

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE COMMISSION**

October 26, 2012

PILGRIM WATCH COMMENT REGARDING SECY-12-110, CONSIDERATION OF ECONOMIC CONSEQUENCES WITHIN THE NRC'S REGULATORY FRAMEWORK -PRICE ANDERSON COVERAGE CLEANUP COSTS

Michael Cass, Vice President and General Counsel for American Nuclear Insurers made a presentation to the NRC Commissioners regarding nuclear indemnity with respect to the effects of offsite contamination at the September 11 Briefing on Economic Consequences. Pilgrim Watch (hereinafter "PW") believes the subject requires further clarification.

The central question is whether Price Anderson fairly covers offsite economic costs. American Nuclear Insurers (ANI) implied that it does to the NRC Commissioners, September 11, 2012; later NRC OGC representative told ACRS that he doesn't know, October 3, 2012; Inside EPA investigative report, supported by emails between EPA, NRC, and FEMA obtained by FOIA, July 2010 concluded that Price Anderson only partially covered partial - it did not cover cleanup. (Please see attachment) The Inside EPA report said that,

NRC officials also indicated during the meetings that the industry-funded account established under the Price Anderson Act -- which Congress passed in 1957 in an effort to limit the industry's liability -- would likely not be available to pay for such a cleanup. The account likely could only be used to provide compensation for damages incurred as the result of an accident, such as hotel stays, lost wages and property replacement costs, the documents show, leaving federal officials unsure where the money to pay for a cleanup would come from.

PW explained in *Pilgrim Watch Comment Regarding Secy-12-110, Consideration of Economic Consequences within the NRC's Regulatory Framework* that actual cleanup costs are the "Elephant in the Room" that NRC, the nuclear industry and its insurers have avoided. After the real-world experiences in Japan proper modeling of these costs can no longer be avoided. If cleanup costs were realistically assessed, it would result in major offsite costs requiring the addition of a large number of mitigations to reduce the probability of a severe accident and require far larger insurance coverage in Price Anderson. The cost formula used in the computational tool (MACCS2) to calculate economic consequences of a severe accident severely underestimates costs likely to be incurred. The Price Anderson Act based its coverage limit on the MACCS. It has the same cleanup assumptions and methodology as MACCS2.

Price Anderson Coverage versus Reality

Price Anderson is the nuclear industries indemnity or insurance, established by Congress in 1957. The purpose is to indemnify the industry against liability claims in the event of an accident and ensure monies for the public. Act establishes a no fault insurance type system in which the first approximately \$12.6 billion (as of 2011) is industry-funded as described in the Act. Any claims above the \$12.6 billion would be covered by a Congressional mandate to retroactively increase nuclear utility liability or would be covered by the federal government. The amount has not been changed in over 50 years, and is painfully insufficient as NRC, industry and its insurers know. For example:

Lesson learned from Fukushima: The Japanese government has budgeted \$14 billion *through March 2014* for the cleanup which could take decades. The Japanese Environment Ministry expects the cleanup to generate at least 100 million cubic meters or 130 million cubic yards of soil, enough to fill 80 domed baseball stadiums (*Japan decontaminates towns near tsunami-hit nuclear plant, unsure costly effort will succeed*, Associated Press, Mari Yamaguchi, March 5, 2012) It is no wonder that ANI does not cover these expenses nor the NRC-approved MACCS2 consequence code models these expenses.

Long before Fukushima, NRC knew that cleanup was prohibitive and therefore should be avoided. The more effective a radiological decontamination is (*i.e.*, the more radiation removed), the more difficult and expensive it will be, requiring from partial destruction to complete demolition of buildings and removal of vegetation, soil and trees. For example, a Decontamination Factor (the ratio of the radiological contamination before the cleanup and the radiological contamination after the cleanup) of 3, meaning 67% of the radiological contamination is removed, could entail, among other things, the removal of lawns and gardens and the removal of roofs on structures. Additionally, radiological decontamination efforts also require sufficient disposal capacity for the radioactive waste that must be removed (*e.g.*, soil, crops, building debris). Finding disposal site(s) is a huge if not insurmountable hurdle, as shown in Japan today. The situation is unlikely to be any different in the United States based on a history of unwillingness of most states to host even low-level radioactive waste sites and objections by communities along transportation routes.

As recognized by the 1987 OECD *Pathway Parameter* report¹ and the *Site Restoration* report², a Decontamination Factor of more than 10 (90% radiological contamination removed) would likely involve

¹ <http://www.oecd-nea.org/nsd/docs/1988/csni88-145-vol2.pdf>

² <http://chaninconsulting.com/downloads/sand96-0957.pdf>

removal and disposal of large amounts of soil and the wholesale removal (or demolition or razing) of many types of structures and the disposal of the resulting building wastes. Both *Pathway Parameter* and *Site Restoration* recognize that achieving Decontamination Factors greater than 10 in both farm and non-farm areas would require the demolition of all structures, the removal and disposal of all the rubble, scraping of the remaining surface soil until the selected cleanup level was reached, and disposal of all rubble and scraped soil as radioactive waste.

The acute difficulty (if not impossibility) of achieving Decontamination Factors greater than 10 for more than a few, select “vital facilities” was known to the NRC as far back as the mid-1970s, as reflected in the 1975 WASH-1400 report³. Instead of recognizing this and dealing with it, NRC industry and ANI simply ignore it. Neither NRC nor ANI model actual cleanup costs in consequence analyses. As a result, SAMA analyses never find that any mitigation is justified and Price Anderson does not provide sufficient monies. The game is rigged.

Post Fukushima, we hope the Commission will take this opportunity and correct the current method to assess offsite costs in a severe accident required to protect health, safety and property.

Respectfully Submitted,

(Electronically signed)

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October 26, 2012

³ See *Site Restoration*, Section 2.8, discussing WASH-1400

ATTACHMENT

The central question is whether Price Anderson fairly covers offsite economic costs? American Nuclear Insurers (ANI) implied that it does to the NRC Commissioners, September 11, 2012; later NRC OGC representative told ACRS that he doesn't know, October 3, 2012; Inside EPA investigative report, supported by emails between EPA, NRC, and FEMA obtained by FOIA, July 2010 concluded that Price Anderson only covered partial costs-not cleanup. Excerpts follow:

1. Sept 11, 2012 Commission Meeting: Briefing on Economic Consequences, Michael Cass, Vice President and General Counsel for American Nuclear Insurers (ANI) Presentation

ANI Coverage

- Bodily Injury
- Property Damage
- Covered Environmental Cleanup Costs
- Reasonable Additional Expenses incurred by States, Counties, and Municipalities in responding to an evacuation

All coverages triggered by the nuclear energy hazard

Cass, Transcript pg., 16 says that:

7 Covered environmental cleanup costs are also defined by the 8 policy. These costs would include loss, costs, or expense arising out of a 9 governmental decree, order, or directive requiring a person to pay for, 10 monitoring, testing for, cleaning up, neutralizing, or containing environmental 11 damage. Environmental damage is defined as contamination by nuclear 12 material. Now, these environmental cleanup costs are indemnified when they 13 result from an extraordinary nuclear occurrence, or an ENO, which is a defined 14 term under the Act, and it's further defined in your regulations at 10 CFR, Section 15 140.83.	16 All these coverages are outlined in the facility form policy that 17 reactor licensees procure from ANI. Coverage grants continue to apply, inform 18 the basis for coverage under the secondary financial protection program master 19 insurance policy. We refer to that SFP policy as a following form policy in that its 20 grants of coverage and other terms and conditions follow those of the underlying 21 primary insurance policy. So, there's a seamless transition between the 22 underlying primary policy and then the secondary financial protection program. 23 Next slide, please.
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Cass response Cmr. Ostendorff, Transcript, pg., 54 says that:

3 COMMISSIONER OSTENDORFF: Thank you. Anybody else in 4 the panel want to offer any comments on that? Okay. 5 Let me go to Mr. Cass for a minute. On your Slide 5, you'd talked 6 about the covered environmental cleanup costs and the property damage, et 7 cetera. Can you just talk for a minute at a high level about, you know, how the 8 ANI policy coverage would affect somebody who has lived in the Fukushima 9 evacuated area for the last 18 months, had to move out, take their wife and kids, 10 shut down their business. Just kind of the basic things, the considerations that 11 would be applicable to providing coverage in that kind of scenario. And 12 Commissioner Magwood was getting to that with his comments on Fukushima. 13 I'd appreciate if you could talk about coverage in that kind of scenario.	14 MICHAEL CASS: Sure. Well, the immediate needs of that family 15 would be taken care of. Their lodging, medical costs, food, shelter, clothing, that 16 kind of thing, since they were displaced from their home. Ostensibly because 17 either the home was contaminated or at risk of contamination, and they were 18 within an evacuation zone that was declared by the government or some -- in this 19 case, would be the local government that would declare protective actions that 20 would be required. Following that, the next -- so, first you have the immediate 21 needs taken care of. Then the next step would be if they worked at an 22 establishment that was also affected by the evacuation order or was 23 contaminated or potentially contaminated, then we would address their lost 24 wages. If they were a business owner, we would address their lost business -- 25 the economic losses from their business.
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Cass, Transcript, pg., 55 says that:

1 Longer term, that's where things -- depending on the nature of the
2 accident, the level of contamination, the recovery that's anticipated. If their
3 property was -- let's take their home. If their home was contaminated, we would
4 either respond by cleaning it up. If it was pre-habitable, then that would be the
5 end of their loss, theoretically. If it was not to be cleaned up, then there would be
6 some payment for the value of that property, and that would, theoretically, solve
7 their claim for their lost property. They would be made whole for that property,
8 based on some economic evaluation of the value of that property -- pre-accident,
9 of course.

10 If it looks as though the consequences of the accident are going to
11 exceed this level of protection that we have available right now of \$12.6 billion,
12 then it would be up to ANI or, potentially, the NRC to file a petition with the court
13 to come up with a compensation plan for the entire population and economy that
14 was affected by this accident. If it looks like the funds are not going to be
15 adequate to cover it, then we have to come up with a plan, and a plan for both
16 compensating the various constituents that are affected, how much they're going
17 to be compensated for, whether additional compensation needs to be --
18 additional funds need to be acquired through some other mechanism besides
19 what's currently structured in Price Anderson.

20 And there was a plan, a skeleton of a plan put together, I believe it
21 was in 1990 timeframe following the Three Mile Island accident that tends to form
22 a framework that we would -- that would be a beginning point that we would use
23 and then attempt to put some additional details into that plan. But, you know,
24 that's essentially how it would work.
25 COMMISSIONER OSTENDORFF: Thank you very much. Thank

2. ACRS, Joint Meeting of Regulatory Policies & Practices and Reliability and Probabilistic Risk Assessment Subcommittees (October 2, 2012)

Transcript, pg., 14

MEMBER CORRADINI: So maybe you're going
to get to this. So does Price Anderson fit into this
at all?

MS. BONE: Price Anderson came in a topic
early in the discussion. We mention it in the legal
authority enclosure. But it became more of a
background point really than part of our options or
recommendations. But we have working group members

6 MEMBER ARMIJO: But, just at a top level,
7 how much of the economic consequences are covered by
8 Price Anderson? You know, compensation for loss in
9 the U.S., what fraction of the economic consequences
10 did you calculate are actually insured in one way or
11 another?
12 MEMBER CORRADINI: Actually, you've
13 actually got to what I was hoping you'd say, which is
14 my intention is that's equivalent of no-fault
15 insurance. Anything off-site should be covered under
16 Price Anderson.
17 MEMBER ARMIJO: That's what I thought.
18 MEMBER CORRADINI: That's what I thought
19 too.
20 MEMBER ARMIJO: But I'm not sure.
21 MS. BONE: Sure I see our OGC rep here

23 MR. PESSIN: Good afternoon. My name is
24 Andrew Pessin, I'm an attorney in the Office of
25 General Counsel. I assisted the workgroup in drafting

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1 the legal opinion that supported this paper.
2 Price Anderson Act is on the background of
3 land contamination and this paper is more looking at
4 the front end. It's looking at what is our authority
5 to regulate licensees to prevent contamination of
6 land, or to mitigate that kind of contamination. So
7 it's to prevent it.
8 Price Anderson doesn't kick in until the
9 land is already contaminated. So that's not the
10 focus. So it was not the focus of this paper.
11 MEMBER ARMIJO: But my question was just
12 really simple. Is there compensation available to
13 people who've been damaged, or property that's been
14 damaged, through Price Anderson?
15 MR. PESSIN: I believe so. But again we
16 didn't look at that as part of this effort.

Mr. Pessin, NRC OGC, says that he does not know.

3. InsideEPA, Investigative Report, Agencies Struggle To Craft Offsite Cleanup Plan For Nuclear Power Accidents, November 22, 2010, Douglas. Guarino and accompanying emails between EPA, NRC, DHS obtained by FOIA (<http://insideepa.com/>)

Agencies Struggle to Craft Offsite Cleanup Plan for Nuclear Power Accidents Monday, November 22, 2010

EPA, the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA) are struggling to determine which agency -- and with what money and legal authority -- would oversee cleanup in the event of a large-scale accident at a nuclear power plant that disperses radiation off the reactor site and into the surrounding area.

The effort, which the agencies have not acknowledged publicly, was sparked when NRC recently informed the other agencies that it does not plan to take the lead in overseeing such a cleanup and that money in an industry-funded insurance account for nuclear accidents would likely not be available, according to documents obtained by Inside EPA ([Part 1](#) and [Part 2](#)) under the Freedom of Information Act (FOIA).

Environmentalists concerned with nuclear safety and cleanup issues say indications in the FOIA documents that the government has no long-term cleanup plan in the event of an emergency casts doubt on the nuclear power industry's ongoing efforts to revive itself. The industry currently has 22 applications to build new nuclear power plants pending before NRC and is marketing itself as a source of carbon-free emissions.

“This is a revelation that should call into question efforts to revive the industry,” one environmentalist says. “Certainly there should be no new [power plant] construction if this issue can't be resolved.” The activist adds that the lack of a cleanup plan is “pretty ironic because nuclear energy is not a new technology or issue. The first nuclear reactor was built in 1942 -- that's 68 years ago.”

A spokesman for the Nuclear Energy Institute (NEI), which represents the nuclear power industry, says officials believe such cleanups would be handled by the insurance fund despite assertions in the documents to the contrary. The NEI spokesman also downplays the likelihood of such a cleanup being necessary, saying accidents are “highly unlikely to occur.”

Staff for the three agencies began meeting to discuss the issue last year, when NRC officials indicated to the other agencies that they do not, as some federal officials had previously assumed, plan on leading cleanup oversight in the event an accident at a nuclear power plant dispersed radioactive contamination off the reactor site and into the surrounding area. NRC suggested EPA would be the appropriate agency to lead such an effort, according to the documents. While NRC and FEMA require nuclear plants to have emergency response plans, it is not clear these plans extend beyond the initial aftermath of an accident or apply to radiation dispersed over large areas, the documents say.

However, the NRC officials also indicated during the meetings that the industry-funded account established under the Price Anderson Act -- which Congress passed in 1957 in an effort to limit the industry's liability -- would likely not be available to pay for such a cleanup. The account likely could only be used to provide compensation for damages incurred as the result of an accident, such as hotel stays, lost wages and property replacement costs, the documents show, leaving federal officials unsure where the money to pay for a cleanup would come from. (Emphasis added)

This summer, EPA staff began drafting a white paper on the issue in preparation for emergency drills the agencies were planning for August that documents say were expected to involve high-level administration officials, including either President Obama or Vice President Biden.

Disagreements over EPA Authority

The white paper was never completed amid disagreements between EPA staff over what authority the agency may or may not have to clean up after a power plant accident.

A July 27 draft of the white paper cites Superfund as a possible source of cleanup funding -- either through EPA's appropriation-driven Superfund trust fund or the agency's authority to sue parties responsible for contamination under Superfund law. But EPA staff disagree on whether Superfund is applicable to cleanup after a nuclear power plant accident, calling into question its viability as both a source of funding and cleanup authority.

Some EPA staffers argue that “special nuclear material from a nuclear incident” is exempt from the types of toxic releases governed by Superfund, according to the documents. Others suggest that such material is typically commingled with chemicals and other radioactive materials that are covered by the law, meaning EPA would be able to assert its Superfund authority to conduct a cleanup.

In internal e-mails, EPA staff provides examples of instances where the agency has been involved with cleanups at nuclear power plant sites due to the sites being contaminated with chemicals. For example, Mary Ballew, of EPA Region I, on Aug. 18 forwarded examples of EPA involvement with power plant decommissioning due to chemical contamination to Stuart Walker, of EPA's Office of

Superfund Remediation and Technology Innovation (OSRTI). Ballew offered to talk to any lawyers in EPA headquarters "that say that the nuke plants don't have chemicals."

According to the information Ballew provided, Region I has been involved with decommissioning at three nuclear power plants -- Maine Yankee, Connecticut Yankee and Yankee Rowe, MA -- and all three required cleanups under the Resource Conservation & Recovery Act (RCRA) due to chemical contamination.

But Jean Schumann, a lawyer in EPA's Office of Emergency Management (OEM), criticizes suggestions that the presence of chemical contaminants gives the agency the authority to clean up after a nuclear power plant incident. In one Aug. 5 e-mail, Schumann argues it is uncertain whether Superfund law gives EPA such authority when radioactive substances from the accident are commingled with other contaminants. "I think there is enough uncertainty still on what the 'release' exclusion means that we're better off staying at a higher level of detail" in the draft white paper, she writes.

But the ability of other laws to provide funding and authority for cleanup are also severely limited, the draft white paper says. The government's emergency response authorities under the Stafford Act, for instance, expire 60 days after an incident, the draft document notes. A Presidential declaration of an emergency "leads to rather limited financial assistance being made available through FEMA" and a "potentially more useful Presidential declaration of a major disaster" appears limited to "natural events," the document says.

Determining Cleanup Standards

Whether EPA can assert its Superfund authorities over a cleanup after a nuclear power plant accident is significant not just from the standpoint of securing funding for the cleanup, but also in determining what cleanup standards would apply to the situation, Walker, of OSRTI, writes in a June 11 e-mail to Elizabeth Southerland, director of OSRTI's assessment and remediation division.

Walker tells Southerland that if EPA appears to be endorsing non-Superfund cleanup approaches in discussions with the other agencies, policy concerns similar to those surrounding EPA's controversial draft guide for responding to all nuclear emergencies -- known as the protective action guidance (PAG) for radiological incidents -- would arise. With the PAG, officials in EPA's Superfund, water and legal offices raised concerns that the document could set a negative precedent weakening the agency's cleanup and drinking water standards because it included guidelines dramatically less stringent than traditional EPA regulations.

The BP oil spill in the Gulf of Mexico, which prompted some Republicans in Congress to suggest the Price Anderson Act be used as model for oil cleanups, also highlights the significance of the issue, Walker argues.

"Given the current circumstances dealing with the Gulf [oil] spill (e.g., questions about who is in charge, is the federal government in control, etc) not inhibiting our flexibility under [Superfund] is a key issue," Walker adds. "Although possibly not the first choice to take a response action during a [nuclear power plant] incident, EPA should not agree to language that appears to be a legal interpretation that inhibits [the Superfund] option."

In addition, despite the expectations of the other federal agencies that EPA "would be heavily involved in the environmental response work, possibly as the lead technical agency," EPA cleanup officials have "not previously been major players in NRC" led drills meant to simulate the government's response to a power plant accident, Walker says.

Confusion amongst Agencies

Attempts by EPA and NRC officials to answer requests for comment on the issue also highlight confusion within EPA and amongst the agencies over who is responsible for overseeing cleanup. An NRC spokesman told Inside EPA that the “best information” he had was “that EPA would oversee cleanup, based on that agency's” PAGs, which the agency has yet to complete due to the controversy they have generated.

But when EPA spokeswoman Latisha Pettaway was asked to confirm that EPA would in fact take the lead on such a cleanup and to explain what legal authorities the agency would use, Randy Deitz, a liaison between EPA's waste and government affairs offices, called the inquiry “an odd-ball request” that “does not fit well with any particular office. . .Why doesn't [Inside EPA] ask NRC?” Deitz asked. “They regulate the cleanup of NRC regulated facilities. We don't get involved at all.”

Jeff Maurer of EPA's Innovation, Partnerships and Communication Office (IPCO) sent Pettaway a similar e-mail about the request for comment, calling it “an inquiry that will not be able to be responded to in a clear cut fashion. . . . This will take awhile,” Maurer said.

Asked by Maurer to provide information on whether EPA would apply Superfund or other standards if it was cleaning up after a nuclear power plant incident, Walker explained that EPA has never “spelled this out anywhere” and that final cleanup levels have not “been discussed by the FEMA, NRC, EPA workgroup looking at Price Anderson Act issues. . . . So I don't have a clear answer.” Walker did express his personal opinion that EPA should not endorse cleanup standards less stringent than Superfund -- such as NRC's power plant decommissioning standards that allow exposure to radiation as high as 25 and 100 millirems -- however. In other e-mails, Walker expressed concerns that, during the development of the draft PAG, NRC officials suggested cleanup standards as lax as 10,000 millirem, which activists argue equates to a cancer risk of one in three people.

In her response to Inside EPA, Pettaway did not include any of this information or acknowledge that the three agencies were actively studying the issue, however. Pettaway said only that questions regarding whether and how EPA would cleanup after a nuclear power plant incident were “based on hypothetical situations/scenarios” and that EPA could not “give an assessment on something that [was] hypothetical.”

A FEMA spokeswoman deferred a request for comment to EPA. The White House did not respond to a request for comment. -- Douglas P. Guarino

Emails obtained by Inside EPA by FOIA (available from InsideEPA or Mary Lampert)

The following excerpt from Stuart Walker' email, EPA, says that “The insurance funds are not used to cover cleanup costs associated with the incident.”

From:	Stuart Walker/DC/USEPA/US
To:	Charles Openchowski/DC/USEPA/US@EPA
Date:	07/30/2010 06:54 PM
Subject:	Upcoming political level (AA, Administrator, maybe Obama/Biden) exercises emergency and late phase cleanup exercises on Nuclear Power Plant Incident

Dr. Steve Landry, SOE Support Team, reviewed the draft scenario. Dr. Landry explained that the intent of the scenario is to have significant damage that exceeds the cap of the \$10 billion Price-Anderson Act (PAA). Additionally, the location chosen for the scenario event should be neither "worst case" nor "best case," but somewhere in the middle.

An NRC representative stated that the PAA actually has a \$12 billion cap, but that it is not really the issue. The PAA is an insurance policy for displaced persons/damage in the event of a nuclear power plant incident. Once the \$12 billion has been exceeded, the U.S. Treasury will cover costs for displaced people. However, the Insurance funds are not used to cover cleanup costs associated with the incident. The NRC representative also noted that each licensee is insured for over \$300 million. Whether or not D/As could recover the costs allocated towards the cleanup is an open question and would be decided by the courts, but PAA is designed to support the people affected by the accident.

- a. The following excerpt from the July 27, 2010 Draft White paper says that, " NRC also indicated the Price Anderson Act would be unable to pay for environmental cleanup after the nuclear power plant incident only for compensation for damages incurred (e.g., hotel stays, replacement costs for property and personal items, lost wages etc.

**NRC-FEMA-EPA White Paper:
Potential Authorities and/or Funding Sources for Off-site Cleanup Following a
Nuclear Power Plant Incident**

Background:

- The Environmental Protection Agency (EPA), the Nuclear Regulatory Commission (NRC), and the Federal Emergency Management Agency (FEMA) began a series of quarterly meetings in 2009 to discuss, unresolved concerns regarding off-site environmental cleanup following a nuclear power plant incident. Deleted: an
- NRC recently indicated to FEMA that they would not be taking the lead for off-site environmental cleanup after a nuclear power plant incident. NRC suggested EPA would be the appropriate agency to lead such efforts. Formatted: Bullets and Numbering
- NRC also indicated the Price-Anderson Act would be unable to pay for environmental cleanup after a nuclear power plant incident, only for compensation for damages incurred (e.g., hotel stays, replacement costs for property and personal items, lost wages, etc). Deleted: the
- FEMA convened a workgroup to discuss the following issues related to nuclear power plant incidents: potential Agency roles (e.g., who would lead cleanup efforts); cleanup authorities; and fund sources. Deleted: CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act), and
- Evaluation of language from the Price-Anderson Act, the Stafford Act, and EPA's previous policies and expectation that the CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) would generally not be used for response actions to address releases from NRC-licensed sites including nuclear power plants, may indicate a potential gap in authority to perform or oversee and fund off-site cleanup following a nuclear power plant incident, depending on the circumstances of the incident and the subsequent declarations of the federal government.
- The Report to Congress from the Presidential Commission on Catastrophic Nuclear Accidents (See Attachment D) : outlines a number of concerns regarding nuclear power plant incidents. The report covers the sourcing of funds under a "Major Disaster," a "Catastrophe," and how to prepare and respond to a "catastrophic disaster."
 - Current plans do not cover "long-duration accidents that have impacts over large land areas".
 - The authority of the Court to award damages does not extend to executive branch powers.

Objective:

- Provide current understanding on potential authorities and sources of funding for off-site cleanup following a nuclear power plant incident.

- b. The following excerpt from the July 27, 2010 Draft White paper lays out the potential cleanup authority and funding source of the Price Anderson Act. It essentially repeats what EPA's Stuart Walker email's said in the first example, "ANI does not cover environmental cleanup costs under their primary insurance policy. It is anticipated that the secondary insurance policy will behave in a similar manner."

Potential Cleanup Authority and/or Funding Source # 1: Price-Anderson Act

- Examples of Potential Circumstances Where It May Be Appropriate to Use the Price-Anderson Act: In addition to an accident, the nuclear power plant incident may be the result of: theft or sabotage; the transportation of nuclear fuel to a reactor site; or the storage of nuclear fuel at a reactor site.
- Possible Actions under the Price-Anderson Act:
 - Provide financial assistance to utilities operating nuclear power plants that have experienced an incident.
 - For individuals who have suffered damages:
 - Those who suffered bodily harm, sickness, or disease will receive financial assistance.
 - Evacuees receive property damage and loss expenses as well as living expenses.
 - Local and State governments can receive financial assistance to assist with evacuations, sheltering, and other immediate response activities.
- Funding Source for the Price-Anderson Act:²
 - Under the Price-Anderson Act, American Nuclear Insurers (ANI) provides nuclear power plants with financial assurance by creating insurance funding pools under both a primary and a secondary insurance policy.
 - **Primary Insurance Policy:** Each year, a premium is paid by utilities that operate nuclear power plants – this premium provides offsite private insurance of \$300 million.
 - **Secondary Insurance Policy:** If an incident exceeds the \$300 million, each reactor would pay a prorated share of up to \$95.8 million. This secondary pool contains approximately \$8.6 billion.
- Potential Gap in Covering Off-site Cleanup under the Price-Anderson Act:
 - These funding pools can only be accessed by a federal agency if the federal agency itself has property that has suffered damages during an incident.
 - ANI does not cover environmental cleanup costs under their primary insurance policy. While not explicitly stated, there is no expectation that the secondary insurance policy will differ in coverage from the primary insurance policy.

Findings:

Potential Authorities and/or Funding Sources for Off-Site Cleanup Following a Nuclear Power Plant Incident

- Price-Anderson Act:
 - ANI does not cover environmental cleanup costs under their primary insurance policy. It is anticipated that the secondary insurance policy will behave in a similar manner.

c. The following excerpt from the July 27, 2010 Draft White paper from Kathryn Snead, EPA, explains again that there is a gap in authority to perform or oversee and fund offsite cleanup and that, at bullet 3, “NRC also indicated the Price Anderson Act would be unable to pay for environmental cleanup after a nuclear power plant incident only for compensation for damages incurred (e.g., hotel stays, replacement costs for property and personal items, lost wages, etc).

Kathryn Snead To all, Please find attached a draft white paper o... 07/27/2010 03:51:39 PM

From: Kathryn.Snead/DC/USEPA/US
To: Stuart.Walker/DC/USEPA/US@EPA, Charles.Openchowski/DC/USEPA/US@EPA, Jennifer.Mosser/DC/USEPA/US@EPA, Susan.Stahie/DC/USEPA/US@EPA, Lee.Tyner/DC/USEPA/US@EPA, Jean.Schumann/DC/USEPA/US@EPA
Cc: Lee.Veal/DC/USEPA/US@EPA, Jeffrey.Blizzard/DC/USEPA/US@EPA
Date: 07/27/2010 03:51 PM
Subject: White Paper on Off-Site Cleanup Following a Nuclear Power Plant Incident

**NRC-FEMA-EPA White Paper:
Potential Authorities and/or Funding Sources for Off-site Cleanup Following a
Nuclear Power Plant Incident**

Background:

- The Environmental Protection Agency (EPA), the Nuclear Regulatory Commission (NRC), and the Federal Emergency Management Agency (FEMA) began a series of quarterly meetings in 2009 to discuss, unresolved concerns regarding off-site environmental cleanup following a nuclear power plant incident.
- NRC recently indicated to FEMA that they would not be taking the lead for off-site environmental cleanup after a nuclear power plant incident. NRC suggested EPA would be the appropriate agency to lead such efforts.
- NRC also indicated the Price Anderson Act would be unable to pay for environmental cleanup after a nuclear power plant incident, only for compensation for damages incurred (e.g. hotel stays, replacement costs for property and personnel items, lost wages, etc).
- FEMA convened a workgroup to discuss the following issues related to nuclear power plant incidents: potential Agency roles (e.g., who would lead cleanup efforts); cleanup authorities; and fund sources.
- Evaluation of language from the *Price-Anderson Act*, the *Stafford Act*, and EPA's previous policies and expectation that the *CERCLA* (Comprehensive Environmental Response, Compensation, and Liability Act) would generally not be used for response actions to address releases from NRC-licensed sites including nuclear power plants, may indicate a potential gap in authority to perform or oversee and fund off-site cleanup following a nuclear power plant incident, depending on the circumstances of the incident and the subsequent declarations of the federal government.
- The Report to Congress from the Presidential Commission on Catastrophic Nuclear Accidents (See Attachment D): outlines a number of concerns regarding nuclear power plant incidents. The report covers the sourcing of funds under a "Major Disaster," a "Catastrophe," and how to prepare and respond to a "catastrophic disaster."
 - Current plans do not cover "long-duration accidents that have impacts over large land areas".
 - The authority of the Court to award damages does not extend to executive branch powers.
- The following are questions and concerns are unresolved:

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DRAFT: DO NOT CITE OR QUOTE

July 27, 2010

Potential Cleanup Authority and/or Funding Source # 1: *Price-Anderson Act*

- **Examples of Potential Circumstances Where It May Be Appropriate to Use the *Price-Anderson Act*:** In addition to an accident, the nuclear power plant incident may be the result of: theft or sabotage; the transportation of nuclear fuel to a reactor site; or the storage of nuclear fuel at a reactor site.
- **Possible Actions under the *Price-Anderson Act*:**
 - Provide financial assistance to utilities operating nuclear power plants that have experienced an incident.
 - For individuals who have suffered damages:
 - Those who suffered bodily harm, sickness, or disease will receive financial assistance.
 - Evacuees receive property damage and loss expenses as well as living expenses.
 - Local and State governments can receive financial assistance to assist with evacuations, sheltering, and other immediate response activities.
- **Funding Source for the *Price-Anderson Act*:**
 - Under the *Price-Anderson Act*, American Nuclear Insurers (ANI) provides nuclear power plants with financial assurance by creating insurance funding pools under both a primary and a secondary insurance policy.
 - **Primary Insurance Policy:** Each year, a premium is paid by utilities that operate nuclear power plants – this premium provides offsite private insurance of \$300 million.
 - **Secondary Insurance Policy:** If an incident exceeds the \$300 million, each reactor would pay a prorated share of up to \$95.8 million. This secondary pool contains approximately \$8.6 billion.
- **Potential Gap in Covering Off-site Cleanup under the *Price-Anderson Act*:**
 - These funding pools can only be accessed by a federal agency if the federal agency itself has property that has suffered damages during an incident.
 - ANI does not cover environmental cleanup costs under their primary insurance policy. While not explicitly stated, there is no expectation that the secondary insurance policy will differ in coverage from the primary insurance policy.

d. The following drafts repeat the same language.

From NRC-FEMA-EPA White paper: Potential Authorities and/or Funding Sources for Off-site Cleanup Following a Nuclear Power Plant Accident, July 27, 2010, Pg., 3

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At 6,

Findings:

Potential Authorities and/or Funding Sources for Off-Site Cleanup Following a Nuclear Power Plant Incident

- Price-Anderson Act:
 - ANI does not cover environmental cleanup costs under their primary insurance policy. It is anticipated that the secondary insurance policy will behave in a similar manner.

At 17,

----- Forwarded by Elizabeth.Southerland@EPA on 06/11/2010 12:13 PM -----
 From: Stuart Walker/DC/USEPA/US
 To: Elizabeth.Southerland/DC/USEPA/US@EPA, Davidw.Charters/ERT/R2/USEPA/US@EPA, Helen.Dawson/DC/USEPA/US@EPA
 Cc: Charles.Openchowski/DC/USEPA/US@EPA
 Date: 06/11/2010 11:57 AM
 Subject: Senior management meeting needed to discuss ongoing staff meetings with NRC and FEMA to resolve responsibilities for early, intermediate, and long-term response to nuclear power plant incidents

Hi Betsy,

See attached email from Colby Stanton that began EPA's involvement with NRC/FEMA efforts to clarify how response to a significant release (e.g., Three Mile Island, Chernobyl) from a commercial nuclear power plant (NPP) would be handled.

After 3 meetings with the other Agencies at the programmatic and general counsel staff, both Charles Openchowski and I believe that we need to have a senior level management meeting to discuss EPA's strategy for these efforts.

There are numerous issues that have arisen during these meetings since Colby's initial note, including:

1. Monies collected from nuclear industry to pay out in the event of a "nuclear incident" go to an insurance company for disbursement. It appears the monies may only go for compensating damages (e.g., cost of temporary or permanent relocation, pay for policemen, personal property replacement, etc) and not environmental cleanup.
2. There appears to not be pre-identified source of funding for environmental cleanup. NRC staff anticipates this would be handled by some type of supplemental appropriation.
3. There is a FEMA expectation that EPA would be heavily involved in the environmental response work, possibly as the lead technical agency (think OSC, RPM role). EPA has not previously been major players in NRC exercises for NPP releases.

Charles and I believe we need a senior level management meeting (OSRTI, OEM, ORIA, OGC, and OHS) to discuss:

1. What would be proper role for EPA in these types of events, including the role of each of our primary offices and respective regional counterparts.
 - There are resource (FTEs and \$'s) implications for EPA's level of involvement both during a real event and during exercises.
 - There are also policy implications if EPA appears to be endorsing other cleanup approaches even in a remedial contractor role for NPP events, similar to concerns raised regarding the PAGs.
2. Given the current circumstances dealing with the Gulf spill (e.g., questions about who is in charge, is the federal government in control, etc) not inhibiting our flexibility under CERCLA is a key issue. Although possibly not the first choice to take a response action during a NPP incident, EPA should not agree to language that appears to a legal interpretation that inhibits this option.

At 33,

From: Stuart Walker/DC/USEPA/US
To: Elizabeth Southerland/DC/USEPA/US@EPA, David Charters/ERT/R2/USEPA/US@EPA, Helen Dawson/DC/USEPA/US@EPA
Cc: Charles Openchowski/DC/USEPA/US@EPA
Date: 06/11/2010 11:57 AM
Subject: Senior management meeting needed to discuss ongoing staff meetings with NRC and FEMA to resolve responsibilities for early, intermediate, and long-term response to nuclear power plant incidents

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At 36,

From: Kathryn Sneed/DC/USEPA/US
To: "Benowitz, Howard" <Howard.Benowitz@nrc.gov>, "Blunt, Kenyetta" <kenyetta.blunt@dhs.gov>, Sara DeCair/DC/USEPA/US@EPA, "DeFelloe, Anthony" <anthony.defelloe@dhs.gov>, diane.donley@dhs.gov, "Greten, Timothy" <Timothy.Greten@dhs.gov>, grace.kim@nrc.gov, "Milligan, Patricia" <Patricia.Milligan@nrc.gov>, Jennifer Mosser/DC/USEPA/US@EPA, Charles Openchowski/DC/USEPA/US@EPA, Jean Schumann/DC/USEPA/US@EPA, anneliese.simmons@nrc.gov, Susan Stahl/DC/USEPA/US@EPA, Lee Tyner/DC/USEPA/US@EPA, Stuart Walker/DC/USEPA/US@EPA, Jeffrey Blizzard/DC/USEPA/US@EPA, Lee Yeat/DC/USEPA/US@EPA
Cc:
Date: 05/25/2010 09:57 AM
Subject: EPA-NRC-FEMA Recovery Discussion on Nuclear Power Plant Incidents

To all,


I apologize about the short notice - my fault for taking so long to send this out:

Our next inter-agency discussion on Recovery from Nuclear Power Plant Incidents:
June 3, 2010 from 1 PM - 3 PM
Follows the FRPCC Meeting (with a break for lunch 11:30 AM - 1 PM)
Crystal City Courtyard Marriott
Blue Ridge Shenandoah Conference Room
2899 Jefferson Davis Highway
Arlington, VA 22202

A few action items that were identified during the last meeting:

- Anneliese Simmons, NRC, agreed to provide example text on the insurance exclusion language on cleanup.
- Anneliese Simmons, NRC, agreed to check on what was meant by "clearly identifiable accidents".

At 45

 **Potential Issue - FEMA looking for someone (e.g., EPA, Corps) to run cleanup of public property after nuclear power plant accident**
Stuart Walker to: Elizabeth Southerland, Helen Dawson 12/08/2009 02:17 PM
Cc: RobinM Anderson

Betsy, this is a follow-up email about what I mentioned to you in the hall. Last week I, CEM, ORIA, and OGC staff (including Charles) met with FEMA and NRC policy and general counsel staff.

We were meeting to discuss the role of NRC, EPA, and FEMA after a catastrophic release from a nuclear power plant, and how the compensation clauses of the Price Anderson Act might come into play because of the CERCLA definition of "release" (which makes a reference to Price-Anderson in excluding some releases from CERCLA jurisdiction). In Price-Anderson, Congress in essence set up a federally-backed insurance scheme to compensate victims of a nuclear reactor accident (e.g., Three Mile Island).

I had thought that EPA was there to explain why previous policy from the removal program was incorrect in stating EPA could not respond to such releases under CERCLA authority, but rather EPA had authority but generally expected NRC to have authority over such incidents and did not expect to be involved except for possible help requested by NRC and/or state.

I was surprised to find out that NRC did not intend to be involved in the cleanup or Price-Anderson compensation decisions for contamination that was outside the fence-line of the facility. NRC said that the authority for spending the \$10 billion insurance dollars that could become available when the Price Anderson Act is triggered would be lie with an insurance company. After those funds were gone, they thought EPA might handle the site cleanup.

NRC does not currently know if the \$10 billion can only be used for compensation for damages suffered by members of the public, or if it can be used for site cleanup. Also they have not asked the insurance company if they have any plans/guidance on how they will decide to distribute the monies, whether they have contractors lined up to do the cleanup work or would they expect each affected property owner to do the cleanup after getting a claim paid, or how they will answer the question of "how clean is clean" for purposes of either cleanup or determining what is considered contaminated for the purposes of compensation.

We will be meeting together again as a group. NRC intends on finding out answers to the groups question either prior to that meeting or possibly inviting the insurance company to the next meeting.

fyi, attached is the agenda for the meeting. Below is an email from FEMA the night before the meeting that lays out some of the issues.

The above (12/08/09) paragraph 5 -6 says that, "NRC does not currently know if the \$10 billion can only be used for compensation for damages suffered by member of the public, or if it can be used for site cleanup. Also they have not asked the insurance company...how they will answer the question of 'How clean is clean' for purposes of either cleanup or determining what is considered contaminated for the purposes of compensation." By the time they wrote the July 27, 2010 Draft, they were clear that ANI only would pay for damages not cleanup, as the preceding emails show.

At 45,

From: "Greten, Timothy" <Timothy.Greten@dhs.gov>
To: Stuart Walker/DC/USEPA/US/EPA, Kathryn Sneed/DC/USEPA/US/EPA
Cc: Charles Openchowski/DC/USEPA/US/EPA, Colby Stanton/DC/USEPA/US/EPA, <grace.kim@nrc.gov>, "Benowitz, Howard" <Howard.Benowitz@nrc.gov>, Jean Schumann/DC/USEPA/US/EPA, Lee Tyner/DC/USEPA/US/EPA, "Milligan, Patricia" <Patricia.Milligan@nrc.gov>, Sara DeCair/DC/USEPA/US/EPA, Susan Stahle/DC/USEPA/US/EPA, "Greten, Timothy" <Timothy.Greten@dhs.gov>
Date: 11/30/2009 07:16 PM
Subject: RE: Agenda: EPA-NRC-FEMA Recovery Discussion

Good evening!

I hope everyone had a good Thanksgiving and made it through Monday.

After reading through the agenda and other notes, I ask that we move the discussion of the Stafford Act to after both Price Anderson and CERCLA have been discussed. Both of the other funding mechanisms should be discussed before we get to the Stafford Act, as both are the appropriate funding avenues before a Stafford Act declaration is made.

That said, I also have a suggestion about what our outcome might be, based on my discussing w/Diane Donnelly today. Please also excuse me if I'm missing key nuances or information here--I might be the newest player in this game.

I'm not sure how much cleaning up after a respectably-size nuclear power plant incident would cost. \$50bil? The mechanisms set up by Price Anderson have set up a \$10bil pool to pay for certain expenses. After that is exhausted, and for those expenses not covered, what vehicles are available? This is covered under Superfund language...yet my understanding is Superfund is essentially broke, as industry hasn't paid in since the mid 1990s. Likewise, Stafford Act funds are not available until a declaration is issued--and then only in line with what the declaration covers.

The one thing I'm reasonably sure about is the cost for a major long-term cleanup would be in excess of \$10bil. If either Stafford Act or Superfund are tapped for \$\$, the bill is going to be so high that Congress will have to appropriate funds--there is no other way this bill will be paid. And getting those funds will be a political decision negotiated the heads of EPA, FEMA/DHS, NRC, Congress, and the White House.

The first deliverable this group should put together is a memo/paper that reads as a guide through this decision making process, explaining the steps and the different decision points. I think it should shy away from trying to toss the funding burden over the fence and say "superfund must do this!" or "Stafford act must do this", and stick to a neutral explanation of what the consequences of each funding action would be (i.e. "[blank] could be funded by CERCLA--the language allows it. However, CERCLA is incredibly underfunded for something like this). A political tool-kit, if you will, that lays out options and tradeoffs.

The second deliverable would be a memo simply explaining the how of administering a long-range cleanup...that is, no matter who pays for it, it will be a joint effort. Each of the agencies has a key ability they bring to the table--EPA understands environmental cleanup/remediation, NRC understands the nuclear power industry, and FEMA has longstanding relationships with state/local government, law enforcement, etc. Both in distributing funding and administering a cleanup, all of these skills would be needed (one agency doesn't have the manpower, either in skill sets or sheer numbers, to pull it off). Also, all of the agencies would essentially be robbing peter to pay paul during a cleanup--they simply don't have standby resources for this beyond a thin bench.

See all of you tomorrow morning!

Tim

The one thing I'm reasonably sure about is the cost for a major long-term cleanup would be in excess of \$10bil. If either Stafford Act or Superfund are tapped for \$\$, the bill is going to be so high that Congress will have to appropriate funds--there is no other way this bill will be paid. And getting those funds will be a political decision negotiated the heads of EPA, FEMA/DHS, NRC, Congress, and the White House.

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See all of you tomorrow morning!

Tim



Re: Fw: Price Anderson info

Stuart Walker to: Jeff Maurer

08/11/2010 05:44 PM

Cc: Gilberto Irizarry, Kathy Jones, Lois Gartner, Randy Deitz

We haven't ever spelled this out anywhere. Nor has final cleanup levels been discussed by the FEMA, NRC, EPA workgroup looking at Price Anderson Act issues. So I don't have a clear answer, but here are some of my thoughts.

EPA has said that under CERCLA, and some other environmental laws (e.g., SDWA, CAA, AEA) that 25/100 mrem is not protective. So I don't think we would want to say we would promoting that as a cleanup level. Also, at one point during the DHS PAG (guidance for dirty bombs and nuclear weapons) development process NRC said they wanted a final cleanup level of 1 to 10 rem (that is 1,000 mrem to 10,000 mrem) and they wanted to apply those cleanup numbers to nuclear power plant meltdowns. I am not sure if NRC still feels the same way now.

In some of the AA level (OAR, OSWER, OW, OGC) which were followed up by Gina McCarthy of OAR meeting with Lisa Jackson, it was decided we would NOT be using optimization in the ORIA PAG (Protective Action Guidelines) that would be proposed for final cleanup. We would instead be talking about using existing standards. Since this language still has to be drafted it is not certain if/how specifically CERCLA will be mentioned.