CLEANING FUKUSHIMA: DESIGNING A MULTIPARTY STAKEHOLDER DAMAGE MITIGATION SYSTEM

Michael Gayed

Background and Overview

On March 11, 2011, an earthquake with a magnitude of 9.0 shocked the east coast of Japan. The ensuing tsunami devastated the already traumatized area. The event resulted in 19,000 deaths and substantial damage to infrastructure of millions of buildings. Among the buildings directly impacted by the tsunami, the Fukushima Daiichi Nuclear Plant sustained substantial damage triggering the second (and potentially first)¹ largest nuclear plant incident.²

The Fukushima plant operates with six General Electric boiling water reactors. The boiling water reactors functions by pumping water to cool the nuclear cores. The cooling mechanics prevent a core meltdown. The Fukushima plant had several contingency strategies in case of emergency power failures, but no strategy is fail-safe when an unpredictable event occurs.³

The Fukushima plant suffered physical damage from the earthquake, but the plant generators kicked in to prevent the cooling system from failing. Three reactors were operating, and three were shut down at the time the earthquake and tsunami struck the plant. The tsunami flooded and malfunctioned the electrical system which powered the water-pumping system. All three

¹ The Chernobyl incident is accredited as the worst nuclear plant accident in history, but Fukushima is continuing to leak radiation during cleanup. With any substantial setbacks during cleanup, Fukushima could release more radiation into the environment than Chernobyl.

² <u>Fukushima Accident</u>, World Nuclear Association, (March 20, 2014), http://www.world-nuclear.org/info/safety-and-security/safety-ofplants/fukushima-accident/.

³ Lake H. Barrett, <u>Reactor Accident Recovery & Lessons Learned</u>, L. Barrett Consulting, LLC., 5 (Feb. 21, 2013).

operating cores melted, and hydrogen gas and highly radioactive material was released into the reactor primary and secondary containment. The hydrogen gases exploded in all three reactors, causing structural damage to the plant's reactors, and the reactors began discharging a substantial amount of radioactive material.⁴

The plant was operated by Tokyo Electric Power Company ("TEPCO"). TEPCO is an electric utility company that was privatized in the early 1950s. TEPCO is now a public company traded on the Tokyo Stock Exchange, New York Stock Exchange, and Osaka Stock Exchange.⁵ TEPCO has been tasked with cleanup after the incident, but the Japanese government intervened and took partial-government control over the TEPCO's cleanup tasks in 2012. In 2013, due to poor maintenance by TEPCO and a report that found that 200 tons of contaminated water was escaping into the sea every day since the tsunami, the Japanese government took control over TEPCO's Fukushima plant.⁶

The damage caused at the Fukushima plant is still not measurable. Some attempted assessments place the total economic loss from the disaster in the range of \$250-\$500 billion (in US dollars). Also, as of September of 2012, Fukushima officials estimated that 159,128 people were evacuated from exclusion zones. These people were forced to leave their homes and possessions and received inadequate compensation for their cost of living.⁷ Another report indicates that due to the lack of transparency and mishandling certain cleanup procedures, both Japan and TEPCO have lost the confidence of the public.⁸

⁴ *Id.* at 5-6.

⁵ Tokyo Power Company, <u>Corporate Information</u>, (Last Visited Mar. 29, 2014) http://www.tepco.co.jp/en/corpinfo/index-e.html.

⁶ Julian Ryall, <u>Japanese Government to take over Fukushima Nuclear Reactor</u>, The Telegraph, (Aug. 26, 2013),

http://www.telegraph.co.uk/news/worldnews/asia/japan/10266309/Japanese-government-to-take-over-Fukushima-nuclear-reactor.html.

⁷ Steven Starr, <u>Costs and Consequences of the Fukushima Daiichi Disaster</u>, Physicians for Social Responsibility, (March 29, 2014),

http://www.psr.org/environment-and-health/environmental-health-policy-institute/responses/costs-and-consequences-of-fukushima.html.

⁸ Lake H. Barrett, <u>Fixing Fukushima's Water Problem</u>, Bulletin of Atomic Scientists, 1-6 (Sept. 9, 2013).

Significant international concern remains over the potential global damage caused by the plant failure and cleanup mishaps. A United States study based out of California faults the Fukushima disaster for an increase in hypothyroidism in newborns among the west coast of the United States.⁹ A Chinese article published on China Daily cites the Japanese government for failing to adequately handle the problem and suggests that international community is seriously affected by the radioactive water dumped into the ocean. The article suggests that Japan accept more international weight in the cleanup procedures.¹⁰ Several countries and organizations have aided or offered to aid Japan with the cleanup process. The Japanese government has allowed very few groups to fully investigate the matter.

Problem Presentation

The assumption in this paper is that due to many complaints, the United Nations wishes to setup a program that allows for international involvement in decisions particular countries make that affect many others. The United Nations funded the initial program write up but requested that the system funds itself.

Goals

Nuclear power remains a growing and reliable source of global energy. It is an effective efficient system that in 2012 produced 10.2% of the world's electricity.¹¹ Like most other energy sources, there is abundant risk involved in harvesting nuclear energy. These risks break apart in two distinct categories, which occur during (1) daily operations of a nuclear reactor, and

⁹ Joseph J. Mangano and Janette D. Sherman, <u>Elevated airborne beta levels in</u> <u>Pacific/West Coast US States and trends in hypothyroidism among newborns</u> <u>after the Fukushima nuclear meltdown</u>, Open Journal of Pediatrics, Vol. 3 No. 1

^{(2012), (}January 29, 2013), http://file.scirp.org/Html/1-1330150_28599.htm. ¹⁰ Yu Zhirong, <u>World must act to stop Fukushima Nuclear Discharge</u>, China Daily, (Oct. 05, 2010), http://www.chinadaily.com.cn/hkedition/2013-10/05/content 17010033.htm.

¹¹ <u>Key World Energy Statistics</u>, International Energy Agency, 7 (2012), https://www.iea.org/publications/freepublications/publication/kwes.pdf.

(2) catastrophic failure of a nuclear reactor.¹² For now, regardless of the risks, it is safe to assume that nuclear energy is here to stay. This research assignment will focus on the aftermath of a catastrophic failure of a nuclear power plant, specifically, the Fukushima Daiichi Nuclear Plant located in Okuma, Fukushima, Japan.

The purpose of this study is to design a system that addresses nuclear disaster cleanup practices to adequately account for multiple stakeholder concerns. With any nuclear disaster a substantial amount of stakeholders are adversely affected. This system will not solve the effect of such a catastrophic disaster, but rather, this system is designed to mitigate the future damage during the remedy and cleanup processes.

The goal of this research is to design a model system that can be utilized with minor evolutions to mitigate stakeholder damages after a major catastrophic event transpires. This system will be designed in the context of tragic nuclear power plant failures.

Process and Structure

The system can be broken down into three distinct sections: (1) research gathering and sharing; (2) mediation to develop cleanup procedures among stakeholders, and (3) mediation/arbitration tribunal to determine final cleanup practices for Japan and TEPCO. See Exhibit 1 for the system diagram.

Research Gathering and Sharing

The first part of the process centers on gathering and sharing research findings among groups. The research gathering and sharing stage consists of allowing each stakeholder that is paying into the system to build an investigation or research squad that will have access to the Fukushima site in order to develop potential cleanup processes that best serve their stakeholders' interests. The primary purpose of information sharing is to

¹² <u>Nuclear power: a dangerous waste of time</u>, Greenpeace International, 2-7 (January 2009) http://www.nonukesyall.org/pdfs/nuclear-power-a-dangerous-was.pdf.

eliminate potential research bias by certain stakeholders and to decrease repetitive and unnecessary investigations.

Due to the high level of technical acumen required to understand and provide appropriate recommendations for cleanup, expert researchers will be an essential facet to the success of the system. Each research group will have direct communication with an information gathering and disbursement commission multiple times during their research investigation in order share information with other groups. The purpose of the commission is to eliminate potential ethical violations of confidentiality. While confidentiality may not be a substantial matter for most stakeholders, information brought by TEPCO and the Japanese government may require the shield of confidentiality due to potential future liability associated with the incident. Further the purpose of sharing information between board members is to eliminate or limit the reliance on bias research or information.¹³

Each participating stakeholder will pay a fee to participate in the process while also being responsible to fund their own research and mediation representatives. The fee will be used to provide representation to certain groups of stakeholders in order to provide due process among the most affected stakeholders. For example, while the Japanese Government and TEPCO are involved in and funding the process, the Japanese citizens will not be adequately represented by the Japanese Government or TEPCO because those two parties are primarily concerned with cleanup costs and liability.

The commission will be tasked not only with gathering and disbursing information but also collecting payments and appointing appropriate individuals to serve as the representatives for the stakeholder parties that are unable to pay for the system; this includes the Japanese citizens. Determining who will represent the underserved stakeholder is an important issue when designing the system. With the current structure of the system it is vital to note the potential ethical concerns that are raised for the designer/system administrator because the commission will use the

¹³ Allan Stitt, <u>Alternative Dispute Resolution For Organizations How to design a</u> <u>system for effective conflict resolution</u>, John Wiley & Sons Canada, LTD., at 30-34.

fees paid by the participating stakeholders to hire representatives for the non-participating stakeholders. One potential method to minimize ethical violations when appointing representatives for those stakeholder is to appoint individuals from non-profit groups who are actively involved in the local communities.¹⁴

Due to the potential ethical violations that may arise with the responsibility delegated to the commission, appointment of adequate commission members is essential to both the integrity of the system and the professionalism and conservation of ethical principles. There are three main ethical issues that the designer must be wary while appointing member of the commission: (1) quality of the process, (2) relationship with commission members, and (3) confidentiality.

The quality of the process is primarily focused on maintaining the integrity of the system's design goal which is provide *equal representation* among stakeholders with *equal power* to influence final outcome of the system. Any relationship with commission members could comprise the integrity of the system. The designer ought to appoint commission members from either local universities or international law firms who have no prior relationship with the designer. If the designer does have a prior relationship with any commission members or establishes one during the process, the designer must inform all stakeholder groups of such a relationship to maintain the appearance of impartiality throughout the process. The designer will have the responsibility of ensuring that the commission members be barred of disclosing any information that they receive during the process.¹⁵

After the information sharing process concludes all parties except for TEPCO and Japan will be tasked with developing potential cleanup procedures that will best suit their Stakeholders' interests. The expert groups will have a key deadline; at which

¹⁴ The idea of appointing local non-profit leaders as representatives of stakeholders comes from a system utilized by the Governor's Commission for a Sustainable South Florida. The Commission reached out to non-profit organizations to represent the public in Everglades Ecosystem Restoration projects. See Laura Ogden, <u>The Everglades Ecosystem and the Politics of Nature</u>, American Anthropologist, Vol. 110 Is. 1, at 21-32, (March 2008). ¹⁵ Nancy Atlas and Stephen Huber, <u>Alternative Dispute Resolution The</u> Litigators Handbook; American Bar Association, at 85-96, (2000).

point the parties then proceed to mediation to establish a clear list of cleanup processes that satisfy as many stakeholder interests as possible.

Cleanup Procedures Mediation

A complex multi-party mediation will facilitate the future arbitration cleanup procedures by combining the interest of all stakeholders (excluding the Japanese Government and TEPCO) into a more practical list of cleanup techniques. The stakeholders will negotiate with each other to establish a list that considers all interests of the other stakeholders.

The complex issue that arises by the process is that the parties will be encouraged to create negotiating teams which will have to approach the mediation session prepared with required submissions analyzed and prepared to present the reasoning behind chosen procedures. The negotiating teams will represent each stakeholder during the mediation process and will consist of an advocate and an expert who was involved in the research stage of the system. The expert presence will be to assist the advocate in analyzing decisions and determining if a proposed process meets the interest of the stakeholders.¹⁶

Stakeholder's interests will be represented initially by submissions made to all parties. The list will elaborate on interest specific goals and the potential cleanup process that will best meet their stakeholder's interests. The stakeholder negotiation teams will all meet together multiple times to develop final cleanup proposals that focus on the interest of the stakeholders. The mediation board will be responsible for assisting the parties into transitioning multiple proposals.

The designer faces issues when determining who to appoint to the mediation board. Due to the complexity of the issues that could arise, a mediation board will be utilized to mix differing expertise in mediation with expert knowledge. The process will begin on a facilitative process where the mediation board will aim

¹⁶ Albert Bate and Tyrone Holt, <u>Large, Complex Construction Disputes: The</u> <u>Dynamics of Multi-Party Mediation</u>, American Arbitration Association, <u>https://www.adr.org/aaa/ShowPDF?doc=ADRSTG_011807</u>, at 51-53, (July 2007).

to help the parties combine interests and procedures to limit the massive scope of procedures that will be brought to the table by each stakeholder. The mediation board will need to have some detailed technical knowledge which may require the opportunity to consult with experts who have not been part of the system thus far. As the process deepens the mediation board will shift its style from facilitative to evaluative to push the process to completion.¹⁷

The designer will have to be wary of several potential ethical pitfalls while appointing mediators and while the process continues. The designer will establish certain qualifications that will be minimum qualifications to determine the mediators' competence. One benefit of having multiple mediators in a system is that is does assist the designer in remaining or appearing to remain impartial to process determinations as the different mediators may have contradictory opinions for the mediation teams. In a perfect situation the designer would be able to pass the minimum qualifications to an impartial group to determine appropriate mediators for the board, but that procedure leaves too much risk for bias within the selection. For that reason, it is most appropriate that the designer personally appoints or outsource the decision to an international mediation group such as the International Mediation Institute. In either case the designer must be prepared to do background research on all members of the board to determine whether any conflicts of interest exist and, if so, whether full disclosure of those conflicts is sufficient or removal of the individual is required.¹⁸

Final Cleanup Process Mediation-Arbitration Tribunal

The mediation's purpose is to develop a list of cleanup procedures that, if followed, should satisfactorily represent the majority of interests brought by the stakeholders (excluding interests of the Japanese Government and TEPCO). After the list is developed, the stakeholders from the mediation process will be engaged in determining the representatives to sit before the mediation-arbitration tribunal. The representatives can be a

¹⁷ Bruce Rubin, <u>The Practice Skills Toolkit Tips on ADR, Discovery, and</u> Ethics, *Choosing the Right Mediator*, First Chair Press, at 51-55, (2013).

¹⁸ Atlas and Huber, at 81-96.

combination of stakeholder agents who engaged in the mediation process or a separate outside firm.

The purpose of the mediation-arbitration tribunal is to allow the Japanese Government and TEPCO to decide whether or not they will be legally bound by the cleanup procedures determined in the process. The caveat that the Japanese Government and TEPCO face if they decide to prevent this process from being legally mandated is that the list of best practices can be used a sword in litigation against them; however, if the two parties agree to be legally bounded by arbitration then the parties will be able to use that same document as a shield against damage in future litigation.¹⁹

The benefits of establishing a tribunal are multifaceted. Both sides of the negotiation, (1) the Japanese Government and TEPCO, and (2) all other stakeholders, will have the opportunity to one mediator/arbitrator. The appointed appoint two mediators/arbitrators will then make a collective decision to appoint another third party mediator/arbitrator to sit on the tribunal. This system design removes potential ethical violations of the designer/coordinator by placing more responsibility on the stakeholders. Due to the complexity of the matter the tribunal will require expert knowledge in the industry. They may request expert testimony from both parties in the mediation/arbitration.

There several potential approaches are the mediators/arbitrators can take, but it may be most beneficial to begin the process by utilizing the single-text negotiation method. This method will ensure that both parties utilize their time most effectively by establishing the main cleanup process differences.²⁰ meets or if the negotiation а deadlock. When the mediators/arbitrators will pull the discrepancies out of the document and switch from a facilitative method to a more evaluative mediation scheme to resolve the differences. At the end of this process a final list of cleanup procedures should be developed.

¹⁹ Martin Frey, <u>Alternative Methods of Dispute Resolution</u>, West Legal Studies, 2003, at 284-86.

²⁰ Roger Fisher and William Ury, <u>Getting To Yes Negotiating Agreement</u> <u>Without Giving In</u>, Penguin Books, 2011, at 114-19.

The systems design is setup to limit ethical violations by the designer/coordinator. The designer at this point will not be involved in the process other than surveillance and administration to offer potential system alterations, obtain feedback, and deliver exit surveys.

The Stakeholders

Tokyo Power and Electric Company ("TEPCO")

TEPCO is the company that owned and operated the plant at the time the earthquake and tsunami caused the disaster. TEPCO has been accused of covering up unacceptable cleanup practices. Due to cleanup accident cover-ups, the Japanese Government has taken partial control of TEPCO for the cleanup. TEPCO's interests are primarily focused on monetary cost of cleanup, litigation and liability, and retaking control of the company.

Japanese Government

After taking partial control of TEPCO and the Fukushima site, the Japanese Government has opened itself up to much liability. The primary interests of the Japanese Government include cost of cleanup, future nuclear regulatory reform, and reimbursing the displaced Japanese citizens.

Japanese Citizens

The Japanese Citizens is one stakeholder that will benefit by the fee structure of the system. The primary interest of the Japanese citizens includes safety, reimbursement for lost property, and future nuclear energy regulatory reform. The system is designed to represent this group through local non-profit organizations that have expertise in the nuclear energy industry.

Fishing Industry

Several studies have indicated that the fishing industry throughout the pacific has been affected dramatically from the Fukushima disaster. Several reports have discovered traces of radioactive isotopes in Pacific Bluefin tuna that migrated from Japan to California waters.²¹ Whether these studies are accurate or not the fishing industry has suffered and may benefit from participating in such a system. This industry's interests is likely focused on limiting radioactive isotopes from leaking into the ocean and gauging how the cleanup practices affect the industry in the long term.

Agriculture Industry

Several reports indicate that radioactive material has been found throughout Japanese farms. There are fears that this radiation might have extended outside of Japan.²² Others in the agriculture industry throughout may want to participate in system to understand the effects and solutions to dealing with radioactive spoiled land.

Nuclear Energy Industry

The nuclear energy industry would benefit greatly from participating in the system as many facilities globally face stricter regulations. Many nuclear plants share the same design as the Fukushima plant and require substantial changes in infrastructure.²³ The industry would also benefit by learning how to deal with a nuclear disaster appropriately.

Other Industries

There may be many other industries that wish to participate in the process that may see a threat from the radioactive exposure from Fukushima. An open forum to allow industry representatives

http://www.pnas.org/content/early/2012/05/22/1204859109.abstract,

²¹ Madigan, Baumann, and Fisher, <u>Pacific Bluefin Tuna transport Fukushima</u>-Derived Radionuclides from Japan to California,

Proceedings of the National Academy of Sciences of the United States of America, April 25, 2012.

²² Jennifer Carpenter, <u>Fukushima fallout fears over Japan Farms</u>, <u>http://www.bbc.com/news/science-environment-15691571</u>, BBC News, November 2011.

²³ <u>Technical Lessons Learned from the Fukushima-Daichii Accident and</u> <u>Possible Corrective Actions for the Nuclear Industry: An Initial Evaluation,</u> <u>http://mitnse.files.wordpress.com/2011/06/fukushima-lessons-learned-mit-nsp-025.pdf</u>, Massachusetts Institute of Technology, May 2011.

to join the process will ensure that interests are met and liability and damage to all stakeholders is mitigated.

Hospitals

Hospitals play an essential role in this system because they may be required to adapt to a system to detect radiation borne illnesses and diseases. The reason hospitals will take on the role rather than general doctors is because the equipment cost may be great. This does not just include local and regional hospitals in Japan, but globally as the risks may reach outside the country.

Other Regional and International Countries

Several countries wanted to be involved because they felt that the system threatens their citizens and businesses. China has publicly announced its worries at several United Nation conventions. The Chinese government was concerned with the radioactive material that has been flowing into the Pacific Ocean. Also, many countries have expressed concern about the stability of their nuclear facilities after the incident. Germany, for example, has decided to phase-out all nuclear energy facilities by 2022.²⁴ The United States and many others have decided to stall ongoing construction of nuclear energy facilities.²⁵

Feedback Process and Exit Survey

The goal of the entire process is to find an adequate way to minimize the damage caused during cleanup of the Fukushima plant. The program has a minimal chance of success without obtaining proper feedback from participants throughout the process. It is crucial that the knowledge and expertise of the research groups is not forgotten while progressing through the mitigation design system.

²⁴Phasing in the Phase Out: Germany Reconsiders Reactor Extensions, http://www.spiegel.de/international/germany/phasing-in-the-phase-out-germanyreconsiders-reactor-lifespan-extensions-a-750836.html, Spiegel Online International, March 2011.

²⁵ Ragheb, <u>Restarting The Stalled USA Nuclear Renaissance</u>, <u>http://mragheb.com/NPRE%20402%20ME%20405%20Nuclear%20Power%20</u> <u>Engineering/Restarting%20the%20USA%20Stalled%20Nuclear%20Renaissanc</u> <u>e.pdf</u>, February 2014.

The feedback process will start after research is obtained by the expert groups. The first stage of feedback collection is after the mediation process. The purpose of the mediation process is to obtain the most reasonable best practices for cleanup. The results of the mediation process will produce a document list which will be allocated to the members of the original research groups to obtain feedback on the results of the mediation. The goal is to determine whether the list actually meets the desired goals of the system. The research groups will receive the list developed from mediation and a form to fill out which will compare whether the established methods met some, part, or all concerns for their respective stakeholders.

The second part of the feedback process will be to obtain the research groups' feedback after the mediation/arbitration tribunal process where the final procedures are developed. The research groups will receive the same information and form as they did during the previous mediation process. Obtaining feedback from the research groups will inform the designer that the process continues or does not continue to be successful at mitigating damage.²⁶ See Exhibit 2: The Exit Survey.

The Culture Clash

This design system will have to deal with a potential issue with negotiation, settlement, and decision making styles that derive from different cultures. The Japanese value collective and collaborative decision making that make the parties in the negotiation think and act as one entity. The designer will have to prep certain parties to ensure that they can adapt to the system, or if not possible, that the system can adapt to their decision making style.²⁷ See Exhibit 3: Dialogue between designer and Japanese government officials.

²⁶ Susan Podziba, <u>Civic Fusion Mediating Polarized Public Disputes</u>, ABA Publishing, 2012, at 99-121.

²⁷ Troy Hall, <u>A Cultural Decide: Differences in Decision Making between Japan and the United States</u>, Credit Union Insight, <u>http://www.cuinsight.com/a-cultural-decide-differences-in-decision-making-between-japan-and-the-united-states.html</u>, February 2013.

The Designer's Role

The designer's role is to plan an effective system to mitigate stakeholder damages. After the system is designed that designer switches to a coordinator role. As a coordinator, the designer will be responsible to ensure the system is functioning appropriately. The coordinator will communicate with the stakeholders to guarantee that their interests are still the primary goal of the project. The coordinator will also be responsible for repairing any system defects that are uncovered during the process. The coordinator will be paid on a salary basis and can be removed from the position by a majority vote of the stakeholder or if any ethical or corrupt practices are uncovered.

Problem Selection

This problem was selected because it requires a multipart ADR system that utilizes experts. I have no opinion on the utilization of nuclear energy programs. Another reason this project generated interest was because the problem gives an opportunity to gain knowledge on multicultural and multinational ADR design systems in disaster environments.

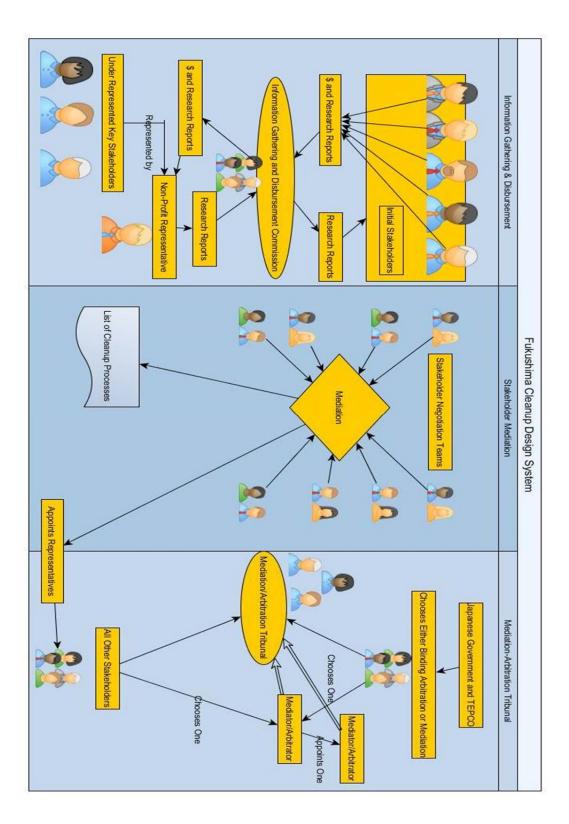


Exhibit Two: The Exit Survey

1. The commission timely disbursed information to you.

OStrongly Disagree ODisagree OAgree OStrongly Agree

2. The system's design allowed all stakeholder concerns to be presented.

OStrongly Disagree ODisagree OAgree OStrongly Agree

3. The designer/coordinator listened to complaints about the process.

OStrongly Disagree ODisagree OAgree OStrongly Agree

4. The designer/coordinator adjusted the system when the system failed.

OStrongly Disagree ODisagree OAgree OStrongly Agree

5. Your party's concerns were adequately satisfied by the final proceedings.

OStrongly Disagree ODisagree OAgree OStrongly Agree

6. Feedback was obtained throughout the process.

OStrongly Disagree ODisagree OAgree OStrongly Agree

7. The mediator listened to your concerns.

OStrongly Disagree ODisagree OAgree OStrongly Agree

8. The tribunal fairly mediated/arbitrated the claim.

OStrongly Disagree ODisagree OAgree OStrongly Agree

- The system processes were fair and transparent.
 OStrongly Disagree ODisagree OAgree OStrongly Agree
- 10. Your party would go through the process again.

OStrongly Disagree ODisagree OAgree OStrongly Agree

Exhibit Three: Dialogue between designer and Japanese Government Officials.

Designer: "The purpose of allowing all stakeholders is to assist your organization with potential cleanup practices that may mitigate any damage that you may have not considered that could arise."

Japanese Government Official: "How will we come to a mutually beneficial conclusion?"

Designer: "It may be impossible to fully satisfy all parties in the negotiation because of vast difference in interest in many cases; however, it mutually benefits all potential stakeholders to be included in a system where their concerns will be heard. Allowing other parties to voice their interests, concerns, and expertise will benefit you in continuing the cleanup procedures, assist you in mitigated future damage to stakeholders, and limit your liability to a certain extent."

Japanese Government Official: "How can we determine which interests are more important than others?"

Designer: "The system is designed to require all participating stakeholders to work together to create list of mutually beneficial cleanup procedures before negotiating with your party and TEPCO. You will not have to determine which interest is more important than others, but you will have the opportunity to determine if the final cleanup practices are reasonable."

Japanese Government Official: "What if we have determined that our procedures or some others are much more efficient than the designed procedures?"

Designer: "The system is designed to allow your party to decide whether it wants to be bound by the list of procedures or not by creating a mediation/arbitration tribunal. If you decide not to follow the procedures and damage occurs, other parties can now utilize the information as a sword in litigation against your party. However, if you decide to follow the procedures, you use that same list as a shield against any such litigation." Japanese Government Official: "What is your role in the system after designing it and how will the system be funded?"

Designer: "As the designer of the system, I will not be engaged directly as a mediator, arbitrator, or decision making body. My purpose once the system starts becomes administrative. I become a sounding board for any complaints or suggestions that are made to alter the system to fix any identified flaws. I ensure the system meets its goals by gathering feedback throughout the process. The system will be funded partially by you and partially by many stakeholders. Stakeholders that participate in the system pay a fee that is used to create due diligence for under or non-represented stakeholders while the rest goes into funding the systems tasks. However, as the main beneficiary of the system you will also be responsible for some of the cost. The final purpose of the system is mitigating your potential losses. It would be in your best interests to engage and assist the process. After I take on a coordinator role, I expect to be paid on a salary basis so that my pay is fixed. I can be dismissed from my position at any-time if the stakeholders agree on a majority vote."