

Attachment A
TCEQ EVALUATION OF MERIT
WASTE CONTROL SPECIALISTS LLC (WCS) APPLICATION
PROPOSED LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY

STATUTORY TIER CRITERIA	TCEQ EVALUATION CRITERIA	WHAT APPLICANT PROVIDED/ TCEQ EVALUATION
<p>TIER 1 CRITERIA: Sec. 401.233(a)(1) The commission shall consider: The natural characteristics of the disposal facility site for a proposed disposal facility or facilities;</p>	<p>The application should include descriptions of favorable natural characteristics, for example, low topographic relief; low level of seismic activity or other natural geologic hazards; favorable stratigraphic, hydrological, and meteorological conditions; few exploitable natural resources; low density of flora and fauna; low human-population density; and an acreage tract of sufficient size as to afford a large buffer area between operational activities and offsite areas.</p>	<p>The applicant states that natural site characteristics include low topographic relief, low human-population density, and relatively low density of flora and fauna. The applicant also states that the site has low seismic activity; favorable stratigraphic, hydrological and meteorological conditions; few exploitable natural resources; and an acreage tract of approximately 16,000 acres to provide a buffer area between operational activities and offsite areas.</p> <p>This is a summary statement of analyzed criteria. More detailed analysis of individual natural characteristics can be found in the relevant Tier sections addressed below.</p>

STATUTORY TIER CRITERIA	TCEQ EVALUATION CRITERIA	WHAT APPLICANT PROVIDED/ TCEQ EVALUATION
<p>TIER 1 CRITERIA: Sec. 401.233(a)(2) The commission shall consider: The adequacy of the proposed facility or facilities and activities to safely isolate, shield, and contain low-level radioactive waste from mankind and mankind's environment;</p>	<p>Design and construction / fabrication specifications for elements associated with the isolation of waste should be provided including: waste disposal trench, liner system, cap system, intruder barriers, and water conveyance systems. Relevant design bases should be provided including: earthquake, rainfall event, wind speed, trench infiltration rate, and intruder scenario. Activities associated with containment and mitigation of an accidental release should be described. An adequacy determination should be made by modeling each element and demonstrating that: 1) the design basis is accommodated with a margin of safety, and 2) that the performance assessment goals are met.</p>	<p>The applicant has provided information regarding structural design, waste canisters, trench design, intruder barrier and final cover. Water conveyance systems and liner systems also are described. The applicant also has defined relevant design bases and provided modeling determinations.</p> <p>Further information may be required on design, construction activities and construction drawings. The technical review will address lack of earthquake and wind-load design calculations and data, design modifications between construction and closure. Material design specifications will be evaluated. Further information and analysis may be required on trench design, the use of waste canisters and additional barriers, and final cover to address stability and state regulatory requirements to contain waste.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(a)(3): The commission shall consider: The adequacy of financial assurance related to the proposed activities.</p>	<p>Cost estimates for the different activities to be performed during the different periods of the facility life cycle should be provided. Financial qualifications such as those required in §305.50 should be provided to demonstrate how fees and activities (all activities sought in the license application) during construction and operation would be financed. Also, financial assurance mechanisms that satisfy statutory and regulatory requirements should be provided for closure/stabilization, institutional controls, corrective action, and liability for third-party damages. §§336.735-738, and §37, subchapter T.</p>	<p><u>Financial Qualifications and Cost Estimates.</u> Financial information was submitted for the applicant and its parent company, Valhi, Inc.</p> <p>Additional data may be required to support the provided cost estimates. Elements contained in the cost estimates appear incomplete.</p> <p><u>Financial Assurance Mechanisms</u> The applicant has addressed the issue of financial assurance mechanisms for items and activities required by statute and by rule. Additional information may be required on proposed mechanisms for the following items:</p> <ol style="list-style-type: none"> 1. Corrective action. (Health and Safety Code §401.241 (a-b) and 30 TAC §336.738(a-c) 2. Potential injury to property or person (H&SC §§401.112(a)(9) 401.233(d)(2) and 30 TAC §37.9059(a-g)). 3. Overall combined insurance coverage for activities such as closure, post-closure, and institutional controls.

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<p>TIER 1 CRITERIA: Sec. 401.233(b)(1)(A): Natural characteristics of the disposal facility site include: The suitability of the site for the proposed activities, including the site's geological characteristics;</p>	<p>The application should include a proposed site that (1) is capable of being characterized, modeled, analyzed, and monitored; (2) avoids areas that have exploitable natural resources that would result in failure to meet the performance objectives; (3) provides sufficient depth to the water table so that groundwater shall not intrude into the waste; (4) avoids areas that are the recharge areas of sole-source aquifers; (5) has a hydrogeologic unit used for disposal that will not discharge groundwater to the surface within the disposal site; (6) avoids areas where tectonic processes affect the ability of the disposal site to meet the performance objectives or that may preclude defensible modeling and prediction of long-term impacts; (7) avoids areas where surface geologic processes occur with such frequency and extent as to affect the ability of the disposal site to meet the performance objectives or that may preclude defensible modeling; and (8) is not located in areas where soil conditions are such that spill cleanup would be</p>	<p>The applicant provided information regarding characterization, modeling, analysis, and monitoring of the proposed site. It also provided information regarding natural resources in the area, depth to groundwater, sole-source aquifers, the hydrologic unit for disposal, tectonic and surface geologic processes, and soil conditions.</p> <p>Additional information and clarification may be required on potential data gaps due to questionable boring density. Also, there will be further review of subsurface geologic characterization regarding apparent faulting in the area, recent seismic events, and groundwater flow modeling. Additional information may also be required concerning potential exploitation of natural resources and mineral rights considerations in the area.</p>

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	impracticable. (30 TAC §336.728).	
<p>TIER 1 CRITERIA: Sec. 401.233(b)(1)(B): Natural characteristics of the disposal facility site include: The suitability of the site for the proposed activities, including the site's topography and features relating to erosion;</p>	<p>The application should include topographic maps of the surrounding areas, soil survey maps showing the types of soil and types of vegetation supported by these soils, descriptions of how wind and water erosion will affect these soils, and any natural or existing man-made features which might change erosional patterns. Data showing low soil erodability indices should be provided.</p>	<p>The applicant has stated that the waste disposal facility lies in the Jalmar-Penwell Association and Blakeney-Conger Series. The applicant asserts that erosion is minimal and describes the region as a topographic high.</p> <p>Additional information may be required on soil erodability indices and data quality regarding the soil formations.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(b)(1)(C). Natural characteristics of the disposal facility site include: The suitability of the site for the proposed activities, including the site's surface and underground hydrology;</p>	<p>For surface hydrology, the application should include records showing low average annual precipitation, snowfall, maximum daily rainfall totals, etc. The application should also provide design bases and supporting calculations, models for flood hydrographs and Probable Maximum Floods. The application should provide maps showing small upstream drainage basins and maps showing no portion of the site on a floodplain.</p> <p>(See next page for underground hydrology comments.)</p>	<p>The applicant has stated that the waste disposal facility lies outside the 100-year, 500-year, and Probable Maximum Floodplain. The applicant also attempts to demonstrate that upstream drainage is minimal and describes the region as semi-arid.</p> <p>Additional information may be required on data pertaining to surface water drainage in the area and surface water quality in nearby playas and springs within 5 miles of the site.</p> <p>(See next page for underground hydrology comments.)</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(b)(1)(C) continued. Natural characteristics of the disposal facility site include: The suitability of the site for the proposed activities, including the site's surface and underground hydrology;</p>	<p>For underground hydrology, the application should include a proposed site that (1) is capable of being characterized, modeled, analyzed, and monitored; (2) avoids areas that have known natural resources that would result in failure to meet the performance objectives; (3) provides sufficient depth to the water table so that groundwater shall not intrude into the waste; (4) avoids recharge areas of sole-source aquifers; and (5) has a hydrogeologic disposal unit that will not discharge groundwater to the surface within the disposal site (30 TAC §336.728).</p> <p>The proposed site should have low stratigraphic complexity; low structural dip; low thicknesses of saturated and high hydraulic-conductivity strata, and corresponding high thicknesses of unsaturated and low hydraulic-conductivity strata; great depth to groundwater; little recharge to the site, and little discharge from the site; minimal groundwater flow velocities, gradients, and volumes; and minimal ambient or</p>	<p>For underground hydrology, the applicant provided information regarding characterization, analysis, and modeling; including depth to aquifers, sole-source aquifers, and the hydrologic unit for disposal.</p> <p>Additional information and clarification may be required during the technical review regarding subsurface characterization, groundwater flow modeling, and groundwater quality and use.</p>

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	background groundwater-quality, use and/or usability.	
TIER 1 CRITERIA: Sec. 401.233(b)(1)(D) Natural characteristics of the disposal facility site include: The suitability of the site for the proposed activities, including the site's meteorological factors;	The application should provide records showing yearly, seasonal, monthly, and/or daily logs of minimal precipitation, favorable temperature, humidity, wind speed and direction, air pressure and air stability. The application should also include an assessment of downwash showing low impact.	<p>The applicant has provided meteorological data and has stated that precipitation levels and other weather-related events are inconsequential. The applicant also has provided a preliminary air dispersion model and stated that air quality is acceptable.</p> <p>Additional information may be required regarding specifics of the applicant's air dispersion model, the quality and completeness of meteorological data, and issues surrounding the effects of weather on design and operations.</p>
TIER 1 CRITERIA: Sec. 401.233(b)(1)(E) Natural characteristics of the disposal facility site include: the suitability of the site for the proposed activities, including the site's natural hazards;	The application should indicate low risk of natural hazards such as faulting and seismic activity; extreme meteorological phenomena; presence of floodplain areas and flooding; surface erosion, and dissolution sink holes.	<p>The applicant provided information regarding faulting and seismic activity; risk of hazardous meteorological phenomena; floodplain analysis; and surface erosion.</p> <p>Additional information may be required regarding recent seismicity and faulting.</p> <p>Additional information may be required regarding specifics of the applicant's air dispersion model, the quality and completeness of meteorological data, and issues surrounding the effects of weather on design</p>

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		and operations.
<p>TIER 1 CRITERIA: Sec. 401.233(b)(2) Natural characteristics of the disposal facility site include: The compatibility of disposal activities with any uses of land near the site that could affect the natural performance of the site or that could affect monitoring of the disposal facility or facilities and disposal facility site;</p>	<p>The application should indicate low level of land use in the site area; low potential for conflict between existing areal land uses and disposal activities that could affect the natural performance of the site, or that could affect monitoring of the disposal facility and facility site.</p>	<p>The applicant has described land use in the site area, and states that none of the five offsite facilities and two onsite facilities within three miles of the proposed waste facilities will affect the ability of the proposed facilities to satisfy the performance objectives or mask their environmental monitoring systems.</p> <p>Additional information may be required regarding monitoring of the disposal facility and nearby facilities to ensure that site performance is not compromised. Additional data may be required to verify that adjacent land use involving radioactive materials will not adversely impact the disposal facility site.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233 (b)(3) (A thr F) Natural characteristics of the disposal facility site include: The adequacy of plans for the collection of pre-license monitoring data and background monitoring plans for the disposal facility site, including analysis of the ambient conditions of the site and established trends of the site's natural parameters, including: (A) natural background radioactivity levels; (B) radon gas levels; (C) air particulate levels; (D) soil characteristics, including chemical characteristics; (E) surface water and groundwater characteristics; and</p> <p>(F) flora and fauna at the site;</p>	<p>(A-E) The application should include plans for a 12-month period of basic environmental data collection during the pre-operational period for those constituents that are subject to seasonal variation. (30 TAC §336.731(a)).</p> <p>(F), The application should include a monitoring plan for conducting biological inventories of the site area to visually identify the habitat types and to characterize seasonal variations in the biological communities through qualitative and quantitative assessments of the flora and fauna associated with the habitat types. Special emphasis should be placed on the identification of threatened/endangered or otherwise</p>	<p>(A-E) The applicant provided information regarding pre-license monitoring plans for the proposed site, and has stated that historic RCRA monitoring may be used for this data.</p> <p>Additional information and clarification may be sought during the technical review. For example, background appears not to have been established for certain radionuclides in all media. There have also been instances where the detection limits used appear to be relatively high, and cases where gross alpha and beta activities have been reported above drinking water standards.</p> <p>(F) The applicant describes a baseline monitoring plan for identifying habitats and associated flora and fauna.</p> <p>The applicant appears to have provided sufficient technical information to begin a detailed technical evaluation of this representation.</p>

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	protected species and commercially or culturally valued species that may occur in the area.	

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<p>TIER 1 CRITERIA: Sec. 401.233(b)(4) Natural characteristics of the disposal facility site include: The possible effects of disposal activities on flora and fauna at or near the site;</p>	<p>The application should include a discussion and supporting documentation of how disposal activities, including construction, operation, and release of radionuclides and chemical waste materials would likely have little or no impact on flora and fauna, particularly protected species and commercially or culturally valued species.</p>	<p>The applicant states that disposal activities will have little or no effect on flora and fauna.</p> <p>The applicant appears to have provided sufficient technical information to begin a detailed technical evaluation of this representation.</p>
<p>TIER 1 CRITERIA: Sec. 401.233(b)(5). Natural characteristics of the disposal facility site include: The ease of access to the site.</p>	<p>Topography and survey map(s) accompanied by text descriptions showing the county, exact coordinates of the site, elevations, drainage, major transportation routes that provide access to the proposed facility should be provided by the applicant(s). The applicant should demonstrate safe and feasible access routes. Information should include construction and condition of these routes along with flooding history and precipitation data for this area. The response should also include waste load size(s) and load handling capacities.</p>	<p>The applicant has provided maps and descriptions that indicate the location of the facility and the major transportation routes that provide access to the site, including rail and truck routes. The Applicant has also provided data pertaining to precipitation and flooding history in order to evaluate impact on site access.</p> <p>Additional information may be required regarding plans for unloading from rail spurs, State Highway 176, the road from State Highway 176 to the first gate, and roads and corridors internal to the facility. Also information may be required on waste load sizes and weights, and the load handling capacities of highways and roads in the area.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(c)(1). Adequacy of the proposed disposal facility or facilities and activities includes: The capability of the proposed facility or facilities and activities to isolate, shield, and contain low-level radioactive waste in conformity with federal standards</p>	<p>Facility layout plot plan(s) showing building functions and locations relative to LLRW waste locations should be provided. Information should also include sketches showing cross-sectional areas of disposal cells, canisters or containers, and intrusion barriers (layers that will serve as covers). Simulation models should be included for ensuring that direct exposure and potential migration of radioactive material from the site will conform to federal standards. Waste information projections (volumes and characterizations) should be included in the application. Information should also contain accurate and thorough descriptions of the equipment to be used and the work activities to be conducted inside the facility throughout the facility's life. There should be written procedures, which address operational safety on how to perform these activities. The procedures should be complete, usable and should provide methods for confirming that radiation exposure to the public or workers is maintained within regulatory limits.</p>	<p>The applicant has provided facility plans which include sketches showing cross-sectional areas of disposal cells, canisters or containers, and intrusion barriers. Simulation models have been provided to help ensure that direct exposure and potential migration of radioactive material from the site will conform to federal standards. Waste information projections (volumes and characterizations) have been provided for both the compact and federal facilities. The applicant also has provided descriptions of the equipment to be used and the work activities to be conducted throughout the facility's life. In addition, the applicant has provided a Health and Safety Plan along with implementing procedures dealing with operational safety.</p> <p>Additional information may be required on building functionality and adequacy; and calculations verifying protective radiation dose rates for workers and the public.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(c)(2) Adequacy of the proposed disposal facility or facilities and activities includes: Acceptable operational safety;</p>	<p>The application should provide documented methods that will ensure the minimum requirements of all applicable federal and state operational safety regulations will be met.</p>	<p>The applicant has provided information regarding the radiation safety program, including emergency response measures pertaining to cleanup of spill areas.</p> <p>Additional information may be required in regard to specificity and accountability for safety procedures.</p>
<p>TIER 1 CRITERIA: Sec. 401.233(c)(3) Adequacy of the proposed disposal facility or facilities and activities includes: Acceptable long-term safety as demonstrated by analysis or study.</p>	<p>The applicant should provide documentation that provides reasonable assurance the long-term safety of the site will be protective of the public and the environment. Long-term safety should be demonstrated using three different analyses to meet the performance objectives of 30 TAC §§336.724, 336.725, and 336.727: (1) performance assessment to demonstrate that the 25 millirem (mrem) annual Total Effective Dose Equivalent (TEDE) will not be exceeded; (2) analysis for intruder protection; and (3) long-term site stability including surface drainage and erosion protection, compaction, stability analysis, liquefaction potential, and settlement and subsidence throughout the institutional control period.</p>	<p>The applicant states that the information and analyses provided in the license application demonstrate that the proposed facility satisfies the performance objectives in 30 TAC §§336.724-727. These objectives are addressed as Principal Design Criteria in section 3.1.2 of the license application. The applicant states that the license application includes all of the information recommended in the Texas Commission on Environmental Quality (TCEQ) application guidance and follows the recommendations of the TCEQ Draft Guidance Document on Performance Assessment (TCEQ 2004).</p> <p>Additional details or clarification may be required on data input for the performance assessment and the evaluation of performance objectives.</p>

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<p>TIER 1 CRITERIA: Sec. 401.233(d)(1)(A)(i)&(ii) Financial assurance criteria include: Adequacy of the applicant's financial qualifications to: Conduct the licensed activities as proposed including:</p> <p>(i) any required decontamination, decommissioning, reclamation, or disposal; and</p> <p>(ii) control and maintenance of the disposal facility site and facility or facilities after the cessation of active operations;</p>	<p>The application should provide a demonstration of sufficient financial resources for the design, construction, fees, operating costs, and provision of financial assurance through the documentation required in §305.50(4)(D)(i)-(vii).</p> <p>Financial assurance mechanisms as required by §§336.736 and 737, and §37, subchapter T should be submitted for closure/stabilization and institutional control activities. Cost estimates for all activities to be performed during closure, stabilization and institutional control of the site should be provided.</p> <p>All activities pertaining to closure, institutional controls, and corrective action should be identified, and cost estimates associated with these activities provided, in order to determine if the dollar amounts of the mechanisms are sufficient to cover these activities. The nature and identity of the applicant, its financial strength, and its compliance history should help determine the capacity of the applicant to maintain</p>	<p><u>Financial Qualifications and Cost Estimates.</u></p> <p>Financial information was submitted for the applicant and its parent company, Valhi, Inc.</p> <p>Additional data may be required to support the provided cost estimates. Elements contained in the cost estimates appear incomplete.</p> <p><u>Financial Assurance Mechanisms</u> The Applicant has addressed the issue of financial assurance mechanisms for items and activities required by statute and by rule. Additional information may be required on proposed mechanisms for the following items:</p> <ol style="list-style-type: none"> 1. Corrective action. (Health and Safety Code §401.241 (a-b) and 30 TAC §336.738(a-c) 2. Potential injury to property or person (H&SC §§401.112(a)(9) 401.233(d)(2) and 30 TAC §37.9059(a-g)). 3. Overall combined insurance coverage for activities such as closure, post-closure, and institutional controls.

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<p>TIER 1 CRITERIA: Sec. 401.233(d)(1)(B) Financial assurance criteria include: Adequacy of the applicant's financial qualifications to: Address any unanticipated extraordinary events that would pose a risk to public health and safety and the environment and that may occur at the disposal facility site after decommissioning and closure of the disposal facility or facilities;</p>	<p>adequate financial security.</p> <p>Financial assurance mechanisms per §336.738, and §37.9045 should be included for corrective action. The amount should not be less than \$20 million. In addressing unanticipated event(s) cost estimate(s) to correct these events should be prepared and submitted for evaluation.</p>	<p><u>Financial Qualifications and Cost Estimates.</u></p> <p>Financial information was submitted for the applicant and its parent company, Valhi, Inc.</p> <p>Additional data may be required to support the provided cost estimates. Elements contained in the cost estimates appear incomplete.</p> <p><u>Financial Assurance Mechanisms</u> The Applicant has addressed the issue of financial assurance mechanisms for items and activities required by statute and by rule. Additional information may be required on proposed mechanisms for the following items:</p> <ol style="list-style-type: none"> 1. Corrective action. (Health and Safety Code §401.241 (a-b) and 30 TAC §336.738(a-c) 2. Potential injury to property or person (H&SC §§401.112(a)(9) 401.233(d)(2) and 30 TAC §37.9059(a-g)). 3. Overall combined insurance coverage for activities such as closure, post-closure, and institutional controls.

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<p>TIER 1 CRITERIA: Sec. 401.233. (d)(2 thr 4) Financial assurance criteria include:</p> <p>(2) The adequacy of the applicant's financial assurance in an amount and type acceptable to the commission and adequate to cover potential injury to any property or person;</p> <p>(3) The adequacy of the applicant's financial security, as required by commission rules; and</p> <p>(4) The degree of certainty that the applicant will be able to maintain adequate financial security.</p>	<p>Financial assurance mechanisms required under §336.736, and §37, subchapter T should be included for liability for third party injury. The amounts should be as prescribed in §37.9059, and should include injuries from risks relating to transportation. (H&S §401.112(a)(9))</p>	<p><u>Financial Qualifications and Cost Estimates.</u></p> <p>Financial information was submitted for the applicant and its parent company, Valhi, Inc.</p> <p>Additional data may be required to support the provided cost estimates. Elements contained in the cost estimates appear incomplete.</p> <p><u>Financial Assurance Mechanisms</u> The Applicant has addressed the issue of financial assurance mechanisms for items and activities required by statute and by rule. Additional information may be required on proposed mechanisms for the following items:</p> <ol style="list-style-type: none"> 1. Corrective action. (Health and Safety Code §401.241 (a-b) and 30 TAC §336.738(a-c) 2. Potential injury to property or person (H&SC §§401.112(a)(9) 401.233(d)(2) and 30 TAC §37.9059(a-g)). 3. Overall combined insurance coverage for activities such as closure, post-closure, and institutional

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		controls.
<p>TIER 2 CRITERIA: Sec. 401.234(1). The commission shall consider: The suitability of facilities at the site that are associated with proposed activities and the adequacy of their engineering and design;</p>	<p>Activities at the site shall be described from the acceptance of waste at the site, through the placement of waste, to the ultimate installation of final cover. Each activity should include an explanation of the facilities required, and design / fabrication / construction specifications for these facilities including: all operations facilities (such as decontamination and machine repair), waste disposal facilities (such as waste sampling and repackaging facilities), and support facilities (such as temporary storage for inclement weather, and truck wash-down procedures for release) . Adequacy of design should be addressed by demonstrating that: 1) the design basis is accommodated with a margin of safety, and 2) that the performance assessment goals are met.</p>	<p>The applicant has provided engineering and design data, and information regarding activities including placement of waste and ultimate installation of final cover.</p> <p>Additional information or clarification may be required on engineering calculations and specifics of design drawings. Further information and analysis may be required on waste emplacement, the use of waste canisters and additional barriers, and final cover to address stability and state regulatory requirements to contain waste.</p>

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<p>TIER 2 CRITERIA: Sec. 401.234(2) The commission shall consider: The suitability of the proposed disposal facility or facilities for the chemical, radiological, and biological characteristics of the low-level radioactive waste as classified under the system established under Section 401.053.</p>	<p>Waste characterization shall be provided to characterize the chemical, biological, and radiological composition of the source term. The suitability of the facilities for the waste characteristics shall be demonstrated using fate-and-transport and exposure modeling that demonstrates: 1) the performance assessment goals are met for radiological components, and 2) relevant assessment goals are met for biological and chemical components.</p>	<p>The applicant has provided design parameters for Class A, B, and C low-level radioactive wastes; including discussion, data, and analyses utilizing parameters regarding the suitability of the proposed facility relative to the performance assessment goals.</p> <p>The applicant appears to have provided sufficient technical information to begin a detailed technical evaluation of this representation.</p>
<p>TIER 3 CRITERIA: Sec. 401.235(1). The commission shall consider the applicant's: Technical qualifications to receive, store, process, and dispose of low-level radioactive waste;</p>	<p>An organizational chart showing how the facility will be staffed should be provided. This chart should show the breakdown of authority and the responsibilities of each individual position along with descriptions of technical qualifications and experience required by each position. Information should include individual resumes for each individual. Resumes should describe in detail technical qualifications and training required by each position.</p>	<p>The applicant provided organizational charts and narrative descriptions, including technical requirements of staff positions and individual resumes.</p> <p>Additional information or clarification may be required on the proposed number of staff versus proposed activities and responsibilities. Also, further information may be required on staff training.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(2) The commission shall consider the applicant's: Experience in management and disposal of low-level radioactive waste and other radioactive materials;</p>	<p>Resumes should describe in detail pertinent years of experience in the industry and appropriate training received during previous assignments. The applicant should have a minimum of 5 years experience in the management and disposal of low level radioactive waste</p>	<p>The applicant provided general statements describing the overall years of experience of the personnel who will staff the facility.</p> <p>During the technical review more specific information regarding staff experience and training may be required.</p>
<p>TIER 3 CRITERIA: Sec. 401.235(3) The commission shall consider the applicant's: Previous operating practices in this state and elsewhere, including the practices of a parent, subsidiary, or affiliated entity of the applicant, related to radioactive materials;</p>	<p>Same response as above, plus applicant should supply information pertaining to compliance history, in the state of Texas and in other states, of itself, the parent company, subsidiary or affiliated entity.</p>	<p>The Applicant has provided compliance history regarding existing licenses and permits for the existing RCRA/TSCA and Low-Level Radioactive Storage facilities located in Andrews County.</p> <p>During the technical review, compliance histories will be evaluated further, and additional information may be required about other companies affiliated with Valhi Inc., who is the parent company of the applicant.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(4). The commission shall consider the applicant's: Record of compliance with environmental statutes, rules, and licenses in this state and in any other jurisdiction, including the records of a parent or subsidiary of the applicant, subject to Section 401.243;</p>	<p>The TCEQ compliance summary will serve as the basis for this evaluation. Each summary includes a numerical score and a rank of the applicant's prior compliance.</p>	<p>The applicant operates a commercial treatment, storage and disposal facility in Andrews County, Texas. The facility's hazardous waste management units are authorized by Permit No. HW-50358. The most recent TCEQ compliance history was prepared on February 17, 2005, and covers the period from August 4, 1999 to February 17, 2005. The applicant's compliance history was given a rating of 0.000 and a HIGH classification, indicating that the applicant complies with environmental regulations extremely well at this facility. The applicant also is licensed by the Texas Department of State Health Services (DSHS) under radioactive material license L04971. Appendix 1.23 of the application contains copies of all inspection reports issued by the DSHS during the past five years. During this time period, no compliance orders or judgements were issued to the applicant. Three Notices of Violation (NOVs) were issued to the applicant during this time period. The applicant states that it has promptly resolved all alleged violations listed in the NOVs.</p> <p>Additional information or clarification may be required on the compliance history of other subsidiaries of the applicant's parent company, Valhi, Inc. One subsidiary is NL Industries (formerly National Lead Company) which has numerous Superfund lawsuits pending</p>

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		resolution.
TIER 3 CRITERIA: Sec. 401.235(5). The commission shall consider the applicant's: Training programs proposed for its employees whose duties relate to the proposed disposal facility site and activities;	The applicant should list the proposed methods for ensuring competency and proficiency of its personnel. The applicant should state how operating personnel would be trained, qualified, tested, approved and certified to perform their respective duties. Methods should be included for documenting required training and testing to prove that competency and proficiency are maintained.	The applicant has provided a general presentation of the employee training and qualification program for the proposed facility. Additional information may be required concerning specificity and accountability in the training program
TIER 3 CRITERIA: Sec. 401.235(6). The commission shall consider the applicant's: Monitoring, record keeping, and reporting plans;	The application should include thorough and appropriate monitoring, record keeping, and reporting plans.	The applicant provided plans for monitoring and reporting and information related to record keeping. Additional specifics may be required on the monitoring and reporting plans and the procedural information regarding record keeping.

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<p>TIER 3 CRITERIA: Sec. 401.235(7) The commission shall consider the applicant's: Low-level radioactive waste spill detection and cleanup plans for the proposed disposal facility site and activities;</p>	<p>The application should include a detailed plan for radioactive and hazardous waste spill detection and cleanup to provide for radiologic and hazardous waste mitigation. The applicant should also provide means to minimize and prevent radioactive waste spills while still maintaining the health physics principal of maintaining radioactivity levels as low as reasonably achievable (ALARA). Minimal requirements would also include personnel training and plans to cleanup and minimize spills during emergencies.</p>	<p>The applicant has provided a procedure for spill response which contains measures to mitigate a radioactive spill. This procedure states that the LLRW Operations Manager and the radiation safety officer (RSO) will direct the cleanup of the spill area. In addition, the procedure states that radiation safety personnel will lead in controlling radioactive material spills, address personal protective equipment and health and safety requirements, and direct cleanup operations. Spill control and mitigation is also discussed in the Consolidated Emergency Plan (ERP-100). Emergency response and incident reporting forms are included in the Plan. The Plan also contains an Emergency Equipment List and addresses the placement of this equipment in areas where a spill is most likely to occur. The Emergency Plan also contains Facility Emergency Action Levels which include a spill/release criteria for declaring an Alert or Site Area Emergency should a major spill occur.</p> <p>Some sections of RSP-100 may need to be expanded or updated.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(8). The commission shall consider the applicant's: Decommissioning and post-closure plans;</p>	<p>Decommissioning and post-closure plans shall address decontamination of surface facilities and structures, evaluation of surface and subsurface contamination, environmental monitoring program, timing of all decommissioning activities, long-term care and maintenance activities, and a demonstration of meeting all regulatory criteria for unrestricted release.</p>	<p>The applicant states that closure of the site will be an ongoing process throughout the operational period. This will entail closing each of the disposal units as they are filled. The final closure of the site will entail a number of activities to be accomplished after all waste has been received and the operational period is completed. Decommissioning and removal of surface structures, modification of surface water and erosion controls, removal of site access roads, final disposal cover installation, and installation of permanent markers will be accomplished during the closure period. The applicant also states that, as part of post-closure, they will perform surveillance activities such as observation of the disposal site to detect the need for maintenance, post-closure care, evidence of intrusion, repair of fencing, repair or replacement of monitoring equipment, re-vegetation, minor additions to soil cover, minor repair of disposal unit covers, and compliance with all license conditions and regulatory requirements.</p> <p>Additional information may be required, such as site specifics relating to a post-closure health and safety plan and a post-closure environmental monitoring program plan.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(9). The commission shall consider the applicant's: Security plans;</p>	<p>The application should include a detailed security plan and associated facility design drawings which provide methods for protection against vandalism, theft, tampering, or sabotage at the site. The application should also address: (1) training of security personnel for normal and emergency situations; (2) emergency evacuation of the facility; (3) worker and visitor access control; (4) criminal, traffic, and general law enforcement activities; (5) crowd control; (6) homeland security plan; and (7) investigation of criminal and safety offenses.</p>	<p>The applicant has provided a Security Plan, SP-100, which contains information concerning: (1) security education and awareness for new employees and on-site contract personnel; (2) worker and visitor access control; (3) incident response; (4) security investigations; and (5) other security related issues. The applicant's Emergency Plan addresses security's role in an emergency evacuation of the facility. The Emergency Plan also states that at least one employee from each operational area is trained for emergency response.</p> <p>Additional site specific information may be required in the applicant's security plans.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(10). The commission shall consider the applicant's: Monitoring and protection plans for workers;</p>	<p>The application should include a detailed plan for monitoring and protection of workers which meets the minimum requirements of all applicable federal and state regulations. Requirements for monitoring and protection of workers would include methods for: (1) dosimeter issuance; (2) record keeping and reporting; (3) internal radiation monitoring; (4) personnel decontamination; (5) respiratory protection equipment issuance; (6) respirator maintenance and cleaning; (7) respirator fit testing; (8) radiation safety committee review; (9) occupational safety; (10) fire safety; (11) radiological and hazardous material handling & safety training; and (12) equipment testing and certification.</p>	<p>The applicant has provided procedures covering monitoring and protection of workers which include methods for: (1) dosimeter issuance; (2) record keeping and reporting; (3) internal radiation monitoring; (4) personnel decontamination; (5) respiratory protection equipment issuance; (6) respirator maintenance and cleaning; (7) respirator fit testing; (8) radiation safety committee review; (9) occupational safety; (10) fire safety; (11) radiological and hazardous material handling & safety training; and (12) equipment testing and certification.</p> <p>The applicant appears to have provided sufficient information to begin a detailed technical review.</p>
<p>TIER 3 CRITERIA: Sec. 401.235(11). The commission shall consider the applicant's: Emergency plans;</p>	<p>The application should include a detailed emergency plan which adequately addresses the following emergency scenarios: (1) radioactive material releases; (2) fires; (3) personal contamination and injuries; (4) weather-related incidents; and (5) security incidents.</p>	<p>The applicant provided plans and procedures which address the following emergency scenarios: (1) radioactive material releases; (2) fires; (3) personal contamination and injuries; (4) weather-related incidents; and (5) security incidents.</p> <p>Additional information may be required on emergency planning and implementation.</p>

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<p>TIER 3 CRITERIA: Sec. 401.235(12)(A thr F). The commission shall consider the applicant's: Plans for background monitoring during the license period, including analysis of the ambient conditions of the disposal facility site and analysis of established trends of the disposal facility site's natural parameters, including: (A) natural background radioactivity levels; (B) radon gas levels; (C) air particulate levels; (D) soil characteristics, including chemical characteristics; (E) surface water and groundwater characteristics; and</p> <p>(F) flora and fauna at the site;</p>	<p>(A thr F) The application should include plans for (1) a 12-month period of basic environmental data collection during the pre-operational period for those constituents that are subject to seasonal variation; (2) the maintenance of a monitoring program during the construction and operational phases of the site which will provide data to evaluate the potential health and environmental impacts; and (3) the maintenance of a monitoring system after the disposal site is closed which will be capable of providing early warning of releases of radionuclides and chemical constituents before they leave the disposal site boundary. (30 TAC §336.731).</p>	<p>(A thr E) The applicant states that historic RCRA monitoring will be used for pre-license background monitoring data. The applicant also has provided plans for monitoring during all phases of the project.</p> <p>Additional information and clarification may be sought during the technical review. For example, background appears not to have been established for certain radionuclides in all media. There have also been instances where the detection limits used appear to be relatively high, and cases where gross alpha and beta activities have been reported above drinking water standards.</p> <p>(F) The applicant provided the baseline inventories portion of the monitoring plan for flora and fauna.</p> <p>Additional information regarding some specific aspects of the continuation of this monitoring plan for flora and fauna potentially affected during the licensing period may be required during the technical review; for instance, sampling methodology, baseline</p>

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		comparisons, reference area criteria, and radio-ecological thresholds.
<p>TIER 3 CRITERIA: Sec. 401.235(13). The commission shall consider the applicant's: Ability to adequately manage the proposed disposal facility or facilities and activities for the term of the license.</p>	<p>The application should provide organization charts for all phases of the project. These charts should cover management, engineering, technical support, maintenance and operations . The application should address personnel changes associated with the various phases of the project. The charts should reflect any use of consultants in any phase of facility planning, construction, operation or closure. The applicant should identify and explain notification and reporting procedures for events such as injuries, worker overexposure, and schedule or project modifications. Information should be included in the application which defines the scope, principle tasks, and schedules for the construction, operation, and closure phases of the project. The applicant should also provide a management plan for receipt, handling, and disposal for all categorizes of waste.</p>	<p>The applicant provided organizational charts, and narrative descriptions, including technical requirements of staff positions. Individual resumes for personnel who will fill these positions were included.</p> <p>Further evaluation will be made during the technical review regarding the adequacy of the proposed staffing. Clarification may be required pertaining to the proposed number of staff versus proposed activities and responsibilities. Additional information also may be required regarding staffing during different phases of the facility's life and management practices related to waste acceptance.</p>

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<p>TIER 4 CRITERIA: Sec. 401.236(1) The commission shall consider: The compatibility of uses of land near the proposed disposal facility site that could be affected by the construction and operation of the disposal facility or facilities;</p>	<p>The application should demonstrate that the facility will not conflict with current and proposed future land use during construction and operation of the site by defining industrial and demographic uses and trends.</p>	<p>The applicant has provided information required in this section, including land use patterns, demographic projections, and regional development plans. In addition, the applicant has provided a professional report from Galvan Eling Associates (1994) stating that there is no evidence of cultural resources that should impede this project. The applicant asserts that there are no conflicts with current and proposed future land use during the construction and operation of the site.</p> <p>Additional information concerning land use may be required.</p>
<p>TIER 4 CRITERIA: Sec. 401.236(2)(A thr C) The commission shall consider: Possible socioeconomic effects on communities in the host county of:</p> <p>(A) the proposed disposal facility or facilities;</p>	<p>The application should:</p> <p>(A) Provide a summary of socioeconomic costs and benefits associated with construction and operation of the facility, and describe how these costs and benefits might vary among different stakeholder groups within the community;</p>	<p>A) <u>Summary of Socioeconomic Costs and Benefits.</u> The applicant has provided a summary report from Hicks and Company (December, 2004) that assesses the likely socioeconomic impacts of the proposed facility. The proposed facility will have both positive and negative impacts. The report suggests that there are likely to be more positive impacts for the local community.</p> <p>Additional information may be required concerning these assertions during the technical review of the application.</p>

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<p>TIER 4 CRITERIA: Sec. 401.236(2)(B and C) The commission shall consider: Possible socioeconomic effects on communities in the host county of:</p> <p>(B) the operation of the proposed disposal facility or facilities; and</p> <p>(C) related transportation of low-level radioactive waste to the disposal facility or facilities.</p>	<p>The application should:</p> <p>(B) Provide a summary of public concerns regarding the disposal site and local perception of risk (based on public hearings, interviews and/or surveys) and describe methods for responding to these public concerns and providing opportunities for public dialogue;</p> <p>(C) Demonstrate that the public has been advised of transportation routes, schedules and emergency plans.</p>	<p>(B) <u>Summary of Public Concerns.</u> The applicant has provided a summary report from Hicks and Company (December, 2004) describing public concerns regarding the facility. The report suggests that there are some public concerns with the proposed facility. However, the report suggests that local officials and many local citizens believe the benefits outweigh the costs.</p> <p>Additional information may be required concerning these assertions during the technical review of the application. Additional information may be required concerning the sampling methods; the differences between the Lea County, New Mexico and Andrews County, Texas survey responses; public requests for any possible compensation at the local level; methods for maintaining dialogue with the local community; and public concerns at the broader level (e.g., transportation concerns within the state of Texas).</p> <p>(C) <u>Public Advisories.</u> The applicant provides some information on the transportation impacts of the proposed facility.</p> <p>Additional information may be required concerning the transportation routes, transportation schedules, and emergency plans provided to the public.</p>

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