Challenges Working in Japan's Special Decontamination Area

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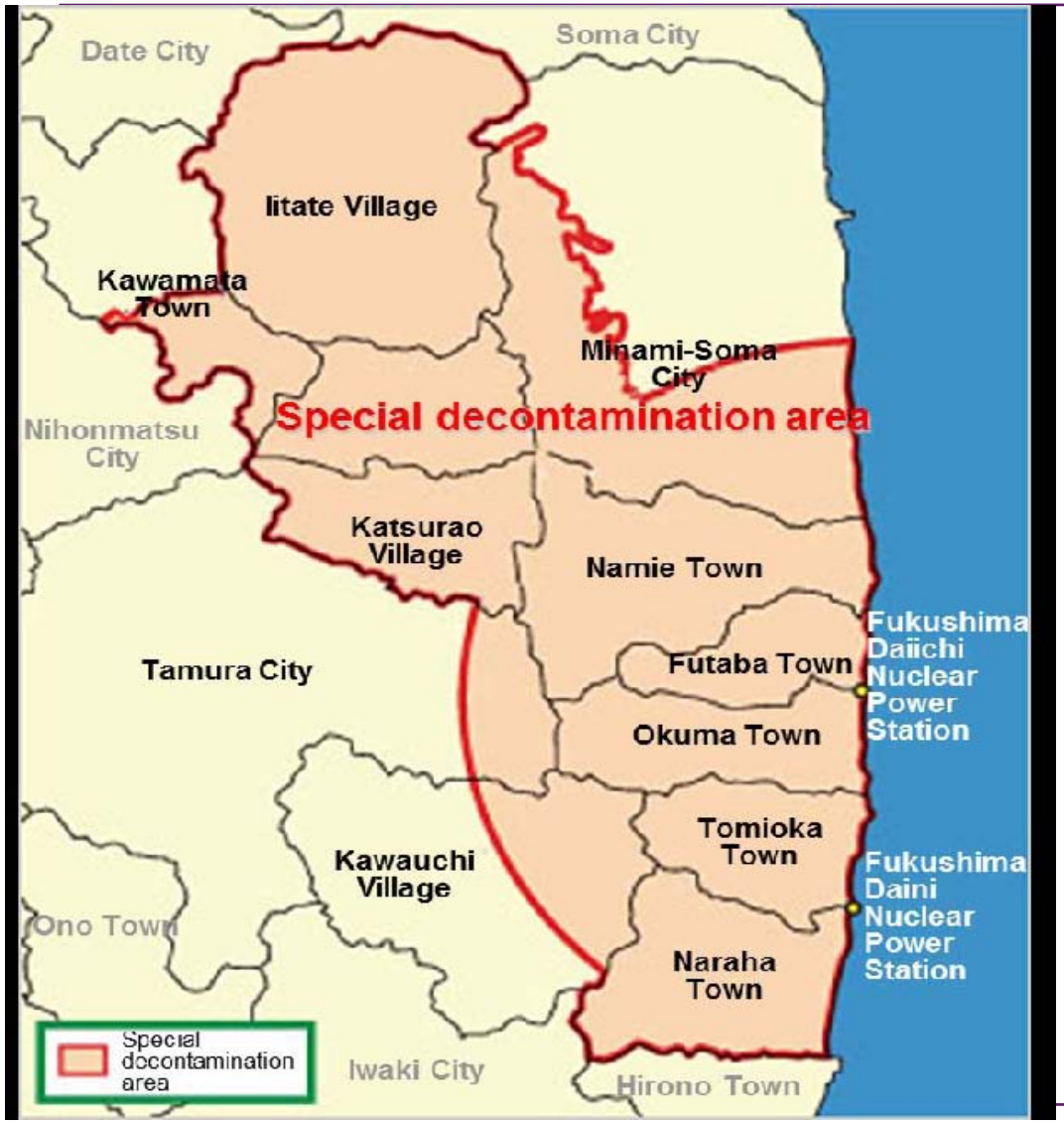
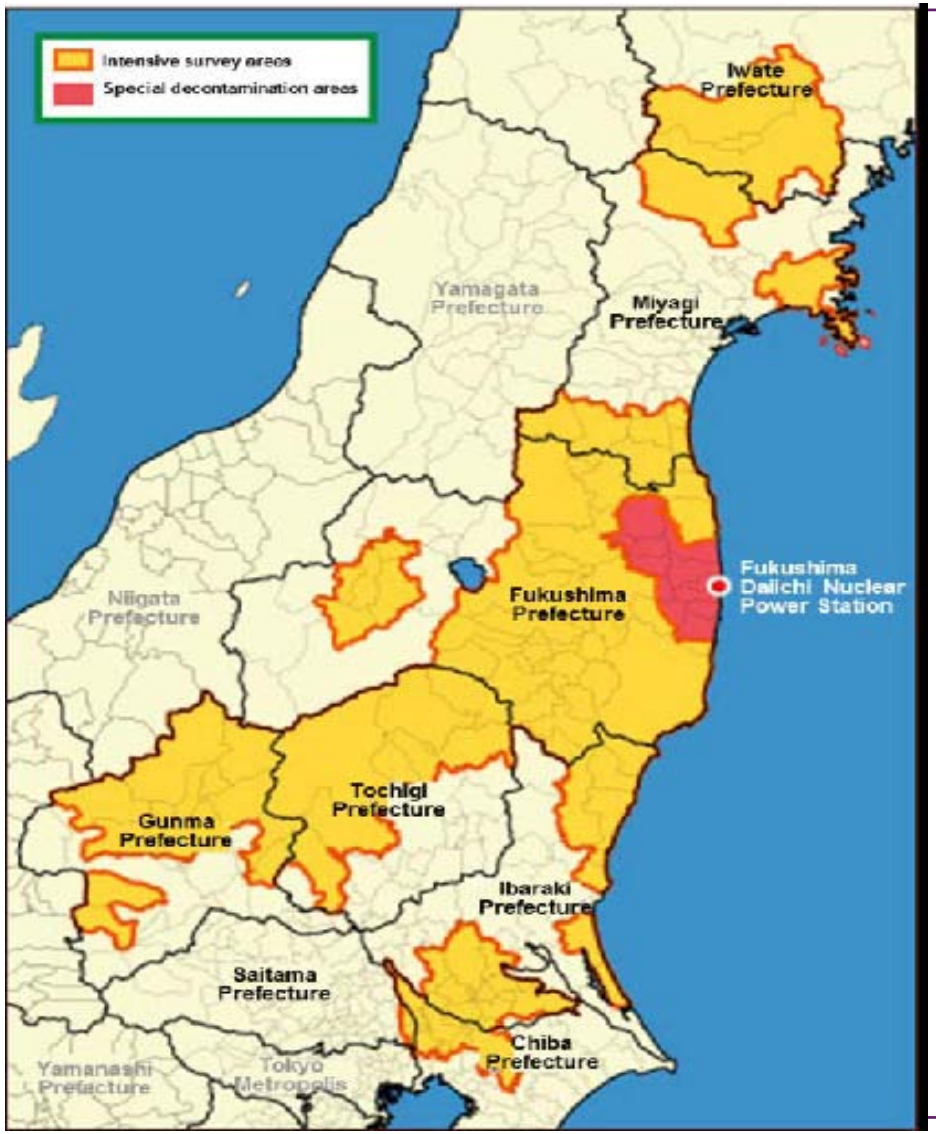
On March 11, 2011, an earthquake and ensuing Tsunami damaged or destroyed over 1 million structures, injured over 6,000 and killed nearly 20,000 people. None of the damage, injuries, or deaths had anything to do with the Fukushima Dai-ichi reactors.

Special Decontamination (Evacuation) Area



- **Includes 11 municipalities <20 km from the NPP, or where annual cumulative dose is >20 mSv (2,000 mrem).**
- **Cs-137 concentrations exceed 200,000 Bq/kg (5.4 nCi/g), primarily in top few cm of soil**
- **Air dose rates 1 meter above ground up to 91 microSv/h (9.1 mrem/h)**
- **Approx 1,300 sq km (500 sq miles)**

Intensive Contamination Survey Area



- **104 municipalities in 8 prefectures where an air dose rate of over 0.23 μSv/hour (equivalent to over 1 mSv/year) was observed, were designated.**
- **Decontamination is implemented by each municipality. The national government will take the necessary financial and technical measures.**

Problem

- 1,300 square kilometers evacuated and must be cleaned prior to return of residents
  - Includes towns, forests, farmland, wetlands, etc.
- Very large volume of potentially radioactive waste will be generated
  - Current estimate is 28 Million Cubic Meters!
- Estimate keeps rising as remediation is performed
- No disposal option for radioactive waste in Japan
- Some types of land, e.g. forests, mountains, are very difficult to remediate

Typical Temporary Waste Storage

Challenges of Doing Business in Japan

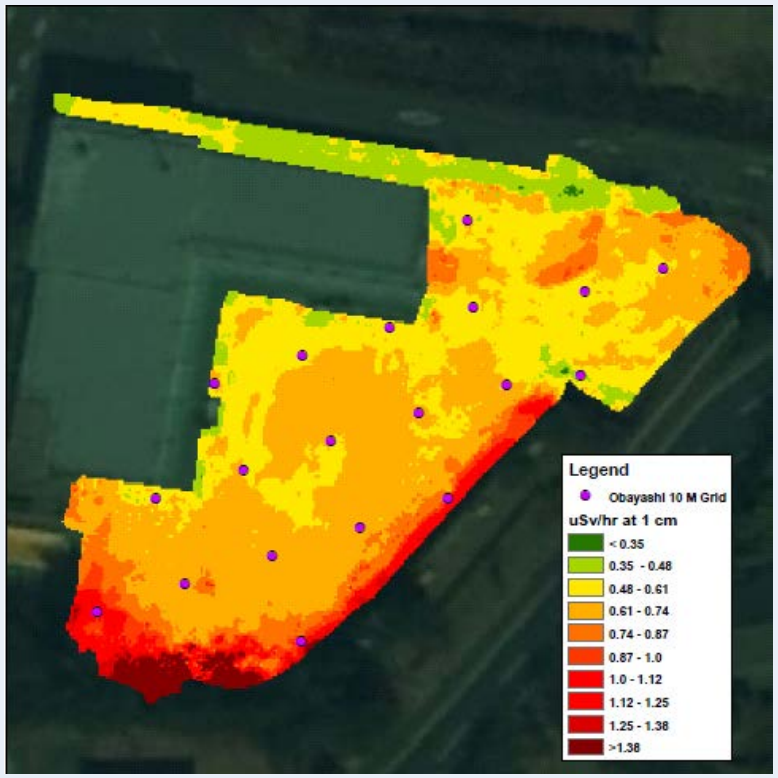
- Relationships *v* Proposals & Contracts
- Language Barrier
- Currency Exchange Rate Fluctuations
- Teaming with Japanese Companies
- Japanese Employment and Labor Laws
- Protection of Proprietary Intellectual Property

Amec Foster Wheeler Japan Experience

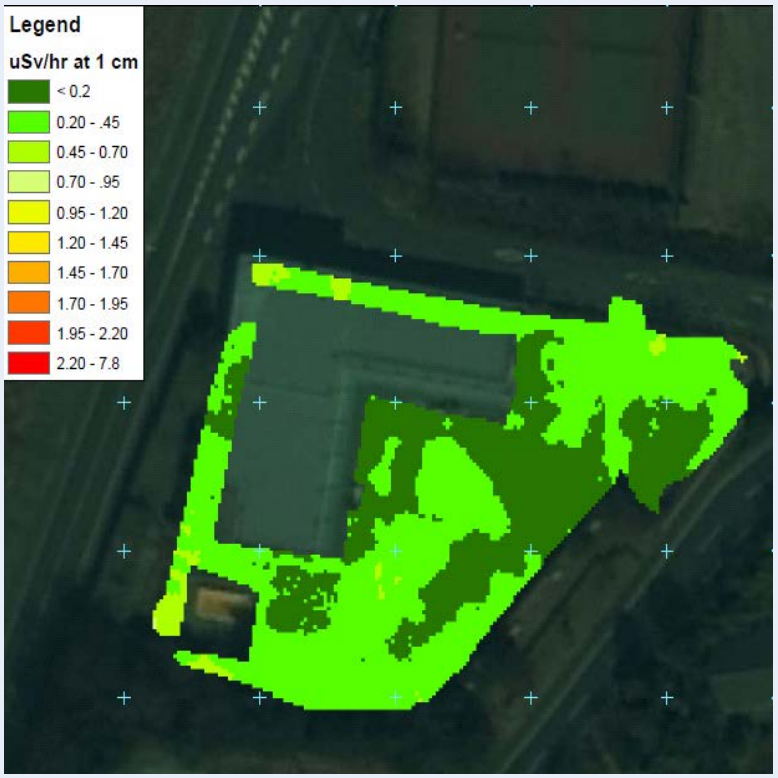
- **Contacted by Obayashi, a large civil construction company headquartered in Japan, after the quake**
- **Negotiated Teaming Agreement**
- **Jointly pursued work using Obayashi's Japan market knowledge and local presence combined with Amec Foster Wheeler's nuclear experience and unique *ScanPlot*SM and *ScanSort*SM technologies**
- **Performed a number of demonstration projects showcasing ability to characterize and remediate radioactive contamination**
- **Teaming Agreement and joint business pursuits worked to advantage of both Obayashi and Amec Foster Wheeler**

Characterization

Pre- and Post-Remediation Surveys of School Yard using *ScanPlot*SM technology

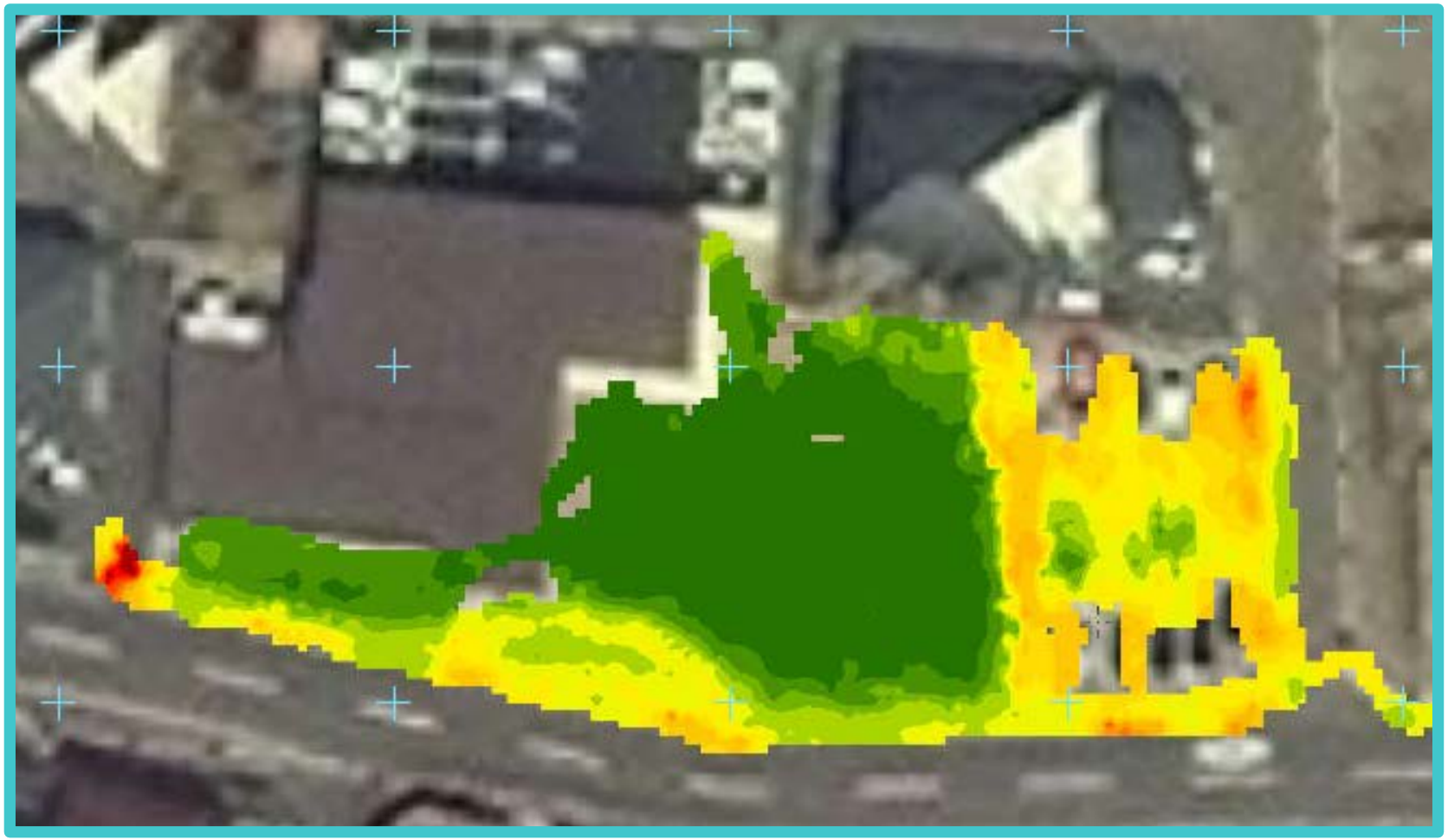


Panel A



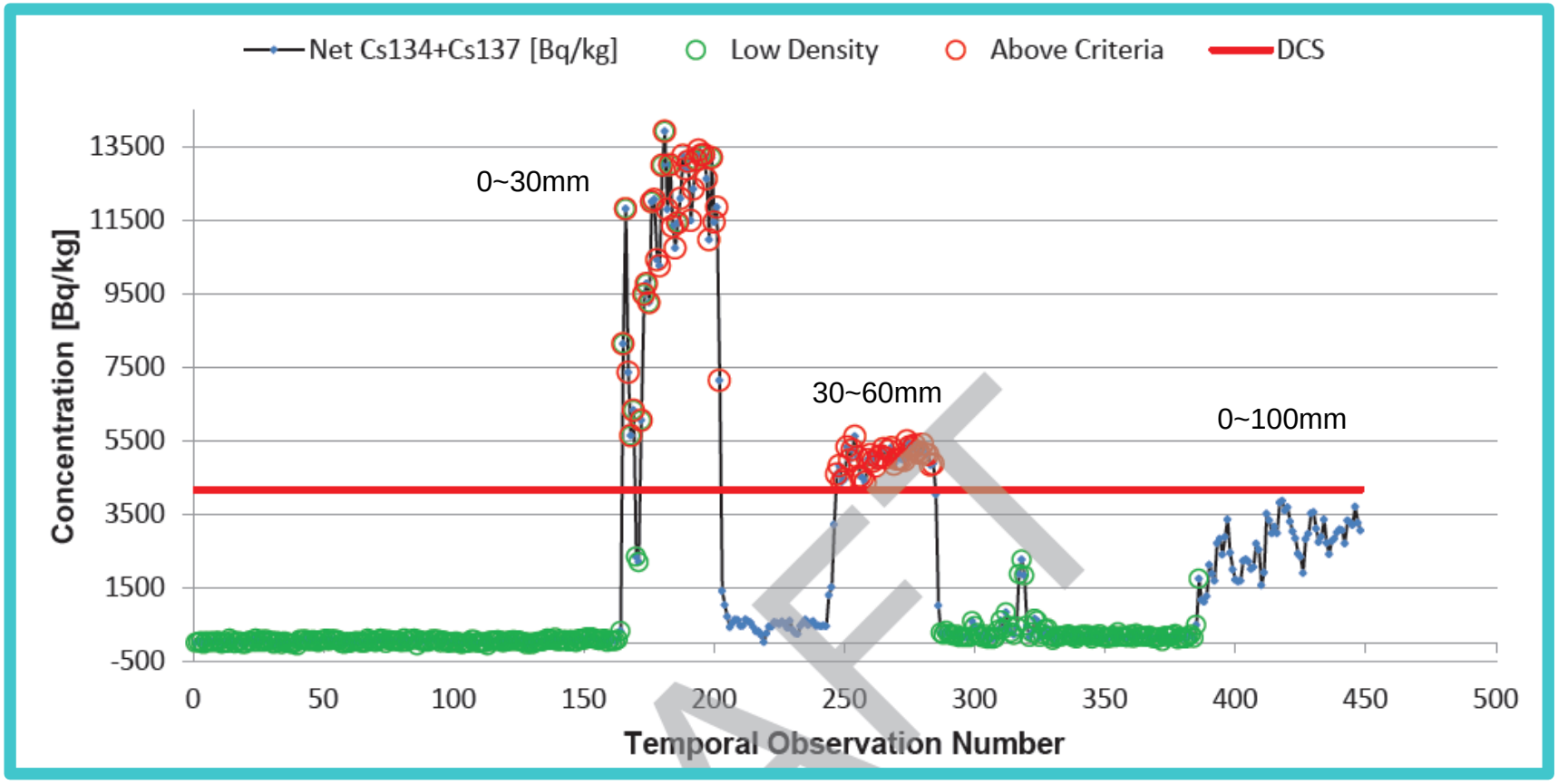
Panel B

*ScanPlot*SM Survey of School Yard



*ScanSort*SM in Operation in Japan

Cs137 Concentration by Depth in Rice Paddy



Summary

Success in a foreign market is not solely dependent on corporate experience, expertise and capabilities, but also on knowledge of local laws, customs and business practices. Don’t assume that what works in one country works everywhere.