Alligator Rivers Region Advisory Committee
Meeting 30, 7 August 2008

Minutes

Venue: Meeting Room, Jabiru Field Station

Agenda Item			Action
1		**Welcome**	Chair
2		**Apologies and Observers**	Chair
3		**Minutes of Meeting 29**	Chair
4		**Action Arising from Meeting 29**	Chair
5		**Supervising Scientist Report**	SSD
6		**ERA Ltd developments –** Ranger and Jabiluka	ERA
7		**Dept of Primary Industry, Fisheries and Mines Report**	DPIFM
8		**Member Reports**	
	8.1	Uranium Equities Limited	UEL
	8.2	Cameco Pty Ltd	Cameco
	8.3	Northern Land Council	NLC
	8.4	Environment Centre NT	ECNT
	8.5	Australian Radiation Protection and Nuclear Safety Agency	ARPANSA
	8.6	Department of Resources, Energy and Tourism	DRET
	8.7	Parks Australia North	PAN
	8.8	NT Department of Health and Community Services	DHCS
	8.9	NT Department of Natural Resources, Environment, the Arts and Sports	NRETAS
	8.10	Other stakeholders reports	
9		**Other Business**	
10		**Next Meeting**	

1. WELCOME

The Chair opened the meeting and welcomed members and observers. Mr Hughes provided a briefing on SSD facilities and fire evacuation procedures.

2. APOLOGIES AND OBSERVERS

The Chair noted apologies received from the following members:

Apologies

Name	Position	Organisation
Mr Phillipe Portella	Member	AFMECO Mining and Exploration Pty Ltd
Dr Peter Burns	Member	Australian Radiation Protection and Nuclear Safety Agency
Mr Russell Robinson	Member	NT Department of Health and Community Services
Ms Emma King	Member	Environment Centre Northern Territory
Mr Mike Ellsmore	Member	Hanson Australia Pty Ltd
Mr Xavier Schobben	Member	NT Department of Health and Community Services
Ms Carolyn Barton	Deputy Member	Australian Government - Department of Resources, Energy and Tourism
Mr Mark Foy	Member	Northern Land Council
Michael Lawton	Deputy Member	NT Department of Natural Resources, Environment and the Arts
Ms Marie Taylor	Member	Australian Government - Department of Resources, Energy and Tourism
Ms Lyn Allen	Member	NT Department of Natural Resources, Environment and the Arts
Mr Peter Cochrane	Ex Officio	Australian Government - Parks Australia
Graham Dewar	Member	Gundjeihmi Aboriginal Corporation

The Chair noted the attendance of the following Members, Deputy Members and Observers:

Members/Deputy Members

Name	Position	Organisation
Prof Charles Webb	Chair	Charles Darwin University
Dr Richard O'Brien	Deputy Member	Australian Radiation Protection and Nuclear Safety Agency
Mr Ian Newnham	Member	West Arnhem Shire Council
Mr Suresh Rajapakse	Member	Energy Resources of Australia Pty Ltd – Ranger Mine
Philipa Varris	Member	Energy Resources of Australia Pty Ltd – Ranger Mine
Mr Geoff Kyle	Deputy Member	Gundjeihmi Aboriginal Corporation
Mr Russell Ball	Member	NT Department of Regional Development, Primary Industry, Fisheries, Mines and Resources
Mr Gary Martin	Deputy Member	NT Department of Regional Development, Primary Industry, Fisheries, Mines and Resources
Mr Richard Sellers	Member	Representing Office of the Administrator NT
Mr Justin Tutty	Deputy Member	Environment Centre Northern Territory
Ms Jennifer Parks	Member	Cameco Pty Ltd
Mr Andrew Sawicki	Deputy Member	Cameco Pty Ltd
Ms Sharon Paulka	Nominee	Uranium Equities Limited
Mr Alan Hughes	Ex Officio	Supervising Scientist Division
Mr Richard McAllister	Deputy Member	Supervising Scientist Division

Observers

Name	Organisation
Ms Nicole Hinton	Australian Government - Department of Resources, Energy and Tourism
Mr Michael Browne	NT Department of Natural Resources, Environment and the Arts
Mr Alan Puhalovich	EWL Sciences Pty Ltd
Ms Julie-Ann Stoll	Central Land Council
Ms Therese Alice	Traditional Owner – Alice Springs region
Dr David Jones	Supervising Scientist Division
Mr Keith Tayler	Supervising Scientist Division
Ms Michelle Bush	Supervising Scientist Division
Ms Wendy Murray	Supervising Scientist Division
Ms Christy Davies	Supervising Scientist Division
Ms Deb Knight	Supervising Scientist Division
Ms Carolyn Lord	Supervising Scientist Division
Mr Scott Parker	Supervising Scientist Division
Ms Jennene Marum	Secretariat/ Supervising Scientist Division

3. DRAFT MEETING OUTCOMES - ARRAC29

Prof Webb sought comments on the ARRAC29 minutes and there being no comments the minutes were approved with no changes.

4. ACTIONS ARISING – ARRAC29

The Chair sought comments from members on actions arising from ARRAC29, which included:

Resolution 4.1 Mr Rajapakse advised that monthly environmental incident reports have been provided to Mr Kyle as requested.

Resolution 5.1 Ms Varris advised that ARRAC members have been kept informed of progress and results from heap leaching trials and she would include details in her presentation later in the meeting.

Resolution 5.2 Ms Varris advised that information had been provided to ECNT regarding whether the release of water on 31 December occurred prior to or following approval from the regulator.

Resolution 12.1 Mr Tutty advised that details on material produced by ACF on Indigenous stakeholder perspectives in relation to Uranium mining had been provided to Ms Barton.

5) SUPERVISING SCIENTIST REPORT

Mr McAllister outlined recent SSD staffing changes including the appointment of Mr Keith Tayler as Director, Supervision and Assessment and the resignations of Ms Davis-Hall and Dr Peter Bayliss.

Audit and Inspection Overview - Ms Bush presented the OSS Audit and Inspection overview. Ms Bush advised that a number of audits and inspections have been undertaken in 2008. The Ranger mine was audited in May covering a selection of applications and proposals from the 2004-2007 period. During the reporting period, three routine periodic inspections were also undertaken. The Jabiluka mine was audited in June. A site inspection was undertaken in early June at Nabarlek and another is planned for 21 August. The

South Alligator Valley containment sites were inspected in July. There is an audit planned in early September for Western Arnhem Land exploration activity.

Revised Audit Protocol - Mr Tayler advised that the SSD audit protocol has been slightly amended and is now similar to the protocol used by DRDPIFR. Mr Tayler noted that a standardised protocol will enable better comparison of audit findings and improve the efficiency of the audit process. Mr Tayler advised that as result of these changes the audit framework now provides for the following categories of audit findings:

Cat 1 – Category 1 non-conformance
Cat 2 – Category 2 non-conformance
C – Conditional
A- Acceptable
NV – Not verified
O - Observation

Ranger Audit - Mr Tayler advised that the Ranger audit was conducted on 12-14 May 2008 and examined a total of 119 commitments drawn from the following documents:

2007 Applications / Proposals
- Irrigate Pond Water in the Jabiru East and RP1 extension and land application areas
- Commission new land application areas in the Corridor Creek Catchment, Ranger
- Extend the existing western stockpile
- Construct temporary accommodation for construction workers at Jabiru East

2006 Applications / Proposals
- Commission new land application areas at Ranger
- Construct an additional lift on the Ranger Tailings Dam

2005
- Interim Deposition of Tailings to RL+12 in Ranger Pit #1

2004
- Application to discharge treated water from the integrated pond and process water treatment plant

Mr Tayler advised the Ranger audit resulted in one Category 2 non-conformance associated with management of the land application areas (CCLAA and JELAA) and three conditional outcomes associated with Radiation Management Plan inductions (2007 audit), Ranger Authorisation inductions (2007 audit) and Pit #1 Seepage Barrier monitoring.

Discussion
Mr Kyle asked why the four separate incidents related to land application areas had been addressed under a single audit finding. Mr Tayler indicated that following discussion with the audit team, it had been decided that the key issue was the overall management of land application areas and that all four findings were related. Mr Kyle suggested it was still not clear why the four incidents were not treated separately given they are widely dispersed geographically. Mr Tayler advised this was the professional opinion of the audit team.

Prof Webb asked about the non-conformance classification and whether the alarm system for the land application area had been installed. Ms Varris stated the alarm was not required under the 2007 application. The alarm was required under the 2006 application but was not installed during that reporting period. Mr Tayler advised that monthly inspections of water and management procedures were conducted to make sure operations were consistent with compliance requirements. Mr Tayler advised that the audit outcome required ERA to report land application rates in weekly water quality reports. Prof Webb indicated he believed that based on the information provided, all four incidents had been satisfactorily resolved.

Jabiluka audit - Ms Bush presented information on the Jabiluka audit and advised that during the period a total of 17 commitments had been audited resulting in 19 audit findings: 16 were acceptable (A), 1 was not applicable (N/A) and there were 2 observations (O). Ms Bush advised that some minor discrepancies were found in the reporting of water quality data and these anomalies were quickly rectified. She advised also that during the inspection it was discovered the IWMP liner had been damaged by a burning poly-pipe creating a hole.

Routine periodic inspections - Ms Bush advised that 3 routine periodic inspections had been conducted during the period at Ranger, Nabarlek and South Alligator Valley. Ms Bush advised the Ranger inspection had included the Tailings Storage Facility (post-wet season inspection; the efflorescence site; and the lift of dam wall); potable water connections (all potable water piping to be fitted with non-return values) and Land Application Areas (follow up from audit). Ms Bush advised that during the Nabarlek inspection it was noted that 6 revegetation sites had been planted since the last visit, Para Grass infestations had noticeably reduced and there had been a visible decrease in woody over-story vegetation since 2004 due to cyclone and fire impacts. Ms Bush advised that the South Alligator Valley inspection had identified some areas of subsidence and also areas of exposed tailings on the road. She advised a report is being prepared for PAN on these matters.

Discussion

Prof Webb asked what the term efflorescence was being used to describe in this instance. Ms Bush advised the term efflorescence was the area of salt crusting on the soil surface that had been observed below the Tailing Storage Facility. Mr McAllister advised that ERA had identified the efflorescence as being related to rock percolation. Mr Tayler advised that a report on the efflorescence observed at Ranger was being prepared by ERA.

Aquatic Monitoring - Mr Tayler advised the 2007-08 wet season was an average rainfall year in contrast to 2006-07 which was characterised by extreme weather and cyclonic events and extensive flooding.

Landslip soil movement (red tide) – Mr Tayler advised that the red tide observed in the Magela Creek catchment was due to fine red sediments resulting from a number of landslips in the upper catchment moving through the system. He advised that the event provided a valuable opportunity to test the sensitivity of the SSD online turbidity monitoring system. Mr Tayler noted that the system had detected increased turbidity due to works being carried out on the boat ramp which proved the high resolution monitoring capacity of the system. Mr Tayler advised that monitoring data indicate that the landslips did not correlate with increased uranium levels in the system.

Ranger off-site surface water quality - Mr Tayler advised that the Magela and Gulungul Creeks are monitored using weekly grab samples and continuous data collection to assess water chemistry and that in-situ monitoring of snail egg production is also being used. Comparative work on macroinvertebrate and fish populations is also continuing. Mr Tayler advised that bioaccumulation data would be reported at the next ARRAC meeting.

Mr Tayler advised that Magnesium and EC relationship research is underway to investigate the use EC as a surrogate for Magnesium levels.

RP1 Siphon water release – Mr Tayler noted the fact that the SSD was able to advise ERA of elevated levels of EC due to siphoning from RP1 was an example of the value of real time monitoring in assisting management outcomes.

Magela Creek and Gulungul Creek Uranium and Radium - Mr Tayler advised there is a high degree of conformity of data on uranium levels collected by SSD and ERA, and that the excursions detected earlier in 2008 were mainly related to flow events. Mr Kyle noted the spike detected on 7 January was due to the culvert release incident. Ms Varris noted the culvert incident had been covered in detail at the last ARRAC meeting. Mr Tayler advised there is reasonably good agreement between the data collected by relevant agencies. He noted the odd ERA upstream sample was probably due to the low flow at time of sampling. Mr Tayler explained monitoring of Magela Creek radium where very little difference is detected between upstream and downstream sites each year. The data collected for Gulungul Creek monitoring also shows agreement between the different monitoring sets undertaken. Samples taken by the different monitoring agencies are not taken on the same day, accounting for variations in data.

Snail monitoring - Mr Tayler advised that snails are key bio-indicators of toxicity. The snail creek side monitoring measures egg production rates. There is little difference in egg production between upstream and down stream sites. In situ tests have been compared with the creek side tests and results are comparable with creek side monitoring. The in situ method is particularly suited for use in this situation as equipment needs are minimal, making the monitoring more effective during floods and lower flow periods. It is portable and less invasive as well as less resource intensive, resulting in a better monitoring system yet giving the same results.

Macro invertebrate and fish study - Mr Tayler advised that the dissimilarity in values between different streams is remaining consistent. Analysis of some results is yet to be completed. The creeks are stable and

there is not much change happening in the system. He advised there has been a rainbow fish decline observed however the reason for this is most likely related to seasonal flow effects as the data correlates well with physicochemical and morphological changes in the creek associated with flood events. In each stream fish populations are becoming more similar rather than less.

Jabiluka surface water - Mr Tayler advised the Jabiluka site is in long term care and maintenance. Biological studies have been discontinued as the area is essentially stabilised and the value of continued biological monitoring is felt to be negligible. Monitoring of water chemistry will continue.

Ngarradj Uranium and Radium - Uranium monitoring at Ngarradj has shown the site is essentially a pristine system. Upstream radium samples have not been taken this year because in previous years the dissimilarity has been virtually nil.

Radiation monitoring at Jabiru East airborne Radon stations - Results from both ERA and *eriss* concur. Figures include natural background and the contribution from mining, gauged from wind correlations, is negligible (below what is detectable).

Discussion
Mr Tutty queried the slide covering integration of continuous monitoring and requested an explanation of the reason why results are so difficult to ordinate. Mr Hughes noted there are a number of practical issues which could affect the sensitivity of monitoring samples. He noted automatic samples sit in glass/plastic sample bottles for some time which may affect the sensitivity of the determinations. The previous numbers are accurate enough, however the improved system takes into account the factors associated with sitting samples. The automated continuous monitoring takes samples at all times and enables action almost immediately via alarm if anomalies are detected.

Mr Tutty asked how the new approach improves on the responsiveness of the existing system. Mr McAllister responded that it is not yet proposed that bottles be refrigerated and Mr Hughes included more research is required before determining if the precautions are necessary. Mr Tayler added research is needed to work out the impact of time delay on samples taken in order to gain certainty about the impact of time on the results. Mr Tutty noted it may be interesting to look at data as soon as it is possible to get to the sample. Mr McAllister agreed comparative samples are taken as soon as a monitoring officer arrives on site. Ms Varris added ERA takes samples of monitoring data to verify eriss results.

Mr Tutty asked for verification of fish monitoring data. Mr Tayler described the glass bottomed boat counting process and indicated the values attained were previously more differentiated than with the current method. Mr Sawicki asked if fish are shy of shade suggesting fish may flee when the boat shadow approaches. Ms Davies explained the technique limiting this occurrence. Mr Tayler advised the new fish counting survey vessel moves more slowly, giving time for more accurate counting. The changed method has yielded more consistent results and the data line runs parallel with the changed method, rather than indicating an actual change in fish numbers. Consistent trends show fish community numbers are not changing in relation to each other. Mr Hughes noted data attained from the earlier method contained more noise. Mr Tutty suggested the previous method produced results with higher resolution.

6. ERA DEVELOPMENTS – RANGER AND JABILUKA
Mr Rajapakse presented a report on recent ERA developments. Key items included:

Recent changes in ERA corporate structure - Chris Salisbury finished his role as CEO and has moved to Rio Tinto's Gove operation. Rob Atkinson will take over as CEO from 8 September. Mr Atkinson was previously GM for Rio Tinto's bauxite operation in Weipa. Alan Puhalovich is now Principal Manager for the Environmental Strategy team. Other appointments include Reid Miller as Manager for Strategic Mine Planning, Bob Peake as Manager for Health & Safety and Libby Beath as Manager, External Relations.

Safety Improvements - AIFR and LTIFR have increased in response to the recent rise in injuries. Most injuries are strains and sprains, with a few more serious injuries. Improvement has been maintained throughout construction work. Contractor injury performance is now better than employee rates, despite a significant increase in the amount of contractor work on site.

ERA OHS achievements - Frequent exercise of effective disaster plan management has resulted in ERA achieving first place overall in the NT Mines Rescue Competition. ERA also achieved first place in several different events. ERA employees are encouraged to develop ideas to overcome ergonomic problems. An example of this is the diaphragm pump trolley as a means of reducing and replacing manual lifting requirements.

ERA Indigenous employment - ERA's Indigenous employment strategy forms part of the operation's goal to positively impact local community development. Indigenous employment has increased at Ranger from 72 in March 2008, to the current 93 employees. Staff retention strategies have been identified in order to achieve the greater Indigenous staff numbers. ERA anticipates an increase in Indigenous employees to 100 by November 2008. This corresponds with ERA's commitment to increase Indigenous employment from 16 percent of staff in 2007 to 20 percent in 2008. Local Traditional Owners are consulted in order to ensure the cultural appropriateness of new appointments.

Production - Production outcomes are in line with 2007 projections for the 2008 period. Nearly all of the planned new fleet is in action, including excavator trucks and loaders. The Shell 50 cutting is underway and the pit will eventually reach a maximum depth of -265 RL.

Laterite Plant and Radiometric Sorter - Energising of the radiometric sorter for the facility is now underway and radiometric commissioning is expected by 2008. The laterite plant will be used to process 1.36 million tones of stockpiled lateritic uranium ore and will be commissioned in late September. This project has been delayed due to personnel shortage.

Update of Ranger Expansion Studies - Mining operations have been extended from 2008 to 2012. Milling is planned for completion in 2020. The land form trial site has been selected and the trial landform will commence construction this year, honouring the rehabilitation agreement. Some slowing of production has occurred because ore is harder at depth. Projects are underway to address this problem. The acid plant has been decommissioned and acid rather than sulphur is now being freighted by road. Deconstruction of the acid plant is planned for next year. The western stockpile is being extended. Preliminary earthworks for the extension to Shell 50 are underway. The water treatment plant is operational with a shift in focus from pond water to process water planned for December. The amount of pond water requiring disposal has not been great this year so the water treatment plant has not as yet been used very much. The tailings dam wall is being raised from 51 to 54 meters.

Accompanying Work Programs - ERA supports the Mirrar in recognition of ownership of land and is keen to see success in ALRA scheduling. A traffic survey is being undertaken by a contractor in consultation with Parks in order to better understand the volume of traffic associated with mining activity. Archaeological and cultural heritage sites have been identified by Gundjeihmi Aboriginal Corporation. ERA is committed to protecting materials listed during the assessment process. Consultation with stakeholders and Parks has occurred for the weed management, biodiversity and fire management programs. Traditional burning practices with Mirarr have been undertaken as part of this strategy.

Ranger Expansion - Feasibility studies have been undertaken. Results show support for a further pit expansion to Shell 50, stretching mining operations to 2012. Subsequent underground mining from this shell requires further feasibility assessment. The western stockpile would also need expansion to accommodate tailings from work on shell 50. Proposed Shell 14 expansion is under study for low grade material of about 15-20,000 tonnes. Expansion to Shell 14 would require the road to be moved. An additional waste rock stockpile would also need to be established. There is potential for an underground operation and a feasibility study is underway around Pit#3 with drilling to explore the geological makeup of the ore body. Resulting plant expansion from 2.4Mtpa is being assessed. Additional work needs to be done in order to understand the feasibility of the expansion including Traditional Owner and statutory regulation approval.

Heap Leach Facility - Existing feasibility studies recommend a heap leach facility to process low-grade ore. The facility would process around 10 million tones per annum. Further work to understand how new technologies can operate within the mine site and the resources required to maximise efficiency is required. One of the key questions considered during feasibility assessment has been the viability of heap leach processing in Kakadu's climate. A comparable site in Brazil offers examples of contingencies available for high rainfall events. These include lining of ponds. Low stack leaching with sulphuric acid would result in significantly lower acid use than current methods allow. This process would allow leachate to be stored in existing pits and negate the need for additional stockpiles. Water would then be processed in the water treatment plant. This would enable 30-40 days leaching time. The leach facility has been considered for situation in both green field and brown field sites. A number of configurations are being considered and the design has not yet been finalised. Other infrastructure required for full operation of the facility will need to be considered if the heap leach process is to go ahead; either a new road or a new acid plant. Access to electricity is also a constraint and accommodation for additional contractors will need to be considered.

Timeframe for expansions - Consultation with the Minesite Technical Committee, Northern Territory and Commonwealth Governments is ongoing. It is anticipated the regulatory approvals process will be

undertaken by 2010, with the aim of commencing in 2012- 2015. Operations will cease in 2020. A range of expansion opportunities exist. A methodical assessment process is underway for feasibility/pre feasibility studies. ERA and RioTinto boards are supportive; however attaining regulatory approval is critical.

Discussion

Mr O'Brien asked if the number of injuries recorded this year has been calibrated against hours worked. Mr Rajapakse advised the increase in work hours had been factored into the calculations provided. Mr O'Brien asked about the sulphuric acid risk/cost benefit analysis process. Mr Rajapakse advised that an analysis was conducted in 2006 which had included assessment of both costs and benefits. At that time there was uncertainty about the future of the mine so the decision was made to ship in acid until the future was clearer. Ms Varris noted that sulphur trucks have been removed from the road but have been replaced by sulphuric acid trucks.

Mr Kyle asked about the rehabilitation model and the consequences of this in terms of the 2026 lease end date. Mr Rajapakse stated ERA remains committed to meeting agreements for closure.

Mr Kyle noted the Shell 14 and Pit #1 irrigation area will expand the mine's footprint and this will have an effect on closure modelling. Mr Kyle asked why the closure model does not reflect this additional activity now, as the closure model will be negotiated in only one week. Mr Kyle suggested that the planned expansions should be included in negotiations as they represent a massive expansion in the mine's footprint. Mr Kyle would like this to be included in the closure model to be considered during the negotiation. Mr Rajapakse stated that he was unable to comment further on the issue at the moment.

Mr Tutty suggested the proposed timeframe was very tight. He asked about the proposed consultation process for the expansion and whether there would be further public consultation in relation to the expansion plans. Mr Rajapakse advised that further dialogue and engagement is planned for the feasibility study in the period 2008-2010. Mr Tutty indicated as this could be considered two years or just slightly more than one, this was a very tight timeframe. Mr Tutty stated that the sooner the public is involved in consultation the better. Ms Varris advised that the ARRAC key group of stakeholders is being consulted, and public consultation will follow.

Mr Rajapakse handed over to Ms Varris who provided an update on ERA environmental management activities and incidents. Key issues included:

Water management - Temporary storage of water in borrow pit occurred in early 2008, however the pond water was back in RP2 by 3 July 2008. The water treatment plant was closed for the dry season on 14 June 2008. Currently predicted there will be around 700 ML water in the system at the start of the wet season if no further land application or treatment takes place. Irrigation ceased on 11 June 2008. Planning for the coming wet season is underway. Enough water needs to remain onsite to allow continued operation of the system so as much water as possible is kept onsite during the dry. The water treatment plant has been approved for operation without pre-treatment and the focus is now on making modifications to the treatment plant to allow this.

Tailings Dam Lift RL54mRL - NRETA has provided formal advice to DPIFM on the tailings dam lift. ERA is continuing to construct the lift. NRETA determined that formal assessment under the NT Environment Assessment Act is not required and has identified key issues. DPIFM have sought feedback from MTC on NRETA determination. Ms Varris advised it was critical that dam construction commence immediately to ensure contingency processed water storage for the wet season.

Climate Change and Energy - Commonwealth regulation requiring reporting on energy efficiency has been initiated. Energetics has been engaged to undertake an external review of ERA's energy and climate change action plan and will result in a three year plan. Electricity metering on site for various unit processes is being implemented to determine energy use per unit. Oil could be recycled on site from ERA fleet vehicles if a suitable filtering system is developed. Activities to improve energy efficiency are being encouraged in Jabiru including a $2000 prize. There will be green content in show bags created for the community environmental awareness day, being held in a few weekends time.

Incident Reports - Environmental incident reports are issued in detail to MTC and a brief summary was provided to ARRAC.

1. Hole in bund seal

Actions:

- Confirmation samples taken.
- Liquid pumped to transfer sump in the organics bund.
- Bund was pressure blasted in the areas of concern.
- Hole in bund seal resealed.
- Bund inspections in plant increased to monthly for next quarter.
- Reported to stakeholders

2. Efflorescence observed to west of TSF

Actions:

- Area identified during cultural heritage survey.
- Inspection of area with dam designer.
- Salts collected for analysis.
- Area walked with stakeholders during RPI.
- Short report on efflorescence in development.
- Reported to stakeholders yesterday.

The need to develop a defined process for samples of this sort was highlighted during this process.

3. Personnel were sprayed with small amount of ADU as a result of wear point in hose

Actions:

- Flexible lines in area inspected and secured in position.
- Weekly planned inspection by maintenance personnel. The approved project to replace all discharge flexible lines is progressing.
- 24 hr urinalysis undertaken.
- Dose assessment produced for exposure.
- Reported to stakeholders on 27/6/08.

Urine analysis was undertaken and dose assessment indicated exposure was very low.

4. Dirty boots taken off site

Actions:

- Boots returned to site.
- Surface contamination assessment undertaken – did not constitute an issue.
- Communication to site.
- Spot checks at gatehouse increased.
- Reported to stakeholders.

Investigation showed procedures were not followed. Level of contamination was so low as to not be an issue but procedure was broken resulting in action.

5. Controlled area vehicle driven off site

Actions:

- Vehicle inspected for mine residue
- Competency records checked
- Vehicle route inspected and cleared for environmental impact (photographs taken).
- As the result of the investigation the team members' employment was terminated for breach of ERA procedures.
- Communication with workgroups.
- Stakeholders notified.

Closure planning - Trial land form processes have commenced with vegetation clearing. Ecosystem construction strategies are being developed drawing on the results and observations of the local rehabilitated land forms prior to closure. In relation to Pit#1 closure, a number of strategy studies are underway and a MTC working group has been established to address closure criteria. A number of assessments are being conducted at different sites. Three options for the demonstration land form are being considered. The draft TOR paper will be forwarded to stakeholders for comment. Meetings to finalise TOR and working arrangements have been undertaken and development of final closure criteria is set to commence on 19 Aug 2008.

Discussion

Mr Sawicki asked about sustainable development and operational fuel requirements and whether ERA has an underground tank management strategy. Ms Varris advised ERA is working to reduce the number of underground tanks on site. Testing of tanks and pipes is being undertaken and a number of tanks and pipes are being decommissioned. A plan related to the traffic strategy will also allow decommissioning of other underground tanks. This proposed action plan has been approved. Mr Sawicki asked if the tanks will be filled with sand or taken off site. Ms Varris advised the tanks have been disconnected and filled with foam until units can be assessed for determining the best decommissioning approach.

Mr Sawicki asked about waste oil processing on site and if decanting and filtering occurs. Ms Varris advised that waste oil is currently classified as potentially radiation contaminated, leaving the only option to burn the oil onsite. Mr Sawicki asked if RioTinto has considered natural gas as a power option for the mine. Ms Varris advised a range of power options are being considered to reduce/remove reliance on diesel power generation, including natural gas.

Mr O'Brien asked about the exposure of workers as a result of the ADU incident and what is a typical concentration of uranium in ADU. Mr Rajapakse stated between 74 - 80 percent. Ms Varris outlined exposure points on bodies of personnel sprayed during the incident and actions taken to reduce contamination following exposure. Ms Varris advised the particular incident location has since been hard piped.

Mr Kyle noted the climate change action plan and asked about ERA's strategy. Ms Varris described the strategy as a series of activities to both reduce emissions and become more energy efficient. Response to climate change events has not yet been addressed in detail. Rio Tinto's ability to manage in a carbon constrained environment is being assessed. ERA sees itself as being part of the solution to climate change. 60 percent of emissions continue to come from power generation. Changing this fuel source represents the largest opportunity for reduction. Onsite practices are also being targeted.

Mr Kyle asked if extreme events of climate change are included in the management plan. Mr Tutty added it would be appropriate for ERA to consider factoring extreme events associated with climate change into management plans, including the responsibility for tailings waste over the next 10 000 years, with respect to climate change predictions. Ms Varris stated ERA's involvement in work to develop a regional climate change model. The models are not yet available. CSIRO is undertaking the research and ERA is looking to be involved with this development. Mr Tutty asked how development of the plan fits in with ERA's short timeframe for feasibility assessment of expansion and closure planning. Ms Varris replied that this is being considered and impacts when they are understood will be factored in to management plans. Mr Rajapakse noted that climate change will need to be factored into future management plans regardless of whether or not expansion occurs.

Mr Kyle noted that people coming to the ERA mess hall sometimes wear dirty and potentially contaminated clothing and asked what ERA's policy is on this and how is it enforced. Ms Varris responded there is definitely a policy and people are trained about the hazards of this practice during induction. Policing is now far more visible and the stop point is when people leave the site rather than when they are at the mess hall. She acknowledged that it is important that this continue to be enforced. Mr Kyle noted it is mostly contractors who are doing this. Ms Varris thanked Mr Kyle for the feedback.

Mr Sawicki noted that 60 percent of fuel used at Ranger goes into power operation and asked what percentage goes into outside operations. Mr Rajapakse advised around 2.5 percent.

Mr Tutty referred to the presentation slide concerning the demonstration landform and asked about the laterite experimentation. Ms Varris explained the mix of laterite and rock for the 3 different models. Mr Tutty recalled last time ERA stated stringent controls exist on models that can be used and wanted to know if these laterite models conform to this regulation. Mr Rajapakse confirmed rock is tested to determine the stability of compounds in rocks to be used. Ms Varris noted vegetation grows on existing waste rock.

Mr Tutty referred to the NT Supervising Authorities report and the 20 May land clearing activity. Ms Varris advised the area had been culturally cleared but a site land disturbance permit had not been used on site to ensure clearance. There were no implications to cultural heritage management. The land was cleared as part of Ranger village accommodation.

Mr Tutty asked about the potable water incident involving a non-return valve. Ms Varris expanded on the incident, describing remediation measures undertaken by welding blanks on pipes and the engagement of an external consultant to conduct a whole of site review for potable water infrastructure. Mr Tutty asked if this

hadn't been subject to audit previously. Ms Varris advised that a full audit was conducted following the potable water incident.

7. DEPT OF PRIMARY INDUSTRY, FISHERIES AND MINES REPORT

Mr Martin presented the DPIFM Supervision and Monitoring Report for ARRAC30. The report provides a summary of variations to the Authorisation and Operational Approvals and safety and environmental incidents during the reporting period. The report also provides a comparison of groundwater data from sites sampled during the reporting period at Ranger and other sites. Key items included:

Mining Technical Committee Meetings - Ranger MTC and Jabiluka MTC meetings were held on 8 April 2008, and 19 May 2008. There were no meetings of the Nabarlek MTC during the reporting period.

Authorisations - Authorisation 108-04 was issued in April 2008. Under agreed conditions, approval was granted to operate the tailings storage facility at an interim level of RL+48.0m. Wording in section 2.1.1 of the Authorisation was amended to approve Pit #3 expansion to the Shell 50 design.

Safety and environmental incidents - Over the reporting period there were a total of 23 reported incidents, 5 of which were safety incidents reported to NT WorkSafe. The full list of incidents is in the DPIFM report, commencing at page 6 of SMR 56. Environmental incidents were followed up by members of the MTC.

Operational approvals - Several projects were approved during the reporting period including:

- Modification to the existing water treatment plant
- Approval to construct and operate a pond water Osmoflo water treatment plant
- Approval to operate the tailings storage facility at an interim level of RL48m
- Extension of Pit 3 to the Shell 50 design

Pond water

- Pond water inventory has decreased during the reporting period
- By early 2008 Pit #3 was effectively dry, allowing mining at floor level
- Actions are ongoing to manage pond water on site
- Methods used to manage pond water include:
  - Use of land application areas
  - Pond water treatment
  - Irrigation of stockpiles
  - Use of evaporation basins on southern stockpiles
  - The use of pond water for dust suppression

Ground and surface water monitoring - Ground water comparison for sites sampled during the reporting period from Ranger has been undertaken. There is was no DPIFM ground water monitoring conducted at Jabiluka. Surface water monitoring in Swift Creek is conducted by DPIFM, ERA and SSD. Uranium peaks detected by both DPIFM and ERA at monitoring sites are being analysed and findings will be available shortly.

Nabarlek - The Nabarlek lease was sold to Uranium Equities Limited in 2008. Uranium Equities Limited has taken ownership of the site and has submitted a mining management plan to DPIFM for assessment. The next Nabarlek MTC meeting is scheduled to follow the 21 August audit.

Discussion

Mr Kyle asked about the data point gap between 2005 and March 2007 for Nabarlek. Mr Martin advised data is collected every 2 years and the gap is a result of problems caused by flooding. Mr Kyle stated the discrepancies in data from Ranger monitoring at Magela Creek are not insignificant noting it had been agreed last year that there was a general convergence of data. Mr Kyle also noted the P31 Uranium sulphate figures labelled as DPIFM data and asked if the labelling is wrong, as the data resembles ERA data. Mr Kyle also noted the large 100 point scale used for graph representation is not useful considering the subject of monitoring is Uranium. Mr Kyle noted the issue of data discrepancies had been raised previously but he had believed the issues had been resolved. Mr Kyle asked if the discrepancies were related to the monitoring equipment used at the Ranger mine. Mr Kyle indicated he continues to be concerned about the validity of the data presented and suggested that, for the benefit of stakeholders, greater scrutiny should be given to data before it is published. Mr Kyle noted that after the issue was last raised, ERA and eriss were consulted in order to determine why discrepancies had occurred. Mr Hughes stated there is not necessarily a significant discrepancy in the data for sulphate readings. Mr Kyle noted that on a scale using 100 unit increments, it is very hard to determine whether there are significant discrepancies. He also noted data will not be taken for another month, so it will be difficult to match readings with data taken by ERA.

Mr Tutty endorsed Mr Kyle's concerns and requested more time and energy be expended to determine correlations. Mr Martin stated DRDPIFR's primary role is to monitor ERA's performance, not ensure that data collected are compatible.

Mr Sawicki suggested the discrepancies may be due to the different labs and related methods being used to obtain results. Mr Hughes advised that generally surface water correlations are more similar than ground water correlations. He noted that since the last ARRAC discussion, only one reading has been taken so it is difficult to distinguish whether this is in fact the case. Mr O'Brien requested differences to be plotted separately with more suitable scale to allow analysis. He noted also that three different labs are used by DPIFM to obtain the data. Mr Tayler suggested if the time of sampling is taken into consideration, there is reasonably good correlation between data points.

Mr Sellers stated data is only presented to ARRAC after it has been peer reviewed by the Technical Committee. Prof Webb stated it is important that ARRAC be presented with the most recent data and suggested it may assist ARRAC's understanding if this were to be presented by technical officer in future. Prof Webb queried whether the peaks are of sufficient magnitude to cause concern and why the variations in data occur. Mr Kyle stated the peaks are not significant in terms of environment and human health however the rigour of the data is important. Mr Tutty suggested perhaps coordination of sampling is possible. Mr Sellers stated coordination of sampling would negate the rigour attained by taking samples at different times. Mr Hughes agreed it is better to stagger sampling taken for data production.

Mr O'Brien stated that if everyone is doing exactly the same things; chances are greater that changes will not be detected. It is better to stick with the existing system staggering collection but make sure differences can be explained. It is not relevant if the levels are well below environmental thresholds.

Mr Tutty stated the purpose of the monitoring work is not only to make sure levels are within acceptable limits, but also to detect trends. Mr O'Brien stated trends will show up if different methods are used, even with variations in data collection. Mr Tutty referred to authorisations granted since the last ARRAC meeting and asked why the Shell 50 design authorisation was granted. Mr Martin stated the terms of the original authorisation did not restrict an expansion to the pit so the wording for the new authorisation was changed to restrict expansion of the pit to Shell 50 and require further approvals and possibly amendments to the authorisation to extend beyond this. Mr Ball noted there were no environmental or other reasons why the expansion could not safely proceed. He noted the detailed application by ERA was assessed by the MTC as part of the approval process. Mr Ball noted that any applications for further expansion would be subject to appropriate assessment and Ministerial approval.

Mr Tutty asked why the original authorisation allowed for an expansion when it was known ERA planned an expansion. He expressed concern that the public did not have a role in the decision to allow the expansion. Mr Ball advised that approvals of such applications are not publicly restrictive processes and that decisions are made on behalf of the public based on consideration of the best available advice.

8. MEMBER REPORTS

8.1 Uranium Equities Limited

Ms Paulka provided a brief report on behalf of Uranium Equities Limited (UEL) which officially purchased Queensland Mines Pty Ltd (QMPL) the owner of the Nabarlek Mining lease MLN-962 from Hanson Pty Ltd on 30 June 2008.

Ms Paulka advised that UEL has been nominated as the operator of the Nabarlek Mining Lease MLN-962 as the nomination was submitted by Hanson's before the transaction was completed to allow progression of both approvals for exploration and the rehabilitation activities. UEL submitted a copy of the old MMP together with the current bond amount of $400,000 in order to obtain an authorisation and complete the transaction. Authorisation number 0435-01 was issued on the 28 May 2008. An updated MMP with new bond calculation was submitted to the regulator on 16 May 2008. This MMP covered both new exploration work and rehabilitation of the legacy areas. Further information was submitted on 22 July following a request from DPIFM. It is expected that the financial security calculation will be assessed by the Securities Assessment Board in early August 2008.

Ms Paulka advised that a work program was submitted to the NLC on 2 May 2008 for this years exploration work as required under the exiting QMPL agreements. A meeting with Traditional Owners was conducted on the 29th July with very positive outcomes. Approval was obtained for the installation of a camp at the Airstrip to cover both exploration and rehabilitation works. Approval was also obtained for the proposed exploration

program inside the fenced area and the program outside the fenced area is awaiting archaeological clearance. The opportunity was also taken at this meeting to describe to the TO's the plans for rehabilitation this year and going forward. This was also received positive reactions and invitations were extended for people to come on site and view this work and/or provide feedback.

Ms Paulka advised that the UEL indigenous employment program has commenced with the son of a local TO due to commence work on the rehabilitation program on Saturday and another local from Oenpelli due to commence next month. An environmental technician has been employed in order to progress the rehabilitation activities on the lease. This person has extensive experience in land management in this region.

Ms Paulka advised that the following rehabilitation works have commenced on the mining lease:

- Fire breaks and back burning occurring around the fenced area to try and minimise the number of hot late season fires. This work was conducted with Kakadu Native Plants following consultation with the NLC and local TO's.
- An area at the western end of the evaporation pond has been selected for the coming season's seedling planting. 5000 seedlings have been ordered from Kakadu Native Plants
- Weed mapping of the site has commenced.
- Seedling mortality rates are currently being measured for last years planting of 1200. Final figures are not yet in but rates appear to be low and in the order of 20% survival. This data will be used to assist the coming years planting.
- Surface and ground water sampling are scheduled for August. Assuming approval is received for the MMP and a new authorisation received then the plan is to commence installation of the camp mid august and start drilling soon after.

8.2 Cameco Pty Ltd
Ms Parks provided a brief report on the Cameco joint venture with Uranium Equities Limited around the Nabarlek mining lease. The drilling program proposed this year requires archaeological clearance.

8.3 Northern Land Council
No report provided.

8.4 Environment Centre NT
No report provided.

8.5 Australian Radiation Protection and Nuclear Safety Agency
Mr O'Brien reported two safety guides are under development. Both have gone through the public comment phase and have been approved by the safety council.

8.6 Australian Government - Department of Resources, Energy and Tourism
Ms Hinton reported on progress in the implementation of the Uranium Industry Framework. She advised that the development of a radiation safety course is underway and is expected to be ready in 2009. Arrangements for the production of video resources for Indigenous communities are being negotiated. Ms Hinton advised that the video will form part of an information and communication strategy highlighting opportunities and benefits for indigenous communities associated with the uranium mining industry.

8.7 Parks Australia North
No report provided.

8.8 NT Department of Health and Community Services
No report provided.

8.9 NT Department of Natural Resources, Environment & the Arts
Mr Browne reported that the application to the lift of the TSF has been deemed not to require formal assessment by NRETA and had been referred back to DPIFM with some specific recommendations.

9. OTHER BUSINESS
Mr Newnham reported on the new local government arrangement of West Arnhem Shire. He advised that Council elections will be held in October 2008. Ms Paulka commended the West Arnhem Shire weed management initiative initiated by Peter Cook. Ms Stoll thanked the Chair and members for the opportunity for CLC and Ms Alice to attend and observe the meeting. There was no other business raised.

Next meeting

It was agreed the next meeting would be held in Darwin in March or April 2009.