Market Alert #3: Japanese Government and Industry Players

1. Summary

Radiological decontamination work in Fukushima Prefecture is implemented by the Ministry of Environment (MOE) and local municipalities in Fukushima. These national and local authorities award work scope to private companies to carry out the decontamination through procurement tender processes that are open to all qualified companies (see Section 3 below for details). In general, Japan's large general contractors, known in Japanese as *zenecon*, win these bids as prime contractors and team with subcontractors to carry out the work. A good strategy for U.S. firms to offer their technologies, know-how, and products in this effort is to team with Japanese partners (see FAQs in Section 6 below for details). CS Japan stands ready and is positioned to assist U.S. firms find partners for market entry.

2. Government Role/Players

Radiological decontamination work outside the Fukushima Daiichi Nuclear Power Station (NPS) is implemented by the MOE and local municipalities in Fukushima Prefecture (equivalent in governance to a state in the United States), depending upon the contamination level of the area. MOE assumes responsibility for areas within 20 km (12 miles) of the Fukushima Daiichi NPS and other areas that have an annual radiation dose of more than 20mSv. Local municipalities cover areas outside the 20 km zone with a dose of less than 20mSv. The Government of Japan's (GOJ) stated goal is to reduce the annual dose in contaminated areas to1mSv. Japan's Reconstruction Agency (JRA) oversees all decontamination efforts outside of Fukushima Daiichi NPS. The JRA will play a major role in the decision to allow repopulation in evacuated areas, ensuring that the infrastructure is safe, and radiation dose rate levels are within the levels agreed to by the stakeholders. Concerning on-site decommissioning and decontamination activities, the Tokyo Electric Power Company (TEPCO) and Japan's Ministry of Economy, Trade and Industry (METI) have responsibility for work inside the Fukushima Daiichi NPS.

3. Procurement Tenders and Cleanup Progress

The MOE and local municipalities award this work to private companies, issuing public tenders and requesting proposals/bids from firms that would like to undertake the work. The MOE announces tenders for its initiatives, *in Japanese*, simultaneously through the Japanese Government's Official Gazette (called "Kanpo" and equivalent to the U.S. Federal Register), in business newspapers, and via the MOE website. MOE's webpage announcing these projects can be found here:

http://tohoku.env.go.jp/fukushima/procure/index.html (in Japanese)

Local municipalities, such as cities, towns, and villages, issue their tenders for decontamination work in areas within their purview, *in Japanese*, via notices on their websites. The following are examples of local municipality websites where these tenders can be found:

- Fukushima City website (announcements can be found in automatically translated English)
- Koriyama City website
- Soma City website

Prior to starting decontamination work, the *Zenecon* must receive local consent from each property owner and coordinate with other local stakeholders as well, such as business owners and public building administrators. In many cases, local consent is time consuming and has resulted in project delays. Public news services have highlighted such delays in recent reporting. For example, Japan's public broadcaster, NHK (Japan Broadcasting Corporation), reported on May 17 that, in the higher-dose area commissioned by MOE, only four percent of the total contaminated areas had been remediated, and in the lower-dose areas covered by local municipalities, less than five percent of households had been decontaminated.

The map below shows the progress of decontamination in Fukushima Prefecture.

(Source: The Ministry of Environment, GOJ)

Note: The green areas of the map indicate those to be decontaminated by local municipalities. Both the light blue and dark blue areas indicate those to be commissioned by MOE. The light blue indicates that planning has been completed, whereas the dark blue indicates that decontamination work has already begun.

4. Private Company Roles/Key Corporate Players

What types of firms are winning these national and local decontamination commissions?

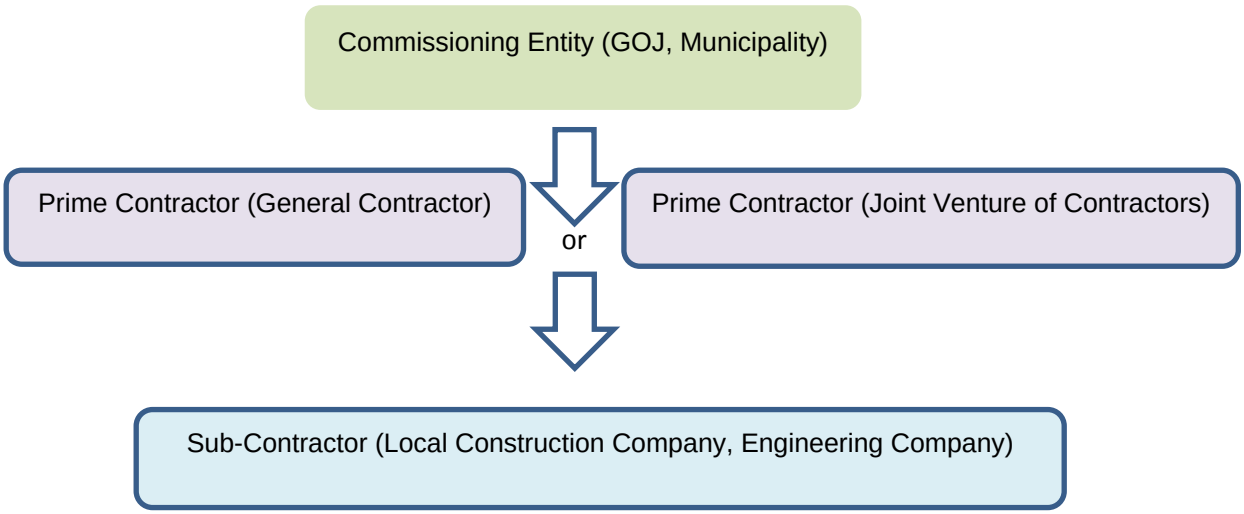
For the most part, Japan's large general contractors (the "*zenecon*") are winning the tenders for both MOE and local municipality projects. These large firms have long histories of working with the Japanese central government's Ministry of Land, Infrastructure, and Transport (MLIT) to secure large public works projects and are well-connected and very adept at winning government contracts. They aggressively monitor the MOE and local municipality websites to become aware of the latest decontamination tender announcements. MOE's procurement process for these projects is, for the most part, the same as that used by MLIT. This provides familiar procedures for these general contractors that have been bidding on public works commissions for decades.

A single general contractor may bid on a project, or join with several large- or mid-sized contractors to form a joint-venture to bid, depending on the scale, type, and nature of the project. As with other public

works projects, these decontamination works often see several layers of contractors engaged in a single project, with each firm filling a particular role and/or bringing required expertise or assets, such as labor.

The following flow chart, while simplistic, captures the basic structure of most of these arrangements:

General Work Flow of Decontamination Projects



Even the sub-contractors likely sublet their work still further down to lower tiers in order to benefit from the expertise or specialties of other construction, engineering, and/or environmental service companies in the market.

The following is a list of most of the primary Japanese contractors, engineering and environmental firms, and related organizations engaging in Fukushima-related decontamination:

General Contractors (*zenecon*)

- Kajima Corporation http://www.kajima.co.jp/english/welcome.html
- Taisei Corporation http://www.taisei.co.jp/english/index.html
- Obayashi Corporation http://www.obayashi.co.jp/english/about/
- Shimizu Corporation http://www.shimz.co.jp/english/index.html

Intermediate-Level General Contractors

- Okumura Corporation http://www.okumuragumi.co.jp/en/
- Maeda Corporation http://www.maeda.co.jp/english.html
- Toa Corporation http://www.toa-const.co.jp/eng/
- Nishimatsu Construction Co., Ltd. http://www.nishimatsu.co.jp/eng/index.htm
- Sumitomo Mitsui Construction Co., Ltd. http://www.smcon.co.jp/english/
- Konoike Construction Co., Ltd. http://www.konoike.co.jp/e_konoike/index.html
- Dai Nippon Construction http://www.dnc.co.jp/en/index.html
- Kumagaigumi Co., Ltd. http://www.kumagaigumi.co.jp/english/index.html
- Tokyu Construction (in Japanese) http://const.tokyu.com/index.html
- Tekken Corporation (in Japanese) http://www.tekken.co.jp/
- Seibu Construction Co., Ltd. (in Japanese) http://www.seibu-group.co.jp/kensetsu/
- Daiho Corporation http://www.daiho.co.jp/english/index.html

Engineering and Environmental Firms

- Atox Co., Ltd. http://www.atox.co.jp/english/

- Dowa Eco-System Co., Ltd. http://dowa-eco.co.jp/en/
- NGK Insulators, Ltd. http://www.ngk.co.jp/english/index.html
- Tokyo Electric Power Environmental Engineering Co., Inc. (in Japanese) http://www.tee-kk.co.jp/
- IHI Corporation http://www.ihi.co.jp/en/index.html
- Kawasaki Heavy Industries, Ltd. – Plant & Infrastructure Company http://www.khi.co.jp/english/kplant/index.html
- Kandenko http://www.kandenko.co.jp/en/index.html
- JFE Engineering Corporation http://www.jfe-eng.co.jp/en/
- Toshiba Corporation http://www.toshiba.co.jp/index.htm
- Hitachi, Ltd.(Hitachi Plant Technologies) http://www.hitachi-pt.com/

Related Firms and Organizations

- Mitsubishi Research Institute, Inc. http://www.mri.co.jp/E/index.html
- Tokyo Electric Power Company http://www.tepco.co.jp/en/index-e.html

5. Technical Advisory Council on Remediation and Waste Management

The "Technical Advisory Council on Remediation and Waste Management" ("the Council") was established in November 2011, shortly after the nuclear accident at Fukushima Daiichi Nuclear Power Plant, and is comprised of nuclear decontamination and waste management companies. As of March 2013, membership had grown to 102 firms from the construction, civil engineering, environment, radiological control, transport, waste management, manufacturing, and other related industry sectors. While the vast majority of members are Japanese, five U.S. firms, one German firm, and one French firm are also members of the Council. The Council's website (in Japanese) can be found at http://tacrwm.jp/ .

Kajima Corporation, one of Japan's largest *zenecon*, acts as the "chair" corporation and is responsible, along with corporations that are members of the Council's executive committee, for holding meetings where they decide the general policy of the council. Other executive committee corporations include Atox (a Japanese nuclear materials management firm), Taisei Corporation (another large *zenecon*), Tokyo Electric Power Environmental Engineering, Dowa Eco-System (a Japanese environmental management company), and NGK Insulators. TEPCO is a promoter of the Council, and Mitsubishi Research Institute serves as the group's secretariat.

The Council's objectives are as follows:

- to facilitate information sharing among member companies on decontamination and the treatment and management of radiological waste
- to apply optimal technologies, depending on localities and contamination situations
- to gather, share and make public the technologies and know-how of member corporations
- to act as a forum for opinion and information exchanges between member firms and the Government of Japan (GOJ), local municipalities, R&D institutions, etc.
- to contribute actively to ensure that the decontamination efforts commissioned by the GOJ and local municipalities are carried out smoothly

The Council serves as a forum for member firms to compile and exchange technical information, and focuses on sharing and promoting the use of effective radiological material decontamination technologies, as well as those for the treatment, transport, and disposal of the resulting waste. Thus far, 44 member firms have registered 103 technologies with the Council. Only member firms are allowed access to the full listing of technologies.

The Council also holds regular plenary and working groups meetings, and sponsors/organizes symposia to bring attention to the decontamination effort. In September 2012, the Council organized a symposium in Fukushima City which included participants from the MOE, the Japan Atomic Energy Agency, other Japanese Government agencies, and 14 regional municipal governments. The Council will soon have six

working groups addressing dose evaluation, stake holder dialog, re-use, transportation, incinerated ash, and safe treatment.

U.S. firms may want to consider joining or associating in some way with this Council. All the key Japanese corporate players in decontamination projects are members. Additionally, the Council may provide an avenue for U.S. firms to meet potential partners and introduce their competencies, services and technologies.

6. Commercial Service (CS) Japan Comment/Frequently Asked Questions (FAQs)

Our office counsels U.S. firms on a regular basis, offering advice on how best to approach the Japanese market in a wide variety of industry sectors. We take into account each firm's unique product/service/technology and its applicability to Japan's real business situation. While each situation requires an individualized approach, we are able to offer some general answers to frequently asked questions that we often field concerning participating in decontamination work currently underway in Fukushima.

Can U.S. contractors bid directly on MOE decontamination projects?

The simple answer is "yes," as long as the U.S. firms are registered as legal entities in Japan and compete according to the dictates of Japan's tender system. Also, in order to qualify to bid on nuclear decontamination projects, interested firms must hold a "Qualification of Civil Engineering Work from the Ministry of Environment (MOE) for Participation in Open and Competitive Bidding" certification. Information on further requirements and the procurement process can be found by reading our Market Alert #1.

Please bear in mind that winning a bid as a prime contractor will require competing directly against Japan's largest and most influential general construction companies, or *zenecon*. Competition is fierce among these *zenecon*, with most monitoring government websites almost hourly in order to find out about the latest procurement opportunities. A strong presence in Japan and commitment to the Japanese market will be necessary to compete effectively in this arena.

Can U.S. contractors bid directly on local municipality decontamination projects?

Again, the simple answer is "yes" as a prime contractor, as long as the U.S. firm is qualified to bid in the local municipality. To become qualified as a prime contractor with local municipalities, firms must first obtain contractor's licenses issued by the GOJ. After that, firms can then apply with the municipalities, each of which maintains its own registration processes. For example, in Fukushima City, a regular call to register as a contractor is made every two years (the next call will be made in late 2014, but a mid-term call is likely to be announced around November 2013). Municipalities disclose their specific registration requirements only at the time of the official announcement. All this said, there are no restrictions on firms, including those from the U.S., from working on projects as sub-contractors. So it may be more practical for U.S. firms to team with Japanese partners that are already qualified to bid on local municipality projects.

Can CS Japan (the U.S. Embassy) arrange meetings for U.S. firms with the MOE and/or local municipalities?

Yes, we can reach out to Japanese government agencies to seek meetings on behalf of U.S. firms, but whether or not that is a good move needs to be considered. Our experience is that arranging meetings between U.S. companies and either national or local government officials, prior to an announcement of a tender or during the procurement process, may not be welcomed by the Japanese authorities and could negatively affect the prospects for U.S. companies. This is because national and local municipalities want to be seen as treating all bidders fairly, taking an unbiased approach to decision-making based on the proposals submitted by companies that is not clouded by meeting with individual firms.

What can CS Japan (U.S. Embassy) do on behalf of U.S. firms that are bidding on national and local government procurements?

CS Japan and the U.S. Embassy, working in conjunction with the Department of Commerce's Advocacy Center, are ready to communicate with Japanese national and local municipality government officials on behalf of U.S. firms seeking to win government contracts here in Japan. This advocacy action takes place after a U.S. firm has prepared its bid on a government procurement and has received interagency approval for such assistance by the Advocacy Center. For information on how to receive this type of support, please refer to the Advocacy Center website found here.

Which segments offer the best opportunities?

Currently, most of the decontamination work being done in Fukushima is manual labor, such as cleaning and wiping the surfaces of roads, buildings, homes, and roofs, and gathering soil and yard waste. As a result, a large portion of these projects in terms of the dollar value is dedicated to the provision of labor, and not to technologies or products.

In the near future, however, we anticipate that decontamination efforts may also include more challenging areas where higher-end technology is required. These areas include remediation of agricultural land, forest land, and rivers as well as the design and construction of facilities to treat, manage, store and dispose of decontamination waste. Waste treatment and stabilization methods would be beneficial if shown to reduce the life-cycle costs. CS Japan is aware of U.S. industry's deep experience in challenging remediation work undertaken for the U.S. Department of Energy and the U.S. Environmental Protection Agency. We welcome information on marketable solutions for these challenging areas as Japan tackles this work.

What can U.S. firms do to participate in nuclear decontamination work in Fukushima?

U.S. companies wishing to enter the Japanese market and participate in this nuclear decontamination work should consider teaming with a reputable, well-connected agent, distributor, or other partner (such as a *zenecon* or an intermediate-level general contractor), and cultivating business contacts through frequent personal, in-country visits. Japan's business culture attaches a high degree of importance to personal relationships, and these take time to establish and nurture. The customs and pace of deal-making in Japan are quite different from the United States. Patience and repeated follow-up have historically been required to secure a deal. CS Japan is ready to help U.S. firms make these essential contacts and seek partners in Japan. For more information on this assistance, please contact Takahiko Suzuki, Commercial Specialist, U.S. Commercial Service Japan, U.S. Embassy Tokyo at takahiko.suzuki@trade.gov.

If a U.S. firm would like to bid directly on a project as a prime contractor, it will need to reach out to the commissioning entity (either MOE or local government) and submit a proposal based on the requirements of the particular project. To better understand how to do this and to grasp a general idea of the process, please read our Market Alert #1.

All things considered, it is probably more practical for U.S. firms entering the market or expanding their presence to consider working with Japanese contractors or engineering firms that are already active in decontamination projects. As noted above, CS Japan is ready to help U.S. firms make the necessary contacts. U.S. firms may also want to consider joining or associating in some way with the Technical Advisory Council on Remediation and Waste Management mentioned above. All the key Japanese corporate players in decontamination projects are members. Additionally, the Council may provide an avenue for U.S. firms to meet potential partners and introduce their services, technologies, know-how, and products to the primary players in the Japanese industry. CS Japan is acting as a liaison for U.S. firms with the council. U.S. firms should contact Takahiko Suzuki at takahiko.suzuki@trade.gov if interested in learning more.

Additionally, the U.S. Government recently proposed creation of a Japan-U.S. Decommissioning and Remediation Business Forum as a mechanism for exchange and cooperation and a venue for continued private sector engagement. This is currently under discussion between the Governments of Japan and the United States. Our vision is for the forum to provide:

- A venue to share experience, expertise, and lessons learned in remediation and decommissioning, including on work already completed at Fukushima Daiichi, and in Tohoku.
- A venue to discuss key technical challenges related to Fukushima clean-up and technical challenges related to Japan's nuclear power program and industry.
- A venue to foster collaboration to solve other challenges related to remediation or decommissioning.
- An opportunity for companies from both countries to network, build relationships, and identify partners for potential joint work.

The Business Forum will not have an advisory role to either government, but its activities would be coordinated by agencies from both governments. Current plans are for holding the first meeting in early autumn of this year. As this is a new proposal, details and plans will be provided in a future market alert once we reach agreement with the GOJ.