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A. Introduction

Congress continued to address the management and storage of nuclear waste during the past year. Senator Lindsey Graham (R-SC) introduced a bill that would require the president to certify that Yucca Mountain remains the designated site for the development of a nuclear repository, while Senate Majority Leader Harry Reid (D-NV) introduced a bill that would establish a commission to explore alternatives for the storage of nuclear waste if Yucca Mountain fails to become fully operational. In April 2009, Representative Nita Lowey (D-NY) introduced H.R. 1936, which would create additional requirements for the licensing of commercial

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nuclear facilities, and H.R. 1937, which would require the Nuclear Regulatory Commission (NRC) to retain and redistribute certain fines collected from nuclear facilities for safety violations. President Obama signed the Omnibus Appropriations Act of 2009, which appropriated $792 million to the Department of Energy and $173 million to the NRC. Other bills proposed the use of nuclear power to help the United States gain energy independence.

On the judicial front, the Court of Federal Claims awarded damages for claims against the government resulting from the Department of Energy's (DOE) failure to meet its statutory and contractual obligations to collect spent nuclear fuel (SNF). The U.S. Court of Appeals for the Federal Circuit remanded several decisions for failure to use the standard contract acceptance rate in the calculation of damages awarded for the government's breach. The Federal Circuit and the Court of Federal Claims allowed assignment of SNF claims against the government after considering the Anti-Assignment Act. The Second Circuit affirmed the NRC's decision not to require that an applicant for renewal of a nuclear power plant license be held to the same standards as one for an initial license. The Third Circuit held that the NRC is not required to examine the environmental impact of a hypothetical terrorist attack on the facility in license renewals. The U.S. Supreme Court held that the Department of Commerce reasonably treated separative work unit contracts as sales of goods for the purposes of the Tariff Act and that the Environmental Protection Agency permissibly employed a cost benefit analysis in cooling water intake structure regulations under section 316(b) of the Clean Water Act.

Recent developments at the NRC include new reactor activities, license renewals, and rulemaking efforts. To date, the NRC has received seventeen combined operating license (COL) applications for twenty-six new units. In addition, the NRC has issued operating license renewals for fifty-one units, and fourteen other renewal applications are currently under review. The NRC has also completed several longstanding rulemaking efforts, approving a final rule that requires an aircraft impact assessment for all new nuclear power plants and issuing a final rule that amends NRC security regulations and adds new security requirements pertaining to nuclear power reactors. The NRC has also developed NRC Staff guidance on limited work authorizations and proposed a rulemaking to revise its Waste Confidence Decision. In the enforcement arena, the NRC has approved a case-by-case extension of the enforcement discretion period. Finally, in September 2008, the NRC accepted for docketing the DOE's license application for the proposed high-level nuclear waste repository at Yucca Mountain, triggering a three-year deadline for the NRC to decide whether or not to grant a construction authorization.

B. Legislative Developments

1. Nuclear Waste

a. Yucca Mountain

In April 2009, Senator Lindsey Graham (R-SC) introduced the Rebating America's Deposits Act (S. 861), which would amend the Nuclear Waste Policy Act

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of 1982 (NWPA) to require the president to certify that the Yucca Mountain site remains the designated site for development of a repository for the disposal of high-level radioactive waste. The bill was referred to the Senate Committee on Energy and Natural Resources.

b. Storage of Nuclear and Radioactive Waste

In March 2009, Senator Harry Reid (D-NV) introduced the National Commission on High Level Radioactive Waste and Spent Nuclear Fuel Establishment Act of 2009 (S. 591), which would create a commission to review the nation's policies regarding storage of high-level radioactive waste and spent nuclear fuel. The commission would evaluate potential improvements in the United States' approach to high-level radioactive waste and spent nuclear fuel management if the Yucca Mountain repository fails to become fully operational. The commission would also submit a report to the appropriate congressional committees that describes its findings, conclusions, and recommendations. The bill was referred to the Senate Committee on Environment and Public Works.

c. Management of Spent Nuclear Fuel

Senator George Voinovich (R-OH) introduced the United States Nuclear Fuel Management Corporation Establishment Act of 2008 (S. 3661) in October 2008. S. 3661 would amend the Atomic Energy Act of 1954 (AEA) to create the United States Nuclear Fuel Management Corporation. The bill authorizes this corporation to manage a spent nuclear fuel enterprise, which would eliminate the need for federal funding for the management of spent nuclear fuel. The corporation would also assume responsibility for the activities, obligations, and use of the federal government's resources pertaining to spent nuclear fuel management.

d. Importation of Radioactive Waste

Representative Bart Gordon (D-TN) introduced the Radioactive Import Deterrence Act (H.R. 515) in January 2009. H.R. 515 would place prohibitions on the NRC's ability to import radioactive waste. A companion bill, S. 232, was introduced in the Senate by Senator Lamar Alexander (R-TN).

H.R. 515 and S. 232 would amend the AEA to prohibit the NRC from issuing a license authorizing the importation of low-level radioactive waste or specific radioactive waste streams exempted from regulation by the NRC. However, the bill exempts from this prohibition any low-level radioactive waste being returned to a federal or military facility authorized to possess such material and low-level radioactive waste that was obtained from an entity in the United States, used in a foreign country, and then returned to the United States for management and disposal.

2. Nuclear Licensing

In April 2009, Representative Nita Lowey (D-NY) introduced the Nuclear Power Licensing Reform Act of 2009 (H.R. 1936), which would provide additional requirements for the licensing of commercial nuclear facilities. Specifically,

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the bill would amend section 103(b) of the AEA to require an applicant to demonstrate that the proposed nuclear facility does not pose an unreasonable threat due to safety or security vulnerabilities, and that adequate evacuation plans for emergency events have been approved by the appropriate federal agencies. Further, the bill adds language to section 103(c) requiring any nuclear license renewals to be subject to the same criteria and requirements that would be applicable for an original application for initial construction. The bill was referred to the House Committee on Energy and Commerce.

2. Energy Independence

Several bills were introduced that addressed the nation's energy needs, and many of those promoted the use of nuclear power. Representative Mike Rogers (R-MI) introduced the American Energy Independence Act (H.R. 6161) in May 2008, which aims to provide energy independence in the United States by July 4, 2015. H.R. 6161 provides standby support for certain nuclear plant delays, encourages the Secretary of Energy to carry out the Nuclear Power 2010 program, and appropriates hundreds of millions of dollars over a five-year period toward this goal. The bill would amend the Internal Revenue Code to establish a nuclear power manufacturing credit equal to 20 percent of a qualified investment during a taxable year, as well as a nuclear power facility construction credit equal to 10 percent of the qualified power facility expenditures. The bill also authorizes the Secretary of Energy to initiate and implement temporary nuclear fuel storage agreements with communities interested in hosting storage facilities and provides procedures for congressional review of these agreements.

Representative Bill Shuster (R-PA) introduced the Energy Independence Act (H.R. 6421) in June 2008. H.R. 6421 addresses many options for sustained energy production in the United States and seeks to eliminate certain impediments to the development of nuclear energy sources. This bill contains many provisions that are similar to H.R. 6161 and specifically amends the Energy Policy Act of 2005 to modify the terms and conditions that govern federal authority to enter into contracts with sponsors of certain advanced nuclear facilities and the Nuclear Power 2010 Program. Other amendments to the Energy Policy Act would direct the Secretary of Labor to promulgate regulations for a workforce training program for workers skilled in the nuclear utility and nuclear energy sectors. The bill amends the NWPA to revise contracting procedures for certain civilian nuclear power reactors.

Representative Jim Matheson (D-UT) introduced the Fulfilling U.S. Energy Leadership Act of 2008 (H.R. 6817) in August 2008. H.R. 6817 is designed to increase domestic energy production and diversify America's energy portfolio, including investments in nuclear energy. The bill would order a study and report to discuss the effect that expanding nuclear energy production would have on reducing greenhouse gases and reducing the cost of electricity. In addition, the bill encourages the Secretary of Energy to carry out the Nuclear Power 2010 Program, establishes an Interagency Working Group to facilitate the development

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of the nuclear industry in the United States, and encourages workforce training throughout the nuclear industry.

While still a member of the House of Representatives in September 2008, Mark Udall (D-CO), now a Senator, introduced the American Energy, American Innovation Act of 2008 (H.R. 7239). H.R. 7239 would provide appropriations to the NRC to establish an additional sixty full-time equivalent positions to expedite and streamline the processing of applications for new nuclear plants and establish an interagency working group to make recommendations to coordinate federal government actions and programs to promote increasing domestic manufacturing capacity and export of domestic nuclear energy products and services.

Representative Gresham Barrett (R-SC) introduced the Pathway to Nuclear Power Act (H.R. 7086) in September 2008. This bill is designed to help the United States meet its growing energy needs and strengthen the nation's energy security through the development of nuclear power. H.R. 7086 would amend the Energy Policy Act of 2005 to revise the terms and conditions governing the federal loan guarantees for innovative technology projects, modify the contract authority of the Secretary of Energy, convert the Nuclear Energy Research Initiative into the Nuclear Power 2010 program, and instruct the Secretary of Labor to promulgate regulations to implement workforce training programs for the nuclear industry. The bill would amend the AEA to revise administrative procedures for licensing new nuclear plants and amend the NWPA to establish the U.S. High Level Nuclear Waste Management Corporation.

Senator Michael Enzi (R-WY) introduced the Eight Steps to Energy Sufficiency Act of 2008 (S. 3523) in September 2008. The bill addresses the use of the Yucca Mountain site in Nevada for the storage of spent nuclear fuel and radioactive waste. Specifically, the bill would amend the NWPA to require that, in conjunction with the submission of an application for the construction of a storage facility, the Secretary must apply to the NRC for a license to construct and operate facilities to receive and store nuclear waste at Yucca Mountain. The NRC would then be required to make a decision within eighteen months of receiving the application. S. 3523 also provides tax credits for investments in nuclear power facilities and amends the Internal Revenue Code to include a five-year accelerated depreciation for new nuclear power facilities.

4. Safety and Security

In August 2008, then Senator Hillary Clinton (D-NY) introduced the Nuclear Facility and Material Security Act of 2008 (S. 3444), and Representative Edward Markey (D-MA) introduced the House version of this legislation (H.R. 6816). S. 3444 and H.R. 6816 are designed to minimize the risks involved if a terrorist attack were attempted at a nuclear power plant. The bill would require the NRC to issue a final rule requiring all commercial nuclear power reactors approved for construction after the date of enactment of this bill to be designed to withstand the impact of a large commercial aircraft. The bill also mandates that the configuration of spent fuel stored in spent fuel pools be arranged to minimize

the risk of fire. It would require spent nuclear fuel to be transferred into dry cask storage as soon as this may safely occur, and mitigation features to be installed at nuclear facilities that would help to cool stored spent fuel in the event of a terrorist attack.

In April 2009, Representative Nita Lowey (D-NY) introduced H.R. 1937, which would require the NRC to retain and redistribute certain amounts collected from safety-related fines. The bill would require the NRC to take the money it receives from nuclear facilities for fines and provide it to the surrounding counties to assist with maintaining their radiological emergency preparedness plans.

5. Thorium

In October 2008, Senator Orrin Hatch (R-UT) introduced the Thorium Energy Independence and Security Act of 2008 (S. 3680), which would encourage the use of thorium fuel in nuclear power generation. The bill would amend the AEA to direct the Secretary of Energy to establish and fund an office for the regulation of thorium fuel cycle nuclear power generation at both the DOE and NRC. The bill would also require the NRC chairman to promulgate regulations for facilities and materials used in thorium fuel cycle nuclear power generation. The bill was referred to the Senate Committee on Energy and Natural Resources.

In April 2009, Representative Joe Sestak (D-PA) introduced H.R. 2015, which instructs the Secretary of Energy to carry out a study on the use of thorium-fueled nuclear reactors by February 1, 2011. The study must include a response to the International Atomic Energy Agency's study on the potential benefits and challenges from the use of thorium.

6. Appropriations

In March 2009, President Barack Obama signed H.R. 1105, the Omnibus Appropriations Act of 2009. H.R. 1105 appropriates $792 million to the Department of Energy for expenses, including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for nuclear energy activities. Of that amount, $2,854,500 must be used for Congressionally Directed Nuclear Energy Projects.

H.R. 1105 includes $535,503,000 for necessary expenses in carrying out uranium enrichment facility decontamination and decommissioning, remedial actions, and other activities under the AEA and the Energy Policy Act of 1992. For nuclear waste disposal activities under the NWPA, H.R. 1105 allocates $145,390,000 to the Nuclear Waste Fund for the acquisition of real property or facility construction or expansion. Of that amount, $15,000,000 will be allocated to state and local governments in Nevada and California to fund oversight and licensing responsibilities. The bill also guarantees loans up to $47 billion for eligible projects under section 502 of the Congressional Budget Act of 1974, of which $18.5 billion will be for nuclear power facilities.

H.R. 1105 makes more than $1 billion available to the NRC for its expenses in carrying out the purposes of the Energy Reorganization Act of 1974 and the AEA. The bill requires that the estimated revenues from licensing fees, inspection services, and other collections, estimated at $860,857,000 for fiscal year 2009, be retained and used for necessary salaries and expenses. Therefore, the fiscal year 2009 appropriation is estimated at $173,799,000.

C. Judicial Activity

1. Spent Nuclear Fuel

Beginning in 1998, nuclear utilities began filing suits against DOE for its failure to remove SNF from reactor sites pursuant to the terms of the standard contract and the NWPA. The following discussion summarizes the aspects of each SNF decision that are unique to that decision.

a. Carolina Power & Light Co. v. United States

On May 19, 2008, the U.S. Court of Federal Claims awarded over $82 million in damages to Carolina Power & Light Co. and Florida Power Corp. (collectively Progress Energy) for costs incurred in the storage of SNF at four nuclear power plants in North Carolina, South Carolina, and Florida.[1] The court disallowed Progress Energy's claims for designing, constructing, and replacing spent fuel racks and for upgrading a water system.

On June 19, 2008, the court granted in part and denied in part the government's motion for reconsideration of the $82 million damages award.[2] The court rejected the government's request for a reduction of $260,037 in railroad track maintenance costs but agreed to reduce the damages by $42,295 and $14,342 for overhead costs and AFUDC charges, respectively.

b. Dairyland Power Cooperative v. United States

On July 2, 2008, the U.S. Court of Federal Claims rejected the government's motion for summary judgment regarding the portion of Dairyland Power Cooperative's claim for damages for costs incurred in developing private off-site alternatives for storage of SNF as a result of the government's breach of the standard contract.[3] In an attempt to develop private fuel storage (PFS), Dairyland created Genoa Fuel Tech, Inc. (GFT), a separate legal entity. The government contended that the investment in PFS made by GFT could not be an element of Dairyland's damages as a matter of law, because GFT was not in privity of contract with the government. The court held that GFT's lack of privity did not preclude Dairyland from arguing that GFT's investment in PFS is recoverable.

1. Carolina Power & Light Co. v. United States, 82 Fed. Cl. 23 (2008).
2. Carolina Power & Light Co. v. United States, 82 Fed. Cl. 317 (2008).
3. Dairyland Power Coop. v. United States, 82 Fed. Cl. 379 (2008).

c. Pacific Gas and Electric Co. v. United States

On August 7, 2008, the Federal Circuit held that the trial court erred in its determination of the acceptance rate used to calculate damages owed to Pacific Gas & Electric Co. (PG&E) by the government for its failure to dispose of PG&E's SNF.[4] The court held that in setting the rate at which the DOE was obligated to begin accepting SNF from PG&E, the Court of Federal Claims improperly relied on an express mechanism set forth in the standard contract for determining the acceptance rate beginning in 1991. The court directed the trial court on remand to recalculate the damages based upon a 1987 acceptance rate.

d. Yankee Atomic Electric Co. v. United States

On August 7, 2008, the Federal Circuit reversed and remanded the trial court's assessment of damages owed to Yankee Atomic Electric Company, Maine Yankee Atomic Power Company, and Connecticut Yankee Atomic Power Company (collectively Yankees) for the government's failure to dispose of the Yankees' SNF.[5] The court held that the trial court failed to set forth a clear acceptance rate to calculate the damages owed to the Yankees, and the acceptance rate used by the trial court was not based upon an evaluation of whether the Yankees would have pursued dual-purpose dry storage even if the government had timely performed. Accordingly, the court ordered the trial court to determine and apply the SNF acceptance rate under the standard contract.

e. Delmarva Power & Light Co. v. United States

On September 18, 2008, the Federal Circuit upheld the government's authority to waive the prohibition in the Anti-Assignment Act against the assignment of claims against the government and validate an otherwise prohibited assignment.[6] Delmarva Power & Light Co. and Atlantic City Electric Co. entered into written contracts with Public Service Electric and Gas Company (PSEG) agreeing to transfer to PSEG their interests in certain nuclear plants, which included all claims of Delmarva and Atlantic City relating to DOE's breach of the standard contract. The court held that the claims assigned included the takings claim, and that the government had the authority to accept the assignment to PSEG by waiving the Anti-Assignment Act's prohibition.

f. Dominion Resources, Inc. v. United States

On October 15, 2008, the U.S. Court of Federal Claims allowed damages incurred prior to one plaintiff's acquisition of the nuclear plant, reasoning that the assignment provision in the NWPA and standard contract created an exception to the Anti-Assignment Act.[7]

4. Pacific Gas & Elec. Co. v. United States, 536 F.3d 1282 (Fed. Cir. 2008).
5. Yankee Atomic Elec. Co. v. United States, 536 F.3d 1268 (Fed. Cir. 2008).
6. Delmarva Power & Light Co. v. United States, 542 F.3d 889 (Fed. Cir. 2008), *petition for cert. filed* (U.S. Dec. 17, 2008) (No. 08-790).
7. Dominion Resources, Inc. v. United States, 84 Fed. Cl. 259 (2008).

g. Consumers Energy Co. v. United States

On September 30, 2008, the U.S. Court of Federal Claims granted the government's motion to dismiss as to Consumers Energy's claim that DOE's actions regarding SNF were a taking of Consumers' vested contract rights.[8] The court reasoned that Consumers has no rights to SNF removal apart from the standard contract and noted the contract claim's viability. The court held that Consumers retains its full range of remedies for breach of contract, so DOE's breach does not constitute the taking of a vested contract right.

2. NRC Licensing

a. Massachusetts v. United States

On April 8, 2008, the First Circuit denied Massachusetts' claim that the NRC committed statutory violations when it dismissed Massachusetts from a license renewal proceeding for two nuclear power plants owned by Entergy that were located within ten miles of the Massachusetts border.[9] Massachusetts attempted to gain party status in the license renewal proceeding to ensure that the NRC would address the state's safety concerns regarding the disposition of SNF. The NRC claimed that Massachusetts was required to forego its attempt to gain party status in the proceeding and instead participate in the proceeding as an interested governmental entity in order to petition the agency to delay the issuance of the renewal licenses. The court agreed with the NRC and denied the petition because Massachusetts failed to exhaust its administrative remedies first before seeking a resolution from the court.

b. Spano v. NRC

On September 19, 2008, the Second Circuit affirmed the NRC's decision to deny petitioners' request that the NRC amend its regulations to require that an applicant seeking a renewal of a nuclear power plant license be held to the same standards as those required of an initial license.[10] The petitioners challenged the NRC's decision for: (1) not allowing petitioners to supplement their petitions; (2) not holding a hearing on the application; (3) improperly relying on the presence of other administrative remedies; and (4) not considering new information raised by petitioners. The Second Circuit upheld the NRC's decision to deny the petitioners' request because it could not conclude that the NRC's decision was arbitrary and capricious.

c. New Jersey v. NRC

On May 21, 2008, the Third Circuit dismissed for lack of jurisdiction New Jersey's petition for review of the NRC's denial of its request for a hearing.[11] New

8. Consumers Energy Co. v. United States, 84 Fed. Cl. 152 (2008).
9. Massachusetts v. United States, 522 F.3d 115 (1st Cir. 2008).
10. Spano v. NRC, Nos. 06-5140, 07-1559, 07-1756, 2008 U.S. App. LEXIS 20017 (2nd Cir. May 21, 2008).
11. New Jersey v. NRC, 526 F.3d 98 (3rd Cir. 2008).

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Jersey requested a hearing to seek rescission of portions of an NRC guidance document, NUREG-1757, which addresses how licensees can satisfy certain decommissioning requirements. New Jersey's petition for review of NUREG-1757 was directly related to the state's challenge of two decommissioning plans filed by Shieldalloy Metallurgical Corporation. New Jersey also challenged the legality of portions of NUREG-1757. The court concluded that it lacked jurisdiction over these claims because NUREG-1757 is not a final order and does not determine any rights or obligations of any party. The court also concluded that it had no jurisdiction to address New Jersey's assertion that the NRC was required to issue an environmental impact statement in conjunction with its issuance of NUREG-1757.

d. New Jersey Department of Environmental Protection v. United States

On March 31, 2009, the Third Circuit held that, when reviewing an application to renew the license for a nuclear power facility, the NRC is not required to examine the environmental impact of a hypothetical terrorist attack on the facility.[12] The NRC denied a request by the New Jersey Department of Environmental Protection (NJDEP) to intervene in the Oyster Creek Nuclear Generating Station relicensing proceeding. NJDEP argued that the National Environmental Policy Act (NEPA)[13] required such analysis. The court, agreeing with the NRC, found that the causal link between the relicensing and an aircraft terrorist attack was too attenuated to require NEPA review. The court further held that even if NEPA required such a review, the NRC had already completed the review through its generic environmental impact statement (GEIS) and site-specific supplemental environmental impact statement (SEIS), which analyzed alternatives at Oyster Creek to mitigate severe accidents.

3. Radioactive Waste Disposal

a. United States v. Manning

On May 21, 2008, the Ninth Circuit rejected the State of Washington's appeal of the trial court's holding that the Cleanup Priority Act (CPA), a Washington statute, is invalid in its entirety because it is preempted by the AEA.[14] The CPA was enacted to prevent the addition of new radioactive and hazardous waste to the Hanford Nuclear Reservation in Washington until the cleanup of existing contamination had been completed. The court held that the CPA was preempted because it regulated within the same field, radiation hazards and radiological safety, occupied by the AEA.

12. N.J. Dep't of Envtl. Prot. v. United States, No. 07-2271, 2009 U.S. App. LEXIS 6978 (3d Cir. Mar. 31, 2009).
13. 42 U.S.C. § 4321 *et seq*,
14. United States v. Manning, 527 F.3d 828 (9th Cir. 2008).

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b. Washington v. Chu

On March 10, 2009, the Ninth Circuit affirmed the district court's grant of the State of Washington's motion for summary judgment,[15] finding that the mixed transuranic waste (TRUM) at the Hanford site designated for the Waste Isolation Pilot Plant (WIPP) was not exempt from the State's Hazardous Waste Management Act (HWMA)[16] and its implementing regulations. DOE argued that it no longer had an obligation under HWMA, because the WIPP Land Withdrawal Amendment Act of 1996[17] provided an exemption to the prohibition against storing untreated TRUM with waste designated for disposal at WIPP, which DOE argued included waste at other facilities that would eventually be disposed at WIPP. The Ninth Circuit held that the exemption applied only to waste physically at WIPP, and the statute did not contemplate the exemption would affect TRUM at other facilities not yet at WIPP.

4. Low Enriched Uranium Processing

On January 26, 2009, the U.S. Supreme Court held the Department of Commerce reasonably treated separative work unit (SWU) contracts as sales of goods for the purposes of the antidumping provision under section 731 of the Tariff Act.[18] A uranium enricher argued that the antidumping provision did not apply to contracts for services. SWU contracts are predicated on the legal fiction that a utility buyer of low enriched uranium (LEU) pays cash for the SWU used to process the feed uranium into LEU and receives back from the enricher the same feed uranium it sent in, but in the form of an LEU. Noting the Department is not bound by the parties' private contractual interpretation, the Court found the Department's position that the transaction was a sale of goods rather than services reasonable because the feed uranium the utilities sent in was a fungible commodity that was untracked once received by the enricher, and the enrichment process resulted in substantial transformation of the feed uranium.

5. Cost-Benefit Analysis in EPA's Cooling Water Intake Structure Regulations

On April 1, 2009, the U.S. Supreme Court held that the Environmental Protection Agency (EPA) permissibly relied on cost-benefit analysis in promulgating regulations under section 316(b) of the Clean Water Act, 33 U.S.C. § 1326(b).[19] The EPA set national performance standards for cooling water intake structures for existing facilities that are point sources, whose primary activity is the generation and transmission of electricity, with the purpose of reducing the impingement and entrainment of aquatic organisms (Phase II). In declining to mandate adop-

15. Washington v. Chu, 558 F.3d 1036 (9th Cir. 2009).
16. Wash. Rev. Code §§ 70.105.020, 70.105.030.
17. Pub. L. 104-201.
18. United States v. Eurodif S. A., 129 S. Ct. 878 (2009).
19. Entergy Corp. v. Riverkeeper, Inc., 129 S. Ct. 1498 (2009).

tion of closed-cycle cooling systems or equivalent reductions in impingement and entrainment, EPA considered the cost of converting Phase II facilities to closed-cycle cooling systems and the related loss of generating capacity. The rules also allow Phase II facilities to seek a variance where the costs of compliance are significantly greater than the costs EPA considered when setting the standards. The Second Circuit rejected the EPA's use of cost-benefit analysis. The Supreme Court granted certiorari to review the limited question of whether section 316(b) authorizes EPA to compare costs with benefits in determining the best technology available for minimizing adverse environmental impact at cooling water intake structures. The Supreme Court held that the EPA's limited use of cost benefit analysis in line with its prior practice was reasonable and thus was permissible.

D. Administrative Activity

1. Nuclear Regulatory Commission Policy, Practices, and Procedures

a. COL Applications

To date, the NRC has received seventeen COL applications for twenty-six new nuclear units. The NRC has completed its acceptance review for all of the applications, all of which been accepted for docketing. Technical and environmental reviews are underway. Several adjudicatory proceedings involving the proposed new reactors are ongoing.

b. DOE Loan Guarantees

In response to its June 30, 2008, solicitation, DOE announced in October 2008 that seventeen electric power companies submitted nineteen applications for federal loan guarantees to support the construction of fourteen nuclear power plants. The applications reflect the intentions of those companies to build twenty-one new reactors, with some applications covering two reactors at the same site. All five reactor designs that have been certified, or are currently under review for possible certification, by the NRC were represented in the applications. DOE later winnowed the list of applicants to five finalists, none of which have been announced publicly. Secretary of Energy Steven Chu stated that changes in the loan guarantee program should allow the first loan guarantees for new reactors to be awarded by May 2009.

c. Design Certification Rulemaking Process

On January 30, 2009, the NRC staff issued SECY-09-0018 to inform the Commission of its progress on streamlining the design certification rulemaking (DCR) process for new reactor designs, Ten COL applications are currently docketed incorporating designs that have been submitted to the NRC for certification. As a result, the NRC staff is reviewing COL applications in parallel with the NRC's review of the design certification applications. Because the DCR must be completed before the NRC can make a decision on the COL application using that design, a delay in the completion of the COL hearing process could result. The

NRC staff has revised the process to shorten the DCR schedule 19.5 months to 12.5 months.

d. Status of License Renewal Applications

To date, the NRC has issued operating license renewals for fifty-one nuclear units. Currently, applications for fourteen units are under review. In accordance with 10 C.F.R. § 2.109, a renewal application must be submitted at least five years before the expiration of the license in order to ensure that the plant can operate uninterrupted during the renewal process.

e. Limited Work Authorizations

The NRC developed interim staff guidance to address the Commission's limited work authorization (LWA) rulemaking, which took effect on November 8, 2007. The major change was the revision of the definition of construction in 10 C.F.R. § 50.10(a) to exclude those activities that have no reasonable nexus to radiological health and safety or common defense and security (e.g., site clearing and grading). The guidance addresses the definition of construction and the delineation of pre-construction activities and those activities requiring prior approval of the NRC.

The definition of construction specifically excludes excavation. Excavation activities, such as the removal of any material below the final ground elevation to the final parent material, may be conducted without NRC approval. Excavation activity, however, does not include the placement of permanent, nonstructural dewatering materials, mudmats, or engineered backfill in anticipation placing the foundation and associated permanent retaining walls. These are considered to fall within the scope of construction. Construction further includes installation of the foundation; the installation of permanent drainage systems; the placement of backfill, concrete, or other materials that will not be removed before placement of the foundation of a structure; the placement and compaction of a subbase; the installation of reinforcing bars to be incorporated into the foundation of the structure; the erection of concrete forms for the foundations that will remain in place permanently; and the placement of material constituting the foundation of any systems, structures, and components within the scope of the definition of construction.

f. Commission Approves Aircraft Impact Final Rule

On February 17, 2009, the NRC approved a final rule requiring all new nuclear power plant applicants to analyze whether the design features of their facility could avoid or mitigate the impact of a large commercial aircraft. The NRC does not believe reactor operators should be required to prevent an aircraft strike, but the Commission is working with other agencies to provide layered protection against such a threat. The final rule requires applicants to show they have incorporated design features and functional capabilities so that even if an aircraft crashes into a nuclear power plant, the reactor core would remain cooled or the containment structure would remain intact. In addition, applicants must demonstrate that the spent fuel cooling or spent fuel pool integrity would be maintained. The rule was expected to be published by June 2009.

g. Power Reactor Security Rulemaking

On March 27, 2009, the NRC issued a final rule amending its security regulations and adding new security requirements pertaining to nuclear power reactors.[20] Key elements of the new rule include safety-security interface requirements that explicitly require licensees to manage potential conflicts between security considerations and other plant activities that could compromise plant security or safety; enhancements to the normal radiological sabotage-based physical security requirements via the new requirement that mixed-oxide fuel be protected from theft or diversion; cybersecurity requirements designed to ensure that digital systems and networks are adequately protected; a new regulatory framework to facilitate consistent application of NRC requirements for mitigation strategies and response procedures for potential or actual aircraft attacks; strengthening of many elements of the preexisting access authorization program requirements; and training and qualification enhancements. The final rule became effective May 26, 2009. For current 10 C.F.R. pt. 50 licensees, compliance with the final rule is required by March 31, 2010. However, current licensees are required to submit their cybersecurity plans within 180 days of the effective date of the rule.

h. Waste Confidence Decision Update

On October 9, 2008, the NRC published in the *Federal Register* a proposed rulemaking to revise its generic determination on the environmental impact of spent fuel storage in conjunction with an update to its Waste Confidence Decision. The proposed rule would amend 10 C.F.R. § 51.23(a) to state the NRC's finding that spent fuel can be stored safely, without significantly affecting the environment, until a disposal facility is available. The NRC also proposes revising Findings 2 and 4 of its Waste Confidence Decision. The objectives of Finding 2 were to predict when a repository for spent fuel would be available for use and how long spent fuel would need to be stored on a reactor site pending the opening of the repository. Finding 4 reflects the NRC's confidence that spent fuel can be stored safely for several decades without impacting the environment. Based on its review of spent fuel pools and dry cask storage, post-9/11 security enhancements, and study results, the NRC would like to revise Finding 4 to state that spent fuel can be stored safely for at least sixty years beyond the life of a reactor's license in spent fuel storage basins or dry storage facilities.

2. Enforcement

On January 2, 2006, the NRC staff issued to David Geisen, a former engineer at the Davis-Besse nuclear plant, an order prohibiting him from any involvement in NRC-licensed activities for five years. The NRC staff requested and received a stay of the enforcement proceeding until after the conclusion of the criminal

20. Final Rule, Power Reactor Security Requirements, 74 Fed. Reg. 13,926 (Mar. 27, 2009).

proceeding, as many of the same facts and issues were involved. Geisen was convicted on three criminal counts in federal court in October 2007, sentenced to four months of home confinement with electronic monitoring, three years of probation, 200 hours of community service, and a $7,500 fine. His former colleague, Andrew Siemaszko, was also convicted on three criminal counts for his involvement in inaccurate reporting to the NRC. In June 2008, Geisen requested that the hearing on the order be reinstated. The Licensing Board held a hearing in the enforcement proceeding from December 8-12, 2008. The Board held additional oral argument on March 3, 2009. To date, the Board has not yet issued its ruling.

The NRC's investigation into the security guard lapses at the Peach Bottom facility culminated in a $65,000 fine levied against Exelon Generation, LLC in January 2009 for a deliberate breach of the agency's security requirements. The NRC determined that select security guards willingly abrogated their responsibility to report observed instances of inattentive behavior. The NRC launched a range of inspections and investigations in September 2007 after video recordings of inattentive security officers came to light. Separately, the NRC initiated a lessons-learned assessment to identify potential improvements in its allegation review processes. The review team developed recommendations for improvements to the allegation policies and practices and to the inspection program, aimed specifically at enhancing the NRC's ability to identify conditions of inattentiveness. Subsequently, the NRC issued Allegation Guidance Memorandum (AGM) 2008-001, Interim Guidance in Response to Lessons Learned from the Allegation Assessment of Inattentive Security Officers at Peach Bottom Atomic Power Station. The AGM is designed to provide interim guidance to the NRC staff responsible for handling allegations.

Effective September 10, 2008, the Commission approved an extension of the enforcement discretion period on a case-by case basis for licensees making the transition to the risk-informed National Fire Protection Association Standard 805.[21] The enforcement discretion period was initially extended from two to three years on April 18, 2006. The Commission extended the enforcement discretion period in recognition of the fact that licensees need additional time to procure additional resources and develop fire probability risk assessments.

3. Important NRC Adjudication Developments

a. PG&E—CLI-08-26

The Commission in CLI-08-26 issued an order resolving the Diablo Canyon independent spent fuel storage installation (ISFSI) proceeding on remand from the Ninth Circuit. Following remand, the NRC staff prepared a supplemental environmental assessment (EA) to address the likelihood and potential environmental consequences of a terrorist attack on the ISFSI. The San Luis Obispo Mothers for Peace challenged the EA supplement arguing that it failed to consider the

21. *See* 73 Fed. Reg. 52,705.

environmental impacts of land contamination and latent health effects. A majority of the Commissioners concluded that the NRC staff properly determined that the environmental impacts of the postulated terrorist attacks were not significant and, therefore, did not warrant preparation of a full-blown environmental impact statement (EIS).

b. Bellefonte—CLI-09-03

In CLI-09-03, the Commission reversed a Licensing Board decision admitting a contention regarding low-level radioactive waste (LLRW). The contention alleged that the applicant failed to offer a viable plan for disposal of LLRW because, as of June 30, 2008, the disposal facility in Barnwell, South Carolina, no longer accepted Class B and Class C LLRW from states outside the Atlantic Compact Commission (Connecticut, New Jersey, and South Carolina). According to the Commission, the Board erred in admitting the proposed contention because the contention constituted a collateral attack upon Table S-3. The Commission also declined to initiate a low-level waste confidence proceeding, reasoning that applicants have been safely managing low-level waste for years. Similar contentions have been admitted in four other proceedings and denied in at least one other.

4. High-Level Waste Storage and Developments

a. Docketing of Application Notice of Hearing; Petitions to Intervene

On September 8, 2008, the NRC accepted for docketing DOE's license application for the proposed high-level nuclear waste repository at Yucca Mountain. The Commission also adopted DOE's EIS, but requested that DOE supplement some aspects of its groundwater analysis. The decision triggered a three-year congressional deadline with a possible one-year extension for the Commission to decide whether grant a construction authorization. NRC officials have stated that this deadline is contingent on the NRC's receiving sufficient resources from Congress. In response to a notice of opportunity for hearing published in the October 22, 2008, *Federal Register*, fourteen petitioners seeking to intervene in the proceeding filed approximately 320 proposed contentions. Three NRC Atomic Safety and Licensing Boards conducted oral arguments in the proceeding from March 31 to April 2, 2009. The Boards will issue rulings on the petitioners' standing and the admissibility of the proposed contentions.

b. Final Rule on Dose Standard After 10,000 Years

On March 13, 2009, the Commission published in the *Federal Register* a final rule on Implementation of a Dose Standard After 10,000 Years.[22] The rule incorporates the EPA's site-specific radiation dose standards for a high-level nuclear waste repository at Yucca Mountain, as required by the Energy Policy Act of 1992. The final rule amends 10 C.F.R. pt. 63 to retain EPA's standard dose limit

22. *See* 74 Fed. Reg. 10,811.

for individuals of fifteen millirem for the first 10,000 years after disposal and adopts EPA's 100 millirem dose limit for the period after 10,000 years and up to one million years. The final rule also follows the EPA by specifying a range of values for the deep percolation rate to be used to represent climate change after 10,000 years. Further, the final rule specifies that calculations of radiation doses for workers will be made using the same weighting factors that EPA is using to calculate individual doses to members of the public. The final rule became effective April 13, 2009.