

MINUTES OF MEETING
STRATHALBYN COMMUNITY CONSULTATIVE COMMITTEE

Thursday 24 August 2006

@ 7.30 pm

Senior Citizens Hall, 6 Parker Street, Strathalbyn

PRESENT:

Dean Brown - Chair	David Bruer	Dr Fred Carrangis	Julia Currie
Barry Davis	Mike Farrier	Susan Jettner	Kirstie Murphy
Roz Twartz	Anne Woolford, Deputy Mayor	Ian Woods	

PIRSA

Hans Bailiht	Greg Marshall	Ted Tyne
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TERRAMIN

John Burgess	David Gladwin	Bob Jones
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APOLOGIES:

Adrian Pederick MP	Ben Brazzalotto	Gallery: 3 people
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1. 7.35 pm	<p>WELCOME BY THE CHAIRMAN</p> <p>Meeting commenced with a welcome from the Chairman.</p>
2.	<p>MINUTES OF PREVIOUS MEETING</p> <ul style="list-style-type: none"> • The Minutes of the previous meeting were accepted as a true and correct record of proceedings with the following corrections. • Page 3 resources should read reserves. • Q1 should read: <i>If further resources are proven would the current operation and site be considered for this additional use?</i>
3.	<p>ACTIONS ARISING FROM MINUTES</p> <ul style="list-style-type: none"> • All outstanding actions from previous meetings have now been addressed. <p>Ian Woods submitted four papers that he requested be attached to the minutes:-</p> <ul style="list-style-type: none"> ○ Response to Greenhouse Gas Budget Report for the Angas Zinc Mine. ○ Re Lease Conditions for Terramin's Angas Zinc Mine. ○ Response to the Interim Report to Minister Holloway from the Chairman of the SCCC – Dated July 2006. ○ Response to Economic Impact Study for the Angas Zinc Mine. <p>Ian Woods submitted a report from the Angas River Catchment Group on the revegetation of the Terramin Mine revegetation proposal.</p>
4.	<p>SIMON RIDGE</p> <p>General Presentation by SAFEWORK SA on safety issues for mine workers.</p> <p>Mine Site – OHS&W Issues</p>

	GREG MARSHALL PowerPoint presentation of the Role of Minerals & Energy on mine regulation and safety issues – Compliance and the Enforcement Model.
	Outstanding questions from Dr Fred Carrangis were addressed by Simon Ridge
Q1	Will SafeWork SA attend the 3 monthly inspections of the mine site?
A	Yes
Q2	Will notice be given of Inspections
A	Depending on what type of inspection Some inspections will be random but notice will be given of the quarterly inspections.
5.	Concrete blocks issue raised by Dean Brown
	Introduction of Mr Jole Jardine Mining Engineer, Terramin's has now appointed him as Mine Manager. Mr Jardine has come from the Stawell Gold Mine and a brief background history was given of his experience in the mining industry.
	PowerPoint presentation on Terramin's safety for the Angas Zinc Mine by Jole Jardine. The Committee members commended the high standard of the presentation.
Q1	Will the same safety reports in detail be presented to the SCCC as are submitted to the Stawell CCC?
A	Yes – Real time reporting will be used. Examples of the software program details were shown to the meeting.
Q2	If a fire was underground, what is done, and how is a fire dealt with underground?
A	First check everyone is safe and let the fire burn itself out. Otherwise we will have 2 mine rescue teams comprising of 6 people in each team to rescue the trapped miners. A description was given on how this is carried out.
Q3	Do vehicles have radios fitted?
A	Yes. All vehicles have radios installed and they are used constantly as part of the mining operations and rescue operations.
Q4	If there is an accident, how will the underground stored tailings affect the safe exit of people.
A	Again, a description of the back filling sequence was described.
6.	BREAK
7.	OTHER BUSINESS
7.1	Cement Blocks research Reply – Presentation by John Burgess


	<p>JB had two samples of concrete blocks made of tailings material with 3% and 10% cement, showing that at least 10% cement would need to be added for precasting to work.</p> <p>DB had discussion with Richard Jewell. Block increases surface area for potential oxidation in the box cut. Need double lined to hold concrete blocks. The TSF he believed is very safe and gives guaranteed safety. Australian Tailings Consultants (ATC) is very well respected in this field and RJ has a very high regard for their opinions.</p>
Q1	Sooner or later the TSF will fail and who will take up the tab?
A	<p>RJ does not believe that the proposed double lined and covered TSF will ever be a problem. Will go hard like concrete.</p> <p>Should not be reworked to place the tailings in box-cut as oxidation may generate AMD.</p>
	<p>IRON RECOVERY FROM TAILINGS. Presentation by John Burgess To float off the pyrite/Pyrrhotite and place concentrate underground.</p>
	<p>If there is some other way of dealing with the tailings we should explore it. At this stage however no other alternative has been suitable.</p>
Q2	Are the Lease Conditions going to be examined by the Committee?
A	<p>These are conditions that the Minister has offered to Terramin and the company has accepted these. The conditions are fixed and cannot be changed.</p>
	<p>FUTURE COMMITTEE STRUCTURE This was discussed but no change will be made to the current structure of the SCCC. The frequency of meetings will now decrease.</p>
8.	<p>NEXT MEETING</p> <p>Thursday 28th September @ 7.30 pm</p>
8.	MEETING CLOSED

ACTIONS TO BE ADDRESSED: Greenhouse Budget further details required.

 **Angas Zinc - Safety**
TERRAMIN AUSTRALIA Ltd
- CCC Presentation 24 August 2006 -



Angas Zinc
Project

 **Angas Zinc - Safety**

Vision

Angas Zinc – Accident Free



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Beliefs

- All accidents are preventable
- No task is so important that it cannot be done safely
- All hazards can be identified and their risks managed
- Everyone has a personal responsibility for the health and safety of themselves and others
- Health and safety performance can always be improved

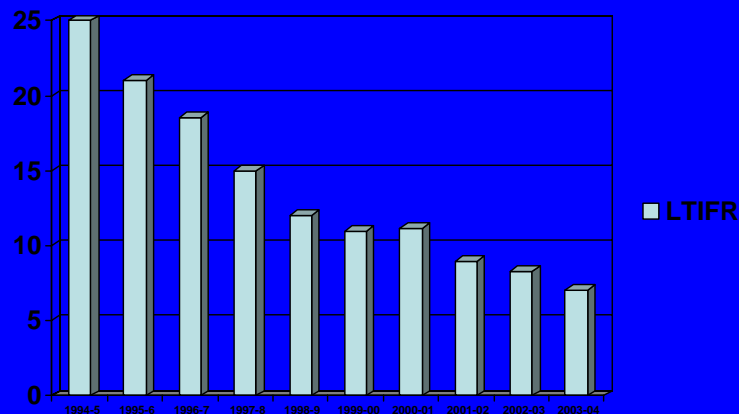
Awareness

The state of mind where we are aware of the possibility and consequences of accidents and act accordingly at all times



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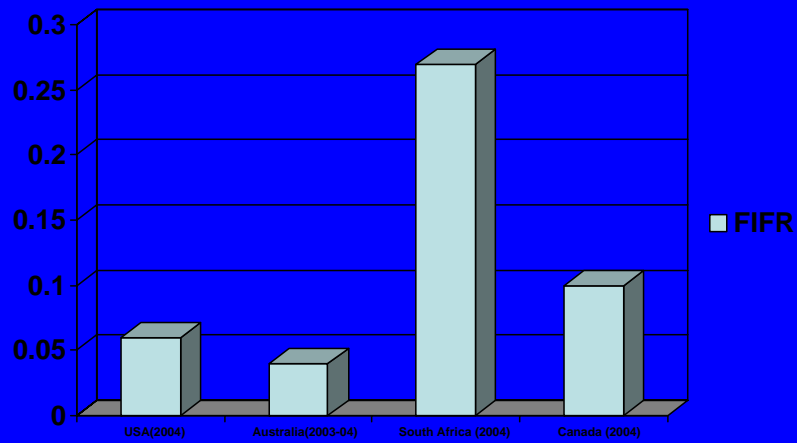
The Lost Time Injury Frequency Rate (LTIFR) for Australian Mines





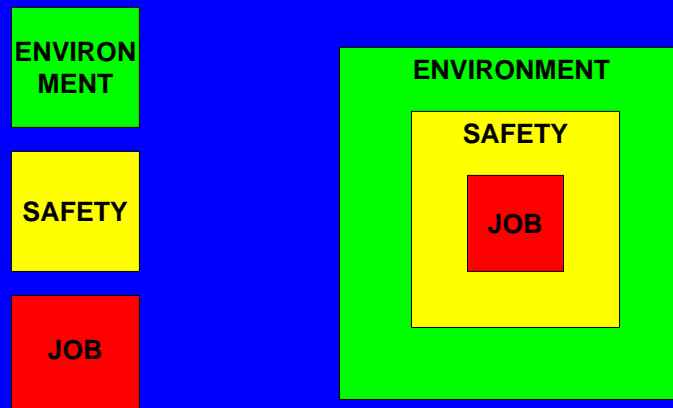
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Comparison of Australian mine safety performance with other countries



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Safety is a State of Mind

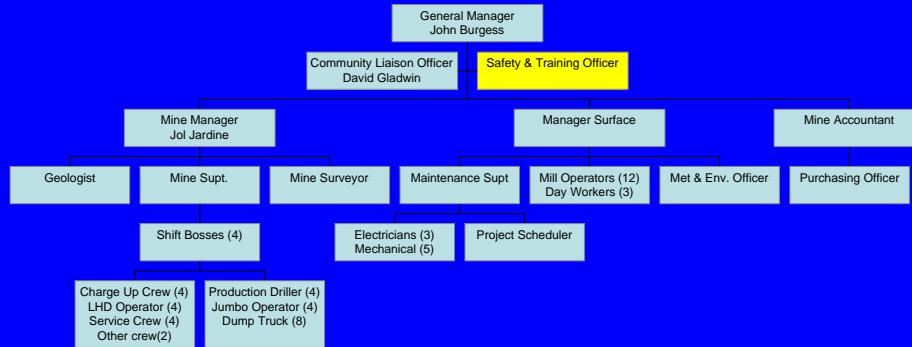


We plan to create the culture!



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Organizational Structure Our Safety Team



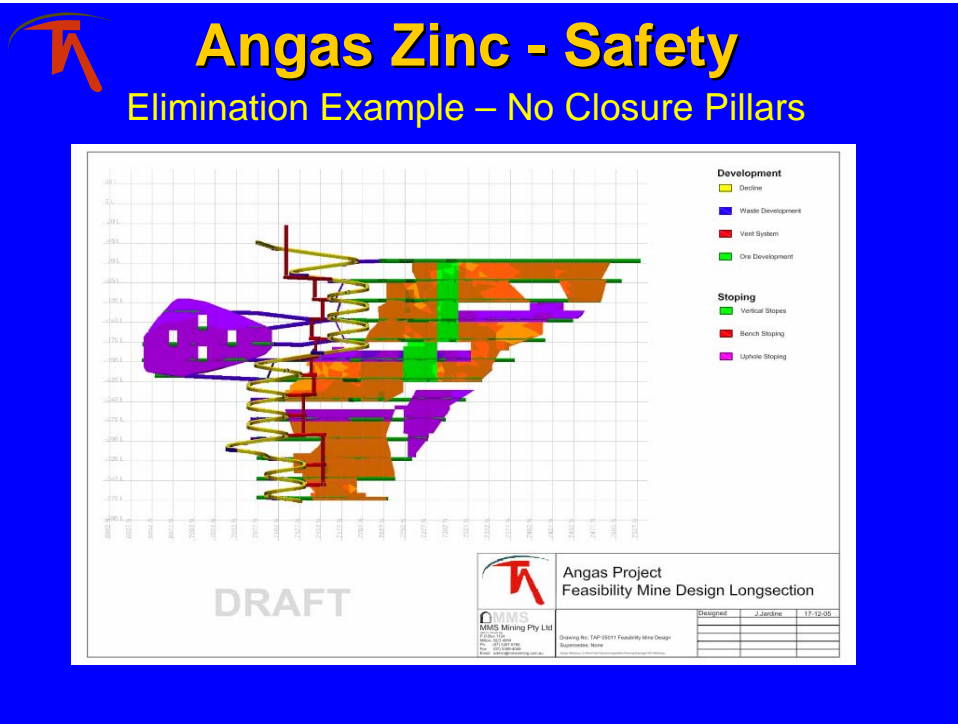
Safety is everyone's responsibility



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The Hierarchy of Control for Safety

1. Elimination
2. Substitution
3. Engineering Design
4. Procedures
5. Personal Protection Equipment





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Engineering Design Example -
short boom for cable bolting narrow drives



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Procedures Example - Tagging





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Personal Protective Equipment

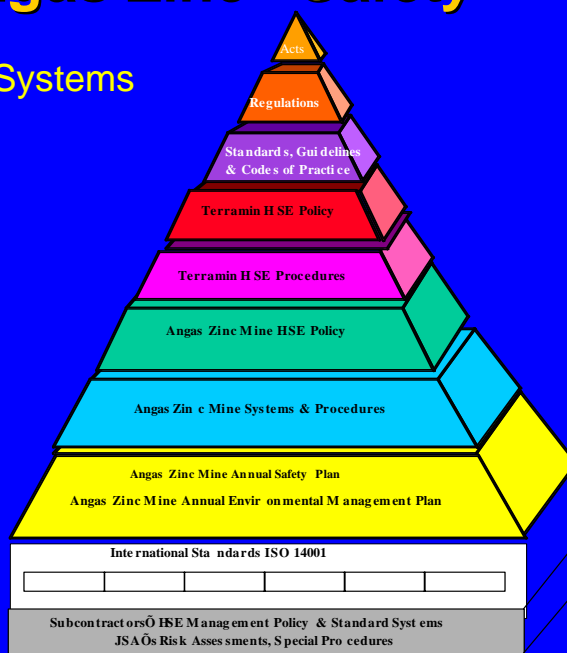


- Protective clothing
- Safety helmets
- Safety glasses
- Hearing protection
- Safety light
- Safety boots - steel capped
- Oxygen Generating self rescuers
- Hand Protection - gloves
- Respiratory protection - dust masks
- Visual protection - reflective vests



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Business Systems





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Business Systems

Recruitment:

- Preliminary interview
 - Short list personnel undergo testing
 - Team players wanted
 - Awareness
 - Verbal skills
 - Numerical and mechanical skills
 - Final interview
- Mining skills an advantage but not a prerequisite



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Business Systems

Induction Program

- New employees
- Site visitors
- Periodic Re-induction

Training

- Involvement in developing training
- Retraining programs and audits for all
- “Teach me & I’ll understand - Involve me & I’ll learn”
- Train the trainer program



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Business Systems

In Action

- Managers lead from the front
- All personnel to have safety improvement projects
- Safety first topic of all meetings
- Immediate investigation of all incidents
- Management measured on response to safety issues
- Step-back and take 5 Programs
- Job Safety Analysis
- Team risk assessments conducted on new or different tasks

O H & S Committee

- Members from the workforce
- Regular meetings with actions back to management responsibility



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Communication

Use of concise and proven communication systems:-
Workplace status reports for each shift

Shift plan discussed with crews at shift start meeting

Safe work Procedures (SWP's for all standard tasks)

Shift tracking of personnel and activities by permanently
manned mine/mill control

Diagrammatic Work plans and work requests



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Business Systems

Safety software – near miss, incident and accident tracking program

ACCstat
Accident Statistics System

Adelaide Data Systems Tr
PRAXIS MINING COM
Injuries, Accident Type by Activity, 01/
Rollup Group: PRAXIS MINING C
Selection: FAT,LTI,RDI,MT

	GENERAL ACTIVITY	SAMPLE PREPARA	SURFACE MINING	SURFACE MISC. DRIVING	TRADES TASK	TREATMENT TASKS	UNDERGROUND MINING TASKS	USING HAND HELD TOOL	USING OUTRIGGER EQUIPME	UTILITIES	Total
BITE INSECT/ANIMAL	1										1
CONTACT WITH CHEMICALS/FUMES	2					1					3
CONTACT WITH OBJECT (NOT CHEM)	2		1		3	4			1		11
FALL 0.5 - 20 METRES	3										3



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Health Monitoring of Employees

Pre employment medicals

Regular health and fitness monitoring for:
compliance to lead protocols
drug and alcohol policy including random testing
dehydration and fatigue

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Emergency Response - Planning

Angas Zinc
Emergency Response Plan
24-Aug-06


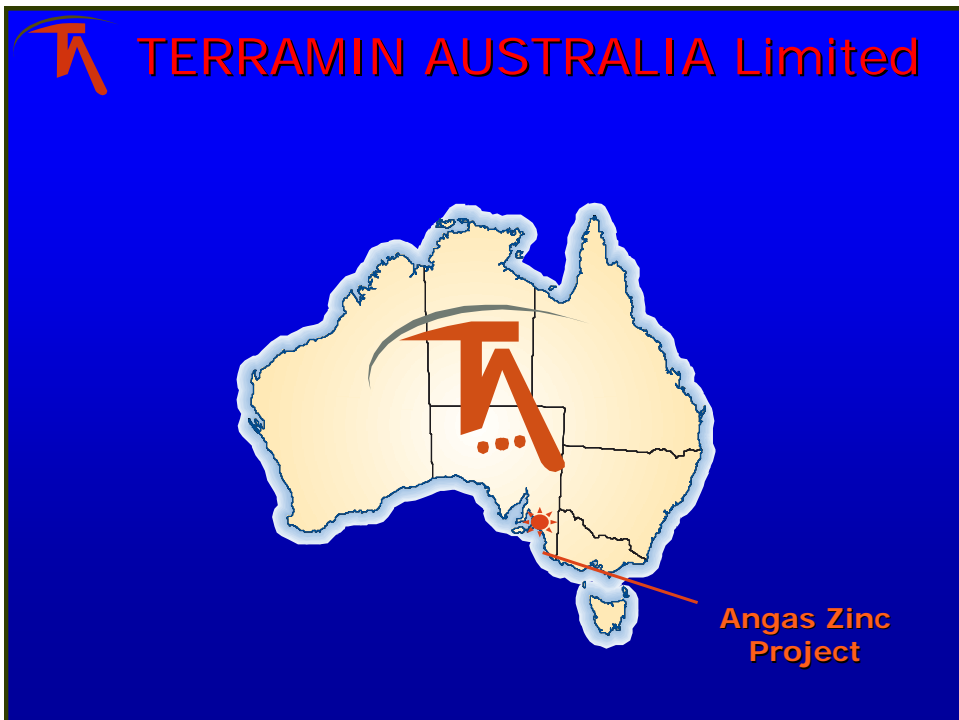
145 LEVEL

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Emergency Response - Implementation

5. 8. 2006

EMERGENCY RESPONSE



Cement Blocks

The proposal:

- Mould all tailings destined for TSF into cement blocks
- Temporary store cement blocks until mining finished
- Relocate blocks from storage pad to box cut



Technical Feasibility

- Could mould all tails into cement blocks
- Would require about 10% cement (minimum) to achieve a strength such that you could lift blocks
- Storage requirement – $500k \times 1.1m^2 = 55ha$ or $13.75ha$ (3 blocks high)
- Practically have to make about 10 moulds per hour which would require about 480 moulds allowing for 48 hours for it to dry.



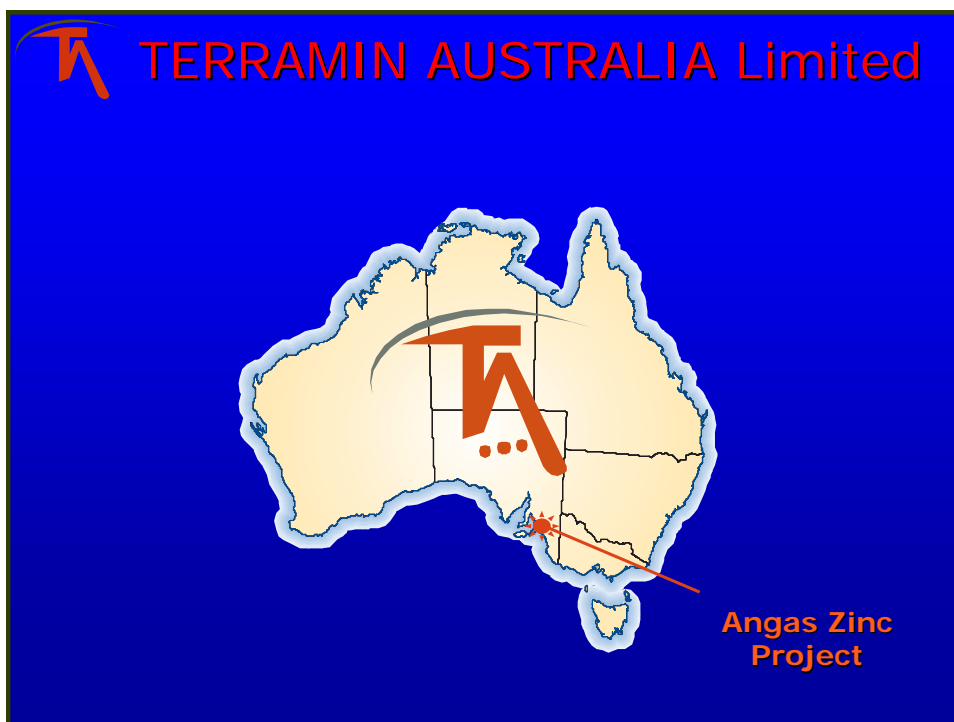
Economics

- Capital cost of moulds
- Capital cost of cement mixing facility
- Operating costs associated with mould handling (labour & equipment)
- EPA will still require a double lined HDPE lay down area - probably would require one for the boxcut as well
- Extremely negative Green House Gas implications



EPA

- How do we handle the supernatant water off the cement blocks – 70% moisture
- Very large surface area of cement blocks (333ha) huge potential for degradation of the surface
- Likely to require a 150mm concrete pad of 15ha because of forklift
- Unlikely to allow placement of blocks back into boxcut area without a liner



Iron Recovery

The proposal:

- Float pyrite/pyrrhotite concentrate, aiming for recovery
- Place concentrate underground



Technical Feasibility

- Could float a concentrate
- Would require acid conditions
- Need to lower pH to 5-6
- Fe is 18.5% of ore
- Dirty pyrite/pyrrhotite concentrate assay of 50%Fe - 60%Fe
- Represents 1.08 million tonnes



Volume of concentrate to be handled

- Float cells volume required larger than existing capacity: $8.3\%Zn + 3.2\%Pb = 11.4\%$ total
- Thickener circuit to be much larger
- Readjust pH to alkaline - AMD
- Cement fill unlikely to be successful; hard to hydrolyse at low pH



EPA view

- Extremely unlikely to allow a Tailings Storage Facility without a HDPE liner – precautionary principle
- Current experience: from single to double liner for this project



Brukungu

- Sole purpose was to produce a Pyritic concentrate
- Tailings was low in Fe
- TSF because of design and location still produced AMD



Economic Evaluation

All additional costs to project

- Capital Equipment -whole new float circuit (double footprint)
- Larger thickener circuit
- Additional reagent/power costs
- Separate water circuits
- Would still require HDPE liner in TSF
- NO advantage to Terramin or environment