Questions: BRC Key Questions, Final Rev. 11/5/10
Answers: represent the views of the organizations signed below

Reactor & Fuel Cycle Technology Subcommittee questions:

Key question: *Do technical alternatives to today's once-through fuel cycle offer sufficient promise to warrant serious consideration and R&D investment, and do any of these alternative technologies hold significant potential to influence the way in which irradiated nuclear fuel is stored and disposed?*

No. Reprocessing is not a suitable alternative to the once-through fuel cycle because it creates larger volumes of radioactive waste and promotes nuclear weapons proliferation.[1] Radioactive wastes from reprocessing in the U.S. are currently causing significant problems such as threats to water quality at Hanford and West Valley[2] and the virtually stranded high-level tank wastes at Savannah River Site. Reprocessing does not obviate the need for permanent storage of radioactive waste. In addition, reprocessing would require construction of an expensive and dirty new infrastructure. We reject any form of reprocessing, or so-called "recycling" of irradiated reactor fuel. [3]

R&D should be focused on the isolation of existing irradiated fuel and other radioactive wastes from the biosphere rather than alternative technologies that would result in additional generation of more radioactive waste.

1. What are appropriate societal requirements for nuclear reactor and fuel cycle technologies?

Real societal requirements -- quantities of electricity sufficient to meet legitimate societal needs and functions -- are being misappropriated as justification for massive public investment in the revival of nuclear energy, and as a consequence, the production of ever more radioactive waste. Today we are collectively facing two unrelated crises resulting from the production of wastes that we "can't live with:" carbon from burning fossil fuels and radioactive waste from every aspect of splitting atoms. This Commission has heard much testimony that making more radioactive waste will address the problem of too much carbon. This is an unfounded assertion which has never been subject to a full analysis under the National Environmental Policy Act, where, with sufficient expert and public in-put the correct answer might be drawn: nuclear energy is not the most cost-effective, environmentally benign, or socially viable answer to the climate crisis. Indeed, a large public investment in nuclear energy would deny our society the resources to focus on averting global consequences from burning fossil fuels and other greenhouse gases.[4]

Our goal is a nuclear-free, carbon-free energy future.

The societal requirement for nuclear technology itself is **safety, security, health and environmental protection.** If these are not affordable, then nuclear technologies must

be phased out. Included in those requirements should be a cradle-to-grave assessment of the safety, health, economic and ecological aspects of the entire fuel chain, including uranium mining, milling, conversion, enrichment and fuel / weapon fabrication. Employing the precautionary principle, our commitment must be to prevent radiation exposures and both the accidental and the routine release[5] of radioactivity since there is no safe dose of radiation.[6]

The U.S. must devote its attention to safety issues with older nuclear power reactors such as corrosion and fatigue in aging of components, underground leaks and unsafe radioactive waste storage in fuel pools before examining the potential for new reactors. It is wholly inappropriate to pursue additional reactors while large safety issues loom with existing reactors and unsolved radioactive waste streams.

2. Are there reactor and fuel cycle technology alternatives that hold significant future promise to meet these societal requirements and to improve the way in which irradiated fuel is stored and disposed?

Irradiated fuel must be put into ***Hardened On Site Storage*** **(HOSS)**. Originally proposed by the safe-energy community in 2002, HOSS is now one of the widest points of consensus among communities impacted by nuclear energy – and supported by those near nuclear weapons production sites as well. Unfortunately, to date this proposal has been largely ignored by the industry and its regulators. A position statement "Principles for Safeguarding Nuclear Waste at Reactor Sites" is attached to this document, and is also available on the BRC website at: http://brc.gov/e-mails/May10/HOSS_PRINCIPLES_3_23_2010x.pdf

The key points of HOSS are:

1) Reduce density of irradiated fuel stored in fuel pools;
2) Reduce inventory stored in fuel pools by transferring it when feasible to dry storage that is hardened to make it more secure and safer--this includes lower density placement and the addition of earth barriers to protect the containers, as well as requiring the physical testing of all cask designs and inspection of each container prior to utilization;
3) Harden fuel pools since all irradiated fuel must be kept in wet storage for the first five years after discharge from the reactor core-- many pools are not currently in containment and need more robust physical protection from aircraft and other disruption;
4) Increase public and local regulatory participation in waste storage monitoring and decision-making including a commitment to an annual public review process;
5) Provide funding for local independent monitoring;
6) Prohibit reprocessing: The reprocessing of irradiated fuel has not solved the nuclear waste problem in any country, and actually exacerbates it by creating numerous additional waste streams that must be managed. In addition to being expensive and polluting, reprocessing also increases nuclear weapons proliferation threats.

Utilization of HOSS at existing reactors will cost-effectively deliver levels of safety, health and security superior to what exists with present dry cask systems by minimizing

the possibility of, and lowering the impact of a fuel pool drain-down and fire, which has the likelihood of extraordinarily high cost to life and health; [7] and lowering security and sabotage risks. HOSS is a major step towards our goal of isolation of radioactivity from the biosphere.

There is currently no realistic technology alternative or roadmap for permanent isolation of military and civilian wastes already generated, and it will take time to develop safer strategies. "Zero waste" energy technologies such as solar and wind power should be the goal for the future.

With respect to reactor technology alternatives, reactor design has not appreciably matured since the 1970s. Many of the proposals offered as "new" are, in fact, technical failures from the past with no prospect for success in the future.[8] Some of the proposals for future reactor designs would make radioactive waste problems worse. For instance, deployment of many small nuclear reactors in communities would also proliferate radioactive waste in communities, increasing the challenges of security, safety, and environmental protection, while maximizing and distributing radiation exposure.

Plutonium powered designs are by definition more dangerous since this fuel is harder to control, and if control is lost, is twice a deadly as uranium fuel.[9] Similarly other novel fuel proposals perpetuate the problems because they all generate highly radioactive cancer-causing fission products requiring isolation.[10] Lighter, cheaper and safer renewable technologies have already overtaken nuclear power.[11] The nuclear industry focus must now shift, after decades of neglect, to decommissioning and radioactive waste management. Likewise, the federal government must address fissile materials including plutonium, which in our view is a waste.

At this point we wish to share our concerns and questions with the BRC concerning the issue of reprocessing irradiated fuel. We believe the HOSS approach to be superior than any consideration of reprocessing; and request that the BRC do a formal comparison between the two, considering such issues as: 1.) ease and cost of implementation; 2.) relative effects on the "back-end" waste streams, types and quantities of wastes generated and disposed of; 3.) relative safety and security issues; and 4.) proliferation effects.

We wish to make the BRC aware that reprocessing:

1. still results in the production of a significant if not greater volume of nuclear waste that is dangerous enough to require permanent isolation vs. volume of waste (high level waste/hlw) requiring permanent isolation from direct disposal of spent nuclear fuel(snf).
2. would, and has, created large amounts of Greater-Than-Class-C waste which is today an "orphan" waste insofar as there is no federal program for this material, and which is exempt from licensing for on-site storage at new reactors. Reprocessing would multiply this problem. In addition, so-called "low-level" radioactive waste is also generated in large quantities at reprocessing sites.[12]

3. would increase worldwide plutonium stockpiles. France and England are awash in plutonium because of its reprocessing, with estimates ranging from 130 to 180 metric tons between them as of the end of 2009. If neither France nor England can use its stockpile of plutonium, why are we interested in creating our own?
4. would create temptations for governments to create stored stockpiles of plutonium to make nuclear bombs. We wish to impress on the members of the BRC our grave concern, and that of many qualified scientists and arms negotiators that our use of reprocessed commercial fuel will encourage more nations to do the same, creating significant new nuclear weapons proliferation risks. Already the recent historic record bears this out:
    - Japan's previous Labor Party leader, Ichiro Ozawa, has threatened to use Japan's reprocessed plutonium stockpiles from commercial reactors to make nuclear weapons to deter China.
    - The U.S. government's concerns that Iran's government could make nuclear weapons even as it claims to enrich uranium exclusively for nuclear power. Reprocessing would provide the Iranian regime another pathway to nuclear weaponry, via weapons usable plutonium extraction from irradiated nuclear fuel.
5. means that a large group of technically sophisticated people have access to plutonium. Are the members of the BRC aware that reprocessing makes plutonium easier to divert, by eliminating the self protecting lethal-dose of gamma ray emitters that act as a security protection in the current waste configuration.
6. creates a new accounting nightmare for plutonium stockpiles. The DOE is already not able to account for nearly 200 pounds of separated plutonium without a full commercial reprocessing infrastructure. We wish to impress on the members of the BRC how difficult it would be to keep track of all of the plutonium thus created; and how relatively easy it would be for enough material to "disappear" for the making of one or more atomic bombs.
7. sets the conditions for a foreign or domestic terrorist to create a radiologic catastrophe here in the U.S.
8. results in severe radioactive contamination of the environment:
    - Military reprocessing in the U.S., at Hanford, Washington, Idaho National Lab, and Savannah River Site, South Carolina, has left behind radioactive wastes and radioactive contamination of the environment that will cost hundreds of billions of dollars over time to deal with, while risking such major water bodies as the Columbia River, Savannah River, Snake River Aquifer, and Tuscaloosa Aquifer.
    - Reprocessing commercial irradiated nuclear fuel is also environmentally devastating. At West Valley, New York, six short years of reprocessing activities, during which time only one year's worth of reprocessing was accomplished, has resulted in radioactive contamination of the surrounding soils and waters that threatens Lake Erie and Lake Ontario downstream, and which may cost more than $10 billion to clean up.
    - In France, the La Hague reprocessing facility has discharged 100 million liters per year of radioactively contaminated liquid wastes into the English Channel via an underwater pipeline. The radioactive contamination of the

seabed at the foot of the pipe is so intense that under British law, it would require deep geologic disposal. Radioactive contamination has spread with the ocean's currents as far away as the Canadian Arctic. A dozen European governments have pursued legal action to force France to stop radioactive dumping in the ocean.

- Large-scale radioactive gaseous releases also occur. Similar environmental assaults have taken place at Britain's Sellafield reprocessing facility, where 1,000 pounds of ultra-hazardous plutonium have been dumped in the Irish Sea, traces of which have been found in children's teeth hundreds of miles away. The combined "routine" operations (that is not including the accidents) of La Hague and Sellafield, over the course of 70 years, are projected to result in more release of radioactive contamination to the environment than did the Chernobyl nuclear catastrophe. Of course, this environmental radioactive contamination will have consequences for human health in this and many future human generations (we do not have any way to estimate the very real consequences for other species). Already at La Hague and Sellafield health impacts among workers and neighboring residents have been documented, including clusters of childhood leukemia, as well as stillbirths.

9. is a financial burden on the U.S. taxpayer. Are the members of the BRC aware that the costs of reprocessing U.S. irradiated nuclear fuel – in the tens to hundreds of billions of dollars – will almost certainly be paid by U.S. taxpayers, as the industry that profited handsomely from generating these wastes in the first place is not interested in paying for such "externality" costs? The French public, for example, pays an extra billion dollars per year to keep its reprocessing and so-called plutonium "recycle" program going.
10. is a "surcharge" on nuclear power according to a November, 2007 Congressional Budget Office report, which concluded that reprocessing adds to the cost of nuclear power 25% more than the cost of direct disposal.

Given these factors, we would ask why the BRC would even consider reprocessing as a "solution" to nuclear waste versus HOSS until safer management is available?

3. What changes, if any, are needed in existing U.S. policy and international commitments for nonproliferation, and in U.S. regulations for safety, environmental protection, and physical security for facilities and materials, to meet these societal requirements?

IAEA's mission to encourage nuclear power internationally has, in actuality, promoted nuclear weapons development since many states have developed atomic weapons through reactor technology. The U.S. Nuclear Regulatory Commission is hampered by competing agendas – its mission is to regulate this dangerous technology, but it all too often strays into the promotional realm.

We believe that nuclear weapons pose a threat in every dimension, and the possible use of a nuclear weapon against civilian nuclear power or nuclear weapons materials storage

sites must not be disregarded. Nuclear reactors and the inventory of waste generated, particularly when stored in unprotected fuel pools and dry containers arrayed like bowling pins, are the largest "dirty bombs" on the planet. If detonated by a nuclear weapon, the consequences of such an event would be an unprecedented catastrophe for the whole planet. The Commission should support and call for the acceleration of the United States' effort to lead in the reduction and swift abolition of nuclear weapons, as well as the phase out of all nuclear weapons materials generation. Reprocessing would undermine these goals.

Regulations must be driven by protective safety standards; and the nuclear establishment's so-called standard "as low as reasonably achievable" must be abandoned. There must be no exemptions or setting of higher release levels by regulators for any situation.

U.S. federal radiation protection standards must be upgraded to protect the most vulnerable, that is children, born and unborn, women, those with compromised immune systems and the elderly, and to end the exceptional level of permissiveness that has been given to radiation compared with other hazardous substances. A standard of zero-release/zero-exposure should be promulgated for all aspects of radioactive operations and waste disposition. A zero release / zero exposure standard should be established now for all new storage and permanent disposition of radioactive waste. For operating facilities zero release / zero exposure should be promulgated as the goal of a progression of tougher regulations over time and with real enforcement of these intermediate steps. For the record, the undersigned do not support allowing this industry to kill 1-in-a-million in this generation or future generations; however, this risk level would bring the regulation of radioactivity into line with the regulation of other hazardous materials as an intermediate step.[13] This would be a vast improvement over the current 1 fatal cancer per 286 "standard" or "reference" men[14] exposed (over a lifetime) – which already corresponds to much higher risk for women,[15] children and the unborn.[16]

Regulatory exemptions or setting of higher release levels should not be permitted. Allowing increased radioactivity in unlabeled, exempt transport, as is now allowed,[17] violates the principles of safety and health and makes it harder to detect radioactive contamination that could involve dirty bombs or illicit radioactive materials' transport.

Current and new programs allowing the deregulation of currently regulated radioactive wastes and materials must be stopped. Communities around the world are at risk because of operations in Tennessee[18] and Sweden[19] which result in the unrestricted release of materials contaminated with radioactivity with no further monitoring or labeling. The unsafe practice of releasing radioactive metals and other items to the open market where recycling into consumer and construction products is possible, or as is happening in Tennessee, disposal in municipal landfills, results in elevated risk of undisclosed radiation exposures to humans and our environment anywhere. Unrestricted release is documented in Tennessee, Sweden, UK, Germany, Russia and Ukraine. Most industrial radioactivity originates from production and use of nuclear fuel. Our national policy should be to limit the spread of radioactive materials. The designation of man-made

radioactivity as so-called "below regulatory concern," "exempt," "at clearance levels" or excluded from regulation must be banned outright.

4. What should be the process to research, develop, demonstrate and commercially deploy these new technologies, what entities should have responsibility for the different phases of development, and how should this development be funded?

The question incorrectly presumes that the radioactive waste problem can be solved by reliance on new technologies, and that such technologies are deployable now, or soon could be. This is not the case. The focus should be on research of technologies that can effectively isolate the radioactivity already created from the environment for as long as it is a hazard. Given the fact that there is no safe dose of radiation, and making atomic electricity and weapons at industrial scale nuclear activities generate new radioactivity over and above that "naturally occurring" hazard must be defined as capable of producing a dose of radiation to living tissue. In other words the waste will remain a hazard as long as it can leak radioactivity into our environment if not contained.

Development of nuclear reprocessing as favored by some in the nuclear industry (and it would seen, some on this Commission) would in fact perpetuate and worsen the problems we currently face – reprocessing expands the volume of radioactively contaminated stuff without lowering the total number of curies – in other words, it simply spreads it out. This does not reduce risk – it increases it.[20]

Development of existing technologies should be aimed only at greater safety, security, health and environmental protection such as development of HOSS at all sites where waste is presently stored. Under the Nuclear Waste Policy Act, the cost of storage of irradiated commercial nuclear fuel "off" the reactor sites would be covered by the Nuclear Waste Fund. The undersigned, with some who dissent (and want to be sure that is noted), support the use of the Nuclear Waste Fund to cover the cost of HOSS storage at reactor sites. At the same time, implementation of HOSS must not become the pretext to generate more waste. Government support for the phase-out of nuclear power should be as thoroughly investigated by this, or another federally funded BRC, as equally viable an option as "the future of nuclear power in America;" there should be no further public investment made in the industry which has created this formidable set of problems.

Foreign-owned and operated companies are seeking a greater role in the U.S. commercial nuclear industry. Any such foreign involvement must scrupulously adhere to the Atomic Energy Act's explicit prohibition against foreign "ownership, control or domination" of a U.S. nuclear reactor. Because "control or domination" can be attained even without majority ownership, thorough and skeptical examination must be made in each case of foreign involvement. U.S. quality assurance and quality control standards must be met by any and all foreign entities involved in U.S. nuclear projects.

The so-called "new" nuclear power reactors (currently pending licensing) have not been shown to be safer, healthier or a better economic investment than other new energy

sources such as harvesting and storing solar and wind energy.[21] No public funds should be expended or committed under the assertion that nuclear energy is a "solution" to the climate crisis[22] without a completing a thorough EIS analysis to support such an assertion.

Transportation & Storage questions:

Key question*: Should the U.S. change the way in which it is storing used/spent nuclear fuel and high level waste while one or more geologic repositories are established?*

This question cannot be answered as it is asked. The question should be: How should irradiated fuel be stored at existing locations and at decommissioned reactors and throughout the nuclear weapons complex? Answer: HOSS and security-enhanced fuel pools should be instituted at commercial reactors. Weapons facilities must devote all resources to exhuming, containing and treating decades-old waste, particularly the liquid wastes, and completely abandon development of new nuclear weapons.

The Blue Ribbon Commission has yet to attain the level of dialogue with currently impacted communities and the scientific research needed to address the question of a geologic repository in a sound, reality-based way. The BRC has yet to attain an overall strategy, including a standard with integrity for a new repository program. Until these things have been accomplished, this will not be a productive process. BRC's mission should be to develop the outline for how to accomplish these processes and subsequently foster a national discussion about isolation of high-level waste, irradiated fuel and the other radioactive waste classes, and what it would take for a geographic area to voluntarily accept and partner in the development of such a site.

5. What role(s) should storage play in an integrated U.S. waste management system and strategy in the future?

Storage is a primary, required step. Existing and new storage must be made safer in terms of security and public safety and health; we again direct you to the Principles for Safeguarding Nuclear Waste at Reactor Sites.[23] All storage sites should have contingency plans in the event of a site emergency. It must be recognized that relocating waste away from the site of generation does not decrease the number of waste sites, but rather creates additional waste sites. In reality each shipment in transit is a "waste site" by definition. Gratuitous waste transports (to a site that is not permanent) increase risks and costs to the public. Transporting waste is expensive and inherently reduces security[24] and safety[25] while increasing radiation exposures,[26] uncertainty[27] and strong public opposition, compared to storage where it is now. If waste is to be transported, it must be to an end-point that significantly improves safety, security, reduces radiation and health risks and better provides for the isolation of radioactivity from the environment.

Centralization of radioactive waste storage has been mischaracterized by the nuclear industry as inherently "safer" and more "secure." All interim storage concepts for irradiated fuel have proposed using the same technology currently being deployed on

reactors sites, above ground dry-cask storage. The nuclear industry also attests that radioactive waste is safe stored where it is on licensed commercial sites and federal facilities. Therefore the only apparent benefit to moving high-level waste to centralized interim storage would be the transfer of title and liability from the waste generators to the US taxpayer and to make room for more waste generation.

Radioactive waste from reactor operation, because there is no less dangerous option has to stay where it is at present, in 70+ congressional districts that are located in 30 states. This decentralization ensures a large group will continue to participate in any decisions about this hazardous material. The continued participation of the waste generators (many of which are very large corporate entities) is important. Making the waste the property of the U.S. taxpayer and centralizing it for "temporary" storage would isolate one congressional district, promote NIMBYism and discourage collective discussion and problem solving. Independent analysts have questioned whether such a site would actually be *temporary*[28] – and also whether it is credible that publicly administered funding would be forthcoming for long-term management at one site, compared to many.

6. Are there technical or regulatory uncertainties related to the ability to store existing and future used/spent fuel and high-level waste safely and securely for an extended period of time (100 years) and then transport it without difficulty to another location?

Yes. HOSS systems must be designed with a plan for extended timeframes that would include specific and complete plans for repair, unloading, repackaging, reloading and replacement of canisters.

Projections for how long the fuel rods will remain intact vary widely. Planning should assume a percentage of the stored rods may have structurally failed leaving only fuel pellets.

The radioactive waste problem is unprecedented in human history and defies all experience with human institutions, governments and industries. The mission to maintain focus, collective memory, and the will to attain a difficult goal — for 100 years, longer than a human life span for storage – and of course longer for a permanent repository — is more the purview of storytelling, song and religion than the commercial, scientific and engineering disciplines associated with nuclear technology. Radiation and fissile elements pose the deepest environmental question humans have encountered and its solution will require long, engaged deliberation across all segments of society.

7. What should be the relationship between storage and progress on the development of disposal capability and possible advanced fuel cycles?

None. High-level waste isolation should be researched with the commitment to deliver isolation over the timeframe that the waste will be dangerous. Storage (HOSS) and or isolation should never be aimed at enabling new radioactive waste production. There should be recognition that ongoing radioactive waste production increases the size, cost and logistics of the existing nuclear waste problem-- and thus the safety, security,

environmental, and health risks to current and future generations -- as well as degrading the health and safety of communities in uranium mining and other uranium fuel chain processing, enrichment, and other activity areas across the globe and in our nation. There is no way to make additional radioactive waste without additional radiation exposure. We have other, better options for making electric power.

8. How should needed storage be provided (who should be responsible, where should it take place, and who should pay)?

Hardened on-site storage (HOSS), wherever possible, should be at the site of generation, paid for by nuclear waste fund fees and the full financial and legal responsibility of the nuclear licensee. Nuclear weapons waste should continue to be the financial responsibility of the federal taxpayer. However there should be accountability and liability for contractors with practices which complicate or negate the isolation of these wastes.

9. What process(es) should be used to select new storage sites (if any), and what are the relative roles of federal, state, local, private, and tribal entities?

Existing sites not safe enough for radioactive waste storage, such as islands in rivers, sandy shores of lakes, earthquake areas, along rising tides etc. are the only circumstance where we support a relocation of waste. New storage sites, *if civilian energy i.e.*, away from reactor, should be established only for safety reasons. Any rationale that would promote waste removal from a site for safety reasons will also argue for immediate shutdown of the reactor which generated the radioactive waste; likewise with nuclear weapons production sites.

In addition, Executive Order 12898[29] and the principles of environmental justice[30] demand that the targeting of Native American reservations and communities for radioactive waste or disposal sites must stop, once and for all. This principle of environmental justice extends to other communities of color and low income communities. It is an environmental injustice that the now cancelled Yucca Mountain, Nevada dumpsite targeted lands belonging to the Western Shoshone Indian Nation according to the "peace and friendship" Treaty of Ruby Valley, signed by the U.S. government.

It is also an environmental injustice that the U.S. federal government, in the person of the Department of Energy's "Nuclear Waste Negotiator" from 1987 to 1992, and the nuclear power industry itself in the form of Private Fuel Storage, LLC, have sought to *export* our worst wastes to these tiny Indian Nations for centralized (so-called) "interim" storage sites for irradiated nuclear fuel, as at the Mescalero Apache Reservation in New Mexico, and at the Skull Valley Goshutes Reservation in Utah (the latter a licensed facility still under active targeting). The people, as opposed to the governments of these nations have stated that they see these actions as genocidal – they are not willing "volunteers." In addition, the industry's Nuclear Energy Institute has admitted that it is actively targeting

additional Native American reservations for such facilities. Such immoral and illegal environmental injustice violations must stop.

In March, 2009, President Obama himself honored the efforts of Native American environmental justice activist Grace Thorpe as an environmental heroine for successfully stopping such dumps targeted at Native American reservations, her own included.[31]

10. What are the key issues affecting the ability to transport used/spent fuel and high level waste now and in the future at the scale that will eventually be required?

The key issues are safety, security and radiation exposure. The standard industry transportation concept presumes massive loads. Planning for a maximum size results in loads that would be too big and too dangerous, and the risk of failure is too great. Lax regulations currently would allow doses and exposures from routine (non-accident conditions) that are a public health threat. Waste must age and cool sufficiently before shipping to reduce dangers. Again, relocation of waste must be minimized and be done only if it improves safety, security, results in reduced radiation exposure and is acceptable to all affected communities along the way, and at the destination.

Highly radioactive shipments, federal in nature, passing nearby and even through major population centers, would be inherently high profile, potentially disastrous and targets for terrorist attack. Many interstate highways, most mainline railways, and numerous waterways (including both coastlines, the Great Lakes, and a number of inland rivers), targeted for shipments of irradiated nuclear fuel and high-level radioactive waste by truck, train, and barge, would put a large percentage of the U.S. population at risk from these hazardous radioactive wastes.

Erosion of regulator credibility and trustworthiness continues to be an unresolved issue that will most certainly poison any future attempts to transport HLRW under any circumstance. An example of a situation that has eroded trust is the repeated call for full-scale physical testing of transport containers with independent public review of this process. Currently, containers are only tested "on paper." Cask design and integrity issues still remain, especially for transport casks. Many feel that previous whistle-blower allegations concerning cask design and quality assurance program flaws were too easily glossed over; and have since been corroborated by retired NRC officials. An NRC pledge to due full scale cask testing, using designs that would actually be used in future transport, has not been fulfilled (reinforcing the point above). DOE's continued misuse and misrepresentation of the 1970s Sandia National Laboratory films of simulations of cask accidents done to verify computer models further call into question DOE's credibility on the issue, since the casks in the films actually failed in two of the simulations reported as successful demonstrations of cask integrity. More recent tests of transport cask integrity to withstand easily obtainable 21st century munitions have resulted in the casks failing dismally. If these casks can't survive real world situations, they have no business being licensed to function in the real world, either.

This broad criticism extends to both NRC and DOE, and is even more complicated with the creation of agencies like Homeland Security, and the involvement of a Katrina-discredited FEMA. The issues raised here represent serious credibility issues that the assigned agencies need to resolve with the public before any further transportation of irradiated fuel is permitted.

Additional questions arise:
What obstacles exist to licensees providing safe storage for decades to a century? What will be required to extend isolation to the entire period the waste will be hazardous? How can state and local governments and the public effectively participate in monitoring storage, selecting a permanent repository, and transportation? How should short-term, mid-term and long-term storage be funded? What changes in federal law and regulations are needed to institute HOSS?

Disposal questions:

Key question: *How can the U.S. go about establishing one or more disposal sites for high-level nuclear wastes in a manner that is technically, politically and socially acceptable?*

QUESTION FOR THE BRC: Why is environmental acceptability not included in this list?

First, turn off the tap: cap with a firm limit the amount of radioactive waste that will need to be permanently isolated. We should start over with a technical process to develop health and safety standards with a goal of zero release – in other words actual *isolation* of radioactive waste from the biosphere. These standards must be developed with robust public involvement. These new standards and regulations must be publicly approved and in place before any siting program is considered. There must be informed consent and acceptance from all affected entities at every level of government, as well as the public, and the inclusion of independent technical experts as well as government and public oversight and appropriate regulation. Independent technical monitoring as well as government oversight and regulation must be ensured for the people in perpetuity. The key consideration must be permanent isolation of the radioactivity contained in irradiated nuclear fuel and high-level radioactive waste from the living environment for as long as it remains hazardous. Intervener or independent funding for all entities could ensure robust public involvement.

> *11. Is a disposal facility (or facilities) needed under all reasonably foreseeable scenarios?*

As stated elsewhere, reprocessing is unacceptable. But even if reprocessing were carried out, high-level radioactive wastes, TRU, Greater-Than-Class-C and so-called “low-level”

radioactive waste requiring permanent isolation and long-term management would still remain.

An isolation facility may be needed but should not be pursued until publicly acceptable standards are established and increased safety and environmental protection is assured that would justify the establishment of such a facility. Absent such standards and assurances, it is unlikely any effort to establish a new disposal facility can succeed.

The WIPP site in New Mexico is operating and managing an entirely different waste form (much less thermally hot plutonium contaminated wastes), and should not be considered for high-level waste or irradiated commercial nuclear fuel. In fact, problems at WIPP, such as hazardous carbon tetrachloride leakage, reveal that this site and facility is not operating safely for the wastes it already disposes.

12. If a permanent disposal system is needed, what are our alternative approaches for disposal?

See answers to questions 9 and 11. Publicly acceptable standards have never been established and then honestly determined if they can be met. The previous policy at Yucca Mountain, continually "lowered the bar" for compliance. That abandonment of protection resulted in destruction of public trust.

13. What process(es) should be used to select new disposal sites and what are the relative roles of federal, state, local, private, and tribal entities?

First: reject the notion of "disposal." Isolation of the waste is the goal. A disposal site may, or may not provide isolation.

We feel strongly that the commitment to a scientifically based program for the long-term isolation of radioactive waste must start with solid research that is open, transparent, and reviewed by independent analysts who are supported by an open grant process for interveners. A strong commitment should be made to include many disciplines, not only the typical engineering and geology teams.

This research and development should be accessible to the public, and there needs to be other avenues of engagement as well. Communities that are today bearing the burden of this industry are not only harmed, they are oppressed. This mistake must not be perpetuated. Many of us see engagement in the future of this program as a vehicle for ensuring that the ethical and visionary aspects of grappling with the unprecedented problem of radioactive containment are addressed. Without this vital step there will be no reconciliation.

A repository site can only be chosen if we have real regulations in hand and it can be shown that the site meets **all** aspects of the regulations. We support the idea of a "volunteer" site, however we will not support it until such an action is legally defined and that definition is protective of the most local interests and those living in the immediate

area. As mentioned, Native American tribes, as well as other low income and people of color communities, cannot be targeted for radioactive waste disposal sites due to principles of environmental justice.

Yucca Mountain has "poisoned the well" in regard to public trust, confidence and acceptance of a siting process for a repository, and very likely for interim storage sites. There must be no rush. Whatever time is needed should be devoted to establishing public trust and confidence.

Trust is not the product of words-- it results from engagement and activity. Implementing HOSS at existing waste storage sites, adopting a zero-release/zero-exposure standard and moving ahead on a volunteer basis with good public participation, transparency and accountability and acceptance would be a good place to start in building public trust and confidence in a waste program.

Another opportunity to build trust would be a commitment to provide intervener funding for independent review and critical analysis of all proposals dealing with radioactive waste management. As many candid nuclear industry leaders have admitted over the years--well resourced public participation has repeatedly resulted in a better outcome than when there has been no such participation. Some societies require that the budget for a licensed project include 1% to fund the work of grassroots environmental and public interest group interveners.

A good place to start this would be with funding made available to non-industry affiliated independent experts and impacted community members to do a review of the BRC's draft report and enough time to make a meaningful contribution to the BRC's final report.

14. What are the essential elements of technically credible, workable, and publicly acceptable regulations for disposal (in geologic repositories)?

Zero release and a cap on the amount of waste needing such management. There is no safe dose of radiation. Any release must be assumed to create some number of excess cancers as well as other radiation health effects which include infertility, miscarriage, birth defects, reduced immune function and others.[32]

Second, that all regulations, laws, and standards are scrupulously followed, not modified, waivered, exempted or otherwise watered down and disregarded to fit political convenience or industry wants. Once these are agreed upon, they should be followed, unless a demonstrated and imminent threat to public health and safety should arise, and no other alternatives exist or are likely to be created in a timely manner.

15. What are the essential elements for a technically credible and publicly acceptable institutional system and process for regulating the safety of disposal?

Zero release and miniscule chance of human intrusion. International inspection and approval should be considered but **not** with a lower standard.

There must be a careful lessons-learned process after the grossly unproductive Yucca Mountain site selection debacle. The Yucca program and the Nuclear Waste Policy Act must be de-constructed and all parts of it examined.

For instance, problems increased when canister systems became the drivers of the repository design. This occurred twice during the program; first with the multi-purpose canister (MPC) and later the transportation, aging and disposal (TAD) cask systems. Waste handling was determined to be more difficult than expected so it transferred from the repository site back to the reactor site. That decision and others should be carefully examined.

Inappropriate radioactive waste definitions and classifications should be rewritten and a solid basis for isolation of radioactivity from the biosphere affirmed, as well as overcoming any institutional barriers to implementing HOSS at reactor sites.

Finally, once standards and regulations are mutually negotiated, politics – particularly Congress – should be minimized or removed from the final decision making. The final decision should be a reflection of the best science and technology, coupled with a legitimate and trustworthy public process for implementation.

Related questions arise:
What are the amounts of irradiated fuel that may be generated over the next several decades that could require isolation facilities?What changes in federal law are needed?

Crosscutting Issues:

16. How much are the options considered recommended by the Commission likely to cost, and over what time period will these costs be incurred?

Bush administration's Global Nuclear Energy Partnership, which promoted reprocessing of commercial irradiated fuel was projected to cost $20 billion over 20 years. Since irradiated fuel reprocessing is proving worldwide to be uneconomic and a disaster for the environment there is growing public apprehension that high-level waste would most likely be moved with a stated intent to reprocess and then when the program is halted because it is inherently impractical, a de facto dump will have been created.

Producers of waste must be willing and able to pay the costs of doing business. If they are unable or unwilling to meet publicly acceptable safety standards, radioactive waste production must end. Under the present system, victims of radiation's health impacts pay, and society pays in increased insurance and healthcare costs since these illnesses are viewed as "externalities" to the business plan.

The billions of dollars that would be wasted on highly speculative, long-term reprocessing ventures could underwrite immediate security enhancements for vulnerable irradiated nuclear fuel storage pools and establish HOSS at reactor sites.

17. Who should pay for the options?

The producers should pay. The Nuclear Waste Fund is a form of such a payment insofar as those who got the benefit of the electric power have paid into a fund. If producers are outlasted by the waste, government must pay from a fund paid for, in advance by the producers at an expanded rate.

18. How should the funds be collected and distributed?

The Waste Fund worked in principle but licensees have been allowed to defer payment. The deferred payment option must be removed. The waste contracts are a deeply fraught problem (for instance the penalty fees being paid by the taxpayer) and worthy of extensive reconsideration – which would be simplified by a commitment to phase out commercial nuclear power waste generation. Congressional oversight and budgeting must be maintained. The Yucca Mountain experience would have resulted in far greater financial waste had appropriations not been limited by Congress.

19. What entity(es) should have responsibility for implementation and governance?

Federal, state and local governments must implement and enforce safety regulations. The public, including independent technical experts, must be allowed an active and meaningful role throughout any program in perpetuity. The public will likely demand stricter oversight than industry and its regulators. Tighter regulation must be accepted by the nuclear industry to better protect the environment and public.

20. How should each option be regulated?

Regulations must be meaningfully enforced by governments. The system must remain public and separate from private industry.

In our view new institutions to carry forward implementation of the research and public engagement on long-term isolation of the waste may be needed – and should be explored under a National Environmental Policy Act type process. The idea of a federally chartered non-profit corporation may be an institutional framework with the strengths of both public and private sectors, if set up properly. Success may depend on a new institution given the deep distrust the public has for not only the U.S. Department of Energy, but also for the U.S. Nuclear Regulatory Commission.

Additional Comments from Responders:

A. The only real solution to the problem of radioactive waste is to stop generating it in the first place. As President Obama himself has articulated, nuclear weapons should be abolished from the face of the Earth. This will not be achieved if nuclear weapons materials are produced and used on a daily basis at energy installations. Energy efficiency combined with renewable energy can and will provide ample energy for our economy.[33] Not only nuclear power, but coal, as well can be phased out and replaced with existing renewable, storage, and efficiency technologies.

B. Irradiated nuclear fuel storage in pools run the risk of catastrophic radiation releases from loss of coolant (water). The irradiated nuclear fuel densely packing these pools must be transferred, when ready (about five years), into robust, dry, above ground, dispersed hardened on-site storage configurations. HOSS principles set higher standards than are being met by current dry cask storage facilities. Current dry cask storage was not designed to withstand terrorist attacks, is also vulnerable to accidental radioactivity releases, and suffers from serious violations of quality assurance and control on both the design and manufacture of dry cask storage containers and installations.

C. As mentioned elsewhere, principles of environmental justice demand that Native American reservations and communities, as well as other peoples of color and low income communities, not be targeted for hazardous radioactive waste storage or disposal facilities.

D. The Commission must be clear about how they define the issues they are addressing and for what problems they are seeking solutions. Regarding irradiated fuel at commercial nuclear reactor sites: is the problem the waste or is it to find room for additional waste? A common analogy is the bathtub that is built without a drain. The faucet is on and the water is running over the sides. Is the solution to bail out the water to make room for more from the running faucet or is it to turn off the faucet and THEN make a plan for what to do?

E. As representatives of citizens groups with long term interest in and literally THOUSANDS of person-years already devoted to these issues, we ask that you dispense with the word “stakeholder.” There is no clear or accepted definition of this term. It is much clearer to us and to you when you simply say who you are talking about--nuclear utilities, local officials, residents, everyone, etc. Anyone concerned about nuclear waste believes that they are a “stakeholder” but you may not be talking about them. Try to avoid all general terms such as “community,” “interested parties,” etc. Again, just state who you are addressing or talking about.

Final note:

Much of the comments offered here focus on high-level commercial waste, that is, irradiated reactor fuel however, in our view the Principles of Safeguarding Nuclear Waste through hardened on-site storage coupled with the Precautionary Principle should be applied to every radioactive waste situation throughout the nuclear fuel chain including the nuclear weapons complex. This process should be vetted with the local decision makers and those at risk of radiation exposures and implemented across the board for such disparate radiation problems as uranium mining wastes and mill tailings, uranium enrichment and fuel processing wastes, reactor operations, nuclear facility decommissioning, vast stocks of nuclear weapons waste, and tons of sensitive fissile materials. This process is step one in ensuring that this waste is isolated from our living environment, and will allow time for the development of more permanent disposition to be done well.

This document will be reissued early in 2011 with citations for key points and any additional group endorsements.

We, as organizations, endorse this statement:

Michael Mariotte
Nuclear Information and Resource Service
Takoma Park, Maryland
www.nirs.org

Grassroots Networking and Support;
Energy Policy;
Radioactive Waste Policy
Licensing Intervention

Susan Gordon
Alliance for Nuclear Accountability
Santa Fe, New Mexico
www.ananuclear.org

Kevin Kamps
Beyond Nuclear
Takoma Park, Maryland
www.beyondnuclear.org

Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abandon both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic. As best it's able, Beyond Nuclear strives to watchdog all commercial nuclear power facilities in the U.S., including reactors and radioactive waste management facilities.

Lynn Thorp
Clean Water Action
www.cleanwateraction.org
Washington, DC 20005

Susan Corbett,
Chair of the Nuclear Issues Activist Team
Sierra Club National
Columbia, South Carolina

Jim Riccio
Greenpeace
Washington, DC
www.greenpeace.org
Vermont Yankee & New Nuclear Facilities.

Tom Clements
Friends of the Earth
Columbia South Carolina and
Washington, DC
www.foe.org

David A. Kraft
NEIS
Chicago, IL
www.neis.org

Braidwood NPP, Byron NPP,
Clinton 1 NPP; proposed Clinton 2 NPP,
Dreden NPP, LaSalle NPP,
Quad Cities NPP, Zion NPP ,
and spent fuel pools; proposed
decommissioning issues;
proposed dry-cask storage;
General Electric Morris Operation
-- spent fuel storage;
GNEP -- GE/Hitachi plans to promote PRISM
reactors and pyroprocessing; proliferation
potential of reprocessing;
LLRW issues; HLRW issues; the BRC
carbon-free/nuclear-free energy alternatives in
Illinois; coal plant closures; state and federal
energy policy; nuclear construction moratorium;
nukes and global warming; Chornobyl and its
aftermath.

Judy Treichel
Executive Director
Nevada Nuclear Waste Task Force
Las Vegas, NV

The Task Force has worked for nearly 30 years on Yucca Mountain and many associated issues. We also monitor activities at the Nevada Test Site.

Alfred Meyer
Chicago Summit Co-Facilitator
Washington, DC

Joe Mangano
Radiation and Public Health Project
www.radiation.org
Ocean City, New Jersey

Glenn Carroll, Coordinator
NUCLEAR WATCH SOUTH
Atlanta, GA
http://www.nonukesyall.org

Laurie Belton
The Women's International League for Peace and Freedom, U.S. Section
Laurie Belton, Boston, MA
www.wilpf.org
Protests/ vigils/ hearings - Vandenberg Air Force Base, Lawrence Livermore, Hanford nuclear waste site; Challenge nuclear weapons manufacture- Lockheed Martin (Bay Area), Raytheon (Tucson), Boeing (St Louis);Challenge nuclear power plant re-licensing- Vermont Yankee, Plymouth (MA), San Luis Obisbo; Active at the UN @ nuclear non-proliferation- facilitating NGO interaction with UN staff and country delegates, reports on nuclear disarmament sessions in key UN bodies, organizes annual studies of key nuclear issues
Lobbies Congress, works in coalition with ANA and Proposition One.

Mali Lightfoot
Director of Development
Helen Caldicott Foundation
Asheville, NC
NuclearFreePlanet.org

Bruce K. Gagnon, Coordinator
Global Network Against Weapons & Nuclear Power in Space
Brunswick, ME
www.space4peace.org
http://space4peace.blogspot.com/

Alice Slater
Nuclear Age Peace Foundation
New York, NY
www.wagingpeace.org
www.abolition2000.org

Scott Sklar
The Stella Group, Ltd.
Arlington, Virginia
www.TheStellaGroupLtd.com
Rate-basing nuclear work in progress, nuclear susceptibility to terrorism.

Fluoride Action Network
Paul Connett
Canton NY
http://fluoridealert.org/
http://www2.fluoridealert.org/Pollution/Nuclear-Industry
Uranium hexafluoride (UF6)

Tom Campbell
The Guacamole Fund
Hermosa Beach, CA
Grassroots support.

Rick Hausman
R&R Foundation
Bradenton, FL
Opposes re-licensing of the Vermont Yankee nuclear plant in Vernon, VT.

Charles N. Utley
Blue Ridge Environmental Defense League
Glenndale Springs, NC

Savannah River Site, Vogtle.

Paula Gotsch
GRAMMES: Grandmothers, Mothers and More for Energy Safety

Oyster Creek Nuclear Generating Station.

David Ellison
Green Party of Cuyahoga County
Cleveland, Ohio

Effective public involvement in decision-making, NPS, Davis-Besse NPS,Piketon;
Local contamination issues - Harshaw Chemical, Advanced Medical Systems, Inc., etc.

Ecology Party of FL
Cara Campbell
Ft. Lauderdale, FL

Intervener on proposed new reactors in Levy County Florida.

Marcus Atkinson
Footprints for Peace
Cincinnati, Ohio
www.footprintsforpeace.org

Y-12 Nuclear Weapons Facility,
Piketon Nuclear Facility,
Uranium mining (Australia),
Nuclear waste,
Fuel Chain.

Marilyn Elie
Westchester Citizens Awareness Network
Cortlandt Manor, NY

Presentations, press releases, attending NRC meetings, listserv to keep our members informed and active in closing the reactors at Indian Point.

Jesse P. Van Gerven
Missourians for Safe Energy
Columbia, MO
www.mosafeenergy.org

We have opposed the expansion of Ameren UE's Calloway County nuclear power facility.

Lea Foushee
North American Water Office
Lake Elmo, MN
www.nawo.org

Prairie Island Nuclear Generating Plant,
Monticello Nuclear Generating Plant.

Jay Coghlan
Nuclear Watch New Mexico
Santa Fe, NM
www.nukewatch.org
www.nukewatch.org/watchblog/

Los Alamos and Sandia National Laboratories,
Waste Isolation Pilot Plant ,
DOE nuclear weapons issues in general.

Gerry Pollet, JD;
Heart of America Northwest
Seattle, WA
www.hoanw.org

"The Public's Voice for Hanford Clean-Up"

Al Gedicks
Wisconsin Resources Protection Council
La Crosse, WI

Dairyland's Genoa nuclear reactor (closed),
Excel's Prarie Island nuclear reactor,
Wolf River Batholith as a possible nuclear waste repository.

Sharyn Cunningham
Colorado Citizens Against ToxicWaste, Inc.
Canon City, CO

Cotter Corporation Uranium Mill in Canon City, CO.

B. Geary
Citizens Action for Safe Energy
Tulsa, Oklahoma

We work to defeat pro-nuke legislation introduced in the Oklahoma state legislature. (in cooperation with the Carrie Dickerson Foundation and the Oklahoma Sierra Club).
We support national efforts (e.g. petitions) on national issues -- radioactive waste, federal subsidies of nukes
We keep members informed of nuclear power issues generally, including through dissemination of Ace Hoffman newsletters.

Michael Saftler
Advocacy Coalition of Telluride
Telluride, CO

Uranium mining, milling, processing, transportation, waste, storage;
EPA negligence,
Nuclear energy,
Nuclear waste.

Bruce Wood
BURNT
Nashville Tn
www.burnt-tn.org

landfills, recycling, composting, environmental justice, multiple chemicals on our bodies and environment.

Sebia Hawkins
Development Director
New Mexico Environmental Law Center
Santa Fe, NM

John LaForge
Nukewatch
Luck, Wisconsin
www.nukewatch.com

Reactors at Kewaunee (WI)
Point Beach (WI)
Prairie Island (MN)
Montecello (MN)
depleted uranium weapons by Alliant TechSystems in MN

Carolyn Treadway
No New Nukes of Normal, Illinois
Normal, IL

Preventing a second reactor from being built at Clinton, IL

Susan Michetti
Citizens of Mt Horeb for Clean Water
Susan Michetti
Mt Horeb WI

Eliminate water fluoridation; many toxic issues in drinking water, including radioactive molecules.

Madeleine Austin
World Business Academy
Santa Barbara, CA

The World Business Academy regularly publishes articles about the reasons why nuclear power is not the answer to our energy needs or the climate change era, and how nuclear power increases the risk of nuclear proliferation and terrorism, cancer, and contamination from nuclear waste. Such articles include coverage of the economics of nuclear power, nuclear power plants' need for vast amount of increasingly scarce water, and the federally permitted radiation (strontium-90) releases from the routine operation of every nuclear plant.

Susan Dancer
South Texas Association for Responsible Energy (S.T.A.R.E.)
and Matagorda County Coalition for Nuclear
Blessing, TX

Industry Accountability.

Robert Gould, MD
SF-Bay Area Chapter, Physicians for Social Responsibility
San Francisco, CA
www.sfbaypsr.org
Lawrence Livermore National Laboratory.

Buffalo Bruce
Western Nebraska Resources Council
Chadron, Nebraska

Crow Butte mining operations owned by Cameco

Ken Bossong, Executive Director
SUN DAY Campaign
Takoma Park, MD

Diane Farsetta, Executive Director
Wisconsin Network for Peace and Justice
Madison, WI
http://www.wnpj.org/

WNPJ has been an active member of the Carbon Free, Nuclear Free WI coalition, which supports strong clean energy policies, while maintaining our state's restrictions on new nuclear reactors. Before new reactors can be built in Wisconsin, there must be a federally-licensed repository for the high-level radioactive waste, and the power must be economically advantageous to ratepayers.

Mary Lampert, director
Pilgrim Watch
Duxbury, MA

Joni Arends, Executive Director
Concerned Citizens for Nuclear Safety
Santa Fe, New Mexico
www.nuclearactive.org

We work on waste issues associated with Los Alamos National Laboratory and the Waste Isolation Pilot Plant, including the transportation of waste through communities. We have a special interest in the proposed transfer of waste from trucks to rail in Antonito, Colorado.

Don Hancock
Southwest Research and Information Center
Albuquerque, NM
www.sric.org

WIPP, Los Alamos and other DOE waste facilities; watchdogging/public information.

Corinne Whitehead
Coalition for Health Concern
Benton, Kentucky

Our site is the DOE Paducah uranium enrichment facility.

Mary Ellen Marucci
CCMN Cooperative Citizen's Monitoring Network
Fort Kent, ME

Jerry Stein
Peace Farm
Amarillo, TX
www.peacefarm.us.org

We work on Pantex, mainly, but also other ANA (Alliance for Nuclear Accountability) issues like the START treaty.

Christopher Thomas
HEAL Utah
Salt Lake City, Utah
www.healutah.org

EnergySolutions, largest commercial low-level nuclear waste disposal site in the nation.

Marcia Halligan
Kickapoo Peace CircleViroqua, Wisconsin
Viroqua, Wisconsin

Judith Johnsrud
Environmental Coalition on Nuclear Power
State College, PA

Sheila Croke
Pax Christi Long Island
Greenlawn, NY

New Start Treaty; all projects regarding nuclear disarmament; supporting resolutions to withdraw troops from Iraq and Afghanistan; supporting conscientious objectors ; restricting military recruiting in schools; protecting rights of immigrants and Muslims; calling for the closing of the School of Americas in Ft. Benning, GA

Kathleen Ferris
Citizens to End Nuclear Dumping in Tennessee (ENDIT)
Murfreesboro, TN
http://citizenstoendit.org/

attempted legislation to end nuclear dumping in TN's municipal landfills;
comments opposing TVA's plan to expand nuclear power in the Tennessee Valley;
comments opposing TVA's plan to use plutonium MOX fuel in aging nuclear reactors.

Ernest Fuller
CCSS i.e. Concerned Citizens for SNEC Safety
Six Mile Run, PA

Saxton decommissioned reactor; Pennsylvania Low Level Radioactive Waste Siting .

Joyce Gauthier
William S. Linnell, Spokesperson
Cheaper, Safer Power
Portland, ME

Led the successful early shutdown of the Maine Yankee Nuclear Plant. Watchdogs for any new nuclear activity.

Bobbie Paul
Executive Director
Georgia WAND
Atlanta, Georgia
www.georgiawand.org

Marylia Kelley,
Executive Director
Tri-Valley CAREs
Livermore, CA
Web: www.trivalleycares.org
We monitor the Dept.of Energy's Lawrence Livermore National Laboratory.

Leo Cashman, Executive Director
DAMS INC
Dental Amalgam Mercury Solutions
St Paul MN
Web site: www.amalgam.org

Deb Abrahamson
SHAWL Society
Wellpinit, WA

Work on the impacts of uranium mining on the Spokane Indian Reservation in eastern Washington. Two mines, Midnite and Sherwood Mine, as well as Dawn Mining Millsite have impacted our lands, waters, air, cultural lifeways and people.

Jack& Felice Cohen-Joppa
Tucson, AZ
www.nukeresister.org

Information about and support for jailed anti-nuclear activists; networking anti-nuclear groups engaged in nonviolent direct action. We monitor news about Palo Verde.

John Blair, president
Valley Watch, Inc.
Evansville, IN

Philip Tymon
Administrative Director
Occidental Arts and Ecology Center
Occidental, CA

Keith Gunter
Citizens' Resistance at Fermi Two
Monroe, MI

Michael J. Keegan
Coalition for a Nuclear-Free Great Lakes
Monroe, MI

Deb Katz
Citizen Awareness Network
Shelburne Falls, MA

Alice Hirt
Don't Waste Michigan
Holland, MI

Patricia Birnie, Chair
GE Stockholders' Alliance for a Sustainable, Nuclear-Free Future
Tucson, AZ

Monitor General Electric's (and Hitachi's) ESBWR and ABWR businesses;
Submit Stockholder Proposals regarding nuclear or energy issues to GE Annual Meetings.

Carole Edelsky, Co-Chair
Tucson WILPF
[www.wilpftucson.org]

Among other
anti-nuclear efforts, we have tried to dialogue with the director of
Raytheon Missiles Corporation regarding our opposition to nuclear
missiles, and we have participated in efforts to get the U.S. Senate to
ratify the START Treaty.

Jennifer Olaranna Viereck, Director
HOME: Healing Ourselves & Mother Earth
Tecopa, CA
www.h-o-m-e.org

Nevada Test Site and surrounding radiated communities and tribal areas;
Yucca Mt. and any temporary proposed sites
Nuclear reactor sites in California.

Barry J.White
CASE/Citizens Allied for Safe Energy, Inc.
Miami, Florida
www.case-fl.org

Elena Day, Steering Committee
Peoples' Alliance for Clean Energy
Charlottesville, VA

Water and Nuclear issues in regards to North Anna.

Tony Nuspl, President
Tulsa Peace Fellowship
Tulsa, Oklahoma
http://tulsapeacefellowship.ning.com

Mary Davis
Ecoperspectives
Lexington, KY
http://www.francenuc.org

Reprocessing, Nuclear Industry in France.

Grandmother for Peace
Molly Johnson, area coordinator
San Miguel, CA

Jim Haber, Coordinator
Nevada Desert Experience
Las Vegas, NV
http://NevadaDesertExperience.org

Interfaith resistance to nuclear weapons and war; Support for Western Shoshone control over their land, including the Nevada National Security Site (NNSS);
Opposition to development and use of new weapons systems like militarized robots, especially the Predator and Reaper drones flying hunter-killer missions from nearby Creech Air Force Base.

Sandra Gavutis
Executive Director
C-10 Research and Education Foundation
Newburyport, Ma.
www.C-10.org

Alliance for Nuclear Responsibility
Rochelle Becker, Director
San Luis Obispo, CA
www.a4nr.org

Terry Miller
Lone Tree Council
Bay City, MI

Judith Mohling, coordinator
Rocky Mountain Peace and Justice Center,
Boulder, Colorado
www.RMPJC.org

We work on keeping Rocky Flats closed to the public and work on
abolishing Colorado's 49 nuclear missiles.

Kiersten L. Sheets
Global Warming Solutions Group of Central Illinois
Peoria, IL
www.gwsolutionsgroup.com

Max Obuszewski
Baltimore Nonviolence Canter
Baltimore, MD

Joyce Harant
Peoria Families Against Toxic Waste
Peoria, Illinois

Issues related to preventing the expansion of a local hazardous waste landfill, work on reducing waste, promoting reuse and recycling and preventing the release of toxic materials into air, water, land and food. Work to prevent the lifting of the nuclear power moratorium in Illinois.

Chuck Broscious
Environmental Defense Institute
Troy, Idaho
http://environmental-defense-institute.org

Idaho National Laboratory
Advanced Test Reactor;
Environmental Health and Safety
Waste issues.

Chris Williams
Vermont Citizens Action Network
Hancock, VT

Dr. Lewis Cuthbert
Alliance for A Clean Environment
Pottstown, PA

Chris Trepal, Executive Director
Earth Day Coalition
Cleveland, OH
www.earthdaycoalition.org

Tim Rinne
Nebraskans for Peace
Lincoln, Nebraska
www.nebraskansforpeace.org
We monitor the activities of the Fort Calhoun nuclear plant just north of Omaha and the Cooper Station at Brownville, Nebraska

Vina Colley
PRESS/NNWJ National Nuclear Workers for Justice
Portsmouth/Piketon Residents for Environmental Safety and Security
Portsmouth, Ohio
We still fight the USEC Enrichment plant known as the Atomic Plant in Piketon, Ohio.
We still work nationally with ANA and DU groups

Joy MacNulty
Nuclear Opponents
MA

Mele Stokesbury
Peace Action
Maui, HI
http://www.mauipeace.org/
Maui Peace Action is a diverse group of citizens committed to ho'omaluhia (making peace). We encourage disarmament through peaceful international cooperation, protest preemptive aggression, promote non-violent solutions to world conflict, and educate for social justice.

Dr. Finian Taylor
Hilton Head for Peace
Hilton Head, SC

Sheldon Plotkin
Southern California Federation of Scientists
CA

Tim Judson
Citizens Awareness Network
Brooklyn, NY

Jane Latus, Vice President
Canton Advocates for Responsible Expansion,
Canton, CT
http://www.cantoncare.org/
Concerned about nuclear power and radioactive wastes in CT.

Corrine Whitehead
Coalition for Health Concern
Calvert City, KY

Randy Kehler
Safe and Green Campaign
www.safeandgreencampaign.org
MA

Rev. Douglas B. Hunt
Executive Director
TN Interfaith Power. & Light
http://tn-ipl.org

Jill Johnston
Southwest Workers Union
San Antonio, TX
swunion.org / news.swunion.org

Richard Ochs
Maryland Safe Energy Coalition
Baltimore, MD

Michael Canney, Co-chair of GPF, Co-chair Green Energy Committee
The Green Party of Florida
Florida
www.FloridaGreens.org

Advocating a carbon free, nuclear free energy policy in Florida.

Julia Rouvier
Flagstaff Nuclear Awareness Project
Flagstaff, AZ

Eleanor Bonney Simons
North Country Coalition for Justice and Peace
St. Johnsbury, VT

Vermont Yankee
Connection between nuclear generator waste & nuclear weapons
"Depleted" uranium.

Jane Swanson
San Luis Obispo Mothers for Peace
San Luis Obispo, CA
www.mothersforpeace.org

Active as legal intervenors re: Diablo Canyon nuclear power plant since1973.
Current cases in Ninth Circuit, U.S. Court of Appeals and in NRC,
opposing license renewal.

Lewis E. Patrie, M. D., Chair
Western N. C. Chapter, Physicians for Social Responsibility
Asheville, NC

Paige Knight
Hanford Watch
Portland, OR

Joan McCoy

Home for Peace and Justice
Saginaw,MI
We work on Peace Issues, Women in Black, Out of Iraq and Afghanistan, Street vigils.

Judi Poulson
Fairmont MN Peace Group
Fairmont, MN

Tom Moss, Coordinator
North Alabama Peace Network
Huntsville, Alabama
http://www.napn.org.

Our focus is issues related to peaceful resolution of conflict.

Mark Haim
Missourians for Safe Energy
Columbia, MO

Libuse Gilka MD
Physicians and Scientists for
a Healthy World

Susan Clark
Committee to Bridge the Gap
Los Angeles, CA

Citizens Against Ruining the Environment-C.A.R.E.
Carol Stark, Director
Lockport, IL
www.willcountycare.org

Please see website-too many issues to list. We have worked occasionally with Dave Kraft & Moe Headington on Dresdan Nuclear, and other nearby locations

Lyn Harris Hicks
CREED
CA

Terry J. Lodge, Chair
Toledo Coalition for Safe Energy
Toledo, OH

Longtime opposition group to Davis-Besse, Fermi 2, proposed Fermi 3, and Perry NPP.

Nancy Burton
Coalition Against Millstone
Ridge, CT

Maureen Headington, President
Stand Up/Save Lives Campaign
Burr Ridge, Illinois

Obtained Resolutions of Opposition to transport and reprocessing of nuclear waste from governmental bodies (county boards and cities) representing nearly 6 million Illinois residents. Engaged in campaign of public education on health and safety issues arising out of transportation and reprocessing of nuclear waste.

Dagmar Fabian
Crabshell Alliance for Greater Baltimore
Cockeysville, MD

Barbara J. Warren
Citizens' Environmental Coalition
Albany, NY
www.cectoxic.org

Debra Stoleroff
Vermont Yankee Decommissioning Alliance
VT

Beatrice Brailsford
Snake River Alliance
Pocatello, ID
bbrailsford@snakeriveralliance.org

Gwen Dubois
Chesapeake Physicians for Social Responsibility
Baltimore, Md

Nina Bell, J.D., Executive Director
Northwest Environmental Advocates
Portland, OR 97212-0187
www.NorthwestEnvironmentalAdvocates.org

Rebecca Tippens
Center for Cultural Evolution
Colrain, MA
http://roundhouseculture.com/

Nuclear power and radioactive wastes in MA.

Gilly Burlingham
Regional Action Group for the Environment
Portland, OR

Nuclear power and radioactive waste issues in the Northwest.

Cat Koehn, Executive Director Artists4Action
Eugene,OR
http://www.artists4action.org/index.htm,
Artists4Action was formed with the goal of creating a powerful coalition of artists that would speak out for environmental action to protect the earth.

David Nazar
Bellefonte Efficiency and Sustainability Team
Cumberland and Hamilton Counties, TN
c/o http://www.bredl.org/

Proposed new nuclear power plants at the TVA Bellefonte facility.

Megan Rice, SHCJ, Office Assistant, Nevada Desert Experience
Las Vegas, NV
http://www.nevadadesertexperience.org/,

The mission of Nevada Desert Experience (NDE) is
• to stop nuclear weapons testing and development through a campaign of prayer, education, dialogue, and nonviolent direct action.
• to mobilize people of all faiths to work toward nuclear abolition and nonviolent social change.
• to support personal renewal in the desert tradition, reconnecting with each other and the earth to stop nuclear weapons testing through a campaign of prayer, education, dialogue, and nonviolent direct action.

Ann Suellentrop M.S.R.N.
Physicians for Social Responsibility
Kansas City
blog: kcnukeswatch.wordpress.com
web: nukewatch.org/KCNukePlant

Our organization has a Kansas City Plant Accountability Project that
works for the cleanup of the contamination at this nuclear weapons
facility.

Tom Small
West Michigan Climate Action Network
www.wmican.net

Palisades and Cook nuclear power plants on the Lake Michigan shoreline.

Kay Cumbow, Member, Education Committee
Citizens for Alternatives to Chemical Contamination
Lake Station, Michigan
http://www.caccmi.org/

uranium exploration/mining in the U.P., Fermi 3 reactor at Monroe nuclear power and waste issues (including transport) in Michigan and at regional reactors - the former Big Rock Point site, the Bruce/OPG nuclear complex located in Ontario; advocate for renewable energy and conservation.

Judi Friedman, Chair and Barbara Backman
PEOPLE'S ACTION FOR CLEAN ENERGY.INC
Canton, CT

Nuclear power and radioactive waste issues in Connecticut and beyond.

Nancy Givens
Bowling Green Green Partnership for a Sustainable Community
BowlingGreen,KY
http://www.wku.edu/bggreen/sustainable.php

economic growth that is coupled with environmental stability and fair and just working conditions and opportunities for low income residents.

Gloria Griffith
Watagua Watershed Alliance
Johnson and Carter Counties, TN,
http://www.wataugawatershed.org/WWA_Front_Page.html

The mission of WWA is “to investigate and act against threats to our watershed, to hold elected officials accountable and to encourage our supporters to become responsible citizens.”

David Kanter, At-Large Officer and Executive Committee Contact,
Sierra Club Southern Maryland Group
Hughesville,MD
http://maryland.sierraclub.org/southern-md/

Calvert Cliffs nuclear power plant.

Melissa Jacobs
Regional Action Group for the Environment
Allegheny and Corland Counties
Nunda, NY

Successfully blocked so-called "low" level radioactive waste dump targeted at their area.

Dick Glick
Corporation for Future Resources
Tallahassee, FL,
http://www.pipeline.com/~dan_glick/CFR.html

Conversion of biomass (vegetation) under anaerobic fermentation conditions into renewable resources.

John Bernard, Treasurer
Maine People's Alliance
South Portland, ME
http://www.mainepeoplesalliance.org/index.html

Cleanup of toxic dumpsites, still works on toxics use reduction.

Cecilia Resti, Co-Chair
Peace Action of Central New York
Syracuse, NY
http://www.peaceactioncny.org/

Nuclear weapons and nuclear power issues.

Donald Keesing
Voices Opposed to Environmental Racism (VOTER)
Asheville, NC

Opposed to radioactive waste dumps targeted at Native American lands.

Adele Kushner
Action for a Clean Environment
Alto, GA

Hatch and Vogtle nuclear power plants.

Madeline Labriola
Pax Christi Hudson Valley
Highland,NY
http://www.paxchristiusa.org/

Elizabeth Vitale
Center for Serenity
West Hartford, CT http://centerforserenity.org/

Jim Bell
Ecological Life Systems Institute
San Diego, CA
http://elsi.org/

"Creating a Sustainable Economy and Future On Our Planet."

Clare Ritchie
Salem Peace Committee
Salem, MA
c/ohttp://www.justicewithpeace.org/community-groups

Pilgrim nuclear power plant.

Therese MacKenzie
SHCJ EcoSpirituality Group
Chicago, IL
http://www.holychildschools.org/shcj.nsf/pages/justiceecospirit,

Ari Daniels
Executive Director
Earth Week Charlottesville
Charlottesville, VA
http://www.earthweek.org/
North Anna nuclear power plant.

Laura Lynch
WILPF-Santa Barbara
Santa Barbara, CA
c/o http://wilpf.org/

San Onofre and Diablo Canyon nuclear power plants.

Linda Richards
Ashland Branch of WILPF
Ashland, OR
http://www.wilpf.org/
Environmental justice and radioactive waste.

Saran Kirschbaum,Board of Advisors, Executive Committee,
The Coalition on the Environment and Jewish Life of Southern California
Los Angeles, CA
http://coejlsc.com/

We work to repair, protect and preserve our environment while integrating God's vision of sustainability, responsibility and advocacy for creation.

Lisa Lintner
Lotus Medicine
Hailey, ID
http://lotusmedicine.net/

Winnie Foster, Energy Chair
Suncoast Sierra Club
St. Petersburg, FL
http://florida.sierraclub.org/suncoast/suncoast.html,

Existing and proposed new atomic reactors in the Sunshine State.

Peter Yuslum and Paul Troyano
Pax Christi New Orleans
New Orleans, LA
http://paxchristino.org/

E.M.T. O'Nan,Director
Protect All Children's Environment
Marion, NC
www.main.nc.us/pace

Norman Hopkins Director
Amy H Remley Foundation
Crystal River, FL
http://www.amyhremleyfoundation.org/php/news/index.php

Progress Energy's Crystal River NPP.

Dave and Sherry Pettus
Hamakua Music Festival, Inc.
Honokaa, HI

Gretel Munroe
Grassroots Actions for Peace
Medford,MA
http://www.grassrootsconcord.org/mission.htma

Pilgrim nuclear power plant.

Joan Brown, OSF
Partnership for Earth Spirituality
http://earthspirituality.org/
Uranium mining.

David Trione
Sound Power, Inc.
Redmond, WA
http://soundpower.us/

Sound Power is committed to overcoming the barriers of subsidized conventional energy prices that exclude full social and environmental costs and the tendency of consumers to purchase equipment based on least first cost instead of lowest life cycle cost.

INTERNATIONAL

Pat Coulter
Earth Alternatives
Manning Alberta, Canada.

Alan Wilkie
World Court Project
Scotland c/o
http://www.lcnp.org/wcourt/
Radioactive wastes generated by nuclear weapons production.

Brennain Lloyd
Northwatch
North Bay, Ontario, Canada
www.northwatch.org
Cameco Uranium Refinery, Blind River, Ontario; BHP Billiton and Denison Mines Decommissioned Uranium Mines, Elliot Lake, Ontario: mineral exploration with uranium as target mineral, throughout northern Ontario; Ontario Power Generation's proposed geological repository for low and intermediate level nuclear waste, Kincardine, Ontario; Nuclear Waste Management Organization's proposed geological repository for nuclear fuel waste, concept development and siting process, throughout Ontario.

Marion Odell
International Institute of Concern
for Public Health
www.iicph.org
info@iicph.org

Siegfried Kleinau,
Binbrook, Ontario
Canada

Lorraine A. Rekmans
Aboriginal Affairs Critic for the Green Party of Canada
Nominated Candidate for Algoma-Manitoulin-Kapuskasing

Ulla Klotzer
Women Against Nuclear Power
Finland

Thanasis Anapolitanos
Mediterranean Anti-Nuclear Watch
Greece

Helene Connor
Sustainable Energy Watch
PARIS, France
www.helio-international.org

Stefanie Fortugno
Inter-Church Uranium Committee Educational Co-operative
Saskatoon, Saskatchewan, Canada
http://icucec.org/
works to educate people about the nuclear industry in Saskatchewan, and to halt all nuclear development in the province, including the mining of uranium