

NEWS RELEASE

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SUCCESSFUL CHANDLER PROJECT DRY AND WET SALT PROCESSING PILOTS

- Successful optical sorting trials at TOMRA in Germany prove the processing methodology
- Dry processing pilot refines 95.4% rock salt (NaCl) into 98.3% saleable grades
- Dry pilot confirms reduced costs and water use assumed in pre-feasibility study
- Successful wet process pilot trials at Veolia Water Technologies, USA prove the methodology
- Wet processing pilot refines 89.5% feed into 99.8% saleable grades
- German based salt experts (K-UTEC AG Salt Technologie) confirms Tellus salt high grade
- The Asian salt market 121 million tonnes per annum (Mtpa), with a forecast deficit in supply of 6 Mtpa by 2018.

Tellus Holdings Ltd (“Tellus”) has successfully completed two programs of salt core pilot scale processing test work. A dry mineral process was proven by TOMRA, using its technology centre in Sydney and a pilot plant in Wedel, Germany. A wet processing methodology was proven using bench-scale test work at Veolia’s HPD® Evaporation and Crystallization research facility near Chicago USA.

The pilot processing confirms Tellus salt is suitable for chlor-alkali, soda ash, road de-icing, food processing, animal feedstuffs, water treatment and other industrial applications.



Fig 1: Dry salt processing pilot in Germany



Fig 2: Pilot demonstrates successful production of high grade salt

Dry processing pilot

Optical sorting is commonly used for rock salt refining throughout the world, and TOMRA is a leading manufacturer of sorting machines. Initial technology selection trials using hand-sorted samples of Tellus’ salt were conducted at TOMRA’s facility in Sydney. Once the type of optical sorting system was confirmed,

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a 70 kg sample of crushed and screened core from the Chandler drill programs was sent to TOMRA's pilot facility in Germany for multi-stage sorting trials.

The sorting process on a small production-scale machine performed better than expected. The products from the sorter have been assayed at K-UTEC's laboratory in Germany and subsequent analysis of the results has confirmed a high mass recovery and high product grade.

Data collected from the pilot plant operation will enable the design of a dry salt sorting process circuit and the selection of process equipment. Once complete, this information will be an essential input to the Chandler Definitive Feasibility Study.

Tellus has now published a product specification for the optically sorted salt product, which will be available on the company's website. Tellus is planning to produce stage one 500,000 tonnes per year of optically sorted salt from the Chandler mine for the industrial applications, including soda ash and chlor-alkali production. Some salt will also be sold for non-industrial uses like food processing, animal feedstuffs, water treatment and other industrial applications.

"The performance of the optical sorting process on the Chandler rock salt was better than expected," said Tellus Managing Director Duncan van der Merwe. "The testwork has demonstrated that a very simple process circuit is all that is required to produce a high quality product from a low capital and operating cost processing plant."



Fig 3: Wet salt processing pilot project in USA



Fig 4: Pilot demonstrates successful production of high grade salt

Wet processing pilot

Tellus is evaluating technology options for the wet salt refining system at the company's Chandler project. The project will produce predominantly dry sorted rock salt, but may also refine a portion of the rock salt into a high grade evaporation refined salt. This test work is the first stage of evaluating a closed circuit system comprising dissolution, evaporation and crystallisation in either a Multiple-Effect (ME) or Mechanical Vapour Recompression (MVR) evaporator system.

The work carried out at Veolia consisted of dissolution of 30 kilograms of Chandler rock salt at 89.5% NaCl containing 8.0% insolubles into water. This liquor was then filtered before being evaporated to the point of crystallisation of sodium chloride, followed by washing of the crystals in brine. The resultant product was assayed by Veolia's laboratory and contains over 99.7% NaCl.



The data collected during the pilot scale trial will now be used for engineering studies, including an update of the Chandler Project Definitive Feasibility Study. Sufficient data has been obtained to enable preliminary engineering design of a wet salt refining circuit and the associated infrastructure and utilities. Veolia will be assisting Tellus with these activities over the coming months.

Tellus has now published a product specification for the wet refined (premium) salt product, which is available on the company website. Tellus is considering the production of 150,000 tonnes per year of evaporated salt from the Chandler mine for industrial and non-industrial uses.

The Asian salt market is currently 121 million tonnes per annum and steadily increasing, with a forecast deficit in supply of 6 million tonnes by 2018. With environmental restrictions likely to limit the expansion of Australian solar salt fields, Tellus is well-placed to take advantage of the gap in supply.

“The work completed by Veolia has proven that a wet refining process can produce a very high quality evaporated salt from the Chandler rock salt feed,” Mr van der Merwe said. “We will now commence enquiries with salt customers and traders, with the aim of obtaining bankable offtake for salt off-take or sales.”

Tellus is continuing to advance environmental studies, regulatory approvals, and the updating of a Definitive Feasibility Study to reflect optimised mining and processing technology models.

About Tellus Holdings:

Tellus Holdings Ltd is an infrastructure project development company with a proposed dual revenue business model. This involves mining the commodities salt and kaolin and backfilling the voids left from mining with equipment, archives or waste. Tellus plans to store like-with-like materials, so as to create opportunities for the future long term, temporary storage, treatment and recovery of valuable materials or permanent isolation of waste. Tellus' business model mirrors world's best practice solutions operating in the UK, Europe, USA and Canada. Tellus is developing the Chandler salt project in the Northern Territory (NT) and the Sandy Ridge kaolin project in Western Australia. Tellus' flagship 'Chandler Project' has been awarded Major Project Status by the Northern Territory Government.

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