Pure Salt Baytown
Evaporated Salt Plant

Baytown, TX USA - Pure Salt Baytown is a privately owned manufacturer of salt products used primarily in food products, chemical processing, oil field drilling and production fluids, deicing, hide curing, agricultural feeding, commercial, industrial and residential water softening and chlorine generation in swimming pools.

Their Baytown facility produces high-purity salt that is used primarily in chlor-alkali production, as well as other salt products sold into food grade, water softening, and chemical markets.

The Client’s Needs

A new chlor-alkali chemical plant presented Pure Salt Baytown with an opportunity to supply high-purity sodium chloride into their production process. In order to furnish chlor-alkali grade salt to this prospective customer, they would need to invest in a new, large-scale production facility in close proximity of their client and their local source of solution-mined salt. To meet these demands, the new process equipment would require high system availability at the exacting purity necessary for use by the end customer.

A new production facility also would provide surplus sodium chloride production that could be utilized to enhance Pure Salt Baytown’s other customers’ existing product lines. These include other high-purity products such as low calcium/magnesium, chemical-grade, and a variety of food grade brands.

Veolia Water Technologies was selected to supply the salt purification system for the new production facility. Veolia’s HPD® Evaporation and Crystallization technologies have a proven, successful installation base for some of world’s largest salt producers. Another factor in choosing a supplier for the salt plant was Veolia’s ability to execute a full, turnkey project with full responsibility for the entire processing facility.
**Research & Development Support**

The research and development center for HPD® evaporation and crystallization was critical to the project. Analysis of the feed variability and the ability to test the process design provided the confidence to move forward on the project. This effort not only validated that the process would work, but fully demonstrated to Pure Salt Baytown and their customers that the quality of the salt would achieve all purity expectations.

Once the results from the testing confirmed the process design, the client turned full responsibility for the equipment supply, installation and construction of the entire crystallizer plant to Veolia Water Technologies.

**Turnkey Project Execution**

To ensure comprehensive execution and clear communication with the customer and end user, dedicated resources were assigned by Veolia to direct the project. A project manager and a multi-disciplined team would be responsible for all phases of construction from beginning to end.

When completed, the salt company at Baytown would be home to the world’s largest single-stage sodium chloride MVR (Mechanical Vapor Recompression) evaporated salt crystallizer, producing more than in excess of 800,000 tons per year of high-purity sodium chloride. Veolia would also provide start-up support, working side-by-side with the plant’s technicians to man the plant during the critical milestones of commissioning.

**Quote from the Client**

"Veolia was able to assure us and our customer that the purity of the salt we produce would meet all of the necessary requirements. Their expertise in industrial salt crystallization fit right in with our integration strategy for the Baytown facility."

- Lawrence Becnel  
Manager of Engineering

**The Results**

The successful design, construction and operation of the Baytown facility was an ideal match of their forward integration strategy and the expertise of Veolia to design and build the salt plant from concept through commercial start-up.

The execution of the project and assistance in launching this operation was a major contribution to the success of the facility.

Output from the HPD salt crystallizer at Pure Salt Baytown has surpassed the production and quality requirements guaranteed. More importantly, the system has consistently exceeded production and availability targets.