

Texas Radiation Online

Position Statement for the 78th Texas State Legislature

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78th Texas State Legislature Position Statement:

- 1. Texas nuclear power plants present four problems for the State.
Switching to the alternatives will solve this dilemma and generate State revenue.**

Nuclear power plants are a security liability which tempt terrorists to target spent fuel ponds and compromise reactor stability, both of which would release huge amounts of radioactivity into the atmosphere and endanger neighboring communities for many miles. For Comanche Peak, the NRC estimated that in the event of an meltdown, an initial 1,200 dead, 14,000 injured, 4,800 additional cancer deaths and \$117 billion in damages - all within 25 miles just for each reactor (there are two reactors at each plant). For South Texas Project, it was estimated that an initial 18,000 deaths, 10,000 injuries, 4,000 cancer deaths and \$112 billion in damages would occur. And it gets worse.

The study, known as CRAC-2, was developed at Sandia Labs, and later published by Congress in 1982. The numbers are based on 1982 population data and 1982 dollars. These figures are just for a single reactor at the plant, and also do not account for radioactivity spread downwind outside of the 30-mile study radius. It did not take into account several serious factors which make matters even more grim. An accident can spread to the spent fuel pools, and the authors of the Reactor Safety Study had concluded that changing some of the criteria for data gathering would actually increase the number of these early fatalities by a factor of 3 to 4 depending upon circumstances [NUREG-0340]. The most recent estimate for an attack upon on-site spent fuel at US plants has concluded that burning spent fuel would spread contamination across an area anywhere from 8 to 70 times larger than the 1986 meltdown of Chernobyl. We suggest that this on-site spent fuel should be fortified in concrete bunkers able to withstand terrorist attacks including large aircraft.

The CRAC-2 model is acknowledged by its authors to also have uncertainties in its meteorological modeling capability. Since the CRAC-2 model considers only one year's worth of data and does not model precipitation frequency beyond a distance of 30 miles from the reactor, the model cannot adequately characterize the frequency of precipitation events or range of fallout. The study also predicts deaths due to radiation exposure occurring within only one year of the accident, although fatalities would continue over hundreds, possibly thousands of years. Fatalities in the populace directly exposed to the accident will take place over a long period of time, for some decades to occur. Genetic aberrations including their reproductive synergisms, leads to many of the hundreds or thousands of years over which fatalities will occur.

Also, the evacuation model for CRAC-2 does not account for actual site conditions such as bottlenecks and terrain barriers which can cause major evacuation routes to overlap the area likely to be covered by the plume once a release of radioactivity occurs. Economic costs not included in CRAC-2 are: the cost of providing health care to the affected population; all onsite costs; litigation costs; direct costs of health effects; and indirect costs. Price Anderson, a trillion-dollar government-funded subsidy to reduce accident liability for companies that own nuclear power plants, is a 1957 amendment to the Atomic Energy Act and provides \$8 billion in coverage for a given accident. The costs of Chernobyl have been estimated above \$350 billion, and the Texas reactors were again estimated in the CRAC-2 study to require between \$112-117 billion each. (both plants have two reactors, and onsite spent fuel storage was not factored in). The taxpayer's liability under Price Anderson is significant, and shows \$8 billion to be a small contribution. Plus, due to the existence of Price Anderson, insurance providers refuse to cover damages sustained in the event of a nuclear accident.

These power plants have inflated customer bills to pay for cost overruns in plant construction amounting to tens of billions of dollars each. Municipal utility partners are forced to devote larger percentages of their revenue than the percentage of power they own or receive from these plants- Austin, for example, owns 16% of South Texas Project, and about 40% of the customer's bill is allocated for the plant, with a dedicated annual budget for the plant over \$186 million. This is lost revenue from our city budgets, and during our State budget crisis, we simply can't afford it.

Texas' nuclear power plants also generate huge volumes of radioactive waste which the State is expected to manage - 96% of the radioactive waste in Texas originates at these plants. Texas waste also makes up the majority of the waste designated in the Texas Compact. Transporting radioactive waste around is also risky business (more on radioactive waste is covered in a later point).

Lastly, these plants have been plagued with safety and construction problems since before they were opened. Just last year, Comanche Peak had to be shut down again to address yet another unaddressed mechanical failure. There have been some very close calls at both of these plants, where Texas was extremely lucky they didn't suffer a meltdown. In recent years, the plant has been using hotter fuel than the plant was designed for. This "higher burnup" fuel caused control rods to warp and stick in place. These control rods are what protect us from a meltdown of the reactor, and this sort of irresponsibility may accomplish a terrorist's task without one even making an effort. Just recently, coolant leaks at Comanche Peak also revealed boric acid spills which recently forced the emergency shutdown of the Davis Besse plant in Ohio when they found a gaping hole in the reactor vessel. The Davis Besse corrosion left between 1/8th and 1/16th of an inch of metal holding in the reactor vessel contents- 2000 lbs-per-square-inch of pressurized radioactive coolant - from breaching. In comparison with Davis Besse, Comanche Peak's acid leak was small, but it is only the latest in a long history of problems.

A solution to these problems is available, and can actually generate State revenue and regional capital rather than impede it. Wind power has clearly demonstrated to be a clean reliable solution to power generation. The King Mountain wind project in McCamey, Texas generates 278 megawatts, and with the addition of the other McCamey area projects of Desert Sky and Woodward Mountain, a total of 598.4 megawatts comes out of the McCamey area alone. 10 Texas counties currently have an

installed capacity of 1,103 Megawatts in wind generation, with a taxable value of \$777 million, and over \$10 million in property tax payments to local school districts - in addition to \$2.5 million in landowner royalty income, and over 2500 jobs. By extending the power distribution grid to supply the major metropolitan areas, and increasing the installed capacity of these and other Texas counties, we can shut down the nuclear power plants and turn power generation from a liability to a means of rebuilding the state economy. We encourage our lawmakers to make this switch, and do whatever is necessary to force nuclear plant operating companies to pay for decommissioning and clean up their mess as they are obligated to do without taxpayer monies.

2. Texas Waste Issues:

Private entities must remain prohibited from being licensed for radioactive waste disposal.

WCS, for example, has expressed that the amounts of waste from Texas and the Texas Compact would not be sufficiently lucrative for them to operate a disposal site in Texas. Senator Cornyn stated as Attorney General that in a scenario that a private company becomes licensed for disposal, there would be no constitutionally-compatible law Texas could pass to limit the amount of imported waste the company brings in. The Department of Energy (DOE) estimates that it will have over 249 million cubic feet of low-level waste slated for disposal for the decade of 2000-2010 alone. This amounts to 92 times the amount of waste which would arrive to Texas over a 35-year period in the Texas Compact, and now even a greater multiple since Maine has now exited the Compact. At the current rate of generation, the DOE figure amounts to 441 times what Texas disposes of in a ten-year period.

3. Texas Waste Issues:

Waste generated in Texas does not require a dedicated disposal facility

Out of a total of 64 radioactive licenses, 45 generate waste and 52 store waste. Nuclear power plants and the WCS facility in Andrews account for the overwhelming majority in both generation and storage. The remaining amount from industrial and medical institutions not only accumulates over large periods of time but mostly decays to a level which does not require licensed radioactive disposal. The Sierra Club outlined this in their report with data and interviews of radiation safety officers in the field, and we also keep a close eye on the data with our own count. Aside from our power plants and brokers such as WCS, radioactive waste disposal is simply not a problem in this State, and does require a dedicated disposal facility. We respectfully want to refer any further questions on in-State generation and storage to the Sierra Club, since they brought the initial analysis to the table.

4. Texas Waste Issues:

A waste disposal facility promises an enormous liability to the State of Texas.

Texas law currently states that any disposal facility built in Texas would become the property of the State once closed, and that the title is required to be transferred over. While not a disposal facility, the recent events surrounding GNI (Gulf Nuclear of Louisiana) demonstrated the cost forced upon

the State and Federal government when corporate responsibility is absent. The cleanup costs of these two buildings was estimated at \$9.6 million- a “drop in the bucket” compared to the liability a waste dump promises to burden our budget with. Our state should not be placing itself in the position of bailing companies out of their responsibility like this when we have a budget deficit amounting to billions of dollars.

Every single “low-level radioactive waste dump ever build has leaked. The lessons of the past can be found at these national sites: radionuclide migration, contaminated groundwater; but also companies attempting to force the host State to inherit the mess after closing the site and escaping liability with the profits.

5. Texas Waste Issues:

The Texas Compact Should Not Be Renewed.

Texas should back out and escape the extra liabilities a Compact dump promises.

First and foremost, new States should be prohibited from addition to the Texas Compact agreement. Maine dropped out of the Compact in 2002, and took with it the majority percentage of the non-Texas waste in the Compact states. Vermont’s yearly percentage is, in fact, miniscule in comparison to that of Texas. At first glance, it may appear that this could be characterized as a opportunity for Texas- until we read the section of the Compact Act regarding the penalties which are to be weighed upon the shoulders of the host state (Texas) once a disposal facility has been designated and opened. If Texas withdraws from the compact after a compact disposal site starts receiving waste, Texas will be obligated under law to take waste from the Compact (including any extra States added to the Compact) for 5 years without receiving any financial reimbursements. Waste from the Vermont will increase dramatically during the decommissioning of their power plant, the Vermont Yankee.

The Compact system has received harsh criticism over the past few years. NRC commissioner Greta Dicus commented that “the compact system in the United States does not work, has never worked, and probably never will work.” Dr. Greg Hayden, the Nebraska Commissioner for the Central Compact Commission, has also observed that “the only driver for new sites has been the compact law, not demand,” and added, “new Compact sites are neither needed nor would they be economically viable.”

This year, US Congress will review the Texas Compact, and either renew the contract or dissolve it. Creating a waste dump for this contract would place Texas in unnecessary financial risk when, in fact, the contract could be dissolved for lack of fiscal conservatism.

6. Texas Waste Issues:

WCS’s Andrews County site is unsuitable for the current radioactive materials license.

Returning to the issue of the vast amounts of DOE waste in contrast with Texas and Texas Compact disposal, we come to the subject of Waste Control Specialists LLC. WCS and Andrews County lobbyists (who in the 1980s attempted to bring to Texas what is now the high level waste dump at Yucca Mountain) have expressed that counties, stakeholders, specifically entities outside of

Andrews County should not be allowed to play a decision-making role in regarding radioactive waste disposal in that County. WCS consistently dictates regulatory policy to our State regulators and Federal agencies. WCS has aggressively lobbied with billions of dollars of campaign contributions, lobbyists, and have even gotten their constituent House and Senate members in Austin and Washington to participate in such activities as pressuring the DOE with letter-writing campaigns to make decisions which would favor WCS in the goal of the disposal of DOE wastes. WCS was even successful in getting its paid-off constituent US Senators to block the nomination of a DOE official who opposed WCS's aggressive strategies and upheld federal law. In its lawsuit against the DOE, WCS was attempting to uphold a proposed strategy to obtain a federal license to evade State law and achieve their aims.

The presence of the Ogallala onsite is not only confirmed in an extensive geological survey which was done by AM Environmental/Terra Dynamics as part of a TNRCC application in 1993 for RCRA disposal- the Texas Water Development Board oversees 4 State-owned wells surrounding the property which it have been determined to be tapped into the Ogallala. It was also determined by Terra Dynamics that there is a 100-year flood plain present in the middle of the licensed property. USGS also concurs the existence of the Ogallala in the region.

In response to this incriminating data, and in a further attempt to secure a processing license, WCS wrote up a report claiming that the Ogallala has been misclassified by every extensive study and analysis ever done and claimed that it is in fact part of the Antler Formation (Antler Sandstone)- a ridiculous claim as the Antler Formation resides over 350 miles away in northeast Texas and eastern Oklahoma. In this short report, WCS also refutes the evidence of a 100-year flood plain. The approximately 20-page report contains no hard evidence or scientific study, and while referring consistently to the Terra Dynamics Survey, it just as consistently refutes the study's findings - suggesting that the word "Ogallala" be replaced with Antler sandstone, and that the 100-year flood plain is non-existent. Although WCS denies the presence of the Ogallala, it has stated that even if the Ogallala is present, a layer of "impenetrable" clay exists which would prevent leakage. This same statement was made of the Pantex facility, which leaked toxic material into the Ogallala within 50 years.

WCS named the tiny report "Environmental Assessment," suggesting that the Bureau's obligation to regulate the company (and perform an authentic environmental assessment) was unnecessary. Government officials, including AG Morales' office repeatedly have pointed out that WCS attempts to dictate regulatory policy to both State and Federal agencies, and this is yet another example. Despite there being absolutely no scientific evidence in the report to support its unrealistic claims, the TDH Bureau of Radiation Control did not make an inquiry on the subject. The Bureau didn't even perform an Environmental Assessment of their own- yet it is their duty to determine whether site suitability criteria are met by WCS. Both the Bureau and WCS are liable for violations of several parts in TAC § 289.254 in this matter (WCS for knowingly submitting a phony site characterization, and BRC for extreme negligence in their regulatory responsibilities by not verifying WCS's unscientific claims). We submit they should be disqualified for licensing consideration in the future, with WCS's historical behavior as justification.

WCS's site is also in a very seismically active region, which has never been the subject of regulatory discussion, although it is legally to be a consideration of siting criteria. Another unaddressed issue

of the site is that Monument Draw, a feeder to the Lower Colorado River, is within 8 miles of the Andrews facility. Technically, the site resides in the Rio Grande river basin, yet is closer and poses more of a contamination risk to the Colorado river. These two issues were never the topic of discussion in licensing considerations.

During the 77th legislative session, WCS lobbyist Lloyd Eisenrich told the House Environmental Regulation Committee that “we know what is under our land better than anyone,” which has been repeatedly proved to not be the case, as every review of Andrews for a disposal facility has found the Ogallala and disqualified the siting. In one example, the Texas Low Level Radioactive Waste Disposal Authority, (who initially stated the Ogallala would probably disqualify a siting in Andrews), was challenged by the Andrews Industrial Foundation to go to Andrews and make a direct determination. They did a study, found the Ogallala, and disqualified the area. Senator Teel Bivins actually lied on the floor of the Senate during the passage of the Senate bill, declaring that there is no Ogallala under Andrews.

Returning to the Environmental Regulation Committee, Eisenrich continued that they “did not care” for people outside of Andrews County making this part of the national debate on nuclear power. This statement ignores that most of the discussion in regards to WCS by those opposed to the Andrews disposal siting have been directed to this as a State issue, and from a standpoint of concerned neighbors with health and environmental concerns. Andrews County is not an island, and it affects its neighbors. For example, we have zoning laws which prohibit various activities so that they do not lower property values in our neighborhoods. The majority of the opposing views take a similar view- Andrews shares the area with its neighbors, and WCS is unable to complain about that fact. The issue of WCS has never been a debate on nuclear power directly, and the only national points that have been made are the facts that WCS is attempting to bring national DOE waste to dump in Texas on a site which is incidentally on top of an aquifer which ranges almost to Canada. Those are the unavoidable national aspects to this issue.

7. Texas Waste Issues: National Waste Transportation Through Texas.

For several years, shipments of the DOE’s transuranic waste have started to be shipped to Waste Isolation Pilot Project near Albuquerque New Mexico for disposal. So far, this has been what is called “contact handled” transuranic waste which means the waste can be handled by personnel in protective clothing. Very soon, remote-handled transuranic waste is scheduled to follow, which is more characteristic of high-level waste and is so hot it must be handled by remote machinery. In the past year alone, there have been 2 accidents involving WIPP shipments. The rate of the shipments has been increasing, and as the number of projected accidents increases proportionally with the number of shipments, they will also happen more often as the rate increases. Despite the assurance of satellite tracking of this cargo, at least one WIPP shipment managed to stray off of its route and onto undesignated highways for several hours before it was noticed directed back to its proper route. The satellite system (SATCOM) worked, but no one was paying attention. When opened, Yucca Mountain will add high-level waste transports over our highways. There has been massive documentation on the problems of high-level waste transportation, most notably a report from PIRG and a report from the Nevada Governors office. Texas first responders, like many

around the nation, are not trained to handle accidents of the nature that the NRC and DOE have projected.

Rather than focus on simply calling for training, we would challenge our representatives to stand up and join State Government Coalitions which oppose the Yucca Mountain plan altogether.

Aside from any environmental flaws, there are two issues which we feel justify such motions: one consists of the various transportation risks including possible terrorist attack, and the other being the fact that Yucca Mountain itself will not solve the spent fuel problem. All of the transportation vessels are vulnerable to a shoulder-fired missile attack. In Texas and other States, more spent fuel will remain at the nuclear power plants than currently exists. Again, we believe that this on-site spent fuel should be fortified in concrete bunkers able to withstand terrorist attacks such as large aircraft, and placing this sort of armoring on transport vehicles would immobilize the vehicles.

8. Texas Waste Issues: The Assured Isolation Concept Should Not Be Taken Seriously

Assured isolation is a concept of waste management which proposes the interim storage of waste at a site which will 300-500 hundred years later either be emptied and decommissioned, or be formally converted into a disposal facility. In this manner, the disposition of the waste is postponed, and supposedly, so is the fate of the site to become a declared dump. This fork in the road is a fundamental defining characteristic of assured isolation, and each possibility is supposedly given equal consideration, funding, and planning.

Another fundamental characteristic of an assured isolation facility is that some basic monitoring of the waste is to be mandated, which is not required at a Part 61 disposal facility. It is for this reason that any monitoring whatsoever is misleadingly referred to as "enhanced monitoring." In actuality, there's absolutely nothing enhanced to speak of, and what has been proposed is a simple system of cameras and dosimeters. In addition, external monitoring of the facility is casually dismissed by planners as being unnecessary. This same attitude is reflected when it comes to the site selection criteria- the environmental requirements for a dumpsite are repeatedly declared to be too strict to be applied to an assured isolation facility.

The assured isolation concept originated with a public relations motive when it was first presented in the 1995 Radwaste Magazine article "Assured Storage Facilities: A New Perspective on LLW Management," written by William L. Newberry, David H. Leroy, and Thomas Kerr. Referring to the LLRWPA, it says, "states assumed responsibility for disposal of radioactive waste just as public cynicism toward government initiatives and skepticism about the safety of nuclear technologies were both reaching a high plateau. The renewed efforts of states to develop new disposal sites have taken place against the political backdrop of Chernobyl, Three Mile Island, nuclear disarmament, and toxic waste horror stories."

The article complains that "regardless of their engineered features, the planned structures for housing waste are still commonly referred to as dumps. The popular image remains that of sanitary landfills for radioactive waste, complete with tipping fees, wheeling seagulls and occasional scavengers." It also states, "like a child's chinese finger puzzle that tightens its grip as the victim tries harder to

extricate himself, the more vigorously states attempt to site new disposal facilities, the more strident, vocal, and effective the opposition becomes.”

“We suggest replacing the objective of permanent disposal with one that may be realistic and politically palatable.” After the article was published, the name “assured storage” was itself judged to not be sufficiently “politically palatable” (it still implied “disposal” too much) for planners so it was changed to “assured isolation”.

Assured storage was said to be a facility built with a 100-year deferred disposition. Although the facility was not required to be designed to disposal facility specifications or siting regulation, it was proposed to be backfilled with sand when converted into a permanent dump, like any other Part 61 disposal facility. Active monitoring was to consist of simple inspection walkways, cameras, and dosimetry in floor drains. The decommissioning option for the hypothetical site is not discussed at any length.

Here are ten reasons why assured isolation is a bad idea:

1. There is no guarantee that an assured isolation facility would ever be considered for decommissioning. Most, if not all literature written on assured isolation stresses the option to convert the facility to a disposal site, and even sometimes presents this as a goal. It is a reasonable assumption that facility will likely be converted to a disposal site.
2. Planners have presumed there will be no error over centuries in both the internal monitoring system, or the containment of waste, and regularly proclaim this to justify loose environmental regulation and siting criteria.
3. The TCEQ (TNRCC) study says reduced external environmental monitoring is justified, and that environmental impact projections need not be prepared. Department of Energy has downplayed the need for an environmental report required by federal law for the preparation of an Environmental Impact Statement.
4. Regulations for assured isolation do not yet exist in either federal or state law, and no federal agency provides a formal definition. As an “agreement state,” Texas models its radioactive material laws on the federal laws, such as the Atomic Energy Act. This process does not operate in reverse.
5. Assured isolation legislation in Texas has repeatedly misdefined assured isolation, and has failed to outline key points of the concept. A primary example is the extensive outline of the use of funds to convert the facility to a disposal site, and no mention whatsoever on how a decommissioning fund is to be implemented. For this reason it must be concluded that what Texas legislation has outlined would not be considered assured isolation if put into practice, and suggests that point one (about no intent to decommission) is reiterated.
6. For reasons stated in numbers 4 and 6, there is a possibility that the DOE may legally have to regulate such a site, which would exclude State oversight at the facility.

7. If Texas issues an assured isolation facility license to a company such as WCS, there is a high probability that WCS will return to the DOE with a proposal as it had done in 1996 (which began the WCS vs. DOE lawsuit). Since federal authorities admit some confusion as to whether assured isolation is to be considered "disposal" or "storage," WCS will likely claim that it is admissible as a disposal license required by the DOE to qualify for disposal proposals and contracts.

8. Assured isolation does not satisfy the Texas Compact's requirement for waste disposal. This is a matter of State record.

9. All assured isolation proposals are riddled with contradictions among themselves. In the TCEQ (TNRCC) document, it admits that "because AI incorporates active monitoring and maintenance during the service life of the facility (approximately 300 years), there may be greater potential for employee exposure or on-site accidents than at a disposal facility which operates for a few decades before closure and post-closure."

In the DOE's outline, it says that active monitoring makes an emergency plan to handle such accidents "unnecessary and inappropriate ... regardless of projected accident doses". DOE first states that emergency procedures for disposal facilities are too strict for an assured isolation facility, and proposes downgraded procedures outlined for an 11(e)2 dump, but later concludes by saying "a requirement to prepare an Emergency Plan, regardless of projected accident doses from the assured isolation facility, appears to be unnecessary and inappropriate". This sort of contradiction is not unusual for assured isolation literature.

10. Assured isolation was openly designed to evade public and stakeholder perceptions by claiming to not be a disposal site. The planners said in the original proposal that it was a plan that was primarily designed to mislead the public- they spent the entire introduction discussing how it would deal with the public perception problem faced with siting waste dumps. Any pursuit of this option must be interpreted as an extension of that intent. Monitored aboveground retrievable storage may be the solution for Texas waste, but assured isolation is far from filling the prescription.

9. Pantex: a State and National Security Liability

By the latter part of the Cold War, residents of Amarillo and around the Pantex facility had a outspoken awareness that the area may be the target for a nuclear attack by the former Soviet Union. This was logical, being home to the primary assembly plant for the entire US nuclear weapons stockpile. It was afterward that the site had been additionally designated as the primary plutonium storage facility of the DOE complex.

Terrorist organizations such as Al-Qaeda have directly stated that nuclear power plants are targets of planned attacks. Sites such as Pantex and Savannah River which are known to house large amounts of plutonium are obviously also seen by such organizations as prime targets for attack. Over 60 tons of plutonium, in the form it is stored at Pantex, are highly unstable, in form of 12,000+ "pits" which are kept in substandard containers, and in buildings which have already been strongly criticized for not containing leaks or being sufficiently armored.

The groundwater at Pantex has already been contaminated with TNT from the days when the plant made conventional weapons. The geology was said to be able to contain such materials, due to its “impermeable” red bed clay- the same “impermeable clay” which is presented as a natural barrier at WCS’s Andrews site. It took 50 years for toxic chemicals to penetrate this “impermeable” barrier and seep into the Ogallala aquifer, which ranges across the center of the United States. Again, it must be pointed out: what is the meaning of national security if we poison our water supply?

Our position is one in opposition to increasing the risk of a nuclear war, for which we support unilateral nonproliferation and disarmament. Even now, the United States nuclear weapons arsenal is still sufficient to bomb every major city in the world several times. The latest treaty with Russia regarding disarmament hardly required any measurable reduction of this arsenal, as the affected weapons to be merely placed in “reserve” storage without dismantling.

Pantex’s mission is moving towards an increased production trend. US commercial plants have been ordered to produce more plutonium and tritium for the nuclear weapons stockpile by the Bush Administration. The federal government in its Nuclear Posture Review underscored the development of more new nuclear weapons in the coming years. All signals point to more activity at Pantex rather than a phasing-out, nonproliferation schema. It is unknown what effect an assault of this complex will have on the State of Texas, the Ogallala, or the United States in terms of health.

10. Focusing Instead On Cleanup

From 1953 up to the mid-1990s, many counties in south Texas were used for mining and milling uranium. The companies that performed these operations left an unanswered legacy of pollution in the region. At some sites, cleanup was undertaken by the Department of Energy, but they themselves officially declined to address the massive aquifer pollution left behind. Some of these aquifers are connected to the Gulf of Mexico. Many were sole source aquifers in such areas as Karnes County. Lake Corpus Christi, which supplies water to the Corpus Christi area, was contaminated by the nearby Mt. Lucas site.

The DOE method of cleanup was to gather up the uranium tailings and contaminated soil into a flattened pile, which was then covered with clay, minimal topsoil, and the site was then declared to be cleaned up for long-term stewardship. Sites without DOE coverage were often left mostly as-is, with a tiny onsite marker or plaque. In those days, the Texas Department of Health was extremely relaxed in regulation of these sites, and as it sometimes does, the Bureau of Radiation Control simply took the word of the company that it had performed the minimal cleanup required. A similar lackadaisical attitude of the Bureau toward its regulatory duties was also apparent by the absence of any criticism of site suitability claims in WCS’s application for a radioactive materials license for the Andrews County facility. It was again seen in the case of GNI in Houston, when regulators neglected to properly investigate what the license-holder was doing until it was too late, and the \$9.6 million mess was discovered.

Instead of licensing new sites such as radioactive waste facilities so that they may be given the opportunity to further pollute the State, we need to be focusing on real cleanup, and face that

difficult task. Instead of building a waste dump for this waste, it should be sent to one of the decommissioned power plants to be monitored with the rest of the plant. We say one specifically due to the fact that both power plants reside above aquifers, and for that reason, supporting the idea itself is out of complete reluctance. We recommend Comanche Peak, as it is not on the coast and is thus at less risk of hurricanes or rising sea levels threatening the isolation of the waste.

Whereas we do not believe that the plant vicinity should be seen as a “sacrifice zone” for waste, consolidation inside the building interior for monitoring with the radioactive innards of the plant does seem to be the least damaging alternative, which we consider to be a fairly large compromise. These plants should never have been built where they are in the first place, and hundreds of thousands of Texans have been opposed these plants even being constructed. Since they will remain radioactive for the term of the other small amounts of radioactive wastes Texas generates for disposal, and are somewhat more contained than a disposal facility would be, it just makes sense to do so instead of tearing the plant down and moving that larger amount of waste from debris to contaminate a cleaner location. In addition, a monitored retrievable storage solution inside of a plant could have a much more “robust” multi-layered dosimetric buffering mechanism built below the waste, yet a few meters above the already reinforced concrete floor.

Our position in regards to this and our other points on waste disposal is simple- decommission the power plants, and then we will be willing to discuss the possibility of a Texas waste dump.

In Closing- Summary

In this document, several means have been presented that would bring money into the State budget rather than divert it away.

Decommissioning our power plants would free up billions of dollars per year to our city budgets, while expanding the power grid and supporting wind generation would replace those megawatts at a tiny fraction of the cost without the nuclear liability- the alternative is proven for developing surplus revenue and capital in a way which is good for the environment. Building upon and exceeding the renewable portfolio standard is a reasonable challenge for Texas, and we are in a position to do it right and do it big. Don't pass up what this energy boom promises - not only the gains it offers through its development, but also all of the freed up revenue we as Texans can take back by decommissioning the nuclear power plants. Texans need economic relief, and this will contribute significantly.

Texas could land in big trouble if it builds a dump for the Texas Compact. The 5-year liability promised for backing out once a site accepts waste on its behalf is enormous. With Maine out of the Compact, and with the contract up for review this year in US Congress, our State should do whatever it can to get out of this outdated federal stranglehold, and certainly call for a nullification. We shouldn't allow other States to enter in unless we intend to put a noose over our neck even more enthusiastically. Our State shouldn't knuckle under and build a dumpsite when the contract could conceivably be repealed this year. We also don't require a dumpsite dedicated for the State's radioactive waste, and that excuse has been thoroughly debunked. The vast majority of Texas waste that needs disposal comes from our nuclear power plants, and decommissioning them will solve the perceived waste dilemma.

WCS is a company known for its shady reputation, and the Andrews facility is up for a thorough license review. The site geology at Andrews is unsuitable, and our packet demonstrates the detail of the ignored studies of that site the TDH chose to ignore. WCS consistently push their license to its limits with monthly amendment requests and other aggressive activity to get away with anything they can legally. For example, they are engaging in false advertising targeted at their DOE clients about being able to store “remote handled TRU” when they’ve merely obtained what is considered greater-than-class C americium from the GNI plant in Houston (TRU is a DOE-specific category). Recently, they also announced demonstration of GeoMelt waste vitrification methods when they had yet to be licensed for any vitrification. Several times in the past, they have advertised to clients that they are able to do things they aren’t unlicensed for, and sent the client to pester the Bureau of Radiation Control about it. The history speaks for itself, and it goes on and on.

WCS has been selling itself as a cheap disposal alternative to licensed radioactive materials disposal sites. They advertise obtaining materials exemptions under 10 CFR 40.13(a) [for Texas see 25 TAC § 285.251(c)(1)] to dump radioactive waste into their RCRA hazardous waste pit. DOD and DOE clients are known to dilute waste to qualify for such exemptions. Upon investigation, it has been determined that neither the Bureau of Radiation Control or the TCEQ has been monitoring what has been disposed in this manner at WCS, or volumes/concentrations of radioactive constituents (when asked, both agencies merely point a finger at the other and say “we thought they were talking care of those records- we don’t know what’s in there”). Just counting the small amounts mentioned in documents available at the NRC website, we can determine that there are several hundred thousand cubic feet of waste disposed at this time. The TCEQ and BRC have stated they have no intention to retrieve this data from WCS’s files at the Andrews facility, so currently, there is no public record of what they are doing onsite for the most notable business activity of the company. This past year, WCS presented legislation which would further deregulate the exemption process. To consider this type of legislation in context would require a review of this current activity at WCS, which is unavailable.

In addition, reviewing material which qualifies for exemption under TAC § 289.254(ggg), there are several radioisotopes listed as being short-lived, yet transform into isotopes which decay for periods of geologic time. The isotopes listed are permitted to be disposed of in municipal landfills at certain concentrations. These include:

Cd-115m ----> 44.6 days ----> In-115 ----> 5.1 +E15 years

Indium 115 - Direct daughter product of Cadmium-115m, has a 5,100,000,000,000 year half life.

Nd-147 ----> 10.98 days ----> Pm-147 ----> 2.6234 years ----> Sm-147 ----> 1.06 +E11 years

Samarium-147 - Secondary daughter product of Neodymium, has a 106,000,000,000,000 year half life.

Both Molybdenum-99 and Technetium-99m are listed as separate isotopes in the list share the same decay chain and long lived- daughter product.

Mo-99 ----> 66 hours ----> Tc-99m ----> 6.02 hours ----> Tc-99 ----> 2.13 +E5 years

Tc-99m ----> 6.02 hours ----> Tc-99 ----> 2.13 +E5 years

Technetium has a half life of 213,000 years

Te-129 ----> 69.6 minutes ----> I-129 ----> 1.57 +E7 years

Tellurium-129 decays to Iodine 129 with a half life of 15,700,000 years

I-123 ----> 13.2 hours ----> Te-123m ----> 119.7 days ----> Te-123 1 +E13 years
Iodine-123 decays to Tellurium-123, which has a half life of 10,000,000,000,000 years

Prohibition of a private disposal facility finds every explanation in the case of Valhi's WCS, and should stay in place. WCS has said that they will not profit from compact waste alone, and consistently demand access to the huge volumes of DOE waste. Texas law states that when they make the profits and close the site, the State of Texas is obligated to inherit the liability. In 1999, John Cornyn told us as Comptroller that there would be no way to pass laws on limiting a private company's intake of waste without violating the Commerce clause of the Constitution, with or without the Compact.

For just FY's 2000-2010, the DOE has estimated nearly 250 million cubic feet for its own disposal. This is 92 times the 35-year total disposal capacity of the Texas Compact, and 441 times what Texas would be expected to dispose in a decade at current reported amounts. For scale, the DOE newsletter *EM Progress* has just reported that 2.3 million cubic feet of waste was disposed of at the Nevada Test Site in 2002, and said that amount was equal to a football field 4 stories high. 2.7 million cubic feet was estimated for the Texas Compact members. This estimate includes waste from Maine, but not waste that commissioners may allow into the dump from outside the Compact's State borders (referred to as the "Compact Loophole"). 249 million cubic feet of DOE waste FY 2000-2010 equals 434 football fields stacked 1 story high each of radioactive waste could fall under the responsibility of the State of Texas when the private company liquidates, and this is in a best-case-scenario where the site would be open for disposal for a ten-year period. [249,736,799 cu ft / 2,300,000 cu ft = 108.58 x 4 football fields= 434.32 football fields]

The concept of assured isolation is presented as an alternative, yet was openly and intentionally designed to deceive stakeholders and is not right for Texas. Our ten points discussed its flaws in intention, planning, and implementation. If a site is going to be a disposal facility it should be merely called that, and the relaxed siting criteria and monitoring inherent in existent definitions of assured isolation characterize it as something that the State of Texas should not spend money reviving from an early grave. Our ten points on assured isolation's problems cover the concept from many different angles.

As far as security over radioactive materials is concerned, and the sensationalized danger of a dirty bomb, Texas needs to do what it can to get Pantex, the nuclear power plants, and these radioactive waste transportation routes removed from the State. If homeland security is going to start anywhere, this would be place. Texas itself is a prime target for terrorist attack, as President Bush calls this home. Nuclear reactors with on-site spent fuel have been repeatedly mentioned by Al-Qaeda to be targets for attack. Consequences of an accident by just the NRC CRAC-2 study (even with its shortfalls) are devastating. Pantex was a prime target of the Soviets and would typically be a target of terrorist attack as well. Texas should at the very least be receiving significant extra federal revenue for putting itself at such risk at this time, perhaps based upon the federal coded alert schema. It is certainly more preferable to remove what amounts to over 12,000 plutonium weapons pits from our border and not have to worry about it leaking further or being blown up. Until then, sufficient armoring needs to be placed on all of these sites, and will cost the taxpayers millions just to

accomplish that task. TXU probably isn't too enthusiastic about volunteering to spend these millions out of their own accounts to pay for this necessary task- millions that they would eventually charge the ratepayer.

We should be focusing on cleanup rather than creating what will later turn into new radioactive superfund sites. South Texas uranium mining areas has never been fully remediated, and remain an unaddressed polluted legacy. What meaning does national security have when we pollute our own groundwater with radioisotopes? Does it have meaning when we put the State at risk for the radioactive fallout which would dwarf the effects of any Al-Qaeda dirty bomb? These are serious questions we should address during these times of heightened alert. Why should we be forced to pay for these plants?

I hope that our State will take the road to the positive future that could be ahead with the new energy boom, and that this Legislature will take the steps necessary to take full advantage of its potential unhindered by the nuclear power plant liability.

If you want fix the economy, there's how to do so.
Thank You,

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