

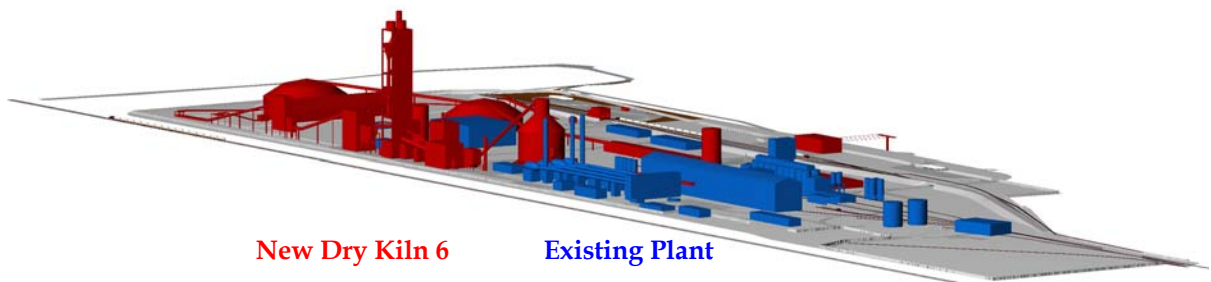
# GARADAGH CEMENT PROJECT NEW DRY KILN 6



GARADAGH CEMENT OJSC

Sahil Settlement  
Salyan Highway  
Baku AZ -1083

## PROJECT INFORMATION



New Dry Kiln 6

Existing Plant

July 2008



ERM GmbH  
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Germany



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(AETC)  
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Azerbaijan

# PROJECT INFORMATION – GARADAGH CEMENT

## NEW DRY KILN 6

### ***The Proposed Project***

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Garadagh Cement O.J.S.C., Azerbaijan (“Garadagh Cement”) intends to install and operate a new state-of-the-art dry process rotary kiln at its existing cement manufacturing site (Kiln 6) and hereby improve the cement clinker production technology employed at the site and increase clinker production. In the kiln, limestone is burned to “clinker” which is the main component of cement. The currently operated four wet process kilns will be decommissioned after commencement of production with the new kiln. As an option, Garadagh Cement is investigating to continuing operation of two wet kilns for a limited period of time, parallel to the New Dry Kiln 6. This option is considered due to the continued deficit of local cement production in Azerbaijan and would include an environmental upgrade of the two wet kilns. (A decision in this regard has not yet been made. Consequently, this option is not subject to the following brief presentation of the key aspects of the New Dry Kiln 6 Project. If this option should be pursued, Garadagh Cement will inform the interested public and relevant stakeholders accordingly).

The Garadagh Cement site is located 1.5 km west of Sahil Settlement about 34 km southwest of Baku and 1 km west of the Caspian Sea. It is planned that the new dry Kiln 6 and related installations will be built within the boundaries of the existing Garadagh Cement plant premises.

Limestone is the main raw-material for clinker production. Present operations use the waste limestone from the dimensional stonecutting which is taking place in the backcountry of the cement plant. For the Project, in addition Garadagh Cement will reopen its currently unused limestone quarry (Shakhgaya West) to ensure long-term availability of limestone raw material at higher quantities. The project will be planned, constructed and operated to international best practice and standards.

### ***The Project Proponent***

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Garadagh Cement O.J.S.C. operates the cement manufacturing at Sahil since privatisation of the site in 1999. Today, a 69.4% share in Garadagh Cement is held by the Swiss cement manufacturing company Holcim Ltd, 10% by the state owned

Azerbaijan Investment Company, another 10% by the European Bank for Reconstruction and Development (EBRD), and the remaining 10.6% is held by individual shareholders.

Holcim has a proven successful experience track of establishing and operation of cement plants. The company was founded in 1912 and today operates about 150 cement and grinding plants in 70 countries.

Garadagh Cement currently prepares the application for a permit to install the new kiln. An Environmental Impact Assessment process according to Azeri standards is currently conducted by the Azeri company SRM.

The project will be planned, constructed and operated according to the Holcim Environmental Guidelines, the EBRD environmental policies, the guidelines for the cement industry issued by the World Business Council for Sustainable Development (WBSCD), and with anticipating future changes of the environmental legislation of Azerbaijan to European Standards.

### ***The Need for the Project***

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The cement market in Azerbaijan is growing since 2003 and is expected to continue with a strong growth rate in correlation with the forecasted GDP growth. In 2007, the annual demand for cement was 3.2 million tonnes.

Garadagh Cement is the only cement clinker producer in Azerbaijan and also the largest cement manufacturing plant operating in Azerbaijan. In 2007, the site manufactured about 1.3 million tonnes of cement. For manufacturing this quantity of cement, Garadagh Cement had to import additional clinker due to the limited clinker production capacity of the existing kilns at site. After Kiln#6 is working, increased clinker production will allow fully utilizing the existing grinding capacity by own clinker production. The future annual quantity of cement manufactured will be about 1.7 million tonnes based on an on-site clinker production of about 1.2 million tonnes per year.

### ***Project Description***

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The new dry Kiln 6 will replace the four existing wet process kilns. The dry process is state of the art for new kilns and has several advantages over the wet process, such as a significantly lower demand

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for water and fuel, increased energy efficiency and lower emissions.

The new kiln will be fuelled with hard coal or petroleum coke if available or natural gas. A coal mill and a housed coal storage are part of the Project.

Due to increased clinker production, additional storage facilities, silos and mills will be constructed. Open storage areas will be removed.

For raw-material treatment at Shakhgaya West quarry, the installation of a new crusher with conveyors and interim storage silos is required.

The ESIA Report will serve as input for the environmental and social appraisal of the Project by potential lender banks or possible other international financiers. An Environmental and Social Management Plan will be outlined in the ESIA to address mitigation measures considered necessary to ensure that the design, construction and operation of the Project will be in an environmentally and socially acceptable manner and compliant with both national and international standards.

### ***Schedule for Establishment of the Project***

Following tentative implementation schedule is envisaged:

<i>Milestone</i>	<i>Tentative Schedule</i>
Supposed granting of permit	Mid 2008
Start of construction works	End 2008
Start of clinker production with the new kiln	2 <sup>nd</sup> Quarter 2011

### ***Environmental and Social Impact Assessment***

Garadagh Cement currently prepares the application for a permit to install the new kiln. Garadagh Cement has contracted the local consulting company SRM from Baku for carrying out the Environmental Impact Assessment (EIA) for the project to be submitted to the Ministry of Ecology and Natural Resources (MENR) as application document for the environmental approval of the project.

In addition, to fulfil the policy expectations of the Holcim Group who is a member of the World Business Council for Sustainable Development (WBCSD) Cement Sustainability Initiative (CSI), its shareholder EBRD and potential international project lenders, Garadagh Cement has contracted a consultant team led by ERM (Frankfurt office/Germany) locally supported by Azerbaijan Environmental Technology Centre, Baku (AETC) to prepare additional studies and compile supplementary information in a wider scoped Environmental and Social Impact Assessment (ESIA) report with reference to international standards.

### ***Benefits of the Project***

The cement produced by Garadagh Cement will be used for construction works in Baku and other regions of Azerbaijan. The increase of produced quantities will significantly contribute to serve the growing national cement market. Transportation of products is easily possible via the direct access to the railway and road networks of Azerbaijan.

Use of waste limestone from dimensional stone cutting will continue to reduce environmental impacts from stone cutting activities in the vicinity of the plant.

The modern state-of-the-art techniques result in reduced emissions to air, CO<sub>2</sub>-emissions and a lower water demand.

The increase of the clinker production capacity allows the stoppage of utilisation of imported clinker by Garadagh Cement, resulting in less transport traffic and a reduction of fugitive emissions during handling of the imported clinker. Furthermore, benefits are expected in occupational health and safety and in the social sphere such as cleaner work environment, and advanced technology which will allow development of workers skills.

### ***Information Disclosure and Public Consultation***

Disclosure of project information and Public Consultation is one of the key issues of the ESIA procedure. It gives the public and all affected or related people, institutions or organisations the opportunity to express concerns, comments and suggestions. Garadagh Cement, as a policy for this project, in line with international good practice is offering information and consultation opportunities for stakeholders and the public on a voluntary basis. Garadagh Cement via consultants will undertake consultation of stakeholders in the

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course of project preparation. The draft ESIA document incl. a summary will be made available for the public and comments and suggestions will be considered for the Final ESIA. The project will also organise an open room event in Sahil where Garadagh Cement and the consultants will provide information and answer questions.

and suggestions are taken in careful consideration during establishment and operation of the project.

With respect to environmental protection, Garadagh Cement will fulfil the environmental terms and conditions of the Ministry of Environment and Natural Resources (MENR) before the commencement of construction activities can start the Project.

### **Commitment of the Project Proponent**

Garadagh Cement is committed to the people of the project areas and will ensure that their concern

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