PROPOSED DESALINATION PLANT FOR RÖSSING URANIUM

SEIA – Public & Focus Group Meetings

July 2014
Agenda

- Welcome and introductions
- Meeting formalities and purpose of meeting
- Project background / motivation
- Overview of proposed Desalination plant for Rössing Uranium
- The SEIA process
- Social and Environmental Issues
- General discussion, comments and questions
- Way forward
- Close
Purpose of meeting

- Understand the SEIA process being followed
- Motivation and overview of the proposed project
- Discuss potential social and environmental impacts
- Input into the SEIA process
Project Background / Motivation

• Low uranium market prices - Rössing is looking at ways to improve its economic viability.

• Currently, Rössing purchases desalinated water at significant cost.

• Erongo Region:
  ➢ Centre for growth
  ➢ central to the country’s economic vitality
  ➢ is a water scarce environment, relying predominantly on the Omdel aquifer for its supply.

• Interim measure - desalinated water from the Areva desalination plant near Wlotzkasbaken, since November 2013.
Project Background / Motivation

• NamWater - pursuing the development of a new desalination plant at Mile 6 (roughly 10km North of Swakopmund).
  ➢ Outcome, timelines and commercial aspects to this project remains uncertain.

• Agreement with NamWater to secure water on a long-term basis from Areva’s desalination plant at economically feasible terms could also not be reached.

• Therefore…

Rössing investigates an alternate source for desalinated seawater to reduce costs of its mining operations and enhance its commercial sustainability.
Water Costs

Rossing Water Demand vs Cost

- Water Costs (N$)
- Water Demand (Mm3/A)
Proposed Desalination Plant - description

- Rössing plans to design, construct and operate a new desalination plant, approximately 6 km north of Swakopmund, for their water supply needs.
- Located at the existing Swakopmund Salt Works.
Proposed Desalination Plant - description

- Seawater intake system & associated infrastructure.
  - The water intake will be located close to Swakopmund Salt Works intake.

- Channel or a pipeline - to transport water to the plant. A seawater receiving tank (or existing salt works pond).
Proposed Desalination Plant - description

- **Pre-treatment plant** to remove sediments, solids and organic matter.
  - Most likely comprise of a Dissolved Air Flotation (DAF) system.

- A Modular Seawater Reverse Osmosis (SWRO) **desalination plant**
  - Capacity - 3 million m$^3$/year (8,200 m$^3$/day).
  - Housed together with the post- and pre-treatment infrastructure in a fenced off plant area.
Reverse Osmosis Process
Proposed Desalination Plant - description

- **Brine outlet system** and associated infrastructure.
  - Various discharge alternatives are being investigated, including ‘beach disposal’ and ‘sea disposal’ options, within the Mining Licence area of the Salt Works

- **11 kV power supply** of approximately 6 km with a dedicated transformer, switchgear and possible new substation at the plant.

- **Desalinated water supply line** of roughly 850m to the existing NamWater pipeline

- Related services and structures i.e. offices, access road, etc.
SEIA PROCESS
SEIA phases

Phase 1: Project initiation/screening
- Internal screening (site visits / identify social and environmental issues)
- Meeting with MET
- July 2014

Phase 2: Scoping
- Notification
- Public participation process (including meetings)
- Scoping Report and Issues Response Report
- Comments period on Scoping documents
- July to October 2014
SEIA phases

Phase 3: SEIA

- Specialist investigations
- SEIA Report and Social and Environmental Management Plan (SEMP)
- Comment period on SEIA documents
- Submit final Reports to the MET
- MET review starts
- October 2014 to January 2015

Record of decision from the MET
Report distribution

- Language – English
- Report summaries - E-mail to registered IAPs
- Complete reports
  - Swakopmund Library
  - National Library of Namibia in Windhoek.
  - CD’s on request
Potential Environmental Issues

- **Shoreline environment**
  - Construction activities and concentrated discharge may cause disturbances to environmentally sensitive beach areas.

- **Marine environment**
  - *Intake*: risk of mortality of plankton, fish eggs and fish larvae when water is sucked in at the inlet areas.
  - *Discharge of brine*: Aquatic species have a tolerance for natural salinity levels, however if these levels undergo significant change this can be detrimental to these creatures.

- **Avifauna**
  - Power line may pose a risk to local avifauna (potential for collisions)
  - Changes to the existing surface water structures in the area may also impact the local faunal residents and migrants.
Potential Environmental Issues

• **Social and economic impacts**
  - The development of an additional source of water may have economic implications for other water users in the region.

• **Noise**
  - The use of high-pressure pumps at RO plants can generate noise. Possible increase in noise levels – impact on nearby receptors (i.e. at Mile 4).

• **Visual**
  - New structures will be erected that may cause negative visual impacts.

• **Archaeology**
  - Construction activities impacting on possible archaeological or historical resources within the area
# Environmental Team

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<thead>
<tr>
<th>SEIA component</th>
<th>Responsible party</th>
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<tr>
<td>SEIA Lead</td>
<td>SLR &amp; Aurecon</td>
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<tr>
<td>Social</td>
<td>Ashby Associates cc</td>
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<td>Economic assessment</td>
<td>Design &amp; Development Services cc</td>
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<td>Airshed Planning Professionals</td>
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<td>Shoreline dynamics</td>
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<td>Intertidal Topographic survey</td>
<td>Alan Louw (Nam) Marine Services</td>
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<td>Waste water discharge modelling in the marine environment</td>
<td>WSP Group Africa (Pty) Ltd</td>
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<td>Marine ecology</td>
<td>Pisces Environmental Services (Pty) Ltd</td>
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THANK YOU!

Comments and questions

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