NUCLEAR EXPORT ENFORCEMENT – LESSONS LEARNED

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OVERVIEW –
AGENCIES AND PENALTIES
Do I need permission to eat the cookie?
Overview - Agency Jurisdiction

- **U.S. Nuclear Regulatory Commission (NRC) – 10 CFR Part 110**
  export and import of nuclear facilities, equipment, and material

- **U.S. Department of Energy (DOE) – 10 CFR Part 810**
  export of technology and assistance for development or production of special nuclear material (SNM)

- **U.S. Department of Commerce’s Bureau of Industry & Security (BIS) – 15 CFR Parts 730 et seq.**
  export of nuclear-related items and technology subject to the Export Administration Regulations (EAR)

- **U.S. Department of State, Directorate of Defense Trade Controls (DDTC) – 22 CFR Parts 120-130**
  export of nuclear items, technical data, and defense services covered by the International Traffic in Arms Regulations (ITAR)
Penalties – NRC and DOE

- Civil Penalties (Atomic Energy Act § 234)
  - Fines, debarment, etc. imposed by agency
  - Referrals to Dept. of Justice for criminal prosecution

- Criminal Penalties (AEA §§ 222, 223, & 232)
  - Injunction & restraining orders
  - Fines - $1,000s up to $500k or twice the monetary gain
  - Jail – a few years, up to life imprisonment if intent to injure the U.S. or secure an advantage to a foreign nation
  - 18 U.S.C. § 1001 – material false statements
Penalties – BIS and DDTC

• Under the EAR (in effect via the International Emergency Economic Powers Act [IEEPA]):
  – Civil: Fines up to $289,238 per violation or twice the value of the transaction, whichever is greater
  – Criminal: Fines up to $1 million and/or up to 20 years imprisonment

• Under the ITAR
  – Civil: Fines up to $1,094,010 per violation
  – Criminal: Fines up to $1 million per violation and/or up to 10 years in prison
Enforcement Outcomes Are Fact-Dependent

- Who identified and reported the violation?
- Was it unintentional, caused by careless disregard, or intentional?
- What was the impact on public health, safety, and national security?
  - For example, NRC issues a “Level of Severity” (I – IV)
- What corrective actions have been or will be taken to prevent recurrence?
- Is this the first time, or is it a repeat offense?

**general enforcement trends emerge, but it is like the stock market......**

Morgan Lewis
ENFORCEMENT LESSONS-LEARNED
NRC – 2016

Exports of nozzle dams to China without a specific license
• Minor reactor components under 10 CFR Part 110, Appendix A
  • Severity Level III
  • NOV with no civil penalty.

NRC - 2013

• Failure to obtain specific license for export of metallic reflective insulation to Brazil.
• Insulation was “especially cut and arranged for use on a [RPV] head” and prepared “so that it could be attached directly to the reactor vessel head.”
• Thus, the insulation “was an especially prepared component for a nuclear reactor, which brings [it] within the NRC’s export licensing authority in 10 CFR 110.8.”
  • Severity Level IV
  • Notice of Violation (NOV) with no civil penalty.
  • Company self-reported; took corrective action; not repetitive; not willful
LL #1 - Properly Categorize Your Items for Export
(Start with NRC and DOE regs, then go to the EAR)

NRC - 2011

• Export of Reactor Circulation Pump Seal Repair kits to Mexico without an NRC license
  • Severity Level III
  • NOV with no civil penalty
  • Enforcement discretion not to impose $7,000 civil penalty because:
    – Company had an export control compliance program in place, but incorrectly categorized the repair kits under EAR (ECCN EAR 99);
    – Company self-reported; and
    – Company took corrective action.
NRC-2012
Exporting deuterium to India and Israel without a specific license.

• NRC regs contain a “general license” for exporting deuterium, but deuterium export exceeded the general license criteria.
  • Severity Level III
  • NOV with no civil penalty.
  • No automated process to track amount of deuterium shipped
  • Corrective actions involved hiring outside counsel for export controls audit and training.
NRC – 2016

Submit notices or reports, when required

- Failure to provide quarterly report for shipping control rod adjuster mechanisms to Canada
  - Severity Level IV
  - NOV with no civil penalty
  - Equipment was subject to “Additional Protocol” reporting requirements

NRC – 2013

Don’t export items or quantities beyond those listed in your license.

- Exports of tritium in excess of 10 CFR 110.23 limit of 0.37 TBq (10 Curies)
  - Severity Level IV
  - NOV with no civil penalty.
LL #4 - Don’t Act With Careless Disregard or Intentionally

BIS/DOJ - April 2017

- Chinese national, Fuyi Sun, **pleads guilty** of attempting to procure for the Chinese military high-grade carbon fiber, without a license
  - Specific high-grade carbon fiber controlled by ECCN 1C210.a
  - Controlled for Nuclear Proliferation reasons (NP Col. 1)
  - Sentencing scheduled for July

BIS/DOJ - April 2017

- Jan 2016 - Chinese national, Sihai Cheng, was sentenced to **nine years in prison** for providing 1,185 pressure transducers that could be used for weapons-grade uranium enrichment, to Iran
  - Pressure transducers are controlled under ECCN 2B230 – NP Col. 1.
LL #5 – USG Has Changed Its Enforcement Posture Under AEA 57(b) and Part 810

DOE - Pre-2015

• Not aware of any significant DOE Part 810 civil enforcement
• No AEA § 57(b)/Part 810 criminal enforcement.
• DOJ enforcement under AEA focused on espionage and Classified Information useful for making weapons (outside of Part 810):
  • 2013 – Pedro Mascheroni – five year prison sentence for violating the AEA for planning to disclose Classified Information to Venezuela
  • 2009 - Roy Lynn Oakley was sentenced to six years in prison for violating the AEA for disclosing Classified Information in an attempted sale of uranium enrichment equipment that was crucial for production of highly enriched uranium for atomic weapons.
“Former TVA manager admits Chinese government paid him for nuclear secrets”

“Chinese engineer pleads guilty to nuclear sharing scheme”
WBIR.com – Jan. 6, 2017
LL #5 – USG Has Changed Its Enforcement Posture Under AEA 57(b) and Part 810

DOE - Post-2015

- DOE issues revised Part 810 rules effective March 2015.
- March 20, 2015 – DOJ brings first criminal charge since AEA § 57(b) became law over 60 years earlier
  - Ching Ning Guey, a PRA Sr. Mgr at TVA:
    “did willfully and knowingly engage and participate, both directly and indirectly, in the development and production of special nuclear material outside of the United States with the People’s Republic of China without being specifically authorized to do so”
  - Pleads guilty in April 2015
- April 2016 – DOJ brings second criminal charge under AEA § 57(b)
  - Alleges a conspiracy:
    - Szuhsiung (Allen) Ho – himself and his company, ETI
    - A foreign company – China General Nuclear Power Company (CGNPC)
    - Unnamed co-conspirators: experts from US nuclear industry
  - Ho pleads guilty in January 2017
LL #6 – Life Imprisonment Can Apply to Commercial Nuclear Power Plant Technology Exports

- DOJ sought life imprisonment for Ho because they alleged Ho acted “with the intent to secure an advantage” for China.

- Technology was not Classified Information or Sensitive Nuclear Technology; it was commercial nuclear power plant technology.
  
  - Probabilistic Risk Assessments 
  - In-core neutron detectors 
  - Advanced fuel designs 
  - Computer simulation codes 
  - Small Modular Reactor technology

- Included three commercial plant-related EPRI reports:
  
  - Program on Technology Innovation: EPRI Material Management Matrix;
  - A Method to Predict Cavitation and the Extent of Damage in Power Plant Piping; and
  - Assessment of EPRI Fuel reliability Guidelines for New Nuclear Plant Design.
LL #7 – Statute of Limitations Can Be Suspended for Criminal Conspiracies

- Five year SOL typical.
- Ho indictment alleges unauthorized activities with China date back to late 1990s.
LL #8 – DOJ Interprets “Assistance” Under Part 810 Very Broadly

- Part 810 is titled “Assistance to Foreign Atomic Energy Activities”
  - Part 810 defines “assistance” to cover
    - “instruction, skills, training, working knowledge, consulting services, or any other assistance as determined by the Secretary. Assistance \textit{may} involve the transfer of technical data.”
- What are the bounds of “assistance” for direct or indirect production of SNM?
- DOJ Feb 2017 press release discussing Ho plea deal:
  “Ho assisted CGNPC in procuring U.S.-based nuclear engineers to assist CGNPC and its subsidiaries with designing and manufacturing certain components for nuclear reactors more quickly by reducing the time and financial costs of research and development of nuclear technology. . . . Ho also identified, recruited, and executed contracts with U.S.-based experts from the civil nuclear industry who provided technical assistance related to the development and production of special nuclear material for CGNPC in China. Ho and CGNPC also facilitated travel to China for and payments to the U.S.-based experts in exchange for their services.”
- These sound like jobs performed by a . . . .
- Staffing agency!!!!

**Take Home Message: the assistance does not need to be “technical assistance”**
Don’t Be An Ostrich

• Implement an export control compliance program.
• Initial and refresher training for all personnel.
• Audits.
• Ask your Legal Department for help.
• Consider voluntary disclosures, as appropriate.
Questions?
Alex Polonsky represents nuclear industry companies on matters ranging from nuclear export controls to nuclear licensing, litigation, and investigations. As the firm’s Facility Security Officer and leader of the firm’s Classified Information Services practice, Alex also supports investigations and litigation involving Classified Information. He is the co-author of “Fundamentals of Nuclear Regulation in the United States” and a teacher of the “NRC 101” course promoted by EUCI. He has authored articles in the Nuclear Plant Journal and World ECR on the DOE’s export control regulations in Part 810, and presented at numerous industry conferences on the topic.
*Our Beijing office operates as a representative office of Morgan, Lewis & Bockius LLP. In Shanghai, we operate as a branch of Morgan Lewis Consulting (Beijing) Company Limited, and an application to establish a representative office of the firm is pending before the Ministry of Justice. In Hong Kong, Morgan Lewis has filed an application to become a registered foreign law firm and is seeking approval with The Law Society of Hong Kong to associate with Luk & Partners.
THANK YOU