

>> *THE JGC GROUP IN FISCAL 2007*

In oil- and gas-producing nations—the main markets for JGC's total engineering business—the high demand for global resources and energy is driving numerous capital investment plans. Despite growing plant construction costs due to the marked rise in the price of materials and equipment, as well as shortages of skilled labor, which have delayed investment decisions for certain projects, the desire for capital investment among these customers, by and large, remains robust.

In this climate, the JGC Group in fiscal 2007 focused on ensuring steady project implementation through stronger partnerships with customers, suppliers, and subcontractors, and ongoing efforts to enhance Group manpower resources. We also focused on more definitive project execution by paying closer attention to a variety of risks.

Furthermore, we worked to minimize project execution risks when pitching for new project orders, by being more selective, diversifying contract formats with customers, pursuing projects in a wider range of regions and fields, and taking steps to quickly secure the necessary skilled labor and other manpower resources.

OIL AND GAS DEVELOPMENT PROJECTS

We executed numerous projects in the field of oil and gas development in response to strong and active capital investment, particularly by customers in the Middle East and Africa.

In Saudi Arabia, we are currently constructing a large-scale natural gas liquids (NGL) recovery plant for the state-run oil company, Saudi Aramco, with completion targeted for mid-2008.

Meanwhile in Iran, JGC is constructing a large-scale natural gas processing plant for Petropars Ltd., a subsidiary of the National Iranian Oil Company. This plant is also scheduled for completion in 2008.

In Qatar, following completion of the first and second trains of a large-scale natural gas processing facility for Dolphin Energy Limited in mid-2007, JGC completed construction of the third and fourth trains at the start of 2008.

In early fiscal 2008, we received an order for the engineering, procurement and construction (EPC) services of offsite facilities (including a water-injection system used at oil fields, crude oil storage tanks and shipping facilities) for a large-scale crude oil processing facility being developed by Saudi Aramco. As explained in our Special Feature 1 “Turning Overseas Engineering Companies Into Profit Centers” (page 12), this project is being conducted in collaboration with JGC Gulf International, Ltd., an E&C subsidiary newly established in Saudi Arabia by JGC. By developing the new subsidiary as an E&C firm, we hope to contribute to greater diversification of the country's industrial base.



Natural gas processing plant for Dolphin Energy Limited, Qatar

PETROLEUM REFINING PROJECTS

During the year, JGC was engaged in a large number of petroleum refining projects in Japan, other parts of Asia and in the Middle East, against a backdrop of efforts being made to increase heavy oil refining and expand production of petrochemical products, all amid booming demand for petroleum products.

In Singapore, JGC is carrying out an oil refinery upgrade project for the Singapore Refining Co. Pte. Ltd. This project will construct an ultra-deep diesel oil desulfurization unit conforming to EURO-IV regulations (sulfur particles 50 ppm or less) within a petroleum refinery that JGC previously constructed. The diesel oil produced is earmarked for both domestic and export use.

In Vietnam, we are constructing that country's first large-scale petroleum refinery and offsite facilities for the state-run oil company, Vietnam Oil and Gas Corporation (PetroVietnam), with completion scheduled for 2009.

In Japan, we won new orders for, and are engaged in, a number of construction projects for large-scale heavy oil processing facilities for domestic petroleum refining companies.

In Bahrain, JGC completed a petroleum refinery modernization project for the state-run oil company, Bahrain Petroleum Company (BAPCO), in mid-2007.

In early 2008, we received an Award Notification to provide engineering, procurement, construction and commissioning services for a large-scale refinery under development by Kuwait National Petroleum Company (KNPC). This project will lead to the building of one of the world's largest refineries as the KNPC takes steps to meet the country's own burgeoning electricity demand. JGC's long track record in refinery construction and experience in executing a number of similar projects across the Middle East, combined with its reputation for outstanding technological capabilities and cost competitiveness, were important factors in successfully winning this latest order.



Petroleum refinery modernization project for BAPCO, Bahrain

LNG PROJECTS

With demand expanding in the U.S., Europe and China, LNG projects are being planned worldwide. In addition to conventional onshore LNG plants, plans in this field include the construction of LNG Floating Production, Storage and Offloading (FPSO) systems to develop small and medium-sized gas fields on the ocean floor. As the leading E&C contractor for LNG plants, JGC is conducting project feasibility studies and Front End Engineering and Design (FEED) work around the world.

In Yemen, JGC continues to work on that country's first-ever LNG project. The plant will have 2 trains and an annual output of 3.35 million tons per train. The first train is scheduled for completion at the end of 2008, followed by the second train in mid-2009.

In Indonesia, we continue to work toward completion of the Tangguh LNG project for BP Berau, Ltd. LNG production is scheduled to begin in the second half of 2008.

In Nigeria, we completed construction of Train 6 of an LNG plant for Nigeria LNG Ltd. in early 2008. JGC also carried out FEED work for the world's largest-capacity LNG plant, with an annual output of 8.5 million tons, for Nigeria LNG.



An LNG plant for Nigeria LNG Ltd., Nigeria

CHEMICAL PROJECTS

In the chemical field, JGC worked on numerous projects, mainly in Japan and in the Middle East, supported by active capital investment in response to high demand for petrochemical and chemical products.

In Saudi Arabia, we have been awarded the EPC services contract by Saudi Polymers Company for large-scale ethylene units and other facilities. The project is scheduled for completion in mid-2011. In the first half of 2008, we completed a project to construct an ethylene unit and a large-scale styrene monomer facility ordered in 2004 by Jubail Chevron Phillips Company, which belong to the same investing company as Saudi Polymers Company. The selection of JGC for this order reflected a number of key factors, including the Company's years of experience in the Middle East, particularly in Saudi Arabia, and its highly rated health, safety and environment (HSE) execution framework. Other factors

included JGC's ability to quickly secure construction resources in Saudi Arabia where there is a boom in plant construction, thanks to a recently completed project for Jubail Chevron Phillips and its ability to bring the necessary knowledge to bear for the benefit of the project.

Also in Saudi Arabia, we are constructing the core high olefin FCC (fluid catalytic cracking) facility and one of the world's largest ethane crackers for the integrated petroleum refining and petrochemical complex of Rabigh Refining and Petrochemical Company, a joint venture between the state-run oil company Saudi Aramco and Sumitomo Chemical Co., Ltd. Completion is scheduled for the second half of 2008.

In Qatar, we completed construction of an ethylene facility expansion project for Qatar Petrochemical Company, Ltd. in the middle of 2007.

In Japan, along with orders from a major chemical company for the construction of a petrochemical plant and a chemical plant, we completed construction of a diphenylmethane diisocyanate (MDI) manufacturing facility for Nippon Polyurethane Industry Co., Ltd. in early 2008.



Ethylene facility expansion project for Qatar Petrochemical Company, Ltd., Qatar

POWER GENERATION, NUCLEAR POWER AND NEW ENERGY PROJECTS

In the new energy field, we are active in the area of gas to liquids (GTL), which is attracting attention as a source of clean energy, as well as in dimethyl ether (DME) and other projects.

Currently in Qatar, JGC is providing project management services for the world's largest GTL project for Qatar Shell GTL Limited, a subsidiary of Royal Dutch Shell. In addition, JGC's role includes project management as well as EPCM activities for GTL synthesis. In the GTL field, we have also joined forces with Osaka Gas Co., Ltd. to develop the "A-ATG (Advanced-Auto Thermal Gasification) Process," a new synthetic gas manufacturing process, with support from Japan Oil, Gas and Metals National Corporation (JOGMEC). A dedicated push to commercialize this core GTL manufacturing process is currently under way.

In Japan, we are constructing a DME manufacturing plant for Fuel DME Production Co., Ltd., with production scheduled to start in the middle of 2008. Fuel DME Production was established by nine companies, including Mitsubishi Gas Chemical Company, Inc. and JGC, for the purpose of promoting the spread of DME. The new company will be striving to commercialize this new fuel by promoting its utilization for boilers, power generators (including fuel cells), and automobiles.

In the nuclear power field, Japan Nuclear Fuel Ltd. (JNFL) has been constructing a spent nuclear fuel reprocessing facility in Rokkasho, Aomori Prefecture, since 1993. JGC has installed piping in the active galleries of the facility, and commissioning is now under way in preparation for the planned start of commercial operations.

LIVING AND GENERAL PRODUCTION PROJECTS

Nickel, copper, aluminum and other non-ferrous metals are basic resources used widely in industries ranging from automobiles and home appliances to IT equipment. Global demand for these metals is expected to increase, fueled most notably by economic development in China and other Asian countries. JGC will focus on non-ferrous metal refining as one component of a strategy to expand its business domain.

In the Philippines, the Company is working on Phase 2 construction of a nickel refining plant as part of a project being led by Sumitomo Metal Mining Co., Ltd. Construction completion is scheduled for mid-2009.

Furthermore, in the pharmaceutical field, in addition to our existing wide range of services related to pharmaceutical production, including EPC services for pharmaceutical-related facilities and equip-

ment, and good manufacturing practice (GMP) compliance, we are also focused on providing the fullest possible range of pharmaceutical services, from new drug development to clinical development and commercial

production, areas where business is likely to expand in the future. We received orders for and executed construction work on pharmaceutical production facilities for several pharmaceutical companies in Japan in fiscal

2007. This was complemented by the completion of a variety of projects in Japan, including a multi-line health and nutritional drink production site in

Saitama Prefecture for Taisho Pharmaceutical Co., Ltd. and a pharmaceutical production plant in Niigata Prefecture for Denka Seiken Co., Ltd. in mid-2007,

completion of a similar plant for Shionogi & Co., Ltd. in Iwate Prefecture at the end of 2007, and a pharmaceutical manufacturing plant for Dainippon Sumitomo

Pharma Co., Ltd. in Mie Prefecture in early 2008.



Pharmaceutical manufacturing plant for Dainippon Sumitomo Pharma Co., Ltd., Japan

ENVIRONMENTAL PROTECTION, SOCIAL DEVELOPMENT AND IT PROJECTS

In the medical facilities field, JGC constructed high-quality medical facilities around Japan and offered project management services, both of which received high marks from our numerous customers.

In March 2008, the Company was selected by the Tokyo Metropolitan Government for the refurbishing and management of the (tentatively named) Mental Health Center. For this Center, the Tokyo Metropolitan Government has used a Private Finance Initiative (PFI) method to completely remodel the present Tokyo Metropolitan Matsuzawa Hospital, a long-

time pioneer in psychiatric treatment in Japan. JGC is the first domestic E&C contractor to have participated in a hospital PFI business. Elsewhere, in addition to an order received in mid-2007 for

construction work on a R&D center in Gunma Prefecture for Sanden Corporation, Japan's top manufacturer of automotive compressors,

JGC won a series of other orders, including for the Seiryokai Foundation's Shosha Hospital expansion project in Hyogo Prefecture and the

Yoshikawa Hospital transfer and new construction project for the Shijinkai Foundation in Saitama Prefecture. The Company also completed expansion

work for the Seibindo Foundation's Shiraiishi Hospital in Saga Prefecture at the end of 2007, and the Okamura Memorial Hospital rebuilding project in

Shizuoka Prefecture for the Kowakai Foundation in early 2008.



Seibindo Foundation's Shiraiishi Hospital, Japan

ENTERPRISE INVESTMENT BUSINESS

The JGC Group's medium-term management plan, "Scenario 2010," which began in April 2006, calls for an expansion of the enterprise investment business into a second major earnings stream behind the E&C business, taking maximum advantage of our strong financial base. Fiscal 2007 saw JGC achieve steady success en route to this goal.

First, the Clean Development Mechanism (CDM) Business that the Company is promoting in Anhui Province, China, which will see the installation of a waste-heat power generation facility for a local cement plant, has received approval to proceed from the governments of Japan and China. This CDM Business will see the construction of a power generation facility which utilizes low-temperature waste heat recovery systems that make use of waste heat from kilns in the cement plant. By introducing this system, the plant can achieve more effective use of waste gas, energy savings and environmental conservation. JGC will purchase Certified Emission Reduction (CER) credits equivalent to a total of 22,000 tons of CO₂ annually from Huaibei Cement Co., Ltd., the owner of a cement plant. Moreover, approval was also granted for raw material replacement CDM businesses in the Inner Mongolia Autonomous Region and Zhejiang Province, China for cement plants under development in both regions. These CDM businesses will dramatically reduce CO₂ emissions by making use of carbide residue (calcium hydroxide), which generates no carbon dioxide, as an alternative to limestone (calcium carbonate) as the raw material for clinker, an intermediate product typically used in cement production. JGC will purchase CER credits equivalent to a total of 550,000 tons of CO₂ annually from these projects.

In Abu Dhabi, UAE, JGC acquired business rights to own and operate the Taweelah A2 IWPP (Independent Water and Power Project). The plant, consisting of combined cycle gas turbine power distiller units, is located in Abu Dhabi's Taweelah district and produces 710 MW of power and 230,000 tons of water per day. The Company acquired 15% of the 40% of shares held in the business by Marubeni Corporation (6% of total shares). These power generation and desalination businesses represent JGC's third such project in the region, following similar facilities in Abu Dhabi's Taweelah B IWPP scheduled to come on stream at mid-year, and the Rabigh IWSPP

(Independent Water, Steam and Power Project) in Rabigh, Saudi Arabia, also scheduled for operation around mid-year.

Additionally, as explained in our Special Feature 2 "Full-scale Entry Into Oil and Gas Field Development and Production" (page 15), we are aiming to ramp up production in JGC's resource development business following successful crude oil and natural gas production in North America.



The Huaibei Cement Plant, promoting the CDM business with a waste-heat power generation facility, China

CATALYSTS AND FINE PRODUCTS

The market environment for the catalyst and fine products business continues to support high product demand on the back of trends such as an increasing focus on the treatment of heavy oil, efforts to reduce environmental impacts, increased production of petrochemical feedstocks, and the stimulation of IT-related investment. In this climate, Group companies involved in the catalysts and fine products business sought to boost production capacity in their respective fields, while also coping with soaring prices for raw materials and fuel through measures that included passing on costs to sales prices, raising production efficiency, and cutting costs. These efforts, however, failed to fully absorb increased costs. Coupled with factors such as increased depreciation and amortization accompanying new capital investments, this business reported higher sales but lower profits in fiscal 2007.

In the catalyst business, sales of FCC catalysts and hydrotreating catalysts—product categories where the Catalysts & Chemicals Industries Co., Ltd. (CCIC), a subsidiary of JGC, holds the leading domestic FCC catalysts market share—rose on steady growth overseas as well as in Japan. In response to rising demand in Asia and the Middle East, we expanded our hydrotreating catalyst manufacturing plant in October 2007. For CCIC's environmental catalysts, the best known of which are our De-NOx catalysts, we delivered the first of these products to China—where environmental measures are moving forward rapidly—for use in the country's coal-fired thermal power plants. We also increased sales of these catalysts in Japan and Europe. Sales of petrochemical catalysts also showed steady growth, particularly in Asia, evidence that our well-received customized catalysts are meeting customer needs for high-value-added products and high functionality.

In the fine chemical products business, sales of abrasive materials and antireflective materials and antistatic materials for flat-panel displays rose steadily due to active IT-related investment. The same was true for sales of cathode materials for rechargeable (lithium-ion) batteries. In a bid to enhance development of this business, Nikki Chemical Co., Ltd. undertook work to expand production facilities in July 2007.

Also in July 2007, CCIC, a key subsidiary in the catalysts and fine products business, completed construction of a new R&D center that will serve as the nucleus for R&D activities in this business. In another move to further strengthen and expand the catalysts and fine products business, JGC decided in early 2008 to merge wholly owned subsidiaries CCIC and Nikki Chemical on July 1, 2008. In merging the two companies, the intention is to reinforce the following:

1. Fusion of proprietary techniques and R&D facilities, and accelerating R&D through qualitative and substantive expansion;
2. Expansion of production capability by means of a two-factory system and a reduction in production risks; and
3. Expanding the scope of business and stabilization of management base fulfillment by focusing on three main operations (petroleum refining catalysts, chemical catalysts, and fine chemicals products).

It is anticipated that in fiscal 2010 the new company from the merger, JGC Catalysts and Chemicals Ltd., will achieve ¥50 billion in sales. Going forward, the company intends to develop into a comprehensive catalyst and fine chemicals manufacturer with sales in the order of ¥100 billion by bolstering and expanding the development and manufacture of functional hybrid materials and accelerating overseas development, in addition to the manufacture of catalysts conducted to date.



The new R&D center built by CCIC, Japan