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Texas Sting Operation Increases Focus on Radioactive Material Pre-Licensing Activities

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Radioactive material is commonly used in certain industries, such as energy and petrochemicals, as part of flow measuring equipment and similar devices. The control of radioactive material is essential to minimize the risks posed by loss, theft, inadvertent exposure and potential misuse by bad actors. Federal and state regulators implement processes to promote the appropriate control of those materials. Nonetheless, a 2016 GAO sting operation allowed investigators to obtain licenses permitting them to purchase significant quantities of radioactive material. The serious flaws in Texas' pre-licensing activities this investigation identified resulted in a shake-up at the Texas regulator and an increased focus on pre-licensing activities.

The Regulation of Radioactive Material—A Historical Perspective

Radioactive material is commonly used in the energy and petrochemicals industries. For example, devices containing radioactive material in sealed sources are used to measure fluid flow and density, to determine the volume of liquid in tanks, and to detect flaws in metal and welds between components. The use, storage and transfer of radioactive material is often managed by companies' health, safety and environment personnel.

The health risks posed by this material depend on the radioisotope, its activity level, the duration of exposure, and the nature of exposure, such as inhalation, ingestion, or external exposure. Health effects can range from no discernable damage to severe injury (including cancer) or even death.

Because radioactive material can be dangerous to human health, the U.S. Nuclear Regulatory Commission ("NRC") and the Agreement States[1] have developed regulations that require appropriate

[1] The NRC has entered into a series of agreements with state governments that delegate certain authority regarding the regulation of radioactive material to state governments. States that have entered into such agreements are termed "Agreement States." States that have not entered into such agreements are termed Non-Agreement States. The NRC retains

oversight and physical control. Control of radioactive sealed sources in the U.S. has historically focused on ensuring that such sources were appropriately licensed, used and stored. Since the September 2001 terrorist attacks, concerns have grown that terrorists could obtain radioactive material and use it to make a dirty bomb.

In 2003 and again in 2005, the NRC and Agreement States issued orders to protect radioactive material from theft, diversion or other unauthorized access.[2]

Regulatory Weaknesses and Efforts to Plug the Holes

Despite the efforts of the IAEA, NRC and Agreement States, weaknesses in the regulatory structures persisted. In 2007, Government Accountability Office ("GAO") investigators obtained a radioactive material license from the NRC after applying for it in the name of a fictitious company. The investigators then altered that license and entered into contracts with radioactive material suppliers to purchase a dangerous quantity of radioactive material.

As a result of that investigation and others which showed similar weaknesses, the NRC bolstered its ability to track the use and transfer of the more dangerous categories of radioactive material through the use of three databases[3] and an increased focus on pre-licensing activities. In this regard, the NRC issued revised pre-licensing guidance to NRC and Agreement State licensing staff. Among other revisions, this guidance suspended the "good faith presumption"[4] and required licensing staff to conduct pre-licensing site visits for applicants who were not known to the regulations.[5] Pre-licensing site visits are intended to provide a basis for regulatory confidence that the applicant will use the radioactive material as specified in the license. The NRC also established a detailed checklist to guide pre-licensing site visits and developed a list of questions and activities related to the applicant's business operations, facility, radiation safety operations and personnel qualifications.

Continuing Weaknesses—The GAO's Recent Covert Vulnerability Test

In 2014, the GAO began to assess the steps that the NRC and the Agreement States had taken to strengthen their licensing processes. As a part of this assessment, the GAO tested the practical effectiveness of those steps through the use of a covert vulnerability test. Specifically, the GAO established fictitious businesses in three states—two Agreement States (including Texas) and one Non-Agreement State. The GAO leased vacant space in an industrial or office park and used these spaces as the physical addresses of the fictitious businesses. GAO made no attempt to outfit the space to make it appear as if a legitimate business was operating there. The GAO then applied for a license to possess a radioactive source. These locations were later the subject of pre-licensing site visits by NRC and Agreement State licensing staff as part their pre-licensing activities.

In two of the three states, the regulator did not issue the requested radioactive material licenses as a result of the site visit. In Texas, however, the regulator issued the license, accepting the GAO investigator's assurances that the site would be adequately prepared to conduct the licensed operations after receiving

the authority to regulate radioactive material in Non-Agreement States, in offshore waters and in other areas of exclusive NRC jurisdiction.

[2] These additional security requirements have been incorporated into NRC regulations, including 10 C.F.R. Part 37; all Agreement States have fully implemented compatible requirements to Part 37 as of 2016.

[3] The National Source Tracking System, the Web-based Licensing System and the License Verification System.

[4] The "good faith assumption" allowed licensing staff to assume that applicants and licensees did not have malicious intentions and that they would be honest and truthful in providing information to regulators.

[5] Prior to June 2007, such visits were optional except in cases where the proposed use of radioactive materials involved unusually complex technical, safety, or unprecedented issues or were otherwise judged to be high risk.

the license. The regulator appeared to apply the presumption of good faith, and, consequently, did not scrutinize key aspects of the fictitious business.

Having obtained the license, the GAO investigator entered into a contract with a radioactive material vendor to purchase the licensed source. The investigator then altered the paper license and contacted a second vendor that agreed to provide a second source. Together, these two sources resulted in a much more dangerous quantity of radioactive material.

Ramifications in Texas

GAO personnel met with the NRC in October 2015 to discuss the covert vulnerability test and its conclusions. Since that time, the NRC has been working with Agreement States to develop and implement corrective actions.

Fallout in Texas has been swift. In February 2016, the Chief of the Radiation Control Bureau and the Manager of the Radioactive Material Group of the Texas Department of State Health Services ("TDSHS") unexpectedly retired and two key industrial licensing personnel were suspended. In September 2016, Karl Von Ahn was promoted to head the Radioactive Material Group.[6] Charlotte Sullivan, the Manager of the Regulatory Licensing Unit, was named the interim Agreement State Director. Dr. Sullivan has been charged with strengthening the Texas radiation control program.

Under this new leadership, the TDSHS is expected to implement certain corrective actions, including:

- Requiring that inspectors from the Radiation Control Program's Inspection Branch (and not personnel from the Program's Licensing Branch as had been the case previously) perform pre-licensing site inspections;
- Confirming that internal guidance and training materials that address pre-licensing activities appropriately focus on appropriate site inspections and the suspension of the "good faith presumption"; and
- Ensuring that licensing personnel receive appropriate training.

In addition, it is possible that the TDSHS may inspect previously-unfamiliar entities to which it issued radioactive material licenses in the recent past to ensure that those entities are legitimate and properly licensed. Further, the TDSHS may investigate ways to mitigate the risks posed by a bad actor's attempt to alter a paper radioactive material license. Specifically, the TDSHS may investigate the merits of making copies of specific licenses available to radioactive material suppliers.

Licensees Should Expect More Scrutiny

Although the implications of the GAO's recent investigation to existing, long-term licensees is unclear, the federal and state governments' continued interest in the security of radioactive material should be of interest to all licensees, both in Texas and in other states. First, federal and state regulations can impose severe civil penalties on licensees who do not appropriately use, store or transfer radioactive material. Second, NRC and state inspectors may conduct more frequent and/or more invasive inspections of licensees' activities as a result of the GAO's covert vulnerability test. Lastly, NRC and state licensing personnel may request more information prior to issuing a new license, license amendment, or Sealed Source and Device and Registry. Accordingly, licensees should review their licenses and licensed

[6] Mr. Von Ahn was previously a reviewer in the Policy, Standards, and Quality Assurance unit, and, prior to that, served a number of roles while working for the Ohio Department of Health's Radiation Protection Division.

activities to ensure they comply with applicable federal and state laws and regulations. Doing so will minimize regulatory risk and financial costs.

If you have any questions about the content of this Alert, please contact the Pillsbury attorney with whom you regularly work, or the authors below.

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