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CORPORATE LIABILITY, GOVERNMENT LIABILITY, AND THE FUKUSHIMA NUCLEAR DISASTER

Eri Osaka[†]

Abstract: This article focuses on the liability issues arising from the Fukushima nuclear disaster. The radioactivity released from the Fukushima Dai-ichi Nuclear Power Plant inflicted catastrophic harm to people, industries, and the environment. Under Japanese law, a nuclear operator bears strict, channeling, and unlimited liability for nuclear damage unless the damage is caused by a grave natural disaster of an exceptional character. This article concludes the Great East Japan Earthquake and tsunami that triggered this nuclear accident do not fall within this exemption because neither of them were unforeseeable nor far beyond the design basis for the reactors at the plant. Therefore, Tokyo Electric Power Company (“TEPCO”) must compensate any damages if the nuclear accident is the legally sufficient cause of them. Additionally, this article argues two entities should be legally responsible for the Fukushima nuclear disaster. The Government of Japan can be liable for the nuclear damage if it failed to exercise its regulatory power over the Tokyo Electric Power Company or if its errant acts expanded the damage. General Electric, the designer of the reactors at the plant, might also be liable for the nuclear damage under U.S. law, assuming the reactors had any weaknesses in their design.

I. INTRODUCTION

On March 11, 2011 at 2:46 p.m. JST (5:46 a.m. UTC), a 9.0 magnitude earthquake hit northeastern Japan. The earthquake and resulting tsunami caused the blackout of the Fukushima Dai-ichi Nuclear Power Plant (“Plant”). Without any cooling measures, the Plant experienced hydrogen explosions and a meltdown, releasing radiation into the environment. As a “Major Accident” on the International Nuclear Event Scale, this accident was rated at level seven, the same level as the Chernobyl disaster.¹ People living in the vicinity of the plant were evacuated by government order voluntarily. Agriculture, fishing, tourism, and other businesses have been affected substantially by this catastrophic event.

Since then, Tokyo Electric Power Company (“TEPCO”), the operator of the plant, has drawn heavy criticism from around the world. However, is TEPCO the only one to blame? Is it possible the Japanese government, which failed to exercise its regulatory power over TEPCO, or General

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¹ Press Release, Ministry of Economy, Trade and Industry, INES Rating on the Events in Fukushima Dai-ichi Nuclear Power Station by the Tohoku District—off the Pacific Ocean Earthquake (Apr. 12, 2011), available at <http://www.nisa.meti.go.jp/english/files/en20110412-4.pdf>.

Electric Company (“GE”), the designer of the Mark I reactor that failed at the Plant, will be held legally liable for this devastating outcome?

This article is divided into four parts. Part II presents a brief overview of the Act on Compensation for Nuclear Damage. Part III provides a description of the compensation scheme for the Fukushima nuclear disaster. Part IV discusses why TEPCO cannot escape from its liability despite the provision in section 3, paragraph 1 of the Act on Compensation for Nuclear Damage. Part V considers the potential liability of the Japanese government and GE.

II. ACT ON COMPENSATION FOR NUCLEAR DAMAGE

A. *Purpose*

The Act on Compensation for Nuclear Damage² (“the Compensation Act”) was enacted in 1961 with two purposes: 1) “to protect persons suffering from ‘nuclear damage,’” and 2) “to contribute to the sound development of the nuclear industry by establishing the basic system regarding compensation in case of nuclear damage caused by reactor operation.”³

The term “nuclear damage” means “any damage caused by the effects of the fission process of nuclear fuel, by the radiation from nuclear fuel or material contaminated by nuclear fuel, or by the toxic nature of such materials.”⁴ However, this definition is too ambiguous to set the scope of damage to be compensated. Courts have applied the general principle of “scope of damage” under section 416 of the Civil Code,⁵ that is, if “effects of the fission process of nuclear fuel, or of the radiation from nuclear fuel etc., or of the toxic nature of such materials” constitute a legally sufficient cause (“*sōtō ingakankei*”), victims of any damage caused by such effects may seek compensation from the offending nuclear operator.⁶ Section 2 contains a provisory clause, “[a]ny damage suffered by the nuclear operator who is liable for such damage is excluded.”⁷

² Genshiryoku Songai no Baishō ni Kansuru Hōritsu [The Act on Compensation for Nuclear Damage], Law No. 147 of 1961 (Japan), translation available at <http://www.oecd-neo.org/law/legislation/japan-docs/Japan-Nuclear-Damage-Compensation-Act.pdf>.

³ *Id.* art. 1.

⁴ *Id.* art. 2, para. 2.

⁵ MINPŌ [CIV. C.], Law No. 89 of 1896 (Japan).

⁶ See, e.g., Tōkyō Chihō Saibansho [Tōkyō Dist. Ct.] Apr. 19, 2006, Hei 14 (wa) no. 6644, 1960 HANREI JIHŌ [HANJI] 64 (Japan) (Kume Quality Products Ltd. v. JCO Ltd.); Mito Chihō Saibansho [Mito Dist. Ct.], Feb. 27, 2008, Hei 14 (wa) no. 513, 2003 HANREI JIHŌ [HANJI] 67 (Japan) (commonly known as the JCO Critical Accident Health Injury Case).

⁷ The Act on Compensation for Nuclear Damage, *supra* note 2, art. 2.

B. Principles of Liability

The Compensation Act provides for strict liability,⁸ channeling liability,⁹ and unlimited liability¹⁰ for nuclear operators. Under channeling liability, where reactor operations cause nuclear damage, only the nuclear operator is liable for the damage.¹¹ In other words, no other person is liable for the damage in such case.¹² Section 798, paragraph 1 of the Trade Act,¹³ the Act Relating to the Limitation of the Liability of Shipowners,¹⁴ and the Product Liability Act¹⁵ do not apply to nuclear damage that is caused as result of reactor operation.¹⁶ The court interpreted the Act on Compensation for Nuclear Damage to preclude a claim regarding a failure to perform obligations under contract¹⁷ or a tort claim¹⁸ under the Civil Code.¹⁹ However, where nuclear damage is caused by the willful act of a third party, the nuclear operator can make a claim for contribution against that third party.²⁰ It should be noted that, in the United States, the liability of nuclear industry is limited under the Price-Anderson Nuclear Industries Indemnity Act (“Price-Anderson Act”).²¹

C. Immunities

The provision of section 3 of the Compensation Act exonerates a nuclear operator from liability where the damage is caused by a grave natural disaster of an exceptional character or an insurrection.²² When a

⁸ *Id.* art. 3, para. 1.

⁹ *Id.* art. 4, para. 1.

¹⁰ *Id.* arts. 3, 4.

¹¹ *Id.* art. 3, para. 1.

¹² *Id.* art. 4, para. 1.

¹³ Shōhō [Commercial Code], Law No. 48 of 1899 (Japan).

¹⁴ Senpaku no Shoyūshato no Sekinin no Seigen ni kansuru Hōritsu [Law Limiting the Liability of Shipowners], Law No. 94 of 1975 (Japan).

¹⁵ Seizoubutsu Sekinin Hō [Product Liability Act], Law No. 85 of 1994.

¹⁶ Act on Compensation for Nuclear Damage, *supra* note 2, art. 4(3).

¹⁷ MINPŌ [Civ. C.], Law No. 89 of 1896, art. 415 (Japan).

¹⁸ *Id.* art. 709.

¹⁹ See Mito Chihō Saibansho [Mito Dist. Ct.], Feb. 27, 2008, Hei 14 (wa) no. 513, 2003 HANREI JIHŌ [HANJI] 67 (Japan) (commonly known as the JCO Critical Accident Health Injury Case); see also Tōkyō Kōtō Saibansho [Tōkyō High Ct.], May 14, 2009, Hei 20 (ne) no. 1395, 2066 HANREI JIHŌ [HANJI] 54 (Japan).

²⁰ Act on Compensation for Nuclear Damage, *supra* note 2, art. 5(1).

²¹ See 42 U.S.C. § 2210(e).

²² Act on Compensation for Nuclear Damage, *supra* note 2, art. 3(1). In the United States, the coverage of indemnification agreement under the Price-Anderson Act excludes: 1) claims under State or Federal workmen's compensation acts of employees of persons indemnified who are employed at the site of and in connection with the activity where the nuclear incident occurs, 2) claims arising out of an act of war, and 3) claims for loss of property which is located at the site of and used in connection with the licensed activity where the nuclear incident occurs. 42 U.S.C § 2014(w).

nuclear operator is exonerated, the Compensation Act requires the Japanese government to take necessary measures to relieve victims and to prevent the damage from spreading.²³

D. Financial Security

A nuclear operator is required to provide financial security for compensation resulting from nuclear damage.²⁴ For this purpose, a nuclear operator must buy private and government insurance or make a deposit with the Legal Affairs Bureau.²⁵

Twenty nonlife and casualty insurance companies established the Japan Atomic Energy Insurance Pool (“Pool”) in 1960 to provide private insurance for nuclear damage.²⁶ As of March 2010, twenty-four nonlife insurance companies, including foreign companies, have joined the Pool.²⁷ In order to diversify risk, the Pool is reinsured with other atomic energy insurance pools around the world. All nuclear operators in Japan buy a policy through the Pool that insures up to 120 billion yen of nuclear damage.²⁸ However, the Pool does not cover some nuclear damages, including damage caused by an earthquake, volcanic eruption, or tsunami.²⁹ The Act on the Indemnity Agreement for Compensation of Nuclear Damage³⁰ was enacted in 1961 to cover such damages. The indemnity agreement for compensation for nuclear damage covers: 1) nuclear damage caused by an earthquake, volcanic eruption, or tsunami; 2) nuclear damage caused by normal operation; or 3) nuclear damage for which the persons suffering therefrom have not claimed compensation within a period of ten years from the day of the occurrence of the event.³¹ All of the nuclear

²³ Act on Compensation for Nuclear Damage, *supra* note 2 art. 17.

²⁴ *Id.* art. 6.

²⁵ *Id.* art. 7.

²⁶ See THE GENERAL INSURANCE ASSOCIATION OF JAPAN (“GIAJ”), GENERAL INSURANCE ORGANIZATIONS AND OTHERS, <http://www.sonpo.or.jp/en/links/004.html>; Gensan Kyōkai [Japan Atomic Industrial Forum], *Anata ni Shitte Moritai Genbai Seido [Nuclear Damage Compensation Scheme Which We Would Like Everyone to Know]*, http://www.jaif.or.jp/melmag_db/2010/0426.html#7.

²⁷ See *supra* note 26 and accompanying text.

²⁸ *Id.*; Genshiryoku Songai no Baishō ni Kansuru Hōritsu Shikōrei [Enforcement Order of the Act on Compensation for Nuclear Damage], Cabinet Order No.44 of 1962 (Japan), sec. 2.

²⁹ See FAQ, MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, http://www.mext.go.jp/a_menu/anzenkakuho/faq/1261356.htm (last visited Mar. 25, 2012) (question four asks, “What is the difference between private insurance for nuclear damage and indemnity agreement for compensation of nuclear damage?”).

³⁰ Genshiryoku Songai Baishō Hoshō Keiyaku ni kansuru Hōritsu [Act on Indemnity Agreements for Compensation of Nuclear Damage], Law No. 148 of 1961 (Japan), *translation available at* <http://www.oecd-nea.org/law/legislation/japan-docs/Japan-Nuclear%20Liability-Indemnification-Contract-Law.pdf>.

³¹ *Id.* art. 10.

operators entered into an indemnity agreement for nuclear damage compensation with the Ministry of Education, Culture, Sport, Science and Technology (“MEXT”) and pay indemnity fees every year.³² After the Fukushima nuclear disaster, TEPCO could not renew its insurance policy through the Pool.³³ Before the expiration of its private insurance, TEPCO had deposited 120 billion yen to the Tokyo Legal Affairs Bureau as of January 13, 2012.³⁴

When nuclear damage exceeds the financial security amount provided by a nuclear operator, in this case 120 billion yen, the government gives the operator such aid as is required to compensate for the damage.³⁵ Such aid is given to the extent that the National Diet authorizes the government to provide it.³⁶

E. Nuclear Damage Compensation Dispute Reconciliation Committee

The MEXT may establish a Nuclear Damage Compensation Dispute Reconciliation Committee to oversee out of court settlements of any disputes that arise over the compensation of nuclear damage, and to prepare general instructions to help operators voluntarily settle such disputes.³⁷

F. Amendments

The Compensation Act has a sunset clause on government insurance and government aid,³⁸ and it has been amended to extend both measures almost every ten years.³⁹ The Compensation Act was most recently amended in 2009.⁴⁰ The compensation scheme for nuclear damage under the Compensation Act was applied for the first time following the JCO

³² *Id.* art. 8.

³³ *Genpatsu Hoken Mondai: Tōden 1,200-oku En Kyōtaku Shōnin* [Nuclear Power Plant Insurance Problem: TEPCO's deposit offer of 12 billion yen was accepted], TOKYO SHIMBUN (June 13, 2012), <http://www.tokyo-np.co.jp/article/feature/nucerror/list/CK2012011302100010.html>.

³⁴ *Id.*

³⁵ Act on Compensation for Nuclear Damage, *supra* note 2, art. 16(1).

³⁶ *Id.* art. 16(2).

³⁷ *Id.* art. 18(1).

³⁸ *Id.* art. 20.

³⁹ MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, MINISTRY HISTORY OF AMENDMENT OF THE ACT ON COMPENSATION FOR NUCLEAR DAMAGE, http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/007/shiryō/08061105/006.htm.

⁴⁰ Genshiryoku Songai no Baishō ni kansuru Hōritsu oyobi Genshiryoku Songai Baishō Hoshō Keiyaku ni kansuru Hōritsu no ichibu wo Kaisei suru Hōritsu [Law Amending Part of the Law Relating to Nuclear Damage Compensation and the Law on Contracts for Nuclear Damage Compensation], Law No. 19 of 2009 (Japan).

Criticality Accident.⁴¹ The JCO Criticality Accident occurred at a uranium reprocessing facility operated by JCO Ltd. in Tokai-mura, Ibaraki on September 30, 1999.⁴² Three JCO employees were exposed to high levels of neutron radiation, and two of them died.⁴³ Additionally, at least 667 people were exposed to radiation.⁴⁴

This accident revealed major flaws in the Compensation Act. First, the amount of financial security for the accident was one billion yen at that time.⁴⁵ Second, a huge number of compensation claims arose, and compensation negotiations between the JCO and victims became complicated.⁴⁶ However, at that time the Compensation Act did not give the power to the Dispute Reconciliation Committee for Nuclear Damage Compensation⁴⁷ to set compensation guidelines for victims.⁴⁸ Thus, the Science and Technology Agency established the Nuclear Damage Investigation Study Group exclusively for that purpose. Most victims pursued their claims based on the criteria set by the Study Group.⁴⁹ By May 13, 2010, 8,018 claims were filed, of which 6,983 were subject to compensation.⁵⁰ The total amount of compensation reached 15.4 billion yen.⁵¹ Because JCO's financial security only covered one billion yen, Sumitomo Metal Mining Co. Ltd., the parent company of JCO, paid the remainder, based not on a legal liability but rather its moral responsibility.⁵²

⁴¹ ATOMIC ENERGY COMMISSION, REVIEW OF NUCLEAR DAMAGE COMPENSATION SCHEME, http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/007/shiryo/08061105/001.htm.

⁴² Shun-Ichi Tanaka, *Summary of the JCO Criticality Accident in Tokai-mura and a Dose Assessment*, J. RADIAT. RES., 42: SUPPL., S1-S9 (2001), available at http://www.jstage.jst.go.jp/article/jrr/42/SUPPL/S1/_pdf.

⁴³ See MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, JCO RINKAI JIKO NI OKERU BAISHŌ NO GAIYŌ [SUMMARY OF THE JCO CRITICALLY ACCIDENT], available at http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/016/shiryo/___icsFiles/afiedfile/2011/04/20/1305111_5.pdf.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ See *supra* note 37 and accompanying text.

⁴⁸ At the time, art. 18, para. 2 of the Act on Compensation for Nuclear Damage stated: "The Reconciliation Committee shall: 1) mediate reconciliation of any dispute arising from compensation of nuclear damage, 2) investigate and assess nuclear damage as necessary for dealing with the matters mentioned above." See MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, GENSHIRYOKU SONGAI BAISHŌ SEIDO NI KANSURU RONTEN SEIRI [ISSUES REGARDING THE NUCLEAR DAMAGE COMPENSATION SCHEME], http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/007/shiryo/08061105/005.htm.

⁴⁹ NUCLEAR DAMAGE INVESTIGATION STUDY GROUP, FINAL REPORT OF NUCLEAR DAMAGE INVESTIGATION (Mar. 29, 2000), http://www.hiroi.iii.u-tokyo.ac.jp/index-genzai_no_sigoto-JCO_jiko-songai-chosa.pdf.

⁵⁰ See SUMMARY OF JCO CRITICALLY ACCIDENT, *supra* note 43.

⁵¹ *Id.*

⁵² *Id.*

Two petitions were filed to the Dispute Reconciliation Committee for Nuclear Damage Compensation and eleven cases went to court.⁵³

III. COMPENSATION SCHEME FOR FUKUSHIMA NUCLEAR DISASTER

A. *Interim Guidelines for Determination of the Scope of Nuclear Damage Due to TEPCO's Fukushima Dai-ichi and Dai-ni Nuclear Power Plants*

The Dispute Reconciliation Committee for Nuclear Damage Compensation was established on April 11, 2011.⁵⁴ It consists of experts from the legal, medical, and nuclear engineering fields.⁵⁵ After thirteen deliberations, on August 5, 2011, the Committee published "Interim Guidelines for Determination of the Scope of Nuclear Damage Due to TEPCO's Fukushima Dai-ichi and Dai-ni Nuclear Power Plants."⁵⁶

The Committee listed the following types of damage as eligible for compensation:

- 1) Damage Caused by Governmental Instructions for Evacuation (including medical examination expenses, evacuation expenses, temporary expenses associated with returning home, homecoming expenses, life or bodily damage, mental suffering, business damage, lost income, examination expenses for property, and loss or diminishment of property value);
- 2) Damage Caused by Governmental Designation of the Navigational Hazard Zone and No-Fly Zone (including business damage and lost income);
- 3) Damage Caused by Governmental Instruction for Restriction on Shipment of Agricultural and Marine Products, etc. (including

⁵³ *Id.*

⁵⁴ Cabinet Order Concerning the Establishment of Dispute Reconciliation Committee for Nuclear Damage Compensation, Cabinet Order No. 99 of 2012 (Japan).

⁵⁵ See MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, LIST OF DISPUTE RECONCILIATION COMMITTEE FOR NUCLEAR DAMAGE COMPENSATION MEMBERS, http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/016/meibo/1309440.htm.

⁵⁶ DISPUTE RECONCILIATION COMMITTEE FOR NUCLEAR DAMAGE COMPENSATION, TOKYO DENRYOKU KABUSHIKIGAISHA FUKUSHIMA DAI-ICHI, DAI-NI GENSHIRYOKU HATSUDENSHO JIKO NI YORU GENSHIRYOKU SONGAI NO HAN'I NO HANTEITŌ NI KANSURU CHŪKAN SHISHIN (Aug. 5, 2011), http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/016/houkoku/_icsFiles/afieldfile/2011/08/17/1309452_1_2.pdf. The Fukushima Dai-ni Nuclear Power Plant was also impacted by the Great East Japan Earthquake and tsunami. Unlike Reactors 1 to 4 of the Fukushima Dai-ichi Nuclear Power Plant, all four reactors of the Fukushima Dai-ni Nuclear Power Plant reached a cold shutdown by March 15, 2011.

business damage, lost income, and, examination expenses for property);

4) Damage Caused by Other Governmental Instructions (including business damage, lost income, and examination expenses for property);

5) Reputation Damage (including reputation damage suffered by agriculture, forestry, and fisheries, or food business, reputation damage suffered by tourist business, reputation damage suffered by manufacturing business, and service business, etc., reputation damage pertaining to export);

6) Indirect Damage (including business damage and lost income);

7) Damage Caused by Radiation Exposure; and

8) Property Damage to Local Governments.⁵⁷

The Nuclear Damage Dispute Reconciliation Committee states that, except for the damage caused by the Great East Japan Earthquake and tsunami, any damages can be compensated if the nuclear accident is the legally sufficient cause of such damages.⁵⁸ If a person receives other compensatory benefits, however, the amount of compensation must be deducted by that amount.⁵⁹

The Nuclear Damage Dispute Reconciliation Committee confirms that these interim guidelines are intended to be comprehensive as of the date of publication.⁶⁰ Therefore, damage not covered by these guidelines can be covered if the nuclear accident is the legally sufficient cause of such damage. These guidelines can be reviewed in response to changing situations in the future. Indeed, the Committee resumed its discussion over damage incurred by voluntary evacuation and cost of radioactive decontamination.⁶¹ On December 6, 2011, the Committee published supplemental guidelines on the damage caused by voluntary evacuation, etc.⁶² This guideline treats voluntary evacuees and people remaining in the

⁵⁷ *Id.*

⁵⁸ *Id.* at 3-5.

⁵⁹ *Id.* at 58.

⁶⁰ *Id.* at 2.

⁶¹ MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, HANDOUTS-COMMITTEE MINUTES-SUMMARY PROCEEDINGS DAMAGES NUCLEAR DISPUTE, http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/016/giji_list/index.htm.

⁶² DISPUTE RECONCILIATION COMMITTEE FOR NUCLEAR DAMAGE COMPENSATION, TOKYO DENRYOKU KABUSHIKIGAISHA FUKUSHIMA DAI-ICHI, DAI-NI GENSHIRYOKU HATSUDENSHO JIKO NI YORU GENSHIRYOKU SONGAI NO HAN'I NO HANTEITŌ NI KANSURU CHŪKAN SHISHIN TSUIHO: JISHU HINANTŌ NI

voluntary evacuation zone equally, because the latter have also feared radiation exposure. Furthermore, on March 24, 2012, the Committee published second supplemental guidelines on the damage caused by governmental instructions for evacuation and voluntary evacuation.⁶³

B. TEPCO's Response

Though TEPCO offered temporary compensation payments to meet the immediate needs for some victims starting on April 26, 2011,⁶⁴ it finally undertook its procedure to permanently compensate individual victims of the Fukushima Dai-ichi Nuclear Power Plant on September 12, 2011.⁶⁵ It sent application packets for individuals to 60,000 homes that claimed temporary compensation payment.⁶⁶ Other individual victims have to request the packet through TEPCO's call center.⁶⁷ This packet covers damage incurred from March 11 to August 31, 2011⁶⁸ and included a 60-page application form and a 156-page manual.⁶⁹ Victims originally had to fill out a total of 2,215 sections and provide receipts and other evidentiary documents.⁷⁰ Unsurprisingly, these long and complicated forms delayed compensation, and subjected TEPCO to further criticism.⁷¹ In response, TEPCO made a new 34-page application with 1,005 sections requiring information.⁷² The

KAKARU SONGAI NI TSUITE (Dec. 6, 2011), http://www.mext.go.jp/b_menu/shingi/chousa/kaihatu/016/houku/_icsFiles/afiedfile/2012/01/18/1315180_1.pdf.

⁶³ DISPUTE RECONCILIATION COMMITTEE FOR NUCLEAR DAMAGE COMPENSATION, TOKYO DENRYOKU KABUSHIKIGAISHA FUKUSHIMA DAI-ICHI, DAI-NI GENSHIRYOKU HATSUDENSHO JIKO NI YORU GENSHIRYOKU SONGAI NO HAN'I NO HANTEITO NI KANSURU CHUKAN SHISHIN DAINJI TSUIHO: SEIFU NI YORU HINAN KUIKITO NO MINAOSHITO NI KAKARU SONGAI NI TSUITE (Mar. 16, 2012), http://www.mext.go.jp/component/a_menu/science/anzenkakuho/micro_detail/_icsFiles/afiedfile/2012/03/16/1309711_6.pdf.

⁶⁴ The amounts of temporary compensation are: one million yen per household and 750 thousand yen for a single person household.

⁶⁵ Press Release, TEPCO, Permanent Compensation for Nuclear Damages by the Accident at Fukushima Daiichi Nuclear Power Station and Fukushima Daini Nuclear Power Station (Aug. 30, 2011), available at <http://www.tepco.co.jp/en/press/corp-com/release/11083007-e.html> [hereinafter Permanent Compensation Press Release].

⁶⁶ *Tōden Baishō Tetsuzuki Kaishi: 6-man Setai e Seikyū Yōshi Hassō [TEPCO Starts Compensation Procedures: Sending out Application Forms to 60,000 Households]*, THE YOMIURI SHIMBUN (Sept. 12, 2011), <http://www.yomiuri.co.jp/national/news/20110912-OYT1T00285.htm>.

⁶⁷ Permanent Compensation Press Release, *supra* note 65.

⁶⁸ Damages that occurred after August 31, 2011 must be claimed on a quarterly basis.

⁶⁹ *10% of compensation forms filed / TEPCO's arduous application process blamed for claimants' slow response*, THE YOMIURI SHIMBUN (Oct. 13, 2011), <http://www.yomiuri.co.jp/dy/national/T111012005321.htm>.

⁷⁰ *Tepco's simplified form just 34 pages, 1,005 sections*, THE JAPAN TIMES, Nov. 25, 2011, <http://www.japantimes.co.jp/text/nn20111125a6.html> [hereinafter *Tepco's simplified form*].

⁷¹ See, e.g., *10% of compensation forms filed*, *supra* note 69.

⁷² *Tepco's simplified form*, *supra* note 70.

permanent compensation payments for companies and sole proprietors started on September 21, 2011.⁷³

As of January 5, 2012, TEPCO had received approximately 44,000 application forms from individuals and approximately 18,000 from companies and sole proprietors.⁷⁴ It paid approximately 14.5 billion yen to individuals and approximately 126.1 billion yen to companies and sole proprietors.⁷⁵

C. *The Government's Response*

1. *Nuclear Disaster Victims Prompt Relief Law*

The Nuclear Disaster Victims Prompt Relief Law⁷⁶ was enacted on July 29, 2011. It enables the government to pay a part of the compensation to victims, which should be paid by TEPCO, in advance if the permanent compensation procedure is delayed. Currently, small tourist businesses in Fukushima, Ibaraki, Tochigi, and Gunma prefectures are able to receive compensation for damage to their reputation under this law.⁷⁷

2. *Nuclear Damage Liability Facilitation Fund*

The total amount of damage caused by the Fukushima nuclear disaster is estimated to be trillions of yen.⁷⁸ As stated above, following Section 16 of the Act on Compensation for Nuclear Damage, the Act for Nuclear Damage Liability Facilitation Fund⁷⁹ was enacted on August 3, 2011.

⁷³ Press Release, TEPCO, Permanent Indemnification for Nuclear Damages to Concerned Corporations and Sole Proprietors due to the Accident at Fukushima Daiichi Nuclear Power Station and Fukushima Daini Nuclear Power Station (Sep. 21, 2011), <http://www.tepco.co.jp/en/press/corpcom/release/11092109-e.html> [hereinafter Permanent Indemnification Press Release].

⁷⁴ RECONSTRUCTION AGENCY, GENSHIRYOKU SONGAI BAISHŌ NI TSUITE [INFORMATION ON THE NUCLEAR COMPENSATION SYSTEM] (Jan. 8, 2012), available at <http://www.reconstruction.go.jp/topics/%E8%B3%87%E6%96%99%E5%BC%95%E3%80%80%E5%8E%9F%E5%AD%90%E5%8A%9B%E6%90%8D%E5%AE%B3%E8%B3%A0%E5%84%9F%E3%81%AB%E3%81%A4%E3%81%84%E3%81%A6.pdf> (distributed at the third session of the Fukushima Reconstruction & Revitalization From Nuclear Disaster Council).

⁷⁵ *Id.*

⁷⁶ Heisei 23 nen Genshiryoku Jiko niyoru Higai ni kakaru Kinkyūsochi ni kansuru Hōritsu [Law Relating to Emergency Facilities for the 2011 Nuclear Disaster], Law No. 91 of 2011 (Japan).

⁷⁷ MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, HEISEI 23 NEN GENSHIRYOKU JIKO NIYORU HIGAI NI KAKARU KINKYŪSOCHI NI KANSURU HŌRITSU NI MOTODUKU KUNI NIYORU KARIBARAI NO JISSHI NI TSUITE, http://www.mext.go.jp/a_menu/ankenkakuho/baisho/1311337.htm.

⁷⁸ See, e.g., Minister of Economy, Trade and Industry Banri Kaieda, Statement at the Plenary Session of the House of Representatives (July 8, 2012) (transcript available at the Record of the Proceedings of the Diet, No.31 of the Plenary Session of the House of Representatives, the 177 Diet Session (July 8, 2012) on page 4).

⁷⁹ Genshiryoku Songai Baishō Shien Kikō Hō [Nuclear Damage Liability Facilitation Fund Act], Law No. 94 of 2011 (Japan).

The purpose of the act is to 1) “take all possible measures for prompt and proper nuclear damage compensation for affected people,” 2) to “stabilize the conditions of Fukushima Dai-ichi Nuclear Power Plant and to prevent adverse effects on business operators dealing with the accident,” and 3) “to ensure stable supply of electricity.”⁸⁰

Under the Compensation Act, the government established the Nuclear Damage Liability Facilitation Fund on September 12, 2011.⁸¹ The state contributed 7 billion yen, TEPCO contributed 2.4 billion yen, and other 11 nuclear operators⁸² contributed a total of 5.6 billion yen.⁸³ The government issued 2 trillion yen special bonds to support TEPCO through the corporation.⁸⁴ Later, the amount was increased to 5 trillion yen.⁸⁵ Moreover, under the Act on Emergency Measure for Damage Caused by Nuclear Accident,⁸⁶ the state shall advance the compensation on behalf of TEPCO based on the guidelines set by the Dispute Reconciliation Committee for Nuclear Damage Compensation.⁸⁷

D. Dispute Settlement Center for Nuclear Disaster Compensation

On August 29, 2011, the Dispute Reconciliation Committee for Nuclear Damage Compensation opened the Dispute Settlement Center for Nuclear Disaster Compensation.⁸⁸ More than 150 lawyers work for the center as mediators and inspectors.⁸⁹ When a victim of the Fukushima

⁸⁰ *Id.*

⁸¹ See *Summary of Nuclear Damage Liability Facilitation Fund*, NUCLEAR DAMAGE LIABILITY FACILITATION FUND, http://www.ndf.go.jp/soshiki/kikou_gaiyou.html (last visited Mar. 28, 2012).

⁸² The other operators include Hokkaido Electric Power, Tohoku Electric Power, Hokuriku Electric Power, Chubu Electric Power, Kansai Electric Power, Chugoku Electric Power, Shikoku Electric Power, Kyushu Electric Power, the Japan Atomic Power Company, J-POWER, and Japan Nuclear Fuel Limited.

⁸³ *Genshiryoku Baishō Shien Kikō—Tōden wa 24-oku En Shu'shi* [Nuclear Damage Liability Facilitation Fund: TEPCO Contribute 2.4 Billion Yen], THE YOMIURI SHIMBUN, Sept. 7, 2011, <http://www.yomiuri.co.jp/atmoney/news/20110906-OYT1T01228.htm>.

⁸⁴ MINISTRY OF FINANCE, HEISEI 23 NENDO TOKUBETSU KAIKEI HOSEI YOSAN (DAI 2 GŌ) [2011 SPECIAL ACCOUNT SUPPLEMENTARY BUDGET (NO. 2)] 22, <http://www.bb.mof.go.jp/server/2011/dlpdf/DL201122002.pdf>.

⁸⁵ MINISTRY OF FINANCE, HEISEI 23 NENDO TOKUBETSU KAIKEI HOSEI YOSAN (DAI 3 GŌ) [2011 SPECIAL ACCOUNT SUPPLEMENTARY BUDGET (NO. 3)] 3, <http://www.bb.mof.go.jp/server/2011/dlpdf/DL201122003.pdf>.

⁸⁶ Law Relating to Emergency Facilities for the 2011 Nuclear Disaster, *supra* note 76.

⁸⁷ *Id.* art. 3.

⁸⁸ *Genpatsu Funsō Kaiketsu Sentā, Bengoshi 130-nin de Taiō* [Dispute Settlement Center for Nuclear Damage Compensation: 130 Lawyers Will Handle the Cases], THE YOMIURI SHIMBUN (Aug. 29, 2011), <http://www.yomiuri.co.jp/national/news/20110829-OYT1T00445.htm>.

⁸⁹ DISPUTE SETTLEMENT CENTER FOR NUCLEAR DAMAGE COMPENSATION, GENSHIRYOKU SONGAI BAISHŌ FUNSŌ KAIKETSU SENTĀ KATSUDŌ JYŌKYŌ HŌKOKUSHŌ [REPORT ON THE ACTIVITIES OF THE DISPUTE SETTLEMENT CENTER FOR NUCLEAR DAMAGE COMPENSATION] 3, http://www.mext.go.jp/component/a_menu/science/anzenkakuho/micro_detail/_icsFiles/afieldfile/2012/02/16/1316600_1_1_1.pdf.

Dai-ichi Nuclear Power Plant and TEPCO cannot reach an agreement on the amount of compensation, the center will assist their mediation without charge.⁹⁰

E. *Nuclear Decontamination Act*

The highest priority issues at the moment are decontamination of the affected area and treatment of contaminated waste. To respond to these challenges, the government enacted the Nuclear Decontamination Act⁹¹ on August 30, 2011. The act came into full effect on January 1, 2012.⁹² According to the roadmap published by the Ministry of the Environment, the Ministry will complete decontamination work by the end of March 2014, except for areas with contamination of over fifty millisieverts.⁹³ Under the law, the state can claim or reimburse the cost for decontamination and treatment of radioactive-contaminated waste from TEPCO.⁹⁴

IV. ANALYSIS OF TEPCO'S LIABILITY

A. *The Act on Compensation for Nuclear Damage Exemption Clause is Not Applicable*

The critical issue in assessing TEPCO's liability is whether the Great East Japan Earthquake and tsunami fall under the category of "a grave natural disaster of an exceptional character," as is required by section 3 of the Act on Compensation for Nuclear Damage.⁹⁵ The Advisory Committee on Compensation System for Nuclear Damage of the Atomic Energy Commission⁹⁶ assumed that "a grave natural disaster of an exceptional

⁹⁰ *Id.*; See also DISPUTE SETTLEMENT CENTER FOR NUCLEAR DAMAGE COMPENSATION, GENSHIRYOKU SONGAI BAISHŌ FUNSŌ KAIKETSU SENTĀ NO TEBIKI [DISPUTE SETTLEMENT CENTER FOR NUCLEAR DAMAGE COMPENSATION GUIDEBOOK], http://www.mext.go.jp/component/a_menu/science/anzenkakuho/micro_detail/_icsFiles/afieldfile/2011/12/05/1311548_1_1.pdf.

⁹¹ Heisei 23-nen 3-gatsu 11-nichi ni Haseishita Tōhoku Chihō Taiheiyōki Jishin ni tomonau Genshiryoku Hatsudensho no Jiko ni yori Hōshutsusareta Hōshasei Busshitsu ni yoru Kankyō no Osen e no Taisho ni kansuru Tokubetsu Sochihō, Law No. 110 of 2011 (Japan) [hereinafter Nuclear Decontamination Act].

⁹² *Id.* at supplementary provision 1.

⁹³ THE MINISTRY OF THE ENVIRONMENT, POLICY ON DECONTAMINATION IN THE SPECIAL AREAS FOR DECONTAMINATION (Jan. 26, 2012), http://www.env.go.jp/press/file_view.php?serial=19091&how_id=14747.

⁹⁴ Nuclear Decontamination Act, *supra* note 91, art. 44.

⁹⁵ ADVISORY COMMITTEE ON COMPENSATION SYSTEM FOR NUCLEAR DAMAGE OF THE ATOMIC ENERGY COMMISSION, DRAFT REPORT OF THE ADVISORY COMMITTEE ON COMPENSATION SYSTEM FOR NUCLEAR DAMAGE (Oct. 8, 1998), <http://www.aec.go.jp/jicst/NC/senmon/old/songai/sonota/sonota01/siryō1.htm#5>.

⁹⁶ The Atomic Energy Commission was set up under the Cabinet based on the Atomic Energy Basic Law in 1956. Genshiryoku Kihon Hō [Atomic Energy Basic Law], Law No. 186 of 1955 (Japan),

character” was a great earthquake, volcanic eruption, wind and water disaster, or other type of natural disaster on a scale that generally had not been seen in history.⁹⁷ Moreover, the Advisory Committee explained that this exemption is limited to an event of force majeure of an extraordinarily high degree; for example, the Great Kanto Earthquake and the Great Hanshin Earthquake do not fall under this exemption.⁹⁸ An earthquake falling within this exemption should be one that has never been seen in history, and substantially greater than these great earthquakes.⁹⁹ The Atomic Energy Commission assumes that “a grave natural disaster of an exceptional character” will be an unforeseeable, great natural disaster based on current knowledge, and must be far beyond the design basis for a reactor.¹⁰⁰ During the Diet deliberations on the Compensation Act, Mr. Yasuhiro Nakasone, then Director-General of the Science and Technology Agency, explained “a grave natural disaster of an exceptional character” meant a great earthquake more than “triple” the Great Kanto Earthquake.¹⁰¹ It is not clear whether he meant tripled intensity, tripled magnitude, or tripled acceleration, but the members of the Advisory Committee on Compensation System for Nuclear Damage assumed that he meant tripled acceleration.¹⁰² Regarding the Great Kanto Earthquake of 1923, its maximum seismic intensity was seven, its magnitude was 7.9, and its assumed peak ground acceleration was 300-400 Gal.¹⁰³ Table 1 shows each peak ground acceleration at the Fukushima Dai-ichi Nuclear Power Plant when the Great East Japan Earthquake occurred.¹⁰⁴

*translation available at <http://www.nsc.go.jp/NSCenglish/documents/laws/1.pdf>. The purpose of this commission is to carry out planned national policies on the research, development, and use of nuclear energy, and to facilitate the democratic operation of nuclear energy administration. *Id.* art. 4. The Atomic Energy Commission plans, deliberates on, and determines the matters related to the research, development and utilization of nuclear energy. *Id.* art. 5, para. 1. While the Nuclear Safety Commission has the same purposes as the Atomic Energy Commission, as is seen in art. 4, it plans, deliberates on and determines matters related to ensuring safety among the matters related to the research, development, and utilization of nuclear energy. *Id.* art. 5 para. 2.*

⁹⁷ DRAFT REPORT OF THE ADVISORY COMMITTEE, *supra* note 95.

⁹⁸ ADVISORY COMMITTEE ON COMPENSATION SYSTEM FOR NUCLEAR DAMAGE OF THE ATOMIC ENERGY COMMISSION, COMMENTS AND ANSWERS ON THE DRAFT REPORT OF THE ADVISORY COMMITTEE ON COMPENSATION SYSTEM FOR NUCLEAR DAMAGE (1998), <http://www.aec.go.jp/jicst/NC/iinkai/teirei/siryoy98/siryoy70/siryoy13.htm>.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ Record of the Proceedings of the Diet, No. 13 of the Special Committee on Science and Technology Promotion of the House of Representatives, the 34th Diet Session (May 18, 1960).

¹⁰² JAPAN ATOMIC ENERGY COMMISSION, DRAFT MINUTES OF THE THIRD SESSION OF THE ADVISORY COMMITTEE ON COMPENSATION SYSTEM FOR NUCLEAR DAMAGE OF THE ATOMIC ENERGY COMMISSION (1998), <http://www.aec.go.jp/jicst/NC/senmon/old/songai/siryoy04/siryoy1.htm>.

¹⁰³ *Historic Earthquakes: Kanto (Kwanto), Japan*, UNITED STATES GEOLOGICAL SURVEY, http://earthquake.usgs.gov/earthquakes/world/events/1923_09_01.php (last visited Apr. 4, 2012).

¹⁰⁴ This data was provided by TEPCO on April 1, 2011. Press Release, Nuclear and Industry Safety Agency of the Ministry of Economy, Trade, and Industry, Record of Earthquake Observation of the

TABLE 1: PEAK GROUND ACCELERATION AND DESIGN BASIS EARTHQUAKE GROUND MOTION IN THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT

| Observation Point | Record of Observation (provisional value as of April 1, 2011) | | | Design Basis Earthquake Ground Motion (Gal) | | |
|-------------------|---|-----------|----------|---|-----------|----------|
| | Peak Ground Acceleration (Gal) | | | north-south | east-west | vertical |
| | north-south | east-west | vertical | | | |
| Unit 1 | 460* | 447* | 258* | 487 | 489 | 412 |
| Unit 2 | 348* | 550* | 302* | 441 | 438 | 420 |
| Unit 3 | 322* | 507* | 231* | 449 | 441 | 429 |
| Unit 4 | 281* | 319* | 200* | 447 | 445 | 422 |
| Unit 5 | 331* | 548* | 256* | 452 | 452 | 427 |
| Unit 6 | 298* | 444* | 244 | 445 | 448 | 415 |

*The record ended approximately 130-150 seconds after the record started.

After the Great East Japan Earthquake, the reactors of units one to three of the Dai-ichi Plant were automatically shut down.¹⁰⁵ Units four to six were under periodic maintenance at that time.¹⁰⁶ Due to the earthquake, the power grid around it was so damaged that the plant lost its external power source, and the emergency generators in the reactor basements started up.¹⁰⁷ Approximately fifty minutes after the Earthquake, the plant was flooded by a tsunami.¹⁰⁸ This caused the emergency generators to break down, and the entire plant lost power.¹⁰⁹ The height of the tsunami wave at the plant could have been as high as 13.1 meters based on computer analysis.¹¹⁰ While the design basis for tsunami waves was 5.7 meters for the Dai-ichi Plant and 5.2 meters for the Dai-ni Plant, TEPCO predicted in 2008

Fukushima Dai-ichi Nuclear Power Plant and the Fukushima Dai-ni Nuclear Power Plant for the Great East Japan Earthquake (Apr. 1, 2011), available at <http://www.meti.go.jp/press/2011/04/20110401013/20110401013.pdf>.

¹⁰⁵ NUCLEAR EMERGENCY RESPONSE HEADQUARTERS OF THE GOVERNMENT OF JAPAN, REPORT OF THE JAPANESE GOVERNMENT TO THE IAEA MINISTERIAL CONFERENCE ON NUCLEAR SAFETY: THE ACCIDENT AT TEPCO'S FUKUSHIMA NUCLEAR POWER STATIONS (June 2011) IV-33, available at http://www.kantei.go.jp/foreign/kan/topics/201106/iaea_houkokusho_e.html.

¹⁰⁶ *Id.* at IV-30-31.

¹⁰⁷ *Id.* at IV-33.

¹⁰⁸ *Id.* at III-28-32.

¹⁰⁹ *Id.*

¹¹⁰ TEPCO, REPORT ON INVESTIGATION RESULTS REGARDING TSUNAMI GENERATED BY THE TOHOKU-TAIHEIYOU-OKI-EARTHQUAKE IN FUKUSHIMA DAIICHI AND DAINI NUCLEAR POWER STATIONS (2011), available at <http://www.tepco.co.jp/en/press/corp-com/release/11040910-e.html>.

that a tsunami wave over fifteen meters would occur if an 8.3 magnitudes earthquake—the same magnitude as the Meiji Sanriku Earthquake of 1896—occurred off the coast of Fukushima.¹¹¹ However, TEPCO did not use this finding when creating the plant’s earthquake countermeasures.¹¹² TEPCO simply reported the finding to the Nuclear and Industrial Safety Agency at the Ministry of Economy, Trade, and Industry (“METI”) on March 7, 2011, four days before the Great East Japan Earthquake.¹¹³ Thus, the Great East Japan Earthquake and tsunami do not fit into “a grave natural disaster of an exceptional character,” because neither of them were unforeseeable nor far beyond the design basis for reactors.

B. *Other Legal Issues*

1. *Jurisdiction*

There are no provisions on jurisdiction under the Act on Compensation for Nuclear Damage. Following the general rule, an action is subject to the jurisdiction of the court that has jurisdiction over the location of general venue of the defendant.¹¹⁴ TEPCO is a corporation, and its principle office is located in Tokyo,¹¹⁵ so the Tokyo District Court has jurisdiction over the lawsuits related to the Fukushima nuclear disaster.¹¹⁶ Otherwise, victims can bring lawsuits in the court that has jurisdiction over their domicile.¹¹⁷ Regarding tort claims, a court has jurisdiction over the place where the tort at issue occurred.¹¹⁸

Japan has not ratified any treaties dealing with nuclear damage.¹¹⁹ Therefore, people in other countries may bring their lawsuits in the country

¹¹¹ *TEPCO Knew Waters Could Reach 15 Meters*, THE YOMIURI SHIMBUN, (Aug. 27, 2011), <http://www.yomiuri.co.jp/dy/national/T110826005191.htm>.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ MINJI SOSHOHO [MINSOHO] [C. CIV. PRO.], art. 4, item 1.

¹¹⁵ *See id.* art. 4, para. 4.

¹¹⁶ If the amount in controversy is less than 1.4 million yen, the summary court generally has jurisdiction. Saibansho Hō [Court Act], Law No. 59 of 1947, art. 33 para. 1, item 1 (Japan).

¹¹⁷ MINJI SOSHOHO [MINSOHO] [C. CIV. PRO.], art. 5, item 1 (Japan); MINPŌ [Civ. C.] art. 484. If citizens outside of Japan suffer from nuclear damage during their stay in Japan, they must follow the Act on General Rules for Application of Laws. Hō no Tekiyō ni Kansuru Tsūsoku Hō [Act on General Rules for Application of Laws], Law No. 78 of 2006 (Japan). Section 17 provides that the formation and effect of a claim arising from a tort shall be governed by the law of the place where the result of the wrongful act occurred. *Id.* at sec. 17. However, if the occurrence at said place was ordinarily unforeseeable, the law of place where the wrongful act was committed shall govern. *Id.*

¹¹⁸ MINJI SOSHOHO [MINSOHO] [C. CIV. PRO.], art. 5, item 9.

¹¹⁹ Such treaties are the Paris Convention on Third Party Liability in the Field of Nuclear Energy, the Vienna Convention on Civil Liability for Nuclear Damage, and the Convention on Supplementary

where the defendant is located (Japan), where the nuclear accident occurs (Japan), or where they are injured (their countries).

2. Causation

The Nuclear Damage Compensation Dispute Reconciliation Committee stated that persons injured while engaging in recovery work following the Fukushima nuclear disaster, suffer health deterioration requiring treatment, contract a disease, or die, he or she may be compensated for damage caused by acute or late radiation.¹²⁰ Nonetheless, such persons must still prove a causal link between their damages and the radioactive substances released from the plant.

In Japan, cause-in-fact has been determined by the so-called “but for” test.¹²¹ The civil standard of proof of causation is “not a scientific standard that leaves no doubt, but a case of ‘strong probability’ that a specific event caused a specific loss by considering all the evidence based on the rules of thumb.”¹²² Strong probability under the test can be found when “a reasonable person is convinced of the conclusion to the extent s/he has no doubt.”¹²³ In the *Sumitomo Metal Mining Co., Ltd.* case, parties disputed whether plaintiffs’ health damages were caused by the JCO Criticality Accident.¹²⁴ The Tokyo District Court and the Tokyo High Court found that the plaintiffs who worked at a factory that was well over 100 meters from the JCO Plant were exposed to 6.5 mSv of radiation, but denied the causal link between the exposure and their damages.¹²⁵

In other cases related to JCO Criticality Accident, courts admitted that “nuclear damage” under section 2 of the Act on Compensation for Nuclear Damage included reputation damage¹²⁶ or pure economic damage.¹²⁷

Compensation for Nuclear Damage (still pending). The United States has ratified only the Convention on Supplementary Compensation for Nuclear Damage.

¹²⁰ See DISPUTE RECONCILIATION COMMITTEE FOR NUCLEAR DAMAGE COMPENSATION, TOKYO DENRYOKU KABUSHIKIGAISHA FUKUSHIMA DAI-ICHI, DAI-NI GENSHIRYOKU HATSUDENSHO JIKO NI YORU GENSHIRYOKU SONGAI NO HANI NO HANTEITŌ NI KANSURU CHŪKAN SHISHIN.

¹²¹ See, e.g., KAZUO SHINOMIYA, FUHŌKŌI—JIMUKANRI, FUTŌRITOKU, FUHŌKŌI CHU-GE-KAN 411 (1987).

¹²² Saikō Saibansho [Sup. Ct.], Oct. 24, 1975, Sho. 48(o) no. 517, 29 STAKŌ SAIBANSHO MINJI HANREISHŪ [MINSHŪ] 1417 (Japan) (commonly known as the Lumbar Case).

¹²³ *Id.* at 1420.

¹²⁴ *Supra* note 19.

¹²⁵ *Id.*

¹²⁶ See Tōkyō Chihō Saibansho [Tōkyō Dist. Ct.], Feb. 27, 2006, Hei 15 (wa) no. 4306, 1204 HANREI TAIMUZU [HANTA] 116 (Japan) (commonly known as Takanofoods Co., Ltd. v. JCO); Tōkyō Chihō Saibansho [Tōkyō Dist. Ct.], Apr. 19, 2006, Hei 14 (wa) no. 6644, 1960 HANREI JIHŌ [HANJI] 64 (Japan) (commonly known as Kume Quality Products v. JCO). In both of these cases, the court gave an award to the plaintiffs.

However, each court denied the plaintiffs' claims because any decline in sales or decrease in property value was not caused by the accident.

3. *Statute of Limitations*

Again, because there are no provisions on the statute of limitations under the Act on Compensation for Nuclear Damage, the Civil Code and its interpretation apply to this issue.¹²⁸ For tort claims, plaintiffs must bring their case into court within three years of the time when they come to know of their damage and the identity of the tortfeasor.¹²⁹ A victim's tort claim is automatically precluded after twenty years have elapsed from the time when the tort committed.¹³⁰ However, courts have amended this twenty-year rule for toxic tort cases. When a victim's injury has an accumulative and latent nature, courts set the starting point of the period of prescription on the date when he or she develops his or her injury.¹³¹ Radiation exposure will be treated in a similar way.

V. WHO ELSE SHOULD BE LEGALLY LIABLE FOR THE FUKUSHIMA NUCLEAR DISASTER?

A. *Potential Liability of the Government of Japan*

Sovereign immunity is not accepted under Article 14 of the Constitution of Japan. Under the State Compensation Law,¹³² when public officials who are in a position to exercise public power have, in the course of performing their duties, illegally inflicted losses on another person intentionally or negligently, the state or a public entity is liable for compensating such losses.¹³³ The Supreme Court has recognized that when

¹²⁷ See Tōkyō Kōtō Saibansho [Tōkyō High Ct.], Sept. 27, 2004, Hei 14 (wa) no. 19606, 1876 HANREI JIHŌ [HANJI] 34 (Japan) (commonly known as Ibaraki Kotsu Co., Ltd. v. JCO); Tōkyō Kōtō Saibansho [Tōkyō High Ct.], Sept. 21, 2005, Hei 16 (ne) no. 5435, 1914 HANREI JIHŌ [HANJI] 95 (Japan). Both courts denied the plaintiffs' claims because the decrease in property value was not caused by the JCO Criticality Accident.

¹²⁸ MINISTRY OF EDUCATION, FAQ ON THE NUCLEAR DAMAGE COMPENSATION SCHEME, http://www.mext.go.jp/a_menu/anzenkakuho/faq/1261362.htm (question eight explains how nuclear damage compensation claims are processed).

¹²⁹ MINPŌ [CIV. C.] art. 724 (Japan).

¹³⁰ *Id.*

¹³¹ See, e.g., Saikō Saibansho [Sup. Ct.], Apr. 27, 2004, Hei 13 (uke) no. 1760, 58(4) SAIKŌ SAIBANSHO MINJI HANREISHŪ [MINSHŪ] 1032 (Japan) (commonly known as the Chikuhō Pneumoconiosis Case).

¹³² Kokka Baishō Hō [State Redress Act], Law No. 125 of 1947 (Japan), translation available at [http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&yo=&x=16&y=25&kn\[\]=%E3%81%93&re=01&ky=&page=13](http://www.japaneselawtranslation.go.jp/law/detail/?ft=2&yo=&x=16&y=25&kn[]=%E3%81%93&re=01&ky=&page=13).

¹³³ *Id.* art. 1, para. 1.

human life and health are in danger and the government does not exercise its regulatory power over the cause of danger, the government is liable under State Compensation Law.¹³⁴ So far, there is no case law that addresses the issue whether the State Compensation Law is applicable to nuclear damage.

Regarding the Fukushima nuclear disaster, there are several facts that suggest potential liability of the Japanese government. First of all, the government should have properly exercised its power over nuclear operation generally. The Nuclear Safety Commission (“NSC”) deals with planning, deliberation, and making decisions on regulations and policies related to nuclear safety and prevention of radiation hazards.¹³⁵ However, the NSC has disregarded a long-time station blackout.¹³⁶ The NSC first disclosed this document on July 13, 2011, eighteen years after it was made.¹³⁷

Second, the government should have properly exercised its power over the Fukushima Dai-ichi Nuclear Power Plant. Before this disaster, the Plant had experienced several incidents, and two of these are exceptionally notable. One was the nation’s first criticality incident (equivalent INES level two) on November 2, 1978, which was covered up for twenty-nine years.¹³⁸ The other was an incident involving a recalculating pump (INES level two) on September 9, 1990.¹³⁹ In light of this accident history, the government should have supervised TEPCO more strictly.

Third, there may be an opportunity to argue that nuclear damage was increased by errant acts of the government. In regard to this argument, the interim report published by the Investigation Committee on the Accident at

¹³⁴ See Chikuhō Pneumoconiosis Case, *supra* note 131; Saikō Saibansho [Sup. Ct.], Oct. 25, 2004, Hei 13 (o) no. 1196, 58 SAIKŌ SAIBANSHO MINJI HANREISHŪ [MINSHŪ] 1802 (Japan) (commonly known as the Kansai Minamatabyō Case); see also Eri Osaka, *Environmental and Worker Safety Law in Japan: Recent Changes, the Impact of Reform Laws and Movements, and the Prospects for the Future* (Sho Sato Conference, Working Paper, 2001).

¹³⁵ NUCLEAR SAFETY COMMISSION OF JAPAN, THE BASIC POLICIES FOR THE NEAR-TERM INITIATIVES OF THE NUCLEAR SAFETY COMMISSION (Dec. 2, 2010), <http://www.nsc.go.jp/NSCenglish/pdf/101202.pdf>.

¹³⁶ WORKING GROUP ON STATION BLACKOUT OF THE STUDY GROUP OF ANALYTICAL ESTIMATION ON ACCIDENT AND TROUBLE OF NUCLEAR FACILITY, THE STATION BLACKOUT ON THE NUCLEAR POWER PLANT (1993). The U.S. Nuclear Regulatory Commission took the problem more seriously. It commissioned research on station blackout with Oak Ridge National Laboratory in the early 1980s. The study group simulated the response of Mark I to station blackout, and predicted that core meltdown and a subsequent containment failure would occur. D.H. COOK ET AL., STATION BLACKOUT AT BROWNS FERRY UNIT ONE—ACCIDENT SEQUENCE ANALYSIS (1981).

¹³⁷ *18-nen Mae, Zendengen Sōshitsu Kentō – Anzen-an – Maboroshi no Hōkokusho [18 Years Ago, A Study on Total Power Loss a Safety Proposal, and the Phantom Report]*, TOKYO SHIMBUN (July 13, 2011), <http://www.tokyo-np.co.jp/article/feature/nucerror/list/CK2011071302000061.html>.

¹³⁸ MINISTRY OF ECONOMY, TRADE AND INDUSTRY, RESEARCH STATUS ON CONTROL ROD DRAW-OUT EVENT AT TEPCO (Mar. 22, 2007), <http://www.meti.go.jp/press/20070322006/touden-p.r.pdf>.

¹³⁹ RESEARCH ORGANIZATION FOR INFORMATION SCIENCE & TECHNOLOGY, NIHON NI OKERU BWR GENSHIRYOKU HASTUDENSHO NO JUYŌ NA JIKO KOSHŌ – TORABURU (2005-NENDO MADE) [MAJOR INCIDENTS, BREAKDOWNS, OR TROUBLES AT BOILING WATER REACTORS IN JAPAN (UNTIL 2005)] (2007), http://www.rist.or.jp/atomica/data/dat_detail.php?Title_Key=02-07-01-02.

the Fukushima Nuclear Power Stations¹⁴⁰ suggests that the government was incompetent to respond the nuclear emergency:

the Nuclear Emergency Response Headquarters . . . and the Local Nuclear Emergency Response Headquarters . . . include the fact that the Off-site Center, which was supposed to serve as the base for response during the nuclear emergency, lost its functionality, and the fact that coordination among relevant organizations was inadequate.¹⁴¹

It also suggests that the government failed to prevent expansion of the disaster:

These problems include: radiation monitoring systems and the System for Prediction of Environmental Emergency Dose Information (SPEEDI) did not work as they were designed and expected to do; the scale of the disaster that occurred had not been considered when preparing evacuation plans and evacuation drills; there was confusion at the accident site regarding the Government's evacuation directives; and not enough information was provided in Japan and abroad in a rapid, accurate, easy-to-understand manner.¹⁴²

B. *GE's Potential Liability*

1. *Reactors at the Fukushima Dai-ichi Nuclear Power Plant*

Fukushima Dai-ichi Nuclear Power Plant is located in Okuma Town and Futaba Town, Futaba County, Fukushima Prefecture, facing the Pacific Ocean on the east side.¹⁴³ The Plant consists of six units with light water, boiling water reactors.¹⁴⁴ Units one to five were built with Mark I type

¹⁴⁰ The committee was established based on the cabinet decision to investigate in an open and neutral manner to determine the causes of the accident at the Fukushima Dai-ichi and Dai-ni Nuclear Power Plants, and to make policy proposals on measures to prevent further spread of the damage and recurrence of similar accidents in the future. See Cabinet Decision, Establishment of Investigation Committee on the Accident at Fukushima Nuclear Power Stations of Tokyo Electric Power Company (May 24, 2011), available at <http://icanps.go.jp/eng/2011/07/05/0524CabinetDecision.pdf>.

¹⁴¹ INVESTIGATION COMMITTEE ON THE ACCIDENT AT FUKUSHIMA NUCLEAR POWER STATIONS OF TOKYO ELECTRIC POWER COMPANY, INTERIM REPORT, 564 (Dec. 26, 2011), <http://icanps.go.jp/eng/interim-report.html>.

¹⁴² *Id.*

¹⁴³ *Fukushima Dai-ichi Genshiryoku Hatsudensho e no Akusesu* [Access to the Fukushima Dai-ichi Nuclear Power Plant], TEPCO, <http://www.tepco.co.jp/nu/f1-np/intro/outline/access-j.html>.

¹⁴⁴ *Fukushima Dai-ichi Genshiryoku Hatsudensho Setsubi no Gaiyō* [Outline of Facilities of the Fukushima Dai-ichi Nuclear Power Plant], TEPCO, <http://www.tepco.co.jp/nu/f1-np/intro/outline/outline-j.html>.

containment structures,¹⁴⁵ while unit six was built with a Mark II type containment structure (Table 2).¹⁴⁶ The reactors for units one, two, and six were built by GE, while the reactors for units three and five were built by Toshiba Corp., and the reactor for unit four was built by Hitachi Ltd.¹⁴⁷ The reactors were all designed by GE.¹⁴⁸ In fact, the reactor for unit one was the first commercial reactor in Japan that was built as a “full turnkey project” by GE.¹⁴⁹ This means that GE designed and built it and turned it over to TEPCO in a ready-to-use condition. At unit one, the emergency diesel generators and DC batteries were located at the basement of the turbine building (Figure 1).¹⁵⁰ GE required placement in that location. Unit two was built in the same way.¹⁵¹ Later, Toshiba became the main contractor for units three and five, and Hitachi Ltd. became the main contractor for unit four.¹⁵² Both companies followed the basic GE plant design.¹⁵³

TABLE 2: GENERAL DATA OF SIX REACTORS OF THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT¹⁵⁴

| | UNIT 1 | UNIT 2 | UNIT 3 | UNIT 4 | UNIT 5 | UNIT 6 |
|----------------------------|------------|--------------|-----------|-----------|-----------|--------------|
| Reactor Type | Mark I | Mark I | Mark I | Mark I | Mark I | Mark II |
| Domestic Content | 56% | 53% | 91% | 91% | 93% | 63% |
| Designer | GE | GE | GE | GE | GE | GE |
| Main Contractor | GE | GE & Toshiba | Toshiba | Hitachi | Toshiba | GE & Toshiba |
| Construction Began | Sept. 1967 | May 1969 | Oct. 1970 | Sep. 1972 | Dec. 1971 | May 1973 |
| Commercial Operation Began | Mar. 1971 | July 1974 | Mar. 1976 | Oct. 1978 | Apr. 1978 | Oct. 1979 |

¹⁴⁵ In the United States, twenty-three reactors at sixteen locations use the Mark I type containment structure.

¹⁴⁶ See Table 2; Outline of Facilities of the Fukushima Dai-ichi Nuclear Power Plant, *supra* note 144.

¹⁴⁷ GE and Hitachi co-founded Hitachi-GE Nuclear Energy Ltd. in 2007. See *About Us*, HITACHI-GE NUCLEAR ENERGY LTD., <http://www.hitachi-hgne.co.jp/en/about/index.html>; *Outline of Facilities of the Fukushima Dai-ichi Nuclear Power Plant*, *supra* note 144.

¹⁴⁸ *Outline of Facilities*, *supra* note 147.

¹⁴⁹ HITOSHI YOSHIOKA, GENSHIRYOKU NO SHAKAISHI: SONO NIHONTEKI TENKAI 111–18 (1999).

¹⁵⁰ See Figure 1; NUCLEAR EMERGENCY RESPONSE HEADQUARTERS OF GOVERNMENT OF JAPAN, REPORT OF JAPANESE GOVERNMENT TO THE IAEA MINISTERIAL CONFERENCE ON NUCLEAR SAFETY: THE ACCIDENT AT TEPCO'S FUKUSHIMA NUCLEAR POWER STATIONS III-40 (2011).

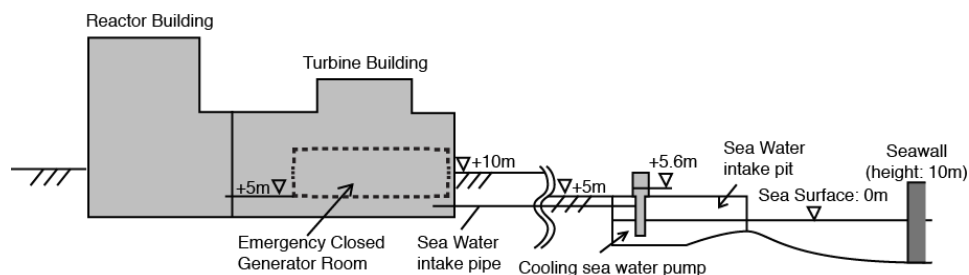
¹⁵¹ See Reiji Yoshida, *GE Plan Followed with Inflexibility*, THE JAPAN TIMES (July 14, 2011), <http://www.japantimes.co.jp/text/nn20110714a2.html>.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ For more information, see TEPCO, NUCLEAR POWER GENERATION, <http://www.tepco.co.jp/en/challenge/energy/pdf-1/nuclear-e.pdf>.

FIGURE 1: CROSS SECTION OF UNIT 1 OF THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANT¹⁵⁵



Since the disaster, GE has emphasized “[the] Mark I containment has a proven track record of safety and reliability for over 40 years.”¹⁵⁶ However, there have been doubts over the Mark I’s safety. In 1972, Stephen H. Hanauer, then a safety official with the U.S. Atomic Energy Commission, recommended that Mark I be discontinued because it presented unacceptable safety risks.¹⁵⁷ Moreover, three GE nuclear engineers resigned from their jobs in 1976, because they strongly believed that a design flaw in the Mark I could trigger a disaster.¹⁵⁸ Dale G. Bridenbaugh, one of the three GE employees who resigned, commented that the Mark I design “did not take into account the dynamic loads that could be experienced with a loss of coolant,”¹⁵⁹ and “[the] impact loads the containment would receive by this very rapid release of energy could tear the containment apart and create an uncontrolled release.”¹⁶⁰

2. Possibility of U.S. Product Liability Lawsuit Against GE

As mentioned above, the Act on Compensation for Nuclear Damage channels legal liability to nuclear operators and precludes the claims under

¹⁵⁵ See *supra* note 150, at III-40.

¹⁵⁶ See GENERAL ELECTRIC, GE REPORTS: THE MARK I CONTAINMENT SYSTEM IN BWR REACTORS (2011), <http://www.gereports.com/the-mark-i-containment-system-in-bwr-reactors/>. See also GENERAL ELECTRIC, GE REPORTS: SETTING THE RECORD STRAIGHT ON MARK I CONTAINMENT HISTORY (2011), <http://www.gereports.com/setting-the-record-straight-on-mark-i-containment-history/>.

¹⁵⁷ Tom Zeller Jr., *Experts Had Long Criticized Potential Weakness in Design of Stricken Reactor*, N.Y. TIMES, Mar. 16, 2011, at A14. For GE’s response to this article, see General Electric, GE REPORTS: SETTING THE RECORD STRAIGHT ON MARK I CONTAINMENT HISTORY (2011), <http://www.gereports.com/setting-the-record-straight-on-mark-i-containment-history/>.

¹⁵⁸ Matthew Mosk, *Fukushima: Mark I Nuclear Reactor Design Caused GE Scientist To Quit In Protest*, ABC NEWS (Mar. 15, 2011), <http://abcnews.go.com/Blotter/fukushima-mark-nuclear-reactor-design-caused-ge-scientist/story?id=13141287>.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

the Product Liability Law or the Civil Code.¹⁶¹ Therefore, there is no way to pursue GE's liability in Japan. However, the principle office of GE is located in Connecticut.¹⁶² A Fukushima nuclear disaster victim, such as a person exposed to radiation released from the Fukushima Dai-ichi Nuclear Power Plant, might think of bringing a lawsuit against GE in Connecticut state court or in a federal court of the United States.¹⁶³

Regarding the "channeling" issue, the Price-Anderson Act does not adopt legal channeling but economic channeling, which means a nuclear operator must compensate nuclear damage even other persons may be held legally liable for it.¹⁶⁴ Moreover, the Price-Anderson Act is not applicable to the Fukushima nuclear disaster after all, because this nuclear accident occurred at a facility operated by non-U.S. companies outside the United States.

3. *Forum Non Conveniens Doctrine*

The United States federal court has applied *forum non conveniens* doctrine to refuse to hear a case even if it has jurisdiction when the court chosen by the plaintiff is inconvenient for the parties and justice would be better served if the case is brought in another court.¹⁶⁵

In *Gulf Oil Corp. v. Gilbert*, the United States Supreme Court offered three key considerations whether a court should grant a defendant's motion of *forum non conveniens*: 1) availability of foreign forum, 2) private interest, and 3) public interest.¹⁶⁶ Regarding private interest, the factors to consider are the relative ease of access to sources of proof, availability of compulsory process for attendance of unwilling witnesses, cost of obtaining attendance of willing witnesses, possibility of view of the premises if appropriate, and all other practical problems that make trial of a case easy, expeditious, and inexpensive.¹⁶⁷ Regarding public interest, the factors to be considered include the undesirability of piling up litigation in congested centers, the

¹⁶¹ Act on Compensation for Nuclear Damage, *supra* note 2, art. 4, para. 3 (Japan); the JCO Critical Accident Health Injury Case, *supra* note 19.

¹⁶² *GE Fact Sheet*, GENERAL ELECTRIC, <http://www.ge.com/company/factsheets/corporate.html> (last visited Mar. 31, 2012).

¹⁶³ U.S. federal courts also have jurisdiction over the citizens of foreign States, including Japan, and diversity jurisdiction over United States citizens. U.S. Const. art. III, § 2. While the Judiciary Act of 1789 gives federal district courts original jurisdiction over any civil action by an alien tort victim, it appears to be difficult to argue that GE's actions are part of a tort that violates international law or any treaty to which the United States is a party. Alien Tort Claims Act, 28 U.S.C. § 1350.

¹⁶⁴ The Price-Anderson Act § 2210(a), 42 U.S.C. § 2210 (1957).

¹⁶⁵ *Gulf Oil Corp. v. Gilbert*, 330 U.S. 501 (1947).

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* at 502, 508.

burden of jury duty on people of a community having no relation to the litigation, the local interest in having localized controversies decided at home, and the unnecessary injection of problems in conflict of laws.¹⁶⁸

Though some jurisdictions limit the availability of the forum *non conveniens* doctrine, the Connecticut state courts preserve it.¹⁶⁹ In *Durkin v. Intevac, Inc.*, the Connecticut Supreme Court cited *Gulf Oil Corp. v. Gilbert*, and then continued:

First, the court should determine whether an adequate alternative forum exists that possesses jurisdiction over the whole case. Second, the court should consider all relevant private interest factors with a strong presumption in favor of—or, in the present case, a weakened presumption against disturbing the plaintiffs' initial choice of forum. Third, if the balance of private interest factors is equal, the court should consider whether any public interest factors tip the balance in favor of trying the case in the foreign forum. Finally, if the public interest factors tip the balance in favor of trying the case in the foreign forum, “the court must ensure that [the] plaintiffs can reinstate their [action] in the alternative forum without undue inconvenience or prejudice.”¹⁷⁰

Regarding the availability or adequacy of an alternative forum, if a victim in Japan sues GE in any court in Japan, Japanese law will be applied under the Act on General Rules for Application of Laws.¹⁷¹ This act provides that the formation and effect of a claim arising from a tort shall be governed by the law of the place where the result of the wrongful act occurred.¹⁷² In such a case, claims against GE would be precluded under the Act on Compensation for Nuclear Damage.¹⁷³ In addition, because the alleged flaws are in the design of Mark I, it may be said that substantial evidence is located at the GE headquarters or other offices in the United States rather than in GE Japan¹⁷⁴ and that many witnesses including current or former GE workers are available in the United States rather than in Japan. Therefore, it is clear neither the federal courts, nor the Connecticut state

¹⁶⁸ *Id.* at 508-09.

¹⁶⁹ *Durkin v. Intevac, Inc.*, 258 Conn. 454, 782 A.2d 103 (2001).

¹⁷⁰ *Id.* at 466 (citations omitted).

¹⁷¹ Hō no Tekiyō ni Kansuru Tsūsoku Hō [Act on General Rules for Application of Laws], Law No. 78 of 2006 (Japan).

¹⁷² *Id.* art. 17.

¹⁷³ See Act on Compensation for Nuclear Damage, *supra* note 2, art. 4, para. 1.

¹⁷⁴ As a global enterprise, GE has been in operation in Japan since 1999. See *Fact Sheet*, GE JAPAN, http://www.ge.com/jp/company/factsheet_jp.html (last visited Apr. 1, 2012).

courts, will apply the *forum non conveniens* doctrine in the lawsuit against GE.

4. *Conflict of Laws*

The law that should be applied to a potential case against GE poses another critical issue for the victims in Japan. If a court applies Japanese laws, the claims against GE are precluded under the Act on Compensation for Nuclear Damage.¹⁷⁵

Connecticut follows the Restatement (Second) of Conflict of Laws in tort cases.¹⁷⁶ Under the Restatement, the rights and liabilities of the parties in tort cases are determined by the local law of the state which has the most significant relationship to the occurrence and the parties.¹⁷⁷ The factors to be taken into account include: 1) the place where the injury occurred, 2) the place where the conduct causing the injury occurred, 3) the domicile, residence, nationality, place of incorporation and business of the parties; and 4) the place where the relationship, if any, between the parties is centered.¹⁷⁸ In addition, the court must consider other factors including: 5) the needs of the interstate and international systems, 6) the relevant policies of the forum; 7) the relevant policies of other interested states and the relative interests of those states in the determination of the particular issue, 8) the protection of justified expectations, 9) the basic policies underlying the particular field of law, 10) certainty, predictability and uniformity of result, and 11) ease in the determination and application of the law to be applied.¹⁷⁹

Given these factors, there is a substantial likelihood that a Connecticut state court will apply Japanese laws. Nonetheless, on the assumption that the court would apply Connecticut law, what would be the result?

5. *Design Defect Claim Under Connecticut Law*

Connecticut passed the Product Liability Act in 1979.¹⁸⁰ In Connecticut, a “product liability” claim includes “all claims or actions brought for personal injury, death or property damage caused by the manufacture, construction, design, formula, preparation, assembly,

¹⁷⁵ See Act on Compensation for Nuclear Damage, *supra* note 2, art. 4, para. 1.

¹⁷⁶ Symeon C. Symeonides, *Choice of Law in the American Courts in 2010: Twenty-Fourth Annual Survey*, 59 AM. J. COMP. L. 303, 330 (2011).

¹⁷⁷ The Restatement (Second) Conflicts of Laws § 145(1).

¹⁷⁸ *Id.* § 145(2).

¹⁷⁹ *Id.* § 6.

¹⁸⁰ CONN. GEN. STAT. § 52-572m et seq.

installation, testing, warnings, instructions, marketing, packaging, or labeling of any product.”¹⁸¹

The units designed by GE have been modified by TEPCO since their installation. Nonetheless, GE could be found liable not for the harm that would have occurred, but for the fact that the reactor was modified if such modification was 1) in accordance with the instructions or specifications of GE, 2) made with the consent of GE, or 3) the result of conduct that reasonably should have been anticipated by GE.¹⁸²

In *Potter v. Chicago Pneumatic Tool Co.*, the Connecticut Supreme Court introduced a modified consumer expectation test, admitting that a risk-utility balancing must be utilized in order to decide whether a design is defective.¹⁸³ The factors to be considered include: 1) usefulness of the product, 2) likelihood and severity of danger caused by the product, 3) feasibility of an alternative design, 4) financial cost of improved design, 5) ability to reduce danger without impairing its usefulness or making the product too costly, and 6) feasibility of spreading loss by increasing the product’s price.¹⁸⁴ Plaintiffs are not required to prove a feasible alternative design, because such a requirement places an “undue burden on [the plaintiff] that might preclude otherwise valid claims from jury consideration.”¹⁸⁵

Under the Connecticut Product Liability Act, persons wanting to recover damages for personal injury or property damage caused by radiation exposure resulting from the Fukushima nuclear disaster must bring a claim within two years from the date the injury or damage complained of is discovered.¹⁸⁶ Regarding the other damages not caused by radiation exposure, a claim must be brought within three years from the date of injury, death, or property damage was first sustained.¹⁸⁷ There is also a restriction requiring that a product liability claim must be brought against any party within ten years from the date that the party last parted with possession or control of the product.¹⁸⁸ However, this ten-year limitation is extended pursuant to the terms of any express written warranty that the product can be used for a period longer than ten years.¹⁸⁹ Moreover, this limitation will not be applied when a product seller, including a person who designs or

¹⁸¹ *Id.* § 52-572m(b).

¹⁸² *Id.* § 52-572p(a).

¹⁸³ *Potter v. Chicago Pneumatic Tool Co.*, 241 Conn. 199, 221, 694 A.2d 1319 (1997).

¹⁸⁴ *Id.*

¹⁸⁵ *Id.* at 217.

¹⁸⁶ *See* CONN. GEN. STAT. § 52-577c(a), (b).

¹⁸⁷ *Id.* § 52-577a(a).

¹⁸⁸ *Id.*

¹⁸⁹ *Id.* § 52-577a(d).

constructs a product intentionally misrepresents the product or fraudulently conceals information about it, if the misrepresentation or fraudulent concealment was the proximate cause of harm of the claimant.¹⁹⁰

There are some disincentives for plaintiffs in product liability cases in a Connecticut court. First, if a court determines that a claim is frivolous, it may award reasonable attorney's fees to the defendants.¹⁹¹ Second, the amount of punitive damages cannot exceed an amount equal to twice the damages awarded to plaintiffs.¹⁹²

VI. CONCLUSION

This article summarizes the related laws and compensation scheme for the Fukushima nuclear disaster and discussed the liability issues for TEPCO, the government of Japan, and GE.

Thus far, only a handful of lawsuits have emerged from the Fukushima nuclear disaster. These lawsuits include: 1) damage suits against TEPCO,¹⁹³ 2) provisional injunction lawsuits requiring TEPCO to pay provisional payments,¹⁹⁴ 3) criminal complaints against the former CEOs of TEPCO and other decisionmakers including former Prime Minister Kan,¹⁹⁵ 4) a provisional injunction lawsuit requiring a local government to move children to a safe place,¹⁹⁶ and 5) state compensation lawsuits filed by

¹⁹⁰ *Id.* §§ 52-572m(a) and 52-577a(d).

¹⁹¹ *Id.* § 52-240a.

¹⁹² *Id.* § 52-240b.

¹⁹³ See, e.g., *14 Nuke Disaster Evacuation Zone Residents File 265 Million Yen Suits Against TEPCO*, THE MAINICHI DAILY NEWS (Mar. 31, 2012), <http://mdn.mainichi.jp/mdnnews/news/20120331p2a00m0na004000c.html>.

¹⁹⁴ Among others, a golf course company in Fukushima filed a petition for provisional disposition with the Tokyo District Court demanding TEPCO provide decontamination work and to pay damages caused by radiation. On October 31, 2011, the court dismissed the case, and petitioners immediately appealed to the Tokyo High Court. *Gorufu-jo Josen nado wo Motometa Kari-shobun Mōshitate wo Kya'ka* [Provisional Injunction for Decontaminating Golf Course Dismissed], THE YOMIURI SHIMBUN (Nov. 14, 2011), <http://www.yomiuri.co.jp/feature/20110316-866921/news/20111114-OYT1T00893.htm>.

¹⁹⁵ *Kan Sōrira 6-nin wo Kōhatsu Minshū Dantai, Genpatsu Jiko Taiō Meguri* [Citizen Group Files Criminal Complaint against Prime Minister Kan and Others Regarding Response to Nuclear Accident], ASAHI.COM (July 14, 2011), <http://www.asahi.com/national/update/0714/TKY201107140325.html>.

¹⁹⁶ Fourteen children and their parents brought this lawsuit in the Koriyama Branch of the Fukushima District Court. On December 16, 2011, the court dismissed the case, and petitioners immediately appealed to the Sendai High Court. *Gakkō Tani de Sokai wo—Kari Shobun Mōshitate Kya'ka* [School Evacuation Provisional Injunction Denied], THE YOMIURI SHIMBUN (Dec. 16, 2012), <http://www.yomiuri.co.jp/national/news/20111216-OYT1T01121.htm>; *Fukushima no Jidō—Seito ga Sokuji Kōkoku—Sokai Motometa Karishobun* [Fukushima Children—Immediate Appeal—Provisional Injunction Requested], THE YOMIURI SHIMBUN (Dec. 27, 2011), <http://www.yomiuri.co.jp/feature/20110316-866921/news/20111227-OYT1T01078.htm>.

a shareholder of TEPCO.¹⁹⁷ In addition, the shareholders of TEPCO brought lawsuits against the current and former CEOs.¹⁹⁸ Though no lawsuit has been brought against GE to date, it may be too early for GE to rest easy. At least one commentator has pointed out that GE may agree to take financial responsibility for the disaster, as did British Petroleum, even if it could escape liability.¹⁹⁹ There is a long road ahead.

¹⁹⁷ *Tōden ni Menseki Futekiyō wa Ayamari—Kabunushi ga Teiso, Kuni wa Hanron* [Not Holding TEPCO Immune is a Mistake, Shareholders Sue, Government Disagrees], THE YOMIURI SHIMBUN (Oct. 20, 2011), <http://www.yomiuri.co.jp/feature/20110316-866921/news/20111020-OYT1T00430.htm>.

¹⁹⁸ *TEPCO Shareholder Lawsuit against Current and Former CEOs Claiming 5.5 Trillion Yen*, MAINICHI SHIMBUN (Mar. 5, 2012), <http://www.yomiuri.co.jp/national/news/20120305-OYT1T01122.htm>.

¹⁹⁹ See Anupam Chander, *Who's to blame for Fukushima?*, L.A. TIMES (Apr. 1, 2011), latimes.com/news/opinion/commentary/la-oe-chander-ge-liability-20110401,0,2228225.story.