



Finance and Insurance Considerations for Long-Term Stewardship and Transfer of Contaminated DOE Property at Miamisburg, Ohio

Prepared for the

United States Department of Energy
Ohio Operations Office

By

Pacific Rim Enterprise Center

August 2000



PACIFIC RIM ENTERPRISE CENTER

THE MARITIME BUILDING, SUITE 508 • 911 WESTERN AVENUE • SEATTLE, WASHINGTON 98104-1047

Finance and Insurance Considerations for Long-Term Stewardship

Clarifying the liability limits would aid MMCIC and its potential commercial partner(s) to determine how much and what type of insurance is needed.

The report identifies no major issues or areas of concern for DOE-Ohio and the current transfer/redevelopment process. However, there are some minor needs DOE-Ohio could address:

- identifying and developing technologies that will improve the performance and predictability of land use controls;
- educating select financial and insurance companies about radiological contamination and clarifying federal liability; and
- exploring possible land use control failure scenarios to determine the limits of DOE liability and to clarify the role of private insurance.

While financing will have to be creative, and insurance better defined, there seems to be no major financing or insurance barriers to the future transfer of MMCIC.

Table of Contents

Executive Summary	i
Table of Contents	iii
Introduction	1
Background	2
Approach	3
Financial Institutions.....	3
Insurance Industry.....	3
Others.....	3
Technical Issues	5
Cleanup Technology	5
Information	5
Land Use Controls	6
Access to Financing and Insurance	8
Insurance.....	8
Financing	8
Other Sources of Aid	10
Conclusion	11
Appendix A: References	12
Appendix B: Contact List	13
Appendix C: Glossary	14

Background

DOE-Mound developed a land-transfer process in coordination with the U.S. Environmental Protection Agency (U.S. EPA), Ohio Environmental Protection Agency (Ohio EPA) and MMCIC. The *DOE-Mound Land Transfer Process* report (DOE 1999) provides a detailed description of Mound's property transfer process. This summary is not intended to fully represent the intricacies of the process, but to provide a broad overview of the details that are relevant to the financial and insurance industry.

In January 1998, DOE sold the Mound Facility to MMCIC to support economic redevelopment in the city of Miamisburg, Ohio. The sales price was \$10.00, with the land transfer to be performed in release blocks subject to approval by DOE-Mound, U.S. EPA and Ohio EPA.

The sales contract establishes that DOE will transfer each parcel through a quitclaim deed (i.e., a deed that transfers the owner's interest to a buyer but does not guarantee that there are no other claims against the property). The deed does not contain a warranty, therefore MMCIC takes the land "as is." DOE retains the liability associated with cleaning up any past practice contamination that is discovered in the future. DOE is remediating the facility to an industrial use standard, and the deed requires that MMCIC develop the property in a manner consistent with the industrial use standard. The deed also imposes land use controls on MMCIC including restrictions on land use, use of groundwater, and the removal of soil. In addition, the deed requires that DOE and its agents continue to have access to the property.

To strengthen the working relationship between the two transferring parties, DOE and MMCIC signed a Memorandum of Agreement (MOA) to assure that each party supports the other party's mission. MMCIC will work with DOE to minimize costs associated with the cleanup of the site while remaining protective of the public health. DOE is tasked with supporting an economic redevelopment initiative that integrates DOE's Exit Plan – a strategy for DOE to reduce or eliminate its ownership of the site – with MMCIC's Comprehensive Reuse Plan, which establishes a reasonably anticipated future land use based on industrial standards. DOE has also agreed to provide MMCIC with documentation, such as the draft Record of Decision (ROD), at the same time it is distributed to U.S. EPA and Ohio EPA, even though DOE is under no legal obligation to provide these documents until after the regulatory review.

Selection of remediation alternatives will follow a traditional Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA) process with the exception that instead of designating "Operable Units," which normally include several Potential Release Sites (PRSSs), the process addresses individual PRSSs. DOE will develop a ROD and provide it to the regulators for review and revision. After the ROD is finalized, an Environmental Summary will be prepared that fulfills requirements set forth in CERCLA and the land transfer process. DOE will revise the Summary based on comments from U.S. EPA, Ohio EPA, and the public, including MMCIC.

After issuing the approved ROD and Environmental Summary, DOE will submit a letter to U.S. EPA requesting approval to transfer the land. Upon U.S. EPA approval, DOE can transfer the land by executing the quitclaim deed with MMCIC. MMCIC has the ability to defer the transfer, though deferrals cannot extend beyond DOE's exit date of 2006.

Approach

There are a number of financial institutions and insurance companies that are active in brownfield financing and environmental insurance. The following is a discussion of the selection process for the financial institutions and insurance companies that were interviewed for this study. Other interview resources are also identified.

Financial Institutions

Financial institutions that provide brownfield financing were identified through Internet research. Finance sources for this study were selected based upon two criteria: experience with brownfield financing and geographic proximity. Because of the Community Reinvestment Act (1977, 12 U.S.C. 2901), banks are given credit for investing in their local communities; therefore, banks with branches in Miamisburg may be more likely to finance redevelopment efforts such as MATC. Early investigations indicated that several institutions had discontinued brownfield financing while others had just begun new programs. As a caveat, it should be noted that these programs are transitory in nature and reflect changing market conditions; the financial institutions noted in this report may change their loan criteria or selection process in the future.

Bank of America was selected because it is the largest commercial financier of brownfields in the nation. Bank of America has also published several reports on issues associated with private brownfield financing.

Key Bank, Bank One and Fifth Third were selected because they have branches in Miamisburg and existing brownfield financing programs. The Financing Initiative for Environmental Restoration (FIER) was selected as an alternative-financing pathway. FIER, created by an entrepreneurial nonprofit called the Development Fund, was established to develop innovative financing in order to access investments for cleanup and redevelopment of contaminated lands in urban and disadvantaged areas.

Insurance Industry

Prior to 1996, only three companies provided environmental insurance: AIG, Zurich, and Reliance. The market broadened somewhat in 1996 with the addition of Kemper and United Capitol (Neuman 1998). Now, there are many providers and most insurance companies provide some form of environmental insurance. Pacific Rim used insurance companies with the longest history in the environmental insurance industry. This list also closely coincided with contacts provided by DOE.

AIG and Zurich were selected based on their history in the industry and familiarity with DOE and its contamination problems. United Capitol was selected because its environmental division is located in Ohio. Kemper was chosen because its Internet site provided a large amount of detailed information. Several sources indicated that Marsh Insurance Services would also be a good source of information.

Others

Several other interested parties were interviewed as part of this report, including: Mike Grauwelman, President of MMCIC; Joe Dufficy, Brownfield Director EPA Region 5; Claire

Sink, DOE Headquarters, Office of Science and Technology; and Susan Hollinghead, Managing Director for Greenfield International. These individuals provided sources of brownfield information, additional information relevant to DOE sites, points of contact, and specific information on Miamisburg.

While the interviews were not inclusive of the hundreds of firms, entities and organizations that provide insurance, financing, policy development, regulations, or consulting for brownfield redevelopment and the transfer of federal facilities, the report does capture the responses of recognized leaders in the field, such as Bank of America and AIG insurance. This research was limited and did not investigate restrictions from DOE's own transfer policy; it was assumed that DOE-Ohio has already considered any barriers to future activities in the development of the Mound transfer process (US DOE 1999). Also, banks and insurance companies normally limit their time horizons to approximately 20 years or less, though real estate equity transactions can last as long as 30 years. This limited time horizon is much different than the time horizon for the liability that DOE faces, in some cases measured in thousands of years. This difference in time horizons limits the use of private sector principles to address some DOE long-term stewardship problems.

Appendices to the report provide a point of contact list, references, and a general glossary.

Technical Issues

Pacific Rim investigated three types of technical issues where technology could play a role in supporting the financing or insuring of MATC: cleanup technology, information requirements, and land use controls.

Cleanup Technology

Historically, most DOE technology needs have focused on needs related to cleanup, primarily characterization and remediation. Interviews with the insurance companies and financial institutions revealed that there were no unique requirements for the use of particular technologies. Their primary requirement was that selected technologies be approved by the relevant regulatory agencies at Mound – Ohio EPA and U.S. EPA. If the regulators approve the technologies, then the banks and insurers will most likely accept the technologies. Technology selection is driven through the development, review, and approval of the ROD.

Insurers are only concerned about the selection of remediation technology if they are providing insurance instruments such as Remediation Stop Loss or Environmental Impairment Liability. In these cases, the insurer will want a higher degree of comfort with the remediation alternative. DOE uses other mechanisms by which to allocate risk of cost escalation or risk of further damage to the environment and does not rely on private insurance. It appears that there are no unique characterization or remediation technology needs driven by the concerns of financial or insurance companies relevant to the remediation and transfer of the Mound facility.

Information

The lack of information about contaminated property can increase the cost of both financing and insurance. Pacific Rim investigated information needs for the financial and insurance industries in comparison to the Environmental Summary that is delivered to MMCIC as part of the DOE-Mound Land Transfer Process.

In private practice, many brownfield redevelopment projects occur with only a Phase I Environmental Site Assessment. More thorough information through a Phase II Environmental Site Assessment is normally not available because the cost is often prohibitive when compared to the value of the land (Henry 1997). Private companies may also call for an "ASTM E1527 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," or an "ASTM E1528 Standard Practice for Environmental Site Assessments: Transaction Screen Process." Both are intended to define good commercial and customary practice for the assessment of commercial real estate, but neither goes beyond a Phase I Environmental Site Assessment.

The Environmental Summary fulfills requirements under both CERCLA and the DOE-Mound Land Transfer Process and includes a property description, summary of historical uses, environmental findings, summary of other factors (a DOE check list to support land transfer), Finding of Suitability to Transfer (which includes a description of deed restrictions), the Final ROD, and notifications of wetlands, flood plains, and cultural resources. The ROD is detailed and includes information on site characteristics such as geologic and hydrogeologic setting, contaminant data, exposure and toxicity assessment, remediation alternative, and risk characterization (US DOE 1999).

Kemper Insurance was the only company that provided a list of their typical requirements, which include a final remediation report, data on what was left on site, action of cleanup level, future site uses (including potential future sales and leases), copy of the purchase sales agreement, balance of liabilities, listing of institutional controls, and deed restrictions (Ayers 2000). The list is more detailed than what would normally be expected from a Phase I or Phase II Site Assessment but less stringent than the information assembled in the Environmental Summary, with the exception of specific information on the borrower.

According to the companies interviewed, the Environmental Summary should meet all the information requirements for insurance and financing purposes, though no company performed a formal review of the information. Furthermore, the Finding of Suitability to Transfer (approved by the U.S. EPA) and the ROD (approved by U.S. EPA and Ohio EPA) would seem to provide liability protection to any future purchaser, similar to Covenants Not to Sue and No Further Action Letters, which are standard in many brownfield financing projects. Several companies were interested in conducting additional reviews of the information to determine potential financing and insurance avenues. Pacific Rim believes that further detailed work with specific banks and insurance companies should be in response to a specific proposal and led by MMCIC and their potential commercial partner(s).

Land Use Controls

The EPA provides the following definition of land use controls (EPA 1998):

The term "Land Use Control" or "LUC" in regard to real property on federal facilities should be broadly interpreted to mean any restriction or control, arising from the need to protect human health and the environment, that limits use of and/or exposure to any portion of that property, including water resources. This term encompasses "institutional controls," such as those involving real estate interests, governmental permitting, zoning, public advisories, deed notices, and other "legal" restrictions. The term may also include restrictions on access, whether achieved by means of engineered barriers such as a fence or concrete pad, or by "human" means, such as the presence of security guards. Additionally, the term may involve both affirmative measures to achieve the desired restriction (e.g., night lighting of an area) and prohibitive directives (no drilling of drinking water wells). Considered altogether, the "LUCs" for a facility, in conjunction with the base master plan, will provide a blueprint for how its property should be used in order to maintain the level of protectiveness which one or more remedial/corrective actions were designed to achieve (underline added).

Insurers are particularly concerned about the applicability, acceptability, enforceability, and workability of LUCs because insurers may be exposed to liability through the failure of a LUC (Patton 2000). Technology obviously plays a role in ensuring that physical restrictions, such as fences and surface barriers, are working to keep people out and contamination in. However, there is also a need to look for technical or technology solutions that enforce institutional controls, such as computerized systems that look for physical activity or that review building permit requests in order to prevent well drilling, unapproved access, or other forms of unacceptable use. Technical solutions will help take the uncertainty out of LUCs, reducing insurance and financing costs. DOE-Ohio may wish to broadly define environmental remediation needs to include

Finance and Insurance Considerations for Long-Term Stewardship

technologies useful for enforcement of LUCs, such as seismic sensors to detect digging and well drilling, automated response triggers that review local activity (i.e. zoning changes or construction permits) for potential conflicts with LUCs, or even devices that can detect when certain soils or materials are being taken off site.

Access to Financing and Insurance

During interviews, several issues arose that may not require particular action by DOE-Ohio, but will impact a MATC purchaser in their ability to obtain financing or insurance as well as the cost of financing and insurance. The companies that raised issues often provided potential solutions, and these are presented below.

Insurance

Kemper Environmental foresaw no unique problems with MMCIC or a commercial partner obtaining any form of environmental liability insurance (Ayers 2000). AIG Environmental noted they would have to take out standard exclusionary language for radiological contamination issues, but they did not view the Mound facility as different than any other industrial site (Joy 2000). Both representatives from Kemper and AIG were familiar with DOE, its operations, and its cleanup challenges.

Zurich US Specialties remarked that, by law, DOE is required to maintain liability for nuclear waste and waste by-products created during energy and weapons production. Since DOE would be retaining liability in these areas and because of statutory indemnification provided to private parties associated with these types of activities, the scope of coverage to be provided by insurance companies would be limited. Several insurance alternatives include Environmental Impairment Liability, which covers third party injury and property damage for non pre-existing conditions. Insurance companies could also provide Responsibility to Sue coverage, which covers the insured if the indemnifier defaults on its responsibility. With this type of coverage the insurance company pays the insured and then sues the indemnifier for damages. While this type of policy is possible, it is uncommon and is rarely offered. Insurance companies do not relish the idea of suing the federal government to collect damages (Patton 2000).

One issue that DOE may wish to address is determining liability in the event of a land use control failure. There are several scenarios where specific liability may come into question. If a tenant breaks a deed restriction that leads to the spread of historical contamination, an insurer would consider this a new condition and therefore part of their exposure. However, the site regulators may see this as a failure of the institutional control and reopen the ROD as well as require DOE to clean up the spread of contamination. If the contaminant is radiological, then this liability scenario becomes even more complex with the inclusion of DOE's liability under the Atomic Energy Act. There is no reason for MMCIC or its commercial partners to obtain coverage for a liability that remains with DOE. Resolving these liability issues will aid MMCIC in transitioning the MATC to the private sector by specifying what and how much coverage is needed based on what remains the responsibility of DOE.

Financing

Key Bank and Bank of America provided the most detailed and responsive answers during interviews. Other banks and institutions interviewed were either at such an early stage of program development that they were not directly helpful (FIER), or the banks' community development departments were unresponsive (Bank One and Fifth Third).

Key Bank readily admitted the dominance of Bank of America as the premier financier of brownfield redevelopment. Key Bank is positioning itself to become the brownfield financing

leader in the Midwest, or in their words, “the Midwest Bank of America.” Due to Mound’s geographic proximity to Key Bank’s Miamisburg branch, MMCIC and potential commercial partners may be more likely to deal with Key Bank as a potential commercial lender. Key Bank has just started their brownfield-financing program and they are currently developing their underwriting criteria. They noted requirements for cleanup certification and insurer certification, for which they recommended AIG. Key Bank encouraged greater communication between its institution and MMCIC and their potential commercial partner. They gave the impression that they are eager to fund brownfield projects (Staneff 2000).

Bank of America was more wary about financing redevelopment of a former DOE facility than Key Bank. The institution has a great deal of experience in brownfield financing and was more apprehensive about the radiological contamination than any other entity interviewed. They felt that it would be virtually impossible to find any sort of traditional debt financing.

Bank of America believes there is a short list of banks with the requisite technical expertise to lend on properties that allow “traditional” contamination to remain in place as a result of a Risk Based Corrective Action (RBCA). Traditional contaminants include petroleum, chlorinated solvents, and heavy metals. Over the years, these banks have had enough experience working on sites with these contaminants to decrease their uncertainty – and therefore their perception of the risks – to an acceptable level. However, Bank of America felt that radiological contamination did not fall into the category of “traditional.” Therefore, a real estate secure loan would be unlikely, since no bank can reasonably estimate the valuation impact of the contamination, and this reduces the collateral value to a point that makes the amount available under the loan nearly meaningless. Even if alternate forms of collateral were substituted, third party health and safety issues and the potential impacts to cash flows that might arise out of any litigation would likely significantly decrease the opportunity to use a real estate secure loan financing route (Muller 2000).

As a potential solution, Bank of America recommended that MMCIC enter into long-term leases for the properties as opposed to selling them. If interest rates continue to rise, many prospective tenants may actually prefer a lease over buy option. If MMCIC did not want an amortized cash flow, but preferred an immediate pay out, they could sell the leases. Under this option, MMCIC would have to consider specific liability transfer mechanisms to cascade the DOE liability to successors and assignees when drafting the leases (Muller 2000). Bank of America also felt that informal discussions should take place between DOE and several financing and insurance entities to determine ways to move radioactive contamination into the “traditional” category.

DOE’s retention of liability for historical contamination is not well understood and provides little value in increasing banks’ comfort with radioactive contamination. Bank of America felt that banks were, in general, not recognizing federal indemnification at either DOE or Department of Defense facilities. The lack of recognition is in part due to the complex ways in which federal liability can be triggered and the extent of that liability. Also, banks have not made an effort to understand the federal system because of the less challenging and more profitable underwriting opportunities in other areas of the real estate market (Muller 2000). There may also be some terminology issues; the word “indemnification” may have different connotations in the DOE realm than it does in the financial realm.

Bank of America feels that discussions of federal indemnification could aid in financing and insuring former federal facilities, both for DOE and the Department of Defense, which is also

involved in federal facility re-use transfer activities. While this may not be classified as a "need," DOE Headquarters or another organization such as U.S. EPA's Federal Facilities Restoration and Reuse Office may wish to address it.

Other Sources of Aid

During Pacific Rim's initial interview, MMCIC was just beginning to look at financing and insurance that may be required for them to divest themselves from the industrial park. MMCIC was concerned that lending and insurance companies are very conservative in the Midwest and would not eagerly invest in the site (Grauwelman 2000). MMCIC may benefit from expert assistance specifically crafted for brownfield redevelopment. Groups such as Greenfield International (see Appendix B, contact list) provide comprehensive assistance for brownfield redevelopment and specialize in assisting municipalities in redeveloping contaminated lands. They can help MMCIC identify potential redevelopment partners, identify and assess financing, and help them review information provided by DOE.

Conclusion

Pacific Rim identified no major technology- or information-related issues associated with the transfer of the DOE-Mound facility to MMCIC that would prevent future insuring or financing. The following are opportunities that DOE-Ohio, as part of its Long-Term Stewardship Pilot Study, may wish to address that will assist in the future transfer of the Mound facility to the private sector. These opportunities include:

- Identification or development of technology and technical solutions that will increase the performance and predictability of Land Use Controls, both physical and institutional.
- Initiation of a dialogue with select financial institutions and insurance companies to reduce the private sector's uncertainty in dealing with radioactive contaminated lands and facilities. The discussion would include education about radiological contamination and definition and clarification of DOE liability and indemnification.
- Exploration of Land Use Control failure scenarios to determine the limits of the DOE liability and to clarify the role of private insurance.

Overall, private industry is more concerned about the financial viability of MATC than the environmental risk of redeveloping the Mound property. It seems that while the transition of Mound from a federal facility to a privately owned industrial park may be challenging, it is a realistic goal.

Appendix A: References

- Ayers, K., Kemper Insurance, Environmental Division, phone interview with Gary Ballew, June 2000.
- Grauwelman, M., Miamisburg Mound Community Improvement Corporation, phone interview with Gary Ballew, May 2000.
- Henry, E. C., Muller, R. A., "Brownfield Financing: Financial Institution Considerations for the Private Sector," *Brownfield News*, February 1997.
- Joy, T., AIG Environmental, phone interview with Gary Ballew, June 2000.
- Muller, R., Bank of America, Environmental Services, e-mail to Gary Ballew, June 15, 2000.
- Neuman, S., "Integrated Environmental Risk Management in Real Estate Transactions," *Environmental Claims Journal*, Fall 1998.
- Patton, L., Esq., "Land Use Controls: Impact on Insurability of BRAC Transfers," presentation at Eastern Stakeholder Federal Facilities Land Use Controls Forum, June 20, 2000.
- Patton, L., Esq., Zurich, Risk Management, interview with Gary Ballew, June 2000.
- Staneff, A., and Moy, G., Key Bank, phone interviews with Gary Ballew, July 2000.
- U.S. Department of Energy, "DOE-Mound's Land Transfer Process," December 1999.
- U.S. EPA Region 4, memorandum "Assuring Land Use Controls at Federal Facilities," April 13, 1998.

Appendix B: Contact List

Finance

Randy Muller
VP Environmental Services
Bank of America
(404) 607-4173
randy.muller@bankamerica.com

Bill Hinga
Community Development Corporation
Bank One
(614) 248-5765
william_hinga@mail.bankone.com

Greg Schroek
Commercial Real Estate
Fifth Third
(513) 579-5378
gregory.schroek@53.com

Alex Staneff
Ohio/Michigan Manager Community
Development
Key Bank
(216) 828-9091
alexander_staneff@keybank.com

Jennifer Burke
Program Manager, The Development Fund
Financing Initiative for Environmental
Restoration (FIER)
(415) 981-1070
tdfsf@aol.com

Information

Claire Sink
Worked with insurance industry on other
DOE projects
DOE, Office of Science & Technology
(301) 903-7928
claire.sink@em.doe.gov

Joe Dufficy
Brownfield Director
EPA Region 5
(312) 886-1960
Dufficy.Joseph@epamail.epa.gov

Susan Hollinghead
Managing Director
Greenfield International
(925) 952-9000
susanh@greenfield-intl.com
www.greenstart-intl.com

Mike Grauwelman
President
MMCIC
(937) 865-4462
mmcic@mound.com

Insurance

Tom Owen
Vice President Environmental
United Capitol
(770) 677-3339
town@ftr.com

Lindene Patton
Risk Management Executive, DOE and
DOE Markets
Zurich
(212) 676-4105
lindene.patton@zurichus.com

Ted Joy
AIG Insurance Agent, formerly with
Southern States Energy Board
AIG
(770) 671-2308
Ted.Joy@AIG.com

Ken Ayers
Custom Environmental Solution
Kemper
(609) 936-3011
kenneth.ayers@kemperinsurance.com

Mark O'Brian
Oversaw DOD land transfer at Port of
Oakland
Marsh Insurance Services
(415) 734-8629

Appendix C: Glossary

Brownfield—Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.

Community Reinvestment Act (CRA)—The Community Reinvestment Act is intended to encourage depository institutions to help meet the credit needs of the communities in which they operate, including low- and moderate-income neighborhoods, consistent with safe and sound banking operations. It was enacted by the Congress in 1977 (12 U.S.C. 2901) and is implemented by Regulation 12 CFR parts 25, 228, 345, and 563e. The Regulation was revised in May 1995.

CERCLA (Comprehensive Environmental Response, Compensation, and Liabilities Act, also known as “Superfund”)—is the U.S. EPA-administered federal law that guides remediation of significantly contaminated lands on the National Priority List.

Covenants Not To Sue—Provided by state and/or U.S. EPA regulators who agree not to sue the purchasers of contaminated property to remediate known or unknown historical contamination.

Environmental Impairment Liability—Insurance instrument designed to limit the cost of damages if remediation alternatives fail or cause damage to the environment.

Environmental Summary—A document that DOE-Mound develops to fulfill reporting requirements of CERCLA and Real Estate disclosure requirements.

Indemnification—to secure against hurt, loss or damage.

Memorandum of Agreement—A record of a good faith agreement.

Operable Units—A portion of a site undergoing CERCLA action based on contaminated media, geographical separation or some other defining characteristic.

No Further Action Letters—Provided by U.S. EPA and state regulators, these letters indicate that no further remediation action is necessary at a contaminated site, though the letters normally include language which allows the regulators to readdress the site if previously unknown historical contamination is discovered.

Potential Release Sites—A unique location where a contaminant release occurred or is suspected to have occurred.

Price Anderson Provisions of the Atomic Energy Act—The Price Anderson Act was originally enacted in 1957 as an amendment to the Atomic Energy Act to establish a system of financial protection for persons who may be liable for a nuclear accident or incident and for persons who may be injured. Initially, the Act covered only commercial nuclear power plants and related facilities and activities operated under license to the U.S. Nuclear Regulatory Commission. In 1988, the Act was re-authorized with amendments that brought nuclear activities of the U.S. Department of Energy (DOE) and DOE contractors under the liability coverage provided by Price Anderson.