

MINUTES OF MEETING STRATHALBYN COMMUNITY CONSULTATIVE COMMITTEE

Thursday 16 August 2012 @ 7.00 pm

Senior Citizens Hall, 6 Parker Street, Strathalbyn

PRESENT:

Charles Irwin - Chair	Mike Farrier	Susan Jettner	Fred Carrangis
Mark Dale	Malcolm Twartz	Anne Woolford	
Julia Currie	Rhonda McCarthy	Merri Tothill – Sec	

Gallery approx 15

Including Terramin staff and URS Consultants (Mine Closure Planning) - Andrew Piggen and Vic Farrington

DMITRE:

Greg Marshall	John Morton
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TERRAMIN:

Matt Daniel	Joe Ranford	Nic Clift, Managing Director and CEO	Yullinah Wylie
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EPA:

Rob Lyons

APOLOGIES:

Ben Brazzalotto, Adrian Pederick MP, Karen Hawke, Hans Bailiht, Dr Ted Tyne.

Meeting commenced at 7.05 pm

1. WELCOME, INTRODUCTIONS AND APOLOGIES

Charles Irwin welcomed all and thanked everyone for attending. Apologies were accepted, as outlined above.

Charles introduced Joe Ranford the new General Manager of Angas Zinc Mine.

Joe welcomed and thanked everyone for being part of the meeting. Joe gave a brief summary of some of his background. He commenced as General Manager in April, so he has had 3 months with Terramin. He came from a farming background on Eyre Peninsula near Cleve and his family continues to farm there. He is a mining engineer with 18 years experience in mining operations and project management roles in Australia and South Africa. He has lived in mining communities and is glad to be involved in the community again.

Note that a microphone (supplied by Terramin) is available for use by any of tonight's speakers.

2. REVIEW OF MINUTES OF LAST MEETING

Two corrections to May minutes –

3. 28RL should be 68RL

4. Ashley Keegan is correct name for presenter from FABAL.

Minutes as amended, accepted as true and correct record.

3. DMITRE: COMPLIANCE OVERVIEW - Compliance and Inspections report Greg Marshall

Hans is an apology, so Greg will present the whole DMITRE report.

Significant Water Management Issues

The December 31, 2012 deadlines of the Environmental Direction remain in place and are unchanged. As the committee is aware, we are receiving monthly reports and these show that Terramin is continuing to reduce water volume but not enough to reach the set targets. DMITRE understand the reasons for not reaching these and that Terramin has a program for addressing this and we hear their report on this later in the meeting. Terramin will report on:-

- *Underground re-injection*
- *RO plant performance*
- *Off site/off take options*

Underground – this is a critical part of water management, ensuring separation of clean mine water from the mine water collected elsewhere. Clean mine water is being re-injected underground. Department for Water (now Department for Environment, Water and Natural Resources – DEWNR) has re-issued licenses. Having re-established this process, subject to the Water Management Plan and EPA criteria, a shandyng process will be used. This process is essential for ensuring that the burden is taken from the RO process, includes reduction of brine. DMITRE is monitoring this. Terramin will provide further detail on the irrigation option.

Paste backfill has been in excess of required performance and if this continues then it will contribute significantly to reaching the water reduction targets.

RO performance – this has been an ongoing technical challenge due to the chemistry of the water. Terramin has increased the performance of the RO plants and increased utilisation of the OSMOFLO plant. Terramin are applying the necessary resources to achieve this, including the use of OSMOFLO staff but there is still significant work to do.

Off site/off take options – pipeline to Langhorne creek was commissioned in July and is operational. This allows beneficial use of treated water and provides a backup for use of Council STEDS ponds, particularly in winter.

There is still some work to do to reduce water levels but Terramin are committed to achieving the targets.

Questions:

What will DMITRE do if Terramin do not achieve the targets?

It is not appropriate to discuss this now.

Inspections

In June Hans and Professor Richard Jewell, Senior Consultant, Australian Centre for Geomechanics inspected the TSF and did not identify any significant issues or risks to the environment.

Last week, Ted Tyne, Scott Marshall and Greg Marshall inspected:-

- Infrastructure for pumping water through the pipeline
- Re-injection pipeline
- Separation of raw mine water from process water pond
- RO facility.

Hans made a number of inspections including checking that the bunding in the Chemical Shed was in place and that the mill scats had been cleared away. In summary everything in reasonable shape, except for the water issue.

Questions

Has the Quantity Surveyor finished looking at the Bond?

Has yet to be completed. It is part of an ongoing process and will continue as part of PEPR Review.

At what stage is the PEPR Review?

There has been engagement with Terramin. The Mine Closure is part of the PEPR, now working out a structure for the review. The Lease Conditions set rules for this. DMITRE has provided the structure to Terramin. Many of the criteria will stay the same but some have changed. The Mine Closure section needs a complete review. Terramin have a plan for working through the review in consultation with SCCC.

With the amount of water in the TSF, has the chemistry of the tailings changed and does this need to be re-visited at Mine Closure?

DMITRE is not aware of any chemistry change, it is more a change of consolidation of the tails; neither ATC nor DMITRE are concerned.

The drain will remain blocked but this is not considered a problem as other drains will compensate.

The March 2012 Surveillance Report is on the DMITRE website. The report indicates no concerns, just need for ongoing maintenance.

What about the review of the 2011 MARC?

DMITRE is part way through the review of the MARC; there are no additional compliance issues.

4. TERRAMIN: REVIEW OF MINING OPERATION (presentation available on website)

Joe Ranford – Mining and Processing

- Terramin has a strong focus on safety - lost time due to injury is rated at 3.4 and industry standard is 5, so very good performance. Have new OHS Superintendent - Les Allen. Have instituted workplace inspections and a safety reward system.
- Employment – 119 people on site and 63% are from the local region, low staff turnover (6%). Also have 107 plus through the gate as contractors and suppliers.
- Supporting the local community – CLASS, Football Club; Band Festival; Kindergarten and Antique Fair and putting \$10-15,000/month through local businesses.

Operations

- Underground development has advanced to over 10,621 meters in total
- Development being established on the 340 metre level
- A total 116,142 tonnes of ore processed (development has slowed down)
- 15,324 dry metric tonnes of zinc concentrate and 6,654 dry metric tonnes of lead copper concentrate – record amounts.

Mine Closure

Terramin will be going through a consultation process on the closure criteria – how to leave the area without environmental impact. It is not about final land use for the site.

Matt Daniel – Environmental report

Please see Terramin Quarterly Report #23 (April to June 2012), available in full on the PIRSA/DMITRE website www.pir.sa.gov.au/minerals/sa_mines/approved_mines/angas under Wider Community Engagement and also emailed to all members prior to the meeting. Hard copy also made available at the meeting.

Matt reported on the QER, focusing on exceptions, the unusual and any exceedances.

Water flow into Burnside Creek

As a result of a large rainfall event on the 21 and 22 June, water flow was evident in Burnside Creek which courses through the STEDS wetland located on the mining lease. As this event created a potential for discharge into the Angas River, water samples from the four Angas River locations were re-sampled and analysed. An increase in metal and nutrient levels were evident in the upstream control points but no correlation can be made between the results and mining activity. High runoff from local catchments containing both naturally occurring metals and nutrients from fertilizer and animal waste in the soils, combined with poor riparian vegetation condition, are possible reasons for the elevated levels.

Noise Monitoring

Updated Environment Protection (Noise) Policy 2007 compliance limits – at nearest neighbour;

- Day time 57dB(A), 7am - 10pm
- Night time 50dB(A), 10pm - 7am

Old limits kept as early warning indicators – Terramin committed to them.

Clarification of Terminology

EPA Noise Policy Guidelines - **Rural Industry** not intended to create link to the term 'industry' as defined in Development Act 1993

Zoning defined in the Alexandrina Council Development Plan - **Grazing Zone** – Objective is retention of land in primary production.

Eastern monitor results - The eastern side of the mine is within grazing zone. Results are generally within compliance but above where Terramin want to be. Day peaks associated with work on neighbouring property.

Western monitor results – exceedance during the day attributed to loader working, hay bales have been placed along north western fenceline.

Current noise model has been reviewed taking into consideration new pastefill plant, RO plant and newly constructed bunding on neighbouring land. Recent review has found that:-

- Terramin will remain compliant under worst case weather conditions
- Under high-risk weather conditions, predicted to exceed the night time early warning noise limits by 1-4dB.

The review will be done annually. Recent rubber blanketing has not improved night noise levels.

Dust Monitoring

Generally within compliance but have had some high solids readings. Have included wind roses in report and this shows has been a lot of wind from north/north west and west. It is therefore not clear that dust is coming from the mine.

Gauges 10, 11 and 12 have revealed high amount of bird scats, so this may explain the high readings. Reading from Gauge 2 indicates lot of machinery movement from recycling that is blowing in.

As part of PEPR review, numbers will be looked at.

Question

Is this monitoring useful, if so what is it telling us?

The dust modelling is based on monitoring dust from the mine but if not monitoring then would not know where we stand.

The ratio of total solids to lead raises more questions about origins of dust. Can look at the data over a period of time.

EPA comment

Should not look at this in isolation, need to put the monitoring figures together and a large amount would be alarming. There are no concerns at current levels. . If way out of compliance, could look at weathering of dust.

TSF Rehabilitation Trial

Trial was set up in 2011 to assess cover thickness, soil moisture and the establishment of vegetation. The trial plot resembles the TSF; consisting of a plastic liner base covered by a 0.1m granular protective layer, the subsoil at 0.6m and 1m and 0.1 of topsoil. The low profile drains much quicker and is still holding moisture.

Oats were planted in October 2011 and reached maturity even when planted late in the season. Weeds such as Fat-hen, Wireweed, Couch grass and Salvation Jane represented around 30% of vegetation by volume. Weeds were sprayed in early May and Spear and Wallaby Grasses (native grasses) were planted 2 weeks later.

Do not have a control plot without a plastic liner.

Community/Environment feedback

8 community events recorded. Includes 2 internal recorded incidents:-

- Stope blast notifications not sent. A new system has been implemented to prevent this from re-occurring. It has been normal practice to contact neighbours if there is an early or late blast.
- 1 drag out complaint –Sediment from car park washing onto Callington Rd, bunds erected immediately.
- Remainder relating to noise and blast noise
- Complaints were from 3 different people

2 internal environmental events recorded

- Stope blast fired after 6pm
- PAF material was dumped in 'clean zone' – removed immediately and an Environmental Alert was distributed to all employees.

Comments

Need to put time of day that complaint happened on Table in QER.

Questions

Re sediment washing onto Callington Rd, do the hay bales stop contamination i.e. do they take out solids and minerals?

They will slow down the movement but not remove minerals. This has been identified as an area that requires work. DMITRE is happy with the prompt action taken. While a potential public safety issue, it is still within the mine lease.

Environmental Activities

- Submitted waste tyre management plan to EPA
- TSF Embankment seeded (May and July) with barley
- Rabbit fumigation around TSF and surrounds
- FABAL pipeline commissioned
- Weed spraying
- Chemicals in chemical shed are all banded
- Planted 1000 trees in multiple locations – front gate, western and eastern paddocks. Water trucks will be available to water over summer

Community Interaction

- Angas Community Newsletter published in May – 20,000 copies distributed around the area, including in three newspapers.
- Donations to CLASS, Strathalbyn Soccer and Netball clubs, the kindergarten and the Strathalbyn bands festival
- Six tours of the AZM mine

Upcoming Activities

- Program for Environmental Protection and Rehabilitation (PEPR) review/Closure plan - ongoing
- Waste Management- Recyclables removal commenced this week - ongoing
- Continuation of feral animal and weed control
- TSF Rehabilitation Trial - ongoing

Questions/Clarification

Any erosion problems on dam wall?

No but there is a bit of erosion on the box cut.

5. TERRAMIN: PEPR REVIEW AND MINE CLOSURE PLAN

Joe Ranford

- Received advice from DMITRE on reviewing PEPR and improvements to the measurable criteria (Section 7 of current MARP; Measures to Manage Environmental Impacts)
- Closure Sub-committee to be consulted on proposed changes, suggest that have regular meetings with this committee
- Have had discussions with neighbours on mine closure and have let them know that are doing a plan and welcome feedback. So far feedback has generally been positive
- DMITRE have provided a template, it is available on the website, it is easy to measure against.

While there has been a lot of regional exploration including north and south of the mine, under current economic conditions mining this is not economical. Have identified areas to progress but need funds. It would make sense to continue but tunnelling is expensive, also current approvals have restrictions on volume.
URS is assisting with the Mine Closure Plan.

Questions/Clarification

How dry do the tailings have to be before a top liner can be put on?

Answered by URS Consultant, Andrew Piggen – 25-30% water is still OK. As part of closure, will be putting in solids and will continue to be drained.

URS has been involved in similar mine closures, including mine in Stawell Victoria which is on the edge of the town. URS are working with Matt and Joe to ensure that site eliminates run off and gets back to a more natural environment. There is some advancement on the technical fronts.

Sub committee will be convened when there is something to see approved by DMITRE and circulated a week in advance; could be within the next week. It is possible to meet via email and face to face.

How close are Terramin to being able to send out criteria?

Some criteria are straightforward and sub committee can comment on those but may need clarification on other information. Can send it out and then have a meeting a week after or if all okay and everyone understands, may not need to have a face to face meeting of the sub committee, It all relates to the MARP, so it is worth sending that around.

When does it suit the sub committee to meet face to face?

In the afternoon, also must fit in with Terramin schedules

Action – Terramin to circulate via email some potential dates for the sub committee to meet face to face. Sub committee members are:-

Charles

Mike

Susan

Julia

Terramin rep

DMITRE rep (Hans)

Council rep (Anne Woolford)

Once the sub committee are happy with the process, then information can be more widely circulated to the SCCC.

The closure will be expensive and will be funded from Terramin general revenue.

6. TERRAMIN: COMMUNITY ENGAGEMENT PROGRAM UPDATE

See update presented as part of Matt's environmental report in Section 4 above, nothing more to add and no further questions.

SHORT BREAK - recommenced at 8.50pm

7. TERRAMIN: UP DATE ON WATER MANAGEMENT

Rene van Oevelen - Update on Environmental Direction

Have been working towards reducing the amount of water in the TSF but so far have had limited success, a few set backs since last meeting in May.

Terramin is committed to achieving the Environmental Direction targets by the 31 December 2012 - Reduce TSF Decant pond water level so no head of water on the single liner and single liner boundary is RL 68m or surface area 15,000m²

No RL reduction from May to June. RO plant (V2) down for 3 weeks in June and tailings has been washed below surface. Also water management plan has been modelled on average rainfall but rainfall has been above this average.

Underwater profile of TSF checked using sonar survey; next one will be done in late September. There has been a reduction in area and it is a good idea to know what is happening below the surface.

Paste fill has been successful, reducing amounts of both tails and water volumes placed into the TSF. 15,180m³ of paste was placed underground in July (a record) and resulting in approximately 9,800m³ of water not going into the TSF

RO treatment not as successful and lost 3 weeks of treatment in June due to coagulation issues with pre-treatment and turbo failure. Recent actions to increase RO treatment of TSF Water include replacing turbo (also have spares handy) and anti-scalant injected at decant pump; also working at a higher pH. Adding a 3rd clarifier. The aim is to not focus on using RO's as only 40% efficient, still need to work on other 60%, so investigating other means.

FABAL pipeline system is working very well with up to 750m³ per day. Still have the capacity to receive more water; have sent 10,000 m³, but dam capacity is more than 80,000m³.

Clean mine water is re-injected. Harvested before contact made with sediments so it is not silted.

Note that irrigation of filtered underground water and RO water shandy mix is no longer a consideration.

Enhanced evaporation is primary focus for TSF water reduction. Additional jet sprinklers have been installed. Working with Uni SA to improve evaporation rate and will see improvement when gets hotter and drier. Pre-aeration shown to be not effective.

Milestones have been up dated and still committed to achieving 68RL, expect it all to take off when warmer weather comes.

Summary of Actions to achieve 68RL

- Increase in clarifier capacity
- Investigation of filtered water off-take agreements
- 5 day trial of running TSF water through Osmoflo RO unit
- Increased re-injection capacity
- Separated clean mine water from the underground water stream
- Enhance evaporation
- Continue high paste fill production

DMITRE comments

Confirming that Terramin have an understanding of what needs to be done

EPA comments

Prefer to look at risk and the assumption is that the pressure on liners has gone down and so this has been an improvement. Need to access the real risk and find out what is the pressure on the liners and at what pressure do the liners become breached. Important to look at it from this perspective and what modelling was done on the TSF design. The 68RL relates to the design parameters.

DMITRE and EPA will talk on this.

General Comments

Monthly reports commended; easier to understand and thank you for answering all questions.

It is nothing unusual to have above average rainfall and could have built in probability of rainfall into the model. Need to have the line come down before December to accommodate this.

Terramin were aware of this and aimed to have the line reach 68RL before December 2012.

Questions

The evaporation benefit is not likely to come before October 2012, so how will this assist in achieving target?

The best output is through sprinklers but there is a risk of spray drift, so monitoring this with wind direction. Aiming for 66RL and this is set internally.

Is there any risk in droplets going off lease due to size?

Visually monitored and relying on inspections as do not have a physical measure. Monitoring is done 6 times per day and sprayers are set up according to weather reports, this is done at night also. Any drift metals would be recorded at water runoff monitors and none have been noted to date.

Note that DMITRE has not observed any drift, it is not misting. Visual is the most effective monitoring because if there was drift, you would see it. This will continue to be monitored.

Lease Condition 69 states that Terramin is required to protect the TSF over the long term: an encumbrance (not caveat) is required on the land that needs to be resolved. This is moving forward and should happen this year. Yet to be determined who will police this encumbrance.

8. OTHER BUSINESS

Round Table

Sue – compliments, well done, have come along way.

Mike – refreshing.

Joe – thank you for being part of the operation, still a lot of work in PEPR and Mine Closure

Nic – re mine closure and future use – there is a natural amphitheatre on site but not been able to interest others in using the site. Terramin's responsibility is to ensure that it is safe. It would be beneficial to have the site used and am appealing to the community to be innovative about future use, to look at what it can be used for.

Julia – waiting for the Mine closure sub committee to get the criteria and find out what the rules are

Joe – need to get the mine closure right and focussing on the criteria in the short term.

Charles – mine closure will dealt with according to the minimum requirements set out in lease and PEPR and it will happen regardless. However, there is potential and Terramin may be able to use their equipment to make something useful and still comply with the requirements for the site.

Council have said they are unwilling to spend money to explore options. There has been some interest from an equestrian group but that is the only one. The site can be sold on and there are opportunities.

Sue – how well has this been advertised?

Charles – it is best that the committee use its networks to get the message out.

Anne – Council has not changed its mind about taking on the site, it wants it fixed up according to the PEPR criteria.

Nic – the ideas need to get out into the community

Charles – please take it out into your networks, time is running short and it is not Terramin's responsibility.

Joe – CLASS are interested in using it as a farm.

Thanks to Ruth, Margaret and Bill for hall and catering, to Merri for taking the minutes and thanks to all in attendance.

9. FUTURE MEETINGS

Next meeting on Thursday 15 November 2012 at 7pm.

10. MEETING CLOSE.

Meeting closed at 9.55pm.

ACTION LIST

Terramin	Action – Terramin to circulate via email some potential dates for the Mine Closure sub committee to meet face to face.
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