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November 27, 2007

VIA FAX AND MAIL

LaDonna Castañuela  
Office of the Chief Clerk, MC 105  
TCEQ  
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Austin, TX 78711-3087  
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Dear Ms. Castañuela,

The Sierra Club is submitting comments on the draft radioactive materials license (R 05807) prepared for Waste Control Specialists for a Byproduct Material Disposal Facility. On behalf of our nearly 24,000 members living in Texas as part of the Lone Star Chapter of the Sierra Club, as well as our members in New Mexico through the Rio Grande chapter, we believe this application should have never received a draft license because of failures, among others, to:

1. accurately characterize the geology and hydrology of the proposed site,
2. the failure to take into account severe weather events and their impacts – including both high winds and high rain events;
3. the failure to consider the full range and impacts of traffic accidents;
4. the failure to look at the potential impacts of the nearby RCRA hazardous waste landfill and the possible low-level radioactive waste permit;
5. the failure to submit a more finalized design of the site, including the degree to which the site will use railroads to bring waste in; and

6. the failure to consider all alternatives to the proposed burial of byproduct materials using what is in essence a RCRA-like Subtitle C design.

The Sierra Club believes that the TCEQ should not have prepared a draft license for WCS because the applicant did not meet the requirements spelled out in Title 25 TAC, Chapter 289. More specifically, we will discuss those parts of the requirements that have not been met by the applicant, which therefore means the application should not have been declared technically reviewed and complete nor the draft license prepared. Thus, because of oversights in the application process, we believe that the TCEQ and applicant can't guarantee that the health, safety and public welfare of the communities surrounding the site, as well as the natural resources of the area, won't be adversely affected. We are therefore requesting that the application be remanded to the applicant. Only after the applicant has met the basic requirements of the existing rules should a draft license be prepared and released at which time Sierra Club would once again review the application and draft license and provide additional comments.

While we believe the license should not be granted based on not meeting Title 25 TAC Chapter 289, if TCEQ insists on proceeding with the draft license as prepared, then Sierra Club must request a public meeting on behalf of approximately a dozen members of Sierra Club who reside in Lea County, New Mexico as well as one member living in Andrews County, Texas and members living in other nearby counties. Finally, because several of these individuals have indicated their belief – and ours – that the granting of the license and opening of the facility has the potential to impact their health, livelihood and financial well-being in a way not common to the general public, Sierra Club requests a contested case hearing on their behalf. The individuals, their addresses and a description of how they would be impacted is found further on in these comments. But again, we take the position that the application does not meet the requirements under Texas law, and that no draft license should have been prepared.

### **Background and Analysis: The Application Does Not Meet Statutory Requirements**

What is amazing is that both the original agency reviewing the application– the Texas State Department of Health Services -- as well as the Texas Commission on Environmental Quality worked continuously with the applicant and allowed 17 revisions to be submitted and yet, if the October draft Environmental Analysis is any indication, the applicant still was not able to meet the requirements.<sup>1</sup> Yet the agency, rather than simply declining to issue a license, prepared a draft license that is full of caveats and attempts to force the applicant to meet basic

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<sup>1</sup> TCEQ. October 22, 2007. Draft Environmental Analysis: License Application Review for By-Product Waste Disposal from Waste Control Specialists LLC in Andrews County, Texas, License No. R 05807.

requirements that should have been contained in the original application. Thus, as purely one example among many, TCEQ is requiring the applicant in License Condition 43 to verify and “to locate the top of the zone of saturation”, which should have already been characterized sufficiently during the application process to meet TCEQ’s analysis and assure the public that wastes would not be placed in a saturated sand or clay formation. By the submittal of these comments, Sierra Club is asking the agency to follow the law and remand the application until such basic data is provided and the site characterization required is verified.

The October Draft Environmental Analysis is in itself insufficient. The agency and its predecessor put together six separate studies that were then combined into the October 2007 report. This consolidation process is apparent in the document in which key questions which arise in one section of the report are not adequately answered and readers are referred to another section. Still, however, there is not adequate consideration of how the separate reviews must support one another. TCEQ based its decision on the “NEPA-style environmental analysis conducted for TEXCOR report (TDH, 1991),” in which individual sections were analyzed separately and then consolidated but no overall report was prepared. The Sierra Club questions this approach and believes the separate reporting allowed an application to proceed that was not sufficiently analyzed, or better stated, allowed separate reviewers to ignore flaws pointed out by others. Still, our major criticism is not the Analysis itself, but the failure of the TCEQ to do what the Analysis made apparent: deny an application that did not meet basic criteria.

Our message is relatively simple. WCS should not have been granted a license.

### **Site Characterization Lacks Details**

The second chapter of the Environmental Analysis – Geological Review -- makes it clear that even the agency did not believe that the applicant had sufficiently characterized the hydrology, geology and sedimentology of the 16 acres on which the byproduct material disposal is to occur.

Thus, 25 TAC 289.260(o)(14) (B) requires examination of the characteristics of the underlying soils and geologic formations, which should include extent, thickness, uniformity, shape and orientation of underlying strata, as well as borehole information. In an application which relies on the local geology to assure that no migration of radioactive materials or waters containing radioactive materials occurs to the aquifers below within the next 1,000 years (or 200 at least), a basic and accurate characterization and understanding is an absolute requirement. But the Analysis makes it clear that the applicant utterly failed to accurately characterize the area in question.

Thus, for example, the Analysis notes that the applicant failed to provide basic information about fracture size when discussing the fractures found by boring logs in the red clay beds, which is the key natural layer protecting migration of materials. Thus, the report states:

“...at no time is any indication of fracture size provided. Neither is any information on orientation consistently reported. The nature, density, and extent of fracturing is undetermined, and this type of information is necessary when attempting to model the potential flow of leachate and transport of radionuclides.”

Similarly, in characterizing the site, the report notes that there is no attempt to understand why the thickness of the Antlers formation is so varied and does not seem to follow their own suppositions so that “there are inconsistencies.”

Similarly, in terms of the 125-foot sand layer – which is key because it is just below the lowest parts of the proposed disposal cells – the Analysis notes that contradictory information is presented. Thus, as an example, while the site Isopach maps show the 125-foot sand present in the northern section of the disposal site, the narrative states that that sand layer is absent in the northern section. Similarly, there are contradictions in the application about whether the 185-foot sand layer is largely continuous under the site – an important consideration because sand layers can contain pockets of water and be saturated – or not. According to the Analysis, within the space of five pages, the narrative of the Groundwater section states that it is continuous and also that it is not (TCEQ 2007: 26).

Because the 125 layer “lies about 12 to 15 feet beneath bottom of proposed by-product material landfill,” the staff notes that “Any release will first encounter this sand and ultimately saturate it, making it imperative to have a good idea where there release may go, how far it may go and at what rate.”

And yet the application is not only filled with inconsistencies about the local site specific geography, including quite shockingly, even providing bore data that were revised – but not sealed by the geologist – “bringing the validity of these logs in question.” Indeed, the report notes that information provided with boring logs in the byproduct disposal application appear to differ in the separate Low Level Radioactive Waste Facility application, even though it appears to be the same bore holes. Again, the Analysis notes the lack of specificity about the size, presence and orientation of fractures within the site.

Similarly, the Analysis notes a controversy about the formation of antitaxial gypsum in fractures found in the area of the Dockum substrate. TCEQ expresses concern that this could be related to salt dissolution – which can lead to subsidence – but which the applicant does not believe to be the case.

In fact, so concerned is the staff about this confusion about the 125 and 185-foot sand layers, and a number of other issues covered in the Analysis that on page 28 of the report they conclude:

“Staff finds that such internal inconsistencies and contradictions taken in conjunction with the lack of detailed mapping for all of the Cooper Canyon sands indicate that the geologic characterization *has not been verified*. This will have further implications in trying to develop a thorough understanding of the hydrogeology. This is not meant to say the site is unsuitable, but rather that further demonstration through verification studies and monitoring is necessary.”

Again, Sierra Club agrees with TCEQ staff that the application contains many inconsistencies and fails to live up to the requirements of the rules, and maintains that this verification – a more trustworthy characterization of the proposed site -- must occur before a license can be granted.

In the same chapter, the Analysis notes that in terms of soils and erosion, the TCEQ reviewer recommends a condition to set up an erosion pin array to develop data on wind and water erosion because the applicant – despite having an application that is more than three years old – failed to place a simple erosion pin array in the area of the byproduct disposal facility. Surely, the requirement for one year of environmental monitoring data before a license could be granted should have required this as a basic condition.

**Seismic Activity.** Although seismic activity does not appear to be a serious concern, and a seismic hazard evaluation was performed, it does not apparently include the largest earthquake – a magnitude 5.0 event recorded in 1992 near Rattlesnake Canyon. The evaluation should be resubmitted taking into account the most serious earthquake in the region to assure the public that seismic activity could not impact the site.

**Subsidence.** The Environmental Analysis again notes the contradictions within the application in regards to salt dissolution – which can be related to subsidence issues – since cross sections provided by the applicant indicate in one case a depression due to salt dissolution and the other does not. A consultant for the TCEQ – Dr. Thomas Gustavson – notes that there is contradictory evidence about the issue, and while it is probably unlikely that salt dissolution has been recent, because of the possibility of a rapid subsidence, further study is preferable. The Sierra Club maintains that further study of the subsidence/salt dissolution issue is needed before any license could be granted.

**Groundwater Hydrogeology.** The dry line proposed by the applicant – the line which separates the part of the Ogallala Antlers Gatuña aquifer formations which are saturated from those that are unsaturated – is again full of contradictions and

misinformation. Key to this saturation component is the exact nature of the four Sand units (225-foot, 180-foot, 125-foot and 80-foot) and TCEQ notes that the application lacks basic data on the thickness of these sands and that basic **hydraulic conductivity, porosity and saturation data** are not always present. Of most concern is the lack of precise data or rather contradictory data about the saturation potential of these sand zones, in part because of confusion about the boring holes and completion logs used by the applicant (see page 35 of Analysis). Another aspect criticized by TCEQ is that because of the presence of "slough" in the bottom of some boreholes, which prevent accurate readings, information about saturation is unclear. Even after the agency requested additional cross sections, the Analysis notes "these data produced a picture of an erratic water level." Thus, if an accurate and reasonably correct characterization of groundwater hydrogeology is a necessity, the applicant has failed to do it.

Unfortunately, rather than force the applicant to redo this section of their application, or simply deny the application, the agency has added a license condition – No. 43 -- for them to resurvey to better calibrate the dryline since there was confusion as to whether a resistivity survey might indicate potential for saturation under the site. This is unacceptable.

The Analysis notes that the applicant presents "an unconventional representation of a hydrogeologic system." Indeed, their hydrogeological conceptual model shows spaced equipotential lines, as opposed to widely spaced equipotential lines found above, and the cause of this tightening up of lines is not ever explained. Similarly, there are contradictions between the mapping presented by the applicant and the boring logs in terms of saturation data.

In fact, the Analysis is extremely critical of the applicant's conceptual model since the applicant did not provide the basic information on which the model was based, and only after repeated entreaties did the applicant make clear "the speculative nature of the sand units" found in their conceptual model, and even after making this clear in Application Revision 16 (April 3, 2007), never "updated the cross sections to reflect this."

And the Analysis's criticisms do not stop there. For example, TCEQ notes that the applicant has not addressed the possibility that a potential pathway for leachate to migrate into the 80-Foot Sand intersecting with the OAG formation exists.

The applicant only addresses the dry line as being related to the location of playa recharge and does not address how rain infiltration through the OAG unit affects the dry line. When an August 2007 groundwater elevations presented to the agency showed two wells – supposedly in the dry line – with between 1.7 and 5.0 feet of water, the applicant blamed it on surface ponding. The very fact that an occurrence of water within the supposed dry line used by the applicant in modeling shows that more verification of the exact nature of hydrogeology is

needed. Thus, TCEQ notes “several borings/piezometers that were dry when originally installed now contain water, so it is incorrect to use them on a map as a dry data point for 2007 saturated groundwater thickness or groundwater elevation maps.”

Similarly, the Analysis notes the failure of the applicant to “support the uneven spacing of the equipotential lines in the Trujillo” and “provide evidence to support the depth of the Trujillo and groundwater flow direction.” Another issue is the lack of clarity of “the degree of the importance of fractures have to groundwater modeling.” Conclusion? “Further verification of the nature of fractures is needed.”

But instead of verification of the exact nature of the site, the applicant defends its model as accurate. And TCEQ, despite criticisms of applicant, simply adds license conditions to try and overcome an incomplete and contradictory application, usually taking the applicant’s explanation at face value. Thus, in terms of the presence of water in wells in the supposed dry zone, the agency accepts – based on verbal communication – that the water is from misdirected runoff drainage and adds a condition to require redirection of the supposed affected drainage as well as addition monitoring of water level elevations.

Similarly, because the applicant has essentially ignored the 125-Foot Sand, mapping it to the east as a confined unit, but as an unsaturated unit below the site, serious questions remain about its nature, whether it is confined or confined, saturated or unsaturated. Given that this is the unit closest to the buried waste, such contradictions make it apparent that the TCEQ should not have granted a license. While TCEQ has added a draft license condition to require monitoring of the 125-Foot Sand, precaution should first require the applicant to verify its true nature and model the likely results of movements of any leachate that escaped the protective layers below the waste disposal site.

Indeed, the groundwater monitoring is discussed as being on the whole problematic or at least contradictory. Thus, while the model – called the Matrix Dominated Flow – which looks at movement to the 225-Foot Sand layer assumes a 1.0 foot standing head of leachate, the process engineering report assumes a 7.0 foot standing head of leachate during operations following a rain event. The model makes no assumption about the presence of fractures that could aid the movement of liquids down to the 225-Foot Zone even though boring logs indicate the presence of fractures. The Environmental Analysis says “it was not possible to evaluate parameters of .... hydraulic conductivity” and “it is unclear which intervals were used for porosity data.” Concluding about the groundwater monitoring models, the Analysis states: “The presentation of the data made review difficult, and the report’s inconsistencies detract from the credibility of the report.”

An independent review of the modeling by the Bureau of Economic Geology concluded that the applicant had not adequately characterized "matric potential," which can be a factor in fluid flow, perhaps even a greater factor than saturation. Again, however, rather than forcing the applicant to immediately follow-up with a more complete study, the TCEQ chooses to add a license condition to address this oversight. In fact, this additional condition is even more unbelievable given that the information provided by the applicant had prepared a matric potential study for the low-level radioactive waste site which provides saturation data which "is not in agreement with" the by-product materials license application.

Indeed, a separate model submitted to TCEQ for the low-level radioactive waste disposal application presents the top of the water table intersecting the base of the by-product material landfill, which "shows that groundwater will be in contact with the by-product material, which shows that the site features do not assure isolation of the waste material because hydrogeologic conditions do not immobilize or isolate contaminants, but rather promote their mobilization." In fact, TCEQ concludes that the applicant's approach to determining saturation is not correct. They say, in fact, that their own data suggests that claystones and siltstones of the Dockum are about 70 percent saturated between 70 and 135 feet across the site, which would represent a much more serious situation for radioactive waste to be buried within part of this zone. But again, rather than rejecting the application or requiring further study they have added a license condition "to undertake additional geophysical/geotechnical investigations for verification purposes."

While TCEQ hired their own consultant – BEG – to model as well, they conclude that it is possible for the waste to reach saturation zones before the 200 years required by statute are reached, specifically for uranium, but they say even so, the actual concentration would not exceed background levels. These independent models were performed late in the process, and as late as September of 2007, the applicant was meeting with TCEQ staff to argue about basic parameters such as where the water table is located.

Synthesis: The Geologic Review of the Environmental Analysis is clear. WCS did not adequately characterize the site, including basic requirements on porosity, the water table, saturation and fissures, and potentially ignoring the only major earthquake to occur recently in the area. The license should not be granted because the application does not assure that contaminants can be contained for 1,000 years, or at least for 200 years and the applicant fails to provide basic verification of site conditions.

#### Socioeconomic Characterizations

The Environmental Analysis notes that the NUREG-1569 requires that the applicant provide information on population statistics, food production data or

information regarding transient population such as visitor statistics for schools, plants, hospitals, sports facility, residential areas or parks. However, the applicant did not provide this type of data. The TCEQ concluded that the general population statistics were sufficient when combined with conservative assumptions of radiological dose analysis that overcome the lack of specificity of population data at the site. The Sierra Club does not agree with this approach, in part because we believe the largest impacts may be on transient populations that come into contact with the site at certain times of the day. Again, we believe that until the applicant followed the guidelines used by TCEQ – based on the NUREG-1569 – no license should be given because site-specific information was not developed.

Texas rules at 25 TAC 289.260 (o) (28) and 25 TAC 289 (f) (1) (A) requires that prior to any major site construction a preoperational monitoring program shall be in operation for a full year. The applicant is required to conduct at least one year of air samples, water samples, vegetation, food and fish samples and soil and sediment samples, as well as ambient gamma radiation measurements. While some of these have been done, others have not been done to establish the background levels needed to make sure that groundwater can be cleaned up to background levels if contamination occurs. Thus, for example, groundwater samples were not accurately measured because of suspended solids left in the unfiltered samples, and the TCEQ adds a license condition to require additional samples after removing suspended solids. This is again unacceptable.

Additionally, because in part because of the presence of the RCRA hazardous waste, and because the radioactive waste may also include non-radioactive hazardous constituents, the TCEQ in the Environmental Analysis adds a license condition to address non-radiological baseline and operational groundwater monitoring. Again, the baseline data should be developed even before a license is granted, not afterwards.

Similarly, surface water samples and sediments samples were not taken to a great extent as part of the application process and again TCEQ has added additional sediment samples in the license rather than forcing the applicant to conduct them prior to the issuance of the license. The same pattern is repeated for fauna samples. None were conducted so TCEQ adds a condition.

What is apparent in the application is that WCS failed to follow Texas rules and statutes in terms of pre-operation sampling and TCEQ failed to insist the applicant follow it. Because TCEQ took no environmental media samples of their own – by choice – they are now relying on the applicant to design and conduct pre-operational and post-operational monitoring AFTER THE LICENSE IS GRANTED with no way to independently verify those results.

How the TCEQ—after continually citing the applicant's failure to establish an accurate or complete monitoring program for sediment, groundwater, surface water and even air emissions can then conclude on page 63 that "the applicant's preoperational monitoring programs meets ... the requirements of 25 TAC 289.202 and 289.260 (o) (28)" is dubious at best.

Again, the Sierra Club believes the application should either be rejected or the applicant should be required to conduct a year of pre-operational data before a revised application can be submitted and a license granted – if the data shows the site is appropriate and meets basic parameters.

**Operational Guidelines.** Sierra Club believes the application does not adequately address transportation issues, including the possibility for accidents on or near the site, including during the transfer from the railroad cars to trucks.

For example, while the proposed license and application generally indicates receipt of waste by truck, the application also mentions receiving waste by railcar under the existing byproduct process and storage license. However, TCEQ notes that the railcar unloading facility is not considered by the agency to be covered by the storage license (known as License L04971). The exact process for receiving waste from the railcar and the transfer to trucks needs to be better explained and the potential spills need to be modeled for and operating guidelines must be developed.

In addition, the Environmental Analysis suggests that there is confusion in the facility organizational chart whether the Director of Environmental, Safety and Health and the Facility Radiation Safety Officer are one and the same position or separate individuals, and a condition is added to the license to make certain that the RSO has a direct line to report problems to the company president, which is not the case reported by WCS. Sierra Club is supportive of this change, but again believes that before a license is granted these organizational problems should be fixed.

The Environmental Analysis also reveals a number of problems related to the applicant's plans to monitor the dose of radiation to individual workers and suggests multiple license condition to correct these mistakes.

Civil Engineering Assessment and Process Engineering Review. The civil engineering section of the Environmental Analysis conducted by TCEQ details "unresolved issues" contained in the WCS application, including the lack of clarity on the ground water level and the lack of calibration of the groundwater model to the specific site; the failure to effectively address wind speed in discussing airborne pollutants and materials; the failure to **COMPLETE A FINAL DESIGN**; and the failure to design actual facility buildings as part of the application. In terms of the failure to provide a complete final design, the civil engineering assessment notes that the applicant is considering a railroad loop encircling all

permitted sites, but the fact that this would impact all modeling of surface drainage designs is not considered in the application. Both the civil engineering assessment and process engineering review also seems concerned about the closure plan and its lack of specificity (see below), particularly beyond the five-year period that is covered in more detail in the application.

The Process Engineering Review criticizes the application for providing “only a fragmented, incomplete picture of the hydraulic mass balance for contact water (Page 183).” In other words, information about the wastewater or contaminated water that might be in the landfill cells is incomplete and not sufficiently presented.

Sierra Club is particularly concerned, as is the Process Engineering Review, by the choice made by the applicant in terms of the 100-year, 24-hour rainfall, as well as a less intense rain but more extended rain event, such as the historical highest 8-consecutive day rainfall period. Table 1 shows the choices made by the applicant and other values that the Process Engineering Review points out perhaps should have been used by the applicant. The apparent choices made by the applicant allows them to size pumps for a lesser requirement than is needed to assure that the inter-cell berm is not over-topped, contaminating clean captured stormwater in adjacent cells that have been dug but not filled with radioactive materials, or even, perhaps, running off-site.

In fact, it is the process engineering review that suggests that WCS did not evaluate the worst-case scenario, and therefore has not properly designed their landfill. They do not, for example, evaluate the “non-contact” uncontaminated rainwater captured in newly constructed cells, nor the potential of non-contact water to contact waste resulting from wind erosion and dispersal or model or discuss the potential for cross-contamination with the proposed low-level radioactive waste site nor the existing RCRA site. Simply put, WCS did not take into account the presence of this non-contact water in its hydraulic balance study and did not assess the true worst-case scenarios, even based on recent rain events. The Sierra Club believes again that the use of selective data and the failure to address the “worst-case scenario” represents the failure of the applicant to meet basic statute and rule requirements. Thus, the license is therefore not protective of public health and welfare of our members.

Table. What TCEQ suggests WCS could have used to look at their design of landfill to prevent contamination and accumulation of rainwater

	<b>Description</b>	<b>What WCS Used</b>	<b>What They Could Have Used</b>
Extended Rainfall Event	Rainfall over several days	8-day rainfall	Hobbs received over 9 inches in a three-day period from September

			15-17, 1995
Intense rainfall	100-year	Value over 24 hours	6-inch total, with 4.3 inches of run-off
			7.5 inches fell in Hobbs on September 15, 1995

Similarly, no lay-out drawings are provided of the location of tank trucks or portable pumping units that are proposed to move contaminated water from the leachate pump system to the two 500,000 gallon wastewater storage tanks. The process engineering review is troubled by the lack of specificity precisely because the system could be overwhelmed by major rainstorms, particularly if several occur in a relatively short period.

Similarly, the wastewater storage tanks will, according to the application, be connected by pipe to an off-site wastewater treatment plant but not final designs are offered for the plant and “no indication that winter freeze protections of any above-ground water transfer lines have been provided (Page 186).” Similarly, the application does not discuss how sludges formed in these tanks will be handled. Overall, there is not sufficient attention to a wastewater management strategy. Sierra Club believes based on the application that the site could present the potential for contamination and run-off of stormwater during major storm events – or a series of major storm events -- and believes that unless significant changes are made to the application, a license can not be granted.

Particulate Air Emissions. Similar to the lack of attention to severe rain events, the applications discounts the very real impact of high winds on dispersal of radioactive waste materials or on moving contaminated waters from one area to another. While the applicant states they will not place waste in the landfills during winds over 25 mph, that does not prevent waste that is already in the landfill – which will not be given a soil cover during emplacement – from blowing off-site. The waste is thus subject to wind erosion and displacement at all times until the landfill cell is finally covered. The Process Engineering Review believes that mass emission rates of particulates used in a model “may have been misapplied” by the applicant and notes, furthermore, that the applicant uses an empirical relationship between wind speed, and material moisture contents to discuss wind impacts, but only applies it up to 25 MPH. This is outrageous given that surface winds are known to exceed 50 MPH in Andrews County.

The Review concludes “it is reasonable to conclude that worst-case mass emissions may have been understated, perhaps significantly, ... and therefore actual off-property GLCs (ground level concentrations) may have been understated.”

Again, the fact that the applicant did not even consider a reasonable worst-case scenario for high winds and lower moisture content is indicative of the overall problems with the application.

**Accidents.** Repeating the theme, the WCS application designs a facility in mind in an area with a relatively high potential for tornadoes, but statistically an extremely low probability of hitting the exact location of the WCS facility, but does not even look at what might happen in a high-wind event, particularly a straight-line wind. For example, according to the Environmental Analysis, winds of some 70 MPH were measured in Lea County, New Mexico, right next door to the WCS site, on June 27, 2007, and yet the application does not address how this might impact the site.

Other oversights or failure to address likely accidents by the applicant includes:

- \*Failure to discuss the potential for accidents, including explosions, due to the co-management of RCRA hazardous wastes;

- \*Railcar transportation accidents, even though the application states that most of the wastes are to be shipped to the Andrews site will come from rail through New Mexico.

Sierra Club is very concerned about a proper analysis of the risks from transportation since the majority of problems facing nearby cities may be related directly to the potential for railway or truck accidents or failures. We maintain that TCEQ can't issue a license until the applicant addresses these potentials, both on and off-site.

Closure Plan. As stated in the Environmental Analysis, the closure plan "appears to be more conceptual in nature than an actual plan" and thus fails to provide specificity on a number of issues, including how they will deal with the wastewater that is proposed to be transferred off-site to wastewater treatment plant. For example, even for the five-year post-closure period, there is no discussion of how to monitor the levels in the leachate and leak detection sumps or remove any liquids. The fact is that the application has designed a RCRA landfill for a byproduct materials disposal site when a RCRA landfill is designed for 30 years followed by a limited post-closure period, while "the time horizon for by-product material is 1,000 years, with a 200-year minimum period of non-detection of releases."

Decommissioning. Sierra Club believes that the decommissioning plan and level of financial security are not sufficient to ensure Sierra Club members living in the area that the plant will be properly decommissioned and cleaned up so that background groundwater and soil levels are maintained while after the plant stops operating. Essentially, the applicant is treating the site as if it were a standard hazardous waste RCRA landfill and not a disposal site with long-term radioactive waste material. TCEQ's acceptance of the WCS's financial security methods puts the workers and neighboring ranches and cities at risk. The

proposed level of an estimated \$4,266,925 seems small when compared with other waste sites run essentially as RCRA hazardous waste cells. As the Engineering Process Review made clear, the failure in the closure plan to identify what would happen with the monitoring of the leachate collection and leak detection sumps means these costs are not even contemplated in the total developed with the applicant. Sierra Club would prefer that rather than relying on a parent company guarantee – a risky idea in today's world of mergers, acquisitions and bankruptcies – that TCEQ require that WCS meet the requirements established in Chapter 37 (T), as proposed in the SB 1604 rule currently being reviewed by TCEQ. While the license establishes a condition that would require WCS to meet these stricter guidelines if the rules pass by June of 2008, we would maintain that TCEQ should impose that condition now. We believe that even in those cases where applicants have applied for a license before June of 2007 with the State Department of State Health Services before SB 1604 went into effect, they should be subject to these stricter financial assurance requirements now since the license has not been granted. Thus, before granting a license, TCEQ should apply these stricter criteria.

Alternatives. We conclude that WCS has never considered to any great extent any alternative other than below-ground burial in a RCRA-style hazardous waste cell system at the proposed site. Indeed the application only has a few pages in its multiple volumes dedicated to looking at alternatives. Another site approximately one-mile away is considered but because the red clay ridge on which the waste burial would take place is not as near the surface, it is discounted. The applicant never considers an alternative to the proposed wastewater collection system and wastewater treatment plant – which is as mentioned not actually designed as part of this application. There is no real attempt to look at above-ground disposal as an option, other than a very cursory review saying it would present too many risks. While such a choice would subject the site to more risk from high winds, it might also better prevent migration to underground aquifers and better monitoring.

In conclusion, Sierra Club believes that the proposed draft license should never have been granted. Title 25 TAC 289.260 (f) (1) requires an “environmental report that includes the results of a one-year preoperational monitoring program” which has already stated the applicant did not meet.

Additional statutes that the applicant failed to meet include 289.260 (g) (2), since they did not indicate how they would notify and report to the TCEQ in the event of a spill or release of different kinds of radioactive materials, as well as 25 TAC 289.202 (yy), as well as 289.202 (g) (3), other notification and reporting requirements that the applicant fails to identify how they will meet. In addition, the applicant does not meet 25 TAC 289.260 (f) (1) (F), since the applicant fails to show how they would verify the material received at the site is by-product material, instead indicating they would rely solely on the by-product material generator/shipper, while also failing to identify how they will verify the validity of a

license or authorization if shipping radioactive material to another person, as required by 289.260 (1) (3).

Of perhaps most concern, in addition to the failure to provide an environmental report is the real failure of the application to convince or provide reasonable proof that the site meets the requirements of 25 TAC 289.260 (o) (2) (B), that it contains "hydrogeologic and other environmental conditions conducive to continued immobilization and isolation of contaminants from usable groundwater sources."

We would suggest that under 289.252 (d) (10), TCEQ has the regulatory authority to deny the license because of the "(C) failure to clearly demonstrate how the requirements in this chapter have been addressed."

We would also conclude that the applicant has continually failed to look at rather obvious issues as part of its application, from the worst-case rain events, to high winds, to all the faults, to potential fissures in the soils, to railcar transportation issues, to the potential for cross-migration of water or materials between the RCRA and by-product materials site. While TCEQ should be recognized for pointing out these basic failures, the fact that Sierra Club is being forced to write this comment on an application that did not merit preparation of a draft license.

Therefore, we request that the Executive Director withdraw the draft license and return the application to the applicant to address the issues raised before resubmitting a complete application.

### **Public Meeting and Contested Case Hearing Request**

In addition to these basic comments on proposed Radioactive Material License Number R05807, the Sierra Club is also requesting that a public meeting be held in the Eunice/Andrews area to receive additional comments and allow our membership and the wider public to make additional comments and ask questions of the applicant and TCEQ. Finally, on behalf of our members that live within 30 miles of the proposed facility, we request a contested case hearing on proposed Radioactive Material License Number R05807, which authorizes the commercial disposal of byproduct material to Waste Control Specialists.

### **Basis of our Contested Case Hearing**

Since 1892, the Sierra Club has been working to protect communities, wild places, and the planet itself. We are the oldest, largest, and most influential grassroots environmental organization in the United States. With over 1.3 million members, the Club is dedicated to help its members explore, enjoy, and protect the planet. This includes our membership in Lea County, New Mexico. While the

Sierra Club has approximately 12 members in Lea County, New Mexico, and we believe these individuals to be concerned about potential problems with the proposed issuance of a license to Waste Control Specialists, we are through this letter identifying two members in good standing that have specifically asked us to request a contested case hearing on Radioactive Material License Number R05807 on their behalf. Other individuals who are Sierra Club members may decide to make similar requests through our organization if given the opportunity. These two individual members will be adversely affected by the issuance of the license.

Rose Gardner lives in Eunice, New Mexico, approximately four miles due west from the proposed WCS commercial byproduct facility. She is more impacted than the general public by the proposed issuance of the license however. The physical address of her home is 1402 Avenue A, Eunice, NM 88231. Her home is just off of Route 207, approximately one to one-and-half mile from the intersection with Highway 234/Highway 176. In addition, Mrs. Gardner and her husband own a Feed Store located right next to the house. In addition, Mrs. Gardner owns a flower shop, which is located just due north of downtown Eunice at 1700 Main Street on Route 207, again about one to one-and-a-half miles the other direction of the intersection with Highway 234/176. Mrs. Gardner says the opening of the WCS byproduct material disposal site will impact her livelihood in several ways. Because she relies on travelers from outside Eunice to purchase goods at the feed store and flower shop, the negative publicity surrounding the opening of a radioactive waste site just down Highway 234/176 will impact her business. Furthermore, Mrs. Gardner's wholesalers for the flower shop is located in Odessa, Texas and the family uses Highway 234/176 frequently for trips to Odessa, while supplies also arrive to the shop from Odessa by truck. In addition, because both the feed store and the flower shop accumulate trash and debris – such as bags in which the feed is stored and boxes in which the flowers arrive – Mrs. Gardner and her husband periodically travel to the local waste dump owned by Waste Management, which is located directly across the New Mexico/Texas line and within 500 meters of the WCS site. Thus, any dispersal of radioactive material from the site to the west, or any traffic accident involving toxic or radioactive material along HW 176 have the potential to impact her livelihood and health.

In addition to her retail businesses in Eunice, Rose Gardner and her husband own approximately 15 acres of land off of 16<sup>th</sup> Street, which has a direct connection to Highway 234 (176 in Texas), again approximately four miles due west of the proposed disposal facility. This land is used to raise both alfalfa and at times "hay grazer." Rose and her husband own horses, cattle, goats, chickens and a pig, which are housed on this land and frequently graze parts of the fields. The alfalfa itself is cut and dried and used both for their own animals but also to provide some hay for the feed store. This alfalfa relies on a 200-foot water well owned by Mrs. Gardner and her husband which is potentially hydrologically

connected to groundwater resources found in the vicinity of the WCS site. Therefore, the failure of the applicant to characterize and verify the porosity, fissures, water table and saturation zones – among other issues identified by TCEQ and its consultants in the Environmental Analysis -- at the proposed site and the potential that indeed groundwater could be contaminated by the opening of the site could directly impact one of her core businesses and the health and welfare of local livestock.

Finally, in addition to the frequent trips to the nearby landfill, Ms. Gardner travels frequently on both Highway 18 and Highway 234/176 into Texas. Because much of the waste coming to the WCS proposed site will likely travel through New Mexico, it is believed that these highways will be used to transport waste. A specific issue is the possibility that waste from the recently permitted uranium enrichment plant known as LES – located just a few miles from Eunice along route 234-- could travel near the businesses and homes owned by Ms. Gardner on its way to the WCS site, since certain wastes generated in the uranium enrichment process could be considered byproduct uranium material. While our interpretation is that it would be improper to receive depleted uranium or other wastes from enrichment activities under the byproduct materials disposal license, the application process is unclear about exactly what waste will be received at the WCS site. The waste definition does not include them but we have concerns because of the proximity to the enrichment plant at LES adjacent to the WCS property. In fact, the landfill to which Mrs. Gardner travels frequently is located in between the LES Uranium Enrichment permitted site and the proposed byproduct disposal landfill.

In addition, the proposed application makes it clear that the applicant also intends to bring waste by rail, and the railroad passes right near an area that Ms. Gardner often travels by, near the intersection of highways 234 and 18. Again, part of the problem with the application is the failure to address the potential for off-site and on-site accidents from railcar transport of radioactive byproduct materials.

Ms. Gardner lives in the same hydrological basin as the WCS site, with lands in both areas being part of the Pecos River Basin, as well as the Pecos River Basin alluvial aquifer. Formations associated with the Pecos Valley, Ogallala aquifer formations and the Dockum (subcrop) underline both the proposed site and the businesses and home owned by Ms. Gardner. As such, Ms. Gardner is more impacted than the general public by the granting of the proposed permit.

In addition, the western part of Andrews County and eastern part of Lea County where Ms. Gardner lives, works and travels are subject to high winds. One of the weaknesses identified in the application is the failure to model the dispersion of radioactive materials and surface water contaminated by radioactive waste because of single-direction winds. High, single-direction winds traveling

westward from the site have the potential to materially harm the property, livelihood and health of Ms. Gardner.

In addition to Ms. Gardner, another Sierra Club member, Fletcher Williams, lives even closer to the proposed WCS site. Mrs. Williams lives at 1800 E. Texas Avenue, Eunice, New Mexico 88231. Mrs. Williams lives approximately two and-a-half to three miles from the site just off of HW 234/176 near the border with Texas. Her home is located near both the railroad line – including a rail spur that is directly behind her house -- as well as the Highway 18/ HW 234 interchange where traffic is likely to be heavy. Like Mrs. Gardner, Mrs. Williams and her family face specific threats from the proposed issuance of a permit to bury byproduct materials near her residence and the roads she frequents, including the use of groundwater for wells in the area, her frequent travels along HW 18 and HW 176, subjecting herself to exposure from transportation accidents, her close proximity to the rail line, and direct exposure due to high winds common in the area, which have the potential to carry radioactive material off-site.

Mrs. Williams is a caregiver and takes care of both her elderly mother as well as two young children under the age of six. Because her mother and other members of her family rely on medical care in Andrews, she frequently travels east along Highway 234/176 to Andrews, passing directly by the site. She also travels with her family along Highway 234/176 on the way to Odessa on trips there for shopping or to the airport.

Again, as detailed in the first part of this comment letter, both Mrs. Gardner, Mrs. Williams and others living in the area are faced with an application that is inadequate because it does not sufficiently describe and verify the soils, ground waters, saturation zones, water table, and subsidence issues that underlie and surround the proposed site as required under 25 TAC 289; it does not include a final design that considers the construction of a railway and unloading area and other facility components like a wastewater treatment plant and sludge management system; it fails to provide a year of monitoring data on basic groundwater parameters and flora and fauna; ignores worst-case scenarios of flood-like conditions that could overwhelm the berm and cell design of the proposed site; and ignores the worst earthquakes and seismic activities in the area in its design and ignores high-wind events that have the potential to cause radioactive waste to migrate off-site, as well as the potential for accidents involving its RCRA hazardous waste operations to move off-site. Simply put, the system and application has not been based on adequate site data as well as off-site data such as basic transportation information. The applicant also failed to provide detailed information about potential alternatives to the design and location of the site, such as an above-ground facility.

Sierra Club also maintains that the financial assurance is inadequate as the amounts of money proposed for closure and post-closure care are not based on reasonable worst case scenarios and do not include, for example, the continued clean-up and maintenance of leachate collection systems after closure. We also believe that the TCEQ should assure that WCS meet the requirements established in Chapter 37 (T), as proposed in the SB 1604 rule currently being reviewed by TCEQ, rather than upon parent company assurances.

Sincerely,

A handwritten signature in cursive script that reads "Ken Kramer".

Dr. Ken Kramer, Director  
Lone Star Chapter, Sierra Club

cc. David Frederick, Esq.  
The Honorable State Senator Kel Seliger  
The Honorable State Representative "Buddy" West

