



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

September 2, 2021

Mr. Kyle Wendtland  
Land Quality Administrator  
Land Quality Division  
Wyoming Department  
of Environmental Quality  
200 West 17<sup>th</sup> Street  
Cheyenne, WY 82001

SUBJECT: American Nuclear Corporation Gas Hills Project Site Inspection  
Report 040-04492/2021-001

This letter refers to the inspection conducted on July 22, 2021, of the American Nuclear Corporation Gas Hills Project site in Fremont County, Wyoming. This inspection examined activities conducted at the site as they relate to public health and safety, and to confirm compliance with the Commission's rules and regulations. Within these areas, the inspection consisted of selected examination of procedures and representative records, and interviews with personnel.

A preliminary exit was conducted with Mr. David Adams, Program Manager, Uranium Recovery Program, Land Quality Division, Wyoming Department of Environmental Quality, of your staff at the conclusion of the onsite portion of the inspection on July 22, 2021. A final exit was conducted by telephone with Mr. Adams on August 31, 2021. No violations were identified and a response to this letter is not required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice, and Procedure," a copy of this letter, its enclosure, and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response, if you choose to provide one, should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

K. Wendtland

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Should you have any questions concerning this inspection, please contact Ms. Martha Poston-Brown, Health Physicist at [Martha.Poston-Brown@nrc.gov](mailto:Martha.Poston-Brown@nrc.gov) or the undersigned at [Heather.Gepford@nrc.gov](mailto:Heather.Gepford@nrc.gov).

Sincerely,



Signed by Gepford, Heather  
on 09/02/21

Heather J. Gepford, PhD, CHP, Chief  
Materials Licensing & Decommissioning Branch  
Division of Nuclear Materials Safety

Docket: 040-04492

License: SUA-667

Enclosure:

Inspection Report 040-04492/2021-001

cc: David Adams, Program Manager, WYDEQ

AMERICAN NUCLEAR CORPORATION GAS HILLS PROJECT SITE INSPECTION REPORT  
040-04492/2021-001, DATED – SEPTEMBER 2, 2021

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cc:

[David.Adams1@wyo.gov](mailto:David.Adams1@wyo.gov)

ADAMS ACCESSION NUMBER: ML21238A359

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**U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV**

Docket: 040-04492

License: SUA-667

Report No.: 040-04492/2021-001

Licensee: American Nuclear Corporation (ANC)  
Uranium Mill Tailings Site

Facility: Gas Hills Site

Location: Fremont County, WY

Date: July 22, 2021

Inspector: Marti R. Poston, Health Physicist  
Uranium Recovery and Materials Decommissioning Branch  
Division of Decommissioning, Uranium Recovery and Waste  
Programs  
Office of Nuclear Materials Safety and Safeguards

Approved by: Heather J. Gepford, PhD, CHP, Chief  
Materials Licensing and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Attachment: Photographs Taken at the ANC Gas Hills Site

Enclosure

## EXECUTIVE SUMMARY

### American Nuclear Corporation Gas Hills Project Site NRC Inspection Report 040-04492/2021-001

This inspection was a routine, announced inspection of decommissioning activities being conducted at the American Nuclear Corporation Gas Hills Project site in Fremont County, Wyoming. The licensee declared bankruptcy in 1994 and the State of Wyoming assumed responsibility for completion of the remediation in 1996. The responsibilities of the State were outlined in a Confirmatory Order (Order) issued in 1996. The Order was modified several times since issuance. The Order was terminated in April 2020 upon exhaustion of funds. The site is currently in standby mode due to funding. Based on the results of this inspection, no violations were identified.

#### Management Organization and Controls

Site status updates are provided by the State and its contractor to NRC Project Manager in routine monthly teleconferences. During this inspection, a site tour was conducted to assess the extent of condition and completion of agreed upon activities. No issues or concerns associated with either of the tailings piles were identified (Section 1.2).

#### Radiation Protection

Access to the TP-1 and TP-2 tailings piles is controlled using fences and locked gates. The gates are appropriately labeled to identify the radiological hazards. No radiation protection issues associated with the site were identified (Section 2.2).

## REPORT DETAILS

### Site Status

The American Nuclear Corporation (ANC) site is located in the Gas Hills region in eastern Fremont County, Wyoming. The Gas Hills is a remote, sparsely populated, rural region in Wyoming, with the nearest population center (Riverton, Wyoming) approximately 45 miles (72.4 kilometers) west-northwest of the site. The site occupies approximately 550 acres (222 hectares) that were used for uranium mining and milling activities between 1959 and 1981. ANC suspended milling activities in 1981 due to poor uranium market conditions and began decommissioning activities. On May 9, 1994, ANC notified the NRC that it was ceasing operations and going out of business (ADAMS Accession No. ML071580050). Consequently, ANC forfeited its \$3.2 million surety reclamation performance bond to the Wyoming Department of Environmental Quality (WYDEQ).

In July 1994, the WYDEQ agreed to remediate the site (ADAMS Accession No. ML071580059). In October 1996, the NRC issued an Order outlining the WYDEQ's responsibilities for the decommissioning of the site (ADAMS Accession No. ML071520354), and the WYDEQ has been conducting limited decommissioning of the ANC site since 1996. Limited decommissioning of the site included placement of an interim cover on Tailings Pond No. 1 (TP-1), removal of windblown tailings, decommissioning and capping Tailings Pond No. 2, ongoing groundwater monitoring, and seasonal groundwater remediation. These remediation activities were performed by WYDEQ and its contractor from 1996 till 2020.

In January of 2020, the State of Wyoming notified the NRC that the funds were depleted and requested termination of the Order (ADAMS Accession No. ML20010C603) in accordance with the provision that allowed for Order termination. In April of 2020, the NRC terminated the Order (ADAMS Accession No. ML20083G263).

### Management Organization and Controls (Inspection Procedure (IP) 88005) and Radiation Protection (IP 83822)

#### Site Observations and Findings

On July 22, 2021, the inspector walked down the site to observe the overall condition of the site while it is in standby. The inspector was accompanied by a representative of the WYDEQ, Uranium Recovery Program.

Both tailings piles (TP-1 and TP-2) are stabilized. TP-2 was considered complete by the State, but a recent assessment by the U.S. Department of Energy - Office of Legacy Management indicates that additional cover may be required. During the inspection in 2019, TP-1 had just been seeded for a vegetative cover. During this inspection, the inspector noted that the vegetative cover has grown in appropriately for the region.

A walkdown of TP-1 was conducted to look for signs of erosion and verify the integrity of the dam. Rattlesnakes have been seen when walking down both tailings piles, so snake garters are highly recommended. The trenching system around the perimeter was in good condition and appeared to be effectively clearing rainwater from around the tailings pile. Signs of rill erosion were found along the sides of TP-1 but the tailings pile does not appear to have been impacted as the rilling was on the opposite bank of the trench. No signs of gullying or undercutting were observed as part of this inspection. The dam was also found in good condition with the only

minimal signs of erosion. Washdown from the spoils pile previously identified along one side of the TP-1 area just inside the fence line has increased since the inspection in CY2019, but the tailings pile has not been impacted, the trench along that side has just been filled along that side. The Wyoming Department of Environmental Quality, Abandoned Mine Land Program, is spending approximately \$80,000 per year in attempts to mitigate this washdown issue onsite. Portions of the TP-2 tailings pile were not accessible due to deep trenching along the access road but areas that were accessible were found in good condition.

The fences surrounding the TP-1 and TP-2 tailings pile were intact, locked with chains and padlocks, well maintained, and appropriately posted. The fences were constructed of wooden or metal posts and four strands of wire, the three upper tiers being barbwire, the lowest is "animal friendly" without barbs to allow for the local antelope to go under the fence, which is their preferred mode. Some of the older metal signs showed sign of wear and tear, fading or damage (due to buckshot) but newer signs had recently been placed onsite by WYDEQ.

### **Conclusion**

Site status updates are provided by the WYDEQ Uranium Recovery Program Manager to NRC Project Manager in routine monthly teleconferences. The inspection was conducted to assess the extent of condition while the site is in standby. No issues or concerns associated with either of the tailings piles were identified.

**PARTIAL LIST OF PERSON CONTACTED**

D. Adams, Program Manager, Wyoming Department of Environmental Quality, Uranium Recovery Program

**ITEMS OPENED, CLOSED OR DISCUSSED**

Open

None

Closed

None

Discussed

None

**INSPECTION PROCEDURES USED**

IP88005	Management Organization and Controls
IP83822	Radiation Protection

Attachment 1  
Pictures of ANC Gas Hills site



Figure 1 – looking across TSP-1 with spoils in background



Figure 2 – Spoils washout at fence line on TSP-1



Figure 3 – TSP-1 showing vegetative cover and side slopes

Figure 4 – showing trench not impacted by washout





Figure 5 – showing trench filled in by washout



Figure 6 Rill and Gully erosion TSP-1 trench side (not tailings pile side) suspected to be a result of channeled rain flow from washout