

August 10, 2010

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SUBJECT: *Request for Investigation and Enforcement Action With Respect To Licensing and Operation of WCS Low Level Radioactive Waste Storage and Disposal Facilities in Texas and Other Radioactive and Hazardous Waste Storage and Disposal Facilities at the Site*

Dear Ms. Brown and Dr. Armendariz:

On behalf of Public Citizen, the Lone Star Chapter of the Sierra Club (collectively, “Concerned Organizations”); The Honorable Lon Burnam, Member, Texas State Representative for Texas House District 90, Peggy and Melodye Pryor, residents of Andrews, Texas, and Rose Gardner of Eunice, New Mexico (collectively, “Concerned Citizens”), we are writing to request that you investigate illegal and improper actions by the Texas Commission on Environmental Quality (TCEQ) in licensing and supervising Waste Control Specialists, Inc.’s (WCS) operation of by-product radioactive material and low-level radioactive waste (LLRW) storage and disposal facilities in Andrews, Texas.

A review of the facts will demonstrate that the radioactive storage and disposal programs as administrated by the TCEQ are inadequate to protect public health and the environment and incompatible with NRC standards, thus warranting an investigation. Specifically, we are concerned that TCEQ has repeatedly and brazenly abused the legal authority delegated to it by the U.S. Nuclear Regulatory Commission (NRC) under the Atomic Energy Act and has failed to protect public health and safety and the environment in licensing and overseeing the operation of WCS’ LLRW and byproduct material storage and disposal facilities in Andrews County. As discussed below, in licensing new facilities for the disposal of LLRW and byproduct material, TCEQ has blatantly disregarded the warnings of its technical staff regarding the environmental and public health hazards of the proposed facilities. TCEQ staff members have left the agency as a result of their warnings going unheeded. Moreover, TCEQ has completely barred the affected public from participating in its decision-making process, arbitrarily refusing to grant detailed and well-documented hearing requests on WCS’ license applications for by-product and LLRW disposal facilities. Finally, the integrity of TCEQ’s entire program has been thrown into question by the favoritism shown by TCEQ to WCS and the appearance of impropriety by at least one

high-level TCEQ official who took a position with WCS shortly after recommending that WCS's applications for disposal licenses be granted.

As a result of TCEQ's unwillingness to effectively regulate and enforce WCS permits, the public no longer has a basis for any confidence in TCEQ's commitment and competence to protect public health and safety and the environment in licensing and overseeing by-product materials and LLRW storage and disposal facilities in Texas. We are particularly concerned that the unsafe operation of WCS' facilities threatens several water tables and may threaten the integrity of the Ogallala aquifer, which may lie under or in very close proximity to the WCS site, and whose presence the TCEQ has effectively ignored.

Despite TCEQ's flagrant and repeated disregard for the law, neither the Attorney General nor the legislature has taken any steps to correct it. Therefore we seek action by the NRC and the U.S. Environmental Protection Agency (EPA). As the agency responsible for delegation of regulatory authority to the TCEQ, the NRC should exercise its authority under Section 274(j) of the Atomic Energy Act (42 U.S.C. 2021(j)) to investigate whether it is appropriate to terminate or suspend TCEQ's authority to regulate the storage and disposal of by-product and LLRW in Texas. We also ask the EPA to participate in the investigation because of the profound significance of TCEQ's improper actions with respect to the health and integrity of the Ogallala Aquifer, a national invaluable and irreplaceable economic and environmental water resource, and other aquifers.

## **BACKGROUND**

### **WCS Licenses and Facilities**

WCS holds licenses for several radioactive waste disposal facilities at the Andrews County site.

**Compact LLRW Disposal Facility.** Under TCEQ License R04100,<sup>1</sup> finalized in September 2009, WCS is authorized to dispose of LLRW originating from the states of Texas and Vermont, in accordance with the Texas Low-Level Radioactive Waste Disposal Compact. WCS has not yet built this facility because of license deficiencies identified by TCEQ in a May 3, 2010 "Technical Notice of Deficiency Comments for Application for Minor Amendment of Radioactive Material License No. R04100." WCS hopes to expand the scope of its license for this facility to allow it to accept LLRW from states outside the Texas-Vermont compact.

**Federal LLRW Disposal Facility.** License R04100<sup>2</sup> also authorizes WCS to dispose of LLRW that is the responsibility of the federal government under the Low-Level Radioactive Waste Policy Act, as amended by the Low-Level Radioactive Waste Policy Amendments Act of 1985. Like the Compact LLRW Disposal Facility, the Federal LLRW Disposal Facility remains unbuilt

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<sup>1</sup> TCEQ License R04100 - [http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=iwr.viewdocument&doc\\_name=LicenseR04100.pdf&doc\\_id=852300812009260&format\\_cd=pdf](http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=iwr.viewdocument&doc_name=LicenseR04100.pdf&doc_id=852300812009260&format_cd=pdf)

<sup>2</sup> IBID

pending resolution of the issues raised in TCEQ's May 3, 2010, Technical Notice of Deficiency associated with the amendment which was filed due to new geology studies of the site<sup>3</sup>.

**Byproduct Material Disposal Facility.** License R05807<sup>4</sup>, issued on May 29, 2008, authorizes WCS to dispose of byproduct material. The byproduct dump is operating and has accepted 3667 barrels of highly radioactive K-65 Fernald weapons waste for disposal.

**Radioactive Waste Treatment, Processing & Storage License.** License #R04971<sup>5</sup>, recently requested to amend on March 5, 2010, will allowed WCS to store two waste streams: LLRW from Studsvik, a Swedish-owned company that processes radioactive waste from nuclear reactors in Tennessee and byproduct waste from Fernald, Ohio, where uranium was processed for nuclear weapons. The license strictly limits storage of LLRW and byproduct materials to 365 days.

**Other WCS Licenses.** WCS also holds permits for treatment, storage, and disposal of hazardous and non-hazardous industrial waste (over 2,000 RCRA waste codes) with a RCRA part B equivalent permit to receive ignitable, corrosive, toxic and selective hazardous wastes. WCS is also permitted for treatment, storage, and land disposal of PCBs and PCB contaminated material and receipt of hazardous substances, pollutants or contaminants from CERCLA (Superfund) sites.<sup>6 and 7</sup>

A factsheet with photos of the WCS site and key information for each of the radioactive waste facilities is online at [www.TexasNuclearSafety.org](http://www.TexasNuclearSafety.org). We will refer to the waste disposal facilities as “dumps” because they involve underground burial of the wastes. We will also use quotes around the term “low-level” because we believe the term is misleading in that there is no radionuclide that cannot go to a “low-level” radioactive waste dump and many of the radioactive materials that can go to a “low-level” site are long-lived and hazardous to health. “Low-level” cannot be equated with low risk.

## Procedural History

**TCEQ denies requests for public participation in licensing decisions.** In 2007, the TCEQ published notice of an opportunity to request a hearing on the licensing of the Byproduct Material Disposal Facility, and in 2008 published a separate notice of an opportunity to request a hearing on the licensing of the Compact LLRW Disposal Facility and the Federal LLWR Disposal Facility. In both cases, the Lone Star Chapter of the Sierra Club submitted detailed hearing requests raising significant environmental and public health concerns about the proposed

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<sup>3</sup> TLLRWD Compact Commission June 12, 2010 meeting – audio recording of the meeting from 40:30 to 42:31 minutes. <http://www.tllrwdcc.org/information.html>

<sup>4</sup> TCEQ License R05807: [http://www.tceq.state.tx.us/assets/public/permitting/waste/rad/byproducts/final\\_license.pdf](http://www.tceq.state.tx.us/assets/public/permitting/waste/rad/byproducts/final_license.pdf)

<sup>5</sup> TCEQ License R04971: [http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=iwr.viewdocument&doc\\_name=LicenseR04971.pdf&doc\\_id=477333582010070&format\\_cd=pdf](http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=iwr.viewdocument&doc_name=LicenseR04971.pdf&doc_id=477333582010070&format_cd=pdf)

<sup>6</sup> TCEQ Central Registry Query: [http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=regent.showSingleRE&reg\\_ent\\_id=596750392002075](http://www12.tceq.state.tx.us/crpub/index.cfm?fuseaction=regent.showSingleRE&reg_ent_id=596750392002075)

<sup>7</sup> WCS Licenses & Permits: [http://www.wcstexas.com/cap\\_licenses\\_permits.html](http://www.wcstexas.com/cap_licenses_permits.html)

facilities.<sup>8</sup> Sierra Club's hearing request on the licensing of the LLRW Disposal Facilities was supported by affidavits from three experienced experts who buttressed Sierra Club's statements of technical concern.<sup>9, 10 and 11</sup>

In each of the licensing cases, two of the three TCEQ Commissioners denied Sierra Club's hearing request and granted the application with no opportunity for the Sierra Club, its lawyer, or its members living near the proposed facilities to address the Commission, claiming that Sierra Club failed to show actual injury or damage.<sup>12</sup> and <sup>13</sup> Former TCEQ Commissioner Larry Soward voted against granting the byproduct material disposal license and denying the Sierra Club's request for a contested case hearing. In the low-level case, Commissioner Soward refused to vote, citing the failure of WCS to obtain all property and mineral interests in the site, as required by Texas statutes.<sup>14</sup> and <sup>15</sup>

**TCEQ overrules Sierra Club's Motion for Rehearing.** In the cases of both the LLRW Disposal License and Byproduct Materials Disposal License, the Sierra Club asked the Commission to reconsider its decision and overturn the granting of the licenses. In both cases, the TCEQ failed to take action, meaning the motions for rehearing were considered overruled and the original decisions to grant the licenses stood.

**Sierra Club appeals TCEQ's decisions.** Finally, following TCEQ's denial of Sierra Club's request for a hearing on the licenses and its decisions to grant the licenses, Sierra Club appealed TCEQ's decisions to State District Court in Travis County.<sup>16</sup> The appeals of the two disposal licenses remain pending.

**Inaction by Other State Agencies and Legislature.** Despite the issuance of two licenses to WCS by TCEQ and the denial of Sierra Club's request for a contested case hearing, neither the Legislature nor Attorney General has taken any action to investigate the process by which WCS obtained its license, nor initiated any action to ensure that the WCS abides by its permit conditions. In fact, the only action taken by the Attorney General has been to confirm the

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<sup>8</sup> Letter to TCEQ Chief Clerk from Sierra Club requesting a contested case hearing, Sep 16, 2007.

<sup>9</sup> Affidavit of George Rice, hydrologist, January 10, 2009.

<sup>10</sup> Affidavit of Diane D'Arrigo, Radioactive Waste Project Director at Nuclear Information and Resource Service, January 7, 2009.

<sup>11</sup> Affidavit of Marvin Resnikoff, Senior Associate at Radioactive Waste Management Associates., January 12, 2009.

<sup>12</sup> TCEQ Commissioners Marked up Agenda - Jan 14, 2009, pg. 2  
[http://www.tceq.state.tx.us/assets/public/comm\\_exec/agendas/comm/2009/090114.mrk.pdf](http://www.tceq.state.tx.us/assets/public/comm_exec/agendas/comm/2009/090114.mrk.pdf)

<sup>13</sup> Webcast of January 12, 2009 TCEQ Commissioner's Meeting: [http://www.texasadmin.com/cgi-bin/tceq\\_view.cgi?smil=TCEQ\\_OM011409&part=3](http://www.texasadmin.com/cgi-bin/tceq_view.cgi?smil=TCEQ_OM011409&part=3), minutes 2-5

<sup>14</sup> TCEQ Commissioners Marked up Agenda - Jan 14, 2009, pg. 2  
[http://www.tceq.state.tx.us/assets/public/comm\\_exec/agendas/comm/2009/090114.mrk.pdf](http://www.tceq.state.tx.us/assets/public/comm_exec/agendas/comm/2009/090114.mrk.pdf).

<sup>15</sup> Webcast of January 12, 2009 TCEQ Commissioner's Meeting: [http://www.texasadmin.com/cgi-bin/tceq\\_view.cgi?smil=TCEQ\\_OM011409&part=3](http://www.texasadmin.com/cgi-bin/tceq_view.cgi?smil=TCEQ_OM011409&part=3), minutes 2-5

<sup>16</sup> Filings in State of Texas District Courts: 201st district court, cause number D-1-G009-000660, 98th district court, cause number D-1-GN-09-000894, 200th district court, cause number D-1-GN-09-003492, 261st district court, cause number D-1-GN--09-004

eminent domain power of WCS to take over any remaining mineral rights surrounding the property and to represent the state in the appeals brought by Sierra Club in State District Court.

## DISCUSSION

As discussed below, we believe the TCEQ has engaged in favoritism and improper revolving door policies, licensing and enforcement irregularities, and blatant disregard for the professional opinions of its own technical staff. On a whole host of issues, the licensing of new LLRW and Byproduct Material disposal facilities at the Andrews site is unsupported and even contradicted by the technical record.<sup>17</sup> This includes the TCEQ's gross negligence in disregarding the significance of the proximity of the Ogallala Aquifer to the site. Therefore we ask you to conduct an investigation into the following issues, for purposes of determining whether Texas' authority to regulate LLRW as an Agreement State should be modified or revoked, or whether the federal government should take other action to protect public health and safety and the environment from mismanagement by the TCEQ.

Our concerns are as follows:

### **1) In licensing disposal facilities TCEQ ignored technical staff concerning risks of radioactive contamination of aquifers.**

In licensing the By-Product Material Disposal Facility and the Compact and Federal LLRW Disposal Facilities, the former TCEQ executive director, Glenn Shankle, overruled the recommendations of his technical staff and recommended that the Commissioners grant WCS a "low-level" radioactive waste disposal license and a radioactive byproduct disposal license. Among the concerns voiced by TCEQ technical staff were unresolved hydrogeologic uncertainties and risks of contamination of aquifers. Several staff members resigned their positions at TCEQ in protest of the issuance of one or another of WCS's licenses, as more fully explained below.<sup>18</sup>

**A. Background on the Ogallala Aquifer and its Location.** The WCS site is located one mile north of Texas Highway 176, east of Eunice, New Mexico, and just east of the Texas/New Mexico border, where Lea and Andrews Counties meet. Site coordinates are given in the low-level license application as N. Latitude 32 Degrees, 26", 27.4" and W. Longitude 103 Degrees, 03', 22.7".

The Ogallala Aquifer, also known as the High Plains Aquifer, is one of the world's largest aquifers, covering an area of approximately 174,000 mi<sup>2</sup> in portions of the eight states of South Dakota, Nebraska, Wyoming, Colorado, Kansas, Oklahoma, New Mexico, and Texas. According to the USGS:

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<sup>17</sup> TCEQ Interoffice Memo to Susan Jablonski, Director, Radioactive Materials Division from TCEQ RML Team regarding Groundwater intrusion into proposed LLRW facility, August 14, 2007.

<sup>18</sup> Texas Observer, "Good to Glow" by Forrest Wilder, Thursday, April 03, 2008

About 27 percent of the irrigated land in the United States overlies this aquifer system, which yields about 30 percent of the nation's ground water used for irrigation. In addition, the aquifer system provides drinking water to 82 percent of the people who live within the aquifer boundary .... Almost 2 million people rely on the High Plains aquifer for their drinking water. Surface water is used for drinking water primarily in the larger cities near the periphery of the High Plains aquifer (Cheyenne, Wyoming, and Lubbock, Odessa, and Amarillo, Texas). Other uses of ground water include livestock (222 Mgal/day), mining (210 Mgal/day), and industry (155 Mgal/day).<sup>19</sup>

The aquifer provides water used to grow “about 19 percent of the wheat, 19 percent of the cotton, 15 percent of the corn, and 3 percent of the sorghum,” as well as “nearly 18 percent of the cattle” produced in the United States.<sup>20</sup>

WCS insists that its site “is not over the aquifer and poses no danger to drinking water (and is suing<sup>21</sup> the man behind the website [savetheogalla.com](http://savetheogalla.com), which says that the Ogallala is ‘underneath and/or precariously close to’ the dump),” according to the Texas Tribune’s Kate Galbraith in a July 14, 2010 article.<sup>22</sup>

But, EPA’s David Barry, who works in the Region 6 Press Office, has publicly stated, “Yes, the [WCS hazardous waste] facility does sit above the Ogallala aquifer. It sits on the southern end of the aquifer.”<sup>23</sup> The hazardous waste facility sits on the same site as the By-product disposal facility and the proposed LLRW disposal facility.

A map from the Texas Geological Atlas, produced by the Bureau of Economic Geology,<sup>24</sup> shows the Ogallala Aquifer in a brownish color and labeled as “To.” From this map it appears that the WCS site sits atop the Ogallala Aquifer. A Google Earth map showing the WCS site is available for comparison.<sup>25</sup>

**B. Changing Aquifer Maps.** Long-standing and widely accepted Texas Water Development Board (TWDB) maps of Major Aquifers of Texas show the Ogallala Aquifer in the area where WCS is located. For example, the map from 1994 shows a blue section where the Ogallala Aquifer lies and the WCS site is clearly within its boundaries.

If this map is compared with the TWDB map from 2006, a significant change in the aquifer boundaries is apparent in Andrews County, so that the Ogallala Aquifer no longer appears to be

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<sup>19</sup> United States Geological Survey website see “High Plains Regional Groundwater Study” factsheet at <http://co.water.usgs.gov/nawqa/hpgw/factsheets/DENNEHYFS1.html>, pg 14

<sup>20</sup> IBID.

<sup>21</sup> WCS Press Release “WCS Files Lawsuit Against New Mexico Attorney in Andrews,” July 2009. <http://www.texassolution.com/documents/greenwood.pdf>

<sup>22</sup> <http://www.texastribune.org/texas-environmental-news/water-supply/how-bad-is-the-ogallala-aquifers-decline-in-texas>

<sup>23</sup> “News Channel 11 investigates: Toxic Waste Coming to West Texas – Part 1”; [www.kcbd.com/Global/story.asp?S=10259021](http://www.kcbd.com/Global/story.asp?S=10259021), April 27, 2009

<sup>24</sup> Texas Geological Atlas map, produced by Bureau of Economic Geology. <http://www.twdb.state.tx.us/GwRD/GTA/GAT/hobbs.htm>

<sup>25</sup> <http://maps.google.com/maps?hl=en&ie=UTF8&ll=32.439815,-103.024979&spn=0.084752,0.132008&t=h&z=13>.

under the location of the WCS site.<sup>26</sup> Boundaries of other parts of the Aquifer do not appear to have changed in a significant way.

At the December 11, 2009 Low-Level Radioactive Waste Compact Commission meeting, WCS President Rod Baltzer stated, “The Texas State Water Development Board modified their maps based on a lot of the drilling data (from WCS) to show that we are not over the Ogallala Aquifer.”<sup>27</sup>

**C. Hydraulic Conductivity.** It matters what formation is beneath the site, or in close proximity, because different formations have different hydraulic conductivity. WCS claims that water movement at its site would be slow,<sup>28</sup> but would this still be considered accurate if the Ogallala is actually under the site or nearby? A USGS report on the Ogallala New Mexico and neighboring states says:

Hydraulic conductivity is a measure of the ease with which sediments can transmit water. The average hydraulic conductivity of the High Plains aquifer in Colorado and New Mexico is about 60 feet per day and ranges from less than 1 to more than 100 feet per day. Differences in hydraulic conductivity are the result of differences in the particle size, shape, sorting, and cementation of the aquifer materials.<sup>29</sup>

**D. Groundwater Levels and Recharge.** While water levels may be decreasing in some areas, at least one source finds that there were increases in Ogallala Aquifer water levels at some locations between 1990 and 2000, some of which appear to be very near the WCS site.<sup>30</sup>

Future groundwater levels are expected to increase. The TCEQ geologists and engineers that reviewed WCS’s application for the LLRW disposal facility similarly concluded, in an August 14, 2007 interoffice memorandum to their Division Director: “Analysis of available data shows that groundwater in the natural system already is unacceptably at or near the boundaries of the proposed disposal units. Predicted increases in rainfall are expected to drive the water tables into the proposed units. These conditions fail to meet the requirements of 30 TAC §336.728(f).”<sup>31</sup>

Whether the Ogallala aquifer is or is not present beneath the site may also matter in terms of recharge features. A TWDB Report states the following in a section about the Ogallala Aquifer;

Recharge to the Ogallala occurs principally by infiltration of precipitation on the surface

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<sup>26</sup> See <http://texasnuclearsafety.org/aquifer-maps>

<sup>27</sup> <http://www.vimeo.com/8998939> , Video # 18. 12-11-09, 36:00 minutes into the video produced by the SEED Coalition

<sup>28</sup> WCS Geology Presentation” Under June 12, 2010 meeting at <http://www.tllrwdec.org/information.html> , page 12

<sup>29</sup> United States Geological Survey, *GROUND WATER ATLAS of the UNITED STATES Arizona, Colorado, New Mexico, Utah, HA 730-C.* - [http://pubs.usgs.gov/ha/ha730/ch\\_c/C-text5.html](http://pubs.usgs.gov/ha/ha730/ch_c/C-text5.html)

<sup>30</sup> Texas Water Development Board Report 345, Aquifers of Texas by John B. Ashworth, Geologist and Janie Hopkins, Geologist November 1995, page 9, 207.  
<http://www.twdb.state.tx.us/publications/reports/GroundWaterReports/GWReports/Individual%20Report%20htm%20files/Report%20345.htm>

<sup>31</sup> TCEQ Interoffice Memorandum regarding Groundwater intrusion into proposed LLRW facility, August 14, 2007

and, to a lesser extent, by upward leakage from underlying formations. Only about one inch of the precipitation actually reaches the water table annually because rainfall is minimal, the evaporation rate is high, and the infiltration rate is slow. The highest recharge infiltration rates occur in areas overlain by sandy soils and in playa-lake basins.

Since the expansion of irrigated agriculture in the mid-1940s, greater amounts of water have been pumped from the aquifer than have been recharged. As a result, some areas have experienced water-level declines in excess of 100 feet from predevelopment to 1990. Reduced pumpage in some areas of the High Plains has resulted in a reduction in the rate of water-level decline.<sup>32</sup>

By contrast, WCS has asserted that little water would travel vertically downward without addressing the strong possibility that during the expected life of the waste water may well up as water tables recover to higher levels.<sup>33</sup>

An aquifer is not simply water. Under EPA regs, "Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring".<sup>34</sup>

Under TCEQ regulations, aquifer has pretty much the same definition: "A geological formation, group of formations, or portion of a formation capable of yielding significant quantities of groundwater to wells or springs."<sup>35</sup>

In addition, Britannica Concise Encyclopedia defines "aquifer" as follows:

In hydrology, a rock layer or sequence that contains water and releases it in appreciable amounts. The rocks contain water-filled pores that, when connected, allow water to flow through their matrix. A confined aquifer is overlain by a rock layer that does not transmit water in any appreciable amount or that is impermeable. There probably are few truly confined aquifers. In an unconfined aquifer the upper surface (water table) is open to the atmosphere through permeable overlying material. An aquifer also may be called a water-bearing stratum, lens, or zone.<sup>36</sup>

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<sup>32</sup> Texas Water Development Board *Report 345 - Aquifers of Texas*, by John B. Ashworth and Janie Hopkins, Geologists, November 1995, Section on Ogallala Aquifer, page 11 (<http://www.twdb.state.tx.us/publications/reports/GroundWaterReports/GWReports/R345%20Aquifers%20of%20Texas/R345Complete.pdf>)

<sup>33</sup> WCS Geology Presentation" to Texas Low-Level Radioactive Waste Compact Commission, June 12, 2010 , <http://www.tlrdcc.org/information.html> , page 10 -12

<sup>34</sup> Code of Federal Regulations Title 40, Chapter 1, Subchapter 1, Part 270.2 - EPA Definition of Aquifer, December 2005, page 1 (<http://cfr.vlex.com/vid/270-2-definitions-19820161>)

<sup>35</sup> 30 Tex. Admin. Code § 335.1-Definitions ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p\\_dir=&p\\_rloc=&p\\_tloc=&p\\_ploc=&pg=1&p\\_tac=&ti=30&pt=1&ch=335&rl=1](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=30&pt=1&ch=335&rl=1))

<sup>36</sup> <http://www.answers.com/topic/aquifer>

While water levels may increase or decrease over time with agricultural pumping and changes in precipitation, we have seen no evidence that the rock layers that constitute the local aquifers are changing, with the possible exception of locations where construction has occurred.

Recent experience at the WCS byproduct site (License RO5807) demonstrates the need for investigation. The byproduct landfill is the part of the WCS site where radioactive weapons waste from Fernald, Ohio has now been buried. An Oct 14, 2009 TCEQ Interoffice Memorandum regarding a site visit to the byproduct landfill noted concerns that drainage trenches could get filled in or plugged. Standing water was found in a ditch near one monitor well:<sup>37</sup>

“It was noted that material from the OAG and upper Dockum may slough off the sidewalls and over time filling or plugging the drainage trench... Also noted during the inspection, water continues to seep from the OAG sand and gravel along the south wall above the red bed bench, standing water was noted in the red bed bench ditch near the TP-88 monitor well location.”<sup>38</sup>

Measurements of water levels at the existing byproduct site have raised concern. Groundwater Level Elevation Reports for the byproduct site were discussed in a February 2, 2010 TCEQ Interoffice Memorandum that raised questions regarding accuracy of some well measurements, stating “However, several of these are questionable. Those wells sampled for the R04100 license that are not sampled the previous month for the R05807 license appear to have been developed prior to sampling. ...it seems that perhaps previous water level elevation measurements from these wells were not accurate.”<sup>39</sup>

A subsequent April 19, 2010 TCEQ Interoffice Memorandum states the following regarding groundwater elevation reports: “The fact that not all wells increase, the amounts of increase vary, and some data indicate a decline, rules out condensation as the cause. While these wells may not yet have a substantial amount of water present in them, they strongly suggest that water in the OAG may be moving. The distribution of these wells appears to make the concept of the dry line difficult to maintain.”<sup>40</sup>

The document goes on to state, “From this data, it appears that the behavior of the OAG groundwater along the south side of the byproduct facility is still not well understood.”<sup>41</sup>

Concerns about the accuracy of the dry line location are raised. “The report states, in Section 2.1, that the dry line location is substantially the same as in the application and previous monthly reports. However, the revised footprints of both the low level and compact facilities depicted on

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<sup>37</sup> TCEQ Interoffice Memorandum regarding October 1, 2009 WCS Site Visit – Byproduct Landfill Construction Inspection, October 14, 2009

<sup>38</sup> TCEQ Interoffice Memorandum, October 14, 2009 regarding October 1, 2009 WCS Site Visit – Byproduct Landfill Construction Inspection, Page 2.

<sup>39</sup> TCEQ, Interoffice Memorandum, February 2, 2010, regarding January (AG Groundwater Level Elevation Report for December 2009 data Log No. 2010-1-0007, Pages 1, 2 and 3.

<sup>40</sup> TCEQ Interoffice Memorandum, April 19, 2010, regarding February OAG Groundwater Level Elevation Report, for January 2010 data Log No. 2010-02-0007, Page 1

<sup>41</sup> IBID, Page 2

the figures, and the increasing presence of dry wells with water of some amount in them, suggest otherwise.”<sup>42</sup>

The memo discusses increases in some water level elevations, stating; “These 2 wells lie within the footprint of the low level facility. this is potential cause for concern and continued monitoring is warranted”<sup>43</sup> The memo goes on to note, “At the compact facility, 2 dry wells in the buffer zone exhibited water level elevations.”<sup>44</sup>

Accurate data is crucial. Exact information is needed about where the site is dry and where water is located or is moving. It is of utmost importance at a site where radioactive waste is buried and must remain isolated. The uncertainties already being dealt with at the byproduct site where radioactive waste has been buried are disturbing. Increased oversight and full investigation are needed at the WCS site.

**E. TCEQ officials ignored technical staff recommendations and warnings.** In August, 2007, after spending considerable time reviewing WCS’s application for a LLRW disposal facility, two geologists and two engineers on TCEQ’s technical staff prepared an interoffice memo bluntly stating that the LLRW disposal facility’s proximity to two aquifers made it “highly likely” that radioactive waste would leak into groundwater.<sup>45</sup> They explained:

Analysis of the data submitted by Waste Control Specialists LLC, in its license application for near-surface disposal of radioactive waste, has resulted in the following conclusions:

- Groundwater is likely to intrude into the proposed disposal units and contact the waste from either or both of two water tables near the proposed facility. The Applicant has failed to demonstrate compliance with 30 TAC §336.728(f) which states "The disposal site shall provide sufficient depth to the water table so that groundwater, perennial or otherwise, shall not intrude into the waste."
- The Applicant has failed to successfully use numerical modeling to predict the future location of one water table that is expected to intrude into radioactive waste. This constitutes a failure to characterize the proposed site as required by 30 TAC §336.728(a) which states the proposed disposal site "...be capable of being characterized, modeled, analyzed, and monitored." Moreover, the Applicant's failure to model the future location of the water table violates 30 TAC §336.709(1) which requires analysis of future site conditions.

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<sup>42</sup> IBID, Page 3

<sup>43</sup> IBID, Page 3

<sup>44</sup> IBID, Page 3

<sup>45</sup> TCEQ Interoffice memo, August 14, 2007, regarding Groundwater intrusion into proposed LLRW facility, page 2

Based on information provided, the Applicant has not demonstrated the site is suitable for near surface disposal of radioactive waste.<sup>46</sup>

The site, they wrote, “cannot be improved through special license conditions.”<sup>47</sup> After a four-year license review, they recommended denying the license.<sup>48</sup>

Similarly, following a technical review of WCS’s application for a radioactive by-product disposal facility license, TCEQ staff wrote in an August 31, 2007 interoffice memo that they could NOT conclude that the application complies with applicable TCEQ rules. In this memo, Patricia Bobeck, P.G. and Conrad Kuharic, P.G., explained that

the application contains inconsistencies and contradictions and lack of detailed geologic data resulting in an incomplete geologic characterization. In addition, hydrogeologic uncertainties and unknowns and modeling that shows water encroachment into the byproduct material landfill shows that the application lacks the requirements to demonstrate compliance with the [applicable] rules . . . .<sup>49</sup>

With TCEQ staff so clearly concerned about the risks of groundwater contamination and questioning the suitability of the site and whether it could meet legal requirements, the issue of whether the WCS site lies above the Ogallala Aquifer, or whether it is very close in proximity to this aquifer and would allow for groundwater connections, became hotly debated.

According to the Houston Chronicle, “When WCS President Rodney Baltzer learned of the [August 14, 2007] memo he immediately sought out meetings with executive director, Glenn Shankle, who decided in December [2007] to begin drafting the license. In fact, records from TCEQ show that during the time period after the staff’s recommendation, Shankle was frequently meeting with Waste Control officials, attorneys and lobbyists.”<sup>50</sup>

TCEQ executive director Glenn Shankle overruled the staff recommendation to deny the LLRW disposal facility license and ordered that the application be approved and that the draft license be drawn up. Similarly, he ordered approval of the application for the radioactive by-products disposal license, and a license was subsequently drafted.

**F. Three TCEQ staff members have quit or taken early retirement in protest of the issuance of one or another of WCS’s licenses.** We are further concerned by the fact that at least three TCEQ staff members have quit or taken early retirement in protest of the issuance of one or another of WCS’s licenses. The fact that TCEQ employees are willing to give up their jobs to

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<sup>46</sup> IBID, pg. 1.

<sup>47</sup> IBID, pg. 1.

<sup>48</sup> IBID, pg 1.

<sup>49</sup> TCEQ Interoffice Memo regarding Final Technical review for byproduct material disposal facility in Andrews County, August 31, 2007.

<sup>50</sup> Houston Chronicle, “Radioactive Waste Roils State Agency” by Janet Elliott, March 3, 2008-  
[http://blogs.chron.com/texaspolitics/archives/2008/03/podcast\\_radioac.html](http://blogs.chron.com/texaspolitics/archives/2008/03/podcast_radioac.html).

call attention to the problem, and the fact that it has happened repeatedly, shows that TCEQ's disregard for the views of its professional staff members is a very grave problem.

The Texas Observer reported the following on April 3, 2008, regarding the protests of TCEQ staff members:

In all, three former TCEQ employees who worked on the Waste Control license applications said they left the agency because of frustration with the licensing process. All three came to the conclusion, after years of working on the applications, that Waste Control's site is fundamentally flawed. "After years of reviewing the application, I submitted my professional judgment that the WCS site was unsuitable," said Patricia Bobeck, a hydrogeologist who worked on the byproduct material disposal application. "Agency management ignored my conclusions and those of other professional staff, and instead promoted issuance of the licenses."

Encarnación "Chon" Serna, Jr. an engineer, said he quit in June 2007 when it became apparent that a license for the low-level radioactive waste landfill would be issued despite staff objections. At the end of the staff's technical review in August 2006, Serna and other staff members decided the application was "very, very deficient" and couldn't be approved. Nonetheless, TCEQ managers decided to move forward, giving the company until May 2007 to address some problem areas. "Around that time I started getting the idea that these people are going to license this thing no matter what," said Serna. "I felt that in clear conscience I couldn't grant a license with what was being proposed."

Serna said that when he left, there were still "thousands of questions in every area of review." For example, he had trouble determining accurate calculations of radiation doses workers might expect to receive when handling soil-like "bulk waste." In 2006, Serna wrote in an internal e-mail that he'd come across 57 scenarios in Waste Control's plan in which workers would be close to radioactive waste. "I think there could be potential exposures to significant doses of radioactivity," he wrote.

His overarching concern, shared by the other former staffers, relates to the site's physical location. Serna said he is convinced that the geology of the site is unsuitable for containment of radioactive waste for thousands of years.<sup>51</sup>

**G. Former employees provide affidavits expressing continued concern of risks to groundwater by WCS facilities.** After Adam Greenwood developed the website [www.savetheogallalaaquifer.com](http://www.savetheogallalaaquifer.com), which states that the Ogallala is underneath and/or precariously close to the WCS site, WCS sued him for defamation. Mr. Greenwood responded

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<sup>51</sup> Texas Observer, *Good to Glow: Despite its own scientists' objections, state regulators are greenlighting a massive nuclear waste dump in West Texas.* by Forrest Wilder, Thursday, April 03, 2008

by filing a Motion for Summary Judgment, which included affidavits from former TCEQ employees Patricia Bobeck and Glenn Lewis, as well as testimony from other experts. Their affidavits reinforce the opinions and conclusions reflected in the August 14 and August 31, 2007 interoffice memoranda. (A disk of the entire Motion for Summary Judgment is available upon request.)

Glenn Lewis was a staff member at TCEQ who worked on WCS's application for the LLRW disposal facilities license. In his affidavit, Mr. Lewis states, "It [water] may be as close as 14 feet from the bottom of the proposed dump", and were not the hundreds of feet of impermeable red bed clay that the applicant originally claimed.<sup>52</sup> Mr. Lewis has also been quoted by the Texas Observer, explaining, "It was obvious from the beginning that the enabling legislation [for low-level radioactive waste disposal] was written for the benefit of, and largely by, this applicant." He continued, "That raised immediate concerns about how objective a review of the application could possibly be." In December 2007, Lewis left TCEQ after serving 25 years in Texas state government.<sup>53</sup>

Patricia Bobeck is a former TCEQ geologist experienced in remediation of contaminated soils and groundwater who worked on the byproduct disposal license. In her affidavit, Ms. Bobeck states, "In my opinion as a professional geologist, it would be reasonable for an educated member of the public concerned about a risk of radioactive contamination to Andrews county water supplies to conclude that the Ogallala Aquifer could extend directly under all of Andrews County, based on widely available maps from reputable, scholarly sources of the kind that intelligent, educated members of the public could reasonably rely upon." Bobeck also states on page 5, "It is my understanding that the Ogallala Aquifer drapes the ridge on which Waste Control plans to construct its landfill. According to the plans presented by Waste Control, Waste Control intended to remove the Ogallala Aquifer from the top of the ridge and to excavate to some depth in the underlying Dockum red clay beds. I do not know whether Waste Control has changed its construction plans or whether Waste Control still plans to excavate beneath the Ogallala Aquifer."<sup>54</sup>

**H. TCEQ Executive Director turns WCS lobbyist after approving WCS's applications for radioactive waste disposal.** The draft by-product material disposal license had already been issued and the draft LLRW license was being drawn up on Mr. Shankle's orders when he resigned his TCEQ position in June 2008. In January 2009, Mr. Shankle became a lobbyist for WCS. That same month, two of the three TCEQ Commissioners voted to approve WCS's application for a LLRW disposal license and signed an order conditionally granting the license as soon as WCS finished acquiring the mineral rights to the proposed site. The final

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<sup>52</sup> Affidavit of Glenn Lewis – Waste Control Specialists, LLC v Adam Greenwood, et al. Cause No 18005 109<sup>th</sup> Judicial District, Andrews County, TX, February 9, 2010, pg 6.

<sup>53</sup> Texas Observer, *Good to Glow: Despite its own scientists' objections, state regulators are greenlighting a massive nuclear waste dump in West Texas.* by Forrest Wilder, Thursday, April 03, 2008. <http://www.texasobserver.org/archives/item/15331-2729-good-to-glow-despite-its-own-scientists-objections-state-regulators-are-greenlighting-a-massive-nuclear-waste-dump-in-west-texas>

<sup>54</sup> Affidavit of Patricia Bobeck – Waste Control Specialists, LLC v Adam Greenwood, et al. Cause No 18005 109<sup>th</sup> Judicial District, Andrews County, TX, February 9, 2010, pg 6.

license was issued in September 2009, upon WCS's showing that all mineral interests had been acquired through condemnation.

Forrest Wilder's April 14, 2009 *Texas Observer* article documents these events.<sup>55</sup> Investigation by the NRC is needed regarding the inappropriate actions of a state officer working closely with the regulated entity, overruling staff recommendations, and soon afterwards lobbying on behalf of the regulated entity. These actions call into question the state's ability to maintain a radiation control program that can adequately protect public health and that meets NRC requirements.

Revolving door concerns with TCEQ have previously been problematic. Former TCEQ executive director Jeff Saitas also left the agency to work for WCS. In the January 18, 2009 article in the *Austin American Statesman*, entitled, "Environmental regulators find higher-paying jobs in industry," Asher Price reported:

Four people have served in and left the executive director spot of the Texas Commission on Environmental Quality since 1994. All of them now work, one way or another, for industries they once regulated.

An engineer by training, Jeff Saitas rose through the ranks at the environmental office before getting appointed by the commissioners as executive director in 1998. But by 2002, at the age of 42, and with three young children, he decided to leave the office...

In 2008, according to records at the Ethics Commission, he was paid as much as \$50,000 by Waste Control Specialists as it successfully lobbied the environmental commission to approve a permit to bury radioactive waste at its Andrews facility — despite warnings from the environmental agency's staff that Waste Control Specialists' application was incomplete.<sup>56</sup>

The potential abuse of office by some TCEQ officials is a matter of grave concern to us because it causes us to lose confidence in the TCEQ's ability and willingness to safeguard public health and the environment. Therefore we ask you to open an investigation into the issue. When top level decision makers at TCEQ make decisions in favor of WCS that ignore significant contrary evidence compiled by their own staffs, and then turn around and work for a regulated entity, it becomes questionable as to whether their decisions are adequate to protect public health and the environment and are compatible with NRC standards.

**I. Issues regarding the location of nearby water tables remain unresolved.** In a recent presentation to the Texas Low-Level Radioactive Waste Disposal Compact Commission on June 12, 2010, geologist Robert M. Holt noted the presence of two hydrologic bodies important to the site - the Dockum (aquifer) and the OAG formation [Ogallala, Antlers, Gatuna]

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<sup>55</sup> *Texas Observer*, *Even the Mafia Was More Circumspect* by Forrest Wilder, April 14, 2009.

<sup>56</sup> *Austin American Statesman*, *Environmental regulators find higher-paying jobs in industry* by Asher Price, January 18, 2009, Pg A07.

which was reported as currently having about 7 feet of water at the playa,<sup>57</sup> which appears to be nearby on WCS property. This is consistent with the concerns spelled out by TCEQ staff in their August 14, 2007 interoffice memorandum:

According to data submitted by the applicant, [WCS] there appear to be two water tables in the immediate vicinity of the proposed facility. The first is a water table present within the Ogallala, Antlers and Gatuna (OAG) materials which lie above the proposed FWF and CWF disposal units. While the data demonstrates that the OAG water table lies above the proposed facility, the precise lateral extent of the water table remains uncertain.

The second water table is in the Triassic redbed materials in which the proposed disposal units will be founded. The two proposed waste disposal units are to be constructed to depths of 120 feet and 85 feet within these redbed materials. In Revision 12a of the application, submitted on March 16, 2007, the Applicant states the second water table is no closer than 14 feet from the bottom of the proposed FWF disposal unit. However, staff analysis of the data shows that the water table may be closer than 14 feet. The current proximity of the second water table makes groundwater intrusion into the disposal units highly likely because of future annual rainfall increases and evapotranspiration decreases due to changing climatic conditions.<sup>58</sup>

During the June 12 meeting, Mr. Holt spoke of “puddles” that “accumulate and then dry out.” When Compact Commissioner Bob Gregory inquired as to how large and deep these “puddles” are, Mr. Holt had no response. Mr. Holt’s PowerPoint presentation, which was provided to the Commissioners during the June 12 meeting, depicts March 2010 water levels in wells, which are indicated by blue “+” signs on the slide entitled “OAG water is Discontinuous and Controlled by Dockum Topography.”<sup>59</sup> and <sup>60</sup>

**J. Investigation Warranted.** As demonstrated above, TCEQ staff were clearly concerned that WCS’s “low-level” radioactive waste license may not meet TCEQ regulations, which require sufficient depth to the water table so that water does not intrude into the waste. Radioactive water contamination of any aquifer that constitutes a resource for drinking water, agriculture, or wildlife protection, is unacceptable. The TCEQ’s disregard for the incredibly important Ogallala Aquifer is all the more disturbing. Therefore we request an investigation by both NRC and EPA into the question of whether TCEQ has violated federal law for the protection of these aquifers or otherwise put public health and the environment at risk.

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<sup>57</sup> “WCS Geology Presentation” Under June 12, 2010 meeting at <http://www.tllrwdcc.org/information.html> , page 12

<sup>58</sup> TCEQ Interoffice memo regarding Groundwater intrusion into proposed LLRW facility, August 14, 2007,” page 2

<sup>59</sup> WCS Geology Presentation” Under June 12, 2010 meeting at <http://www.tllrwdcc.org/information.html> , page 15

<sup>60</sup> Texas Low Level Radioactive Waste Disposal Compact Commission June 12, 2010 hearing audio, Morning session, <http://www.tllrwdcc.org/information.html>

## 2) WCS's licenses for LLRW and byproduct material disposal both suffer from significant technical defects that have never been cured.

In response to draft licenses for the disposal of both byproduct material and LLRW, Sierra Club submitted comments to TCEQ alleging that basic legal requirements for issuing a license had not yet been met. Sierra Club's comments were based directly on the findings of TCEQ staff who performed the environmental and safety analysis for each license. Instead of meeting these requirements, TCEQ placed numerous pre-construction conditions and other caveats in place to force the applicant to meet the requirements after receiving its licenses. Furthermore, in response to Sierra Club's and others' comments, TCEQ's executive director repeatedly expressed the need to "verify" important and basic facts about the application through further monitoring and review, but recommended granting the licenses with this information presumably unverified.

The legality of these licenses should be investigated, and the practice of granting licenses before requirements have been met should be tested for compatibility with NRC standards.

**A. Byproduct Material Disposal License.** As described above, WCS's Byproduct Materials Disposal License, issued in 2008, is based on a grossly inaccurate and incomplete license application that fails to address significant environmental problems with the Andrews site. These defects are perpetuated in the license itself. Among the defects are failures to:

- 1) accurately characterize the surface and underground geology and hydrology of the proposed site, including the precise location of the dry line of the OAG, the saturated zones and water table heights of the OAG and the Dockum red bed, the level of wind and water erosion, and the extent to which fissures and salt dissolution could pose a problem<sup>61, 62 & 63</sup>;
- 2) consider the full range and impacts of traffic or rail accidents<sup>64 & 65</sup>; and
- 3) analyze the potential and cumulative impacts of the nearby RCRA hazardous waste landfill, the low-level radioactive waste license, the radioactive waste storage license and waste from the uranium enrichment facility<sup>66, 67 & 68</sup>.

**B. License for LLRW Compact and Federal Facilities.** WCS's application for this license, as well as the TCEQ's technical review of the application, is grossly deficient in many

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<sup>61</sup> Sierra Club Comments on TCEQ License R05807, p. 4, 11/27/200

<sup>62</sup> TCEQ Draft Environmental Analysis for WCS Byproduct Waste Disposal License Application (License R05807), p. 24, 26-31, 44-45, 10/22/2007  
<http://www.tceq.state.tx.us/assets/public/permitting/waste/rad/byproducts/assessment.pdf>

<sup>63</sup> TCEQ License R05807 - Executive Director's Response to Comments, p. 79-83, 3/14/2008  
[http://www.tceq.state.tx.us/assets/public/permitting/waste/rad/byproducts/filed\\_rtc\\_rev05807.pdf](http://www.tceq.state.tx.us/assets/public/permitting/waste/rad/byproducts/filed_rtc_rev05807.pdf)

<sup>64</sup> TCEQ Draft Environmental Analysis for WCS Byproduct Waste Disposal License Application (License R05807), p. 192-193, 10/22/2007

<sup>65</sup> TCEQ License R05807 - Executive Director's Response to Comments, p. 78, 3/14/2008

<sup>66</sup> Sierra Club Comments on TCEQ License R05807, p. 15, 11/27/2007

<sup>67</sup> TCEQ Draft Environmental Analysis for WCS Byproduct Waste Disposal License Application (License R05807), p. 37-38, 10/22/2007

<sup>68</sup> TCEQ License R05807 - Executive Director's Response to Comments, p. 78

respects. In addition to having the same problems as the Byproduct Material Disposal License discussed above<sup>69, 70, & 71</sup> WCS's LLRW license application fails to:

- 1) submit a more finalized design of the site, particularly with the new boundaries of the federal facility required by TCEQ<sup>72, 73 & 74</sup>;
- 2) submit final plans and descriptions of the leachate collection system<sup>75, 76 & 77</sup>;
- 3) design a finalized radioactive safety program for its workers, which is crucial for worker protection<sup>78, 79 & 80</sup>;
- 4) take into account severe weather events and their impacts - including both high winds, tornadoes and high rain events<sup>81, 82 & 83</sup>;
- 5) take into account future climactic conditions that might change the amount and timing of evaporation, high wind and high precipitation events<sup>84, 85 & 86</sup>;
- 6) consider all alternatives to the proposed burial of low-level radioactive waste, including an assessment of above-ground isolation, as required by Chapter 401 of the Health and Safety Code<sup>87</sup> &; and

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<sup>69</sup> Sierra Club Comments on TCEQ License R04100, p. 17, 24 9/16/2008

<sup>70</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R04100), p. 193, 8/13/2008  
[http://www.tceq.state.tx.us/assets/public/permitting/rad/wcs/final\\_draft\\_ea.pdf](http://www.tceq.state.tx.us/assets/public/permitting/rad/wcs/final_draft_ea.pdf)

<sup>71</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, p. 16, 18, 21-24 of 36, 12/2/2008  
[http://www.wcstexas.com/PDF\\_downloads/R04100%20filed%20RTC.pdf](http://www.wcstexas.com/PDF_downloads/R04100%20filed%20RTC.pdf)

<sup>72</sup> Sierra Club Comments on TCEQ License R04100, p. 5-7, 9/16/2008

<sup>73</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R05807), p. 42, 46, 8/13/2008

<sup>74</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, p. 19, 21 of 36, 12/2/2008

<sup>75</sup> Sierra Club Comments on TCEQ License R04100, p. 10, 9/16/2008

<sup>76</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R04100), pg. 105, 8/13/2008

<sup>77</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, pg. 19, 12/2/2008

<sup>78</sup> Sierra Club Comments on TCEQ License R04100, pgs. 9, 11-12, 9/16/2008

<sup>79</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R04100), pgs. 81, 120, and Appendix C, 8/13/2008

<sup>80</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, pgs. 20, 12/2/2008

<sup>81</sup> Sierra Club Comments on TCEQ License R04100, pgs. 8-10, 9/16/2008

<sup>82</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R05807), pgs. 93-94, 8/13/2008

<sup>83</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, p. 17, 12/2/2008

<sup>84</sup> Sierra Club Comments on TCEQ License R04100, pgs. 7-9, 9/16/2008

<sup>85</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R04100), pg. 50, 8/13/2008

<sup>86</sup> TCEQ License R04100 – Executive Director's Response to Public Comments, pg. 18, 25 12/2/2008

<sup>87</sup> Sierra Club Comments on TCEQ License R04100, p. 23-24, 9/16/20

- 7) consider alternative site locations to the existing hazardous and mixed use waste site in Andrews, including other counties in Texas<sup>88, 89 & 90</sup>.

**C. Ongoing Site Monitoring Reveals that “Risks of both... operations seem to be increasing”.** A cursory review of documents that have resulted from ongoing monitoring at the WCS facilities reveals that problems continue to increase, despite repeated assurances from the TCEQ executive director that license conditions would further “protect public health and safety” and/or “the environment.”

In one document in particular, a TCEQ staff member reviewing proposed amendments for both licenses found numerous problems with WCS’s proposals to address license conditions<sup>91</sup>. Of particular concern were several sections indicating that WCS’s modeling for mass air emissions was “not val[i]datable” and that according to published papers it was not “specific enough” to be reliable. The document concludes:

“Risks of both 4100 and 5807 operations seem to be increasing as we go along, not decreasing. That is to say, WCS seems to move in the direction of increasing operational and environmental risks in these various proposals, whether they be amendments or reports required by license conditions.”

#### **D. Additional Concerns with Licenses**

Also attached herewith is Sierra Club’s Motion for Rehearing regarding WCS’s application to dispose of the low-level waste.<sup>92</sup> This explains how TCEQ approved WCS’s application even before WCS had acquired all the property rights for the site. This is contrary to Texas law. Although WCS has since acquired all mineral interests, and the license was accordingly issued, under Texas law, the application should not have even been considered until WCS had acquired the title to and interest in the property. Tex. Health & Safety Code § 401.204. In fact, former TCEQ Commissioner Larry Soward refused to consider or vote on the application during the Commissioners’ January 14, 2009 public meeting because to do so would violate Texas law<sup>93</sup>.

### **3) TCEQ has arbitrarily barred the public from participating in its licensing decisions.**

We also ask that you investigate the TCEQ’s unilateral refusal to allow the public to participate in licensing decisions for the By-Product Material Disposal license and the LLRW Disposal license, despite the presentation by the Sierra Club of hearing requests that more than satisfied the TCEQ’s requirements for obtaining a hearing and the Texas Public Interest Council’s filing that recommended the TCEQ find Rose Gardener an “affected person” and Sierra Club be

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<sup>88</sup> Sierra Club Comments on TCEQ License R04100, p. 23-24, 9/16/2008

<sup>89</sup> TCEQ Draft Environmental Analysis for WCS LLRW Waste Disposal License Application (License R05807), pg. 294, 8/13/2008

<sup>90</sup> TCEQ License R04100 – Executive Director’s Response to Public Comments, pg. 15, 12/2/2008

<sup>91</sup> TCEQ Memo from Louis Gloystein, Subject: 5807 & 4100 Strategic Issues, May 21, 2009

<sup>92</sup> Sierra Club’s Motion for Rehearing TCEQ Docket No 2005-1994-RAW - License R04100, Oct 5, 2009

<sup>93</sup> Webcast of TCEQ Commissioners Meeting, January 14, 2010, [http://www.texasadmin.com/cgi-bin/tceq\\_view.cgi?smil=TCEQ\\_OM011409&part=3](http://www.texasadmin.com/cgi-bin/tceq_view.cgi?smil=TCEQ_OM011409&part=3)

granted associational standing<sup>94</sup>. Incredibly, the TCEQ determined that no one from the public has “standing” to participate meaningfully in the licensing of (1) the by-product disposal facility and (2) the low-level radioactive waste disposal facility in West Texas. Licenses for both of these were approved with no real public input.<sup>95</sup>

For the byproduct materials waste disposal license, TCEQ ruled that neither the Sierra Club nor anyone else was entitled to any type of hearing, since none of the complaining Sierra Club members could conceivably be harmed by the granting of the disposal license. The agency made a series of factual determinations, outside of any hearing process, and concluded that Sierra Club lacked "standing" to participate in a contested case regarding licensing. No representative from Sierra Club was allowed to speak at the public Commissioners' Agenda meeting, during which this determination was made. TCEQ Chairman Buddy Garcia concluded that Sierra Club's hearing request should be denied because the Club failed to show “actual injury or damage.”

(It is worth noting that TCEQ Commissioner Larry Soward, whose term has since expired, dissented and expressed his opinion that Sierra Club indeed established that it had members whose interests were affected in a manner that is different from the general public, and its hearing request should therefore be granted. Commissioner Soward proposed that the application should be referred for a hearing for the benefit of the public interest. He pointed out that this would be the only disposal facility of its kind in Texas and one of a very few in the country. He acknowledged that former agency staff members had raised concerns, in the media, about this application and whether the agency was suppressing a full review of the issues. He noted that a contested case hearing would allow for a full review of all the issues associated with WCS's application. A cd of this meeting is available upon request.)

The Sierra Club case sought standing on behalf of Rose Gardner who lives in Eunice, New Mexico, about 4.5 miles from the disposal site. Her home is half a mile from the highway that runs by the disposal site. Rose and her husband own a feed store located right next to the house. She also owns a flower shop about a half mile north of that. She believed her livelihood would be affected in several ways by the byproduct material disposal site: she relies on travelers from nearby to purchase goods at the feed store and flower shop, and the negative publicity surrounding the opening of a radioactive waste site just down the highway would deter customers. Her shop supplies, including flowers, arrive from Odessa via the highway that borders the disposal site. She makes trips to a rural landfill on the southwest corner of the disposal site, and she travels frequently on the highway that borders the disposal site, inasmuch as it is the highway that takes her east to Odessa, the nearest commercial center. Rose and her husband own acreage near her feed store that is used to raise alfalfa. She has horses, cattle, goats, chickens and a pig, on this land which frequently graze on parts of the fields. The alfalfa itself is cut and dried and used both for their own animals and to provide some hay for the feed store. She has a 200-foot water well, which is at least potentially hydrologically connected to groundwater resources found in the vicinity of the disposal site.<sup>96</sup>

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94 OPIC Response to Request for Hearing - Dec 19, 2008, pg 8 (<http://www7.tceq.state.tx.us/uploads/eagendas/hr-rfr/2005-1994-RAW.PicR.pdf>)

95 Sierra Club's Motion for Rehearing TCEQ Docket No 2005-1994-RAW - License R04100, Oct 5, 2009, pg 3.

96 Sierra Club's Comments and Hearing Request (R04100) - Sep 16, 2008, pg 26-28.

Rose Gardner is not the only Sierra Club member affected by the license. Mrs. Fletcher Williams lives even closer – only 3.5 miles from the proposed WCS site. She is on the highway that borders the disposal site. Her home is located near the railroad line – including a rail spur that is directly behind her house – that serves the disposal site. Mrs. Williams cares for her elderly mother and two young children under the age of six. Because her mother and other members of her family rely on medical care in Andrews, Texas, she frequently travels east along Highway 176 to Andrews, passing directly by the disposal site. She also travels with her family along Highway 176 on the way to Odessa on trips there for shopping or to the airport. She and her family use groundwater wells in the area.<sup>97</sup>

The TCEQ acknowledged (in its response to comments made about its draft license) that numerous potentially-significant aspects of the subsurface hydrogeology regime of the site had yet to be characterized: size of red-bed clay fractures (TCEQ Executive Director’s Response, pp. 79-80), causes of Antlers formation deformities (Response, pp. 80-81), consistent data on the 125-foot and 185-foot subsurface sand layers (Response, p. 81), consistent borehole data (Response, pp. 81-82), the causes of gypsum in the Dockum clay fractures (Response, p. 82), and so forth. Thus, the license requires WCS to verify the subsurface geology and hydrogeology before commencing construction. Nevertheless, the TCEQ executive director (Mr. Shankle) determined that “concerns about groundwater contamination against the gradient and over three miles away do not provide a reasonable basis for holding a contested case hearing.” Two of the three TCEQ Commissioners ultimately agreed.

It was plainly unreasonable for the TCEQ to discount to “zero” Ms. Gardner’s (and her customers’) and Ms. Williams’ apprehensions about potential harm associated with the licensing of the byproduct disposal site, which is mostly for highly radioactive “K-65” Fernald wastes. Under TCEQ rules,<sup>98</sup> a contested case hearing regarding the license should have been granted. An appeal of the decision is still pending.

On appeal, TCEQ takes the position that the decision to grant or deny a hearing is, itself, a decision that need only be supported by “substantial evidence.” In Texas, this is far less than a preponderance of the evidence; the “evidence” may actually preponderate against the agency’s decision, yet satisfy the standard. This standard is generally applicable when all parties have been provided an opportunity to present evidence at the agency level, and TCEQ has reached its decision following a review of all of the evidence presented. Accordingly, on appeal, a district court reviews the evidentiary record, compiled at the agency level, only to ensure that some evidence exists to support TCEQ’s decision—even if it’s less than a preponderance of the evidence. But in this case, TCEQ denied Sierra Club an opportunity to present any evidence to support the hearing request. Meanwhile, the “record” on appeal includes five file boxes of information and modeling studies compiled by WCS and TCEQ—information that they claim supports the decision to deny a hearing to Sierra Club—even though it was apparently not sufficient to fully and satisfactorily verify the subsurface geology and hydrogeology of the site. By denying Sierra Club an opportunity to present any evidence of its own, these boxes of

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<sup>97</sup> IBID, pg 28-29.

<sup>98</sup> See 30 Tex. Admin. Code § 55.251 (setting out requirements for submitting contested case hearing); and § 55.252 (setting out requirements for a group or association seeking a contested case hearing). For the definition of an “affected person” or “person affected,” see 30 Tex. Admin. Code § 55.256(a) & (b).

information compiled by WCS and TCEQ easily satisfy the substantial evidence test proposed by TCEQ. Plainly, this substantial evidence standard of review was not intended to apply in a case like this—where all of the “evidence” has been compiled by the interested parties, and the protesting party has had no opportunity to present any of its own. And TCEQ’s position—advocating the application of the substantial evidence standard of review, while denying Sierra Club an opportunity to contribute any evidence—is simply unreasonable and exacerbates an already arbitrary decision-making process.

The same thing happened when WCS sought to get a second license to operate, side-by-side, a Compact low-level radioactive waste disposal site and a Non-Compact Federal low-level radioactive waste disposal site. Sierra Club, again, sought a hearing. Again Ms. Gardner and Ms. Williams were denied "standing." TCEQ claimed that Sierra Club failed to prove injury or harm or that Ms. Gardner and Ms. Williams would be harmed by the facility in some manner that is different from members of the general public, and therefore no hearing was necessary. This effort by Sierra Club relied on largely the same facts, but, this time, Sierra Club gathered affidavits to support its case, even though no affidavits are required by TCEQ rules. In one affidavit a hydrologist with relevant waste depository experience, stated that "I can attest that the geology [of the disposal site] is quite complex and there is a possibility that contaminants in groundwater can migrate into wells as far as 5 miles from the WCS site."<sup>99</sup> In another affidavit by a chemist with 20 years of experience in analyzing other radioactive waste dump sites made the point that other all six of the “full service” disposal sites such as Beatty, Sheffield, Maxey Flats have demonstrated the risk of leakage -- technological barriers notwithstanding -- is high, and a hearing on any of these disposal sites is justified.<sup>100</sup> Yet another, by a PhD physicist with over 30 years' experience with radioactive waste issues, pointed out numerous unresolved questions regarding the groundwater dynamics and aquifer (the Ogallala) saturation of the area beneath the disposal site, the projected (and licensed) site inventory, and the adequacy of the financial assurance required under the TCEQ license. Despite all this, the TCEQ ruled that no hearing was justified and again TCEQ defended this decision on appeal by claiming that the decision (i.e., that no one could reasonably expect to be harmed), itself, need only be supported by "substantial" (less than 50%) of the evidence.

Real and meaningful public participation is the supposed goal in radioactive waste management in Agreement States, but it is unclear whether TCEQ would ever allow any person to qualify as an “affected person” entitled to a hearing, under its narrow and tortured interpretation of the law.

By contrast, attached are three documents related to the Louisiana Energy Services, L.P. (“LES”) application for a license for a uranium enrichment facility (attachments 9, 10 and 11). LES’s application for a license went to the licensing board of the NRC for consideration. Interested parties sought to intervene in that licensing action and raised contentions regarding deficiencies with the application. The NRC order granting a hearing request acknowledges that those parties have standing to participate in the licensing action.<sup>101</sup> In the second document, the board decided which issues were valid and warranted a full hearing. At the bottom of page 4, Subsection A

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<sup>99</sup> Sierra Club’s Reply to Responses to its Hearing Request, Jan 12, 2009,” Affidavit of George Rice, page 44, paragraph 12.

<sup>100</sup> IBID., Affidavit of Diane D’Arrigo, pages 47-50.

<sup>101</sup> Nuclear Regulatory Commission Order in the Matter of Louisiana Energy Services – CLI-04-15, NRC Docket 70-3103-ML, May 20, 2004

“Standing”, the board confirms the parties’ standing to participate. In Note 4 on the next page, the board states that parties, in support of their standing contentions, provided declarations from individuals living distances of between 2.5 and 22 miles from the proposed facility.<sup>102</sup> One of those individuals was Rose Gardner’s husband, who resides with her, and another was Fletcher Williams. What is significant is that the NRC Board considered declarations from individuals as far as 22 miles from the proposed facility. The third document is an Opinion from the Court of Appeals in Washington D.C. in which the Court confirms that interested parties have standing to challenge the license.<sup>103</sup>

To summarize, the NRC and the Court of Appeals in D.C. acknowledged that both individuals and organizations had standing to challenge the license for the nearby LES site, and yet the TCEQ, faced with similar standing requests with similar, if not stronger contentions backed up by affidavits, determined Sierra Club – on behalf of its members -- was not entitled to a hearing regarding the WCS disposal licenses. This effectively results in the denial of any public participation. With concerned citizens living within 5 miles of the proposed facility and experts stating that the hydrogeology of the site is uncertain, nothing more should be needed to obtain standing and a hearing in order to publically scrutinize the license application. WCS seems to be shown favoritism in their dealings with TCEQ.

**4) TCEQ’s lax enforcement of permits has engendered disregard for health, safety, and legal concerns on the part of WCS.** TCEQ has failed to effectively enforce WCS’s Radioactive Materials Storage License, instead deferring repeatedly to the judgment of the regulated private company, WCS. TCEQ has allowed the company to accept waste not explicitly authorized by TCEQ in its interpretation of the storage license.

Radioactive waste from Studsvik, a radioactive waste processing company in Tennessee, is currently being stored at the WCS storage facility in Andrews County, Texas. Documentation of communications reveal that early on WCS believed that it needed to amend its license before it could accept the Studsvik waste is attached.<sup>104</sup> WCS even submitted a plan for seeking the license amendment.<sup>105</sup> Then, in early 2009, WCS dropped that idea, concluding that its license was fine as is and that no amendment was necessary before it accepted the Studsvik waste.<sup>106</sup> TCEQ disagreed.<sup>107</sup> WCS accepted the waste anyway.<sup>108</sup> The TCEQ literally stood by and watched. Forrest Wilder explains in a Texas Observer article that WCS never sought to amend its license before accepting the Studsvik waste.<sup>109</sup>

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<sup>102</sup> NRC Atomic Safety and Licensing board, Opinion in the Matter of Louisiana Energy Services, Docket 70-3103-ML, Jul 19, 2004, ,” pages 4-5.

<sup>103</sup> United States Court of Appeals for the District of Columbia Circuit - Opinion in the Matter of Louisiana Energy Services No. 06-1301, December 7, 2007, section II, pages 6-8.

<sup>104</sup> WCS request to TCEQ for license amendment for Studsvik Waste, License L04971, Jan 25, 2008, pg. 1

<sup>105</sup> WCS request to TCEQ re R04971 Term Storage Provision - WCS-Studsvik LLRWS Initiative, May 14, 2008, pg. 2

<sup>106</sup> Letter to TCEQ Executive Director from WCS counsel re R04971 amendment 47, June 2, 2009, pg 1.

<sup>107</sup> Letter from TCEQ to WCS re Studsvik waste receipt and storage, May 20, 2009, pg. 1

<sup>108</sup> R04971 License Review Sheet Log no 2009-06-0004, entry under Jun-8, 2009

<sup>109</sup> Texas Observer “Radiation, Immigration and Secret Love,” by Forrest Wilder, Jan 12, 2010, pg. 2

As late as August 2009, the TCEQ staff was requesting additional information about the waste already stored at the WCS site. In an email exchange occurring between TCEQ staff and a staffer from the Tennessee Department of Environment & Conservation questions were asked regarding the expected doses of exposure for WCS workers handling the Studsvik waste.<sup>110</sup> At this late date, TCEQ staff was still attempting to acquire critical information by contacting the Tennessee environmental agency. Whether TCEQ staff's inquiries were ever satisfactorily addressed is unknown to us.

From the TCEQ database it appears that the license has not been amended to address the Studsvik waste, but WCS has accepted the Studsvik waste and is storing it. In short, WCS is being allowed to act with impunity.

Not only was the Studsvik waste unauthorized by the WCS storage license, but the waste has now been sitting at the WCS site for more than 365 days, a clear violation of the WCS storage license. WCS sought to amend its license to allow it to continue storing the Studsvik waste beyond the 365-day storage limit which expired on June 8, 2010. TCEQ denied their request May 24, 2010<sup>111</sup>.

On June 9, 2010, Public Citizen and SEED Coalition submitted a complaint to TCEQ asking that enforcement action be taken against WCS for violating the terms of its storage license by holding the Studsvik waste beyond the limit imposed by the license which expired June 8, 2010<sup>112</sup>. The TCEQ responded to that complaint saying that it would issue a Notice of Violation (NOV) within two weeks, but that WCS would not be fined at this time, nor would WCS be required to remove the waste or return it to Studsvik.

It is apparent that WCS must have anticipated little or no enforcement action would be taken. In testimony before the Compact Commission in December of 2009, CEO Rod Baltzer told the Commissioners that WCS could hold the Studsvik waste indefinitely, despite clear terms in its TCEQ license stating otherwise. By April 16, 2010, WCS applied for an extension of the 365-day storage limit, which was denied.<sup>113</sup> WCS should have been prepared to move the waste upon expiration of the permitted time limit. TCEQ should have been ready to fine WCS for permit violations or at minimum, demand that the waste be returned.

Instead, in a quote taken by the radioactive waste trade journal *RadWaste Monitor*, WCS representative Dan Burns expressed a flagrant disregard for the opinion of TCEQ on the subject of waste storage limits.

“We are going to continue to store the waste past the 365 days, until we can’t,” he said.

While officials from Studsvik in Tennessee claimed to have contingency plans which included taking the waste back from Texas, the WCS officials were obstinate, at least in part because they believed TCEQ would not punish them.

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<sup>110</sup> Email and phone log entries between TCEQ and TNDEC re worker dose info for Studsvik workers, Aug 13, 2009 to Aug 18, 2009. pgs. 1-3

<sup>111</sup> TCEQ Notice of Violation to WCS for interim storage of Studsvik waste, Jul 13, 2010, pg. 1

<sup>112</sup> IBID, pg. 5

<sup>113</sup> IBID, pg. 5

“There’s no indication that we’ll have to send those offsite anywhere,” said Jeff Havlicack, vice president for business development at WCS.<sup>114</sup>

A “Notice of Violation” was issued by TCEQ on July 13, 2010. The recommended enforcement action was to ask WCS to enter into a “Compliance Agreement” by August 30<sup>th</sup><sup>115</sup>. To date, the waste continues to reside at the WCS facility in violation of the company’s license.

## CONCLUSION

A thorough review of TCEQ licensing, compliance and enforcement practices related to WCS is needed. Grave concerns have been raised by experts, TCEQ staff, and former employees in the licensing of WCS’s radioactive waste facilities. Organizations like the Sierra Club that have requested the opportunity to demonstrate potential problems with the proposed site and license conditions have been denied that opportunity in violation of state rules and statutes. Former executive directors at the agency have used their influence to help the private company standing to profit from the licenses recommended by those same directors.

In submitting this document, we request that your agency review the granting of the two licenses recently issued by the TCEQ for the disposal of byproduct materials and low-level radioactive waste and assess whether TCEQ is meeting federal requirements for proper licensing, public participation in license decision-making and enforcement of licensing conditions as part of their delegated program to oversee management of radioactive waste.

We are happy to provide any information requested and respond to any questions you have related to these matters. Tom Smith, Director, Texas Office of Public Citizen, is available as a primary contact and can direct you towards additional information or other concerned citizens or organizations. He may be reached by phone at 512.637.9468 or by email at [smitty@citizen.org](mailto:smitty@citizen.org). Thank you.

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114 Radwaste Monitor Vol 3, No. 20, “WCS, Studsvik Face Questions on Future of Stored B&C Waste,” June 28, 2010, pg. 2

115 TCEQ Notice of Violation to WCS for interim storage of Studsvik waste, Jul 13, 2010, pg. 1