

MINUTES OF MEETING

STRATHALBYN COMMUNITY CONSULTATIVE COMMITTEE

Thursday 21 February @ 7.00 pm

Senior Citizens Hall, 6 Parker Avenue, Strathalbyn

PRESENT:

Charles Irwin - Chair	Anne Woolford	Susan Jettner	Fred Carrangis
Mark Dale	Malcolm Twartz	Karen Rogerson	Adrian Pederick MP
Julia Currie	Rhonda McCarthy	Merri Tohill – Sec	

DMITRE:

Hans Bailiht Diona Ashenden

TERRAMIN:

Matt Daniel Joe Ranford Nic Clift, Managing Director Kirsty Margetts Rene van Oevelen
and CEO

EPA:

David Vaughan as proxy for Glenn Sorrenson

APOLOGIES:

Mike Farrier, Ben Brazzalotto, Greg Marshall, Glenn Sorrenson

Gallery approx 15 - including Terramin staff, Mike Riley (Communications) and URS Consultant (Mine Closure Planning) - Andrew Piggen

Meeting commenced at 7pm

1. WELCOME, INTRODUCTIONS AND APOLOGIES

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

2. REVIEW OF MINUTES OF LAST MEETING

Minutes accepted as true and correct record, with some minor changes.

3. DMITRE: COMPLIANCE OVERVIEW - Compliance and Inspections report (Hans Bailiht)

Since November 2012 have been closely monitoring the level of the TSF, ensuring that it would be below 68RL (as per Environmental Direction). This has now been achieved. Have also been in discussion with Terramin about a buffer for the winter period.

Also about to have a discussion with Terramin re closure.

The Annual Compliance Report 2011 (MARCR) has been completed but has not been tabled as there are some adjustments to be made to make it in line with guidelines. The 2012 report is due on 31 March 2013. This version is expected to be more comprehensive and Matt Daniel is working on this.

The Environmental Direction is complete except for finalising the PEPR. This is currently in process and sending a letter to Terramin on this matter.

Question

In terms of the Compliance Report what is the timeline for continuing to get the TSF water level down?

It will be faster and more streamlined.

4. TERRAMIN: WATER MANAGEMENT (presentation available on website)

Joe Ranford – What is happening at the Angas Mine.

Welcome everyone and thank you for coming on the Mine Tour. Good to see the water level getting down, focus now on lessening surface area. The big focus is to still keep pushing water level down.

- 68 RL was reached in January
- Sponsored a CLASS auction for an underground tour
- Safety - Excellent improvement in safety - Total Recordable Incident Frequency Rate (TRIFR) halved since December 2011, due to increase in safety awareness, safety observations and hazard reporting

Mining and processing for 4th quarter 2012.

- Underground development has been reinstated and advanced to over 10km, decline is 360m
- Development progressing past the 350 metre towards the 360 metre
- A total 110,035 tonnes of ore was processed (over 440,000t for the year)
- 15,630 tonnes of zinc concentrate
- 5,973 tonnes of lead copper concentrate.

Good quality concentrates and increased zinc processing but EBIT static because prices are down and Australian dollar is strong.

Exploration

- Near Mine Exploration has commenced with the drilling of 2 deep exploration holes, these holes are awaiting assay results.
- Regional exploration has commenced with RAB (Rotary Air Blast) and RC (Reverse Circulation) drilling conducted during January (Kanmanto area).
- Sites have been successfully rehabilitated

Water Management Update

Thanks to DMITRE and EPA for working with Terramin. There has been a lot of focus in this area and appreciate their support. We were confident we could do it and a credit to the Terramin team for their excellent work (working from within and not with external companies).

We will still provide up dates on surface level.

R. van Oevelen reporting on Water Management

- Graph presented (as part of presentation available on website) shows progress over time – problem has now been worked out.
- Total surface area reduction for TSF in 2012 was 27,596m² and current surface area is 19,326m² (as of 1 February 2013). Aiming to get to 15,000m².
- The approximate volume of water remaining in the TSF decant pond is 35,860m³ at the end of Jan (calculated from on-site metering). Approximately 204,697m³ removed from the TSF since the November 2011 beach survey.

Moving Forward

- Terramin will ensure the TSF decant pond is operating within compliance at all times. Aiming for 15,000m².
- Key focus - enhanced evaporation; Raw water management - dust suppression, re-injection and continuation of Paste fill
- Tails deposition – now focusing on low points, extending spigot lines and fine tuning management of tails placement to push the TSF decant pond surface area to less than 15,000m².
- V2 on standby since end January due to difficulty in treating TSF water (too salty). Water no longer available for standpipe and FABAL pipeline. Terramin has taken control of managing the plant, it is now automated so it can run more frequently and have higher availability.
- O2 has been decommissioned and now off the site.

DMITRE Comment

Thank you to Joe and his staff. It has been a difficult feat but Terramin achieved what it had to do. Thanks to Nic Clift for supporting the team and enabling the finances.

Questions

How are you reducing water with a high salt content?

Pumps require water to protect them from slurry. Originally we used RO water, now changed to raw water, it is put into the glands and then into treated tails water, so all raw water is out. We supplement water leaving the system with TSF water as well as evaporation.

What about storm water?

There is 14ha of TSF and our aim is to keep amount of raw water in the system low. Rainwater dilutes this and we also have the V2 ready to go anytime.

68RL and 15,000m² is the maximum level, what is the target?

We are looking to see what the reduction in size is for the decant pond. It is now important to keep the surface area small and so the 68RL is less important.

So what are the targets for area?

We haven't modelled size but will do so when we have pushed all of the tailings that are changing the beaching. Currently it is less than 15,000m² and also the drains are working.

The drains are pumping back into the pond, should we expect to see the level go up?

Only in a 1:100 storm event. It has been designed for most storm conditions.

DMITRE comment

We would like to see the buffer less than 15,000m² and have put this in writing to see what Terramin's goals are.

Isn't the operating level 4-5,000m²?

It has been designed for the under drains to work at 15,000m² and at 68RL with no pressure on the liner. The dam is now working well and there is no leaking. We need the operational space to bring the dam area in, so it can work in the way it has been designed. This will all come out in the audit report.

Is there any risk to the liners – EPA comment?

No comment from EPA. Terramin has looked at this and depending where you look at the level on the dam, it will be significantly below the liner level and there wouldn't be any phreatic head. The head on the double liner was insignificant, so haven't focused on this. Have talked to EPA but they haven't got the answer, so not sure if any progress on this yet.

This has been a long time coming and is good news.

DMITRE is comfortable with the beach height.

5. TERRAMIN: REVIEW OF MINING OPERATION

Matt Daniel – Environmental report

Please see Terramin Quarterly Report #25 (October to December 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.

Environmental Activities

- PEPR review - Closure Plan and revised PEPR submitted
- Waste Management Plan updated in-line with PEPR review
- TSF Rehabilitation (vegetation growth) trial - harvested and Annual report drafted
- Commencement of rabbit fumigation in December
- Control burning in conjunction with the CFS as part of fire prevention
- Annual Weed survey - to be published in the 2012 MARCR, looking at numbers/different species
- Continuation of weed control.

Community Interaction

- Victor Harbor High School, yr 10 science students - presentation and surface bus tour
- SACOME Mining for non-miners site visit - underground and surface tour
- Sponsorships - Strathalbyn Softball Club; Strathalbyn District Basketball; Strathalbyn Football Club; Hat sponsorship for Strathalbyn Cricket Club

Dust Deposition Gauges

Measurement of Total Insoluble solids

- Gauges 11 and 12 over 4g/m²/month (according to Australian Best Practice guidelines)
- Gauge 12 located in an agricultural field adjacent to unpaved access road
- Gauge 11 located on neighbouring land on front yard (dry and dusty in summer)
- Ash content for both gauges less than 50% - higher organic content, also looked at lead ratio and so suggests deposited dust was not mine related

Lead to Total Dust Ratio

- Lead levels within compliance
- Lead to dust ratios have been examined
- Highest is 7 located closest to the mill and Gauge 11 and 12 lowest lead: dust ratio

Noise Monitoring

There are some concerns with the West side (Boxcut) Monitoring – the peaks at around 7am are associated with a shift change.

East monitoring results (Mill), peaks relate to an overheating bearing (higher noise level) and the need for a device to cool it down, also some machine idling and a wind speed peak.

Noise Mitigation Strategies

- Three noise complaints from one individual during the quarter regarding noise at night in the Burnside Creek area. Db reduced to 50 but now looking at hertz (as alternative measurement)
- Consultant from a noise mitigation strategies company (Flexshield) came to site in December to review – found that Mill gear box produced the highest on-site noise levels, so acoustic curtains (rubber and double sided) were installed in January ‘enclosing’ the gearbox
- Noise results before and after curtain installation at two locations are:-
 - 3m from the sag mill on the first level (west of gear box) Before - 96dB After - 87dB
 - Near stairs on the first level (north of gearbox) Before - 92dB After - 87dB

Questions

Are there any heat issues associated with having the curtains around the gear box?

Heat has not changed, if there is an increase we can remedy with using more grease on machine to cool it down.

The hertz measurement curve has a tonal element to it, was this detected at the site?

It was detected at the monitor but not detected audibly.

Was there a specific tone or sound signature?

We can provide a report on this.

You have had the curtain in place since January, have you had any more feedback from neighbours re noise?

Yes, noise level has reduced but it is still audible. Sound does carry further in certain atmospheric conditions.

In relation to the graphs – is the 50-57dB measurement at the nearest neighbours?

We do specific measurement at the neighbours but we can monitor continuously at other sites but we do not continuously monitor at the neighbours. Continuous monitoring has been calibrated with monitoring at the neighbours.

Can we get any of the data measured at the neighbours?

We have the measurement results but it is close to the road, so unless you have the whole noise picture it would be hard to interpret.

Community feedback and environmental incidents

2 community incidents

- 3 noise complaints from same complainant - constant rhythmic noise is keeping resident awake at night
- Two stope blasts occurred after the 6pm cut off time due to a problem with the firing line.

2 internal environmental events recorded

- Waste hydrocarbon tap was left partially open leaking approximately 20 litres of oil. Area was remediated immediately after it was reported.
- Spill adjacent to the paste delivery line although contained within the bunded area - area was cleaned up.

Upcoming activities for the first quarter 2013

- Completion of 2012 MARCR by 31 March 2013 in new format and according to new guidelines
- Waste Management- implement updated waste management plan
- Continuation of recycling of historic waste - 168 200 litre plastic drums were recycled in January
- Extensive feral animal control - 133 burrows fumigated in January, baiting in February
- Continuation of weed control. Targeting woody weeds, in January poisoned - 23 Olives, 26- African Boxthorn, 6 Athel Pine.
- Noise monitoring in March
- Tours scheduled with DMITRE industry group; school group and Aboriginal TAFE students.

Comments

Language used in the document was good, it tells you how and what it is.

Questions

What is an air lance?

It is a long tube like pipe that detects air (shaped like a wind instrument e.g. clarinet). It can record air noise i.e. compressed air coming out of the long tube.

How are the TSF trials going?

TSF trials were vandalised, the instrument cabling had been cut. There is a draft report on the significant difference between treatments. We are looking at this with URS. There is moisture in the soil and plants have gone through the whole seasonal cycle, the plants have all set seed and have been successful. We have checked root structures in the top soil and the soil stock piles all show good root growth. We are happy with the results.

Has there been much vandalising of other equipment?

No. But note that there has been some in the general community.

6. TERRAMIN: PEPR REVIEW

Diona Ashenden - DMITRE

Currently EPA and DMITRE are working together to review this with a strong focus on the mine closure criteria. Cannot give a time for completion as it is very important to determine that everything is right before it can be approved. We are working very closely with Matt and using outcome and outcome measurement criteria, as follows:-

Mining Regulations 2011—1.7.2011; Part 7—Programs for environment protection and rehabilitation; 65—Preparation of programs; (2) (d) set out the criteria that will be used to measure the outcomes specified in the program, including details about

- i) What is to be measured and the form of the measurements that are to be used; and
- ii) The locations where the relevant measurements are to be taken, or how such locations are to be determined; and
- iii) What is proposed to be taken to constitute the achievement of the relevant outcomes (with consideration being given to any inherent errors of measurement); and
- iv) The frequency of any measuring or monitoring; and
- v) Any background or control data that is to be used, or how any such data is to be acquired.

Determining the outcome and the outcome measurement criteria is the most important criteria for getting feedback on as part of the PEPR review.

Terramin has delivered a PEPR draft and when DMITRE is happy that it is as close and as good as it can be, then it can go to the SCCC.

Questions

What sort of timeframe are we looking at? The group needs at least 4-6 weeks to consider and we need some warning that it is coming.

No answer on timeframe and cannot even give a rough idea. You will get a warning that it is coming.

Should it go to the Mine Closure sub group first or to the entire group at the same time?

Recommend that it goes to the whole group at once. It will be a substantial piece of work, at least 4 folders of information, it is a big task. When it does get released to the SCCC, the first folder (which will be the smallest one) will contain the outcomes and the strategies to meet those outcomes. The other folders will contain detailed technical information, so focus on the first folder.

Will it include issues that the community are concerned and care about and are they being addressed from a community perspective?

This should be the case.

What is the timeframe for input after the SCCC get the document?

The SCCC should have it for 4-6 weeks and then get together at a meeting. Need to manage this process at the meeting. If people bring notes and go through topic by topic. Could achieve 90% in a meeting but maybe there will be outstanding issues. Most of the new material is in the Mine Closure section, so make sure that section addresses all of your concerns. This will be your last check before DMITRE and EPA look at it again. The intention is to leave behind a better document and an example that is at the leading edge.

7. DMITRE/TERRAMIN: MINE CLOSURE PLANNING

DMITRE

In the current PEPR there is a conceptual plan for closure. This has been adopted in the interim but there are other concepts that Terramin want to investigate. Terramin will talk to DMITRE and EPA about those as EPA must be happy with the plan, so we are working together with EPA. There needs to be one solution that all parties are happy with. There has been some progress on this since the November 2012 meeting.

Progress on Mine Closure Plan – presentation by Matt Daniel and Andrew Piggen, URS

- Environmental outcomes and criteria tables, encompassing operational, rehabilitation and closure phases constructed in conjunction with DMITRE and reviewed by the SCCC sub-committee. These are the basis and foundation for the PEPR and closure plan
- Closure Plan submitted to DMITRE on the 28th November
- Revised PEPR submitted to DMITRE on the 28th December
- Site trials – looking at vegetation and soil samples, investigations and observations indicate that vegetation can be established on the cover proposed in the PEPR

TSF rehabilitation trial

After two seasons of monitoring the TSF rehabilitation trials the main observations made:-

- The proposed TSF cover (the low profile treatment) supported vegetation right through to harvest in December 2012.
- Oats grew well indicating at this stage that vegetation (annual oat pastures) may be sustainable in the long term
- Observations of vegetation on site soil stockpiles and cleared areas show significant establishment and growth.
- Also planted out local acacia seeds

TSF Cover design options

- The approved capping profile is HDPE with soil cover as detailed in the 2007 MARP and the 2012 draft PEPR.
- URS are conducting a preliminary assessment of the 2007 MARP cover and also 5 alternative capping options including:

- Four SA EPA 'default' capping systems based on landfill guidance which includes compacted clay, geosynthetic clay liners (GCL), geomembranes and composites.
- An evapo-transpiration (ET) or phytocover as previously discussed.
- Based on the findings of the assessment to date, further discussions will be held with DMITRE.

Question

What is evapo-transpiration?

It is the process of moisture arising out of plants and the soil, both plants and soil store and release moisture. We are doing some modelling on this and are in discussion with DMITRE re this.

Soil testing

- Field investigations conducted, soil sampling and ongoing analysis
- Preliminary options modelling in progress
- Based on the findings of preliminary modelling, further detailed soil testing undertaken
- Next steps:
 - Further discussions with DMITRE regarding review and assessment of options
 - Refinement of modelling and assessment to identify preferred options

Mine Rehabilitation - steps

As per DMITRE presentation, the PEPR and Closure Plan is to be taken through the review & approval process

- Capping options are assessed and refined in parallel leading to selection of preferred options.
- Preliminary closure tasks & timelines have been developed to a draft stage subject to PEPR, Closure Plan and capping option assessment and review.

Overview of Mine Site Domains

The locations of the domains are outlined in the MARP (2007). This still needs to satisfy DMITRE that there has been no impact and it will be looked after in the long term.

- North domain (former STEDS pond) – no works required. The Council did some rehabilitation in June.
- Central domain – infrastructure removed, earthworks and revegetated. Soil removed and put into TSF and down the mine.
- South – TSF earthworks, capping and vegetation
- Buffer - remediation of mining affected areas, houses and sheds to remain, may be some soil remediation if required.

Overview of steps for rehabilitation

- TSF surface & pore dewatering – approx. 12 months
- Southern domain – earthworks, capping, equipment removal – approx. 2 years
- Boxcut – re-contouring walls to a stable profile 1:3, engineer portal – approx. 2 months
- Fill mine voids with backfill and remaining space with water – approx. 6 months
- Central domain – removing infrastructure, contaminated soils, reshaping and revegetation works – approx. 9 months
- Monitoring the completion outcomes and criteria will be ongoing until all criteria are met.

Question

How long will it take for the tailings to dry out?

Not sure at the moment, so do not have an answer.

Post Closure Land use options

Have had some interest from Equestrian Australia; CLASS and the Showgrounds Committee. These groups are all talking together. Heard from the Equestrians last week and they seem more serious.

CLASS may be viable but at an early stage. They are serious about having a community farm and want a conglomeration between all groups. It is all very early days.

Discussion will go back and forwards (like the PEPR) and include DMITRE and EPA. DMITRE will review the plan and options at the same time as looking at the criteria.

Question

When do we hear about post closure responsibility?

DMITRE – as part of the closure plan Terramin will put in their recommendations for ongoing monitoring and maintenance.

This is the area that SCCC can have input.

Any other thoughts?

Adrian – interested in closure methods. Is there any chance of getting pros and cons of each alternative/option for TSF capping methods and include comments. It needs to be a lay persons' guide. Need to keep it simple to sell it to the community. It would be good to look at the choices and know the reasons behind them with some historical evidence.

DMITRE – we will get the scientific assessment and once we have that assessment of pros and cons, it can be translated into a simplified manner.

Mark – it is not too far removed from a natural system. This is sand over a clay layer and would be easy to repair, unlike a plastic cover.

Charles – we want to be able to discuss this and not last minute, so we need the pros and cons in a presentation. We need to have the conversation so everyone can understand. We need to schedule a meeting for the introduction of options for the TSF capping/cover.

Sue – it is of interest to people in the community, so we need to see the options.

Charles – we need to have things more sorted before we present to the whole community. Not sure of the timeframe. This needs to be figured out, even if it requires an extra meeting.

DMITRE – apologies for not being able to give a timeframe.

Malcolm – has the costing been done on this option and will the company be able to afford it?

DMITRE – we have confidence that it will be closed to both DMITRE and EPA satisfaction.

Fred – anyone shown interest in the box cut?

Terramin – could use the box cut as an arena but may not be feasible due to water, so may be better as a wetland.

DMITRE – it all needs to meet the closure outcomes, closure is more important.

Charles – closure is the base threshold. Heard nothing from Council at this stage.

8. TERRAMIN: COMMUNITY ENGAGEMENT PROGRAM UPDATE

Newsletter will be out soon.

9. OTHER BUSINESS

Terms of Reference review

DMITRE is talking with a number of preferred companies.

Site Visit

All appreciated this, good to get current view of what site looks like and where we are going with closure.

Round Table

Julia – we are generating discussion in the community about post closure options but we have no idea about any restrictions on what can be built and what you can do? If we could be told about these conditions, what is allowed and any future licensing requirements this would help. So far we have had no indications.

DMITRE – this is all part of the closure plan and it will take time to firm up on that.

Charles – there are 4 domains. The TSF in the south domain may be longer term; in the other areas options could be clearer. It would help if the community could be bought up to speed on options for the other domains, not including the TSF.

Julia – we are looking at grant applications, so we need some knowledge of the guidelines.

DMITRE – it will not be a quick process but we will also not just spring it on the community. This land is currently owned by Terramin, so it is up to them to make the decision.

Terramin – we have been talking with CLASS and working with the Equestrian Centre. Anyone can contact Joe and Matt for a discussion.

Water is no longer available for the polo grounds as this water was directed from the STEDS ponds and it is no longer going into there as of 10 September 2012, so unable to deliver it to the polo grounds.

Fred – I will be an apology for next meeting.

Adrian – glad that finally making some significant progress but it has taken a lot longer than had hoped.

Joe – thanks to everyone for attending. URS has taken all questions on board. The next step is with DMITRE and EPA to direct Terramin's efforts.

If anyone has any issues, please contact Joe personally.

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

10. FUTURE MEETINGS AND CLOSE.

Next meeting on 16 May 2013 at 7pm. Meeting schedule for 2013 – 15 August and 21 November.

Meeting closed at 8.40pm.

ACTION LIST

Terramin	<i>Action – Terramin to report on the specific tone or sound signature of noise measurement.</i>
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