



## Sustainability Report

December 2020

The world needs mining. There can be no doubt about that. Most of what we as a society use every day involves mining in one way or another, whether it be the steel we use in the bridges and buildings we build, the alloys we use in the cars we drive and the airplanes we fly, or the metals we use in the electronics we rely on. Mining provides many benefits, often in rural and underserved areas, including jobs to local workforces, increases in the local tax bases, and numerous spinoff businesses and benefits to those communities. In fact, mining was what opened up the American West in the 1800s.



*White Mesa Mill near Blanding, Utah*

But the earth's resources are finite and, if not managed properly, mining can have negative impacts on public health, safety and the environment. This means we need to mine the world's resources safely and responsibly and not waste any of the resources we mine. We need to be able to enjoy the many benefits mining brings, while striving to eliminate all negative impacts.

As miners, we need to continue to provide jobs and economic benefits as we obtain the resources the world needs, while at the same time meeting and, to the extent practicable, exceeding all applicable health, safety and environmental regulations to ensure a minimal impact to our workers, the public and the environment while our mines and facilities are in operation. Then, we need to properly reclaim our mines and facilities after we complete operations so that any lasting impacts to the environment are eliminated or minimized. Finally, we need to responsibly recycle everything we mine, to the extent practicable, in order to minimize the disturbances needed to be made to the environment, and to sustain the valuable resources in the ground for future generations.

Equally important, we need to be able to do this in our own country, in our own backyards, rather than relying on metals mined from other countries, which in most cases have lesser protections for public health, safety and the environment than we have. In the United States, we are highly regulated and operate to the highest standards. We, as Americans, should be proud of that, and should not be afraid to do properly in our own country what we rely on others to do for our benefit in theirs. America needs to set an example by demonstrating how it can play its part in satisfying its own and the world's needs in a responsible manner. There is only one "globe" in "global warming," and everything we do here, in our own backyards, to foster the responsible mining and recycling of valuable carbon-free energy resources helps us all achieve our global objective of combatting climate change.

We believe a sustainability plan needs to address all of these things. At Energy Fuels, we are proud to be able to say that we achieve these objectives in everything we do. Uranium, which is the fuel for carbon-free, emission-free baseload nuclear power, is one of the cleanest forms of energy in the world. The very heart of our business – uranium production – helps us play a big part in addressing global climate change, reducing air pollution, and making the world a healthier and cleaner place.

## TABLE OF CONTENTS

|        |   |    |
|--------|---|----|
| 1.     | INTRODUCTION AND SUMMARY .....  | 1  |
| 1.1.   | Addressing Global Climate Change, Reducing Air Pollution, and Making the World a Healthier and Cleaner Place.....   | 2  |
| 1.2.   | A Major Contributor to the Communities in which we Operate .....  | 2  |
| 1.3.   | Our Commitment to Health, Safety and Environmental Responsibility .....   | 3  |
| 1.4.   | The Uranium Mining, Milling and ISR Recovery Industry is Highly Regulated, Which Ensures Protection of Public Health, Safety and the Environment to the Highest Standards ..... | 3  |
| 1.5.   | Environmentally Responsible Mining, Milling and ISR Production .....  | 4  |
| 1.6.   | Environmentally Responsible Reclamation .....   | 4  |
| 1.7.   | Cleaning up Our Country’s Cold War Legacy .....   | 5  |
| 1.8.   | Sustaining the World’s Resources through Recycling .....  | 5  |
| 2.     | ADDRESSING GLOBAL CLIMATE CHANGE: REDUCING AIR POLLUTION .....  | 7  |
| 2.1.   | Commitment to Reducing Greenhouse Gas (“GHG”) Emissions through Nuclear Energy.....   | 7  |
| 3.     | CONTRIBUTING TO THE COMMUNITIES IN WHICH WE OPERATE.....  | 8  |
| 4.     | OUR COMMITMENT TO ENVIRONMENTAL RESPONSIBILITY .....  | 10 |
| 4.1.   | Our Environment, Health and Safety Policy .....   | 10 |
| 4.2.   | Our ALARA Program .....   | 11 |
| 4.3.   | Overview of the EHS Program.....  | 13 |
| 4.4.   | Environmental Compliance.....   | 13 |
| 5.     | THE URANIUM MINING, MILLING AND ISR RECOVERY INDUSTRY IS HIGHLY REGULATED, WHICH ENSURES PROTECTION OF PUBLIC HEALTH, SAFETY AND THE ENVIRONMENT TO THE HIGHEST STANDARDS ..... | 16 |
| 5.1.   | As a Uranium Miner and Producer, We Are Highly Regulated .....  | 16 |
| 5.1.1. | Today’s Governmental and Environmental Regulations.....   | 16 |
| 5.1.2. | Regulatory Authorities over our Mines and Facilities.....   | 17 |
| (a)    | <i>Uranium Mills.</i> .....   | 17 |
| (b)    | <i>ISR Facilities.</i> .....  | 18 |
| (c)    | <i>Conventional Mines.</i> .....  | 18 |

|        |  |    |
|--------|--|----|
| 5.1.3. | Applicable Laws and Agencies .....   | 18 |
| (a)    | <i>Environmental</i> .....   | 19 |
| (b)    | <i>Labor</i> .....   | 20 |
| (c)    | <i>Historical and Cultural</i> .....   | 20 |
| (d)    | <i>Corporate</i> .....   | 20 |
| (e)    | <i>Securities</i> .....  | 20 |
| (f)    | <i>State, Provincial and Local</i> .....   | 21 |
| 5.1.4. | Agencies and Exchanges with Regulatory Jurisdiction.....   | 21 |
| (a)    | <i>U.S. State Agencies, Including:</i> .....   | 21 |
| (b)    | <i>American Federal Agencies, Including:</i> .....   | 22 |
| (c)    | <i>Canadian Agencies, Including:</i> .....   | 22 |
| (d)    | <i>Stock Exchanges, Including:</i> .....   | 22 |
| 5.1.5. | Legacy Cold-War Era Governmental and Environmental Regulations.....  | 22 |
| 6.     | <b>OPERATING RESPONSIBLY TO ENSURE A MINIMAL IMPACT TO OUR WORKERS,<br/>THE PUBLIC AND THE ENVIRONMENT WHILE OUR MINES AND FACILITIES ARE<br/>IN OPERATION</b> ..... | 25 |
| 6.1.   | <b>Operating Responsibly</b> .....   | 25 |
| 6.2.   | <b>Operating Standards for Uranium Mills</b> .....   | 26 |
| 6.2.1. | Jurisdiction over the Mill .....   | 26 |
| 6.2.2. | Uranium Mills are Subject to Unique, Extremely Protective Requirements .....   | 26 |
| 6.2.3. | 10 CFR Part 20.....  | 26 |
| 6.2.4. | Clean Air Act Requirements .....   | 27 |
| 6.2.5. | Monitoring of any Impacts to Groundwater .....   | 27 |
| 6.2.6. | Wastes Generated by Mills on an Ongoing Basis .....  | 28 |
| 6.2.7. | Transportation .....   | 29 |
| 6.3.   | <b>Operating Standards for ISR Production</b> .....  | 29 |
| 6.3.1. | How ISR Mining is Performed.....   | 29 |
| 6.3.2. | In-Situ Recovery is Distinct from Fracking .....   | 30 |
| 6.3.3. | Jurisdiction over In-Situ Recovery .....   | 30 |

|        |   |    |
|--------|---|----|
| 6.3.4. | Wastes Generated from ISR Mining .....  | 31 |
| (a)    | <i>Bleed Solution</i> .....   | 31 |
| (b)    | <i>Liquid Process Effluents</i> .....   | 31 |
| (c)    | <i>Restoration Waters</i> .....   | 31 |
| (d)    | <i>Discrete Surface Wastes</i> .....  | 31 |
| 6.3.5. | Operational Standards .....   | 31 |
| (a)    | <i>Radon, Gamma and Air Particulate Levels at the Facility and Management of Exposure to Workers</i><br>.....                                   | 31 |
| (b)    | <i>Management of Waste Solutions</i> .....  | 32 |
| 6.4.   | <b>Operating Standards for Conventional Mining</b> .....  | 32 |
| 6.4.1. | Jurisdiction over Conventional Uranium Mining .....   | 32 |
| (a)    | <i>State and Federal Agencies</i> .....   | 32 |
| (b)    | <i>EPA</i> .....  | 32 |
| (c)    | <i>MSHA</i> .....   | 33 |
| (d)    | <i>Other</i> .....  | 33 |
| 6.4.2. | Operational Standards .....   | 33 |
| (a)    | <i>Radon and Gamma in Mines and Management of Exposure to Workers</i> .....   | 33 |
| (b)    | <i>Radon Emanations from Underground Uranium Mines</i> .....  | 34 |
| (c)    | <i>Possible Need for NPDES Discharge Permit or the Equivalent</i> .....   | 34 |
| (d)    | <i>Groundwater Protection</i> .....   | 35 |
| 6.4.3. | Other Matters.....  | 35 |
| 7.     | <b>RECLAIMING RESPONSIBLY AFTER WE COMPLETE OPERATIONS SO THAT ANY<br/>LASTING IMPACTS TO THE ENVIRONMENT ARE ELIMINATED OR MINIMIZED</b> ..... | 36 |
| 7.1.   | <b>Reclaiming Responsibly</b> .....   | 36 |
| 7.2.   | <b>Reclamation of Uranium Mills</b> .....   | 38 |
| 7.2.1. | Clean-Up Standards for Uranium Mills.....   | 38 |
| (a)    | <i>Responsibility for and Manner of Clean Up</i> .....  | 38 |
| (b)    | <i>Surface</i> .....  | 38 |
| (c)    | <i>Groundwater</i> .....  | 38 |

|         |   |    |
|---------|---|----|
| (d)     | <i>Tailings Impoundment Cover</i> .....   | 39 |
| (e)     | <i>License Termination</i> .....  | 39 |
| 7.3.    | <b>Reclamation of ISR Facilities</b> .....  | 40 |
| 7.4.    | <b>Reclamation of Conventional Mines</b> .....  | 41 |
| 7.4.1.  | Responsibility for and Manner of Clean Up.....  | 41 |
| 7.4.2.  | Radiological Standards for Reclamation .....  | 42 |
| 8.      | <b>CLEANING UP OUR COUNTRY’S COLD WAR LEGACY</b> .....  | 43 |
| 9.      | <b>SUSTAINING THE WORLD’S RESOURCES THROUGH RECYCLING</b> .....   | 44 |
| 9.1.    | <b>Recycling Wastes for the Recovery of Valuable Uranium, Vanadium and Rare Earth Elements</b><br>.....         | 44 |
| 9.1.1.  | Recycling Wastes for the Recovery of Commercially Salable Uranium.....  | 45 |
| 9.1.2.  | Recycling Wastes for the Recovery of Commercially Salable Vanadium .....  | 45 |
| 9.1.3.  | Recycling Ores for the Recovery of Commercially Salable Rare Earth Elements together with<br>Uranium.....       | 46 |
| 9.2.    | <b>Recycling Production Wastes</b> .....  | 46 |
| 9.2.1.  | Recycling Water used in Remediation of Historical Plumes.....   | 46 |
| 9.2.2.  | Production Wastes.....  | 47 |
| 9.2.3.  | Office Wastes .....   | 47 |
| 9.2.4.  | Related Efforts.....  | 47 |
| 10.     | <b>NATURAL RESOURCES AND MATERIALS MANAGEMENT</b> .....   | 49 |
| 10.1.   | <b>Biodiversity Program</b> .....   | 49 |
| 10.1.1. | NEPA .....  | 49 |
| 10.1.2. | Plan of Operations .....  | 51 |
| 10.1.3. | State Environmental Reviews .....   | 51 |
| 11.     | <b>EFFLUENTS, WASTES AND TOXICITY</b> .....   | 52 |
| 11.1    | <b>Management of Effluents, Waste and Toxicity at our Mill, ISR Facilities and Conventional<br/>Mines</b> ..... | 52 |
| 11.2    | <b>Role of the Mill in Minimizing the Waste “Footprint” of the Company and Others</b> .....                     | 52 |
| 11.3    | <b>Other Hazardous and Non-Hazardous Wastes</b> .....   | 53 |

|         |  |    |
|---------|--|----|
| 12.     | <b>THE WHITE MESA MILL IS AN IDEAL PERMANENT DISPOSAL FACILITY FOR MILL TAILINGS, EFFLUENTS AND WASTES AND ISR FACILITY WASTES</b> | 54 |
| 12.1.   | <b>Siting</b>  | 55 |
| 12.2.   | <b>How we Meet these Objectives</b>  | 55 |
| 12.3.   | <b>Uranium Mill Tailings Impoundment Design Criteria</b>   | 56 |
| 12.4.   | <b>Liner Design Standards</b>  | 56 |
| 12.5.   | <b>Groundwater Monitoring and Effluents</b>  | 57 |
| 12.6.   | <b>Reclamation Plan and Surety</b>   | 57 |
| 12.6.1  | Responsibility for and Manner of Cleanup   | 57 |
| 12.6.2. | Surface Treatment  | 57 |
| 12.6.3. | Groundwater  | 58 |
| 12.6.4. | White Mesa Mill Surety Bond  | 58 |
| 12.6.5. | Long-Term Custodian  | 58 |
| 12.7.   | <b>Permitting Requires EIS and Extensive Evaluations</b>   | 59 |
| 13.     | <b>HUMAN RIGHTS</b>  | 60 |
| 14.     | <b>EMPLOYMENT: LABOR, HEALTH AND SAFETY</b>  | 61 |
| 14.1.   | <b>Diversity and Equal Opportunity</b>   | 61 |
| 14.2.   | <b>Non-Discrimination</b>  | 62 |
| 14.3.   | <b>Freedom of Association, Collective Bargaining &amp; Civic Participation</b>   | 62 |
| 14.4.   | <b>Annual Effectiveness Reviews by the Board and Audit Committee</b>   | 63 |
| 14.5.   | <b>Anti-Corruption, Fraud, Unauthorized Disclosure and Anti-Competitive Behavior</b>   | 63 |
| 14.6.   | <b>Supplier Social Assessment</b>  | 64 |
| 14.7.   | <b>Occupational Health and Safety</b>  | 64 |
| 14.7.1. | Radiation  | 64 |
| 14.7.2. | Standard Operating Procedures  | 65 |
| 14.7.3. | Compliance with MSHA and OSHA  | 65 |
| 14.7.4. | Training and Education   | 66 |
| a)      | <i>Required Safety Training</i>  | 66 |

|       |   |    |
|-------|---|----|
| 14.8. | <b>Professional Development</b> .....                         | 67 |
| 15.   | <b>STAKEHOLDERS AND SOCIETY</b> .....                         | 68 |
| 16.   | <b>PRIVACY FOR VISITORS, SHAREHOLDERS AND CUSTOMERS</b> ..... | 69 |
| 17.   | <b>SECURITY PRACTICES</b> .....                               | 70 |
| 18.   | <b>CORPORATE GOVERNANCE AND FINANCE</b> .....                 | 71 |
| 19.   | <b>GRI STANDARDS REFERENCED</b> .....                         | 72 |

## 1. INTRODUCTION AND SUMMARY

Energy Fuels Inc. (“**Energy Fuels**” or the “**Company**”), a corporation headquartered in Lakewood, Colorado, is a uranium and vanadium mining and a rare earth element (“**REE**”) processing company operating in the western United States that is dedicated to sustainability through corporate, environmental and social responsibility. All of Energy Fuels employees, assets and operations are in the western United States.

Energy Fuels has been the leading U.S. producer of uranium since 2017, and, from 2006 to date, Energy Fuels’ assets have produced approximately 34% of all U.S. uranium produced during that period. In fact, Energy Fuels’ current assets produced more than two times the total uranium produced by all other U.S. uranium companies combined over that period, other than Cameco Corporation, which was the largest U.S. producer from 2006-2016.

Energy Fuels also produces vanadium in the U.S., as market conditions warrant, and was the largest primary producer of vanadium in the U.S. in 2019. We have significant high-grade vanadium resources in several of our uranium mines near the Colorado-Utah border. Vanadium, which today is mainly used in the steel, aerospace, and chemical industries, also contributes to environmental sustainability, as this critical mineral is seeing considerable interest in next generation batteries that store energy generated from renewable sources.



*Pinenut Mine Shaft Prior to Reclamation*

At Energy Fuels, we are proud of being the largest uranium and vanadium producer in the United States, but we are even prouder of our record of safety and environmental sustainability. Not only do we embrace responsible mining, proper reclamation and responsible recycling, we also produce uranium, which is the fuel for carbon-free, emission-free nuclear energy. We are proud to play a growing part in global efforts to combat climate change, reduce air pollution, and promote environmental responsibility.

Beyond uranium and vanadium, Energy Fuels is also completing pilot-scale test-work to enable the processing of uranium-bearing natural REE ores at our White Mesa Mill (the “**Mill**”) in Utah, in preparation for the commercial production of REE carbonate in 2021.

REEs are a group of 17 chemical elements that have a variety of industrial and clean energy applications, including wind turbines, electric vehicles, clean energy production, advanced magnets, automotive components, communications technology, consumer electronics, lasers and numerous other applications.

The natural uranium/REE-bearing ores to be processed at the Mill are expected to come from third parties, and, in many cases, are side streams that have historically been discarded from other mining operations. Energy Fuels will produce commercially salable uranium and a commercially salable REE carbonate as co-products from recycling these natural ores. In addition, the Mill is evaluating the potential to separate individual REE oxides from REE carbonates at the Mill, and in future years expects to evaluate the potential



to produce REE metals and metal alloys at the Mill or elsewhere in the U.S., thereby furthering the Company's involvement in producing these critical minerals.

Under our REE business, we will not only be recycling uranium from rare earth ore streams that have been discarded in the past, we will be helping to produce rare earth elements, which are key components of numerous modern technologies. *From a sustainability perspective, not only will Energy Fuels provide critical rare earth elements used in many advanced technologies and clean energy applications, we will also provide recycled uranium to fuel carbon-free nuclear energy to power those technologies! This is a remarkable clean energy story!*

We are excited to share with you the following key efforts, initiatives and considerations that guide our management team's approach in all aspects of business, and which we feel highlight the Company's unwavering commitment to sustainability and corporate responsibility:

### **1.1. Addressing Global Climate Change, Reducing Air Pollution, and Making the World a Healthier and Cleaner Place**

The uranium we responsibly produce is helping address some of the most daunting health and environmental issues facing the world today: air pollution and climate change. Uranium is the fuel for carbon-free, emission-free baseload nuclear power – one of the cleanest forms of energy in the world. The very heart of our business, uranium production, helps address global climate change, reduces air pollution, and makes the world a healthier and cleaner place. We are proud of our record of environmental stewardship. We are proud to play a growing part in this global effort. See Section 2, [Addressing Global Climate Change: Reducing Air Pollution](#), below.

### **1.2. A Major Contributor to the Communities in which we Operate**

Most of the Company's work force is in underserved and rural markets:

- Over half of the Company's employees typically work at the Mill, which is located in San Juan County, Utah. San Juan County is the poorest county in Utah and well within the 50 poorest counties in the United States. The Mill has been the largest private employer in San Juan County during most of its 40-year history. Further, throughout its history and currently, the Mill's workforce has typically been approximately 50% Native American;
- The Company's Nichols Ranch in-situ recovery ("ISR") uranium project is located in the Powder River Basin of Wyoming, a rural area, approximately 80 miles northeast of Casper, Wyoming, and 11 miles, as the crow flies, from the nearest town of Linch, Wyoming. Linch, Wyoming has a population of 29 and is the county seat for Johnson County, Wyoming; and
- The Company's Alta Mesa ISR project is located in Brooks and Jim Hogg counties, Texas, with the central processing facility in Brooks County. Brooks County is generally rural, and according to the 2010 United States Census, there were 7,223 people living in the county. The population density was 8 people per square mile. Brooks county has one of the highest poverty rates in Texas.

See Section 3, [Contributing to the Communities in Which we Operate](#), below. We are proud that our operations help to sustain these rural and underserved communities.

### 1.3. Our Commitment to Health, Safety and Environmental Responsibility

Safety, health and protection of the environment are of paramount importance to Energy Fuels. As stated in our Environment Health and Safety Policy:

Energy Fuels is committed to the highest standards of corporate responsibility and environmental protection. We operate our facilities in a manner that puts the safety of our workers, contractors, communities, environment, and principals of sustainable development above all else. *Whenever issues of safety conflict with other corporate objectives, safety shall be the first consideration.*

At Energy Fuels, we are committed to the following principles:

- building and operating our facilities in compliance with, and meeting or exceeding, the standards in all applicable laws and regulations of the jurisdictions in which we operate;
- adopting and adhering to standards that are protective of human health and the environment at all of our facilities;
- considering environmental and social issues which may impact our stakeholders, including minority and indigenous populations, local landholders, and the communities in which we operate;
- encouraging the ongoing development of sound programs of sustainability in all communities in which we operate;
- keeping radiation health and safety hazards and environmental risks as low as reasonably achievable; and
- always striving for and being committed to the very best outcomes possible in every situation we face.

We are good neighbors in the communities in which we operate, an accountable and responsive partner to shareholders, and conscientious stewards of the earth.

Further, under our ALARA program, we are committed to using, to the extent practicable, procedures and engineering controls to achieve radiation exposures to our workers and the public as low as reasonably achievable (“ALARA”) below the applicable regulatory standards.

See Section 4, [\*Our Commitment to Environmental Responsibility\*](#), below.

*We're a company that cares about the environment and sustainability, and we believe it shows in everything we do.*

### 1.4. The Uranium Mining, Milling and ISR Recovery Industry is Highly Regulated, Which Ensures Protection of Public Health, Safety and the Environment to the Highest Standards

The uranium mining, milling and ISR production industries are highly regulated and are, in fact, among the most highly regulated industries in the United States and the world today. The Company's properties and facilities are subject to extensive laws and regulations, which are overseen and enforced by multiple federal, state and local authorities. These laws govern exploration, construction, extraction, recovery, processing, exports, various taxes, labor standards, occupational health and safety, waste disposal, protection and remediation of the environment, protection of threatened and protected species, toxic and hazardous substances, and other matters. See Section 5, [\*The Uranium Mining, Milling and ISR Recovery Industry is\*](#)

[Highly Regulated, which Ensures Protection of Public Health, Safety and the Environment to the Highest Standards](#), below.

***The Company prides itself on being in full compliance with all applicable laws, regulations, permits and licenses and in conducting its operations in a manner that in most cases results in the Company being well within the applicable standards and in exposures to workers and members of the public being as low as reasonably achievable below the standards. This myriad of laws and regulations, and the Company's commitment to operate as low as reasonably achievable within the regulatory standards, ensures protection of public health, safety and the environment to the highest standards.***

### **1.5. Environmentally Responsible Mining, Milling and ISR Production**

Equally important, we do everything in an environmentally responsible manner. We work hard every day to ensure our operations minimize impacts to the environment, including water, air, wildlife, soil, and cultural resources.



*Wildlife at Nichols Ranch near Linch, Wyoming*

In addition, the Mill, our ISR facilities and all of our mines must be reclaimed in accordance with strict standards aimed at eliminating any long-term impacts to the environment. We currently have bonds in place guaranteeing the complete closure, reclamation and any post-closure monitoring of all of our mines and facilities. These bonds are regularly updated, reviewed, and approved by all applicable regulatory authorities to ensure that our mines, Mill and ISR facilities will be properly reclaimed to meet all applicable standards after our operations cease. See Section 6, [Operating Responsibly to Ensure a Minimal Impact to our Workers, the Public and the Environment while our Mines and Facilities are in Operation](#), below.

***We take the environmental impact of uranium mining seriously, and we're committed to minimizing impacts through a commitment to high standards and meeting or exceeding all regulatory requirements, while operating and through final reclamation.***

### **1.6. Environmentally Responsible Reclamation**

As miners, in addition to meeting all of the applicable health, safety and environmental regulations, to ensure a minimal impact to our workers, the public and the environment while our mines and facilities are in operation, we need to properly reclaim our mines and facilities after we complete operations so that any lasting impacts to the environment are eliminated or minimized.

To this end, the Mill and each of our ISR facilities and mines must have an approved reclamation plan with a cost estimate to reclaim the facility, which must be secured by a surety bond or the equivalent, to ensure that the regulator can step in at any time and have the funds available to reclaim the site. The Company currently has posted bonds to cover its reclamation obligations at all of its mines, Mill and ISR facilities.

Further, with respect to the Mill, upon site closure, title to the closed tailings impoundments must be transferred to the U.S. Government for perpetual ownership and custodianship. This requirement is unique and is what sets the Mill apart from all other types of facilities in the country. No other mine, non-uranium

milling facility or any type of disposal facility, radioactive or otherwise, is required by law to be transferred to the federal government upon closure.

See Section 7, [Reclaiming Responsibly After we Complete Operations so that any Lasting Impacts to the Environment are Eliminated or Minimized](#), and Section 12, [The White Mesa Mill is an Ideal Permanent Disposal Facility for Mill Tailings, Effluents and Wastes and ISR Facility Wastes](#), below.

### **1.7. Cleaning up Our Country's Cold War Legacy**

Proper reclamation of all or our mine sites is required by current regulatory standards, and something we take very seriously. However, reclamation standards prior to the latter part of the twentieth century were not as stringent. This resulted in a significant number of abandoned, un-reclaimed or improperly reclaimed mine sites in the United States, particularly abandoned uranium mines in the Western United States that were developed and mined during the Cold War era. The White Mesa Mill is currently receiving low-grade mineralized material from the cleanup of one conventional mine in northwest New Mexico and is pursuing other opportunities to process mineralized materials from the clean-up of abandoned uranium mines on the Navajo Nation and in the four corners area of the United States. See Section 5.1.5, [Legacy Cold-War Era Governmental and Environmental Regulations](#), and Section 8, [Cleaning up our Country's Cold War Legacy](#), below.

***We are proud to be able to play a part in cleaning up these legacy Cold War era sites in the U.S. and returning the environment to the stringent standards required today.***

### **1.8. Sustaining the World's Resources through Recycling**

We demonstrate our commitment to environmental protection, not only through responsibly mining, milling and reclaiming, but also through our uranium, vanadium and REE recycling programs.

In addition to producing uranium from our mines, we recycle other companies' uranium-bearing tailings or wastes (known as alternate feed materials) for the extraction of uranium that would otherwise be lost through direct disposal. Over the Mill's history, it has recycled over 6 million pounds of commercially salable uranium, which would otherwise have been lost to direct disposal. ***That amount of recycled uranium, after being converted to nuclear fuel, will produce as much electricity as approximately 50 million tons of coal. That amount of coal would fill a coal train that extends from Los Angeles to New York City and almost all of the way back and would provide as much electricity as about 24,500 wind turbines, or almost half of the 60,000 wind turbines in the U.S. in 2019. This recycled uranium would eliminate over 85 million tons of CO<sub>2</sub> emissions compared to coal, or the same amount of annual emissions as 18 million passenger vehicles. Over the last 20 years, over 47% of our uranium production has been from the recycling of uranium-bearing waste materials.***

And, in 2019, for the first time, we produced over 1.8 million pounds of high-purity vanadium product by recycling existing tailings solutions at the Mill. We are not aware of any other vanadium producer having done this before! ***That amount of recycled vanadium, which would otherwise have been lost to direct disposal, will provide the vanadium needed for enough steel girders to build four and a half Golden Gate Bridges! Over the last 10 years, over 26% of our vanadium production has been from this recycling program.***

Finally, under our planned U.S. REE business, we will not only be recycling uranium from natural uranium- and REE-bearing ore streams that have typically been discarded in the past, we will be helping to produce REEs from those streams, which are key components of numerous modern technologies, including magnets for electric vehicles and wind turbine motors for clean energy generation. ***All of these resources – the***

***uranium and the REEs – are recycled resources from streams that have typically been discarded in the past.***

See Section 9, [\*Sustaining the World's Resources through Recycling\*](#), below.

***We are very proud of our recycling programs, which go well beyond what most mining companies are able to do!***

This Sustainability Report aims to summarize the foregoing environmental and social pillars of the Company, of which we are immensely proud.

## 2. ADDRESSING GLOBAL CLIMATE CHANGE: REDUCING AIR POLLUTION

### QUICK FACTS

Uranium is the fuel for carbon-free, emission-free baseload nuclear power – one of the cleanest forms of energy in the world.

Nuclear energy provides nearly 55 percent of carbon-free electricity in the United States, more than any other source.

The amount of electricity generated from nuclear energy in the U.S. avoids the emissions of more than 476 million metric tons of carbon dioxide every year. That’s more than the annual emissions from more than 100 million passenger vehicles.

#### 2.1. Commitment to Reducing Greenhouse Gas (“GHG”) Emissions through Nuclear Energy

The uranium we responsibly produce is helping address some of the most daunting health and environmental issues facing the world today: air pollution and climate change. Uranium is the fuel for carbon-free, emission-free baseload nuclear power – one of the cleanest forms of energy in the world. The very heart of our business, uranium production, helps address global climate change, reduces air pollution, and makes the world a healthier and cleaner place.

According to the Nuclear Energy Institute (“NEI”), nuclear energy provides nearly 55 percent of carbon-free electricity in the United States, more than any other source. The amount of electricity generated with nuclear energy avoids the emissions of more than 476 million metric tons of carbon dioxide every year. That’s more than the annual emissions from more than 100 million passenger vehicles. Nuclear plants are the most efficient source of electricity, operating 24/7 at a more than 93 percent average capacity factor (capacity factor is the ratio of the actual amount of electricity generated by a plant compared to the maximum amount that it could potentially generate). That’s more than two times the capacity factor of any other carbon-free source. During the 2019 polar vortex, U.S. plants operated at more than 98 percent capacity. ***If you want energy around-the-clock without carbon emissions, there’s nothing that can match nuclear power.***

We are proud of our record of environmental stewardship. We are proud to play a growing part in this global effort.

Energy Fuels’ Climate Change Policy can be found here: <https://www.energyfuels.com/governance>

### 3. CONTRIBUTING TO THE COMMUNITIES IN WHICH WE OPERATE

## QUICK FACTS

Most of the Company's workforce is in underserved and rural markets.

The Mill has been the largest private employer in San Juan County, Utah, during most of its 40-year history. San Juan County is the poorest county in Utah and well within the 50 poorest counties in the United States.

Approximately 50% of the Company's workforce at the Mill is Native American.

Our operations in these rural and underserved areas support the local economies not only through the taxes we pay to local authorities and the salaries and wages we pay to our employees and to numerous third-party contractors, such as transportation companies, equipment rental companies, equipment vendors and service providers, but also indirectly through the "multiplier effect" to the communities as a whole.

Most of the Company's workforce is in underserved and rural markets:

- Over half of the Company's employees typically work at the Mill, which is located in San Juan County, Utah. San Juan County is the poorest county in Utah and well within the 50 poorest counties in the United States. The Mill has been the largest private employer in San Juan County during most of its 40-year history. Further, throughout its history and currently, the Mill's workforce has typically been approximately 50% Native American;
- The Company's Nichols Ranch project is located in the Powder River Basin of Wyoming, a rural area, approximately 80 miles northeast of Casper, Wyoming, and 11 miles, as the crow flies, from the nearest town of Linch, Wyoming. Linch, Wyoming has a population of 29 and is the county seat for Johnson County, Wyoming; and
- The Company's Alta Mesa project is located in Brooks and Jim Hogg counties, Texas, with the central processing facility in Brooks County. Brooks County is generally rural and, according to the 2010 United States Census, there were 7,223 people living in the county. The population density was 8 people per square mile. Brooks County has one of the highest poverty rates in Texas.

Our operations in these rural and underserved areas support the local economies not only through the taxes we pay to local authorities and the salaries and wages we pay to our employees and to numerous third-party contractors, such as transportation companies, equipment rental companies, equipment vendors and service providers, but also indirectly through the "multiplier effect" to the communities as a whole. That is, the money we pay directly to our employees, contractors vendors and providers is spent by them in the communities, thereby providing income to local businesses and wages and salaries to employees and owners of those business, who in turn spend their income, salaries and wages on other businesses in the community, and so on. Indeed, as the largest private employer in San Juan County, Utah, the Mill is a very significant factor in the local economy.



*Work crew at the Pinyon Plain Mine near Tusayan, Arizona*

As a responsible and valued member of the communities in which our facilities operate, Energy Fuels also makes contributions to local causes, such as through providing scholarships and internships to local residents, and donations to local organizations and causes, such as youth sports teams and charitable events.

We are proud that our operations are major contributors and help to sustain these rural and underserved communities.



## 4. OUR COMMITMENT TO ENVIRONMENTAL RESPONSIBILITY

### QUICK FACTS

We operate a comprehensive public health, safety and environmental management program, in accordance with all applicable laws regulations, licenses and permits and the Company's Environment, Health and Safety ("EHS") Policy. This program is the responsibility of the Company's management, subject to oversight by the Environment, Health and Safety Committee of the Board of Directors of the Company.

The EHS Policy applies equally to all employees, suppliers and vendors and, together with the EHS Committee Charter, is reviewed and approved, as amended, on an annual basis.

Under our ALARA program, each of our production facilities is required to use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as reasonably achievable ("ALARA") below the regulatory standards.

We file approximately 300 separate environmental reports on 20 different properties on an annual basis – and those are just the routine filings!

We take public health, safety and the environment very seriously, and we're committed to minimizing any impacts from uranium and vanadium mining and REE recovery by meeting or exceeding all regulatory requirements as we operate and through final reclamation of each project.

We work hard every day to ensure our operations minimize any impacts to public health, safety and the environment, including any impacts to water, air, wildlife, soil, and cultural resources, occupational health and safety of our workers and any impacts to members of the public. In addition, all of our mines and facilities must be reclaimed in accordance with strict standards aimed at eliminating any long-term impacts to the environment. We currently have bonds posted with regulatory authorities to ensure that the Mill, our ISR facilities and mines will be properly reclaimed to meet all applicable standards after our operations cease. ***We take public health, safety and the environment very seriously, and we're committed to minimizing any impacts from uranium mining by meeting or exceeding all regulatory requirements as we operate and through final reclamation of each project.***

#### 4.1. Our Environment, Health and Safety Policy

Safety, health and protection of the environment are of paramount importance to Energy Fuels. As stated in our Environment Health and Safety Policy:

Energy Fuels is committed to the highest standards of corporate responsibility and environmental protection. We operate our facilities in a manner that puts the safety of our workers, contractors, communities, environment, and principals of sustainable development above all else. ***Whenever issues of safety conflict with other corporate objectives, safety shall be the first consideration.***

At Energy Fuels we are committed to the following principles:

- building and operating our facilities in compliance with, and meeting or exceeding, the standards in all applicable laws and regulations of the jurisdictions in which we operate;
- adopting and adhering to standards that are protective of human health and the environment at all of our facilities;
- considering environmental and social issues which may impact our stakeholders, including minority and indigenous populations, local landholders, and the communities in which we operate;
- encouraging the ongoing development of sound programs of sustainability in all communities in which we operate;
- keeping radiation health and safety hazards and environmental risks as low as reasonably achievable; and
- always striving for and being committed to the very best outcomes possible in every situation we face.

We are good neighbors in the communities in which we operate, an accountable and responsive partner to shareholders, and conscientious stewards of the planet. ***We're a company that cares about the environment and sustainability, and we believe it shows in everything we do.***

#### **4.2. Our ALARA Program**

Utah Administrative Code R313-15-101 (2) (10 CFR 20.1101), which is applicable to the Mill, and comparable state regulations in Wyoming and Texas, which are applicable to our ISR facilities in those states, provide that each of our production facilities shall use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as reasonably achievable (“ALARA”) below the regulatory standards.

***What this means is that we cannot be satisfied by just meeting the regulatory emission or exposure standards at the Mill or ISR facilities. We must also take all reasonable steps to try to get the actual emission and exposure results as low reasonably possible below those standards.***

U.S. Nuclear Regulatory Commission (“NRC”) Regulatory Guide 8.10, “*Operating Philosophy for Maintaining Occupational and Public Radiation Exposures As Low As Is Reasonably Achievable*,” sets forth the philosophy and general management policies and programs that licensees should follow to achieve these objectives. NRC Regulatory Guide 8.31 is directed toward occupational health protection from radiologic and toxic hazards from airborne particulates of uranium and its daughters. However, it is also recognized that uranium operation workers will be exposed to external radiation in addition to inhaled particulates. Therefore, ensuring protection of operation workers from external radiation hazards is also addressed. As the regulations require maintaining doses to members of the public ALARA, these ALARA requirements also address all environmental monitoring data for each facility.

In response to these regulatory requirements, Energy Fuels has adopted ALARA Programs at the Mill and each of the Company’s ISR facilities, under which the Company is committed to maintaining occupational exposures of personnel, contractors and visitors and effluent releases to the environment ALARA.

In order to achieve this objective, Energy Fuels and its management provide a strong commitment to and continuing support for the development and implementation of the radiation protection and ALARA Programs at its production facilities. Each facility also sets ALARA goals for emissions and exposures and strives to maintain actual exposures and emissions at or below those goals. For example, the ALARA goals at the Mill are set at 25% of the regulatory emission and exposure

standards. *The Mill has met its ALARA goals each year since it was constructed over 40 years ago, which means its annual exposures and emissions have been less than 25% of regulatory standards for each of those years. In most cases, the Mill has operated well below those ALARA goals!*

The program that Energy Fuels utilizes to ensure that worker exposures and effluent releases are ALARA is the sum total of:

- All the design barriers, operating procedures, management controls, and personnel experience and expertise built into the Mill or ISR facility, including the equipment to control and prevent effluent releases and to sample and monitor the working environment. Potential releases, both in the Mill or ISR facility and to the environment, are held within the performance capability of the control equipment through regular inspection and maintenance of the equipment;
- Extensive programs to monitor both the work environment and releases from the Mill or ISR Facility are conducted. These include monitoring of the work environment; personnel monitoring programs; and facility area monitoring programs, which include both external radiation surveys and airborne radionuclide monitoring;
- Bioassay programs;
- Contamination control programs;
- The qualifications of the staff. All management personnel involved with plant radiation protection have extensive experience in similar positions and are trained to use appropriate technology.

Energy Fuels' commitment to this ALARA objective is supported by the training programs conducted for facility personnel, continuous reviews of radiation, environmental, and industrial hygiene protection policies and procedures, and the adoption of procedures and equipment that have been demonstrated to reduce occupational exposures and releases to the environment.

Energy Fuels has established an ALARA Committee to review all matters relating to the ALARA Programs. The ALARA Committee meets as required, but generally at least once per quarter.

The members of the ALARA Committee include at least the following:

- The facility's Radiation Safety Officer (“**RSO**”);
- The facility manager;
- Corporate management personnel in charge of facility operations; and
- Corporate management personnel in charge of environmental and regulatory matters.

All Mill or ISR facility matters that impact or could potentially impact public health, safety or the environment are reviewed by the ALARA Committee to ensure that exposures to the public, workers and the environment are ALARA.

Energy Fuels performs an annual ALARA audit of the radiation safety program at the Mill and each ISR facility, during which procedural and operational efforts are reviewed to maintain exposures ALARA in accordance with NRC Regulatory Guide 8.31. The ALARA audit is generally performed each year by a member of the corporate environmental and regulatory compliance management personnel of the Licensee and one or two other independent specialists.

Through the ALARA Committee, Energy Fuels continually evaluates the radiation safety (health physics) and environmental protection programs at the Mill and each ISR facility, including their staff and whether or not adequate resources are allocated to the programs. Any issues relating to radiation safety or environmental protection are reviewed by the ALARA Committee as they arise. The ALARA Committee also takes a proactive role in scheduling periodic reviews of various aspects of each facility's radiation safety program to help ensure that any potential areas of concern are identified and dealt with before a problem can arise.

Although the Company's conventional mines are not required by law to have their own ALARA programs, the Company is committed through its EHS Policy: to building and operating all of our facilities in compliance with, and meeting or exceeding, the standards in all applicable laws and regulations of the jurisdictions in which we operate; to keeping radiation health and safety hazards and environmental risks as low as reasonably achievable; and to always strive for and be committed to the very best outcomes possible in every situation we face. As a result of these commitments, the Company applies ALARA principles to all of its conventional mines, to the extent applicable.

#### **4.3. Overview of the EHS Program**

On a quarterly basis, the Environment, Health and Safety Committee (the "**EHS Committee**") of the Board of Directors of the Company reviews in both quantitative and qualitative terms: the status of operations; environmental matters; health and safety matters as compared to the U.S. Mine Safety and Health Administration's ("**MSHA's**") publicly reported national averages; inspections and any findings, citations or violations resulting therefrom; licensing and permitting matters; and any litigation relating to each of the Company's conventional mines, ISR facilities, and the Mill. The EHS Committee also determines whether anything has come to the attention of management that would indicate that the EHS Policy was not properly implemented during the quarter, and whether any violations of the EHS Policy during the quarter were identified. The EHS Committee makes recommendations to Management when appropriate.

#### **4.4. Environmental Compliance**

The Company has extensive filing requirements pursuant to its site-specific licenses and permits, which have in the past included and/or now include without limitation:

- radioactive materials licenses;
- general licenses;
- air quality permits;
- aquifer protection permits;
- general permits for stormwater discharge;
- permits to construct or repair individual sewage-disposal systems;
- on-site sewage facility permits;
- construction permits;
- wastewater discharge permits;
- mining and reclamation permits;
- well permits;
- county access permits;

- surface alteration permits;
- permits to dewater underground mines;
- pre-cursor chemical laboratory apparatus (“PCLA”) permits;
- uranium exploration permits;
- aquifer exemptions;
- area permits for Class III underground injection wells and permits to conduct Class I underground injections;
- permits to commence small mining operations;
- general multi-sector storm water permits for discharges associated with industrial activity;
- stream channel alteration permits;
- multi-sector general permits;
- right-of-way encroachment permits;
- road use permits;
- operating permits;
- evaporation pond construction (and expansion) permits;
- dam construction permits;
- conditional use permits;
- National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) construction approvals; and
- permits to mine.

*Note: While not all of our licenses, permits and environmental filings are made public, many of them are and can be found at these links to our regulating agencies’ respective websites:*

- Nichols Ranch Licenses and Reports Available Here: <https://www.nrc.gov/info-finder/materials/uranium/licensed-facilities/nichols-ranch.html>
- White Mesa Mill Licenses and Reports Available Here: <https://deq.utah.gov/waste-management-and-radiation-control/energy-fuels-resources-usa-inc>
- Arizona Permitting Documentation Available Here: <http://www.azdeq.gov/EnergyFuelsRes>

In addition, we file approximately 300 separate environmental reports on over 20 different properties annually as part of our routine business operations, including but not limited to the following:

- production and exploration reports;
- land use reports;
- chloroform corrective action comprehensive monitoring evaluations;
- tailings capacity evaluations;
- tailings reports;
- technical evaluation reports;
- standard operating procedures at each facility;
- leak detection system videos;
- 11e.(2) summary reports;
- NESHAPs reports;
- Safety and Environmental Review Panel (“SERP”) reports;
- ALARA audit reports;
- annual performance reports on tailings cells;
- seeps and springs reports;
- surety updates;
- semi-annual effluent reports;

- exceedance notices, if any;
- radon flux notices;
- chloroform reports;
- arsenic monitoring reports;
- discharge minimization technology reports;
- groundwater reports;
- data quality reports on tailings cells;
- nitrate reports;
- stormwater reports;
- water rights use reports;
- hydrological reports;
- construction notice reports;
- Utah Pollutant Discharge Elimination System (“UPDES”) reports;
- emissions inventory questionnaires;
- Aquifer Protection Permit reports and self-monitoring reporting forms;
- air permit compliance certifications;
- gamma reports;
- mineral exploration progress reports (exploration drilling reports);
- drilling and construction notice reports;
- mine facility reports;
- Clean Air Act Subpart W tailings photos;
- soil sampling reports;
- noxious weeds annual reports;
- well sampling reports;
- revegetation test plot photos;
- development rock area annual reports;
- monthly depth checks on wells;
- WDEQ Five-Year Mechanical Integrity Test (“MIT”) Reports;
- abandonment reports;
- inorganic contaminants, lead and copper, volatile organic compounds and semi-volatile organic compounds reports;
- disposal well falloff test and mechanical integrity reporting;
- raptor/sage grouse surveys;
- total trihalomethanes and haloacetic acids reports;
- plant water usage reports;
- revised total coliform rule and chlorine residuals reports;
- additional protocol reports;
- TCEQ Tier II Chemical Reports;
- hazardous materials registrations;
- Class III Underground Injection Control (“UIC”) Annual Reports;
- TCEQ Class I and Class III UIC monitoring reports;
- Foreign obligation inventory reports; and
- domestic uranium production reports.

***This comprehensive regulatory scheme ensures that we operate in the safest manner possible, both in regard to our employees and to the environment and surrounding community at large.***

**5. THE URANIUM MINING, MILLING AND ISR RECOVERY INDUSTRY IS HIGHLY REGULATED, WHICH ENSURES PROTECTION OF PUBLIC HEALTH, SAFETY AND THE ENVIRONMENT TO THE HIGHEST STANDARDS**

## QUICK FACTS

The Company's properties and facilities are subject to extensive laws and regulations, which are overseen and enforced by multiple federal, state and local authorities. These laws govern exploration, construction, extraction, recovery, processing, exports, various taxes, labor standards, occupational health and safety, waste disposal, protection and remediation of the environment, protection of threatened and protected species, toxic and hazardous substances, and other matters. *Current regulatory standards applicable to uranium mining, milling and ISR production are among the strictest, if not the strictest in the world, and as a result are very protective of public health, safety and the environment.*

*In fact, under the Company's ALARA program, the Company seeks to operate as low as reasonably achievable below all applicable emission and exposure standards and generally sets ALARA goals at 25% of the applicable regulatory emission and exposure standards. In almost all cases, the Company achieves or beats its ALARA goals, which means that the Company typically operates at less than 25% of the applicable regulatory emission or exposure standards.*

Proper development, operation and reclamation of all our mine sites and production facilities is required by current regulatory standards, and something we take very seriously.

Unfortunately, like most industries in the United States and throughout the world, regulatory standards prior to the latter part of the twentieth century were not as stringent, which resulted in worker health issues and numerous abandoned uranium mines in the 1950s and early 1960s, many of which are on the Navajo Nation and remain un-reclaimed.

Fortunately, the government and environmental regulation of uranium mining and milling industries, like most other industries, has improved dramatically over time, resulting in today's highly protective and all-encompassing standards.

*We are proud to be able to play a part in cleaning up these legacy Cold War era sites in the U.S. and returning the environment to the stringent standards required today.*

### **5.1. As a Uranium Miner and Producer, We Are Highly Regulated**

#### **5.1.1. Today's Governmental and Environmental Regulations**

The Company's properties and facilities are subject to extensive laws and regulations, which are overseen and enforced by multiple federal, state and local authorities. These laws govern exploration, construction, extraction, recovery, processing, exports, various taxes, labor standards, occupational health and safety, waste disposal, protection and remediation of the environment, protection of threatened species, toxic and

hazardous substances, and other matters. See Section 5.1.3, [Applicable Laws and Agencies](#), below for a list of applicable laws and regulations.

In general, our exploration, evaluation, and extraction activities are subject to federal and state laws and regulations relating to worker health and safety, environmental quality and pollution control. We are subject to legislation regarding emissions into the environment, water discharges, and storage and disposition of hazardous materials among many others. In addition, legislation has been enacted which requires facility sites to be reclaimed in accordance with such legislation.

Reclamation bonds or the equivalent have been posted for each of the Company's material properties that have structures or facilities. Energy Fuels is required to have export licenses issued by the NRC for its uranium exports. Such licenses are obtained by the Company as required.

See Section 5.1.3, [Applicable Laws and Agencies](#), below for a list of applicable laws and regulations and agencies.

Under the Company's ALARA program, the Company seeks to operate as low as reasonably achievable below all applicable emission and exposure standards and generally sets ALARA goals at 25% of the applicable regulatory emission and exposure standards. In almost all cases, the Company achieves or beats its ALARA goals, which means that the Company typically operates at less than 25% of the applicable regulatory emission or exposure standards. See Section 4.2 above.

#### 5.1.2. Regulatory Authorities over our Mines and Facilities

##### (a) *Uranium Mills.*

Uranium mills in the U.S. are primarily regulated by the NRC pursuant to the *Atomic Energy Act of 1954*, as amended (the "AEA"). The AEA's primary function is to ensure the protection of employees, the public, and the environment from radioactive materials, and it also regulates most aspects of the uranium recovery process. The NRC regulations pertaining to uranium recovery facilities are codified in Title 10 of the Code of Federal Regulations.

Under Section 274 (b) of the AEA, the NRC has the authority to enter into an agreement with a U.S. state (an "Agreement State") to discontinue NRC's authority over uranium mills and ISR facilities (except on final closure of sites and other limited circumstances). The States of Utah, Colorado, Texas and Wyoming are some of the states that are currently Agreement States.

On August 16, 2004, the State of Utah became an Agreement State for the regulation of uranium mills. This means that the primary regulator for the Mill is the State of Utah Department of Environmental Quality's ("UDEQ's") Division of Waste Management and Radiation Control ("DWMRC") rather than the NRC. At the time the State of Utah became an Agreement State, the Mill's NRC Source Material License was transferred to the State of Utah and became a Radioactive Materials License. The State of Utah incorporates, through its own regulations or by reference, all aspects of Title 10 pertaining to uranium recovery facilities. When the State of Utah became an Agreement State, it required that a Groundwater Discharge Permit ("GWDP") be put in place for the Mill. The GWDP is required for all similar facilities in the State of Utah, and specifically tailors the implementation of the state groundwater regulations to the Mill site. The State of Utah requires that every operating uranium mill have a GWDP, regardless of whether the facility discharges to groundwater. Worker safety at the Mill is regulated by MSHA.



In some cases, the AEA requirements supersede or replace the requirements of other agencies; in other cases they coexist with the requirements of those agencies. For example, EPA has jurisdiction at the Mill only for radon emissions from the Mill's tailings cells, which is regulated under NESHAPS, and for non-radionuclide air emissions, such as dust (PM-10), SOX and NOX, which are covered by an Air Approval Order issued by the Utah Division of Air Quality (which has delegated authority by EPA). Virtually all other regulatory requirements at the Mill are subject to DWMRC jurisdiction as an Agreement State under the AEA.

*(b) ISR Facilities.*

The provisions of the AEA and its regulations that are applicable to uranium milling also apply to our ISR facilities in Wyoming and Texas. The Nichols Ranch Project and the Alta Mesa Project each have a Source Material License. The Nichols Ranch Source Material License was originally issued by the NRC; however, the State of Wyoming became an NRC Agreement State on September 30, 2018, and the Wyoming Department of Environmental Quality (“WDEQ”) - Land Quality Division (“LQD”) subsequently assumed all management and oversight functions. Texas, an NRC Agreement State since 1963, issued the Alta Mesa Source Material License through its Texas Commission on Environmental Quality (“TCEQ”). ISR facilities are also regulated by the State of Wyoming and State of Texas, respectively, and the U.S. Environmental Protection Agency (“EPA”) under the Clean Water Act, and the Safe Drinking Water Act. In addition, ISR wellfields and deep disposal wells require Underground Injection Control Permits and aquifer exemptions under the EPA’s UIC program and delegated authority in Wyoming and Texas. Worker safety at ISR operations is subject to regulation by the U.S. Occupational, Safety and Health Administration (“OSHA”), rather than MSHA.

*(c) Conventional Mines.*

Conventional uranium mines are subject to regulation by a number of agencies including: (1) local county and municipal government agencies; (2) the applicable state divisions responsible for mining and protecting the environment within Utah, Colorado, Arizona, New Mexico, and Wyoming; (3) the BLM and the United States Forest Service (“USFS”) on public lands under their jurisdictions; (4) the U.S. Mine Safety and Health Administration (“MSHA”); (5) the EPA for radon emissions from underground mines and National Pollutant Discharge Elimination System (“NPDES”) permits, where applicable; and (6) other federal agencies, including without limitation the U.S. Fish and Wildlife Service (“USFW”), U.S. Army Corps of Engineers (“USACE”), and United States Department of Energy (“DOE”), where certain conditions exist. In addition, a uranium processing facility at the Company’s Sheep Mountain Project in Wyoming, if and when constructed, will be subject to regulation under the WDEQ as a uranium processing facility and for permanent disposal of the resulting tailings.

5.1.3. Applicable Laws and Agencies

The rules and regulations governing our industry and company practices are vast and intricate, and Energy Fuels and its subsidiaries must at all times be cognizant of and compliant with many environmental, occupational, securities and other laws, rules and regulations, including without limitation:

(a) *Environmental*

- **Atomic Energy Act of 1954 (“AEA”)**: A health and safety law that governs the development, regulation and disposal of nuclear materials at facilities in the U.S., and established the Atomic Energy Commission (now the NRC) to promote the “utilization of atomic energy for peaceful purposes to the maximum extent consistent with the common defense and security and with the health and safety of the public;”
- **Clean Air Act of 1963**: A U.S. environmental law that regulates air emissions at a national level in order to control air pollution. This Act is the basis for Energy Fuels’ NESHAPS standards;
- **Clean Water Act of 1972**: A U.S. environmental law that regulates the discharge of pollutants into national waters, including lakes, rivers, streams, wetlands and coastal areas, in order to control water pollution. This Act was formerly known as the Federal Water Pollution Control Act;
- **Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”)**: The U.S. Superfund law, administered by the EPA (as defined below), that governs the investigation and cleanup of sites contaminated with hazardous substances;
- **Endangered Species Act of 1973 (“ESA”)**: A U.S. environmental law that provides a framework for the protection and conservation of threatened and endangered species (flora and fauna) by prohibiting the “taking” of any “listed” species within the U.S.;
- **Federal Land Policy and Management Act of 1976 (“FLPMA”)**: The BLM’s organic act, governing the way in which it manages U.S. public lands;
- **General Mining Act of 1872**: A historic law that sets the foundation for all domestic mineral exploration and mining within the U.S.;
- **National Environmental Policy Act (“NEPA”)**: A U.S. environmental law, administered by the EPA, which is procedural in nature and governs the process for conducting Environmental Assessments and Environmental Impact Statements, as well as public participation through publication on the Federal Register and notice and comment periods;
- **Resource Conservation and Recovery Act (“RCRA”)**: A U.S. environmental law, developed by the EPA, which creates the framework for the proper management of hazardous wastes;
- **Safe Drinking Water Act (“SDWA”)**: A U.S. environmental law, developed by EPA, that creates drinking water standards and establishes protection standards for underground sources of drinking water; and
- **Uranium Mill Tailings Radiation Control Act (“UMTRCA”)**: A U.S. environmental law that amends the AEA, to establish health and environmental standards for the “safe and environmentally sound disposal, long-term stabilization, and control of uranium mill tailings in a manner that minimizes or eliminates health hazards to the public.”

(b) *Labor*

- **Federal Mine Safety and Health Act of 1977 (the “Mine Act”):** A U.S. labor law governing MSHA activities which also created an independent Federal Mine Safety and Health Review Commission to provide independent review of MSHA’s enforcement actions. This Act governs Energy Fuels’ conventional mining and milling operations; and
- **Occupational Safety and Health Act of 1970:** A U.S. labor law governing the federal law of occupational health and safety in the private sector. This is separate and distinct from the Mine Act, which relates to mining, though crossover between the respective implementing regulations does exist. This Act governs Energy Fuels’ ISR facilities (Nichols Ranch and Alta Mesa) and corporate offices.

(c) *Historical and Cultural*

- **National Historic Preservation Act of 1966 (“NHPA”):** A U.S. law that establishes a program for the preservation of historic properties by establishing criteria for a “National Register of Historic Places composed of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, engineering, and culture” (Title I, Section 101).

(d) *Corporate*

- **Delaware General Corporations Law:** a Delaware law that governs the incorporation of business, allowable powers, corporate management, shareholder and other corporate transactions, and corporate records, including articles, bylaws, amalgamations, continuances and dissolution. This Act applies to the Company’s U.S. operating entity, Energy Fuels Resources (USA) Inc., which employs all of the Company’s employees and to the Company’s subsidiary Energy Fuels Holdings Corp., which owns all of the Company’s operating facilities and mines; and
- **Ontario Business Corporations Act, RSO 1990:** An Ontario, Canada law that governs the incorporation of business, allowable powers, corporate management, shareholder and other corporate transactions, and corporate records, including articles, bylaws, amalgamations, continuances and dissolution. This Act applies to the Company, which is an Ontario corporation.

(e) *Securities*

- **Securities Act of 1933 (the “Securities Act”):** A U.S. law enacted in order to regulate the stock market, with a uniform set of rules designed to protect investors against fraud. As a publicly traded company, this Act controls Energy Fuels’ registration of securities with the SEC and NYSE American;
- **Securities Exchange Act of 1934 (the “Exchange Act”):** A U.S. law that supplements the Securities Act by controlling the trading of securities registered with the SEC and national stock markets. It forms the basis for the regulation of financial markets and their participants. As a participant on the NYSE American, the Exchange Act is fundamental to the Company’s securities law practices;

- **Securities Act (Ontario), RSO 1990:** A provincial Act of Ontario that vests power in the Ontario Securities Commission, an independent Crown corporation comparable to the U.S. SEC, to “provide protection to investors from unfair, improper or fraudulent practices, to foster fair and efficient capital markets and confidence in capital markets, and to contribute to the stability of the financial system and the reduction of system risk” (Ontario Securities Commission website, “About”);
- **National Instrument 43-101 “Standards of Disclosure for Mineral Projects:”** A national instrument of Canada that provides a mineral resource and reserve classification scheme used to disclose information about mineral properties. As a Toronto Stock Exchange listed company, Energy Fuels has traditionally provided disclosure to shareholders relating to mineral resources pursuant to this law;
- **NYSE American Company Guide:** A comprehensive stock exchange guide to applicable requirements, procedures and policies for companies listed on the NYSE American (as defined below); and
- **TSX Company Manual:** A compilation of all procedures and requirements set out by the TSX (as defined below) for companies listed on the Toronto Stock Exchange.

*(f) State, Provincial and Local*

The Company is additionally subject to all applicable State and local environmental, transportation, health and safety, employment and corporate laws specific to the jurisdictions in which we conduct business. We encourage our stakeholders to look at these laws, and their corresponding guidance, for a more complete understanding of our ongoing legal and compliance obligations.

5.1.4. Agencies and Exchanges with Regulatory Jurisdiction

Our routine reporting requirements are imposed through numerous federal and state agencies and exchanges spanning multiple states and provinces, including, without limitation, the following:

*(a) U.S. State Agencies, Including:*

- Arizona Department of Environmental Quality (“**ADEQ**”);
- Colorado Department of Natural Resources, Division of Reclamation, Mining and Safety (“**CDNR**”);
- Colorado Department of Public Health and the Environment (“**CDPHE**”);
- New Mexico Mining and Minerals Division (“**NMMMD**”);
- New Mexico Environment Department (“**NMED**”);
- State Departments of Transportation (“**DOTs**”);
- Texas Commission on Environmental Quality (“**TCEQ**”);
- Texas Railroad Commission (“**TRC**”);
- Utah Department of Environmental Quality (“**UDEQ**”);
- Utah Department of Natural Resources, Division of Oil, Gas and Mining (“**UDOGM**”);
- Wyoming Department of Environmental Quality (“**WDEQ**”):
  - Land Quality Division (“**LQD**”); and
- Wyoming State Engineer’s Office (“**WSEO**”).

(b) *American Federal Agencies, Including:*

- U.S. Bureau of Labor Statistics (“**BLS**”);
- U.S. Bureau of Land Management (“**BLM**”);
- U.S. Department of Commerce (“**DOC**”);
- U.S. Department of Energy (“**DOE**”);
- U.S. Department of Transportation (“**DOT**”);
- U.S. Environmental Protection Agency (“**EPA**”);
- U.S. Forest Service (“**USFS**”);
- U.S. Mine Safety and Health Administration (“**MSHA**”);
- U.S. Nuclear Regulatory Commission (“**NRC**”);
- U.S. Occupational Safety and Health Administration (“**OSHA**”);
- U.S. National Park Service (“**NPS**”); and
- U.S. Securities and Exchange Commission (“**SEC**”).

(c) *Canadian Agencies, Including:*

- British Columbia Ministry of Finance;
- Government of Newfoundland and Labrador’s Department of Government Services and Lands;
- Innovation, Science and Economic Development, Corporations Canada;
- Ontario Ministry of Government Services; and
- Ontario Securities Commission (“**OSC**”).

(d) *Stock Exchanges, Including:*

- New York Stock Exchange American (“**NYSE American**”); and
- Toronto Stock Exchange (“**TSX**”).

5.1.5. Legacy Cold-War Era Governmental and Environmental Regulations

Proper development, operation and reclamation of all or our mine sites and production facilities is required by current regulatory standards, and something we take very seriously. However, like most industries in the United States and throughout the world, regulatory standards prior to the latter part of the twentieth century were not as stringent. The government and environmental regulation of uranium mining and milling industries, like most other industries, has improved dramatically over time, resulting in current regulatory standards that are among the strictest, if not the strictest in the world, and as a result are very protective of public health, safety and the environment.

While the history of mine safety and health legislation in the United States goes back more than a century, commencing with the first federal mine safety statute passed in 1891, modern standards applicable generally to metal and non-metal mines (i.e., mines, other than coal mines, which had been regulated earlier) didn’t really begin until 1966 with the passage of the federal Metal and Nonmetallic Mine Safety Act, which set up procedures for developing safety and health standards for metal and nonmetal mines. Standards could be advisory or mandatory. One annual inspection was required for underground mines, and federal inspectors were given the authority to issue notices of violation and orders of withdrawal. Education and training programs were also expanded.

In 1973, the Mining Enforcement and Safety Administration (“**MESA**”) was created as a new departmental agency separate from the Bureau of Mines, which had been established in 1910. MESA assumed the safety and health enforcement functions formerly carried out by the Bureau. This was to avoid any appearance of

a conflict of interest between the enforcement of mine safety and health standards and the Bureau's responsibilities for mineral resource development.

However, the modern era of mine safety didn't really get into full swing until 1977 with the passage of the federal Mine Safety and Health Act of 1977, commonly known as the Mine Act, which established and currently governs the activities of MSHA. In addition, the Mine Act established the independent Federal Mine Safety and Health Review Commission to provide independent review of most of MSHA's enforcement actions. The Mine Act amended the 1969 Coal Act in a number of significant ways and consolidated all federal health and safety regulations of the mining industry – both coal and metal/nonmetal – under a single statutory scheme. Key components of the Mine Act include:

- Four annual inspections required at all underground mines;
- Two annual inspections required at all surface mines;
- Strengthened and expanded rights of miners;
- Enhanced protection of miners from retaliation for exercising such rights;
- Mandatory miner training provisions established; and
- Mine rescue teams required for all underground mines.

With respect to the regulation of radiation and environmental regulations, the federal government first set the standard for the amount of radon in mines on January 1, 1969, which resulted in better underground ventilation in uranium mines and the reduction of radon exposure for underground miners to safe levels. Additional environmental protections for all mining and industry in the United States were implemented upon the founding of the EPA in 1970 and the passage of related laws. Uranium mill tailings became regulated in 1978 upon the passage of the Uranium Mill Tailings Radiation Control Act (1978) (“UMTRCA”), which authorized the EPA to establish health and environmental standards for the stabilization, restoration, and disposal of uranium mill tailings, to be implemented by the NRC.

EPA established standards for radon emissions to the environment from uranium mine ventilation shafts under the National Emission Standards for Hazardous Air Pollutants (“NESHAPS”) commencing in 1989, which requires exposures to nearby residents and other receptors from radon emissions from uranium mine ventilation to be kept within established regulatory standards.

As part of the regulatory regime for uranium mills and ISR facilities established by UMTRCA, Mill and ISR facilities are required to post a bond or other acceptable surety for the full amount of the cost of reclamation of those facilities. In addition, during this timeframe, state mining laws and regulations of the BLM and USFS were amended to require that reclamation bonds be posted to cover the cost of fully reclaiming all uranium and other mines. These reclamation bonding requirements ensure that no uranium mills, ISR facilities or uranium mines can be abandoned and left un-reclaimed today.

As a result of all of these regulatory advancements since the late 1960s, uranium mining, milling and production have become highly regulated, with strict protections for underground mine workers and mill and ISR facility workers; protections to the environment, including radon and other emissions to the environment that could impact nearby residents or the environment generally; and requirements to fully reclaim all sites to strict standards and to post bonds to ensure that such reclamation will take place. This places uranium mining, milling and production among the highest regulated industries in the United States with some of the strictest standards.

However, prior to the late 1960s, the lack of strict, all-encompassing protections for workers and the environment, resulted in a Cold War era legacy for uranium mining and production that, in hindsight, was very poor. The lack of underground protections for uranium miners, particularly to radon exposures,

resulted in high rates of cancer among workers in that era, which do not exist today under current standards. In addition, the lack of reclamation requirements and bonding resulted in a number of abandoned, unreclaimed or improperly reclaimed mine sites in the United States, particularly abandoned uranium mines in the Western United States that were developed and mined during the Cold War era. That is no longer a problem for currently permitted mines and other facilities due to the strict reclamation and bonding requirements in place today.

As discussed in more detail in Section 8, [\*Cleaning up our Country's Cold War Legacy\*](#), below, the Mill is currently receiving low-grade mineralized material from the cleanup of one conventional mine in northwest New Mexico and is pursuing other opportunities to process mineralized materials from the cleanup of abandoned uranium mines on the Navajo Nation and in the four corners area of the United States. ***We are proud to be able to play a part in cleaning up these legacy Cold War era sites in the U.S. and returning the environment to the standards required today.***

## 6. OPERATING RESPONSIBLY TO ENSURE A MINIMAL IMPACT TO OUR WORKERS, THE PUBLIC AND THE ENVIRONMENT WHILE OUR MINES AND FACILITIES ARE IN OPERATION

### QUICK FACTS

Uranium mines, mills and ISR facilities are highly regulated to ensure that all applicable standards are met during operation.

Over the Mill's 40-year history, it has never had an overexposure of any of its workers or any members of the public and, in fact, operates well below the regulatory exposure limits. For example, the Mill has very rarely, if ever, exceeded its ALARA goal of 1,250 mrem/yr for workers, set internally as 25% of the regulatory standard, and typically the maximally exposed worker is less than 500 mrem/yr, which is one tenth of the regulatory standard of 5,000 mrem/yr. Similarly, emissions at the boundary monitoring stations around the Mill almost invariably show emissions at less than the ALARA goal of 25% of the regulatory standard, and modeling shows that exposures at the nearest potential receptor, when the Mill is operating at full licensed capacity, are a small fraction of the 100 mrem/yr standard (typically, approximately 10% of the standard) and much less during normal Mill operating levels.

There have been no detected releases from any of the Mill's tailings cells to groundwater at the site since the Mill commenced operations in 1980.

The Company's Nichols Ranch and Alta Mesa ISR facilities operate well within all of the regulatory standards set out in 10 CFR Part 20. The same ALARA principles applicable to the Mill apply equally to those facilities to ensure that all exposures to workers and to members of the public are as low as reasonably achievable below the regulatory standard at all times.

All of the Company's conventional mines operate in compliance with all applicable underground radon and gamma exposure standards. The Company manages underground ventilation, residence time of workers in operational areas and other factors to keep such exposures ALARA.

All of the Company's conventional mines operate in accordance with all applicable radon emission standards to the environment.

#### 6.1. Operating Responsibly

As miners, we need to continue to provide jobs and economic benefits as we obtain the resources the world needs, while at the same time operating responsibly by meeting all of the applicable health, safety and environmental regulations, to ensure a minimal impact to our workers, the public and the environment while our mines and other facilities are in operation.

As evident from Section 5 above, uranium mines, mills and ISR facilities are highly regulated to ensure that all applicable standards are met during operation. In this Section, we look at the regulatory requirements and standards applicable to the Mill, the Company's ISR facilities and its mines.



## 6.2. Operating Standards for Uranium Mills

### 6.2.1. Jurisdiction over the Mill

As discussed in more detail in Section 5.1.2 above, the primary regulator of the Mill is the State of Utah DWMRC as an Agreement State under the AEA. In some cases, the AEA requirements supersede or replace the requirements of other agencies; in other cases they coexist with the requirements of those agencies. For example, EPA has jurisdiction at the Mill only for radon emissions from the Mill's tailings cells, which is regulated under NESHAPS, and for non-radionuclide air emissions, such as dust (PM-10), SOX and NOX, which are covered by an Air Approval Order issued by the Utah Division of Air Quality (which has delegated authority by EPA). Virtually all other regulatory requirements at the Mill are subject to DWMRC jurisdiction as an Agreement State under the AEA. Worker safety at the Mill is regulated by MSHA.

### 6.2.2. Uranium Mills are Subject to Unique, Extremely Protective Requirements

Due to the long-lived nature of the radionuclides in uranium mill tailings, uranium mills are subject to a unique, extremely protective regulatory regime.

As examples of the types of scrutiny afforded to uranium facilities:

- Uranium mill tailing impoundments must be designed to provide reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. In contrast, hazardous waste disposal facilities licensed under Subtitle C of RCRA have a 30-year design standard;
- Uranium mill tailings impoundments must undergo very strict siting criteria associated with this 1,000-year design standard;
- The liner systems for uranium mill tailings impoundments must be designed to be at least as protective as RCRA Subtitle C facilities, which generally means a triple liner (typically two synthetic liners and one clay liner) system with a leak detection and dewatering system between the synthetic liners, to ensure virtually no chance of any infiltration of liquids to the subsurface; and
- As discussed in more detail in this Section 6, strict monitoring standards apply during facility operation, thereby ensuring that all applicable standards are met during operation, which includes standards applicable to air particulate (dust), and radon emissions to the environment and groundwater quality and to ensure that any potential leak from the facility is identified before it can become a significant problem.

See Section 11, [\*Effluents, Wastes and Toxicity\*](#), below, for a more detailed description of uranium mill, siting, construction, closure and other requirements.

### 6.2.3. 10 CFR Part 20

The regulations at 10 CFR Part 20 set out the standards for protection against radiation for all types of licenses issued under the AEA, including uranium mills and ISR facilities. These regulations address both occupational standards, i.e., standards applicable to workers at the licensed facility, and standards applicable to members of the public who may be exposed to radiation emanating from the licensed facility.

For workers, the regulations in 10 CFR Part 20 address radiation exposure from various different radionuclides, which in the case of uranium mills is mainly from uranium and its daughters (thorium-230, radium-226 and lead-210). The regulations also address the different pathways of exposure – inhalation of radon and its daughters, ingestion and inhalation of air particulate (radioactive dust), and exposure to

gamma radiation. Measurements of these types of radiation are required at various locations throughout the Mill site, and records are required to be kept of the amount of time each worker spends in each area throughout the year. The maximum time-weighted exposure from all of these pathways combined for an adult worker cannot exceed 5 rem (5,000 mrem) per year. However, under 10 C.F.R 20.1101, each licensee is also required to use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (“ALARA”). ALARA goals are typically set by the Company at 25% of the regulatory standards, or, in the case of adult workers, 1.25 rem (1,250 mrem) per year.

10 CFR 20.1301 provides that each licensee shall conduct operations so that the total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (100 mrem) in a year, exclusive of the dose contributions from background. Radon, air particulate and gamma emanations from the site are measured at regular intervals to ensure that this standard is satisfied. In addition, 10 CFR 20.1101(d) provides that to implement the ALARA requirements, the exposure to members of the public from air particulate, excluding radon and its daughters, should not exceed 0.01 rem (10 mrem) per year.

*Over the Mill’s 40-year history it has never had an overexposure of any of its workers or any members of the public and, in fact, operates well below the regulatory exposure limits. For example, the Mill has very rarely, if ever, exceeded its ALARA goal of 1,250 mrem/yr for workers, set internally as 25% of the regulatory standard, and typically the maximally exposed worker is less than 500 mrem/yr, which is one tenth of the regulatory standard of 5,000 mrem/yr. Similarly, emissions at the boundary monitoring stations around the Mill almost invariably show emissions at less than the ALARA goal of 25% of the regulatory standard, and modeling shows that exposures at the nearest potential receptor, when the Mill is operating at full licensed capacity, are a small fraction of the 100 mrem/yr standard (typically, approximately 10% of the standard), and much less during normal Mill operating levels.*

#### 6.2.4. Clean Air Act Requirements

In addition to the requirements of 10 CFR Part 20, uranium mills must also comply with Clean Air Act national emission standards for hazardous air pollutants (“NESHAPS”). The requirements for operating (i.e., active) uranium mills are set forth in 40 CFR Part 61, Subpart W, and require that the radon flux from the Mill’s tailings impoundments cannot exceed 20 picocuries/metres squared/second (“pCi/m<sup>2</sup>/s”). Measurements of radon flux from the Mill’s tailings impoundments must be taken annually.

The regulations under 40 CFR Part 70 provide for the establishment of comprehensive State air quality permitting systems consistent with the requirements of Title V of the Clean Air Act. Under these requirements, the State of Utah Department of Air Quality has issued an Air Approval Order for the Mill. This Order requires the Mill facility to comply with the air particulate (PM10) and other non-radionuclide standards set by EPA under the Clean Air Act for such things as stationary sources and mobile equipment.

#### 6.2.5. Monitoring of any Impacts to Groundwater

Criterion 7A of 10 CFR Part 40, Appendix A (“Appendix A”) requires that a uranium mill establish a groundwater detection monitoring program to ensure that any hazardous constituents entering the groundwater do not exceed the specific concentration limits set out in Criterion 5C in the uppermost aquifer beyond the point of compliance during the compliance period. The list of hazardous constituents is set out in Criterion 13 and includes the full list imposed by EPA under 40 CFR Part 192, which is the full suite of hazardous chemicals applicable to groundwater protection at RCRA Subtitle C facilities. It should be noted that some Agreement States, such as Utah, will have their own groundwater protection regulations that may be stricter than the NRC program set forth in Appendix A. In the case of Utah, the groundwater protection

program for a uranium mill tailings facility is implemented through a specific groundwater discharge permit for the facility.

The primary standard for groundwater protection is the design standard for mill tailings impoundments set out in Criterion 5A of Appendix A. The groundwater monitoring program is considered a secondary standard. This means that uranium mills are designed not to leak solutions to groundwater, and that the monitoring system is intended to verify that the facility is not leaking.

In practice, groundwater monitoring at uranium mills is conducted on a quarterly or semi-annual basis, or a combination of the two, for a number of constituents from the list set out in Criterion 13 (or under the State's groundwater protection program), that are considered to be good indicator parameters for potential tailings cell leakage (i.e., constituents that are considered to be prevalent in the tailings and mobile in groundwater) in a number of monitoring wells at the site. Monitoring results are recorded and reported to NRC (or the Agreement State) on a periodic basis.

The Mill has a State of Utah Groundwater Discharge Permit, under which it monitors for 47 constituents in 29 groundwater monitoring wells at the site. ***There have been no detected releases from any of the Mill's tailings cells to groundwater at the site since the Mill commenced operations in 1980.***

#### 6.2.6. Wastes Generated by Mills on an Ongoing Basis

The predominant waste generated by uranium mills on an ongoing basis are the mill tailings themselves, which are required to be placed in tailings impoundments at the Mill site that are designed to meet the Criteria in 10 CFR Part 40, Appendix A. See Section 12, [\*The White Mesa Mill is an Ideal Permanent Disposal Facility for Mill Tailings, Effluents and Wastes and ISR Facility Wastes\*](#), below for a detailed discussion of the unique and very protective requirements applicable to uranium mill tailings impoundments to ensure that the tailings impoundments do not leak to the environment. In addition, all other wastes created at the Mill that are incidental to Mill operations, such as office trash, fluorescent light bulbs, laboratory chemicals, etc. are also required to be disposed of in the Mill's tailings impoundments on an ongoing basis.



*White Mesa Mill near Blanding, Utah (2018)- State of the Art Tailings Cells 4A and 4B in Background; Partially Reclaimed Tailings Cell No.2 between Tailings Cells 4A and 4B and Tailings Cell 1*

### 6.2.7. Transportation

The Company’s “*Transportation Policy for Shipments of Uranium Ores to the White Mesa Uranium Mill*” describes the shipping responsibilities and practices to be employed when shipping uranium ore from a mine by truck to the Mill. The policy outlines specific shipping precautions and necessary documentation to maintain compliance with applicable requirements of the U.S. Department of Transportation regulations at Title 49 of the Code of Federal Regulations. Safe transportation of uranium ore from each mine to the Mill is paramount to the Company, and strict adherence to the policy is required.

The policy encompasses uranium ore shipping and transportation requirements and the specific responsibilities of a mine operator/owner, the transport contractor, and Mill personnel with regard to: maintaining exclusive use shipments, personnel training, vehicle marking, labeling and placarding, preparation of shipping papers, transportation requirements, emergency response, radiation control, record retention and other matters.

A copy of the policy can be found here: <https://www.energyfuels.com/governance>

### 6.3. **Operating Standards for ISR Production**



*State-of-the-Art Nichols Ranch ISR Project near Linch, Wyoming – approximately 62 miles from Casper, Wyoming*

#### 6.3.1. How ISR Mining is Performed

ISR mining is a technique that involves separating uranium from ore without removing the ore from the ground. Rather than using surface or underground excavation techniques, ISR facilities use subsurface wellfields to bring the uranium to the surface for production. Each wellfield is usually composed of a number of patterns that involve the installation of injection wells and production wells in the ore zone. Each pattern will consist of a number of injection wells to inject a solution known as lixiviant into the mineralized zone. This lixiviant typically consists primarily of groundwater containing dissolved oxygen and carbon dioxide. At the same time, a single production well located at the center of the injection well pattern will draw the lixiviant through the ore body. By continuously injecting lixiviant and drawing it through the ore body, the uranium is oxidized and dissolved into the solution and is brought to the surface. An ISR facility will typically have a number of these injection well/production well patterns throughout the ore body.

Once brought to surface, the “pregnant” solution is run through ion exchange (“IX”) units, which cause the uranium in solution to attach to resins, thereby removing the uranium from solution. The barren lixiviant is then pumped back through injection wells into the wellfield and the process repeats itself on a continuous basis. When fully loaded, the IX resins are transferred to a processing facility where the uranium is stripped from the resins. The stripped resins are then returned to the IX columns for reuse. The pregnant solution is

then treated with hydrogen peroxide in order to precipitate the uranium. The precipitated uranium is then dewatered and dried, resulting in the production of U<sub>3</sub>O<sub>8</sub>, or “**yellowcake**.” These processing facilities are similar to the back end of a conventional uranium mill. That is, they do not involve crushing, milling or leaching of ore or separating leached solutions from solids, as would be found at the front end of a conventional uranium mill, but they do involve the remaining steps in the milling process of stripping, precipitation, dewatering and drying to produce yellowcake. Each ISR recovery facility may have several wellfields that utilize one such processing facility. Smaller ISR facilities may enter into commercial arrangements with other ISR facilities or a conventional uranium mill to ship their IX resins or yellowcake slurry to those other facilities for stripping, precipitation, dewatering and/or drying.

### 6.3.2. In-Situ Recovery is Distinct from Fracking

ISR mining involves pumping a liquid solution below the surface of the earth to recover uranium-bearing minerals from ore (a process referred to as “**leaching**”); under current State ISR regulations, it cannot have injection pressures that exceed the fracture gradient for the uranium-bearing portion of the aquifer. In contrast, hydraulic fracturing (“**fracking**”) utilizes a pressurized sand/liquid mixture to create small cracks or “fractures” throughout the formation where the sand acts as a proppant to hold the fractures open, thereby releasing trapped oil and gas for extraction by way of wells. ISR is a low-impact option to mining that, unlike fracking, does not structurally disturb the ore bed.

### 6.3.3. Jurisdiction over In-Situ Recovery

Although ISR recovery facilities are involved in mining, NRC treats them differently than conventional uranium mines, which are not under NRC jurisdiction. This is primarily because, unlike conventional uranium mines, ISR facilities actually contact the ore with lixiviant to solubilize the uranium to ultimately produce yellowcake and therefore require licenses under the AEA, which are issued by the NRC or applicable Agreement State.

In addition to being required to obtain licenses from the NRC or applicable Agreement State, licensees must also obtain an Underground Injection Control (“**UIC**”) Permit and aquifer exemption from EPA or an EPA delegated State under EPA’s UIC program, promulgated under Part C of the Safe Drinking Water Act. The UIC program is intended to protect underground sources of drinking water (“**USDW**”) from contamination and prohibit the movement of any contaminant into an USDW. Underground injection, such as is the case with ISR mining, is permitted so long as prescribed requirements are satisfied to prevent the migration of injection fluids to underground sources of drinking water, and those are confirmed by the use of a network of monitor wells.

In order to obtain a UIC permit, the licensee must also obtain an aquifer exemption for the aquifer or portion thereof that will be affected by ISR operations. In order to approve an aquifer exemption, EPA or an EPA-delegated State must find that the portion of the aquifer does not currently and will not in the future serve as a source of drinking water. One way to support such a finding is to determine that the aquifer or portion thereof contains minerals that are expected to be commercially producible. Once approved, the EPA removes that portion of the aquifer from protection under the SDWA.

While the EPA aquifer exemption effectively removes that portion of the aquifer from protection as a USDW, the EPA drinking water standards and protections and NRC or Agreement State groundwater protection provisions are still in effect for the aquifer adjacent to the exempted area. Upon completion of uranium production, the delegated state groundwater regulations and Agreement State decommissioning provisions require that the impacted groundwater in the ISR production area must be restored to its prior usage classification. These requirements remove the source of hazard that could, over time, migrate outside of the exempted portion of the aquifer and potentially impact the surrounding USDW.

As should be evident from the foregoing, the licensing process for an ISR uranium facility will typically be considerably more involved than the licensing process for a conventional uranium mine. This is because licenses will need to be obtained from the NRC or applicable Agreement State, which will involve many of the considerations required for a conventional uranium mill. In addition, a UIC permit and an aquifer exemption will be required from EPA (or an EPA-delegated State) and other mining approvals will be required.

#### 6.3.4. Wastes Generated from ISR Mining

The ISR mining process generates a number of waste streams.

##### (a) *Bleed Solution*

In order to create a cone of depression, or inward gradient, that prevents production fluids from leaving the mining zone, and to bring fresh water into the mining zone to reduce the buildup of contaminants in the lixiviant, slightly more water is removed from the ore zone than is injected. This net withdrawal of solutions from the well field is referred to as “bleed solution” and often contains elevated levels of radium and other contaminants.

##### (b) *Liquid Process Effluents*

Resin stripping and yellowcake precipitation and de-watering activities conducted in the above-ground processing facility also generate wastewater.

##### (c) *Restoration Waters*

When uranium recovery operations cease at a wellfield, existing wells are used to sweep contaminated water out of the ore zone. The sweep water is processed using reverse osmosis technology, and the resulting clean water (typically representing 75-80% of the sweep water) is then commingled back with native groundwater into the formation to ultimately replace the groundwater impacted by mining. The reject water or “brine” (the remaining 20-25% of the sweep water) is referred to as “restoration water” and is disposed of.

##### (d) *Discrete Surface Wastes*

Discrete surface wastes generated by ISR facilities include discarded piping, discarded IX resins and other chemicals, construction material and equipment that cannot be decontaminated and salvaged, as well as contaminated soils. Other wastes include sludges from treatment of bleed solutions, liquid process effluents and restoration waters. All these wastes must be removed from the site and disposed of in compliance with a variety of laws and regulations in order to meet free release criteria for the site at closure.

#### 6.3.5. Operational Standards

##### (a) *Radon, Gamma and Air Particulate Levels at the Facility and Management of Exposure to Workers*

As an ISR facility is an AEA licensed facility and performs many of the same operations as a conventional uranium mill, e.g., concentrating, precipitating, dewatering and drying yellowcake, all of the provisions of 10 CFR Part 20 described in Section 6.2.3 above for conventional uranium mills for the protection of workers and the public also apply to ISR facilities. This results in similar types of radiation monitoring and exposure standards as for conventional uranium mills.

Because ISR facilities do not have tailings impoundments, they are not subject to the radon flux measurement requirements of 40 CFR Part 61, Subpart W, as it applies to conventional impoundments. However, ISR facilities that have evaporation ponds are subject to the requirements of Subpart W as it applies to non-conventional impoundments (none of the Company's ISR facilities have evaporation ponds).

***The Company's Nichols Ranch and Alta Mesa ISR facilities operate well within all of the regulatory standards set out in 10 CFR Part 20. The same ALARA principles applicable to the Mill apply equally to those facilities, to ensure that all exposures to workers and to members of the public are as low as reasonably achievable below the regulatory standard at all times.***

*(b) Management of Waste Solutions*

As discussed in Section 6.3.4, above, ISR facilities will generate bleed solutions, liquid process wastes and restoration water wastes.

These waste solutions are managed at the Company's ISR facilities by deep well injection. Under deep well injection, all liquid effluents generated by the ISR facilities are injected into permitted Class I non-hazardous byproduct disposal wells. The Company operates four deep disposal wells, with two at the Nichols Ranch and two at the Alta Mesa ISR facilities. These wells are constructed to access deep aquifers that do not meet the definition of a USDW. These can be at depths that exceed 4,000 feet from surface. The operation of these wells is in accordance with requirements enforced by EPA or a delegated state under 40 CFR part 146.

#### **6.4. Operating Standards for Conventional Mining**

##### **6.4.1. Jurisdiction over Conventional Uranium Mining**

NRC (or the Agreement State) does not have jurisdiction over conventional uranium mining. However, jurisdiction over conventional uranium mining can fall under a number of other regulatory authorities, as described below.

*(a) State and Federal Agencies*

Conventional uranium mining is subject to all of the State and federal agencies typically involved in other types of mining, such as the State Departments of Mining and Water Quality or the equivalent, the BLM the USFS and MSHA and other local, State and Federal agencies. Which of these agencies will be involved, and to what extent, will depend on the specific circumstances of the mine but will not generally be dependent on the fact that the mine is a uranium mine rather than any other type of mine.

*(b) EPA*

EPA can have jurisdiction over conventional uranium mining activities in a number of ways:

- (i) RCRA. Some of the wastes generated by conventional uranium mining activity can be hazardous wastes subject to EPA jurisdiction under RCRA. Examples of hazardous wastes that may be found at conventional uranium mine sites are cleaning solvents, degreasers, used oil, nickel/cadmium in batteries, etc. These will require disposal off-site at a facility licensed to receive such materials. This is no different than for any other conventional mining activity.
- (ii) TSCA. Some of the wastes generated by historic conventional uranium mining activity can be "chemical substances" under TSCA. As a result, things such as PCBs from old transformers used

at the mine, old PCB-laden fluorescent light bulbs, etc. would have to be managed and disposed of in accordance with TSCA and its applicable regulations (most if not all of these historic PCB uses have long been dealt with in accordance with applicable regulations). This is no different than for any other conventional mining activity. All of the historic PCB-containing equipment at the Company's sites has long-been removed and disposed of accordingly.

- (iii) Clean Water Act. As with any other mining operation, a uranium mine that must discharge mine water will be subject to the requirements of the Clean Water Act. These requirements are discussed in more detail in Section 6.4.2(c) below.
- (iv) Clean Air Act. 40 CFR Part 61 Subpart B sets out national emission standards for radon emissions from underground uranium mines. These standards are discussed in more detail in Section 6.4.2(b) below.

(c) *MSHA*

MSHA has jurisdiction over occupational safety in conventional uranium mines, under the Federal Mine Safety and Health Act of 1977. The applicable regulations are set out at 30 CFR Parts 1 through 104.

The regulations at 30 CFR Part 57 address safety and health standards for underground metal and nonmetal mines. Of these regulations, the regulations at 30 C.F.R 57.5037 through 57.5047 address the measurement and recording of radon daughter and gamma levels in underground uranium mines and set standards for maximum permissible levels and other related protections.

(d) *Other*

Other regulations may apply to uranium mines just as they may apply to other metal mines, depending on the circumstances and the host State.

6.4.2. Operational Standards

(a) *Radon and Gamma in Mines and Management of Exposure to Workers*

Radiation safety for workers in underground mines falls under the jurisdiction of MSHA. The applicable regulations are at 30 CFR 57.5037 – 57.5047. For underground uranium mines, radon daughter concentrations must be monitored at least every two weeks, unless radon daughters are found to be in excess of 0.3 Working Levels (“**WL**”), in which case the frequency of monitoring must increase to weekly.

The annual exposure limit to radon daughters is set at 4 Working Level Months (“**WLM**”) in any calendar year. The regulations also provide for record keeping of each worker's time in the various areas of the mine and the radon daughter concentrations in the various areas of the mine, as well as requirements for the use of respiratory protection in any areas exceeding 1.0WL.



MSHA has also set standards for exposure to gamma radiation in underground uranium mines. 30 CFR 57.5047 provides that gamma radiation surveys shall be conducted annually in all underground mines where radioactive ores are mined. Where average gamma radiation measurements are in excess of 2.0 milliroentgens per hour in the working place, gamma radiation dosimeters must be provided for all persons affected. Records of cumulative individual gamma radiation exposure must be kept. Annual individual gamma radiation exposure shall not exceed 5 rems (5,000 mrem).



*Pinyon Plain Mine at sunset, located near Tusayan, Arizona*

***All of the Company's conventional mines operate in compliance with these radon and gamma exposure standards. The Company manages underground ventilation, residence time of workers in operational areas and other factors to keep such exposures ALARA.***

*(b) Radon Emanations from Underground Uranium Mines*

The regulations under the Clean Air Act set out national emission standards for radon emissions from underground uranium mines in 40 CFR Part 61 Subpart B. Those regulations are administered by EPA (or an EPA-authorized State) and apply to uranium mines that have mined, will mine or are designed to mine over 100,000 tons of ore during the life of the mine or had or will have an annual ore production rate greater than 10,000 tons (unless it can be demonstrated to EPA that the mine will not exceed total ore production of 100,000 tons during the life of the mine). All of the Company's material conventional mines meet these applicable thresholds and are subject to the regulations under 40 CFR Part 61 Subpart B.

The standard is set in 40 CFR 61.22, which provides that the emissions of radon-222 to the ambient air from an underground uranium mine shall not exceed those amounts that would cause any member of the public to receive in any year an effective dose equivalent of 10 mrem/yr over background. Compliance with this standard must be calculated annually by use of an EPA-approved model and the results reported to EPA (or the EPA-authorized State).

***All of the Company's conventional mines operate in accordance with these radon emission standards.***

*(c) Possible Need for NPDES Discharge Permit or the Equivalent*

If the mine discharges water, it may be necessary to obtain an NPDES Permit, or the equivalent State-issued permit, under the Clean Water Act. The NPDES program requires permits for the discharge of "pollutants" from any "point source" into "waters of the United States." This includes discharge of contaminated mine waters and covers radionuclides as well as other metals and pollutants. Under the NPDES program (or State equivalent) all discharge waters must be treated to appropriate standards for discharge to the environment.

(d) *Groundwater Protection*

States regulate any impacts to groundwater from conventional mining operations, including any impacts from elevated levels of radionuclides. For example, Section 3.1.7 of the “*Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for Hard Rock, Metal, and Designated Mining Operations*” provides that operations that may affect groundwater quality shall comply with all State-wide groundwater quality standards established by the Water Quality Control Commission. Similarly, groundwater monitoring wells may be required around evaporation ponds as a condition of issuance or renewal of a groundwater protection permit, or the equivalent.

Visit the following link for the full text of the above-referenced Colorado Mineral Rules and Regulations: <https://drive.google.com/file/d/1aEdnykzEQF1z9qcHYrjhRBuauI73MXrt/view>

6.4.3. Other Matters

Individual States may have other applicable requirements. For example, the Colorado Division of Reclamation, Mining and Safety (“**DRMS**”) can determine that a mine is a Designated Mining Operation (a “**DMO**”) if it is a mining operation at which “toxic or acidic chemicals used in extractive metallurgical processing are present on site or acid- or toxic-forming materials will be exposed or disturbed as a result of mining operations.” If a mine is determined to be a DMO, the most significant result is the requirement that it submit an environmental protection plan (an “**EPP**”). The EPP must identify the methods the operator will utilize for the protection of human health, wildlife, property and the environment from the potential toxic- or acid-forming material or acid mine drainage associated with the operations. The EPP must be submitted to the DRMS for review and, after a public hearing, a decision must be made by DRMS.

**7. RECLAIMING RESPONSIBLY AFTER WE COMPLETE OPERATIONS SO THAT ANY LASTING IMPACTS TO THE ENVIRONMENT ARE ELIMINATED OR MINIMIZED**

**QUICK FACTS**

As miners, in addition to meeting all of the applicable health, safety and environmental regulations to ensure a minimal impact to our workers, the public and the environment while our mines are in operation, we need to properly reclaim our mines and facilities after we complete operations so that any lasting impacts to the environment are eliminated or minimized.

Each mine, mill and ISR facility must have an approved reclamation plan with a cost estimate to reclaim the facility, which must be secured by a surety bond or the equivalent, to ensure that the regulator can step in at any time and have the funds available to reclaim the site. The Company currently has posted bonds to cover its reclamation obligations at all of its mines, Mill and ISR facilities.

Uranium mill tailings impoundments, including the final cover, must be designed to provide reasonable assurance of control of radiological hazards to be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years. By comparison, the design standard for a Part 61 Low Level Radioactive Waste facility requires 100 years of active institutional controls and for Class C wastes protection for 500 years, and RCRA disposal cells are designed with a regulatory oversight horizon of approximately 30 years.

Upon site closure, title to the closed Mill tailings impoundments must be transferred to the U.S. Government (DOE) for perpetual ownership and custodianship. This requirement is unique and is what sets the Mill apart from all other types of facilities in the country. No other mine, non-uranium milling facility or any type of disposal facility, radioactive or otherwise, is required by law to be transferred to the federal government upon closure.

**7.1. Reclaiming Responsibly**



*Tony M Mine located near Ticaboo, Utah*

As miners, in addition to meeting all of the applicable health, safety and environmental regulations to ensure a minimal impact to our workers, the public and the environment while our mines are in operation, discussed in detail in Sections 5 and 6 above, we need to properly reclaim our mines and facilities after we complete operations so that any lasting impacts to the environment are eliminated or minimized.

As discussed above, each mine, mill and ISR facility must have an approved reclamation plan

with a cost estimate to reclaim the facility, which must be secured by a surety bond or the equivalent, to ensure that the regulator can step in at any time and have the funds available to reclaim the site.

The reclamation bonds are intended to secure the obligations of the mine or facility licensee to reclaim and will only be drawn upon if the licensee fails to reclaim the site in accordance with the reclamation plan. In the normal case, the licensee will pay for the cost of reclamation directly, and, upon the licensee providing evidence to the regulatory authority that the reclamation has been completed, the bond will be released without being drawn upon. If the licensee fails to fulfill its reclamation obligations, then the regulatory authority will step in and perform the reclamation itself and draw upon the bond to cover the costs of reclamation.

The Company currently has posted bonds to cover its reclamation obligations at all of its mines, Mill and ISR facilities.

Further, with respect to the Mill, upon site closure, title to the closed tailings impoundments must be transferred to the U.S. Government for perpetual ownership and custodianship. This requirement is unique and is what sets the Mill apart from all other types of facilities in the country. No other mine, non-uranium milling facility or any type of disposal facility, radioactive or otherwise, is required by law to be transferred to the federal government upon closure. See Section 12, [\*The White Mesa Mill is an Ideal Permanent Disposal Facility for Mill Tailings, Effluents and Wastes and ISR Facility Wastes\*](#), below for a more detailed discussion of this requirement.



*Left: Hack 1 Mine in Production (1988)*

*Below: Hack 1 Mine following reclamation and closure.*



## 7.2. Reclamation of Uranium Mills

### 7.2.1. Clean-Up Standards for Uranium Mills

#### (a) *Responsibility for and Manner of Clean Up*

UMTRCA amended the AEA to require that all active uranium mills must comply with the decontamination, decommissioning, and reclamation standards prescribed by the NRC and to require that such facilities post reclamation bonds or surety.

Responsibility for reclamation rests with the licensee. Appendix A Criterion 6A requires the adoption of a Commission-approved reclamation plan for the site, Criterion 9 requires that financial surety must be established to fund the cost of reclamation in accordance with such plan, and Criterion 11 requires that each licensee include in its financial surety an amount equivalent to at least \$250,000 (1978 dollars) to cover the costs of long-term surveillance by the long-term government custodian (DOE).

#### (b) *Surface*

Reclamation plans for uranium mills typically require that upon closure, all mill buildings, unsalvageable equipment, contaminated soils (impacted by Mill operations within the Mill site itself as well as surrounding areas that may be impacted by windblown radioactive dusts from milling operations), etc. be deposited in the tailings cells and the tailings cells capped in place.

Appendix A, Criterion 6(6) sets the standard for determining when all impacted areas, other than the tailings impoundments have been adequately cleaned up. Those standards set strict limits for any residual radioactivity in soils, such that all impacted areas, other than the tailings impoundments, will be cleaned up to free-release standards, which means that the lands can be used for beneficial uses in the future. As discussed in Section 12, [\*The White Mesa Mill is an Ideal Permanent Disposal Facility for Mill Tailings, Effluents and Wastes and ISR Facility Wastes\*](#), below, the tailings impoundments will be capped in place and title of the tailings impoundments will be transferred to the U.S. government (DOE) for perpetual ownership and custodianship.

#### (c) *Groundwater*

As discussed in Section 6.2.5 above, each uranium mill is required to have a groundwater monitoring program. If the facility has been designed in accordance with the Criteria set out in 10 CFR Part 40, Appendix A and everything goes as planned, there will be no contamination to groundwater at the time of site reclamation. However, if there is contamination, Appendix A Criterion 5B(5) provides that at the point of compliance, the concentration of a hazardous constituent must not exceed the greater of NRC-approved background and the concentration limit set out in Criterion 5C or an alternate concentration limit (“ACL”). Criterion 5B(6) provides that where it is not practically achievable at a site to reduce groundwater contamination to background or to the limits established by NRC in Criterion 5C, ACLs that present no significant hazard may be proposed by licensees for NRC or applicable Agreement State consideration. The NRC or applicable Agreement State will establish a site-specific ACL for a hazardous constituent if it finds that the proposed limit is ALARA, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded.

Criterion 5D provides that the licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater standard. The NRC or applicable Agreement State will determine when the licensee may terminate corrective action measures based on data from the

groundwater monitoring program and other information that provide reasonable assurance that the groundwater protection standard will not be exceeded.

*(d) Tailings Impoundment Cover*

The design criteria for mill tailings impoundments are set out in Appendix A, most notably in Criteria 3 (which provides that below grade disposal is preferred), Criterion 4 (which sets out site and design criteria), Criterion 5A (which specifies criteria for tailings impoundment liners), Criterion 5E (which specifies requirements for leak detection systems and dewatering systems) and Criterion 6 (which provides for the design life standard).

The other notable design criterion is Criterion 6, which requires that the impoundments, including the final cover, must be designed to provide reasonable assurance of control of radiological hazards to:

- be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years, and
- limit releases of radon-222 from uranium byproduct materials to the atmosphere so as not to exceed an average release rate of 20 pCi/m<sup>2</sup>/s to the extent practicable throughout the effective design life.

By comparison, the design standard for a Part 61 Low Level Radioactive Waste facility requires 100 years of active institutional controls and for Class C wastes protection for 500 years, and RCRA disposal cells are designed with a regulatory oversight horizon of approximately 30 years.



*White Mesa Mill Cell 2 Impoundment Reclamation Cover prior to vegetation growth.*

*(e) License Termination*

Upon site closure, title to the closed tailings impoundments must be transferred to the U.S. Government (DOE) for perpetual ownership and custodianship. This requirement is unique and is what sets the Mill apart from all other types of facilities in the country. No other mine, non-uranium milling facility or any type of disposal facility, radioactive or otherwise, is required by law to be transferred to the federal government upon closure.

Section 83.7 of the AEA and 10 CFR Part 40, Appendix A Criterion 11E provide that material and land transferred to the long-term custodian (DOE) must be transferred without cost to the long-term custodian other than administrative and legal costs incurred in carrying out such transfer. Criterion 12 provides that the final disposition of tailings at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation.

In order to cover the costs of long-term surveillance, Criterion 10 requires that a minimum charge of \$250,000 (1978 dollars) must be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium mill license.

In most cases if there is a groundwater contamination problem, the problem must be remediated prior to license termination, or an ACL must be obtained, thereby solving the problem. In some circumstances, DOE may agree to take some additional actions after it takes title to the site, such as additional monitoring, if not onerous and provided adequate funding is provided.

Upon NRC being satisfied that all regulatory requirements have been met and the site is reclaimed in a manner that satisfies all applicable standards, the Mill's license will be terminated upon transfer of the reclaimed tailings impoundments to DOE. 10 CFR 40.28 provides a general license in favor of the long-term custodian for custody of and long-term care of the tailings impoundments and any surrounding lands transferred to it. The surrounding areas not transferred to DOE would generally be free-released.

### 7.3. Reclamation of ISR Facilities

As with a uranium mill, ISR uranium facilities must submit a reclamation plan for approval as part of the licensing process. The licensee must post a reclamation bond or other form of surety with NRC (or the Agreement State) to cover the cost of reclamation in accordance with the approved reclamation plan. The amount of the surety must be reviewed each year and adjusted to reflect any changes in the costs of reclamation.

All surface wastes at an ISR facility, such as buildings and equipment that cannot be decontaminated and salvaged, piping, sludges from treatment of waste waters and restoration waters, any evaporation pond liners and contaminated soils in and around the site, are considered to be 11e.(2) byproduct material (i.e., the equivalent to mill tailings). However, an ISR facility will not have a tailings impoundment in which to dispose of these wastes. Instead, each ISR facility must enter into an agreement with a uranium mill or a facility with a mill tailings disposal cell in order to dispose of these wastes upon reclamation of the ISR site.



*Nichols Ranch ISR Project, Header House 6  
Facing North, March 2015*



*Nichols Ranch ISR Project, Header House 6  
Facing North, August 2020*

At closure, all surface wastes must be removed from the site and disposed of at such an offsite uranium mill or other facility licensed to accept uranium mill tailings. Reclamation will be complete when all such materials are removed from the site and the site meets the free release criteria in 10 CFR Part 40, Appendix A, Criterion 6(6). This is the same free release standard as for conventional uranium mills.

Finally, any groundwater contamination problems will have to be remediated, as discussed in Section 6.3.4(c) above.

As ISR facilities will dispose of all of their surface materials offsite at a licensed facility, and the remaining facility will meet the free release standards in Appendix A, Criterion 6(6), the ISR facility will not be transferred to DOE upon license termination.

#### 7.4. Reclamation of Conventional Mines

##### 7.4.1. Responsibility for and Manner of Clean Up

It is the responsibility of the mine permit holder to reclaim the mine site prior to permit termination. Any permit or Plan of Operations approval issued today will require the applicant to provide a mine reclamation plan for approval and to post a mine bond or other form of surety to cover the costs of reclamation. Because conventional uranium mines do not create uranium mill tailings, DOE will have no responsibility for taking title to the reclaimed mine site or any of the wastes generated at the site.

Mine reclamation plans will typically require that any hazardous substances, such as used engine oils, on-site chemicals and other hazardous wastes and historic PCB-laden transformers and other wastes be recycled or disposed of at an offsite disposal facility licensed to accept such wastes. The mine facilities and equipment that cannot be salvaged and removed from the site will typically be required to be buried with and covered by waste rock or, in some cases, put back into the mine. Radioactive waste rock or low-grade ores on surface are usually placed above ground in dumps (along with unsalvageable building debris and equipment) and covered with a dry cover system then contoured to meet erosion control requirements and re-vegetated. In some circumstances, such waste rock and low-grade ore may be placed back into the mine. Upon completion of reclamation, all mine openings will be plugged and sealed off. In any circumstance where any equipment, debris, waste rock or ore is put back into the mine, attention must be given to ensuring that such activity does not contribute to groundwater or surface water contamination.



Pigeon Mine Site  
During Full Production and Ore Sorting  
November 16, 1989  
(view looking north)



Pigeon Mine Site  
Reclamation Completed April 1, 1991  
(view looking north)



#### 7.4.2. Radiological Standards for Reclamation

There are currently no regulatory standards in most States for the cleanup of radionuclides at conventional uranium mine sites per se, other than through groundwater, Clean Water Act and Clean Air Act requirements. As mentioned above, NRC does not have jurisdiction under the AEA. However, on federal lands, BLM and USFS typically require that any residual radioactivity in the remaining soils at the site meet the standards for the class of public use of the lands in the future. In circumstances where regulatory standards do not exist, the Company has worked with the applicable regulatory agencies to implement appropriate site-specific reclamation standards for each mine, which generally provide comparable protections as for reclamation at uranium mills and ISR facilities.



*Pigeon Mine site (view looking north), almost 20 years after reclamation completed.*

## 8. CLEANING UP OUR COUNTRY'S COLD WAR LEGACY

### QUICK FACTS

There are hundreds of abandoned, un-reclaimed or improperly reclaimed mine sites in the United States, particularly abandoned uranium mines in the Western United States that were developed and mined during the early years of the Cold War era.

Today, the EPA is spearheading the effort to clean up these sites, many of which are located on Navajo Nation land.

The Mill is located just a short distance away from the northern edge of the Navajo Nation, so it is the perfect facility to cost-effectively recycle low-grade ore from these sites and produce uranium that can be used for the generation of clean electricity.

***We are proud to be able to play a part in cleaning up these legacy Cold War era sites in the U.S. and returning the environment to the standards required today.***

Proper reclamation of all of our mine sites is required by current regulatory standards, and something we take very seriously. However, reclamation standards prior to the latter part of the twentieth century were not as stringent. This has resulted in a number of abandoned, un-reclaimed or improperly reclaimed mine sites in the United States, particularly abandoned uranium mines in the Western United States that were developed and mined during the early years of the Cold War era. Today, the EPA is spearheading the effort to clean up these sites, many of which are located on Navajo Nation land. The Mill is located just a short distance away from the northern edge of the Navajo Nation, so it is the perfect facility to cost-effectively recycle low-grade ore from these sites and produce uranium that can be used for the generation of clean electricity. In addition, there are numerous other companies with reclamation obligations at abandoned uranium mine sites in the region, and the Mill is the most rational facility to handle this material.

The White Mesa Mill is currently receiving low-grade mineralized material from the cleanup of one conventional mine in northwest New Mexico and is pursuing other opportunities to process mineralized materials from the cleanup of abandoned uranium mines on the Navajo Nation and in the four corners area of the United States.

***We are proud to be able to play a part in cleaning up these legacy Cold War era sites in the U.S. and returning the environment to the standards required today.***

## 9. SUSTAINING THE WORLD'S RESOURCES THROUGH RECYCLING

### QUICK FACTS

We are very proud of our recycling programs, which go well beyond what most mining companies are able to do.

The Mill has recycled enough uranium which, after being converted to nuclear fuel:

- will produce as much electricity as approximately 50 million tons of coal. That amount of coal would fill a coal train that extends from Los Angeles to New York City and almost all of the way back, and would provide as much electricity as about 24,500 wind turbines for a year, or almost half of the 60,000 wind turbines in the U.S. in 2019;
- This recycled uranium would eliminate over 85 million tonnes of CO<sub>2</sub> emissions compared to coal, or the same amount of annual emissions as 18 million passenger vehicles. 85 million tonnes of CO<sub>2</sub> emissions is about 1.5 times the annual CO<sub>2</sub> emissions for the entire country of Sweden; and
- Over 110 million acres of forest would be required for one year or 1.4 billion seedlings would need to grow for 10 years to sequester that amount of CO<sub>2</sub> emissions. 110 million acres of forest would be a forest larger than the entire State of California.

Over the last 20 years, over 32% of our uranium production has been from the recycling of uranium-bearing waste materials.

The Mill has recycled enough vanadium, which would otherwise have been lost to direct disposal, to provide the vanadium needed for enough steel girders to build four and a half Golden Gate Bridges! Over the last 10 years, over 26% of our vanadium production has been from this recycling program.

We look forward to recycling uranium and REEs from natural uranium- and REE-bearing ores that would in most cases be discarded. From a sustainability perspective, not only will Energy Fuels provide critical REEs used in many advanced technologies and clean energy applications, we will also provide recycled uranium to fuel carbon-free nuclear energy to power those technologies.

#### 9.1. Recycling Wastes for the Recovery of Valuable Uranium, Vanadium and Rare Earth Elements

We demonstrate our commitment to environmental protection, not only through responsibly mining, milling and reclaiming, but also through our uranium and vanadium recycling programs, and soon our proposed REE recovery program.

Energy Fuels is unique in its ability to recycle at varying stages of operations, whether through the processing of “alternate feed materials” from third party sites to recover additional minerals that would otherwise be lost to direct disposal; the recovery of vanadium from tailings pond solutions to reduce total in-ground waste; the proposed processing of REE ores for the recovery of REEs and uranium that in many cases would have been discarded; the reuse of water across the Mill property to preserve a finite resource

in an arid region (the Mill is a “zero discharge” facility with respect to the use of water); or the recycling of non-hazardous business wastes from our regional and corporate offices. Recycling is key to what we do!

*We are very proud of our recycling programs, which go well beyond what most mining companies are able to do.*

#### 9.1.1. Recycling Wastes for the Recovery of Commercially Salable Uranium

In addition to producing uranium from our mines, we recycle other companies’ uranium-bearing tailings or wastes (known as alternate feed materials) at the Mill for the extraction of uranium that would otherwise have been permanently disposed of. We make the alternate feed materials we receive less hazardous prior to disposal by removing the uranium and help reduce America’s waste disposal footprint by using already-existing tailings impoundments equipped with state-of-the art lining technology. This is a win-win program, as the Company is able to recover **uranium without additional mining – something good for both business and the environment.**

Over the Mill’s history, it has recycled 6 million pounds of commercially salable uranium, which would otherwise have been lost to direct disposal. *That amount of recycled uranium, after being converted to nuclear fuel:*

- *will produce as much electricity as approximately 50 million tons of coal. That amount of coal would fill a coal train that extends from Los Angeles to New York City and almost all of the way back, and would provide as much electricity as about 24,500 wind turbines for a year, or almost half of the 60,000 wind turbines in the U.S. in 2019;*
- *This recycled uranium would eliminate over 85 million tonnes of CO<sub>2</sub> emissions compared to coal, or the same amount of annual emissions as 18 million passenger vehicles. 85 million tonnes of CO<sub>2</sub> emissions is about 1.5 times the annual CO<sub>2</sub> emissions for the entire country of Sweden; and*
- *Over 110 million acres of forest would be required for one year or 1.4 billion seedlings would need to grow for 10 years to sequester that amount of CO<sub>2</sub> emissions. 110 million acres of forest would be a forest larger than the entire State of California.*

*Over the last 20 years, over 32% of our uranium production has been from the recycling of uranium-bearing waste materials.*

#### 9.1.2. Recycling Wastes for the Recovery of Commercially Salable Vanadium

In late 2018, the Company initiated a successful vanadium program through which we were able to recover previously disposed of vanadium from the Mill’s tailings impoundments and process it through a retrofitted and updated vanadium recovery circuit. In doing so, we were able to make the tailings facilities cleaner by removing the majority of an abundant constituent, and to recycle nearly 2 million pounds of high-purity V<sub>2</sub>O<sub>5</sub> or “**black flake**” for reuse in multiple industries, all without additional mining operations. The result was an efficient, low-cost method of vanadium production entirely through recycling and with little capital expense. We are not aware of any other vanadium producer having done this before!

Under this recycling program we produced over 1.8 million pounds of high-purity vanadium product in 2019. *That amount of recycled vanadium, which would otherwise have been lost to direct disposal, will provide the vanadium needed for enough steel girders to build four and a half Golden Gate Bridges! Over the last 10 years, over 26% of our vanadium production has been from this recycling program.*

### 9.1.3. Recycling Ores for the Recovery of Commercially Salable Rare Earth Elements together with Uranium

Beyond uranium and vanadium, Energy Fuels is also completing pilot-scale test-work to enable the processing of uranium-bearing natural REE ores at the Mill, in preparation for the commercial production of REE carbonate in 2021.

REEs are a group of 17 chemical elements that have a variety of industrial and clean energy applications, including wind turbines, electric vehicles, clean energy production, advanced magnets, automotive components, communications technology, consumer electronics, lasers and numerous other applications.

The natural uranium/REE-bearing ores to be processed at the Mill are expected to come from third parties, and, in many cases, are side streams that have often been discarded historically, from other mining operations. Energy Fuels will produce commercially salable uranium and a commercially salable REE carbonate as co-products from recycling these natural ores. In addition, the Mill is evaluating the potential to separate individual REE oxides from REE carbonates at the Mill, and in future years expects to evaluate the potential to produce REE metals and metal alloys at the Mill or elsewhere in the U.S., thereby furthering the Company's involvement in producing these critical minerals.

Removal and recovery of the uranium and thorium from rare earth ores is the key aspect of Energy Fuels' value proposition, as many rare earth separation and recovery facilities are not able to handle the contained uranium or thorium from a technical or regulatory standpoint. The Mill has a 40-year history of responsibly handling, processing and recycling uranium- and thorium-bearing materials. Therefore, it has the potential to provide a crucial link in a commercially viable U.S. rare earth supply chain.

Under our REE business, we will not only be recycling uranium from rare earth ore streams that have been discarded in the past, we will be helping to produce rare earth elements, which are key components of numerous modern technologies. ***From a sustainability perspective, not only will Energy Fuels provide critical rare earth elements used in many advanced technologies and clean energy applications, we will also provide recycled uranium to fuel carbon-free nuclear energy to power those technologies! This is a remarkable clean energy story!***

## 9.2. Recycling Production Wastes

In addition to recycling wastes for the recovery of commercially salable uranium, vanadium, and anticipated REEs, we reuse water at the Mill, which is a zero-water-discharge facility, to preserve a finite resource in an arid region. We also recycle what would otherwise become production wastes, as well as non-hazardous business wastes from our regional and corporate offices.

### 9.2.1. Recycling Water used in Remediation of Historical Plumes

Prior to Energy Fuels' acquisition of the Mill, chloroform in the shallow aquifer at the Mill site was discovered. The chloroform appears to have resulted from the operation of a temporary laboratory facility that was located at the site prior to and during the construction of the Mill, and from septic drain fields that were used for laboratory and sanitary wastes prior to construction of the Mill's tailings cells. In April 2003, we commenced an interim remedial program of pumping the chloroform affected water from the groundwater to the Mill's tailings system. There is now a State-approved long-term Corrective Action Plan ("CAP") for the cleanup in place through this pumping, which is proving highly successful.

Similarly, elevated concentrations of nitrate and chloride were observed in some of the monitoring wells at the Mill, a number of which are upgradient of the Mill's tailings cells. After a detailed study by an independent professional engineering firm, a Contamination Investigation Report was submitted to UDEQ

in January 2010. The firm concluded that: (1) the nitrate and chloride are co-extensive and appear to originally come from the same source; and (2) the source is upgradient of the Mill property and is not the result of Mill activities. A CAP is likewise in place to manage this cleanup.

In the case of both plumes, Energy Fuels voluntarily elected to assume cleanup responsibilities so as to make its site and the surrounding environment cleaner over time.

Furthermore, the Mill is able to, and regularly does, pump the subsurface water used in its plume remediation efforts for reuse in the Mill's non-potable process circuits. In doing so, we are not only working every day to make our Mill site and subsurface cleaner, but also reusing our water resources to the extent reasonably possible to reduce our total water consumption in a desert climate where resources are finite.

#### 9.2.2. Production Wastes

Our key sites successfully recycle what would otherwise become production wastes in an effort to improve our Company's carbon footprint.

For instance, when our ISR facilities are in production, the water pumped from the ore body is processed for uranium recovery, then returned back into the wellfield and reused for further mineral recovery, thereby minimizing water waste. When performing groundwater restoration on any water impacted by ISR activities, the water is pumped through a reverse osmosis system, the majority of which results in clean water that gets returned to the ore body, thereby utilizing the clean water to improve the overall groundwater quality. Our facilities also recycle the following production wastes offsite through companies or agencies licensed to do so: recycled parts cleaner solvent used at the shop; used oil; scrap metal; damaged electrical cable (copper); salvage vehicles for scrap; and spent vehicle batteries.

#### 9.2.3. Office Wastes

Non-hazardous commercial wastes (such as plastic, paper and cardboard, and kitchen and other food wastes) are the only wastes disposed of in typical landfills. The corporate office encourages recycling practices throughout the day, with recycling bins in individual offices and shared spaces.

#### 9.2.4. Related Efforts

In addition to our above efforts, the Company's key sites are continually thinking critically about the ways in which they can improve on a smaller scale. At our Nichols Ranch ISR facility, which has recently been in production, for instance, management has implemented a Sustainable Development Plan, which includes some of the following initiatives:

- *Electricity*: All thermostats at the wellfield, plant and office are controlled by a single person, with a range set between 60- and 69-degrees Fahrenheit (heating) and 72- and 75-degrees Fahrenheit (air conditioning), to limit unmonitored fluctuations that waste energy. When power is lost at the plant, equipment is restarted at 15-minute intervals in order to avoid overwhelming local power resources;
- *Oil*: Used oil at Nichols Ranch is stored in a secure location onsite until the tank reaches capacity, at which time it is sent offsite to recycle;
- *Chemicals*: Nichols Ranch has been analyzing data in order to reduce the consumption of chemicals during elution and precipitation processes, and has set the wellfield oxygen injection to be in proportion to the uranium recovery curve, thereby avoiding oxygen saturation in the formation;

- Scrap Metal and Dead Batteries: Twice per year, Nichols Ranch sends its scrap metal and dead batteries to a licensed recycling company in Casper, Wyoming (the nearest metropolitan center to the Project site); and
- Incandescent Lightbulbs: Incandescent lightbulbs at the Project site have been replaced with LED bulbs, which have increased energy efficiency and a significantly longer life, thus reducing waste.

Many of these procedures or similar procedures have been implemented, or will be implemented, at our other facilities as appropriate.

## 10. NATURAL RESOURCES AND MATERIALS MANAGEMENT

### QUICK FACTS

National Environmental Policy Act (“NEPA”) evaluations are required in connection with all major federal actions, which include licensing or permitting actions by federal agencies, and licensing or permitting actions on federal lands, such as BLM or USFS lands.

Most of our sites and projects over the years have required an Environmental Assessment (“EA”) or Environmental Impact Statement (“EIS”) pursuant to NEPA, or the equivalent.

By undergoing either an EA or EIS, the Company is able to ensure that its actions are adequately protective of biodiversity in the areas in which it operates.

In situations where NEPA does not apply, such as for State licensing actions on private or State lands, the relevant State regulatory authority will usually perform a similar type of analysis as a NEPA analysis.

#### 10.1. Biodiversity Program

##### 10.1.1. NEPA

National Environmental Policy Act (“NEPA”) evaluations are required in connection with all major federal actions, which include licensing or permitting actions by federal agencies, and licensing or permitting actions on federal lands, such as BLM or USFS lands.

Most of our sites and projects over the years have required an Environmental Assessment (“EA”) or Environmental Impact Statement (“EIS”) pursuant to NEPA, 40 CFR 1508.18 or the equivalent before building or commencing operations. The Mill and Nichols Ranch ISR facility were originally licensed by NRC, so were subject to NEPA.



*Beaver Mine (La Sal Complex), Utah*

The Alta Mesa ISR facility was licensed by the State of Texas, which did not require a NEPA process but did require a comparable State of Texas environmental analysis of the site. Most conventional mines permitted in recent times on federal lands require a NEPA analysis as well.

It is through these studies that we best ensure the protection of biodiversity by considering ecological (such as the effects on natural resources and on the components, structures, and functioning of affected



ecosystems), aesthetic, historic, cultural, economic, social, or health effects, whether direct, indirect, cumulative, beneficial or detrimental. The EPA website includes a useful summary of an EA, explaining that, “The EA determines whether or not a federal action has the potential to cause significant environmental effects. Each federal agency has adopted its own NEPA procedures for the preparation of EAs.... Generally, the EA includes a brief discussion of:

- The need for the proposal;
- Alternatives (when there is an unresolved conflict concerning alternative uses of available resources);
- The environmental impacts of the proposed action and alternatives; and
- A listing of agencies and persons consulted.

“Based on the EA, the following actions can occur:

- If the agency determines that the action will not have significant environmental impacts, the agency will issue a Finding of No Significant Impact (“**FONSI**”). A FONSI is a document that presents the reasons why the agency has concluded that there are no significant environmental impacts projected to occur upon implementation of the action;
- If the EA determines that the environmental impacts of a proposed Federal action will be significant, an Environmental Impact Statement is prepared.”

When the applicable federal agency determines that an EIS must be prepared, a more intensive process commences that includes public notice and comment. The EPA website additionally notes that an EIS includes the following sections, which we feel are relevant to biodiversity (in relevant part):

- “**Summary:** A summary of the EIS, including the major conclusions, area of controversy, and the issues to be resolved;
- **Purpose and need statement:** Explains the reason the agency is proposing the action and what the agency expects to achieve;
- **Alternatives:** Consideration of a reasonable range of alternatives that can accomplish the purpose and need of the proposed action;
- **Affected environment:** Describes the environment of the area to be affected by the alternatives under consideration; and
- **Environmental consequences:** A discussion of the direct and indirect environmental effects and their significance.”

For a detailed discussion see [40 CFR Part 1502](#).

Actions and alternatives that must be considered in the EIS process can include mitigation efforts, which may be realized through: “(a) Avoiding the impact altogether by not taking a certain action or parts of an action; (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) Compensating for the impact by replacing or providing substitute resources or environments.”

By undergoing either an EA or EIS, the Company is able to ensure that its actions are adequately protective of biodiversity in the areas in which it operates.

### 10.1.2. Plan of Operations

When proposing to conduct operations that might cause a significant disturbance of surface resources on USFS or BLM lands, generally in relation to new or modified mine/project operations, the Company is required to provide a notice of intent to operate and submit a Plan of Operations for Mining Activities (“**PoO**”). The PoO requires, in addition to general and detailed information about the project and operations, environmental protection measures. These measures address air quality, water quality, solid wastes, scenic values, fish and wildlife, cultural resources, hazardous substances, and reclamation. The Company’s PoOs detail the Company’s planned measures for maintaining and protecting fisheries, wildlife and their habitats – especially if critical or sensitive. The USFS or BLM, as the case may be, then typically performs an EA or EIS depending on the degree of disturbance to vegetative resources, soil, water, air, or wildlife. As with the NEPA process, the PoO process enables us to ensure we are operating in a way that is adequately protective of biodiversity.

### 10.1.3. State Environmental Reviews

NEPA does not apply to any licensing actions that do not involve a federal agency or federal lands. In situations where NEPA does not apply, such as for State licensing actions on private or State lands, the relevant State regulatory authority will usually perform a similar type of analysis as a NEPA analysis. In fact, one of the requirements for a State to become an Agreement State for the regulation of uranium mills and ISR facilities is for the State to demonstrate to the NRC that it has adequate environmental evaluation regulations in place to perform similar substantive environmental reviews as would have been performed by the NRC under NEPA.

## 11. EFFLUENTS, WASTES AND TOXICITY

### QUICK FACTS

All effluents and wastes associated with our Mill, ISR facilities and mines have been evaluated and addressed through detailed regulations and permit and license conditions at each facility and mine.

The Mill's tailings system is a permanent disposal facility that has been designed very robustly to permanently contain a full spectrum of radionuclides, hazardous chemicals and metals. The Mill is an ideal permanent disposal facility for those types of wastes and helps satisfy NRC's objective of non-proliferation of radioactive material disposal sites.

*All* waste, hazardous and otherwise, generated at the Mill facility, that cannot be free-released for recycle purposes, *must* be disposed of onsite in the Mill's state-of-the-art tailings impoundments.

*All* wastes that cannot be free-released for recycle or disposed of as non-hazardous materials produced by our ISR facilities will be permanently disposed of in the Mill's tailings impoundments.

The Mill accepts and directly disposes of *other* ISR facilities' waste material from around the country in the Mill's tailings impoundments so that additional disposal sites need not be created.

#### 11.1 Management of Effluents, Waste and Toxicity at our Mill, ISR Facilities and Conventional Mines

See Section 6, [\*Operating Responsibly to Ensure a Minimal Impact to Our Workers, the Public and the Environment While Our Mines are in Operation\*](#), above for a detailed discussion of the effluents and wastes at the Mill, our ISR facilities and conventional mines, and the way in which those effluents and wastes are managed. As evident from Section 6, all effluents and wastes associated with our Mill, ISR facilities and mines have been evaluated and addressed through detailed regulations and permit and license conditions, as described in that Section.

#### 11.2 Role of the Mill in Minimizing the Waste "Footprint" of the Company and Others

One of the key objectives of the NRC under the AEA is to minimize the proliferation of permanent radioactive materials disposal facilities. The Mill's tailings system is a permanent disposal facility that has been designed very robustly to permanently contain a full spectrum of radionuclides, hazardous chemicals and metals. From a public policy perspective, the Mill is an ideal permanent disposal facility for those types of wastes. There is no need for any Mill wastes to be disposed of at any other facilities, and indeed, no other types of facilities, other than uranium mill tailings disposal facilities, are equipped to handle the hazards associated with uranium mill tailings. See Section 12, [\*The White Mesa Mill is an Ideal Permanent Disposal Facility for Mill Tailings, Effluents and Wastes and ISR Facility Wastes\*](#), below for a detailed discussion on the unique and very protective design standards applicable to the Mill's tailings facilities.

As a result,

- *all* waste, hazardous and otherwise, generated at the Mill facility, that cannot be free-released for recycle purposes, *must* be disposed of onsite in the Mill's state-of-the-art tailings impoundments. That includes mill tailings, other site-generated wastes, as well as laboratory chemicals, fluorescent lightbulbs, office trash, etc.;
- *all* wastes that cannot be free-released for recycle or disposed of as non-hazardous materials produced by our ISR facilities will be permanently disposed of in the Mill's tailings impoundments; and
- the Mill accepts and directly disposes of *other* ISR facilities' waste material from around the country in the Mill's tailings impoundments so that additional disposal sites need not be created.

### **11.3 Other Hazardous and Non-Hazardous Wastes**

We do not have any operations outside of the U.S. (our primary domicile) and thus generate zero hazardous waste outside of the country.

By Wyoming and EPA standards, our Nichols Ranch Project is classified as a "Conditionally Exempt Small Quantity Hazardous Waste Generator," meaning it generates no more than 220 lbs. of hazardous waste per month. Texas has similar regulations, but it does not require a similar designation. Visit the following link for an overview of requirements for sites with this status:

<https://www.epa.gov/sites/production/files/2015-01/documents/cesqg.pdf>.

With respect to non-hazardous waste, the Company's contributions to landfills are *de minimis* (household trash only). All of our operations have internal procedures in place to track various non-hazardous and universal wastes. The Company does not incinerate any portion of its non-hazardous wastes.

## 12. THE WHITE MESA MILL IS AN IDEAL PERMANENT DISPOSAL FACILITY FOR MILL TAILINGS, EFFLUENTS AND WASTES AND ISR FACILITY WASTES

### QUICK FACTS

Uranium mill tailings impoundments must be designed to provide reasonable assurance of control of radiological hazards to be effective for 1,000 years, to the extent reasonably achievable, and in any case for at least 200 years. In contrast, hazardous waste disposal facilities licensed under Subtitle C of the Resource Conservation and Recovery Act have a 30-year design standard.

Uranium mill tailings impoundments must undergo very strict siting criteria associated with this 1,000-year design standard.

The liner systems for uranium mill tailings impoundments must be designed to be at least as protective as RCRA Subtitle C facilities, which generally means a triple liner system (typically two synthetic liners and one clay liner) with a leak detection and dewatering system between the synthetic liners to ensure an extremely low chance of any infiltration of liquids to the subsurface.

Strict monitoring standards apply during facility operation, thereby ensuring that all applicable standards are met during operation and that any potential leak from the facility is identified before it becomes a significant problem.

The facility must have an approved reclamation plan with a cost estimate to reclaim the facility, which must be secured by a surety bond or the equivalent to ensure that the regulator can step in at any time and have the funds available to reclaim the site.

Upon site closure, title to the closed tailings impoundment must be transferred to the U.S. Government for perpetual ownership and custodianship. This requirement is unique and is what sets apart the White Mesa Mill from other facilities, as protections over the site never cease. No other type of facility is required by law to be transferred to the federal government upon closure.

The Mill is licensed as an “**11e.(2) facility**” – a reference to the AEA, Section 11e.(2), which defines “**byproduct material**” (in relevant part) as “the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.” As an 11e.(2) facility, the Mill is able to dispose of all material generated onsite and from approved off-site facilities that fits the definition – in other words, all low-level radioactive tailings or wastes resulting from the mining and milling of natural uranium ore for the production of concentrated source material content (in the case of uranium, yellowcake). Section 11e.(2) byproduct material is not derived from highly refined “special nuclear material” as one would find in a fuel cycle facility for uranium conversion, enrichment or fabrication.

Uranium mills create their own wastes, which they must deal with in accordance with applicable regulations. Some of these most important regulations, and how they apply to our Mill, are summarized below.

## 12.1. Siting

The siting criteria for uranium mills are set out in Criteria 1 of 10 CFR Part 40, Appendix A, which states that “The general goal or broad objective in siting and design decisions is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and to do so without ongoing maintenance.” Criterion 1 goes on to state that the following site features which will contribute to such a goal or objective must be considered in selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites:

- Remoteness from populated areas;
- Hydrogeologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from groundwater sources; and
- Potential for minimizing erosion, disturbance, and dispersion by natural forces over the long-term.

The Criterion emphasizes that in the selection of disposal sites, primary emphasis must be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. Finally, the Criterion provides that while isolation of tailings will be a function of both site and engineering design, overriding consideration must be given to siting features given the long-term conditions of the site.

The Mill was sited in satisfaction of all of the foregoing criteria as part of its initial licensing by the NRC in 1980.

## 12.2. How we Meet these Objectives

One of the key siting features of the Mill, in addition to the fact that it is in an isolated location that meets all of the stability requirements, is that there is a perched aquifer approximately 100 feet below surface at the site that is discontinuous, low flowing, generally of poor-quality water and of very limited use, mainly for irrigation and stock watering purposes at a few locations upgradient of the Mill site. The regional aquifer is some 1,000-1,100 feet below this perched aquifer and is separated by a very low permeability “aquitar” with upper portions comprised of bentonitic mudstone, claystone and shale. Any potential groundwater contamination at the site would be detected in the perched aquifer and remediated in the perched aquifer. It is extremely unlikely that any potential groundwater contamination would ever reach the regional aquifer because of the 1,000 to 1,100-foot impermeable aquitar, as evidenced by the fact that the regional aquifer is under artesian pressure in the area of the Mill site.



*White Mesa Mill near Blanding, Utah*

Further, because of the low permeability of the perched aquifer, groundwater travel times are very slow at the site, averaging approximately 0.68 feet per year between the Mill’s tailings cells and the closest seep or spring. In addition, the distances between the Mill’s tailings cells and the closest seep or spring are long (approximately 2,200 feet). As a result, any potential releases to the perched groundwater at the site that could not be remediated at the point of release would take approximately 3,230 years to reach a point of

exposure to the public or the environment (not counting the additional estimated 240 years for any potential seepage from the Mill's tailings cells to travel through the vadose zone from the bottom of the cell liners to the perched aquifer). It is likely that any such releases would naturally attenuate or dilute to concentrations that would meet applicable water quality standards, or any alternate concentration limits that may be set, before they would ever reach a point of exposure to the public or wildlife. *This feature makes the Mill siting almost ideal because the perched aquifer allows for early detection of any potential releases; any actual release can be remediated or managed safely in the perched aquifer; and there is a very low chance of any potential contamination of the regional aquifer or exposure to the public or wildlife.*

### 12.3. Uranium Mill Tailings Impoundment Design Criteria

The design criteria for 11e.(2) byproduct material impoundments are set out in Appendix A, most notably in Criteria 3 (which provides that below grade disposal is preferred), Criterion 4 (which sets out site and design criteria), Criterion 5A (which specifies criteria for tailings impoundment liners), Criterion 5E (which specifies requirements for leak detection systems and dewatering systems) and Criterion 6 (which provides for the design life standard).

The other notable design criterion is Criterion 6, which requires that 11e.(2) byproduct material impoundments must be designed to provide reasonable assurance of control of radiological hazards to:

- be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years; and
- limit releases of radon-222 from uranium byproduct materials to the atmosphere so as not to exceed an average release rate of 20 pCi/m<sup>2</sup>/s to the extent practicable throughout the effective design life.

By comparison, the design standard for a Part 61 Low Level Radioactive Waste facility requires 100 years of active institutional controls and for Class C wastes protection for 500 years, and RCRA disposal cells are designed with a regulatory oversight horizon of approximately 30 years.

### 12.4. Liner Design Standards

The design standard for uranium mill tailings impoundments has been established by EPA in 40 CFR 192.32 and 40 CFR 264.221, and implemented by NRC and Agreement States under Appendix A, Criterion 5A. These standards essentially require the same liner system as required for RCRA Subtitle C Hazardous Waste facilities, which must include: a synthetic top liner; a second synthetic liner; a leak detection/leachate collection and removal system between the two synthetic liners; and a third underlying clay liner or equivalent.

Cells 4A and 4B at the Mill have been constructed with two 60 mm HDPE synthetic liners, a geonet leak detection/leachate collection and removal system between the two synthetic liners and a third geoclay liner under the lower synthetic liner. In addition, there is an elaborate "slimes drain" solution collection and removal system above the top synthetic liner, in the tailings cell itself, to be used to dewater the cell after it has been filled with tailings and prior to closure of the impoundment. The tailings from processing any ore materials at the Mill, including alternate feed materials, uranium/REE bearing ores, and any AUM materials, will be permanently disposed of in Cells 4A and/or 4B or in new tailings impoundments with similar design features.

Cells 2 and 3 at the Mill were constructed in 1980-1983 in accordance with the UMCTRA design standards at the time, and each includes a single synthetic liner, with a leak detection system beneath the liner and a "slimes drain" dewatering system above the synthetic liner to dewater the tailings cell after it is filled and prior to closure of the impoundment. Cell 2 is full and in the process of final closure, and Cell 3 is nearly

full (the little remaining capacity is reserved for other Mill uses), so they would not be used for disposal of tailings from any further processing of uranium ores at the Mill. Cell 1, which is an evaporation pond, was constructed to the same standards as Cells 2 and 3, except that, because it is only an evaporation pond, does not contain tailings and will be removed and reclaimed at site closure, it does not have a “slimes drain” system above the synthetic liner.

## **12.5. Groundwater Monitoring and Effluents**

Each uranium mill is required to have a groundwater monitoring program to provide early warning of any potential release from the tailings. The NRC’s 10 CFR Part 40 – Domestic Licensing of Source Material (10 CFR Part 40), Appendix A Criterion 5B(5) provides that at the point of compliance, the concentration of a hazardous constituent must not exceed the greater of NRC or Agreement State-approved background and the concentration limit set out in Criterion 5C or an alternate concentration limit (“**ACL**”). The NRC or Agreement State will establish a site-specific ACL for a hazardous constituent if it finds that the proposed limit is ALARA, after considering practicable actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded.

The Mill has a State of Utah Groundwater Discharge Permit, under which it monitors for 47 constituents in 29 groundwater monitoring wells at the site. There have been no detected releases from any of the Mill’s tailings cells to groundwater at the site since the Mill commenced operations in 1980.

## **12.6. Reclamation Plan and Surety**

### **12.6.1 Responsibility for and Manner of Cleanup**

UMTRCA amended the AEA to require that all active uranium mills will comply with the decontamination, decommissioning, and reclamation standards prescribed by the NRC and to require that such facilities post reclamation bonds or surety.

Responsibility for reclamation rests with the licensee. Appendix A Criterion 6A requires the adoption of an NRC (or Agreement State)-approved reclamation plan for the site, Criterion 9 requires that financial surety must be established to fund the cost of reclamation in accordance with such plan, and Criterion 11 requires that each licensee include in its financial surety an amount equivalent to at least \$250,000 (1978 dollars, adjusted to today to account for inflation) to cover the costs of long-term surveillance by the government custodian (DOE).

### **12.6.2 Surface Treatment**

The reclamation plan must address the decontamination and decommissioning of the Mill and Mill site and reclamation of any tailings or waste disposal areas.

Reclamation plans for uranium mills typically require that, upon closure, all mill buildings, unsalvageable equipment, contaminated soils (impacted by mill operations within the mill site itself as well as surrounding areas that may be impacted by windblown radioactive dusts from milling operations), etc. must be deposited in the tailings cells and the tailings cells must be capped in place. The cap must be constructed to satisfy the 1,000-year design standard and must meet strict criteria to limit infiltration of precipitation into the reclaimed tailings cell.

Appendix A, Criterion 6(6) sets the standard for determining when all impacted areas, other than the tailings impoundments have been adequately cleaned up. Criterion 6(6) provides that byproduct material containing concentrations of radionuclides in soil, and surface activity on remaining structures, must not result in a



total effective dose equivalent (“TEDE”) exceeding the dose from cleanup of radium contaminated soil to the benchmark standard of 5pCi/g concentration of radium in the surface 15 cm (6 in) and 15 pCi/g concentration of radium in the subsurface, and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not exceed “1” (unity).

#### 12.6.3. Groundwater

As discussed above, each uranium mill is required to have a groundwater monitoring program. If the facility has been designed in accordance with the Criteria set out in 10 CFR Part 40, Appendix A and everything goes as planned, there will be no contamination to groundwater at the time of site reclamation. However, if there is contamination, Appendix A Criterion 5B(5) provides that at the point of compliance, the concentration of a hazardous constituent must not exceed the greater of NRC-approved background and the concentration limit set out in Criterion 5C or an alternate concentration limit (“ACL”). Criterion 5B(6) provides that where it is not practically achievable at a site to reduce groundwater contamination to background or to the limits established by NRC in Criterion 5C, ACLs that present no significant hazard may be proposed by licensees for NRC consideration. The NRC will establish a site-specific ACL for a hazardous constituent if it finds that the proposed limit is ALARA, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded.

Criterion 5D provides that the licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater standard. The NRC will determine when the licensee may terminate corrective action measures based on data from the groundwater monitoring program and other information that provide reasonable assurance that the groundwater protection standard will not be exceeded.

#### 12.6.4. White Mesa Mill Surety Bond

The Mill has posted a reclamation bond with the DWMRC to cover all of the costs of reclamation of the Mill. The bond amount is reviewed annually by the Mill and DWMRC and adjusted at least annually to reflect any changes in the estimated cost of reclamation of the site, including the costs of any corrective action plans that may be applicable.

#### 12.6.5. Long-Term Custodian

One unique feature of the regulatory scheme for uranium mill tailings is that Section 83 of the AEA requires that, prior to license termination, title to uranium mill tailings (11e.(2) byproduct material) must be transferred to the DOE for custody and long-term care.

Section 83.7 of the AEA and 10 CFR Part 40, Appendix A Criterion 11E provide that material and land transferred to the DOE must be transferred without cost to the DOE other than administrative and legal costs incurred in carrying out such transfer. Criterion 12 provides that the final disposition of tailings or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation.

In order to cover the costs of long-term surveillance, Criterion 10 requires that an amount equivalent to at least \$250,000 (1978 dollars, adjusted to today to account for inflation) must be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium mill license, though variances in funding requirements may be specified by the NRC as deemed necessary.

Upon NRC being satisfied that all regulatory requirements have been met and the site is reclaimed in a manner that satisfies all applicable standards, the Mill's license will be terminated upon transfer of the reclaimed tailings impoundments to DOE. In the case of termination of a license issued by an Agreement State, Section 274(c) and 10 CFR 150.15a(a) require that, in addition to the Agreement State, the NRC must also be satisfied that all regulatory requirements have been met and that the site is reclaimed in a manner that satisfies all applicable standards. 10 CFR 40.28 provides a general NRC license in favor of the long-term custodian for custody of and long-term care of the tailings impoundments and any surrounding lands transferred to it. The surrounding areas not transferred to DOE would generally be free-released.

#### **12.7. Permitting Requires EIS and Extensive Evaluations**

As can be expected, permitting of a uranium mill will require a full Environmental Impact Statement under NEPA.

### 13. HUMAN RIGHTS

Energy Fuels has a Human Rights Policy, which can be found here:  
<https://www.energyfuels.com/governance>

The Company has a no-tolerance policy regarding child labor, forced or compulsory labor, or discrimination in any form. Protecting the rights of minority groups, women and indigenous peoples is of key importance to Energy Fuels and is considered in all aspects of Company operations. Energy Fuels is not aware of any operations or suppliers related to the Company that pose a significant risk for incidents of child labor or forced or compulsory labor in any form.

We recognize that some of the Company's operations are in close proximity to indigenous communities, and that our operations are often a source of concern to those communities. We work every day to meet and surpass our regulatory standards and obligations to help provide concrete assurances that the environments in which we operate remain safe, that any localized impacts are mitigated to the greatest extent possible while in operation, and that our sites are fully reclaimed prior to final closure. Energy Fuels values meaningful tribal consultation and respects the longstanding rights of indigenous peoples to their ancestral lands, resources and the cultural and religious significances derived from them.

We understand that the domestic uranium industry's historically poor legacy during the Cold War era has given rise to concerns about uranium mining. Know that we hear you and share your desire to leave our nation's most treasured monuments, parks, and geological features intact and safe for recreational, aesthetic and cultural/spiritual uses in perpetuity. Modern mining is nothing like the historic uranium mining of the Cold War era. All mining today is highly regulated and meets or exceeds very stringent standards that ensure the safety of the public, the environment and our workers while we are in operation and the safe reclamation of our sites once mining has ceased. We at Energy Fuels truly believe in the Federal Land Policy and Management Act of 1976's ("FLPMA's") policy declaration:

that management [of public lands] be on the basis of multiple use and sustained yield... in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values... that will provide for outdoor recreation and human occupancy and use... [and that] recognizes the Nation's need for domestic sources of minerals... from the public lands including implementation of the Mining and Minerals Policy Act of 1970....

Mining is a societal necessity – join us in supporting responsible mining!

## 14. EMPLOYMENT: LABOR, HEALTH AND SAFETY

### QUICK FACTS

Energy Fuels is an equal opportunity employer and is committed to making employment decisions based on valid job requirements, without regard to race, color, national origin, gender, religion, age, sex, sexual orientation, gender identity, disability, veteran status or any other legally protected status.

At the Board and executive officer level, the Company has a Diversity Policy in place that states that, “When considering the composition of, and individuals to nominate or hire to, the Board and the Executive Team, the Committee and the Board, as applicable, shall consider diversity from a number of aspects, including but not limited to gender, age, ethnicity and cultural diversity.”

Our Code of Business Conduct and Ethics applies to all directors, officers and employees of Energy Fuels, as well as its agents, consultants and contractors, and any violation constitutes grounds for disciplinary action, up to and including immediate termination and possible legal prosecution.

Our facilities are subject to extensive occupational safety requirements administered by MSHA, OSHA and State authorities under numerous regulatory requirements.

Training requirements for the Company are stringent and thorough, documented, and inspected by regulatory authorities on a regular basis.

#### 14.1. Diversity and Equal Opportunity

Energy Fuels is an equal opportunity employer. The Company issues an Employee Handbook annually, which explicitly states that it applies to all employees, including managers, supervisors, co-workers, and non-employees such as customers, clients, vendors and consultants. The Handbook specifies that “Energy Fuels is committed to making employment decisions based on valid job requirements, without regard to race, color, national origin, gender, religion, age, sex, sexual orientation, gender identity, disability, veteran status or any other legally protected status.”

The Company also provides reasonable accommodation for qualified individuals with known disabilities and employees whose work requirements interfere with a religious belief unless doing so would result in an undue hardship to the Company or cause a direct threat to health or safety.

Regular full-time employees currently enjoy a competitive benefits program that is provided for their and their families’ security and well-being. Such benefits currently include life, health, dental, long-term disability insurance, annual paid leave, paid holidays, a 401(k) Retirement Plan, a Roth IRA, and a Flexible Benefit Plan. In addition, employee-paid short-term disability (often used to cover maternity leave), accident, and specific illness insurance are available. Medical and family leave, which cover a number of health conditions, disabilities and lifecycle events, also cover pregnancy and, for all employees regardless

of gender, childbirth and care of a newborn. Other than to the extent required by law, the Company does not currently provide benefits to part-time or temporary employees.

At the Board and executive officer level, the Company has a Diversity Policy in place that states that, “When considering the composition of, and individuals to nominate or hire to, the Board and the Executive Team, the Committee and the Board, as applicable, shall consider diversity from a number of aspects, including but not limited to gender, age, ethnicity and cultural diversity. In addition, when assessing and identifying potential new members to join the Board or the Executive Team, the Committee and the Board, as applicable, shall consider the current level of diversity on the Board and the Executive Team.” The Policy also notes that the Company has set measurable targets relating to obtaining and maintaining adequate gender diversity on the Board.

The full Diversity Policy can be found here: <https://www.energyfuels.com/governance>

Currently, over half of the workforce at the Mill are Native American.

#### **14.2. Non-Discrimination**

The Employee Handbook prohibits discrimination or harassment of any kind within the workplace, including but not limited to any statement or physical conduct that is offensive, threatening, hostile or intimidating to a person of reasonable sensitivities related to any matter regarding race, national origin, religion, gender, age, sex, sexual orientation, gender identify, disability, veteran status or any other status protected by federal, state or local laws. This includes any conduct that has the effect of creating a hostile work environment. Such conduct may include but is not limited to the following: slurs, negative stereotyping, threatening, intimidating, hostile acts, or displays of written or graphic material of a lewd, indecent, or offensive nature.

Sexual harassment is unequivocally opposed, whether from directors, employees or customers, clients, vendors, consultants or visitors in an Energy Fuels workplace. A comprehensive complaint procedure is in place to ensure a work environment free of harassment and discrimination, including sexual harassment.

#### **14.3. Freedom of Association, Collective Bargaining & Civic Participation**

All employees and workers of the Company are entitled to freedom of association, defined as “The right to join with others in a common undertaking that would be lawful if pursued individually,” without any prior authorization or interference from Energy Fuels. The Company’s Employee Handbook (the “**Handbook**”) notes that “The Company encourages employees to be civic-minded and to become involved in worthwhile public service and/or technical organizations.” Only statements made publicly about or on behalf of the Company, or otherwise pertaining to Company business, need to be approved in advance.

In addition, employees are not prohibited from engaging in collective bargaining, defined as “Negotiations between an employer and the representatives of organized employees to determine the conditions of employment, such as wages, hours, discipline, and fringe benefits.” The Handbook specifies that the rights typically afforded to an employee for a family or medical leave of absence (“**FMLA**”) do not supersede any collective bargaining agreement in place that provides for greater family or medical leave rights.

Energy Fuels does not benefit from or contribute to any violation of these important employee rights through its business relationships, nor is it aware of any suppliers, purchasers or others involved with the Company who are in violation of, or are at significant risk of violating, these rights of its own employees.

The Handbook also includes a Company-wide voting policy, which affords all employees reasonable and sufficient time off from work in order to vote without any input as to how that vote should be cast.

#### **14.4. Annual Effectiveness Reviews by the Board and Audit Committee**

The Company's Board of Directors and Audit Committee each perform annual effectiveness reviews of the Board and Audit Committee, respectively.

On an annual basis, each director completes a Board Effectiveness Assessment, which is designed to evaluate the effectiveness of the Board as a whole, the Chair of the Board, the committees of the Board, the contribution of individual directors and the policies and procedures observed by the Board and its committees, as well as the quality of the relationship between management and the Board. It is broken into seven parts: Board Structure and Composition; Board Responsibility; Board Operations; Board Effectiveness; Effectiveness and Contribution of Individual Directors; Quality of Relationship between Management and the Board; and Individual Assessment. The completed forms are maintained by the Company's legal department on a confidential basis, and the results are consolidated on a "no names" basis for presentation to the Governance and Nominating Committee. The Committee, in turn, has the ability to make recommendations to the full Board of Directors for the purpose of strengthening the Company's corporate governance practices.

Additionally, the Audit Committee members each complete a separate Effectiveness Assessment as a part of the Audit Committee's mandatory review, discussion and assessment of its own performance and ongoing role and responsibilities. In the Assessment, each member evaluates the role and responsibilities of the Committee as set out in the Committee's Charter, the effectiveness of the Committee as a whole, the effectiveness of the Chair of the Committee, the contribution of individual members, the policies and procedures observed by the Committee, and the quality of the relationship between the Committee and the Company's external auditor. The Assessment is broken into eight parts: Role and Responsibilities of the Committee; Committee Structure and Process; Committee Effectiveness; Committee Oversight; Management and Auditors; Committee Culture; Self-Assessment; and Effectiveness and Contribution of Individual Members. As with the Board Effectiveness Assessment, the Audit Committee Effectiveness Assessment results are consolidated on a "no names" basis for presentation to the Audit Committee, which then has the ability to improve upon any identified deficiencies or areas for improvement.

The Company's Environment, Health and Safety Committee also performs an annual review of the Company's Environment, Health and Safety Policy, Committee Charter, Sustainability Report, Human Rights Policy, Climate Change Policy and Vendor Code of Conduct to make sure that all environmental, health and safety and social functions of the Company are being adequately monitored by the Committee.

#### **14.5. Anti-Corruption, Fraud, Unauthorized Disclosure and Anti-Competitive Behavior**

Our Code of Business Conduct and Ethics applies to all directors, officers and employees of Energy Fuels, as well as its agents, consultants and contractors, and any violation constitutes grounds for disciplinary action, up to and including immediate termination and possible legal prosecution.

The Code requires compliance with all laws, rules and regulations, and strictly prohibits:

- insider trading on material, non-public information;
- engaging in, condoning or tolerating fraud, bribery, corruption or other illegal or unethical actions;
- restraining trade, practicing business in an unfair manner or abusing power;

- giving anything of value, whether directly or indirectly, to officials of foreign governments or foreign political candidates in order to obtain or retain business;
- giving business gratuities to U.S. government personnel in violation of applicable laws and regulations;
- using Company facilities or assets for the benefit of any political party or candidate running for office;
- violations of the U.S. Foreign Corrupt Practices Act;
- any failure to report an actual or potential conflict of interest to the General Counsel or Chair of the Audit Committee;
- use of corporate assets and opportunities for non-Company related business or personal endeavors/gain;
- the failure to maintain non-public corporate information in confidence;
- use of corporate information technology systems for purposes of harassment, threats or obscene messages or other inappropriate use, including the unauthorized distribution of copyrighted documents;
- dealing with security holders, customers, vendors, suppliers, competitors or employees in a way that is not honest, fair and ethical;
- failing to promote worker health and safety;
- failure to adhere to the Environment, Health and Safety Policy;
- unwelcome sexual advances, requests for sexual favors, verbal or physical conduct which might be construed as sexual or harassing in nature, comments based on ethnicity, religion, race, age, sex or sexual orientation, or other non-business personal comments or conduct that makes others uncomfortable in their employment; and
- any failure to protect employee personal information where a duty is owed.

The full Code of Business Conduct and Ethics can be found here: <https://www.energyfuels.com/governance>

#### **14.6. Supplier Social Assessment**

Energy Fuels has a Vendor Code of Conduct, designed to complement the Company’s Code of Business Conduct and Ethics, which can be found here: <https://www.energyfuels.com/governance>

We are also pleased to report that the Company has never suffered any controversy linked to “living wages” or labor standards.

#### **14.7. Occupational Health and Safety**

##### **14.7.1. Radiation**

The regulations at 10 CFR Part 20 set out the standards for protection against radiation for all types of licenses issued under the AEA, including the licenses for the Mill and our ISR facilities. These regulations address both occupational standards, i.e., standards applicable to workers at the licensed facility, and standards applicable to members of the public who may be exposed to radiation emanating from the licensed facility. The Mill and the Company’s ISR facilities operates in compliance with all applicable standards, which can be found at the following link: <https://www.nrc.gov/reading-rm/doc-collections/cfr/part020/>.



*Pinyon Plain Mine near Tusayan, Arizona*

All individuals, whether employees, contractors or accompanied site visitors, must survey themselves at one of the designated radiation survey stations, log their survey reading and sign out on the provided form before leaving any Company site's designated "Restricted Area," which is access-controlled in order to help protect individuals from exposure to low-level radiation and radioactive materials. If an individual exceeds the survey limit, decontamination, in accordance with that site's Standard Operating Procedures ("SOPs"), is required prior to rescanning out. Radiation protection of workers

at the Company's conventional mines is regulated by MSHA, and radon emissions to the environment are regulated by EPA (or an EPA-delegated State) under EPA's NESHAPS program. All of the Company's conventional mines operate in accordance with all applicable MSHA and EPA standards.

#### 14.7.2. Standard Operating Procedures

At the operations level, each of our operating sites has SOPs in place, which are reviewed, updated and signed off annually by authorized personnel with an intimate knowledge of site-specific operations. For example, SOP volumes at the Mill include: 1) Ore Receiving & Grind; 2) Pre-Leach & Leach; 3) CCD; 4) Uranium SX; 6) Yellowcake Precipitation; 7) Vanadium SX; 8) Vanadium Precipitation; 8) Vanadium Fusing & Packaging; 9) Radiation Protection Manual; 10) Performance Based Manual; 11) Environmental Protection Manual; 12) ALARA Program; 13) Training Program; 14) Respiratory Protection Program; 15) Emergency Response Plan; and 16) GWDP Plans and Procedures. Each volume is then subdivided into numerous subtopics with highly detailed analysis and instructions. Radiation protection is a mandatory SOP volume topic for each of the Company's sites, irrespective of their site-specific variations.

#### 14.7.3. Compliance with MSHA and OSHA

All of our conventional mine sites and the Mill are subject to MSHA, while our ISR facilities are subject to OSHA. We encourage our shareholders and other interested parties to review all applicable standards and regulations here:

- MSHA: <https://www.msha.gov/regulations/standards-regulations>
- OSHA: <https://www.osha.gov/laws-regs>

These agencies conduct inspections at our sites, noting any findings, citations or violations in their resulting reports. In addition, the agencies may hold periodic consultation visits. Any hazards identified through such visits and inspections are corrected by the Company in a judicious manner; after a determination is made by the agency that the implemented corrections are adequately protective, the case file is closed. All actions of this nature are taken very seriously by the Company, as we recognize our responsibility to help prevent accidents, injuries and illnesses and their potentially dire consequences. Long-term preventative programs may also be suggested or required by MSHA and OSHA from time to time. As a result of one such OSHA suggestion, the Company increased its use of employee input regarding known or potential hazards and ways in which to correct them for the purpose of improving site-specific training and education concerning protective methods.



#### 14.7.4. Training and Education

##### *a) Required Safety Training*

Training requirements for the Company are stringent and thorough and are meant to i) instruct and educate all workers of the inherent risks associated with their jobs, ii) acquaint workers with the practices instituted by management to minimize occupational exposures, and iii) ensure that workers have an understanding of the fundamentals of radiation, health, safety and environmental protection procedures before beginning their assigned tasks. All training attendance and completion forms and scored exams are maintained on file in each employee's personnel files.

Employee training differs depending on a multitude of factors, including whether a given site is under MSHA or OSHA jurisdiction. For new hires, training differs depending on whether the individual is inexperienced or experienced (as defined by the relevant criteria), and how recent an experienced new hire's last training was on the required skillset.

For instance, MSHA requires that all newly hired inexperienced workers under its jurisdiction complete an initial MSHA-approved 24-hour training program. The Mill's program is conducted by its Radiation Safety Officer, Safety Coordinator, a qualified designee or a combination thereof, and covers the following topics: Introduction to the Workplace; Electrical Hazards, Traffic Control and Communication Systems; Emergency Procedures (first aid, evacuation, and firefighting); Health and Safety Standards; Statutory Rights of Miners; Hazard Recognition; HAZCOM (hazard communication); Radiation Protection Program; Respirator Protection Program; Regulation Overview; and Environmental Programs – SWPPP and SPCC.

All newly hired employees, whether experienced or inexperienced, are tested on both radiation safety and respiratory protection and must pass before they commence their job duties. Additional required forms include the Alpha Contamination Training Acknowledgement Form, the Radiation Exposure Request Form (for employees with previous work-related radiation exposure) and the Form for Radiation Exposure to Pregnant Women Employees.

In addition, all new workers are given specialized training on their specific job relating both to health and radiation and to non-radiological hazards. This training is often a combination of in-office and on-the-job training. Specific radiation protection issues existing for a particular job that are beyond the scope of the initial training are typically addressed in a SOP or Radiation Work Permit or, in certain circumstances, by specific training given by the Radiation Safety Officer or his/her designee.

Finally, all employees are required to take annual 8-hour refresher trainings, which must include a minimum of one hour of radiation safety training. Some of our sites elect to give this training at one time each year, while others elect to teach a portion of the refresher course every month so that training is a constant part of the site culture and ever-present in employees' minds.

All contract employees must complete a safety and radiation awareness training that covers his/her work specifications and is commensurate with the risks, hazards and length of the task(s), in accordance with all applicable rules and regulations.

Delivery personnel, i.e., those who deliver ore, sulfuric acid, 11e.(2) byproduct material and reagents, are required to receive Hazard Awareness Training annually; the signed training forms are retained on file at each site by the Radiation Safety Officer and checked at the entry gates with each shipment.

All visitors at Company sites, other than the corporate office, must receive visitor-specific Hazard Recognition Training by the Radiation Safety Officer, Safety Officer or qualified designee and sign the

training form prior to being escorted anywhere onsite. Hazard recognition training provides instruction on what a visitor should do to avoid possible radiological and non-radiological hazards in the areas of the facility they will be visiting. These completed forms are maintained onsite and are reviewed annually at the Mill and ISR facilities during their respective ALARA audits.

#### **14.8. Professional Development**

We are committed to the professional development of all employees and directors. Many of our officers and directors attend the Prospectors & Developers Association of Canada (“**PDAC**”) annually, and employees are encouraged to attend continuing education classes in their respective fields (e.g., legal, engineering or accounting) that will enable them to further excel in their positions at Energy Fuels and open the door to new career development opportunities. In most situations, employees’ continuing education courses and conferences are paid for by the Company and are considered job-related activities.

Energy Fuels has a New Director Orientation Program, which includes a full day of review with the General Counsel and various other company personnel at the corporate office, and the provision of reference materials, including a detailed handout of “key takeaways.” It serves as our new directors’ first concrete opportunity to ask questions and familiarize themselves with their duties and responsibilities to the Company, its shareholders and employees.

## 15. STAKEHOLDERS AND SOCIETY

We take employees' concerns very seriously and go to great lengths to ensure "whistleblowers" are protected. For more information on the Company's approach toward complaints, please visit the Company's Whistleblower Policy here: <https://www.energyfuels.com/governance>

The purpose of our Whistleblower Policy is to ensure that the Company receives, hears and treats fairly – without repercussion to the whistleblower – any complaints or submissions regarding accounting, internal accounting controls or auditing matters, especially in regards to questionable practices under the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the Company's Code of Business Conduct and Ethics, and National Instrument 52-110 promulgated by the Canadian Securities Administrators.

While not covered by the Whistleblower Policy, we welcome the concerns of our stakeholders and community, as well. Because we require the ability to evaluate the validity of any such complaints, we are unfortunately not able to afford confidential treatment in these instances; however, stakeholders and community members are able to file a complaint by delivering it to the Corporate Secretary, Energy Fuels Inc., 225 Union Blvd., Suite 600, Lakewood, Colorado 80228. The Corporate Secretary will forward the Complaint to the Chair of the Audit Committee.

## 16. PRIVACY FOR VISITORS, SHAREHOLDERS AND CUSTOMERS

Energy Fuels could not exist without the support of its dedicated shareholders and loyal customer base. We do everything in our power to ensure that your right to privacy as a visitor, prospective or active shareholder or customer is protected. Personal information shared with the Company through the Energy Fuels website “Contact” form, or by alternate means, is maintained by our marketing team solely to provide you with interesting email updates, press releases, invitations and other electronic messages from Energy Fuels relating to the Company and its business endeavors, and is never sold or given to a third party for unauthorized use. Anyone who provides their contact information and subsequently wishes to withdraw consent to use it may contact us at any time using the email address [info@energyfuels.com](mailto:info@energyfuels.com). Our customer relationships are typically memorialized in duly executed agreements, which govern any specific privacy terms that go above and beyond the Company’s standard policy. When you trust us with your information, we take it seriously!

## **17. SECURITY PRACTICES**

While the Company employs strict access and safety measures at its mining and milling sites and offices to ensure the safety of its employees and third parties, there are not any persons employed as “security personnel” and, as such, there is not a potential risk for excessive use of force or other violations of human rights against individuals. Any concerns related to unauthorized access or inappropriate behavior at a Company site or office may result in the use of local law enforcement to ensure the protection of others and Energy Fuels property. However, site and office managers will consider the totality of the circumstances in every instance and may alternatively employ de-escalation measures, such as requesting that a person leave the location peacefully or sit down with a member of Human Resources to discuss concerns in a constructive manner.

## 18. CORPORATE GOVERNANCE AND FINANCE

For detailed information regarding the Company's general disclosures (e.g., name, activities, location of headquarters and operations, ownership, scale, employee information, supply chain, risk factors, initiatives, etc.), management's approach, economic performance, market presence, indirect economic impacts, business strategy, procurement practices, socioeconomic matters (e.g., instances of non-compliance, if any, with applicable laws or regulations), and taxes, please see the Company's most recent public disclosures on Forms 10-K (Annual Reports), 10-Q (Quarterly Reports), DEF 14A (Definitive Proxy Statements) and 8-K (Current Reports), available on the SEC's Electronic Data Gathering, Analysis, and Retrieval ("EDGAR") platform, and in similar form on the Ontario Securities Commission's System for Electronic Document Analysis and Retrieval ("SEDAR"). Insider reports are also available for review on EDGAR and on the OSC's System of Electronic Disclosure by Insiders ("SEDI").

- EDGAR: <https://www.sec.gov/edgar/searchedgar/companysearch.html>
- SEDAR: [https://www.sedar.com/search/search\\_form\\_pc\\_en.htm](https://www.sedar.com/search/search_form_pc_en.htm)
- SEDI: <https://www.sedi.ca>

## 19. GRI STANDARDS REFERENCED

This Sustainability Report references select content from the Global Reporting Initiative (“GRI”) Standards issued by the Global Sustainability Standards Board (“GSSB”), which Energy Fuels used to guide its discussion on each of the above topics. In particular, this material references the following:

### Disclosures:

- 1.2, 1.6, 1.7, 1.9, 2.2, 3.3 and 3.4 from GRI 101: Foundation 2016;
- 303-1 and 303-2 from GRI 303: Water and Effluents 2018;
- 304-1 through 304-3 from GRI 304: Biodiversity 2016;
- 305-5 from GRI 305: Emissions 2016;
- 306-1 through 306-5 from GRI 306: Effluents and Waste 2016;
- 401-2 and 401-3 from GRI 401: Employment 2016;
- 404-1 and 404-2 from GRI 404: Training and Education 2016;
- 407-1 from GRI 407: Freedom of Association and Collective Bargaining 2016;
- 408-1 from GRI 408: Child Labor 2016;
- 409-1 from GRI 409: Forced or Compulsory Labor 2016;
- 410-1 from GRI 410: Security Practices 2016;
- 411-1 from GRI 411: Rights of Indigenous Peoples 2016;
- 413-1 and 413-2 from GRI 413: Local Communities 2016; and
- 417-1 from GRI 417: Marketing and Labeling 2016.

### GRI Standards Topic Areas:

- GRI 102: General Disclosures 2016;
- GRI 103: Management Approach 2016;
- GRI 201: Economic Performance 2016;
- GRI 202: Market Presence 2016;
- GRI 203: Indirect Economic Impacts 2016;
- GRI 204: Procurement Practices 2016;
- GRI 207: Tax 2019, GRI 205: Anti-Corruption 2016;
- GRI 206: Anti-Competitive Behavior 2016;
- GRI 301: Materials 2016, GRI 302: Energy 2016;
- GRI 307: Environmental Compliance 2016;
- GRI 308: Supplier Environmental Assessment 2016;
- GRI 402: Labor/Management Relations 2016;
- GRI 403: Occupational Health and Safety 2018;
- GRI 405: Diversity and Equal Opportunity 2016;
- GRI 406: Non-discrimination 2016;
- GRI 412: Human Rights Assessment 2016;
- GRI 414: Supplier Social Assessment 2016;
- GRI 416: Customer Health and Safety 2016;
- GRI 418: Customer Privacy 2016; and
- GRI 419: Socioeconomic Compliance 2016.