Proposed Loan
Republic of Indonesia: PT Semen Andalas Indonesia for the Reconstruction of the Cement Production Facility in Aceh

In accordance with ADB’s public communications policy (PCP, 2005), this abbreviated version of the RRP excludes confidential information and ADB’s assessment of project or transaction risk as well as other information referred to in paragraph 126 of the PCP.
CURRENCY EQUIVALENTS
(as of 28 February 2007)

Currency Unit – rupiah (Rp)

Rp1.00 = $0.00011
$1.00 = Rp9,095

ABBREVIATIONS

ADB – Asian Development Bank
BRR – Rehabilitation and Reconstruction Agency for Aceh and Nias
CSP – country strategy and program
EBITDA – earnings before interest, taxes, depreciation, and amortization
IMT-GT – Indonesia-Malaysia-Thailand Growth Triangle
PRC – People’s Republic of China
SAI – PT Semen Andalas Indonesia

WEIGHTS AND MEASURES

ha – hectare
MMT – million metric tons
MMTPA – million metric tons per annum
MW – megawatt
(i) The fiscal year (FY) ends on 30 November. “FY” before a calendar year denotes the year in which the fiscal year ends.

(ii) In this report, “$” refers to US dollars.

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I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed Indonesian rupiah–denominated loan, without government guarantee to PT Semen Andalas Indonesia (SAI) for the Reconstruction of the Cement Production Facility in Aceh (the Project). The design and monitoring framework is in Appendix 1.

II. INTRODUCTION

2. In 1983, SAI, a wholly owned subsidiary of Lafarge S.A. (Lafarge), began operating a cement facility with a production capacity of 1.4 million metric tons per annum (MMTPA) in Lhoknga, near Banda Aceh, Indonesia. SAI also owns distribution terminals in several cities on the coast of northern Sumatra, the company’s target markets.

3. Then on 26 December 2004 the tsunami struck the north coast of Sumatra, with catastrophic impact on lives, housing, infrastructure, and various sectors of the economy. The earthquake on 28 March 2005 further devastated Nias, Simeulue, and southern parts of Aceh. An estimated 167,000 people died or went missing, and 500,000 were displaced from their homes in Aceh and Nias. About 80,000–110,000 new houses are needed. Roads, bridges, ports, and other necessary physical and social infrastructure have to be rebuilt or rehabilitated. SAI’s plant was almost fully destroyed, causing the company to stop production.

4. The Asian Development Bank (ADB) responded immediately to the tsunami disaster by committing $329 million in grants for rehabilitation and reconstruction. The Earthquake and Tsunami Emergency Support Project (ETESP) was approved in March 2005 to help restore essential public services, rebuild infrastructure, and revive economic activity through livelihood support. In addition, ADB has contributed $10 million to a multi-donor trust fund administered by the World Bank to support, among others, community regeneration, livelihood rebuilding, and infrastructure development. In April 2005, the Government of Indonesia (Government) created the ministerial-level Rehabilitation and Reconstruction Agency for Aceh and Nias (BRR) to lead the recovery and reconstruction efforts over the target implementation period of 2005–2009. ADB has been working closely with BRR and other donors in the reconstruction.

5. The construction of more than 100,000 houses, business premises, and roads and other transport infrastructure requires a large volume of cement and other construction materials. The lack of local cement production facility, the long distance between alternative sources of cement and the market, and the limited port and ship capacity have made it more costly to construct housing and other infrastructure facilities in Aceh than in other areas in North Sumatra. Lengthy transportation could also delay reconstruction and development of infrastructure. Having a cement production facility in the project area would thus be beneficial. The Project would demonstrate ADB’s continuing support for reconstruction work and further infrastructure development in Aceh, and would complement the ongoing assistance under ADB’s ETESP and other projects of its development partners.
III. BACKGROUND

A. Indonesian Cement Industry

1. Overall Demand and Supply

6. Nine cement companies in Indonesia operate 15 cement plants with a total installed production capacity of 46.1 million metric tons (MMT) in 2005. PT Semen Gresik, PT Semen Padang, and PT Semen Tonasa are part of the Semen Gresik Group that is 51% owned by the Government and holds the largest market share of 45.3%. PT Indocement Tunggal Prakarsa, a subsidiary of Heidelberg of Germany, is the second-largest player with a market share of 29.6%, and PT Holcim Indonesia, a subsidiary of Holcim of Switzerland, is the third-largest with a market share of 15.2%. These top three companies have a total market share of 90%. Each of them operates several large plants across the country. However, 73% of their capacity is in Java, which accounts for over two thirds of their sales. The other four small cement producers (SAI, PT Semen Bosowa, PT Semen Baturaja, and PT Semen Kupang) each operate a single plant or a few small plants in Sumatra or in other islands. The cement industry in Indonesia is subject neither to price control nor to restrictions on foreign investment. Cement producers can sell and set prices freely across the country. There is no import tariff on imported cement.

7. Before the Asian financial crisis, Indonesia was a net cement importer, producing 24.7 MMT locally and importing 1.4 MMT in 1996. Some cement producers increased their production capacity in 1997 just before the crisis caused a slump in economic growth and a corresponding decrease in cement consumption. The capacity utilization rate plummeted and the country started to export cement. Thanks to improving economic performance and investments, domestic cement demand, which dropped to as low as 18.6 MMT in 1999, has since then increased by 8.5% yearly to reach 30.4 MMT in 2005. Indonesian cement producers increased their capacity utilization rate from 51% in 1999 to 74% in 2005 and produced 33.9 MMT of cement in 2005. In response to rising demand and higher domestic prices compared with export prices, these companies have progressively shifted their sales toward the domestic market.

8. In 2005, demand for cement grew at a slower 5% as rising oil prices and interest rates led to a slowdown in infrastructure investments. An increase in government spending on infrastructure development would drive up demand for cement. Assuming a yearly growth in demand of 7% over the next 5 years, the existing capacity will be met by 2010. The domestic producers are expected to respond to the rising demand by increasing their capacity through new or better-performing plants. As foreign investors are not restricted from entering the Indonesian cement industry, the entry of new players could generate additional capacity. These projects are, however, not expected to pose a major threat to existing cement players, given the large capital investment requirement and the need for a well-developed distribution network and brand recognition. Appendix 2 describes the Indonesian cement industry in more detail.

2. Demand and Supply in SAI’s Target Markets

9. Because of the low value-to-weight ratio of cement and the producers’ sparse coverage of Indonesia, each producer has adopted a geographically focused sales and distribution network. In Sumatra, three players have a total installed capacity of 8.1 MMTPA. PT Semen Padang, a subsidiary of PT Semen Gresik, is the largest producer with a 5.4 MMTPA integrated plant in West Sumatra. SAI is in second position with a capacity of 1.4 MMTPA, followed by PT Semen Baturaja, a state-owned company whose three small plants in South Sumatra have
total capacity of 1.25 MMTPA. Domestic consumption in Sumatra grew by about 5.2% per year in 2001–2005.

10. Demand for cement is projected to stay strong in the post-reconstruction phase, given the improved political situation in Aceh. The tremendous loss of lives, physical infrastructure, and economic and social facilities moved the Government and the Free Aceh Movement to resume discussions and finally sign a cease-fire agreement in August 2005. In July 2006, the Government passed the Law on Aceh Governance, which gives the Acehnese greater self-autonomy in policy making, natural resource management, and infrastructure financing. The first direct elections for governor, deputy governor, and district officials on 11 December 2006 were peaceful. The high turnout of voters—more than 75% of the 2.6 million in the province—clearly indicated public interest in an end to the conflict and in progress toward peaceful and stable development. Strong momentum to restore and maintain peaceful development is expected to attract foreign investments, which will help propel economic growth in Aceh. BRR is assisting the regional governments in developing a sustainable long-term economic development plan to further realize the agricultural and natural resource potential of the province and boost economic growth.

B. The Asian Development Bank’s Operations

1. ADB’s Assistance for the Reconstruction of Aceh

11. ADB responded immediately to the tsunami disaster by committing $329 million in grants for rehabilitation and reconstruction. The ETESP was approved in March 2005 to help restore essential public services, rebuild infrastructure, and revive economic activities through livelihood support. The Extended Mission in Sumatra became fully operational in July 2005, and an extension facility was later established in Banda Aceh. As of 31 December 2006, subprojects requiring up to $191 million in grant funding had been prepared, and almost 59% of that amount had gone to procurement and construction. In 2005 and 2006, the reconstruction was slower than expected because of its scale and complexity, the challenge of coordinating with sectoral line agencies, and the Government’s complex budget procedures. However, the Government has addressed many of these constraints and expedited processing. The pace of reconstruction activities should therefore pick up.

12. Aceh is one of the provinces in the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT), an ADB-financed regional economic cooperation initiative of the governments of Indonesia, Malaysia, and Thailand. The stated objective of IMT-GT is to promote trade, investment, and tourism in the subregion, with the private sector playing a major role. The private sector arm of IMT-GT, the Joint Business Council, formed a task force to assist in the rehabilitation of tsunami-affected areas in Aceh in June 2006. The Project therefore fits in with the theme of IMT-GT, which promotes private sector investments as a major source of financing for infrastructure and support facilities.

2. ADB’s Private Sector Operations in Indonesia


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1 The IMT-GT, started in 1993, is a regional cooperation initiative between Indonesia, Malaysia, and Thailand. It comprises all 10 provinces of the island of Sumatra, and eight provinces or states each from Peninsular Malaysia and southern Thailand. The IMT-GT road map (2007–2011) has been prepared to provide a vision and framework for cooperation in the IMT-GT and ensure the effective implementation of the IMT-GT programs and projects. (IMT-GT. 2007. Indonesia-Malaysia-Thailand Growth Triangle: A Roadmap for Development 2007–2011. Draft.)
approved $197.5 million in financial assistance for 16 projects in the general industry and financial sectors. After the financial crisis, ADB did not provide new financial assistance to Indonesia until 2005, when it approved a liquefied natural gas project.\textsuperscript{2} In 2006, the Board approved financial assistance to PT Perusahaan Gas Negara (Persero) Tbk, a state-owned gas utility. This was the first assistance to a non-sovereign entity under the Innovation and Efficiency Initiative.\textsuperscript{3}

14. Promoting pro-poor sustainable economic growth through infrastructure and infrastructure services development with private sector participation is one of the areas under the Indonesian Country Strategy and Program (CSP) 2006–2009. Poor physical infrastructure is considered a key constraint on sustainable economic growth. The CSP supports private sector development particularly in the infrastructure and financial sectors. Given the lead role of the private sector in job creation, private sector development will be integrated as far as possible with all ADB operations. The CSP also recognizes the importance of long-term local currency financing for privately sponsored infrastructure projects, especially those with local currency revenues. Consistent with the CSP, the Project will provide local currency financing for infrastructure development in Aceh through more efficient and sustainable supply of cement.

IV. THE PROPOSED PROJECT

A. Project Description

15. The Project involves the reconstruction of a cement production facility, a coal-fired power plant, and a jetty, as well as the preparation of a quarry site. All of these facilities will be rebuilt on the same site as SAI’s original plant but will have the benefit of more efficient and environment-friendly production technology.

B. Project Sponsor

16. SAI was established in 1980 by Circle Industries PLC of the United Kingdom and Cementia Holding AG (Cementia) of Switzerland to build and operate a cement plant in Northern Sumatra. SAI began its commercial operations in 1983 with an initial production capacity of 1 MMTPA. Technical improvements later increased this capacity to 1.4 MMTPA. SAI joined the Lafarge group of companies (Lafarge Group) when Lafarge purchased Cementia in 1999 and became fully owned by Lafarge following the takeover of Blue Circle in 2001. The management team of SAI is composed of professionals with extensive experience. The company’s board of directors is composed of the company’s president and its senior vice presidents for finance and manufacturing. The board of directors, with the members of the company’s executive committee, meets monthly. SAI also has a board of commissioners that include representatives from Lafarge.

17. Lafarge, based in France, has a worldwide presence and a strong track record of over 100 years in the building materials business. Its diversified product line (including cement, gypsum, aggregates and concrete) and geographic diversification into 70 countries are among its key strengths, helping cushion recurring fluctuations in demand for building materials linked to economic cycles. In Asia, the Group has operations in Bangladesh, People’s Republic of China (PRC), India, Indonesia, Republic of Korea, Malaysia, Philippines, and Viet Nam.

\textsuperscript{2} ADB. 2005. Report and Recommendation of the President to the Board of Directors on a Proposed Loan for Tangguh Liquefied Natural Gas Project. Manila.
\textsuperscript{3} ADB. 2006. Report and Recommendation of the President to the Board of Directors on a Proposed Loan for the South Sumatra to West Java Phase II Gas Pipeline Project. Manila.
18. Lafarge, through SAI, has been operating in Indonesia for 8 years and demonstrates its continued commitment to its operations in Aceh through financial and technical assistance to SAI. Lafarge has involved itself in social and humanitarian activities for the Acehnese, setting up a construction training center, arranging for a mobile clinic, and rebuilding houses, mosques, and schools.

C. Environmental Aspects and Social Dimensions

19. The Project has been classified under environmental category A, i.e., a project with significant impacts if not adequately mitigated. The summary environmental impact assessment report\(^4\) was prepared according to ADB’s *Environment Policy* (2002) and was posted on the ADB website on 6 December 2006. An environmental and social impact assessment of the Project was conducted for SAI by a team of consultants\(^5\) from March to June 2006 in compliance with the relevant national and provincial laws and regulations for environmental impact assessment, particularly the regulations issued by the State Minister of Environment, Number 308 of 2005, on environmental impact assessment for the rehabilitation and reconstruction of Aceh after the earthquake and tsunami. The Project received environmental and social clearance from the Ministry of Environment on 16 August 2006.

20. The Project will adopt an integrated approach to environmental management. It will use effective technology, designs, and pollution control equipment to minimize emissions during operations, especially particulates, sulfur dioxide, and nitrogen oxides. The damaged electrostatic precipitator will be replaced by bag filters, which are more effective in controlling dust emissions. The captive coal-fired power plant will use circulating fluidized bed combustion technology, which allows the solid wastes from combustion in the form of coal ash, unburnt coal, remaining limestone and gypsum to be recycled back into the cement production to reduce pollutants. The residual emissions will meet the national standards as well as the World Bank’s emission guidelines for the cement industry.\(^6\) Adverse impacts on ambient air and water quality during operation are expected to be minor. SAI has had structured public consultations regarding the Project. As there are no communities around the project site, none will be disturbed by the residual dust and noise generated by the construction activities. SAI will continue providing community development assistance.

21. SAI will set up an appropriate organization and an environmental management information system for the effective management of environmental, occupational health, and safety aspects during construction and operations. SAI has prepared an effective environmental management plan, including a monitoring program, which the contractors will implement during construction under the supervision of SAI. Further, SAI personnel will implement the EMP during operations as part of the routine and integral activities.

22. SAI will expand its limestone mining area to ensure safety in its limestone mining operations and to increase its limestone reserves. The land to be acquired is on steep terrain. The land is not inhabited and, hence, there will be no need to relocate houses, plantations, or public services. Given the minor impacts, the Project has been classified as category B under ADB’s *Involuntary Resettlement Policy* (1995). SAI, in consultation with the Aceh Besar Land Acquisition Committee (comprising district, subdistrict, and village officials), has compensated the affected persons at negotiated rates that are markedly higher than the market rate for similar

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\(^5\) CV Cipta Puga.

land (steep terrain). The Project has been classified as category C under ADB’s *Policy on Indigenous Peoples* (1998), as no persons of tribal or ethnic minority origins will be affected.

D. Development Impact

1. Impact, Outcome, and Output

23. Aceh’s economy has grown more slowly than the rest of the Indonesian economy in the last 20 years partly as a result of the long-standing political conflict. The tsunami worsened matters: it took lives, destroyed infrastructure, and reduced the income and welfare of the Acehnese. Economic growth substantially decreased by 13.5% in 2005, and the mining and quarrying, building and construction, and industrial sectors were most adversely affected. Furthermore, the average inflation rate year-on-year from January to September 2006 was recorded at 29%, compared with 16% for all of Indonesia, because of a hike in oil prices, transportation costs, and prices of construction materials and other tradable goods.

24. Although cement production under the proposed Project is expected only after the peak of reconstruction in 2007 until mid-2008, the Project will help equalize demand and supply and thus mitigate cement price escalations and, hence, the construction costs of housing and other infrastructure projects during the subsequent restoration phase. Many of the houses built in the past 2 years have been temporary or small. More permanent houses will have to be built and small houses enlarged. Furthermore, the Project will remain highly relevant, given the need to develop economic infrastructure facilities to promote investments in the province in the medium to long term. With its rich natural resources, including oil and gas reserves, Aceh ranks fifth among Indonesian provinces in per capita gross domestic product. The Project will serve the strong demand for construction materials to support infrastructure development in a cost-competitive and sustainable manner.

25. Without a local cement production facility, the province would have to import more costly cement or pay more for transporting cement from other cities. The cement production facility in Aceh, once rebuilt (output), will help make locally produced cement available at prices comparable with those in other cities in North Sumatra (outcome). The Project will contribute to the development of infrastructure in Aceh at lower costs, facilitate the revival of natural resource-based and other related industries, and provide foreign investments to support private sector activities in Aceh (impact).

2. Development Effectiveness

26. The development effectiveness of the Project is assessed in terms of private sector development, business success, and economic sustainability. At the company level, the rebuilt cement facility will use a more efficient and environment-friendly production process, which will comply with ADB’s *Environment Policy* (2002) as well as the Government’s regulatory requirements. SAI is implementing new internal control procedures consistent with Lafarge’s standards. The Project will create employment during construction and operation. Furthermore, it will have impact beyond the company. First, the rebuilt facility will support the resumption of natural resource-based and other associated industries such as cement transport and distribution. Second, the availability of cement supply locally will facilitate the development of infrastructure in Aceh that is conducive to private sector investments. Third, the Project signifies

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7 Growth in the mining and quarrying sector slowed by 33.6%, building and construction by 24.0%, and the industrial sector by 20.5%. (BRR. 2006. *Aceh and Nias Two Years after the Tsunami Progress Report 2006. Aceh.*)
the continuing commitment of Lafarge, a global leader in construction, to invest in Aceh and could thus create a demonstration effect for further foreign investments in the province. The Project will be financially sound and economically sustainable. It will create economic benefits through lower prices and transportation costs and will help restore balance in cement supply and demand to ease the increasing price pressure in the medium term. The design and monitoring and development effectiveness frameworks are in Appendix 1.

V. THE PROPOSED ADB ASSISTANCE

A. Loan

27. The proposed ADB loan, denominated in Indonesian rupiah, will be for up to Rp420 billion ($45 million equivalent) from ADB’s ordinary capital resources.

B. Justification for ADB’s Assistance

28. The Project merits ADB’s assistance for the following reasons:

(i) The reconstruction of the new fully integrated cement facility in Aceh will help ensure a sustainable supply of cement for the massive infrastructure rebuilding activities in the region, ease the increasing pressure on prices, and lead to a better balance between cement supply and demand in Aceh in the medium term. ADB has been supporting the rehabilitation and reconstruction activities in Aceh under the ETESP, which covers a broad range of sectors, e.g., housing and infrastructure, agriculture, irrigation, fisheries, and social services. The Project will facilitate the infrastructure development and help revive private sector activities especially in associated industries in the area through employment generation and the promotion of related businesses.

(ii) The Indonesian rupiah denominated loan will match SAI’s local currency revenues. In Indonesia, the availability of long-term financing is quite limited. Many commercial banks are still in a precarious state and hesitate to provide long-term credit. ADB will provide long-dated financial assistance denominated in Indonesian rupiah, thus mitigating the foreign exchange risk of the Project.

(iii) The potential ADB local currency bond issue to finance the Project will help promote the development of the long-term capital market in Indonesia, consistent with ADB’s long-term strategic framework.

(iv) ADB’s direct assistance to the Project will help ensure that the new production technology is environment-friendly and complies with the Government’s environmental laws and regulations and ADB’s Environment Policy (2002).

C. Anticorruption; Combating Money Laundering and the Financing of Terrorism

29. SAI was advised of ADB’s policy on Anticorruption and policy relating to the combating of money laundering and the financing of terrorism. Consistent with its commitment to good governance, accountability, and transparency, ADB will require SAI to maintain and comply with internal procedures and controls following international best-practice standards for preventing corruption, and to covenant with ADB to refrain from engaging in such activities.
D. Assurances

30. A framework agreement relating to ADB’s status, privileges, and immunities with respect to its equity investments, lending operations, and guarantee operations in the private sector is in effect between the Government and ADB. Consistent with the Agreement Establishing the Asian Development Bank, the Government will be requested to confirm that it has no objection to the proposed assistance to SAI. No funding will be disbursed until ADB receives such confirmation. ADB will enter into a suitable loan agreement and other required documents, following the approval of the proposed loan by ADB’s Board of Directors. These agreements will be on terms and conditions satisfactory to ADB.

VI. RECOMMENDATION

31. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and, acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve the loan of up to Rp420,000,000,000, for PT Semen Andalas Indonesia for the Reconstruction of the Cement Production Facility in Aceh Project from ADB’s ordinary capital resources.

Liqun Jin
Vice President

16 March 2007
## DESIGN AND MONITORING AND DEVELOPMENT EFFECTIVENESS FRAMEWORKS

### Table A1.1: Design and Monitoring Framework

<table>
<thead>
<tr>
<th>Design Summary</th>
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<th>Data Sources/Reporting Mechanisms</th>
<th>Assumptions</th>
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<tr>
<td><strong>Impact</strong></td>
<td>Lower construction costs and facilitate development of infrastructure projects in Aceh</td>
<td>Costs of housing and other infrastructure projects in Aceh comparable with those in other cities in North Sumatra</td>
<td>Reports of construction activities prepared by BRR and other provincial authorities</td>
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<td></td>
<td>Facilitate revival of upstream and downstream industries</td>
<td>Investments in upstream and downstream industries</td>
<td>Statistical reports on Aceh prepared by Bureau of Statistics and other provincial authorities</td>
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<td></td>
<td>Provide foreign investments to support private sector activities in Aceh</td>
<td>Contribution to gross domestic product and taxes from cement and other associated industries</td>
<td>Assumptions</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Locally produced cement available at prices comparable with those in other cities in North Sumatra</td>
<td>Capacity utilization of SAI’s cement plant not lower than the industry average</td>
<td>Due completion and operation of the cement production facility</td>
</tr>
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<td>• Locally produced cement available at prices comparable with those in other cities in North Sumatra</td>
<td>Cement prices in Aceh comparable with those in other cities in North Sumatra</td>
<td>No severe natural disaster causing damage to the cement production facility</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>Rebuilt cement production facility with nominal capacity of 1.55 million metric tons per year</td>
<td>Completion according to specifications</td>
<td>Financial resources mobilized as planned</td>
</tr>
<tr>
<td></td>
<td>Coal-fired power plant with net capacity of 29 megawatts</td>
<td>Construction completed within 23 months</td>
<td>No severe natural disaster causing damage during construction</td>
</tr>
<tr>
<td></td>
<td>• Rebuilt cement production facility with nominal capacity of 1.55 million metric tons per year</td>
<td>• Rebuilt cement production facility with nominal capacity of 1.55 million metric tons per year</td>
<td>Satisfactory performance of contractors</td>
</tr>
<tr>
<td></td>
<td>Coal-fired power plant with net capacity of 29 megawatts</td>
<td>Coal-fired power plant with net capacity of 29 megawatts</td>
<td>Efficient supervision by Lafarge Asian Technical Center</td>
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**Activities with Milestones**

1. Construction of the cement production facility, to be completed by September 2008
2. Construction of the captive coal-fired power plant, to be completed by April 2008

**Assumptions**

- Well-functioning infrastructure and associated industries to support cement supply chain
- Availability of other resources for construction (e.g., labor and other construction materials) at reasonable cost
- Smooth administration of the newly elected local government

**Assumptions**

- Due completion and operation of the cement production facility
- No severe natural disaster causing damage to the cement production facility
- No political violence disrupting the operation

**Assumptions**

- Financial resources mobilized as planned
- No severe natural disaster causing damage during construction
- Satisfactory performance of contractors
- Efficient supervision by Lafarge Asian Technical Center

**Inputs**

- SAI
- ADB
- Cofinanciers

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ADB = Asian Development Bank, BRR = Rehabilitation and Reconstruction Agency for Aceh and Nias,
SAI = PT Semen Andalas Indonesia.
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<th>Objectives</th>
<th>Impact</th>
<th>Performance Targets</th>
<th>Measurement</th>
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| **Private Sector Development** | **A. Project Company Impact** | • More efficient and environment-friendly production process  
• Internal control procedures improved to international standards  
• Employment creation | • SAI’s operations to meet industry standards  
• SAI’s compliance with ADB’s *Environment Policy* and guidelines as well as the Government’s environmental requirements  
• SAI’s implementation of the new internal control policy and manual consistent with Lafarge’s standards  
• Total of 300 staff employed for cement plant operations | • Company’s operating, financial, and environmental performance  
• Adoption of internal control manual  
• Number of jobs created |
| | **B. Beyond Company Impact** | • Support for upstream and downstream industries  
• Promotion of infrastructure reconstruction and development, conducive to private sector investments  
• Continuing commitment of a large foreign enterprise, and demonstration effect for more investments in Aceh | • Resumption or expansion of operations of associated industries and businesses (e.g., natural resources, cement transportation and distribution)  
• Timely completion of infrastructure projects at reasonable cost | |
| **Business Success** | • Financial profitability  
• Sustainable operations | • Financial internal rate of return greater than weighted average cost of capital  
• Financial ratios in compliance with covenanted ratios | • Financial ratios  
• Financial statements  
• Operations reports |
| **Economic Sustainability** | • Cement supply provided at cheaper prices and lower transportation costs to cater to local demand  
• Demand-supply equilibrium of cement in Aceh restored | • Economic internal rate of return greater than 12% | • Economic internal rate of return  
• Statistics on cement demand, supply, and prices |

*ADB = Asian Development Bank, SAI = PT Semen Andalas Indonesia.*
A. Overview of Indonesian Cement Industry

1. In Indonesia, nine cement companies operate 15 cement plants with a total installed production capacity of 46.1 million metric tons (MMT) in 2005. PT Semen Gresik, PT Semen Padang, and PT Semen Tonasa are part of the Semen Gresik Group, which is 51% owned by the Government and holds the largest market share of 45.3%.\(^1\) PT Indocement Tunggal Prakarsa, a subsidiary of Heidelberg of Germany, is the second-largest player with a market share of 29.6%, and PT Holcim Indonesia, a subsidiary of Holcim of Switzerland, is the third-largest with a market share of 15.2%. The top three companies have a 90% share of the market. PT Semen Gresik, PT Indocement Tunggal Prakarsa, and, to a lesser extent, PT Holcim Indonesia each operate several large plants across the country. However, 73% of their capacity is in Java, which accounts for over two thirds of their sales. The other four companies (PT Semen Andalas Indonesia [SAI], PT Semen Bosowa, PT Semen Baturaja, and PT Semen Kupang) each operate a single plant or a few small plants in Sumatra or in other islands. The cement design capacity and location of the cement plants of these companies are given in the table.

2. The industry saw an untimely increase in capacity just before the Asian financial crisis, leading to excess supply and low capacity utilization rate at around 50% in 1988–1999. Thanks to subsequent economic recovery, domestic cement demand that dropped to as low as 18.8 MMT in 1999 has since then increased by 9% per year to reach 31.8 MMT in 2005. Because of excess supply, industry capacity was relatively unchanged over the past 5 years, and capacity utilization rate increased from 59% in 2000 to 74% in 2005. From being a net importer, Indonesia has become a net exporter since the Asian financial crisis. About 70% of its exports are to other countries in Asia, particularly to Bangladesh and Sri Lanka. However, given the rising domestic prices compared with export prices, cement producers are progressively shifting their sales toward the domestic market. Historical cement supply, domestic consumption, and export trends are shown in Figure A2.1.

\(^1\) Cemex Asia Holding recently sold its shares of 24.7% of PT Semen Gresik to the Rajawali Group.
## Indonesian Cement Producers, 2005

<table>
<thead>
<tr>
<th>Company</th>
<th>Location of cement plants</th>
<th>Capacity (tons)</th>
<th>Domestic Sales (tons)</th>
<th>Market Share (%)</th>
<th>Major Shareholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>PT Semen Andalas Indonesia</td>
<td>Aceh</td>
<td>—(^a)</td>
<td>1,124,580(^b)</td>
<td>3.6</td>
<td>Lafarge</td>
</tr>
<tr>
<td>PT Semen Padang</td>
<td>West Sumatra</td>
<td>5,440,000</td>
<td>3,876,732</td>
<td>12.3</td>
<td>PT Semen Gresik</td>
</tr>
<tr>
<td>PT Semen Baturaja</td>
<td>South Sumatra and Lampung</td>
<td>1,250,000</td>
<td>895,235</td>
<td>2.8</td>
<td>Government of Indonesia</td>
</tr>
<tr>
<td>PT Indocement Tunggal Prakarsa</td>
<td>West Java and South Kalimantan</td>
<td>15,650,000</td>
<td>9,335,415</td>
<td>29.7</td>
<td>Heidelberg</td>
</tr>
<tr>
<td>PT Holcim Indonesia</td>
<td>West Java and Central Java</td>
<td>9,700,000</td>
<td>4,793,114</td>
<td>15.2</td>
<td>Holcim</td>
</tr>
<tr>
<td>PT Semen Gresik</td>
<td>East Java</td>
<td>8,200,000</td>
<td>7,903,635</td>
<td>25.1</td>
<td>Government of Indonesia</td>
</tr>
<tr>
<td>PT Semen Tonasa</td>
<td>South Sulawesi</td>
<td>3,480,000</td>
<td>2,496,165</td>
<td>7.9</td>
<td>PT Semen Gresik</td>
</tr>
<tr>
<td>PT Semen Bosowa Maros</td>
<td>South Sulawesi</td>
<td>1,800,000</td>
<td>922,363</td>
<td>2.9</td>
<td>Bosowa Group</td>
</tr>
<tr>
<td>PT Semen Kupang</td>
<td>East Nusa Tenggara</td>
<td>570,000</td>
<td>68,942</td>
<td>0.2</td>
<td>Government of Indonesia</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>46,090,000</strong></td>
<td><strong>31,486,181</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) PT SAI's cement production facility is under reconstruction.  
\(^b\) PT SAI imported cement from Lafarge Group.  

Source: Indonesia Cement Association.
3. In 2005, demand grew by only 5% as the hike in interest rates and inflation that resulted from the Government’s decision to cut fuel subsidies slowed down infrastructure expenditures. As macro conditions improve and government spending increases, especially on infrastructure development, cement consumption will correspondingly increase. In October 2005, Indonesian construction spending indeed lagged 9% behind its precrisis level whereas gross domestic product was 21% above the precrisis level. In 2006, the Government announced its plan to raise expenditures on infrastructure projects to Rp44 trillion from Rp35 trillion in 2005, representing an increase of about 26%. The largest state-owned toll road operator estimated total investments of about Rp 89.7 trillion over the next 10 years. Around 10% of this amount will be used for cement consumption, projected at about 1.3 million metric tons per annum (MMTPA). Assuming overall demand growth of 7% yearly, the existing excess capacity is expected to be absorbed by 2010. Per capita cement consumption in Indonesia, at 144 kilograms (kg) in 2005, was relatively lower than in other countries in the region, so there is potential for further growth. Both greenfield projects and expanded or more efficient plants should increase industry capacity by at least 3.5 MMT in the next 4 years.

4. Further capacity expansions could come with the entry of new players. However, they are not expected to pose a major threat to existing cement players, given the large capital requirements for new plants and the need to develop a distribution network and brand loyalty. With rapid increases in cement prices in the domestic markets—up to Rp38,000 per bag (equivalent to $84 per ton) in 2005, or about 35% higher than the 2004 level—the risk of imports is also increasing. For example, the PRC could be an exporter to Indonesia. However, it is believed that the risk to the existing producers is limited, given the rapid growth that is expected to continue in the PRC.

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2 Such as 147 kg in the Philippines, 319 kg in Viet Nam, 445 kg in Thailand, 568 kg in Malaysia, 659 kg in Brunei Darussalam, and 860 kg in Singapore.
5. In terms of geographic locations, Java is the largest-consuming region with the highest share of 62% of the national demand. The top three cement producers, which competed aggressively for market share in this region, appear to have switched to a “for profit” rather than a “for market share” strategy to maximize shareholder value and improve financial health. In other regions, smaller producers are ranked among the top three companies in market share, given the limited radius of competition in the cement industry. For example, SAI is ranked second in Sumatra, while PT Bosowa Maros is ranked second in Sulawesi and eastern Indonesia.

B. Demand and Supply in SAI’s Relevant Markets

6. Because of the low value-to-weight ratio of cement and the sparse geographic coverage of Indonesia, each producer has adopted a geographic focus for its sales and distribution network. SAI’s cement production facility in Lhoknga near Banda Aceh had installed capacity of 1.4 MMTPA. Its target markets are Aceh, North Sumatra, Riau mainland, and Riau islands. Cement consumption in these markets increased from 3.3 MMT in 2003 to 3.6 MMT in 2004 and 3.7 MMT in 2005, for a yearly growth of 4.9% in 2003–2005. There are other two cement producers in Sumatra. PT Semen Padang, a subsidiary of PT Semen Gresik, has an integrated plant in West Sumatra with a capacity of 5.4 MMTPA. PT Semen Baturaja is another state-owned company operating in South Sumatra with a total capacity of 1.3 MMTPA from three small plants. Given the limited competitive radius of cement, PT Semen Padang could be considered the only competitor of SAI in the North Sumatra market.

7. Since SAI had to cease its production after the tsunami, the region experienced a shortage of cement, which, coupled with price speculation, drove up cement prices in Aceh by 63% to an average price of Rp 41,600 per bag in 2005, from Rp 25,500 per bag in 2004. The price in Aceh was about 8.7% higher than prices in Sumatra and 10% higher than in Indonesia as a whole. A significant portion of this price gap is due to higher transportation cost.