stability of the IWL and for the management of site water.</p> <p>If the tailings moisture content target of 6.8% to 10% cannot be achieved, potential consequences for the IWL are as follows (but not limited to):</p> <ul style="list-style-type: none"> • Excessive settlement of the combined IWL waste • Inadequate bearing capacity beneath mobile stackers • Slope instability • Soft spots & layers • Seepage. <p>Seepage of saline waters and AMD could potentially be a result of the targeted 6.8% to 10% moisture content not being achieved, and could also result in the “wetting up” (potentially during the life of mine) of the IWL by rainfall infiltration or ingress of rainfall runoff from the IWL upslope. This seepage could potentially emerge at the surface at topographic low points around the perimeter of the IWL potentially impacting surrounding vegetation (including agriculture). This has the potential to lead to multiple environmental outcomes not being achieved, including (but not limited to) outcomes for public safety, vegetation, groundwater and land use.</p>	<p>Provide a discussion as to any implications for (i) the water balance, (ii) seepage and (iii) IWL stability should a tailings moisture content of 6.8% be exceeded.</p> <p>Provide a discussion as to any implications for (i) the water balance, (ii) seepage and (iii) IWL stability should a tailings moisture content of 10% be exceeded.</p> <p>Provide a description of the strategies that IRD would propose to manage a potential increase in tailings moisture content greater than 6.8% and greater than 10%.</p> <p>Undertake an impact assessment of the potential for environmental outcomes not to be achieved if the design parameter of 6.8% and/or 10% tailings moisture is exceeded.</p>
Impact Assessment and Management Strategies				
28	Traffic and Transport	Ch 8 IM_8_03 MLP Appendix C	<p>MLP page 8-33 includes incorrect references to Impact ID’s. It is assumed IM_10_03 should read IM_8_03 to reflect the Impact and Risk Register in Appendix C.</p> <p>In Appendix C, against IM_8_03, the factors that limit / mitigate impact (control measures) include a statement that commits to “... provision of alternative access arrangements where practicable”.</p>	Provide additional information on the alternative access arrangements proposed.

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			More information is required on what these alternative arrangements would be. For example, is a potential strategy the provision of access to third party land users to travel through the proposed lease in a safe and controlled manner?	
29	Traffic and Transport	Ch 8	<p>MLP Page 8-34 states “the risk of catastrophic consequences are present at railway and road crossings and along roads across Australia and the risk assessment of a vehicle accident applied here is not sensitive to the additional traffic generated by the project (ie: the same risk rating would still apply to public safety if the project did not occur).”</p> <p>The CEIP is proposing a new railway and hence it is assumed that new potential impact events are being created as a result of this proposed development.</p> <p>Figure 8-10 indicates proposed Rail level crossings on the south east corner of the proposed lease boundary and approximately 2km from the south east corner of the proposed lease boundary.</p> <p>The Impact/Risk Assessment Register (Appendix C) does not include potential impact events that involve a train interaction with the public either on the proposed lease or adjacent to the proposed the lease.</p>	Provide a new impact event(s) analysis and propose any new outcomes and draft measurement criteria.
30	Air Quality	Ch 15 Table 15-3 Pg 15-2 and Table 15-15 (p15-39)	<p>Results of dust deposition monitoring should not exceed 4g/m2/month (and no more than 2g/m2/month above background) and must be reported as a <u>monthly</u> average. IRD have proposed an <u>annual</u> average for dust deposition measurements.</p> <p>The averaging period is set at a monthly average to enable effective monitoring and management of nuisance dust.</p>	In the Response Document, IRD to review and provide additional information on the dust deposition measurement criteria frequency (monthly vs annual).
31	Blasting	Ch 17	<p>A reference to IM_19_01 in Table 17-6 should refer to IM_17_01.</p> <p>As per issue #28, in some chapters of the MLP, the PIM or IM numbers do not correctly reference the Impact and Risk Register in Appendix C.</p>	Provide a response to the issue. Identify any other instances where a referencing error of this nature has occurred.
Environmental Outcomes				
32	Aboriginal Heritage	Section 9.8 Pg 9-12	The outcome for Aboriginal Heritage should include closure as a phase, and the draft measurement criteria should demonstrate compliance at mine completion.	Propose revised environmental outcome(s) to include the closure and completion phases.
33	Wastes	Pg 14-13	The proposed outcome for IM_14_01 is a strategy.	Provide a revised proposed environmental

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				outcome.
34	Visual Amenity	Pg 20-36	There is no impact event to address the potential impacts to visual amenity post mine completion from mine site infrastructure that has not been removed from the site or as a result of the final landforms. Current proposed visual amenity environmental outcomes do not include mine completion.	Provide a response to this issue. If required, provide a new impact event analysis for this issue. If required, propose an environmental outcome.
Draft Outcome Measurement Criteria				
35	Public safety	Ch 7, Section 7.8, Pg 7-12	Public safety impact events IM_07_02 to IM_07_11 relate to the stability of the IWL being a potential source of impact. If IWL design parameters for particle size distribution, waste rock to tailings mixing ratio, and tailings moisture content are not achieved, there is also the potential for multiple environmental outcomes not being achieved, including (but not limited to) outcomes for public safety, vegetation, groundwater and land use	Review and discuss the proposed draft measurement criteria and draft leading indicator criteria for <u>all</u> impact events where the IWL is the potential source of the impact. Consider the inclusion of IWL design parameters as draft measurement criteria and draft leading indicator criteria. As a result of the review, propose new draft measurement criteria and draft leading indicator criteria in the Response Document.
36	Aboriginal Heritage	Section 9.8 Pg 9-12	The outcome for Aboriginal Heritage should include closure as a phase, and the draft measurement criteria should demonstrate compliance at mine completion.	Propose revised draft measurement criteria to include the closure and completion phases.
37	Soils and Land Quality	Ch 13	The draft measurement criteria for impact ID IM_13_03 (MLP page 13-23) proposes “Soil testing on adjoining land demonstrates there is no statistically significant increase in the level of salinity”. Detailed baseline soil salinity data would be required for this draft measurement criteria.	Provide further information about the process for collection of baseline soil salinity data in relation to this draft measurement criteria.
38	Visual Amenity	Pg 20-36	There is no impact event to address the potential impacts to visual amenity post mine completion from mine site infrastructure that has not been removed from the site or as a result of the final landforms. Current proposed visual amenity environmental outcomes do not include mine completion.	If required, propose draft measurement criteria and draft leading indicator criteria.
39	Air Quality	Ch 15	Total suspended particulate matter (TSP) baseline data indicates that background TSP peaks above 120ug/m3/24hr in some instances. IRD indicates that the project criteria for nuisance impacts includes	IRD to review draft measurement criteria and draft leading indicator criteria for the air quality nuisance outcomes to consider:

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			<p>annual average TSP < 90ug/m3/year (MLP Table 15-3), hence DSD recommends this be included as a draft measurement criteria.</p> <p>As nuisance impacts occur on short timeframes, hence, 24hr average TSP measurement criteria should be developed which reflects short term nuisance impacts.</p> <p>IRD have made the assumption that PM10 will provide an accurate proxy for nuisance impacts without supporting evidence. DSD supports PM10 being used as a proxy for short term nuisance impacts, but this must be based on a scientific correlation between PM10 and TSP. DSD recommends that IRD collect evidence to investigate the correlation between PM10 and TSP.</p> <p>IRD to clarify why TSP is proposed to be measured at Warrambo as opposed to measuring TSP at sensitive receptors that are in closer proximity to the operation or at the lease boundary.</p> <p>Dust deposition used in conjunction with directional dust deposition instruments may provide an appropriate measure of nuisance impacts from dust.</p>	<ol style="list-style-type: none"> 1) The appropriateness of directional dust deposition instruments used in conjunction with dust deposition instruments as a measure of nuisance impacts. 2) The inclusion of annual average TSP < 90ug/m3/year as per IRD's project specification in Table 15-3 of the MLP 3) A commitment to the development of a 24 hour average TSP measurement criteria 4) The appropriateness of developing a correlation between PM10 and TSP for measurement of nuisance impacts 5) Clarification of the proposed locations for TSP measurements
40	Air Quality	Ch 15	No long term draft measurement criteria have been proposed for potential human health impacts from particulates.	See issue #41 below
41	Air Quality	Ch 15 Table 15-15	<p>DSD notes that there has been a recent variation to the National Environment Protection (Ambient Air Quality) Measure. Refer to the following link: https://www.comlaw.gov.au/Details/F2016L00084</p> <p>This variation prescribes national standards for:</p> <ul style="list-style-type: none"> • PM10 - annual average • PM2.5 - 24 hour average and annual average <p>DSD recommends that all of the maximum concentration standards and maximum allowable exceedances for the pollutants listed above be adopted as measurement criteria for all air quality human health outcomes.</p>	Provide an updated Table 15-15 to reflect any proposed changes to draft measurement criteria and draft leading indicator criteria.