



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 19, 2018

Mr. Bernard Bonifas  
Mine Manager  
Uranerz Energy Corporation  
1701 East "E" Street  
Casper, WY 82605

SUBJECT: URANERZ ENERGY CORPORATION, NICHOLS RANCH ISR PROJECT, U.S.  
NUCLEAR REGULATORY COMMISSION VERIFICATION OF THE 2018  
FINANCIAL ASSURANCE (SURETY) UPDATE, SOURCE MATERIALS  
LICENSE SUA-1597

Dear Mr. Bonifas:

By letter dated December 18, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18040A731), Uranerz Energy Corporation submitted its 2018 financial assurance (surety) update to the U.S. Nuclear Regulatory Commission (NRC) staff. As a result of this submittal, the overall effect of this financial assurance update is to increase the surety amount by \$137,833 to \$6,373,789, from the previously approved surety amount of \$6,235,956.

Based on the information provided in the financial assurance update submittal, the NRC staff has determined that the surety estimate is acceptable as documented in the NRC staff's verification (enclosed). License Condition 9.5 of Materials License SUA-1597 will be revised to reflect the current updated surety amount during a future licensing action.

If you have any questions, please contact Mr. Ron Linton, Project Manager, at 301-415-7777 or by email at [ron.linton@nrc.gov](mailto:ron.linton@nrc.gov).

As a result of this verification, the NRC staff has completed its work on Cost Activity Code (CAC) and Enterprise Project Identifier (EPID) 000092/04009067/L-2017-DFA-0004. Therefore, this CAC/EPID will be closed.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

*/RA/*

Ron C. Linton, Project Manager  
Uranium Recovery Licensing Branch  
Division of Decommissioning, Uranium Recovery,  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

Docket No.: 040-09067

License No.: SUA-1597

Enclosure:

NRC Surety Estimate Staff Verification

cc: BJ Kristiansen, P.G. WDEQ-LQD  
Ryan Schierman WDEQ-URP

SUBJECT: URANERZ ENERGY CORPORATION, NICHOLS RANCH ISR PROJECT, U.S. NUCLEAR REGULATORY COMMISSION VERIFICATION OF THE 2018 FINANCIAL ASSURANCE (SURETY) UPDATE, SOURCE MATERIALS LICENSE SUA-1597, DATED APRIL 19, 2018

cc: BJ Kristiansen, P.G. WDEQ-LQD  
Ryan Schierman WDEQ-URP

DISTRIBUTION:

RKellar, RIV Sachten, DUWP

**ADAMS Accession No.: ML18099A347**

OFFICE	DUWP	DUWP	DUWP	DUWP
NAME	RLinton	RAugustus	BVonTill	RLinton
DATE	04/11/2018	04/12/2018	04/13/2018	04/19/2018

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**Technical Evaluation Report  
Staff Verification of 2018 Surety Estimate  
Uranerz Energy Corporation  
Source Material License SUA-1597**

DATE: April 19, 2018  
DOCKET: 040-09067  
LICENSE NO.: SUA-1597  
LICENSEE: Uranerz Energy Corporation  
SITE: Nichols Ranch In-Situ (ISR) Project  
PROJECT MANAGER: Ron Linton  
TECHNICAL REVIEWER: Reginald Augustus, Ron Linton

**Background**

By License Condition 9.5, Uranerz Energy Corporation (Uranerz) is required to submit to the U.S. Nuclear Regulatory Commission (NRC) annual updates of the financial assurance (surety) to cover third-party costs for decommissioning and decontamination at the Nichols Ranch ISR Project (Nichols Ranch) located in Johnson and Campbell Counties, Wyoming.

By letter dated December 16, 2014, Uranerz submitted its Nichols Ranch 2015 annual surety update (Uranerz, 2014) to the NRC.

Subsequently, by letter dated March 13, 2015, Uranerz submitted a revised annual surety update (Uranerz, 2015a), to address comments by Wyoming's Department of Environmental Quality's Land Quality Division (WDEQ-LQD). The NRC staff reviewed the revised surety update and issued a request for additional information (RAI) on September 14, 2015 (NRC, 2015). The licensee responded to the RAI in its submission of the Nichols Ranch 2016 surety update on December 18, 2015 (Uranerz, 2015b).

As previously stated, by letter dated December 18, 2015, Uranerz submitted its Nichols Ranch 2016 annual surety update (Uranerz, 2015b). The NRC staff reviewed the surety update and issued an RAI on April 18, 2016 (NRC, 2016). The licensee responded to the RAI in its August 12, 2016, submission of a revised 2016 surety update (Uranerz, 2016a).

By letter dated December 21, 2016, Uranerz submitted its Nichols Ranch 2017 annual surety update (Uranerz, 2016b). The NRC staff reviewed the surety update and determined that the standby trust exemption previously issued by the NRC for Nichols Ranch had expired. At this time, NRC staff was in the process of reviewing the State of Wyoming's special account provision to determine if the special account provision was equivalent to the requirement in 10 CFR Part 40, Appendix A, Criterion 9(i) that, if a trust is not used, a standby trust be set up to

receive funds in the event the Commission or State regulatory agency exercises its right to collect the surety. The NRC staff finalized the determination that Wyoming's special account provision was equivalent to a standby trust on October 25, 2017 (NRC, 2017b). Therefore, due to the NRC staff's review of the special account provision, the licensee and NRC staff agreed that the issue would be addressed in the licensee's 2018 surety submission.

By letter dated December 18, 2017, Uranerz submitted its Nichols Ranch 2018 annual surety update (Uranerz, 2017) to NRC.

Throughout the review period from 2015 to the present, Uranerz has maintained a surety amount of \$6,800,000 with the WDEQ-LQD. The Uranerz proposed financial assurance updates were \$6,718,536, \$6,088,553, \$6,219,928, and \$6,373,789 for 2015, 2016, 2017, and 2018, respectively.

### **Staff Review and Analysis**

This report includes the results of the NRC staff's final review of the 2015, 2016, 2017, and 2018 annual surety updates (Uranerz, 2014, 2015a, 2015b, 2016a, 2016b, 2017). The NRC staff reviewed the Nichols Ranch ISR Project surety update in accordance with requirements in 10 CFR Part 40, Appendix A, Criterion 9, "Financial Criteria" and in License Condition 9.5 of Materials License SUA-1597. Additionally, the NRC staff used NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications" (SRP) (NRC, 2003) as guidance in determining elements to be included in a surety review. Specifically, staff used the review procedures and acceptance criteria in Section 6.0, and guidance in Appendix C of the SRP. The NRC staff used WDEQ-LQD Guideline 12 "Standardized Reclamation Performance Bond Format and Cost Calculation Methods" (Guideline 12) [WDEQ, 2017a], when applicable, to verify that reasonable unit costs were included in the surety calculations.

#### *Sufficiency of the Cost Estimate*

In the surety calculations, the licensee includes costs for decommissioning and decontamination (D&D), reclamation of sites, structures, and equipment used in conjunction with project operations.

Uranerz estimated the cost to decommission and decontaminate the Nichols Ranch facility by an independent party at \$6,373,789. This constitutes an increase of \$137,833 from the NRC previously approved 2014 surety estimate of \$6,235,956 (NRC, 2014a). When compared to the revised 2017 annual surety update (Uranerz, 2016b) of \$ 6,219,928, it constitutes an increase of \$153,861. The majority of the changes to the cost estimate were from groundwater restoration and building demolition and disposal cost activities. Additional changes were the result of updates to the master cost sheet and consumer price index (CPI). The cost estimate is based on costs of a third party contractor, does not take credit for any salvage value, and includes a 15 percent contingency factor.

The NRC staff reviewed the updated cost estimate against requirements in LC 9.5 (NRC, 2017a). The NRC staff observed that changes in the surety estimate were based on re-baselining of costs by Uranerz derived from WDEQ-LQD Guideline 12, as well as costs of utilities, transportation, and labor. In addition, new costs breakdowns were included in this year's submission in a master cost sheet that included unit costs, 10 percent contractor profit

and overhead, and the unit and source. Furthermore, the consumer price index adjustment was updated (as necessary) for costs from 2013-2017.

Based on staff's review of the 2016 Nichols Ranch surety estimate, the NRC staff issued an RAI to Uranerz on April 18, 2016 (NRC, 2016). The RAI requested an update to the surety estimate to provide additional information (i.e., most recent updated rates from WDEQ-LQD Guideline 12, or further explanation of how the unit costs and key assumptions were derived) in the cost estimate to justify reliance on all of the unit costs in the surety estimate. Uranerz responded to the above-referenced RAI in their August 12, 2016, revised 2016 annual surety update (Uranerz, 2016a) and its subsequent 2017 annual surety update submitted on December 21, 2016 (Uranerz, 2016b). In its response in the revised 2016 surety, Uranerz added notes to the pages of the cost estimate to justify reliance on unit costs. Unit costs were also revised to reflect current decommissioning costs or adjusted based on the CPI escalator. Uranerz also indicated that it intended on re-baselining costs for its 2017 annual surety update. The 2017 annual surety update and subsequent 2018 surety update (Uranerz, 2017), outline the changes to the various worksheets.

The NRC staff observes that the licensee's surety estimates and the associated cost breakdowns were adequately summarized and calculated in accordance with Appendix C of NUREG-1569 (NRC, 2003). The NRC spot-checked the calculations within the cost breakdowns and found the calculations to be correct. The NRC staff observes that 10 CFR Part 40, Appendix A, Criterion 9 does not specify a specific contingency factor to be used in the surety calculations. Guidance in NUREG-1569 recommends a minimum 15 percent contingency as an acceptable criterion. The NRC staff finds that the contingency used by the licensee is consistent with that guidance.

The NRC staff's review of the cost adjustments were found to be consistent with proposed changes in operations. The NRC staff found that the licensee has included in the update all activities: (1) listed in the reclamation plan or in Section 6.0 of NUREG-1569; and (2) conducted during the period covered by the estimate. The NRC staff found the licensee has based the assumptions for the financial surety analysis on site conditions, including experiences with generally accepted industry practices, research and development at the site, and previous operating experience.

Therefore, the NRC staff finds that the licensee has established an acceptable financial assurance cost estimate based on the requirements in 10 CFR Part 40, Appendix A, Criterion 9.

#### *Determination of Wyoming's Use of a Fiduciary Fund to Meet Standby Trust Requirement*

Wyoming law requires that a separate account be set up to receive forfeited decommissioning funds, but does not specifically require a Standby Trust Agreement (STA). Section 35-11-424(a) of the Code of Wyoming states, "[a]ll forfeitures collected under the provisions of this act shall be deposited with the State treasurer in a separate account for reclamation purposes." Pursuant to WDEQ financial assurance requirements, WDEQ holds permit bonds in a fiduciary fund called an agency fund. If a bond is forfeited, the forfeited funds are moved to a special revenue account. Although the special revenue account is not an STA, the special revenue account serves a similar purpose in that forfeited funds are not deposited into the State treasury for general fund use, but instead are set aside in the special revenue account to be used exclusively for reclamation (decommissioning) purposes.

NRC elected to grant Uranerz an exemption from the STA requirements in 10 CFR Part 40, Appendix A, Criterion 9 on September 9, 2014, for the surety arrangement until the 2016 review cycle to allow the NRC staff an opportunity to evaluate whether the separate account required by the State of Wyoming would satisfy the NRC's requirement for an STA (NRC, 2014b).

By letter dated May 26, 2017 (WDEQ, 2017b), the State of Wyoming (Wyoming) submitted to NRC its basis for how its Fiduciary Fund (Fund 487), was equivalent, and thereby meets the intent of 10 CFR Part 40, Appendix A, Criterion 9(i). NRC staff reviewed Wyoming's letter and in an internal memo dated October 25, 2017 (NRC, 2017b), outlined its determination that Wyoming's Fund 487 was equivalent to a standby trust, and therefore meets the regulatory requirements of 10 CFR Part 40. Appendix A, Criterion 9(i).

## **Conclusion**

Based on the information provided in the application and the detailed review of the surety estimate for the Nichols Ranch ISR Project, the NRC staff concludes that the 2017 surety estimate reasonably includes funds sufficient to cover the estimated current costs for closure of the facility. The staff determined that the updated surety amount meets the requirements of 10 CFR Part 40, Appendix A, Criterion 9 and LC 9.5 (NRC, 2017a) and is therefore acceptable.

For the reasons discussed above, the NRC staff finds that Uranerz has provided adequate justification for the current financial assurance estimate at the Nichols Ranch ISR Project. Therefore, the NRC staff has reasonable assurance that the financial assurance estimate is sufficient and accepts the financial assurance estimate for the Nichols Ranch ISR Project.

## **References**

10 CFR Part 40. Code of Federal Regulations, Title 10, Energy, Part 40, "Domestic Licensing of Source Material."

10 CFR Part 51. Code of Federal Regulations, Title 10, Energy, Part 51, "Environmental Protection Regulations for Domestic Licensing and related Regulatory Functions."

NRC, 2017b. Internal memo from R. Augustus, US NRC, to J. Tappert, US NRC, Determination of Whether Wyoming's Department of Environmental Quality's Fiduciary Fund Complies With Nuclear Regulatory Commission Regulatory Requirements, October 25, 2017, ADAMS Accession No. ML172234A454.

NRC, 2017a. Uranerz Energy Corporation. Materials License SUA-1597, Amendment No. 5, March 22, 2017, ADAMS Accession No. ML17033A330.

NRC, 2016. Letter from R. Linton, US NRC, to W. Goranson, Uranerz Energy Corporation Nichols Ranch Project, Request for Additional Information, Annual Financial Assurance Estimate Adjustment, April 18, 2016, ADAMS Accession No. ML16099A067.

NRC, 2015. Letter from R. Linton, US NRC, to M. Thomas, Uranerz Energy Corporation Nichols Ranch Project, Request for Additional Information, Annual Financial Assurance Estimate Adjustment, September 14, 2015, ADAMS Accession No. ML15253A780.

NRC, 2014b. Federal Register Notice 2014-21413 for Uranerz Energy Corp., re Temporary Exemption; Issuance, September 9, 2014, ADAMS Accession No. ML14265A055.

NRC, 2014a. Letter from R. Linton, US NRC, to M. Thomas, Uranerz Energy Corporation Nichols Ranch Project, Approval of Annual Financial Assurance Update, August 28, 2014, ADAMS Accession No. ML14203A358.

NRC, 2003. NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications—Final Report." June 2003.

Uranerz, 2017. 2018 Surety Estimate, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, December 18, 2017, ADAMS Accession No. ML18040A731.

Uranerz, 2016b. 2017 Surety Estimate, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, December 21, 2016, ADAMS Accession No. ML17012A338.

Uranerz, 2016a. 2016 Revised Surety Estimate and Responses to Request for Additional Information, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, August 12, 2016, ADAMS Accession No. ML16238A192.

Uranerz, 2015b. 2016 Surety Estimate and Responses to Request for Additional Information, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, December 18, 2015, ADAMS Accession No. ML16020A520.

Uranerz, 2015a. 2015 Revised Surety Estimate, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, March 13, 2015, ADAMS Accession No. ML15078A044.

Uranerz, 2014. 2015 Surety Estimate, Uranerz Energy Corporation Nichols Ranch Project, Source Material License SUA-1597, December 16, 2014, ADAMS Accession No. ML15021A177.

WDEQ, 2017b. Letter from T. Parfitt, WDEQ to D. Collins, US NRC, May 26, 2017, ADAMS Accession No. ML17177A267.

WDEQ, 2017a. Wyoming Department of Environmental Quality Land Quality Division, Guideline No. 12, Standardized Reclamation Performance Bond Format and Cost Calculation Methods, Revised February 2017.