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
27 July 2014	Email from Riana Scholtz	E1
24 July 2014	Email from Kahijoro Kahuure	E2
5 August 2014	Email from Sandra Muller	E3

Abb.	COMMENTS	RESPONSE
Technical & general		
M1	Have Rössing thought of letting the salt works use their discharged brine in their operations?	This option is being considered but is not currently part of the project design. The chemicals used in the desalination process will 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?	

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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?	Different options are considered at this stage – i.e. the introduction of the buffer ponds or possibly to dose with chlorine gas at the intake to minimise biological growth inside the intake pipeline.
M1	Once the water is added into the NamWater existing line what is the quality of the water.	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?	
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 m^3 of desalinated water to only cater for Rössing's requirements.
M3	Can this plant be expanded?	
M1	Where are you in the design phase?	The project is currently at a conceptual design stage and the proponent's technical consultants, with input from the Social and Environmental Team, are actively investigating a variety of options for each of the components mentioned above. The current cost estimation is based on a study from Gecko costing the project at a pre-feasibility level.
M1	What is the project timeline?	If all goes according the current proposed schedule, 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 18 to 22 Million US dollars.
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?	

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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?	
M1	What will happen to this plant if Rössing shuts down?	The lifespan of the plant is 10 years which aligns with the remaining life of the Rössing Mine. Rössing has adopted a survival strategy for the next 3 and half years, which includes obtaining water from a less expensive desalination source. The proposed plant will therefore bring significant savings and brings the mine's (operational) costs down. The decommissioning and closure phase will also be addressed in the SEIA process.
M3	What is the lifespan of the plant and what happens after that?	The lifespan of the plant is 10 years which aligns with the remaining life of the Rössing Mine. The plant could however continue to operate long after the 10 year period with the proper refurbishments at the end of the period. The SEIA process will consider the decommissioning and closure phase of the plant.
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?	This is one of the options still being investigated by the project (Engineering) team. The potential impacts associated with this will be assessed as part of the SEIA process, should this be a feasible option.
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?	The location of the proposed plant in relation to the Rössing mine is approximately 50 km from the Rössing mine.

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		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.
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^3 of water what volumes will be discharged as brine back into the sea?	The desalination plant will be designed to take in 6 million m^3 sea water per year. 3 million m^3 of this water will be desalinated water, transported to Rössing (per year) and ±3 million m^3 will be discharged back into the sea 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. One of the salt works' ponds might be used as a buffer pond but this still needs to be determined as part of the engineering design. The plant will be owned by Rössing but operated by an independent contractor (i.e. Gecko Water).
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.
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 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

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		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^3 per annum. During 2013 and 2014 the total water consumption was reduced.
M5	Is the intention to put the desalinated water into the NamWater system?	Yes, the plan is for the desalinated water to be transported to Rössing via the existing NamWater pipeline.
E3	The 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. 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.	The SEMP objectives will be considered in the SEIA process. 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. Rössing's preliminary indications are that water can be produced at below USD2/m^3, before conveyancing costs from the proposed new desalination plant. This is substantially less than the existing water price, which is well above USD3/m^3 before conveyancing costs. Noted.
M3	What is the future for Rössing when the mine and the desalination plant reaches the end of their lifespan?	According to uranium price new long term contracts could be be sourced and the life of mine extended. A decommissioning plan for the plant will be developed as part of the process.

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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^3
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? Are any alternative being considered?	No-one can answer on NamWater's behalf. However, negotiations with NamWater are already underway. The approach to the water reticulation will follow the same methodology as Areva's plan. 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. An alternative to the use of the NamWater infrastructure is however not being considered as part of this project and SEIA process.
M4	Why not place the whole power line below ground?	This is one of the options currently being considered. A decision in this regard will be influenced by the outcome of, amongst others, the SEIA and the avifaunal study in particular. The project planning and alternate assessment is linked to the SEIA process. There are existing power line poles along the Henties Bay Road.
M4	How does this desalination plant compare to Areva's plant in size and output?	Areva's plant has a design production capacity of 20 million cubic meters per annum. The Rössing desalination plant will be designed for 3 million cubic meters per annum output capacity. The Rössing plant will therefore be significantly smaller than Areva's plant. 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.

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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.
M5	Will the intake be a jetty type?	The final decision regarding the various infrastructure components are still being considered by the Engineers with input from the Environmental team. However, the intake system will most likely be a jetty type structure next to, and relatively similar to the existing Salt Works one.
M5	Will a pilot plant be implemented to test the processes?	No, this is not considered at the moment. The water at the likely intake and discharge locations will now be monitored as well as the water along the existing Salt Works intake channel.
M5	NamWater also took a few samples at Mile 8 and monthly samples at the Areva plant. The information can be made available.	Noted with thanks.
M5	Will the pre-treatment only consist of DAF? How will the effluent be discharged from this pre-treatment system? What about post-treatment?	The various treatment options are still being considered by the Engineers with input from the environmental team.
M5	Take note that the new water acts, regulations will be enforced soon with stricter requirements for Chloride and Boron. Class B for Chloride and Boron will in future not be sufficient. To allow for this requirement, the process might require 2 passes.	Noted.
M5	The NamWater desalination plant includes a discharge beyond the mixing zone (at ± 600 m into the sea). Is this an option?	The different discharge options are being investigated by the Engineers with input from the environmental team. It is important to realise that this plant will be designed for 3 million m^3 per annum output capacity.

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		The most likely option will be a discharge of the brine into the waves (beyond the low water mark of the sea). The potential impacts from a marine ecology point of view however still need to be assessed, etc.
M5	The sea water current is in a northerly direction. Will the discharge being upstream not impact on the intake quality?	This issue is being investigated by the engineering team. The exact intake and discharge locations still need to be determined as part of the ongoing studies by the Engineers, taking the currents, water quality and dispersion into account, with input from the SEIA specialist assessments (i.e. marine ecology, etc.).
M5	Other mines might follow the same route. Did the public ask why more plants will be constructed and why this is happening?	Yes, this did come up in the meetings with the public and other stakeholders. 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.
M5	If Government allows this plant they should be OK with allowing future similar plants as well.	No comment.
M5	How big will the plant be?	With reference to the BID, the media filters and Reverse Osmosis (RO) plant will be housed in the same building which will be approximately 60m x 20m x6m high, while the post treatment and pre-treatment plants, and the storage tanks would be located adjacent to the plant building. The equipment room, offices, and chemical storage room would also be housed in a 13m x 20m x 6m

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		high building that is connected, or is immediately adjacent, to the main plant building.
M6	Domestic waste water from site offices: • What will the arrangement be? • 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.	This still needs to be investigated by the project team and will form part of the SEIA process.
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.
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.	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 part.	
C3	The energy needed for the osmosis process is supplied by thermal power	The desalination plant and associated facilities will be powered via a new 11kV

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	(fossil fuels).	cable running from the existing Tamarisk substation, located 6km away along the C34 on the outskirts of Swakopmund. Solar power generation to supply the plant was considered but pursuit of this option has already been discontinued for various reasons, as presented in the Scoping Report (section 4).
C4	Swakop Uranium is a co – user of the NamWater pipeline and reservoirs .	Noted.
Socio-economic		
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. 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.
M3	What will be the the saving for Rössing?	Saving in water cost is estimated to be approximately NAD40m to NAD60m per year against the current water cost.
M3	What will the savings be per unit?	N$20.

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M3	What is Areva charging for water?	Between N$45 to N$50 per cubic meter. However, these contracts are on a 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?	Firstly, the plant is fit to purpose. The plant has been sized to fit the exact needs of Rössing. The second major factor is the plant's strategic location. This location enables significant cost savings due to the availability of existing infrastructure such as pipelines and power infrastructure. The motivation behind the project is therefore cost driven.
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	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. Will the plant affect this activity in any way?	You will still be able to watch the birds at that site during operations. There will however be construction activities, which could create a temporary visual impact to the south of that site. A socio-economic impact assessment as well as biodiversity and visual impacts assessment will be conducted as part of the SEIA process.
M3	What is the estimated number of workers to be employed during construction?	Approximately 50 over the course of the construction period.
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.
C3	The mining industry in Erongo provides mercenary basic service for themselves and not the inhabitants of the region , i.e. households are released	The desalinated water from the proposed new plant will by used by Rössing only.

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	from ever higher water tariffs by NamWater. NamWater inherits possibly an operating drink water source later for the household demand .	Cannot comments on behalf of NamWater.
EIA process (procedural)		
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 will be more relevant (relating to its location) and will be 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?	This will have to be confirmed.
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
Avifauna		
M4	Are there any glaring environmental issues associated with the project?	The site on which the plant is to be located is an important bird area. The site is known as a Damara Tern nesting site and Damara Terns in particular are

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		therefore being looked into.
Marine ecology		
M1	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. The management plan set up for the project should explain the monitoring requirements in details. These requirements were in certain instances too vague in the previous desalination project.	Yes, this issue is being investigated by the engineering team. The exact intake and discharge locations still need to be determined by the Engineers, with input from the SEIA specialist assessments (i.e. marine ecology, etc.). Noted. The Social and Environmental Management Plan (SEMP) will include the detailed monitoring requirements that will be developed with input from the various specialists and also in consultation with other key stakeholders.
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?	With reference to the presentation that was made, the intake system pose a risk of mortality of plankton, fish eggs and fish larvae when water is sucked in at the inlet areas. The potential impacts will however be assessed as part of the SEIA process and relevant design, management and mitigation measures will be spelled out as a result of this study.
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?	
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?	We would support this idea. WP indicated that he would however discuss this with the Marine Ecologist after the meeting to determine the practicalities and will further liaise with Anja Kreiner in this regard.
M6	Monitoring of the brine discharge: • Monthly monitoring results must be submitted in time • Who will do the monitoring? • Suggestion that a marine ecologist needs to conduct at least bi-annual monitoring.	The monitoring plan will be developed as part of the SEIA process. The monitoring parameters will be included by the Marine Ecologist. It is important that MAWF review these before the SEIA and SEMP are finalised.
M6	Discharge of brine: • There are no Namibian Standards yet	SLR requested that the standards being referred to be made available by the MAWF. (Cynthia Ortmann made these available after the meeting).

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	• Look at international best practice	
Waste Management		
M5	How much solid waste will be produced? How much will be filtered out?	This will have to be determined as part of the ongoing studies.
Noise		
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.	Noted.
M4	I currently live in Mile 4. Will I be affected by increased noise levels?	A noise specialist will assess noise impacts as part of the SEIA process. If the specialist determines that there will be significant noise impacts, then the design of the project will be influenced in order to reduce the significance of this impact.
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. Various location options are being considered to allow for the best practical design. A noise assessment will be carried out as part of the SEIA process.
Permitting		
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. The changes to the Ancillary Works on the Salt Works Company's mining licence also need to be communicated with MME.
M5	What permits will be applied for?	
M6	Permit applications:	

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	• The permit application must be submitted in parallel with the submission of the Draft SEIA Report. • The permit will be issued based on projections of discharge. • 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.	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