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November 2012  
SFR-109

# Financial Assurance Report

A Report to the 83rd Texas Legislature



# Financial Assurance Report

Prepared by  
Radioactive Materials Division

SFR-109  
November 2012



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## **Executive Summary**

### **Purpose**

In 2011, the Texas Legislature passed Senate Bill 1504 (82nd regular session), which charged the Texas Commission on Environmental Quality (TCEQ) with conducting “a review of the adequacy of the financial assurance mechanisms of the compact waste disposal facility license holder”. Thus, this report will look at the financial assurance provided by the compact waste disposal facility license holder, Waste Control Specialists LLC (WCS), as it pertains to the low-level radioactive waste (LLRW) disposal facility in Andrews, Texas. The Texas Legislature laid out the four topics to be considered in the report:

1. The segregation of financial assurance funds from other funds;
2. The degree of risk that the financial instruments are subject to financial reversal;
3. Potential post-closure risks associated with the compact waste facility (CWF);  
and
4. The adequacy of the financial instruments to cover the state’s liabilities.

### **Background**

On September 10, 2009, the TCEQ issued license number R04100 (License) to WCS to dispose of LLRW. The term LLRW disposal facility includes both the federal waste facility (FWF) and the CWF.

As required by the License, WCS provided financial assurance in the amount of \$139.5 million (in 2010 dollars) prior to accepting waste - \$20 million in a surety bond and the remainder in stock held in a third-party trust (Trust). While this report by statute only applies to the CWF, this financial assurance amount applies to both facilities covered by the License.

The Trust provided by WCS is specifically tailored to allow and manage the use of stock investments. It is funded 100 percent with common stock in Titanium Metals Corporation (TIMET), a publicly traded stock on the New York Stock Exchange (NYSE). The trustee is U.S. Bank, National Association, and the TCEQ is the beneficiary. The Trust is structured to mitigate risk by requiring stock with a value greater than the required financial assurance amount to create a cushion or buffer, as well as other protective measures. As one of these additional protective measures, the Trust agreement requires the deposit of \$9 million in cash in the Trust each year on or before the anniversary of the initial funding of the Trust. The first payment of \$9 million to the Trust was received on November 1, 2012.

### **Legislative Study for Financial Assurance**

Financial assurance is a term used to describe financial instruments that assure funds are available for the completion of closure, post-closure, and potential corrective action activities if the license holder is unable or unwilling to perform as required by the license.



## **1. The Segregation of Financial Assurance Funds from Other Funds**

TCEQ rules provide adequate segregation of funds in third party financial assurance instruments since neither the surety bond nor the Trust can be diverted for use by any other agency or used for a site other than the LLRW Disposal Facility.

The Trust used by WCS was designed with the following stipulations to assure segregation of funds:

- The stock held in the Trust is titled in the name of the trust;
- WCS and the trustee intend that no third party have access to the fund;
- Payments from the Trust can only be directed by the TCEQ executive director for the subject facility.

## **2. The Degree of Risk that the Financial Instruments Are Subject to Financial Reversal**

To evaluate the degree of risk of the current financial instruments, the report discusses the following possible risks with the Trust:

- a. diversification of financial instruments
- b. declining stock value
- c. liquidation of stock in Trust
- d. affiliation with Valhi Holding Company

To mitigate these risks in regard to the Trust, the TCEQ required several safeguards to help reduce the risk of principal loss. While no financial assurance mechanism is totally without risk, these built-in safeguards have worked well in the first year of the Trust.

## **3. The Potential Post-Closure Risks**

To examine the potential post-closure risks associated with the CWF, the report discusses two factors that could impact the CWF. To mitigate these potential post-closure risks, adequate financial assurance has been posted to monitor and maintain the LLRW Disposal Facility.

## **4. The Adequacy of the Financial Instruments**

To address the adequacy of the financial instruments to cover the State's liabilities, this report used the Environmental Analysis (EA) dated September 2009, which the TCEQ Commissioners finalized along with the License approval. The EA discussed the cost estimates that were used to develop the financial assurance amounts. These cost estimates will be reexamined during the annual reevaluation of the financial assurance costs to ensure that financial assurance amounts will be adequate and up to date with changes at the site.

The TCEQ determined that the financial assurance amount and mechanisms presented by WCS were adequate to cover the state's liabilities as determined by the EA.

## **Conclusion**

As a result of this study, the TCEQ can demonstrate that the financial assurance is adequate to cover the State's liabilities, and annual updates to the financial assurance ensure it remains sufficient to cover changes in circumstances at the LLRW disposal facility. Furthermore, any potential post-closure risks can be diminished by ensuring an adequate amount of financial assurance for institutional control and corrective action.



## 1. Introduction

In 2011, the Texas Legislature passed Senate Bill 1504, as codified in Section 401.2085 of the Texas Health & Safety Code, which charged the Texas Commission on Environmental Quality (TCEQ) with conducting “a review of the adequacy of the financial assurance mechanisms of the compact waste disposal facility license holder”. Thus, this report will look at the financial assurance provided by the Compact Waste Facility (CWF) license holder, Waste Control Specialists LLC (WCS) in relation to the Texas Low-Level Radioactive Waste (LLRW) Disposal Facility.

The term LLRW Disposal Facility includes both the Federal Waste Facility (FWF) and the CWF. The legislation was also explicit in requesting the examination of the financial assurance amounts “against projected post-closure costs, including a review of the adequacy of funds for unplanned events.” Therefore, this report will focus on the adequacy of the financial assurance after closure and in the event of any unplanned circumstance. The Texas Legislature laid out four topics to be considered:

1. The segregation of financial assurance funds from other funds;
2. The degree of risk that the financial instruments are subject to financial reversal;
3. Potential post-closure risks associated with the CWF; and
4. The adequacy of the financial instruments to cover the State’s liabilities.

To address these topics, some background information is necessary. This report, first, looks at the different types of financial instruments acceptable to the TCEQ for the purpose of financial assurance. This report then conveys how the amount of financial assurance for the CWF was determined and, finally, the four required topics are addressed.

## 2. Financial Assurance Instruments and Risks

### 2.1 Introduction

Financial assurance is a term used to describe financial instruments that assure funds will be available for the completion of closure, post-closure or corrective action activities should the license holder be unable or unwilling to perform as required by the license. This section discusses the activities covered by financial assurance as well as the various financial assurance options available to the licensee. Finally, the current arrangement between the WCS and the TCEQ is examined.

### 2.2 Risks Covered by Financial Assurance

Texas rules under Title 30, Texas Administrative Code (30 TAC), Chapter 37, Subchapter T, identify three activities that must be covered by financial assurance:

- Closure
- Post-Closure

- **Corrective Action**

The terms closure, post-closure and corrective action are used among all financial assurance instruments set out in Subchapter T because a majority of these instruments are available to other programs under the TCEQ's regulatory jurisdiction. However, 30 TAC 37.9035, further defines these terms to include activities unique to radioactive waste as follows:

**Closure** – Closure consists of any one or combination of the following activities: closure, dismantlement, decontamination, decommissioning, reclamation, disposal, aquifer restoration, stabilization, monitoring, or post closure observation and maintenance. Please note that this category includes terms also used to specify closure and post-closure in the License.

**Post-Closure** – The term post-closure in Chapter 37 includes activities that are identified as institutional control as specified in 30 TAC 336.734, of this title (relating to Institutional Requirements) and the License. These activities include, but are not limited to, carrying out an environmental monitoring program at the disposal site, periodic surveillance, minor custodial care, and other requirements as determined by the Commission or Executive Director, and administration of funds to cover the costs for these activities. The period of institutional control is determined by the Commission, but may not be relied upon for more than 100 years following transfer of control of the disposal site to the custodial agency.

**Corrective Action** – Corrective action is made up of the activities required to remediate unplanned events that pose a risk to public health, safety, and the environment and/or activities that may occur after the decommissioning and closure of the CWF.

The purpose of using these common terms is to allow consistency among such instruments in the way they operate within the established regulatory structure.

### **2.3 Instrument Options and Degree of Risk**

TCEQ rule 30 TAC 37.9050 designates several financial assurance instruments that may be used for closure, post-closure and corrective action activities.

Acceptable financial assurance instruments fall into two categories:

- (1) Third-party instruments that transfer risk to third party issuers, such as fully funded trust accounts, irrevocable standby letters of credit, surety bonds, insurance, and external sinking funds; or
- (2) Self-insurance instruments such as financial tests, corporate guarantees or statements of intent. Although self-insurance instruments are available for some radioactive facilities, such as storage and processing under 30 TAC 37.9050(g) and (h), they are not available for LLRW disposal facilities because they are not compatible with U.S. Nuclear Regulatory Commission (NRC) rules in 10 CFR 61.62.

In addition to the instruments described above, both NRC rules and Texas law allow for alternative financial instruments or arrangements on a case-by-case basis. These rules can be found in Section 401.109 of the Texas Health & Safety

Code) and 30 TAC 37.9045(a)(1) and are compatible with NRC rule 10 CFR 61.62(g).

The financial mechanisms currently applicable to the LLRW Disposal Facility are described below in general terms.

### **2.3.1 Fully Funded Trusts**

A fully funded trust is considered one of the more secure forms of financial assurance because it is administered by a regulated third party trustee and generally receives funding in the form of cash.

Banks with trust operations or trust companies typically serve as trustees. TCEQ rule 30 TAC 37.201(b) requires that the trustee be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency. Trustees are held to a high fiduciary standard since the beneficiary vests confidence, faith, reliance and trust with the trustee whose aid, advice or protection is sought. This relationship requires the trustee to act at all times for the sole benefit and interest of the beneficiary.

The TCEQ controls any payments from the trust to the licensee or any other person authorized by the TCEQ's executive director to perform the required actions under the license if reimbursement requests have been submitted along with itemized bills. Based on experience with a variety of waste licenses and permits, the TCEQ has a positive track record of such trusts maintaining an adequate principal balance over the life of the trust.

### **2.3.2 Surety Bonds**

A surety bond is issued by a surety company and provides timely funding in the event a demand is made on the instrument. The bond establishes a contractual obligation for the surety company to fund the instrument in its entirety if the licensee fails to meet its obligations. The bond contains no expiration date; however, the surety company may cancel the bond so long as it provides the TCEQ with at least a 90-day cancellation notice. If the licensee does not provide an acceptable alternate instrument within 30 days of the cancellation notice, then the TCEQ has the right to draw on the instrument to ensure continuous financial assurance coverage.

TCEQ rules require any surety company issuing a surety bond to meet the U.S. Department of Treasury Guidelines. The U.S. Department of Treasury reviews the creditworthiness of surety companies annually and publishes acceptable companies along with their surety bond size limits. Surety bonds are considered a low risk financial assurance option.

### **2.3.3 Alternative Financial Assurance Mechanisms**

Texas law—Section 401.109(d)(7) of the Texas Health & Safety Code and 30 TAC 37.9045(a)(1)—provides for the use of alternative financial assurance mechanisms. TCEQ rules further allow licensees the ability to combine financial assurance instruments, such as a surety bond and a trust.

### 3. Financial Assurance Provided by WCS

WCS currently uses a surety bond together with a trust to meet its financial assurance requirement of \$139.5 million for the LLRW Disposal Facility - \$20 million in a surety bond and the remainder in stock held in a third-party trust. Specifically, \$86.1 million is for costs relating to the CWF, and \$53.4 million is for costs relating to the FWF.

The issuer of the WCS surety bond, U.S. Specialty Insurance Company, is currently approved by the U.S. Treasury Department for bonding capacity up to \$50,730,000, well above the \$20 million bond issued on behalf of WCS. The surety company is also rated A+ (Superior) by A.M. Best Company, an independent insurance rating service.

The trust used by WCS contains conditions specifically tailored to allow and manage the use of stock investments. It is currently funded 100 percent with common stock in Titanium Metals Corporation (TIMET), a publicly traded stock on the New York Stock Exchange (NYSE). The trustee is U.S. Bank, National Association, and the TCEQ is the beneficiary. The Trust is structured to mitigate risk by requiring stock with a value greater than the required financial assurance amount to create a cushion or buffer and triggering events for stock liquidation as well as other protective measures.

#### 3.1 Established Cost Estimates

WCS is required to maintain funding for closure, post-closure, institutional control and corrective action during its licensed period. The following are the projected costs and funding amounts for financial assurance presented in the Environmental Analysis:

**Table 1: Projected Costs and Funding Amounts  
for Financial Assurance**

<b>Financial Assurance</b>	<b>Amount (2010 dollars)</b>
<b>Closure</b>	\$ 81.6 million
<b>Post-Closure</b>	\$ 10.5 million
<b>Institutional Control</b>	\$ 21.5 million
<b>Corrective Action</b>	\$ 25.9 million
<b>Total</b>	<b>\$ 139.5 million</b>

An evaluation of the cost estimates for each activity is described below.

### **3.1.1 Closure**

The TCEQ developed closure costs based on cost estimates submitted by WCS. Further, 30 TAC 336.736(a) states:

“The applicant shall provide assurance 60 days prior to the initial receipt of waste that sufficient funds will be available to carry out disposal site closure and stabilization, including:

- (1) decontamination or dismantlement of land disposal facility structures;
- (2) disposal of any radioactive material remaining at the site at closure;  
and
- (3) closure and stabilization of the disposal site so that, following transfer of the disposal site to the custodial agency, the need for ongoing active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance, and monitoring are required.”

Thus, the costs for closure consider three activities: decontamination of land disposal facility structures, off-site disposal of radioactive materials remaining at the site, and the actual filling and covering of the disposal unit. These costs will be updated annually to reflect changes in the design and operation of the facility over time.

The decontamination of the LLRW Disposal Facility will consist of the decontamination of the waste staging buildings, administration buildings, laboratory buildings, the gate house, and other ancillary infrastructure. Once the facilities have been decontaminated, demolition of the facilities will begin. It is expected some materials or equipment will remain contaminated after decommissioning is complete, and therefore, require disposal. Thus, after demolition and assuming the disposal unit is full at closure, any contaminated rubble must be disposed of at an off-site location capable of accepting LLRW.

The closure of the disposal unit consists of two sequential processes: filling any remaining air space in the disposal unit and then placing a cover over the unit.

Finally, once the site has been marked for closure, all radioactive waste not in the disposal unit will be disposed of at a location off-site that accepts radioactive waste. The disposal of radioactive materials at closure will consist of two types: solid waste and liquid waste. The solid waste will be comprised of any waste staged for disposal, but not yet disposed. The only type of liquid waste that may be disposed of off-site is leachate removed from the CWF continuously during closure. At the time of the issuance of the license, it was assumed that leachate from the CWF was relatively free of contaminants and was assumed to be disposed of at RCRA costs. As of the time of this report, however, a Wastewater Treatment Plant (WWTP) has been constructed to eliminate the dependence on off-site leachate disposal. The construction of the WWTP may reduce the cost to dispose of leachate, but the reduction of this cost may be partially offset by the costs to demolish and decommission



the waste water treatment plant as a condition of the License. The effect of these changes will be evaluated during the annual updates to the financial assurance costs.

**Table 2 Breakdown of Closure Costs**

<b>Activity</b>	<b>Quantity and Unit cost<sup>1</sup></b>	<b>Cost (2010 dollars)</b>
<b>Off-site disposal of staged waste from CWF</b>	151 yd <sup>3</sup> @\$19,202/yd <sup>3</sup>	\$3,000,000
<b>Total off-site disposal from FWF</b>		\$25,900,000
<b>Landfill closure<sup>2</sup></b>		\$52,700,000
<b>Total</b>		<b>\$ 81,600,000</b>

### 3.1.2 Post-Closure

Post-closure costs include such activities as monitoring, surveillance, and any maintenance of the closed facility. WCS submitted post-closure costs that vary depending on the proposed amount of waste received each year. The concept put forth by WCS recognized that if the facility closes after just one year of waste emplacement, then only a fraction of the total costs is required due to the fact that only a fraction of the total volume of waste will have been received. As more waste is emplaced every year, the costs for post-closure would increase to account for the increased amount of monitoring, surveillance and maintenance. As more waste is filled and then covered, the fractional post-closure costs would approach the total post-closure costs for the entire facility.

To arrive at the fraction of costs for a year of waste, WCS provided the total post-closure costs for the proposed complete inventory of thirty-five years of waste disposal. The total costs were then annualized and divided into fixed costs and variable costs. Fixed costs are activities that will need to be accounted for regardless of the amount of waste emplaced or duration of operations. An example of fixed costs would be general personnel and office material used during post-closure. Variable costs depend on the volume of waste disposed at the time of closure. Examples of these costs are radiological monitoring, surveillance, leachate collection, and the personnel associated with these activities.

In the case of early closure, to determine the post-closure costs for any given year of waste emplacement, the determined annual variable costs will be

<sup>1</sup> The unit costs for disposal are based on the costs at a commensurate disposal facility from 2008 and adjusted for inflation.

<sup>2</sup> Landfill closure cost is for the LLRW Disposal Facility as a whole and includes costs of demolition.

adjusted by the fraction of operational time within the site operational lifespan (35 years). This is based on the assumption that one-thirty-fifth ( $1/35$ ) of the total proposed volume for the site will be emplaced each year. This assumption will continue to be evaluated during the annual updates to the financial assurance costs.

In the case of early site closure, the variable post-closure activities would then be less costly than if the entire proposed inventory had been disposed. For example, if the facility is closed after the first year (i.e. one year of waste emplacement), the adjusted annual *variable* costs can be estimated to be one-thirty-fifth ( $1/35$ ) of the total annual *variable* cost of post-closure. If the facility closed after the second year of operation, the adjusted annual *variable* costs is two-thirty-fifths ( $2/35$ ) of the total annual *variable* costs of post-closure and the trend continues until the thirty-fifth year.

For each year, these adjusted annual *variable* costs will be added to the annual fixed costs and then multiplied by the length of the post-closure period (30 years for the FWF and 5 years for the CWF) to arrive at the total post-closure costs corresponding to the year of closure.

Currently the CWF annual post-closure costs are \$90,000 per year. With five years of post-closure care, the total post-closure costs for the CWF are \$450,000. With each annual review, these amounts will increase due to the adjusted variable costs.

### **3.1.3 Institutional Control**

Once the Post-Closure period has ended, WCS will no longer perform any activities on the site and the disposal site will be under the control of a custodial agency from the State of Texas. Chapter 401 of the Texas Health & Safety Code and 30 TAC 336.737 requires that the licensee “pay into the perpetual care account an amount determined by the executive director to be adequate to provide surveillance, monitoring, any required maintenance, and other care of the disposal site on a continuing basis during the institutional control period.”

The institutional control period lasts for 100 years with the custodial agency carrying out the institutional control program of monitoring, surveying the site for changes in the cover, and restricting any other human activity. In calculating the costs for this institutional control, WCS again looked at a fractional basis to account for the amount of waste at the facility over time. First, the annual cost for institutional control for the entire site was calculated and partitioned into fixed and variable costs. To account for one year of waste at the site (out of a possible 35 years of waste at the site), the annual variable costs were multiplied by a factor of  $1/35$ . Finally, this fractional annual cost was multiplied by 100 years to arrive at the total costs of institutional control for the entire site for the first year of operations. For the first year, the institutional costs for the CWF are approximately \$4,700,000.

### **3.1.4 Corrective Action**

Corrective action is designed to address unplanned events that pose a risk to public health, safety, and the environment that may occur after the decommissioning and closure of the CWF. As part of the analysis for any unplanned events, WCS provided four scenarios under which a release from the LLRW Disposal Facility after closure would pose a risk to public health, safety, or the environment. Of the four scenarios presented, only one considered a release in the CWF. The other three scenarios involved unplanned events in the FWF. The scenario involving the CWF is a breach in the liner and is not the costliest of the four considered scenarios. The costliest corrective action scenario was estimated to be \$72,200,000, and this amount was determined to adequately cover the costs of the other three non-bounding scenarios, including a breach in the liner of the CWF. To minimize the up-front costs, the first year corrective action cost of \$25,900,000 (2010 dollars) is required with a minimum increase each year of \$3,350,000 after the first year. With each annual review, licensed changes to the design and operation may change the corrective action costs.

## **3.2 Segregation of Financial Assurance Funds from Other Funds**

### **3.2.1 Third Party Financial Assurance Instruments**

TCEQ rules provide adequate segregation of funds in third party financial assurance instruments since neither the surety bond nor the Trust can be diverted for use by any other agency or used for a site other than the LLRW Disposal Facility.

The Trust was designed with the following stipulations to assure segregation of funds:

- The stock held in the Trust is titled in the name of the Trust;
- WCS and the trustee intend that no third party have access to the fund;
- Payments from the Trust can only be directed by the TCEQ Executive Director for the LLRW Disposal Facility; and
- The Trust is managed by U.S. Bank N.A, whose trust operations are regulated and examined by the Office of the Comptroller of the Currency (an independent bureau of the U.S. Department of the Treasury).

The surety bond provided by WCS identifies and must follow state law and specific License requirements, as well as providing the TCEQ executive director powers to direct payments, if required. Other third-party instruments have similar provisions.

Generally, financial assurance is held in third-party instruments until the TCEQ's approval of closure and post closure activities by the licensee. The TCEQ also has the right to draw on third party financial assurance instruments should the licensee be unable or unwilling to perform any required activities or to protect its position prior to cancellation by the instrument provider. Regardless of the circumstances triggering a third-party

instrument draw, Texas statutes require these funds be placed in the Radiation and Perpetual Care Account (RPCA).

### **3.2.2 Radiation and Perpetual Care Account – Account 5096**

#### **3.2.2.1 Function and Purpose**

Texas Health and Safety Code, Section 401.305, authorizes the RPCA as a dedicated account within the general revenue fund. The statute allows either the Department of State Health Services (DSHS) or other department designated by the executive commissioner of DSHS, as well as the TCEQ, the authority to administer the money and security for a variety of actions except normal operating expenses. Such actions include, but are not limited to, decontamination, decommissioning, stabilization, reclamation, maintenance, surveillance, control, storage, and disposal of radioactive substances for the protection of the public health and safety and the environment.

#### **3.2.2.2 Use of RPCA Funds**

The agency currently has the authority to access funds from the RPCA account in the event of an incident involving the release of radioactive material at a disposal, source material recovery, processing, or storage facility licensed by the TCEQ. Currently, the TCEQ has a rider that provides appropriations for an incident involving a release of radioactive materials at the CWF; this may need to be updated to cover all closure activities. Further, the TCEQ would need to obtain authorization to spend the funds through an appropriation in future years.

Obtaining appropriations in the future may be impacted by the fact that in the RPCA, there are no dedicated sub-accounts into which the security deposits are placed. Once funds are placed into the account they become commingled with other funds and are not site-specific.

### **3.3 The Degree of Risk that the Financial Instruments Are Subject to Financial Reversal**

As mentioned previously, WCS currently uses a surety bond together with a trust to meet its financial assurance requirement of \$139.5 million for the LLRW Disposal Facility. Generally, both of these financial instruments are considered low risk financial assurance options. However, no financial instrument can be completely without risk and the use of stock in the Trust introduces a different element of risk. The risks that may be associated with the stock component of this Trust are:

#### **a. Diversification of Financial Instruments**

The Trust is comprised of TIMET stock. Should TIMET experience financial difficulties resulting in declining stock valuation, the Trust would lose principal value. Diversification of investments could provide a greater buffer from fluctuating stock prices.

#### **b. Declining Stock Value**

The Trust requires a 25 percent buffer above the required financial assurance amount to be maintained for the portion of the financial assurance amount secured by the TIMET stock. At the inception of the trust agreement on November 3, 2011, WCS provided a 60 percent buffer and has maintained the required 25 percent buffer at each subsequent month end.

**c. Liquidation**

As of September 30, 2012, the Trust owned approximately 8.2 percent of the outstanding shares of TIMET, which represents approximately 9 days of the average trading volume for this stock. Should WCS be unable or unwilling to provide additional funds as required due to a drop in stock value below a 6 percent buffer, Trust terms specify immediate liquidation of all TIMET shares after a one day cure period has elapsed. Liquidation of such a large volume of stock could impair the TCEQ's ability to maintain financial assurance funding equivalent to the cost estimates in the license.

**d. Affiliation with Valhi Holding Company**

Valhi Holding Company (VHC) is the higher-tier parent company of WCS and the largest shareholder of TIMET, owning approximately 28 percent of TIMET as of December 31, 2011. The financial instrument currently in place for WCS's hazardous waste facility and the radioactive storage and processing facility licenses are secured by a corporate guarantee from VHC of approximately \$52 million. There is a potential that a financial downturn of one of the companies could impact the others in the company umbrella due to these interrelationships.

To mitigate these risks, the Trust contains several safeguards, which include:

- A gradual reduction in the dependence on stock by requiring \$9 Million annual cash deposits, which will effectively decrease the risk over time, on or before the first anniversary of the initial funding and then annually for four more years. The first annual \$9 Million payment was received by the Trust on November 1, 2012.
- A requirement that increases to cost estimates and/or inflation cannot be secured by stock.
- A requirement that upon the 5th anniversary of the initial funding of the Trust, stock will no longer be an allowed investment.
- A 25 percent valuation buffer in excess of the portion of the required financial assurance secured by stock.
- An automatic true-up by WCS should month-end valuations fall below the 25 percent buffer.
- The automatic liquidation of the stock by the trustee should the value of stock at any time fall below a 6 percent buffer in excess of the portion of the required financial assurance amount secured by stock, after allowing for a one day cure period for WCS.
- A requirement that stock investments must be in marketable, unrestricted common stock of entities traded on the New York Stock Exchange,

- The conveyance of stock to the Trust in a form that is available for immediate sale and is not subject to limitations of federal securities law that would affect the volume or timing of any stock sale by the trustee.

During the first 9 months of the Trust, the built-in safeguards worked properly without TCEQ regulatory intervention.

### **3.4 Potential Post-Closure Risks Associated with the CWF**

As discussed in detail above, the main risk to the CWF is a breach of its liner, which would require remediation of the CWF and removal of a portion of the radioactive wastes for disposal at an off-site location. Another risk to the CWF is the transport of contamination from the FWF to the CWF. Should contamination from the FWF migrate to the CWF, the integrity of the CWF could be at risk and could potentially create a commingling of federal and state wastes. This commingling would provide additional layers of complexity to determine who is liable for the waste. However, these scenarios were all evaluated and proper financial assurance posted to address the issues.

### **3.5 Financial Assurance Instruments Are Adequate to Cover the State's Liabilities**

The TCEQ determined that the financial assurance instruments presented by WCS are adequate to cover the state's liabilities and meet the financial assurance requirements of Texas law and the License.

## **4. Conclusion**

The results from this study show that the financial assurance is adequate to cover the State's liabilities. Further, amounts can be adjusted during the annual updates to the financial assurance to account for changes in the license and site. The TCEQ has also taken steps to diminish any potential risks to the CWF after closure. Finally, the TCEQ has implemented measures by which the financial assurance funds cannot be accessed for other purposes.

## **Abbreviations, Initialisms, and Acronyms**

CD – Certificate of Deposit  
CDU – Containerized Disposal Unit  
CFR – Code of Federal Regulations  
CWF – Compact Waste Disposal Facility  
DFP – Decommissioning Funding Plan  
DSHS – Department of State Health Services  
EA – Environmental Analysis  
FA – Financial Assurance  
FWF – Federal Waste Disposal Facility  
LC – Letter of Credit  
LLRW – Low-Level Radioactive Waste  
NCDU – Non-containerized Disposal Unit  
NRC – United States Nuclear Regulatory Commission  
NYSE – New York Stock Exchange  
RPCA – Radiation Perpetual Care Account  
TAC – Texas Administrative Code  
TCEQ – Texas Commission on Environmental Quality  
TIMET – Titanium Metals Corporation  
THSC – Texas Health and Safety Code  
VHC – Valhi Holding Company  
WCS – Waste Control Specialists LLC