



SOUTHERN PORTS AUTHORITY

Port of Esperance

MINUTES OF MEETING
SOUTHERN PORTS AUTHORITY, PORT OF ESPERANCE (SPA PoE)
PORT CONSULTATIVE COMMITTEE

Date:	Wednesday, 24 June 2015	
Venue:	SPA PoE - Large Admin. Meeting Room Corner Bower Avenue and The Esplanade ESPERANCE	
Time:	15:35 hours	
Attendees:	Brett Thorp	Chamber of Commerce and Industry (Chairman)
	Phil Chalmer	Southern Ports Authority (SPA) - Director
	Nicolas Fertin	SPA – Chief Executive Officer *
	Mark Sokolich	SPA - General Manager Commercial *
	Neil Pearson	SPA PoE - interim Chief Operating Officer / General Manager Operations.
	Matthew Devenish	SPA PoE - Program Manager
	Alex Leonard	SPA PoE – Environmental Manager
	Debbie Storm	SPA PoE – Executive Officer
	Matthew Scott	Shire of Esperance – Chief Executive Officer
	Kevin Hall	Shire of Esperance – Shire Councillor
	Rob Horan	Shire of Esperance - Shire Councillor
	Lindy Shipard	Local Environmental Action Forum (LEAF)
	Wayne Halliday	Tourism Esperance
	John Richardson	Esperance - WA Farmers Federation (WAFF) and Locals for Esperance Development (LED)
	Shayne Flanagan	Goldfields Esperance Development Commission (GEDC) – Chief Executive Officer
	Christiane Smith	On behalf of Dr Graham Jacobs – Member for Eyre
	<i>* joined meeting at 15:50 hours</i>	
Apologies:	Clarrie Green	Department of Environment and Regulation (DER)
	Phillip Jeffries	DER
	Dr Graham Jacobs	Member for Eyre
Guests:	Michael Rodriguez	Poseidon Nickel – Chief Operating Officer
	Dr Michael North	MBS International – Senior Environmental Geochemist

1. Opening

The meeting was opened and Attendees were welcomed to the meeting by Brett Thorp as Chairman of the SPA PoE Port Consultative Committee (PCC).

2. Election of Chairman and Deputy Chair

Brett Thorp vacated the position of PCC Chairman, and a request was made for nominations for this position. Brett Thorp indicated his willingness to continue in this role. Debbie Storm nominated Brett Thorp. No other nominations were received. Christiane Smith seconded the nomination, and it was then accepted by all Attendees. (UNANIMOUS)

Brett Thorp called for nominations for the position of Deputy Chair. Shayne Flanagan indicated his willingness to undertake this role. Matthew Scott seconded the nomination and it was then accepted by all Attendees. (UNANIMOUS)

3. New Terms of Reference for PCC

Brett Thorp tabled the draft Terms of Reference (ToR) previously circulated to Attendees by Email. It was noted that the ToR need to be adopted by the PCC, but would then require adoption by the SPA Board of Directors.

Phil Chalmer indicated that some changes may be required by SPA, particularly in relation to the number of Members. Debbie Storm would provide a copy of the final ToR adopted by SPA to Attendees.

Nicolas Fertin and Mark Sokolich joined the meeting at this point, and were introduced by Brett Thorp to the PCC.

4. Visit to Flinders Logistics, Port Adelaide

Brett Thorp raised a discussion in relation to his visit on 17 June 2015 as PCC Chairman, accompanied by SPA PoE personnel (Alex Leonard, Neil Pearson and Greg Solly [Port Services Manager]) to Flinders Port, South Australia where they viewed Flinders Logistics (FL)'s Tippler Operations. They were accompanied by Poseidon Nickel.

Brett Thorp advised:

- Flinders Port is located North of Adelaide, 20 minutes from the airport. It is a very large Port, spread over a sizable area. The Port accommodates a lot of bulk exports such as grain, cement, sulphur and copper concentrate. The main residential area is further away from operations than in Esperance, albeit the closest residential property is still only 500 metres from the Port.
- FL refers to their container unloading system as a "Tippler". However, it is also called a Rotainer or Rotabox by manufacturers of this type of equipment.
- Unfortunately, the Ship's Master would not allow video to be taken of the operations for security purposes (vessel was on its maiden voyage).
- The product viewed was copper concentrate, which is a finer grade of product than nickel concentrate, and also uses xanthate as part of its process.
- FL has been involved in Tippler Operations at Flinders Port for approx. five (5) years, with the first six (6) months being under the strict supervision of the (South Australian) Environmental Protection Authority (SA-EPA), equivalent to Western Australian's Department of Environment Regulation (DER).
- Continual monitoring by the SA-EPA is no longer required given the cleanliness of the Port and the FL Tippler Operations. However, three (3) dust monitors are still used at the Port. Results from these monitors indicate the presence of dust from neighbouring dust sources only. Copper did not feature in the results.
- Since commencing Tippler Operations, FL has refined the (half-height) containers and software that operates the Tippler, as well as introducing a (patented) misting system which they place inside the ship's hold to suppress dust.
- FL purchases a basic Tippler, pulls it to pieces and then reassemble to their own specifications.
- During loading, an observer is placed near the ship's hold and operates the misting system, inside the ship's hold, with fans applied as required. Layers can be added to the misting system, with differing water particle sizes being deployed depending on the wind direction and need. Land sourced water is used by FL in their misting system.

- FL software prevents the lid of the container being removed until such time as the unit is positioned in the ship's hold. The container is tipped out, and then tipped up-right with the lid replaced. All of this occurs inside the ship's hold.
- During the period Brett Thorp, SPA PoE and Poseidon Nickel observed operations, there was no visible dust leaving the ship's hold or present on the container / Tippler when it re-emerged from the ship's hold. There was also no evidence of product on the wharf.
- There was also very little odour (xanthate), almost non-detectable standing on the wharf.
- Containers go through a washing process before leaving the mine site, and are transported by road/rail to the Port. At times, there may be 'road/rail' dust on the containers.
- Vessels are not loaded to capacity, due to the weight of the product. Maximum capacity is 70% and this ensures the Tippler and containers are located within the ship's hold when containers are emptied of their cargo and also when the container is returned to its upright position. Vessel capacity is usually 44,000 tonnes, however cargos of 24,000 to 30,000 tonnes are usually loaded.
- A lot of what FL has developed was to ensure a more streamlined operation for them, reduce dust and make the Tippler system last longer. A slew crane is used, so the unit takes quite a lot of knocking around. FL indicated that this would be substantially reduced had they a shore based gantry crane, like the Port of Esperance.

Alex Leonard spoke on a comparison of the Tippler operations at Mid-West Ports – Geraldton, which is not as sophisticated as the FL operations. For example: there is no misting system fitted into the ship's hold in Geraldton.

Phil Chalmer spoke on plans by SPA PoE to view the operations in Bunbury and Geraldton albeit that nickel concentrate is no longer being exported through Geraldton due to the closure of mines.

Lindy Shipard raised a discussion on the proposed move by the Port from fully containerised nickel exports to consideration for Tippler operations, such that the product still arrives in containers, but is then exported in bulk. She queried why the Port was considering this move.

Brett Thorp indicated that consideration was driven primarily by the Nickel Exporters' Overseas Customers, who cannot handle containers. Also, once a half-height container is in the supply chain loop (overseas) it is difficult to bring the empty container back.

Shayne Flanagan spoke in support of the move by the Port to investigate the possibility of using other technology from a Social and Economic basis. The use of the Tipplers ensures that containers remain in Australia and do not have to undergo Quarantine procedures, thereby shortening the supply chain and ensuring operating and capital expenditure continues to make the mine viable, thereby creating jobs in Australia. However, Shayne Flanagan emphasised that he would not advocate anything that would harm the Community and its Residents.

Brett Thorp advised that before Poseidon Nickel or Sirius Resources would be given the approval to export through the Port of Esperance via a Tippler system, the DER would insist on a carefully monitored trial period. In turn, under SPA PoE's standards, any product that now leaves the Port must adhere to its stringent standards.

It was noted that Sirius Resources is at a different stage of development to Poseidon Nickel. They presented to the PCC, suggesting the use of a Qube Rotainer.

Matthew Scott indicated that "World's Best Practice" (WBP) would be expected by the Port in relation to nickel exports, and if possible, real time monitoring. A discussion was held on what WBP actually means, as WBP could apply separately to container operations, bulk out-loading and/or tippler operations. It was understood that approval from the DER and Environmental Protection Authority in Western Australia (WA-EPA) would be required, which would be based on WBP.

Nicolas Fertin advised that SPA also wants best practice adopted at the Port, which is why the visit to South Australia was undertaken, and further visits will be made to Geraldton and Bunbury. The Port is reviewing the different types of equipment available to evaluate performance.

In response to a question by Lindy Shipard, on whether the Port would develop its own software to control the Tippler system, Nicolas Fertin indicated that it was too early in the investigation process for the Port to respond. Neil Pearson indicated that FL may share this technology with SPA PoE. FL were very co-operative and open during their visit.

Brett Thorp tabled and read a letter dated 28 May 2015 from the Hon. Graham Jacobs MLA to the Minister for Environment (the Hon. Albert Jacob MLA) in relation to Export Nickel - Sirius Resources Nova Nickel.

John Richardson asked whether the wind profile at Flinders Port was similar to Esperance, and was there an upper limit to moisture levels in the product.

Brett Thorp indicated the wind profile was similar to Esperance, with Flinders Port being located in the upper tributary.

Neil Pearson spoke on moisture content of product in the containers, which FL record (in real time monitoring), with the product blended in the ship's hold. They continually undertook monitoring of Transportable Moisture Levels (TMLs) of the product, utilising their very sophisticated software developed in-house. The speed of the crane, misting system and lid position combined to give superior environmental control of their operations. The misting system was adjustable and FL managed the droplet size to ensure very fine dust was captured firstly, with the next layer being slightly larger droplets to capture larger particles and so forth. The process ensures that dust does not escape from the ship's hatch. They also utilise a curtain system and fans in stronger wind conditions.

5. Poseidon Nickel

Guests joined the meeting 16:13 hours

Michael Rodriguez provided a slideshow presentation to PCC Attendees on the proposal by Poseidon Nickel to export through the Port of Esperance. He introduced Dr Michael North as a consultant to Poseidon Nickel on environmental matters.

Michael Rodriguez indicated that he had already spoken to the Shire of Esperance and Esperance Chamber of Commerce and Industry, in relation to this proposal.

The presentation outlined:

- The location of the three mines, being:
 - Mt Windarra (Laverton) – Mine only;
 - Black Swan (Kalgoorlie) – Mine and Concentrator Facility; and
 - Lake Johnson (approx. 3 hours drive north of Esperance) - Mine and Concentrator Facility.
- There is currently a short mine life, but it is hoped to be extended. Production will be 70,000 to 100,000 tonnes per annum, based on a 380,000 tonne mine estimate.
- Produce from Mt Windarra will be processed at the Black Swan concentrator.

- A discussion was held on negotiations with BHP Billiton Nickel West to transport product from Mt Windarra to their Leinster Nickel Operations Facility for processing, which will now not proceed. Subsequent to the media announcement made, an issue occurred in relation to the State Act.
- Poseidon Nickel planned to move towards production this year, but this is dependent upon the Nickel Market.
- As part of the existing arrangements, acquired with the purchase of Lake Johnstone, an immediate 5,000 tonnes of Nickel Concentrate will be exported by Poseidon Nickel through the Fremantle Port.
- It is then Poseidon Nickel's preference to export through the Port of Esperance, via a Tippler or Rotabox Technology utilising half height containers. This system would minimize dust and odour.
- Michael Rodriguez spoke on their visit (with the Port and PCC Chairman) to FL. They were very impressed with the operations. Odour was limited, in that he could only smell the xanthate slightly when positioned above the ship's hold, but not on the wharf.

Questions / Comments

Brett Thorp thanked Poseidon Nickel for their presentation and spoke on previous concerns relating to nickel export proposals.

1. *Why is a Rotainer/Tippler system being considered over export of fully closed containers?*
Michael Rodriguez spoke on the commercial advantage of exporting in bulk, which resulted the retention of containers at the Port, and return of these units to the mine site for reuse.

This method:

- Removes the need for Quarantine inspections (containers are not leaving Australia, therefore no risk of introduced pests);
- Eliminates costs associated with the extra weight of the containers being carried around the World (i.e. having to pay for the weight of the containers when exporting, and also the cost of bringing empty containers back into Western Australia).

Poseidon Nickel plan to seek approval for (three) export trials to be undertaken, which would utilise the applied technology, include dust monitoring measures and an observer (supplied by the Port) to visually monitor the operations, before seeking ongoing licence approval for the export proposal. Containers would be stored off site, not at the Port.

Future export plans would be based on 10,000 tonnes per shipment x 7 vessels per year. This could double if export tonnage reduced to 5,000 tonnes per shipment.

A Noise Assessment was undertaken as part of the Works Approval process, which indicated that there would be no significant change in noise levels at the Port. All noise reduction measures recommended in the Noise Assessment would be undertaken. Alex Leonard indicated that the Port has Noise Loggers installed and will monitor these activities.

Michael North will be overseeing the trial on behalf of Poseidon Nickel, and spoke on air displacement utilising the Tippler methodology in comparison to the old method of export, utilising conveyors and a shiploader. This was the method used by the Port of Esperance in the past, which had a propensity to dust and smell.

Air displacement using conveyors and a shiploader is far greater, and creates a 'roll-back' of air out of the ship's hold, thereby creating dust plumes, whereas the Tippler method works on minimizing air displacement, and reducing dust.

Very little air is able to escape out of the ship's hold utilising the FL Tippler system, and what does try to escape is captured by the misting system.

Reagents and methods used in the production of Nickel Concentrate have evolved in recent times, thereby reducing the odour of the product. The product will also arrive at the Port in containers, rather than in bulk, thereby reducing the odour.

Michael North indicated that:

- If the temperature of the product is limited, so is the odour.
- If the pH level of the product is limited, so is the odour.
- If the level of oxygen to the product is limited, so is the odour.

High temperatures in Nickel Concentrate cause the product to become odorous, through release of gases. Poseidon Nickel will ensure the temperature of the product, pH levels and level of oxygen to the product are all managed to reduce odour. In particular, the application of moisture alleviates a rise in temperature.

Michael North advised that he had visited the Copper Concentrate mine in South Australia, which had produced the product being exported by FL, viewed during the visit. The product was quite odorous, yet it could not be smelt when loading was being undertaken, except in the ship's hold.

A discussion was held on PM10 particle size, and dust monitoring undertaken at the Port, which equates to the size of particles that can be inhaled by adults.

In addition to its Air Quality Monitoring (Deposition Gauge, High Volume Sampler and Tapered Element Oscillating Microbalance [TEOM]), the Port of Esperance has 'calibrated noses' and will smell the product during the trial.

Michael North encouraged the PCC to go onto You Tube and view the FL Tippler Operations Video, which shows a step change in efficiency that can be clearly seen.

Poseidon Nickel left the meeting at 17:00 hours

6. Tanker Jetty Island (TJI) Demolition Update

Matthew Devenish provided a slideshow presentation on the TJI Demolition Project which has been successfully completed.

He also spoke on the welfare of the black-faced cormorants previously nesting on the TJI, including 10 unfledged chicks that were placed in the care of professional Carers. The demolition had been timed to coincide with the end of the breeding season. No chicks should have been present on the structure, which highlights the need for further studies to be undertaken on these birds.

The birds have relocated to the Port's breakwater area, but have not started to use the nesting boxes placed there.

An underwater video was taken, following demolition, to ensure the dive site was secure. Fish had already moved back into the area.

He thanked LEAF and the Esperance Bay Yacht Club for their assistance during this Project. It was noted that the site is a designated dive location and as such excluded to motorised vessels.

The timber removed is currently being tested, before it will be offered to the Community.

Nicolas Fertin spoke on the commitment by the Port to engage with the Community on Projects.

In response to a question raised by Nicolas Fertin, on whether the PCC was comfortable with the level of communication that was undertaken, Attendees indicated that they were very pleased with the level of communication undertaken. In particular, LEAF expressed pleasure in working with the Port on this Project.

Matt Devenish left the meeting at 17:20 hours

7. Dust Monitoring Results

Alex Leonard provided an update on dust monitoring results. The Port has recorded six (6) dust exceedances since the last meeting, all due to grain loading activities. These exceedances are reported to the Department of Environment Regulation (DER) and were also referred to CBH.

CBH has been looking into the application of a mineral oil as a dust suppression.

8. Other Business

- **Woodchips** - It was noted that Australian Plantation Log Exports (APLE) Woodchip trial was due to commence in early July 2015 over Berth 2, exporting approx. 20,000 tonnes. Southern Pacific Fibre (SPF) is also looking to export Woodchips, but will utilize Berth 1, in October 2015.

Lindy Shipard requested information on when pyrethrum would be used. This item had been discussed at the previous PCC meeting (25 March 2015), and a copy of the minutes and presentation by SPF would be forwarded to her. It was noted that pyrethrum is only used prior to a ship's hold being closed (on the surface) and only when shipping to China.

It was noted that APLE are stockpiling their product at a farm, whereas SPF will stockpile at a dedicated site in the Industrial Park.

A discussion was held on the Woodchip operations at the Port of Albany, and in particular the difference between that operation and the Port of Esperance. There will be no stockpile at the Port of Esperance, and thereby no resizer or dozer used. SPF will locate a resizer at their location in the Industrial Area but will mitigate the noise. Shade-cloth may be used during the trial should the product be dusty.

- **Conveyor System versus Tippler System** – Further discussion was held in relation to the export of bulk nickel via a conveyor system or a tippler system. In particular, the discussion centred on the science of air displacement.

There is a massive displacement of air in the ship's hold when a conveyor system is used, which results in dust escaping. The software used by FL takes into account air displacement and through use of the misting system reduces this risk.

In relation to noise, Alex Leonard took some Noise Monitoring Equipment with him to Southern Australia, but no measurements were recorded. It was a very quiet operation.

The FL Tippler Operations eliminated the need for personnel to be on the berth, thereby contributing to safe handling.

Action Items:

1. Debbie Storm to forward the Minutes and Presentation by Southern Pacific Fibre, from the 25 March 2015 PCC meeting, to Lindy Shipard.

Meeting Closed: 17:35 hours

Date of Next Meeting: Wednesday, 7 October 2015 at 15:00 hours