

## COMMENTS AND RESPONSE REPORT

### Record of consultation

Date	Description	Abbreviation
31 July 2014	SEIA Focus Group Meeting – Key Stakeholders	M1
31 July 2014	SEIA Focus Group Meeting – MUN	M2
31 July 2014	SEIA Focus Group Meeting – Media	M3
31 Jul 2014	SEIA - Public Meeting	M4
7 August 2014	SEIA Authorities Meeting – NamWater	M5
7 August 2014	SEIA Authorities Meeting – MAWF (Department Water Environment)	M6
3 August 2014	Comment sheet – G. Noci (Mile 4 resident)	C1
25 August 2014	Comment sheet – Hans-Dieter Göthje for Kallisto Tours and Services	C2
1 August 2014	B. Seefeldt	C3
28 July 2014	D. Garbers	C4
23 September 2014	B. Seefeldt	C5
27 July 2014	Email from Riana Scholtz	E1
24 July 2014	Email from Kahijoro Kahuure	E2
5 August 2014	Email from Sandra Muller	E3
1 December 2014	Email from Philip Hooks	E4
1 December 2014	Email from Andre Brummer	E5
9 January 2015	Letter from Ministry of Environment and Tourism (response regarding Scoping Report)	L1
21 January 2015	Email from Anja Kriener	E6

Abb.	COMMENTS	RESPONSE
<b>Technical &amp; general</b>		
M1	Have Rössing thought of letting the salt works use their discharged brine in their operations?	This option was considered but is not part of the project design. The chemicals used in the desalination process determine the output content of the brine and therefore influence the suitability of such an option. This is not currently part of the project but may be investigated later.
M4	The use of brine at the salt works was considered during the Areva desalination plant planning. Is this being considered for the Rössing desalination plant?	
M5	Will discharge of brine to the salt works be an option?	
C3	The private property owner can process the brine if no chemicals are added during the sea water desalination in Rössing's plant.	
M1	How does Rössing plan to keep the biological growth from the filters?	Refer to section 3.5.2 of the SEIA Report: Chlorine gas may be used to eliminate biological contaminants in the feed water and reduce biological growth in the pipes and pumps of the desalination plant and various holding tanks. The preferred process will not use continuous application of chlorine because of the bio-flocculation process (part of the ProGreen™ system) relies on biological action and would be destroyed by a biocide. However, shock doses of chlorine, i.e. 10mg/l for 10mins may be introduced infrequently at certain points for controlling bio-growth (e.g. at media filters, and at a maximum frequency of about 6 times a day or every 4 hrs of operation).
M1	Once the water is added into the NamWater existing line what is the quality of the water.	Refer to section 3.5.5 of the SEIA Report: The plant will produce drinking water quality (mixture of Class A and Class B according to the Namibian drinking water standards) to the same specification as the Areva desalinated water.
M5	What will the quality of the desalinated water be?	
C5	One of the responses given to IAP questions was "The plant will produce drinking water quality – a mixture of A and class B (with desalination water) –	<ul style="list-style-type: none"> <li>i. The water supplied by NamWater is derived from the Omdel. However since the end of 2013, the water supply was augmented by</li> </ul>

Abb.	COMMENTS	RESPONSE
	<p>to the same specification as AREVA water .”</p> <ul style="list-style-type: none"> <li>i. Does this mean that the feed to NamWater’s main line is not desalinated water ?</li> <li>ii. Do the experts of the Project foresee a corrosion in the waterpipe by desalinated (pure) water , and an unhealthy condition when not blended with water containing salts ?</li> <li>iii. Talking about water quality standards of the country the high concentration of alkali , salts , and others can only be regarded to so called class A and B water by DWA , because Namibia adheres still to an old legislation (RSA ) with an out dated regulation from 1989 , adopted by the interim government .The truth is that NamWater’s drink water, actually a salt solution is not fit for human consumption since the main source (Omdel ) has been overloaded , and is now depleted . The sale of (mineral) waters in supermarkets at the coast speaks for itself.</li> <li>iv. To my understanding the advantage of using the purified solvent to its full extent by diluting NamWater’s unhealthy Aqueous solution is not realised .</li> <li>v. My request is that the outlet water of the plant does not become mixed with NamWater’s water before feeded into their main line.</li> <li>vi. In my lifetime I did not experience any cation traces in de-ionised water stored in stainless steel of polyethylene tanks .The RO3 Water Swakopmund branch sells everyday reverse osmosis water in</li> </ul>	<p>desalinated water from the Areva plant due to the high coastal water demand, for use by Rössing and other relevant mines (Refer to section 3.2).</p> <ul style="list-style-type: none"> <li>ii. Refer to section 3.5.5 and Table 03: The desalinated water will be fully pH corrected, re-mineralised (using soda ash and calcium) and chlorinated to the relevant potable water standards. The desalinated water will not increase corrosion risk to the pipeline.</li> <li>iii. Cannot comment on behalf of NamWater.</li> <li>iv. Noted.</li> <li>v. Refer to section 3.5.5: Product water produced by the desalination process will be pumped via a new 400mm diameter pipeline (steel, ductile iron and GRP piping are being considered) to intersect with the existing 700mm diameter NamWater pipeline that runs alongside the C34, approximately 850m to the east of the site. The waters that the NamWater pipeline carries (a mix of Omdel and Areva water) will be mixed with Rössing remineralised desalinated water in the transfer pipeline and not before.</li> <li>vi. Cannot comment on behalf of others.</li> </ul>

Abb.	COMMENTS	RESPONSE
	<p>coloured plastic containers to the public for human consumption.</p> <p>Their product has a TDS of 10 – 20 mg/L which is the outlet of the plant while the feed water (town) has 600 – 1200 mg/L. Without oxygen and carbon dioxide ordinary metal are resistant in pure water. The reaction of dissolution of the metal begins with an oxidation, and not by hydration .Plastic material cannot dissolve in pure water. Only one of 10 000 000 water molecules dissociated.</p>	
M1	Can the plant be expanded so that other mines can make use of this?	This does not form part of the scope of this project. The plant will be designed to deliver 3 million m3 of desalinated water to only cater for Rössing’s requirements. (Refer to section 3.3 of the SEIA Report for more details regarding the project description):
M3	Can this plant be expanded?	
M1	Where are you in the design phase?	The design phase has not commenced since an environmental clearance certificate needs to be obtained first. The project is at bankable feasibility study level at the end of November 2014.
M1	What is the project timeline?	The final SEIA Report will be submitted to MET towards the end of January 2015. Assuming a review period of 3 months and MET approving the SEIA, construction could commence towards end of April. Construction will take up to 18 months to complete.  The entire cost would range from N\$180 million and N\$220 Million.  (Refer to section 3.3 of the SEIA Report for more details regarding the schedule and section 7.4 for costs).
M2	How long will it take to complete the construction of the plant and what will the overall costs be for constructing the plant?	
M3 & C3	What will the cost of the facility be?	
M3	How long will construction take after approval?	
M5	When will the project be implemented? i.e. when will the first drop of water be supplied?	
M6	How much will be spent on the plant?	

Abb.	COMMENTS	RESPONSE
M1	What will happen to this plant if Rössing shuts down?	Refer to section 3.3 of the SEIA Report: The plant will be designed to have a 10 year operational life, which ties in with the current Rössing Uranium Life of Mine plan. At the end of the design life period, the plant may be refurbished for continued operation, or may be decommissioned, broken down and the site rehabilitated, or sold as a going concern to another mining house or NamWater, depending on the situation and needs at that time.
M3	What is the lifespan of the plant and what happens after that?	
M4	What is the design life of the plant?	
M1	Will the development of this plant hamper NamWater's plans for their own project?	NamWater planned to construct a desalination plant at Mile 6. Cannot comment on behalf of NamWater.
M1	Will chlorine gas be used to treat the water? What will this impact be?	Refer to section 3.5.2 of the SEIA Report: Chlorine gas may be used to eliminate biological contaminants in the feed water and reduce biological growth in the pipes and pumps of the desalination plant and various holding tanks. The preferred process will not use continuous application of chlorine because of the bio-flocculation process (part of the Progreen™ system) relies on biological action and would be destroyed by a biocide. However, shock doses of chlorine, i.e. 10mg/l for 10mins may be introduced infrequently at certain points for controlling bio-growth (e.g. at media filters, and at a maximum frequency of about 6 times a day or every 4 hrs of operation). The concentration of chlorine in the brine water discharges is expected to be low and within relevant standards due to the application of sodium metabisulphate.
M2	What is the distance between Rössing (mine) and the proposed desalination plant? Once the water is in the pipeline is it NamWater's responsibility?	See Figure 7 of the SEIA Report: The location of the proposed plant in relation to the Rössing mine is approximately 50 km from the Rössing mine.  The desalinated water will be transported to the mine through the existing

Abb.	COMMENTS	RESPONSE
		NamWater pipeline, who owns and operates this infrastructure. They will remain the responsible party for the maintenance of the pipeline. (Refer to section 3.5.5 of the SEIA Report).
C3	Using NamWater's water transport system means relaying on an old water pipeline which can anytime burst.	The desalinated water will be transported to the mine through the existing NamWater pipeline (who owns and operates this infrastructure). They will remain the responsible party for the maintenance of the pipeline.
M2	If the facility takes in 3 million m <sup>3</sup> of water what volumes will be discharged as brine back into the sea?	The proposed desalination plant can produce up to 10,000m <sup>3</sup> /d of potable water in every 24 hour cycle. Water production times and rates will vary depending on demand at the mine, peak and offpeak electrical demand periods (and associated electrical rates), routine maintenance shutdowns, breakdowns and upset conditions (i.e. ocean storms or red tide conditions). The production rate for the plant should however average at 8,200m <sup>3</sup> /d or approximately 3Mm <sup>3</sup> per annum. At peak production the plant will abstract up to 25,000m <sup>3</sup> /d of seawater, produce 10,000m <sup>3</sup> /d of potable water and discharge 15,000m <sup>3</sup> /d back to the ocean as brine.
M2	What made you decide to use the Salt Works as the desalination plant site and what is their role in this?	There is existing infrastructure at the salt works; it is privately owned land; and is a licenced mining area.
M2	What is the distance between the Areva plant outlet and the proposed Rössing outlet?	The distance is approximately 30 km.
M2	Will the desalinated water be fit for human consumption? Will this water and the Omdel water be mixed?	The plant will produce drinking water quality to the same specification as the Areva desalinated water. At peak, the proposed desalination plant can produce up to 10,000m <sup>3</sup> of potable water in every 24 hour cycle (10Mℓ/d).
C3	The TDS value becomes lower in the NamWater and municipality them storage tank at Swakopmund.	As is the case with desalinated water from the Areva plant the water derived

Abb.	COMMENTS	RESPONSE
		from the Omdel will be diluted and the quality will improve.
M3	Who is the manufacturer of the plant?	An Israeli company by the name of IDE will be the manufacturer. It will be a prefabricated, modular system that will be shipped in pieces to the proposed site where it will be assembled.
M3	How much water does Rössing use?	A maximum of 3 million m <sup>3</sup> per annum. During 2013 and 2014 the total water consumption was reduced. (Refer to section 3.2 of the SEIA Report).
M5	Is the intention to put the desalinated water into the NamWater system?	Refer to section 3.5.5: Product water produced by the desalination process will be pumped via a new 400mm diameter pipeline (steel, ductile iron and GRP piping are being considered) to intersect with the existing 700mm diameter NamWater pipeline that runs alongside the C34, approximately 850m to the east of the site.
E3	<p>The Strategic Environmental Management Plan (SEMP) has set the objective of mines sharing infrastructure to avoid the proliferation of power lines and pipelines - one could add seawater intake, outlet and desalination plant structures. It seems unnecessary to build a second desalination plant at this stage because the AREVA plant has more than enough spare capacity to supply RUL and others.</p> <p>I would like to caution RUL against expecting significantly lower treatment costs with a process that has not been tested on Namibian seawater (to my knowledge) and would suggest they explore new ways of coming to a realistic price agreement with AREVA and/or NamWater.</p>	<p>The SEA (SAIEA, 2010) provides a bird's eye view of cumulative environmental impacts in the Erongo region brought about as a result of the Uranium Rush (and other directly linked developments, and potential developments, such as desalination and chemical plants), and advises on how to avoid negative cumulative impacts and to enhance opportunities for positive impacts, within the uranium sector and between mining and other industries. The SEM objectives were considered in the SEIA process.</p> <p>The Areva plant has excess capacity to the current coastal water demand since Trekkopje mine is on care and maintenance. Water cannot be produced at affordable prices due to high unit costs of the Areva plant.</p> <p>Rössing Uranium is therefore proposing to build, own, and operate a</p>

Abb.	COMMENTS	RESPONSE
		desalination plant, designed to a much lower capacity than the Areva plant. It is expected that the total cost of water for Rössing Uranium will then decrease to between US\$2.00/m <sup>3</sup> and US\$2.50/m <sup>3</sup> at point of supply. This is substantially less than the existing water price, which is well above USD3/m <sup>3</sup> before conveyancing costs. (Refer to section 3.2 of the SEIA Report for more detail).
M3	What is the future for Rössing when the mine and the desalination plant reach the end of their lifespan?	<p>New long term contracts could be sourced and the life of mine extended. The plant will be designed to have a 10 year operational life, which ties in with the current Rössing Uranium Life of Mine plan. At the end of the design life period, the plant may be refurbished for continued operation, or may be decommissioned, broken down and the site rehabilitated, or sold as a going concern to another mining house or NamWater, depending on the situation and needs at that time. (Refer to section 3.3. of the SEIA Report).</p> <p>Impacts associated with the decommissioning phase of the plant was also assessed as part of the SEIA process and are presented in section 7 of the report.</p>
M3	Is there any connection with the Industrial park?	No.
M3	What percentage of the water that currently goes to Swakopmund is desalinated water.	Between 15 & 20 % of water to Swakopmund is desalinated water.
M3	How many litres is in a cubic meters of water?	1000 litres = 1 m <sup>3</sup>
M4	Rössing plans to pump the desalinated water into the existing NamWater pipeline. What is the possibility of NamWater not allowing the use of their infrastructure?	Cannot comment on NamWater's behalf. However, negotiations with NamWater are underway. The approach to the water reticulation will follow the same methodology as Areva's plan.

Abb.	COMMENTS	RESPONSE
	Are any alternative being considered?	<p>An alternative would be a new pipeline from the desalination plant to the Rössing mine, which would require a new project plan and associated SEIA.</p> <p>An alternative to the use of the NamWater infrastructure was however not being considered as part of this project and SEIA process.</p>
M4	Why not place the whole power line below ground?	<p>Refer to section 3.5.4 of the SEIA Report: The desalination plant and associated facilities will be powered via a new 11kV underground cable running from the existing Tamarisk substation, located 6km away along the C34 on the outskirts of Swakopmund.</p> <p>However, an alternative, i.e. putting the distribution line from the Tamarisk substation along the C34 above ground as opposed to a buried cable, was assessed in the SEIA and would require a number of additional design requirement and management and mitigation measures as described in section 7 of the SEIA Report.</p>
M4	How does this desalination plant compare to Areva's plant in size and output?	<p>Areva's plant has a design production capacity of 20 million cubic meters per annum. The Rössing desalination plant has been designed for 3 million cubic meters per annum output capacity.</p> <p>The Rössing plant will therefore be significantly smaller than Areva's plant.</p> <p>The proposed plant will be housed in two buildings with a footprint of approximately 60m X 20m and 20m X 30m. This equates to a footprint roughly the size of a rugby field. (Refer to section 3.2 of the SEIA Report).</p>
M4	Why hasn't NamWater already done something like this yet?	The project team cannot respond on NamWater's behalf.
M4	If agreement is reached between Rössing, NamWater and other stakeholders, will this project be off the table?	Yes.

Abb.	COMMENTS	RESPONSE
M5	Will the intake be a jetty type?	Yes.  (Refer to section 3.5.1 of the SEIA Report for a detail description of the intake system).
M5	Will a pilot plant be implemented to test the processes?	A pilot plant is not considered necessary since reverse osmosis is a proven process.  Monitoring requirements have been stipulated in the SEMP.
M5	NamWater also took a few samples at Mile 8 and monthly samples at the Areva plant. The information can be made available.	Noted.
M5	Will the pre-treatment only consist of DAF? How will the effluent be discharged from this pre-treatment system? What about post-treatment?	It is intended that the project will implement a bio-flocculation pre-treatment technology (i.e. ProGreen™ technology). This means, in a best case scenario, that there would be no CIP solution; Phosphonate antiscalant; Chlorine; or Sodium bisulphate (SMBS) contained in the effluent stream (brine).  In the worst case scenario, this system will run in parallel or as an additional pre-stage to the more traditional dissolved air floatation flocculation system, and would potentially serve to reduce the volume of pre-treatment DAF chemicals.  The SEIA assessment is however based on a dissolved air flotation (DAF) only treatment process, which is the worst case for this plant.  (Refer to sections 3.5.2 and 3.5.6 of the SEIA Report for more details on the pre-treatment system).
M5	Take note that the new water acts, regulations will be enforced soon with stricter requirements for Chloride and Boron.	Noted.

Abb.	COMMENTS	RESPONSE
	<p>Class B for Chloride and Boron will in future not be sufficient.</p> <p>To allow for this requirement, the process might require 2 passes.</p>	
M5	<p>The NamWater desalination plant includes a discharge beyond the mixing zone (at ± 600 m into the sea). Is this an option?</p>	<p>Various brine discharge methods were considered as part of the process. Refer to section 4.3 of the SEIA Report).</p> <p>The preferred option that was assessed as part of the SEIA is the surface zone discharge option (i.e. discharge of the brine beyond the low water mark of the sea).</p> <p>The impacts associated with this option were assessed in section 7 of the report.</p>
M5	<p>The sea water current is in a northerly direction. Will the discharge being upstream not impact on the intake quality?</p>	<p>Refer to section 4.1 and 4.2: Various brine discharge location were considered as part of the process. The preferred discharge location is north of the intake. (Refer to sections 4.2 and 9 of the SEIA Report).</p>
M5	<p>Other mines might follow the same route. Did the public ask why more plants will be constructed and why this is happening?</p>	<p>This is not the preferred approach (to have all these desalinated plants) as was spelled out in the Strategic Environmental Assessment (SEA). However, from a cost perspective, Rössing has already curtailed its operations due to the low uranium price. It has adopted a survival strategy for the next 3 and half years, which includes assumptions of a less expensive desalination source. The survival strategy is therefore partially dependant on the success of this project. (Refer to section 7.1 of the SEIA report indicating the potentially significant negative socio-economic impacts if the project does not go ahead and the Rössing mine is forced to close prematurely).</p>
M5	<p>If Government allows this plant they should be OK with allowing future similar</p>	<p>No comment.</p>

Abb.	COMMENTS	RESPONSE
	plants as well.	
M5	How big will the plant be?	The desalination plant will be approximately 60m by 20m (1,200m <sup>2</sup> ) by 6m high. (Refer to section 3.5.3 of the SEIA Report).
M6	<p>Domestic waste water from site offices:</p> <ul style="list-style-type: none"> <li>• What will the arrangement be?</li> <li>• The area where the desalination plant is proposed is a highly sensitive area, therefore it is important that sewage waste is discharged correctly, to be arranged with municipality.</li> </ul>	Refer to section 3.5.3.1 of the SEIA Report: Permanent ablutions will be established as part of the RO plant complex. Sewage and grey water collected from kitchen sinks and elsewhere in the facility will be collected in conservancy tanks. The conservancy tanks will be pumped out on an as needed basis and the sewage delivered to the existing Swakopmund waste water treatment plant for processing.
E1	What about Areva's desalination plant?	The Areva plant has excess capacity to the current coastal water demand since Trekkopje mine is on care and maintenance. Water cannot be produced at affordable prices due to high unit costs of the Areva plant.
E2	Rössing Uranium is not in the business of supplying water to its self, but to produce uranium. Water is a key strategic resource and as such I content that we need to obtain the opinion of NamWater as to why they are not the supplier of choice for this entity?	Cannot comment on behalf of NamWater.
E5	<p>I am getting concerned by all the proposed desalination plants at the coast. Last week 24/11 Walvis Bay Municipality had a meeting with NamWater Exec where we were informed that NamWater is in the process of negotiating the take-over / buy-in of the Areva desalination plant and that it would be sufficient for the coast for a few years.</p> <p>It was my understanding that the new Husab mine would again put pressure on a desalination plant / require a new one for its purposes. Now we have</p>	Cannot comment on behalf of NamWater.

Abb.	COMMENTS	RESPONSE
	Rössing proposing their own plant. I can understand that the mines would probably want its own water security, but what is NamWater's overall policy on this as bulk supplier.	
E5	In all of this the Walvis Bay Municipality (WBM) was informed last week that we would be expected to contribute towards the water from the Areva plant while on the ground it is not possible to supply WBM with this desal water (although technically possible – but it would mean the reduction of 1,0 million m <sup>3</sup> per year northwards from the Kuiseb to Swakop as it will use the same pipeline). How would another new plant now affect the costing of the water as less water will now be used via the Areva plant when Rössing has its own plant, thereby potentially increasing the unit cost from the Areva plant to local authorities.	There should be no impact on the municipalities as their water source is from Omdel and not from Areva.  Cannot comment on behalf of NamWater regarding any information on future plans or costing.
C3	Increased industrial activity between Swakopmund and Wlotzkasbaken or Henties Bay attracts more industry in an already disturbed Dorob National Park (recreation zone) along the coast line with attractive beaches in the future, e.g. the government supports the investment for a giant salt work from a nation in tribalistic conflict (Nigeria) because of potential job opportunities and money.	Refer to section 3.4. The proposed location for Rössing's desalination plant is at the Salt Work (±10 km north of Swakopmund). There is existing infrastructure at the salt works; it is privately owned land; and is a licenced mining area.
C3	The proposed activity because part of an industrial area within the park.	
C3	The energy needed for the osmosis process is supplied by thermal power (fossil fuels).	The desalination plant and associated facilities will be powered via a new 11kV cable running from the existing Tamarisk substation, located 6km away along the C34 on the outskirts of Swakopmund. Solar power generation to supply

Abb.	COMMENTS	RESPONSE
		the plant was considered but pursuit of this option has already been discontinued for various reasons, as presented in the Scoping Report.
C4	Swakop Uranium is a co – user of the NamWater pipeline and reservoirs.	Noted.
<b>Socio-economic</b>		
M3	The facility has a lifespan of 10 years. Is this a cost effective option seeing that is expensive to implement?	The saving in water cost is estimated to be approximately NAD40 million to NAD60 million per year against the current water cost. (Refer to section 7.4.2 of the SEIA Report). The payback period will be approximately 3 years.
M6	What is payback period?	
M1	Why are the mines not using the existing desalination plant and building a new one? Surely government must step in and force compliance so that each mine doesn't have to build its own one?	At the moment no solution to utilise the existing plant economically is on the horizon. The existing plant does not belong to the state, but rather to a private foreign owed company. The state has no desalination plant of its own. Cannot comment on behalf of Government and other parties.
M4	Is the main drive for this project the cost of water?	The main driving force is definitely the cost of water. The estimated cost of water for 2014 is roughly N\$132 million as opposed to N\$60 million for 2013. The proposed project will result in savings of approximately N\$60 million per annum with a payback of just over 3 years. (Refer to sections 3.2 and 7.4.2 of the SEIA Report).
M3	What will be the saving for Rössing?	Saving in water cost is estimated to be approximately NAD40m to NAD60m per year against the current water cost. (Refer to sections 3.2 and 7.4.2 of the SEIA Report).
M3	What will the savings be per unit?	N\$20.
M3	What is Areva charging for water?	Between N\$45 to N\$50 per cubic meter. However, these contracts are on a

Abb.	COMMENTS	RESPONSE
		take or pay basis and therefore during periods of low usage, the actual water tariff could easily increase (and has proven to do so) to over N\$90 per cubic meter.
M4	Why will the provision of water from this smaller plant present such significant cost savings?	<p>Firstly, the plant is fit to purpose. The plant has been sized to fit the exact needs of Rössing. The second factor is the plant's strategic location (Refer to section 3.4). This location enables significant cost savings due to the availability of existing infrastructure.</p> <p>The motivation behind the project is therefore cost driven.</p>
M3	What will the relationship be with the Salt Works Company?	There will be a contract set up between the Salt Works Company (landowner), the contractors who will operate the plant (Gecko Water) and Rössing.
C2	<p>One of our popular tours is the half-day tour to Cape Cross which includes a visit to the Swakopmund Salt Pans where we watch flamingos and other shore birds from the most northern edge of the Swakopmund Salt Works.</p> <p>Will the plant affect this activity in any way?</p>	<p>The impacts on birds were assessed to low and will therefore not impact on bird watching activities.</p> <p>There will however be construction activities, which could create a temporary visual impact.</p> <p>A socio-economic impact assessment as well as biodiversity- and visual impact assessments have been conducted as part of the SEIA process. Refer to sections 7.4, 7.6 and 7.8 of the SEIA Report.</p>
M3	What is the estimated number of workers to be employed during construction?	Approximately 50 over the course of the construction period (refer to section 3.3 of the SEIA Report).
M4	Will the Swakopmund Salt Works be compensated for the use of the proposed desalination plant site?	There will be financial compensation for the use of the site, but the details in this regard are contractual and confidential.
M6	Will NamWater still be paid to use their pipeline?	Yes, only for the transfer of the water.

Abb.	COMMENTS	RESPONSE
C3	The mining industry in Erongo provides mercenary basic service for themselves and not the inhabitants of the region, i.e. households are released from ever higher water tariffs by NamWater. NamWater inherits possibly an operating drink water source later for the household demand.	The desalinated water from the proposed new plant will be used by Rössing only. Cannot comment on behalf of NamWater.
<b>EIA process (procedural)</b>		
M1	What happens to the data that is collected and can it be made available for others in a database that allows for others to use the researched information?	The SEIA reports are public information. The data that will be collected can also be made available.
M2	Request that the reports also be made available at Arandis and Walvis Bay.	Agreed. The draft reports will also be made available at these locations for review.
M3	Are we using Areva's experiences?	The Areva plant is located approximately 30 km from the location of Rössing's proposed plant. Areva's plant is also much bigger, with a design production capacity of 20 million cubic meters per annum compared to the 3 million cubic meters per annum output capacity planned for Rössing's plant. NamWater proposed to construct a desalination plant at Mile 6 and an EIA was also done for this plant. The information from this EIA process was more relevant (relating to its location) and was referred to in this SEIA process. Most of the same specialists are also part of the SEIA team for Rössing's proposed project.
M4	Can the study for the Wlotzkasbaken desalination plant be used for this study?	
M5	The Salt Works might fall within a Nature reserve/protected area?	It falls outside of the protected area.
M6	The area where the desalination plant is proposed is a sensitive area. Therefore, if something goes wrong in the surrounding area, Rössing will be blamed.	Noted
E6	Under the legal framework neither the Marine Resources Act nor the	Noted. Reference to these two Acts was added to Section 2 of the final SEIA

Abb.	COMMENTS	RESPONSE
	Aquaculture Act are mentioned. Both should be added.	Report.
<b>Avifauna</b>		
M4	Are there any glaring environmental issues associated with the project?	The preliminary or “Base Case” project (i.e. conceptual project as envisaged at the completion of the pre-feasibility stage) is an important bird area. The site is known as a Damara Tern (core) breeding site and Damara Terns in particular have therefore been looked into and assessed. Refer to section 7.8 for a detailed bird impact assessment. The outcome of this study has influenced the position of the desalination plant, which has been removed from the core breeding area. (refer to section 8 of the report).
<b>Marine ecology</b>		
M1	<p>Rössing needs to check that the inlet and outlet are situated properly so that the inlet isn't taking in the brine from outlet and also take the currents into consideration.</p> <p>The management plan set up for the project should explain the monitoring requirements in detail. These requirements were in certain instances too vague in the previous desalination project.</p>	<p>Refer to section 4.2 of the SEIA for alternatives relating to the brine discharge locations.</p> <p>The intake and discharge locations have been determined by the Engineers, with input from the SEIA specialist assessments (i.e. marine ecology, etc.). Refer to section 4.12 and Table 18 of the report.</p> <p>Noted. The Social and Environmental Management Plan (SEMP) includes the monitoring requirements.</p>
M2	With reference to the suction line taking in the seawater and pumping the brine minerals back into the sea, what are the long term effects of this?	The intake system poses a risk of mortality of plankton, fish eggs and fish larvae when water is sucked in at the inlet areas. The potential impacts has been assessed as part of the SEIA process and relevant design, management and mitigation measures developed out as a result of this study. Refer to section 7.9 for Marine Ecology Impact assessment.
C3	What about environmental change , i.e. aqualife at the affected coast due to established salt work activity with an additional concentrated waste solution outlet?	The intake system poses a risk of mortality of plankton, fish eggs and fish larvae when water is sucked in at the inlet areas. The potential impacts has been assessed as part of the SEIA process and relevant design, management and mitigation measures developed out as a result of this study. Refer to section 7.9 for Marine Ecology Impact assessment.

Abb.	COMMENTS	RESPONSE
M1	Can we make it possible for Anja and her team (MFMR) to work with Pisces on this so that her team can gain experience?	Anja Kreiner was consulted during the Marine Ecological Assessment and such possibilities discussed.
M6	<p>Monitoring of the brine discharge:</p> <ul style="list-style-type: none"> <li>• Monthly monitoring results must be submitted in time</li> <li>• Who will do the monitoring?</li> <li>• Suggestion that a marine ecologist needs to conduct at least bi-annual monitoring.</li> </ul>	The monitoring requirements have been developed as part of the SEIA process in consultation with the Marine Ecologist and are presented in the SEMP.
M6	<p>Discharge of brine:</p> <ul style="list-style-type: none"> <li>• There are no Namibian Standards yet</li> <li>• Look at international best practice</li> </ul>	Please refer to section 2.12 of the SEIA Report as well as the Marine Ecology specialist report for a detailed discussion regarding the water quality guidelines that were referred to as part of this SEIA.
E4	It will be interesting to see the outcomes of the ocean engineering modelling / monitoring to see which of the options will provide the best quality feed water, whether upstream or downstream of the discharged brine. It will interesting to know how consistent the currents, rips and eddies are. Do you know how long the baseline is or was being run for?	No ongoing baseline monitoring was required for the purposes of the diffusion modelling. Baseline monitoring will occur in the construction phase and lead up to plant commissioning, so that the operational phase environmental monitoring will have a baseline against which it can assess results. For the diffusion modelling the shoreline was mapped as part of the shoreline dynamics assessment, and this information was used along with existing data from the area (predominantly the Mile 6 desalination plant studies). A major component of the brine diffusion modelling study was to characterise and quantify the parameters that influence the dispersion and dilution of the effluent brine (apart from the jet entrainment) in the surfzone. This was done through an analysis of existing data, supported by numerical modelling of wave transformation and longshore currents in order to quantify the conditions at the point of discharge.

Abb.	COMMENTS	RESPONSE
		<p>For further details in this regard, refer to Annexures D7 – Brine Dilution Modelling and D8 – Shoreline Dynamics.</p> <p>Regarding feedwater quality, the intake site is not the pivotal aspect affecting feedwater quality for this project, the use of the salt works intake channel and buffer ponds will have the greatest effect on feedwater quality. It is expected that the unusual intake system (i.e a long channel and buffer pond) will reduce turbidity and suspended solids and increase water temperature which will allow the plant to use less pretreatment chemicals in the process. This system should also provide the plant with a buffer against upset conditions at sea (i.e. high sediment loading during storms or high seas and protection during potential sulphur eruptions and algal blooms that could impact on feedwater quality).</p>
E6	<p>At the sampling point at the edge of the predicted brine mixing (EMP Figure 6), biological sampling should also be done (e.g. survival of early life stages of species occurring in the area) – I think Phillip Hooks mentioned that in the meeting... it is not clear to me if that is planned in the current SEMP.</p>	<p>In Section 6.6.2.1 of the SEMP under “biological monitoring” is stated: Rössing Uranium should appoint a marine ecologist to assist with the biological marine monitoring, diffusion and whole effluent toxicity (WET) test and validation requirements. ... A monitoring program should be developed to study the effects of the discharged brine on the receiving water body, and/or intertidal biological communities surrounding the discharge location, particularly as monitoring of the affected subtidal benthic communities is in this case not feasible. This is because the sampling point is located in the mid –surf area where biological survey would be exceedingly difficult, that is why chemical diffusion monitoring was proposed in unison with Whole Effluent Toxicity</p>

Abb.	COMMENTS	RESPONSE
		testing, and assessed by a qualified marine ecologist to determine acceptability.
E6	It is stated somewhere that the exact constitution of the brine is not known yet. It is essential to mention that consultation between the desalination plant and MFMR are done, before the plant goes into operation so we know exactly what is pumped into the ocean and in what amounts.	This requirement has been added to the SEMP.
L1	It is not clear whether the discharging of brine from the proposed desalination plant will have an impact on the water quality to be abstracted by the NamWater plant.	Based on the diffusion modelling, elevated salinity levels should fall back to undetectable levels (i.e. near ambient) within 50m of the diffuser (point discharge), therefore the potential for the Rössing's brine discharges to prejudice water quality for the planned Mile 6 desalination are considered negligible.  Refer to sections 7.4.2.2 to 7.4.4 and section 7.10.4 in the SEIA Report.
<b>Waste Management</b>		
M5	How much solid waste will be produced? How much will be filtered out?	Refer to section 3.5.3. The operations phase is not expected to generate significant volumes of waste and will be restricted to mostly domestic waste and chemical containers and packaging.  For larger desalination plants it is considered best practice to collect the filter screenings and sludge (including those from the dissolved air floatation and ProGreen bio flocculation process, if used) and desiccate it before being disposed of via landfill, however in the case of the Rössing Uranium desalination plant, due to the small plant capacity, these solids may be co-

Abb.	COMMENTS	RESPONSE
		discharged with the brine, and allowed to diffuse back to ambient concentrations. The impact to marine ecology associated with the release of these solids back to the ocean is assessed as being low. (Refer to section 7.9.3 of the SEIA report).
<b>Noise</b>		
M1	There is some wind study data available that was obtained from our weather station and put together by a German student. This information can be made available to your noise specialist.	The noise assessment included the necessary wind-related information. Thank you (Ministry of Fisheries and Marine Resources) for making information available.
M4	I currently live in Mile 4. Will I be affected by increased noise levels?	A noise specialist has assessed noise impacts as part of the SEIA process. (Refer to section 7.7 of the SEIA Report). The specialist has assessed the noise impacts and has proposed mitigation measures which will be included in the SEMP. Noise impacts on humans were assessed to be very low.
C1	Why can't the plant be located at the northern end of the pans? This would simplify the channelling of the water to the plant and is further from Mile 4 (less noise).	The Salt Works property is private property and therefore presents a feasible solution. Any other solution would have to be on state land and as such would present additional complications on land use. Refer to section 4.12 of the SEIA Report: Various location options have been considered to allow for the best practical design. The Swakopmund Salt Works is the designated location of the proposed desalination plant with the objective to supply water to the Rössing Uranium Mine. There are a number of potential locations for the proposed desalination plant within the boundaries of the Salt Works area. The purpose of this trade-off studies was to determine the optimum location of the plant within the Salt Works based on the multi-

Abb.	COMMENTS	RESPONSE
		criteria considering technical, financial, legal & regulatory, environmental and other criteria.
<b>Permitting</b>		
M1	What legal permits have to be obtained?	The environmental Clearance Certificate from MET as a result of the SEIA process. Also, a permit from MAWF for the water intake as well as a permit for the discharge of the brine into the sea.  Please refer to a complete list of permits and agreements to be required in section 4.2 of the SEMP.
M5	What permits will be applied for?	
M6	Permit applications: <ul style="list-style-type: none"> <li>• The permit application must be submitted in parallel with the submission of the Draft SEIA Report.</li> <li>• The permit will be issued based on projections of discharge.</li> <li>• If a permit is issued, it will be for 5 years on condition that if any changes to volume of discharge foreseen, this must be notified in writing to the MAWF. Therefore, make sure the demand will not increase.</li> </ul>	Noted.  Noted.  Any such increases would require redesign and another SEIA process.
M6	The same application form must be used for the brine discharge and the domestic effluent discharge. The application must be accompanied by the agreement letter from the municipality. The agreement would define the way the municipality will manage the sewage.	Noted
E6	The Benguela Current Large Marine Ecosystem (BCLME) programme has established some water quality guidelines which we usually recommend being followed (e.g. for the LLNP experimental plant in Luederitz). The BCLME report can be found under <a href="http://www.dlist.org/sites/default/files/doclib/BEHP-">http://www.dlist.org/sites/default/files/doclib/BEHP-</a>	These guidelines have been added to Table 2 of the SEMP.

Abb.	COMMENTS	RESPONSE
	LBMP-03-04.pdf This should definitely be included in the SEMP (Table 2)	