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Sustainable Energy and Economic Development (SEED) Coalition

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Robert Wilson, Chairman

Members and the Texas Low Level Radioactive Disposal Compact Commission

Comments on the TVA Application for Importation of Nonparty Low-Level Radioactive Waste

The Sustainable Energy and Economic Development (SEED) Coalition, Rep. Lon Burnam, Public Citizen, Environment Texas, the South Texas Association for Responsible Energy, CODA and Tex/New Mex Radiation Rangers, along with Peggy and Melody Pryor submit the following comments.

The TVA Application is especially of concern to us. This application in particular should either be denied or a decision should be delayed due to the extremely high curie levels of the waste, the fact that it would take up nearly all of the curie allocation for the first year and due to TVA's ongoing violations. Research should be conducted as to whether the waste should rightfully go to the federal facility as opposed to the Compact facility, and whether it might best be left in place until another Southeast Compact facility becomes available. Analysis should also be sought regarding whether the control rod blades are in fact close enough to the control rods to be considered high-level waste.

We urge that the Compact Commission either deny this and other import applications, or postpone decisions regarding radioactive waste applications for the following reasons:

1. The Compact Commission has not yet resolved the issue of whether there will be enough capacity at the Compact site for Texas' and Vermont's radioactive waste, their undiminished access to the waste disposal site. There are legal questions regarding whether Texas and Vermont will have the full legally required access and capacity that must be resolved before the Compact Commission decides on whether to approve waste applications.

SB 1504

SB 1504 amended Section 401.207 (b) of the State Health and Safety Code to read as follows:

(b) The compact waste disposal facility license holder may accept for disposal at the compact waste disposal facility approved nonparty compact waste that is classified as Class A, Class B, or Class C low-level radioactive waste in accordance with the compact waste disposal facility license *to the extent the acceptance does not diminish the disposal volume or curie capacity available to party states*. The license holder may not accept any nonparty compact waste for disposal at the facility until the license has been modified by the commission to specifically authorize the disposal of nonparty compact waste.

However, any importation of waste inevitably diminishes the disposal volume or curie capacity available to the party states, Texas and Vermont. Despite the fact that the Legislature capitulated to the demands of WCS to expand the site to accept waste from around the country, the Compact was created to meet the needs of party states and the site should be limited to waste from party states only until the existing waste from Texas' and Vermont's reactors has been disposed of and it can be physically demonstrated that there is still room for waste from nonparty states. There are huge reactor heads sitting at Texas reactor sites that need to be disposed of and the Vermont Yankee plant is likely to be decommissioned in the near future.

Limits on the volume and curies of waste for WCS' Compact facility have been established by the WCS license with the TCEQ. There is a limit of 2.3 million cubic feet of waste and 3.89 million curies. The Compact Commission has no authority to make decisions premised on the expansion of WCS' license. The first priority for the Compact Commission should be to protect the interests of the Compact States and ensure adequate capacity for Texas and Vermont. .

Section 401.207 (b) of SB 1504 conflicts directly with the limits on importation established in section (e):

(e) The compact waste disposal facility license holder may not accept more than 50,000 total cubic feet of nonparty compact waste annually. The compact waste disposal facility license holder may not accept more than 120,000 curies of nonparty compact waste annually, except that in the first year the license holder may accept 220,000 curies. The legislature by general law may establish revised limits after considering the results of the study under Section 401.208.

Due to this inherent conflict, and until there is clarification by the Texas Legislature, the Compact Commission should not approve this or any other application to import radioactive waste that comes from nonparty states.

**Texas Low Level Radioactive Waste Disposal Compact Consent Act Public Law 105-236
Sept. 20, 1998**

There is also legal conflict regarding the importation of nonparty waste due to this portion of Public Law 105-236, the Texas Low Level Radioactive Waste Disposal Compact Consent Act:

“ARTICLE IV. RIGHTS, RESPONSIBILITIES, AND OBLIGATIONS OF PARTY STATES
“SEC. 4.01. The host state shall develop and have full administrative control over the

development, management and operation of a facility for the disposal of low-level radioactive waste generated within the party states. **The host state shall be entitled to unlimited use of the facility over its operating life.** Use of the facility by the non-host party states for disposal of low-level radioactive waste, including such waste resulting from decommissioning of any nuclear electric generation facilities located in the party states, is limited to the volume requirements of Section 3.04(11) of Article III.

The referenced section – Section 3.04(11) of Article III – reads as follows:

“(11) By no later than 180 days after all members of the commission are appointed under Section 3.01 of this article, establish by rule the total volume of low-level radioactive waste that the host state will dispose of in the compact facility in the years 1995–2045, including decommissioning waste. The shipments of low-level radioactive waste from all non-host party states shall not exceed 20 percent of the volume estimated to be disposed of by the host state during the 50-year period. When averaged over such 50-year period, the total of all shipments from non-host party states shall not exceed 20,000 cubic feet a year. The commission shall coordinate the volumes, timing, and frequency of shipments from generators in the non-host party states in order to assure that over the life of this agreement shipments from the non-host party states do not exceed 20 percent of the volume projected by the commission under this paragraph.

Two problems arise:

*First, there is a direct legal conflict for Texas in that accepting any non-party waste violates requirements of Section 4.01 that require that the host state be *entitled to unlimited use of the facility over its operating life*.

The Compact Commission should halt consideration of all non-party waste import applications until this fundamental legal question is resolved.

***Secondly, the Compact Commission should not approve any import applications until Texas and Vermont waste is disposed of and stored waste is either shipped elsewhere or buried at the site, since the question of capacity is overarching, and the legal requirement is to provide Texas with unlimited access.**

The volume estimate made by the Compact Commission within the required 180-day timeframe was that Texas would require 5 million cubic feet and Vermont would require 1 million cubic feet for its waste. The total, 6 million cubic feet, would exceed the licensed volume for the site of 2,310,000 cubic feet. This estimate has not been revised or updated.

There is not enough capacity at the WCS site as licensed for the Texas and Vermont waste alone, without any nonparty imports. WCS’ claims of waste volume reductions through processing have not been verified by independent analysis.

The Texas Compact Low-Level Radioactive Waste Generation Trends and Management Alternatives Study in 2000 provided a chart (on page 4-107) that shows Texas and Vermont waste would total 2,543,000 cubic feet, which would exceed the licensed volume by 233,000 cubic feet. (See attached)

There is more waste than originally thought.

There are four Texas commercial reactors that will need to be decommissioned and one in Vermont. Reactor heads were replaced for three Texas units after the study was completed. There are now two reactor heads and eight steam generators stored at the South Texas Project site, that should be disposed of at the WCS site before any non-party import applications are approved.

There is one reactor head at Comanche Peak in Texas and four steam generators, which should also be disposed of at the WCS site before any non-party import applications are approved. It remains to be seen if another reactor head will need to be replaced at Comanche Peak.

Vermont Yankee is likely to be decommissioned soon and may need more volume than originally planned due to the pipes that have leaked tritium and contaminated soil.

WCS is not forthcoming with information regarding waste stored at the site and waste anticipated to come to the site from Texas and Vermont, leaving estimation of capacity used and still available up to guesstimates and waiting.

Questions should be answered before application decisions are made

How much waste is currently stored at the site and will it be disposed of there? Disposal of this waste should be prioritized and should occur before any import application decisions are made.

2. The Compact Commission should delay action on all import applications until the site is proven to be dry enough and pending resolution of legal issues raised by the Lone Star Sierra Club.

There is a serious problem with water being found in monitoring wells in the buffer zone of the Compact Waste facility site. Extensive pumping has been inadequate. Water remains and another 18 months of pumping may be needed to achieve the drier conditions required by the site's license. The presence of water at the site is of great concern since contamination of aquifers must be prevented. This concerns was raised by the entire radioactive waste division of TCEQ early on, but remains unresolved.

Since the license for the Compact facility is under legal challenge, and the water issue is likely to be raised, the Compact Commission should not make decisions yet on import applications.

However, if the Compact Commission should decide to go ahead and make decisions regarding import applications, there should at minimum be a contingency included in any approvals that no shipments shall be initiated until the Compact Site water monitoring levels no longer show water.

Legal Challenges:

On May 21, 2012, the Sierra Club submitted a motion to the Texas Commission on Environmental Quality (TCEQ) that seeks to overturn the Executive Director's April 25, 2012 decision authorizing Waste Control Specialists LLC (WCS) to begin accepting waste and to begin waste disposal activity under Radioactive Material License R04100.

The filing by the Sierra Club comes on the heels of a May 8, 2012 decision by a Texas State District Court judge that ordered the TCEQ to hold a contested case hearing on the WCS low-level radioactive waste disposal facility in Andrews County, Texas. (See LLW Forum News Flash titled, "State District Court Judge Orders Hearing on WCS Facility," May 9, 2012.) The ruling was issued after a hearing in a pending lawsuit by the Sierra Club which argues that the TCEQ licensed the facility without holding a required contested case hearing. (More information is attached)

The Compact and Compact Commission are authorized to enter in a compact with the policy of The law that created the Texas Low Level Radioactive Waste Disposal Compact, Public Law 105-236, effective September 20, 1998, sets out the Purpose of the Compact as follows:

“TEXAS LOW-LEVEL RADIOACTIVE WASTE DISPOSAL COMPACT “ARTICLE I. POLICY AND PURPOSE

“SEC. 1.01. The party states recognize a responsibility for each state to seek to manage low-level radioactive waste generated within its boundaries, pursuant to the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 U.S.C. 2021b–2021j). They also recognize that the United States Congress, by enacting the Act, has authorized and encouraged states to enter into compacts for the efficient management and disposal of low-level radioactive waste. It is the *policy of the party states to cooperate in the protection of the health, safety, and welfare of their citizens and the environment and to provide for and encourage the economical management and disposal of low-level radioactive waste. It is the purpose of this compact to provide the framework for such a cooperative effort; to promote the health, safety, and welfare of the citizens and the environment of the party states; to limit the number of facilities needed to effectively, efficiently, and economically manage low-level radioactive waste and to encourage the reduction thereof; and to distribute the costs, benefits, and obligations among the party states; all* in accordance with the terms of this compact.

The Commission should protect the economic interests of party states and act to prevent contamination, which is costing billions of dollars to remediate at other low-level radioactive waste facilities. The Compact Commission is clearly charged with protecting the health and safety of Texans. Preventing contamination is part of that responsibility. We urge the Compact Commission to adhere to the directives of the amended Radioactive Waste Policy Act and exercise caution in order to prevent health risks and unnecessary litigation.

Considering

- the fact that the purpose of the Compact that allows for the Compact Commission includes a policy of protection of the health, safety, and welfare of citizens and the environment;

- the presence of water at the Compact site;
- TCEQ's concern about water levels of four monitoring wells at the site;
- risks of spreading radioactive contamination through waterways and
- Judge Livingston's recent order that a contested case hearing should be held

the Compact Commission should halt consideration of imports of waste until all legal issues are resolved, until the contested case hearing has been held or a decision not to hold such a hearing has been made, and until TCEQ no longer has concerns about water levels in any monitoring well.

3. Assuming dry conditions at the site can be attained, the **Commission should set up policies for prioritizing imports before approving any applications, and take public input before approving these policies.**

As of this time, the Committee charged with developing these policies has not yet held a meeting, or at least any meeting for which the public has received proper notification.

It would be premature to make any decisions regarding approval of any import applications until an appropriate process has been determined for how each application is to be considered and until there is time for adequate public consideration and comment regarding the process itself.

We have several questions:

- Has your committee met to address process, and if so, when and where. How does an interested person get notified of the committee meetings? SEED Coalition has requested notification verbally and by an email to Compact Commissioners Dolgener and Salsman.
- Have you decided on any proposed process at this time?
- Have you developed any method of prioritizing or weighting applications?
- How will you determine which applicants receive which allocation of available space (cubic feet) or curie limits?
- Have any applicants already been given priority, and if so, on what basis?

SEED Coalition urges that Texas' and Vermont's waste be disposed of prior to making decisions on any radioactive waste imports. At minimum, an updated analysis of the disposal needs of Texas and Vermont must be conducted before decisions are made regarding imports, and there must be public disclosure of the amount of waste currently stored at the site and whether it will be buried there. This information is vital in order to ensure capacity.

The Commission has received applications for far more curies than the annual amount allowed under the license. The applications received thus far are approaching a total of 500,000 curies, which is nearly 13% of the entire licensed curie limit. It is well over the 220,000 curie limit established by SB 1504.

Clearly the Commission needs to develop a set of procedures that can determine how the available space and curies will be allocated. SEED is concerned about the lack of prioritization of disposal of waste from Texas and Vermont brokers and generators, which should come first in order to ensure that legal requirements are met, especially considering that the host state is to have “unlimited access” to the site.

4. The safety and availability of containers for shipping radioactive waste is of great concern. Since the Compact Commission is charged with protecting public health and safety, no imports should be approved until there is full information provided regarding the shipping casks that would be used and whether they meet safety standards.

Energy Solutions’ notified the Nuclear Regulatory Commission (NRC) on May 4, 2012 (Event Report 47895) of a regulatory compliance issue with the 10-160B Type B Casks and the 8-120B Type B Casks.

In part, the Event Report says: “As part of the relicensing of new 8-120B Casks, Energy Solutions identified a hypothetical accident scenario required by 10 CFR 71 which was not previously analyzed as part of the original or ongoing licensing activities. This analysis confirmed that the current cask design does not comply with the Type B package requirement for this specific accident scenario. The 10-160B has a similar design. As such, the casks have been placed out of service.”

Although the casks were discussed at an NRC meeting, it does not appear that any action has been taken yet. SEED Coalition recommends that the Compact Commission not approve any import applications until the extent of the defect and its impact on the availability of shipping containers has been determined.

Waste Control Specialists President Rod Baltzer posted on The Texas Solution, a WCS website, on April 16, 2012 a comment regarding “a nation-wide shipping cask shortage” that has affected the shipment of low level nuclear waste. (www.texassolutionblog.com) This comment was made prior to the May 4 NRC Event Report that announced that the Energy Solutions Type B casks were being removed from service. Energy Solutions claims to have the largest fleet of licensed casks in the nuclear industry. If their casks are not available, what does that leave? The Compact Commission should find out how many casks are available for shipping purposes prior to approving any import applications.

The safety of casks is of critical safety importance. Any casks that get used must be able to meet required accident scenario standards. The U.S. Department of Transportation reports that from 2007 – 2009, there were 39 accidents involving radioactive material. In 2002, two collisions occurred at the WIPP site in a single month.

Waste routes in Texas

Have preferred and alternate waste routes been officially designated by the Texas Department of State Health Services? While the designation of transportation routes is outside of the purview of the Compact Commission, the Commission should not make decisions regarding import applications until it is determined that routes are in place and that people along the route have been informed that radioactive waste may travel through their community.

Route designation is legally required of the state under the Texas Low-Level Radioactive Waste Disposal Compact Consent Act, PL 105-236. Section 4.04 (8) requires that Texas “(8) Identify and regulate, in accordance with federal and host state law, the means and routes of transportation of low- level radioactive waste in the host state.” There is no evidence online that routes have been established for Texas, so although 49 CFR Part 397.201 allows any person, State, political subdivision thereof, or Indian Tribe directly affected by a routing designation to apply for a preemption determination or to apply for a waiver of pre-emption regarding any routing in the state. However, it is doubtful that anyone in Texas would know if they are on the routes since they don’t seem to be publicly available, if they do exist. SEED Coalition called the Texas Department of Transportation to find out what information the agency had regarding routes but the agency contacts had never heard of routes for low-level radioactive waste.

Many Texas highways would likely be used for transportation of nuclear waste, which could include routes through New Mexico, Dallas-Ft. Worth, Abilene, Midland-Odessa, Amarillo and Lubbock, as well as other major Texas cities. Public Citizen’s Texas Office finds that there are 1414 schools, 142 hospitals and over 8 million people that live within 5 miles of the interstates that would likely be used as radioactive waste routes.

Emergency Preparedness

The Compact Commission should also inquire as to the readiness of emergency responders along transportation routes before making any decisions regarding importing radioactive waste, which would travel down our highways and railways. Many communities in Texas have only volunteer fire departments and it is unlikely that they would have Geiger counters and protective gear available or have adequate training to respond to an accident involving radioactive waste. In fact, there is still no full-time paid, professional fire department in the counties where South Texas Project and Comanche Peak reactors are located or in Andrews County, where the waste disposal facility is located and where there could be 400 shipments every year according to Waste Control Specialists.

TVA Specific Concerns

There are numerous specific reasons why this application should not be approved.

- The Compact facility should be prioritized for Texas’ and Vermont’s radioactive waste.
- The highly radioactive nature of waste in this application means that the curie counts are absolutely huge. The materials are very hot, being Class B and C radioactive waste. The

application is for 1,100 cubic feet of waste from Alabama including irradiated hardware – which can include control rod blades, local power range monitors, intermediate range monitors and tri-nuclear filters. The curie count for this waste alone is a whopping 200,000 curies.

- A second portion of the application appears to seek disposal for another 6,00 cubic feet of waste and 2000 curies for waste from Alabama and Tennessee, which would include dewatered bead and or powdex resins or filters, apparently from various TVA reactors, although this is not spelled out clearly in the application. TVA should provide information as to how much of the material is from each site and the nature of the material from each site. This is also very high level Class B & C waste.
- The import of Tennessee Valley Authority waste would use up nearly all of the first year's 220,000 curie limit. What processes are in place to determine which entity should receive priority? What impacts will this have on availability of the site for Texas and Vermont waste? The application states that Southeast Compact is allowing exports until another regional facility has been identified, but perhaps this highly radioactive waste should not be shipped across our highways and railways when it could in fact be held until a facility is made available nearby. This would minimize the risks of exposure and minimize potential liability for Texas.
- The Compact Commission should research the nature of the components to be imported. Control rod blades act as brakes for the control rods, which are classified as high-level waste. The Compact Commission should determine whether the control rod blades should be considered high-level waste as well. Are they part of the control rods?
- What shipping containers that are already approved by the NRC would be available and would be used to ship such high level waste?
- Tennessee Valley Authority is a federally owned corporation in the United States created by congressional charter in May 1933. It was designed to provide electricity generation, but also navigation, flood control, fertilizer manufacturing and economic development in the Tennessee Valley, which had been hard hit in the Great Depression. **As a federally owned corporation, it appears that the waste that TVA proposes to dispose of at the WCS site should go to the federal facility, as opposed to the Compact facility.**
- TVA owns and operates Browns Ferry (3 units), Sequoyah and Watts Bar nuclear power plants and it appears that the waste that would be imported would come from various units from these sites, but it is unclear from the application which waste would come from which specific site, and the application should be much more specific.
- At the Browns Ferry site in Alabama, all three reactors were scrammed due to a loss of external power on April 27, 2011 – caused by a nearby tornado. Due to grid damage and the shutdown of these reactors there were blackouts throughout the Southeastern US. A small oil leak was found on one generator. Due to these circumstances, the Compact Commission should carefully scrutinize the application and find out whether there are any problems with the materials that would lead to unusual circumstances or special considerations in handling, transport and disposal of the waste.
- TVA lists several unresolved violations, and although they note that these do not relate to the management, storage, handling, transportation or disposal of radioactive waste, they are nonetheless unresolved violations that should be thoroughly researched. In fact, these violations should be resolved before the Compact Commission makes any decision regarding the application to import waste to Texas. They discuss only recent violations

and further research into the history of TVA violations is prudent and warranted.

In conclusion, this application in particular should either be denied or a decision should be delayed due to the extremely high curie levels of the waste, the fact that it would take up nearly all of the curie allocation for the first year and due to TVA's ongoing violations. Research should be conducted as to whether the waste should rightfully go to the federal facility as opposed to the Compact facility, and whether it might best be left in place until another Southeast Compact facility becomes available. Analysis should also be sought regarding whether the control rod blades are in fact close enough to the control rods to be considered high-level waste.

The Compact Commission should place a moratorium on this and other decisions regarding import applications until there are clear answers to these many unresolved questions, legal issues, and environmental, and health and safety issues.

There is a question of how Texas will keep its legally mandated "unlimited access" if the non-party imports are approved. There is a strong likelihood of a contested case hearing before the State Office of Administrative Hearings that could challenge the Compact facility's license, and decisions should not be made until the hearing is completed. There are huge issues remaining about water at the site that could lead to contamination risks.

Applications for import should not be approved until pumping of wells that have water at the site is shown to be successful and the site is dry enough to meet license requirements. Again, **if the Compact Commission should decide to go ahead at this time and make decisions regarding import applications, there should at least be a statement included in any approval that no shipments shall be initiated until the Compact Site monitoring wells currently of concern no longer show water.**

Procedures should be put in place for how each application will be considered and how to address the allocation of a limited amount of space to competing users. Texas and Vermont waste should be prioritized and in order to make sure that the party state needs are actually met, decisions regarding nonparty applications should not be made until existing Texas and Vermont waste, including reactor heads and steam generators stored onsite now, is disposed of at the site, along with waste currently stored at the WCS site, unless it is to be shipped elsewhere in the near future.

The Compact Commission should first adopt formal procedures, with public comment and input, concerning how import applications will be handled at Compact Commission meetings, particularly those that involve large volumes of waste or high levels of radioactivity, and how various applications will be prioritized.

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