

2022 SUSTAINABILITY REPORT

Supplying the fuel to power a greener future



The 4 Pillars of our Sustainability Approach

Lasting value creation for Peninsula's stakeholders by demonstrating the highest standards of stewardship whilst actively monitoring and seeking to diminish any adverse impacts that the Company's decisions and activities may have on future generations.



Pillar 1

EMPLOYEES



Pillar 2

ENVIRONMENT



Pillar 3

SOCIAL



Pillar 4

GOVERNANCE



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Message from the Chief Executive Officer

With the publication of this Sustainability Report Peninsula Energy Limited (“Peninsula” or “the Company”) celebrates an important milestone in its ongoing evolution to improve what we do and how we do things.

Although this may be the first time that the Company reports on matters relating to Employees, the Environment, Social and Governance (“EESG”) in the form of a stand-alone Sustainability report, many of the matters being reported on have been entrenched in Peninsula’s values, corporate governance philosophies, codes of conduct, operating policies and culture for a long period of time.

Significant achievements relating to EESG matters during the year ended 30 June 2022 include the rollout of ISO 14001 and ISO 9001 certification processes for environmental and quality management at the Lance Uranium Projects (“Lance”), the addition of two new non-executive directors to Peninsula’s Board, including the Company’s first female director, having no lost-time or recordable injuries for more than 5 years, the substantial completion of the rehabilitation of old trial mining areas at the Karoo Project in South Africa that previous mining companies left abandoned following exploration activities conducted in the late 1960’s early 1970’s and the granting by our Wyoming regulator of a license amendment that allows the use of several different oxidants in conjunction with low pH lixivants in the uranium extraction process at Lance.

The Company is also pleased with two recent positive developments in the broader uranium industry. Firstly, the continued efforts of various US regulatory agencies and other stakeholders’ to recognize the clean energy benefit of nuclear power and to progress the implementation of the US Nuclear Fuel Working Group’s (“NFWG”) strategy is aimed at reviving the capabilities of the uranium mining, milling and conversion industries in the United States, and secondly the European Commission’s endorsement in July 2022 of nuclear energy as a source of green energy production.

A handwritten signature in black ink, appearing to read 'Wayne Heili'. The signature is fluid and cursive, written over a white background.

Wayne Heili
Chief Executive Officer

Sustainability Highlights 2022



No lost-time or recordable injuries
for more than 5 years



Karoo Project Rehabilitated
Old trial mining areas rehabilitated after it was abandoned following exploration activities



Rollout of ISO 14001 & ISO 9001 certification processes
for environmental and quality management at the Lance Uranium Projects ("Lance")



License amendment
that allows the use of several different oxidants in conjunction with low pH lixiviants in the uranium extraction process



1 INTRODUCTION

1.2 About Peninsula Energy Ltd

1.2.1 Corporate Strategy

Our mission: Uranium extraction for a green energy future

The successful conclusion of the low pH Field Leach Trial (“FLT”) at Lance and subsequent issuance of a licensing amendment allowed commercial low pH leaching. Following the FLT, a larger, more comprehensive field demonstration was operated for sixteen months beginning August 2020. The field demonstration, which is located in a previously unmined portion of Mine Unit 1, focussed on field requirements for lixiviant chemistry (rate of acidification, acid and oxidant requirements), use of ponds to manage solids during acidification and various well spacings.

Peninsula’s primary objective over the near to medium term is to successfully ramp-up uranium production at Lance using the low pH in-situ recovery (“ISR”) which is licensed to produce up to 3 million lbs per year.

Successfully transitioning Lance into a low pH ISR operation will provide a platform for Lance to become a viable, long-term operation. Importantly, it will also improve the operating capacity, performance and cost profile of Lance. Peninsula has received environmental approval to utilise the low pH recovery method within the entire Ross Permit Area at Lance, paving the way for the Company to develop new mining units.

1.2.2 Values



1.2.3 Approach to sustainability

At Peninsula, we have identified and acknowledge the importance of instilling a culture whereby the Company acts lawfully, ethically and responsibly.

It is imperative for us to be able to demonstrate principles of good corporate citizenship in all aspects of our operations as we continue to progress our production ramp-up at Lance whilst being able to clearly identify our impacts and areas of improvement in so far as it affects the following four pillars:



We recognise that sustainability needs to be at the core of all four pillars as is evident from our definition of sustainable development:

Lasting value creation for Peninsula's stakeholders by demonstrating the highest standards of stewardship whilst actively monitoring and seeking to diminish any adverse impacts that the Company's decisions and activities may have on future generations.

1.3 EESG and the uranium industry

A significant development for the participants in the nuclear fuel cycle was the European Commission's endorsement of nuclear energy as a source of green energy in July 2022. This means that nuclear energy will be included in the European Union's sustainable finance taxonomy, which is a technical rulebook used to guide investors towards climate-conscious projects.

To fully appreciate our business and our contribution to a cleaner future, some background information of uranium and how it is used to generate electricity is provided below.

1.3.1 What is uranium?

Uranium is a commonly occurring element found in soil, rock and water nearly everywhere on Earth. In some locations, chemical and other conditions create higher concentrations of uranium. These higher concentrations are referred to as ore bodies or ore zones. As found in nature, uranium is slightly radioactive and has properties that make it a useful fuel for nuclear power plants.

Uranium occurs naturally in two principal forms (or isotopes), which are uranium-235 (0.7%) and uranium-238 (99%). Uranium-235 is the form most commonly used for nuclear energy production because the nucleus can be split in a controlled manner by a neutron. This process of splitting an atom is called fission. When the Uranium-235 atom is hit by the neutron, it absorbs it and splits into two smaller atoms of a different element. When the atom splits, it releases heat, radiation and more neutrons, which go on to fission other uranium atoms and the process repeats itself in what is known as a chain reaction.

1.3.2 Nuclear power plants and benefits of nuclear energy

Contrary to popular belief, nuclear power plants do not use radiation to produce power. Instead, they use the heat produced during fission to produce the power, and the radiation is a by-product that is well contained within the reactor. The heat produced by fission is used to boil water and generate steam. The steam then turns giant turbines to produce electricity. Once the steam has passed through the turbines, it is cooled down and re-condensed to water for re-use.

Nuclear power plants and air quality

In operation nuclear power is a clean, zero-emission energy source. It does not burn like fossil fuels that can cause air pollution and add to greenhouse gases. Uranium as a fuel is both affordable compared to other energy sources and very efficient. For perspective on how efficient it is, just one ceramic pellet of uranium fuel the size of your fingertip produces the same amount of energy as approximately 570 litres of oil, 1 ton of coal or 480 cubic meters of natural gas.

Small footprint

Nuclear power plants produce more electricity on less land than any other clean-air source. By illustration, approximately 3 million solar panels covering approximately 190 square kilometres would be required to produce the same quantity of electricity as a typical 1,000-megawatt nuclear power plant that would require a bit more than 3 square kilometres. And the nuclear production operates continuously regardless of time of day or weather conditions.

Minimal waste

Many people view the transportation, storage and disposal of used nuclear fuel as an unsolvable problem. It should however be borne in mind that, as nuclear fuel is extremely energy dense, the used nuclear fuel that needs to be disposed of is a lot less than what people normally expect. To illustrate this point, it is estimated that all of the used nuclear fuel generated by the U.S. nuclear energy industry over the last 60 years would fit onto a football field and not exceed a height of 10 meters.

Used nuclear fuel rods can be recycled and re-used, thereby extending their carbon free energy providing potential. This has been demonstrated with great success by the French nuclear program.

1.4 EESG and in-situ uranium recovery

1.4.1 What is in-situ uranium recovery

Lance is an ISR facility designed to recover uranium from mineralised underground deposits. Solution mining techniques are used to dissolve and recover uranium from the ore body in-situ. In-situ recovery, also known as in-situ leach (“ISL”), of uranium has been used in Wyoming as a uranium extraction method for more than five decades.

During production, the uranium-recovery solutions continually move through the aquifer from outlying injection wells to internal recovery wells. These wells can be arranged in a variety of geometric patterns depending upon the ore-body’s configuration, the aquifer’s permeability, and the operator’s selection based upon operational considerations. Wellfields are often designed in a five-spot or seven-spot pattern, with each recovery (i.e., production) well located inside a ring of injection wells. Monitoring wells tapping into the ore-zone aquifer would surround the wellfield.

In addition, monitoring wells would tap into both the overlying and underlying aquifers. These monitoring wells are screened in appropriate stratigraphic horizons to detect lixiviant, should it migrate out of the ore zone (i.e., production zone). Should this ever occur the operator can quickly correct any migration.

Uranium is recovered and processed in a central processing plant (“CPP”) into dry yellowcake. The yellowcake is packed into approved steel drums and trucked to an offsite facility that would continue the process of making nuclear fuel for use in a reactor.

1.4.2 Benefits of in-situ uranium recovery

Unlike conventional mining methods (underground or open pit), some of the major advantages of ISR mining are that environmental impacts and potential exposure to radiation for humans are minimised.

Compared to conventional mining methods such as open cast mining or underground mining, the advantages of in-situ mining method utilised at Lance include, amongst others, lower dust generation, lower noise generation, lower greenhouse gas emissions, less visual impact disturbance, safer working conditions and smaller footprints.

1.4.3 In-situ uranium recovery and radiation

Licensed uranium recovery facilities operate in a highly regulated environment with numerous safety regulations and protocols developed over time aimed to ensure the safety of members of the public, the environment and workers at licensed facilities. Radiation protection regulations for licensed uranium recovery facilities in Wyoming require licensees to keep occupational radiation doses and doses to members of the public as low as reasonably achievable (“ALARA”).

1.4.4 In-situ uranium recovery and the use of acid

Peninsula is focused on advancing Lance from an alkaline in-situ recovery operation into a low pH ISR operation.

Both sulfuric acid (low pH) and alkaline (carbonate) leaching have been used in ISR projects internationally for a number of decades. From a process perspective, acid leaching, in general, has the advantage of achieving a higher extraction of uranium over a shorter period of time. Low pH leaching as an extraction method has been used in mining in many areas in the United States and rest of the world with great success in its application. Seepage of residual solutions to areas beyond the wellfields are unlikely to occur in low pH ISR operations as porosity is reduced and there is a natural attenuation that is caused by reactions between affected constituents and adjacent barren rocks.

The Company’s low pH Field Leach Trial (“FLT”) conducted to support its application to use low pH in-situ recovery yielded positive results. Preliminary results indicated that the reverse osmosis treatment with permeate injection and pH adjustment required with alkaline ISR would not be required and that the pH could be increased to a level allowing final restoration without affecting injectivity. The FLT confirmed that groundwater restoration can be achieved as previously shown in laboratory tests and modelling. Further information on the FLT is provided in Section 4.2.8. Restoration and rehabilitation.

Lance is the only US uranium project that is authorised to use the low pH process.



2. Governance

The Company endeavours to apply the best practice recommendations of the 4th edition of the ASX Corporate Governance Council for the reporting period.

2.1 Corporate governance statement

2.1.1 Board composition

The skills, experience, and expertise relevant to the position of each director who is in office at the date of this report are detailed in the Directors' Report of the Company's Annual Report for the year ended 30 June 2022.

The majority of the Company's Board members are non-executive, independent directors. When determining whether a non-executive director is independent, the director must not fail any of the following materiality thresholds:

- Less than 10% of Company shares are held by the director and any entity or individual directly or indirectly associated with the director;
- No sales are made to or purchases made from any entity directly or indirectly associated with the director; and
- None of the directors' income or the income of an individual or entity directly or indirectly associated with the director is derived from a contract with any member of the economic entity other than income derived as a director of the entity.

Non-executive directors have the right to seek independent professional advice in the furtherance of their duties as directors at the Company's expense. Written approval must be obtained from the Chairman prior to incurring any expense on behalf of the Company.

The Board has formally adopted a Nomination Committee Charter and a separate Nomination Committee assesses the skills and competencies required on the Board.

2.1.2 Ethical standards

The Board acknowledges and emphasises the importance of all directors and employees maintaining the highest standards of corporate governance practice and ethical conduct.

A code of conduct has been established requiring directors and employees to:

- Act honestly and in good faith;
- Exercise due care and diligence in fulfilling the functions of office;
- Avoid conflicts and make full disclosure of any possible conflict of interest;
- Comply with the law; and
- Encourage the reporting and investigating of unlawful and unethical behaviour.

Directors are obliged to be independent in judgement and ensure all reasonable steps are taken to ensure due care is taken by the Board in making sound decisions.



2 GOVERNANCE

2.1.3 Diversity

The Board has adopted a Diversity Policy. The Diversity Policy addresses equal opportunities in the hiring, training, and career advancement of directors, officers, and employees. The Diversity Policy outlines the processes by which the Board will set measurable objectives to achieve the aims of its Diversity Policy, with focus on gender diversity within the Company. The Company is committed to inclusion at all levels of the organisation, regardless of gender, marital or family status, sexual orientation, gender identity, age, disabilities, ethnicity, religious beliefs, cultural background, socio-economic background and perspective. The Board is responsible for monitoring Company performance in meeting the Diversity Policy requirements, including the achievement of diversity objectives if and when such objectives are set. The Company is focused on providing a range of business and employment opportunities for all members of the communities in which it operates.

All personnel are employed and/or promoted on their merits.

2.1.4 Gender diversity

The Board is committed to workplace diversity and supports representation of women at the senior level of the Company and on the Board. Given the relatively small size of the Company at this point in time, the Board has not determined measurable objectives for increasing gender diversity.

The Board conducts all Board appointment processes in a manner that promotes gender diversity, including establishing a structured approach for identifying a pool of candidates, using external experts where necessary.

The composition of the Board was strengthened during the 2022 financial year with the appointment of two non-executive directors. Ms Rachel Rees, an experienced non-executive director with relevant Risk, Audit & Finance Committee experience and Mr Brian Booth, an experienced mining executive. Ms Rees became the first female appointed to the Board and on January 30, 2023 she was also appointed as an executive director of the Company with the role of Executive Director Finance & Corporate Affairs. The Company considers the current Board to be effective and possessing a wide range of complementary skills.

2.1.5 Climate change policy

Peninsula recognises that it has a responsibility to reduce greenhouse gas emissions that may contribute to climate change. The Company aims to assist in reducing reliance on fossil fuels and harmful emissions caused by fossil fuels as the planned uranium production by the Group will be used by nuclear power plants to generate electricity. The Company will actively look for ways in which the amount of energy resources used in its mining activities can be reduced.

2.1.6 Human rights policy

Peninsula recognises the importance of respecting human rights as contained in the guidance provided by the United Nations Universal Declaration on Human Rights, the United Nations Guiding Principles on Business and Human Rights, the Voluntary Principles on Security and Human Rights and applicable constitutional statutes in Australia and the US in which we operate.

2.1.7 Trading policy

The Board has formally adopted a Securities Trading Policy in line with Corporate Governance guidelines which restricts Directors and employees/consultants from acting on material information until it has been released to the market and adequate time has been given for this to be reflected in the security's prices.

2.1.8 Whistleblower and anti-bribery and corruption policy

The Company is committed to conducting all of its business activities fairly, honestly with integrity, and in compliance with all applicable laws, rules and regulations. Its Board, management and employees are dedicated to high ethical standards and recognise and support the Company's commitment to compliance with these standards.

In particular, the Company is committed to preventing any form of Corruption and Bribery and to upholding all laws relevant to these issues, including the Anti-Corruption Legislation. In order to support this commitment, the Company has adopted this Anti-Bribery and Anti-Corruption Policy to ensure that it has effective procedures in place to prevent corruption and bribery.

2.1.9 Audit and risk management committee

The Audit and Risk Management Committee now consists of three Non-Executive Directors and has an independent Chairman. Ms Rachel Rees was appointed as a member of the Audit and Risk Management Committee on 5 February 2022 following the resignation of Mr David Coyne on 13 October 2021. The number of directors on the Committee during the year is now consistent with the ASX Corporate Governance Council recommendations and is appropriate for the size of the Company. The Audit and Risk Management Committee operates under a formal charter. The names and qualifications of those appointed to the Audit and Risk Management Committee and their attendance at meetings of the Committee are included in the Directors' Report of the Company's 30 June 2022 Annual Report.

2.1.10 Shareholder rights

Shareholders are entitled to vote on significant matters impacting on the business, which include the election and remuneration of Directors, changes to the constitution and receipt of annual and interim financial statements. Shareholders are strongly encouraged to attend and participate in the Annual General Meetings of Peninsula Energy Limited, to lodge questions to be responded to by the Board and/or the Chief Executive Officer and can appoint proxies.

2.1.11 Risk management

The Board considers identification and management of key risks associated with the business as vital to maximise shareholder wealth. The Chief Financial Officer and Joint Company Secretary has been delegated the task of implementing internal controls to identify and manage risks for which the Board provides oversight. The effectiveness of these controls is monitored and reviewed as required. The current volatile economic environment has emphasised the importance of managing and reassessing the Company's key business, social and environmental risks.

2.1.12 Remuneration policies

The Remuneration Committee is responsible for determining and reviewing the appropriate compensation arrangements and policies for the Key Management Personnel, in accordance with the policies and procedures outlined in the Remuneration Committee Charter. The Remuneration Committee reviews executive packages annually by reference to Company performance, executive performance, comparable information from industry sectors and other listed companies.

The Company's Remuneration Policy is to ensure remuneration packages properly reflect each person's duties and responsibilities and support the Company's business objectives. The Policy is designed to attract the highest calibre directors, executives, and senior staff, and reward them for performance which results in long-term growth in shareholder value. Executives and selected senior staff participate in the employee share, restricted share unit and option arrangements. The amount of remuneration for all Key Management Personnel of the consolidated group, including all monetary and non-monetary components, is detailed in the Remuneration Report within the Directors' Report. Shares given to Key Management Personnel are valued at the market price of those shares. Options are valued independently using a Black-Scholes model. The Board believes that the remuneration structure adopted results in the Company being able to attract and retain the best directors, executives, and senior staff to run the consolidated group. It will also provide executives with the necessary incentives to work and grow long-term shareholder value. The payment of cash bonuses, share awards and other incentive payments are reviewed by the Remuneration Committee annually as part of the review of executive remuneration and a recommendation is put to the Board for approval. All cash bonuses, share awards and other incentives must be linked to predetermined performance criteria. The Board can exercise its discretion in relation to approving incentives, cash bonuses and share awards and can recommend changes to the Remuneration Committee's recommendations. Any changes must be justified by reference to measurable performance criteria or other relevant circumstances applicable to the Company.

2.1.13 Remuneration committee

The Remuneration Committee consists of three non-executive Directors and has an independent Chairman, consistent with the ASX Corporate Governance Council recommendations. The names of the members of the Remuneration Committee and their attendance at meetings of the committee are detailed in the 30 June 2022 Directors' Report.

2.1.14 Management information systems

Lance has developed an Environmental Management System in accordance with ISO 14001 standards as well as a Quality Management System in accordance with ISO 9001 Standards. Implementation of these management systems will continue in the 2023 financial year when the Company will pursue appropriate attestation from an accredited auditing body.

2.1.15 Other Information

Further information relating to the Company's corporate governance practices and policies has been made available publicly on the Company's website at www.pel.net.au.

2 GOVERNANCE

2.2 Regulatory environment

Compliance to rules and regulations can be quite complex. One of the key ways in which the Company manages this risk is through the recruitment of suitably qualified and experienced individuals internally and utilisation of external specialists in the various jurisdictions in which the Company operates.

2.2.1 Corporate regulatory environment

2.2.1.1 Australia

Companies operating in Australia need to comply with various laws and regulations, the requirements of which have been determined by the Australian Government and state and territory government agencies. These laws and regulations are designed to ensure fair competition, sufficient protection for the relevant parties, and integrity of Australia's markets. There are also international agreements that impact the Australian environment.

Peninsula Energy is listed on the Australian Stock Exchange ("ASX") which imposes additional financial reporting and filing requirements on the Company.

The Company further subscribes to the ASX Corporate Governance Council's Corporate Governance Principles. These principles require amongst others, commentary on how entities recognise and manage environmental risks and social risks.

2.2.1.2 United States

Similar to Australia, companies operating in the United States also have to comply with a wide range of laws and regulations relevant to their operations. The US corporate regulatory environment could be described as complex due to multiple and overlapping regulations existing within the multi-level federal, state and local governmental regulatory systems. The purpose of these systems is to ensure integrity, safety and to promote fair and ethical behaviours in business.

2.2.2 Uranium regulatory environment

2.2.2.1 International agencies and associations

There are a number of international agencies and associations who are key role players in the promotion of a safe and responsible nuclear industry. Peninsula recognises the important role that these agencies and associations have and values the guidance provided to ensure that the Company's policies and procedures are aligned with industry best practice.

International Atomic Energy Agency (IAEA)

The International Atomic Energy Agency was established in 1957 and reports to both the United Nations General Assembly and the Security Council. The main purpose of the IAEA is the promotion of the peaceful use of nuclear energy. The IAEA is a recognized authority on matters such as nuclear safety (including radiation protection), the provision of safeguards against the misuse of nuclear technology or nuclear materials and the promotion of nuclear security standards and the implementation thereof.

Both Australia, where Peninsula Energy's corporate office is incorporated, and the United States of America, where the Lance Project is situated, are member states of the IAEA. A key aspect relating to the promotion of the peaceful use of nuclear energy is the Treaty on the Non-Proliferation of Nuclear Weapons to which the United States of America is signatory and Australia a participant through ratification. The Company is required to report the total amount of uranium produced annually to the US Department of Commerce. The US Department of Commerce provides information on all uranium produced in the US to the IAEA under the Additional Protocol to the Non-proliferation Treaty to provide assurance that all of the uranium produced by US mines were used for peaceful uses only.

World Nuclear Association (WNA)

The World Nuclear Association (WNA) is an international association that was established to promote a wider understanding of nuclear energy by producing authoritative information, developing of common industry positions and ongoing participation and contribution to the energy debate. The WNA promotes nuclear energy as a sustainable source for electricity and readers of this report who would like to gain more information on nuclear energy, the nuclear fuel cycle, radiation and similar topics are advised to visit the WNA's website at (<https://www.world-nuclear.org/>)

2.2.2.2 U.S Federal and State Regulatory Bodies

U.S. Nuclear Regulatory Commission ("NRC")

The U.S. Nuclear Regulatory Commission was established by the U.S. Congress in 1974 as an independent agency to ensure the safe use of radioactive materials for civilian purposes while protecting people and the environment. The NRC regulates commercial nuclear power plants and other uses of nuclear materials, such as in nuclear medicine, through licensing, inspection and enforcement of its requirements in the U.S primarily through the Atomic Energy Act of 1954, as amended (the "AEA") Regulatory activities include amongst others: direction-setting and policymaking activities, radiation protection, fire protection, safety culture, emergency preparedness and response and enforcement.

U.S. Department of Transportation ("DOT")

The transportation of radioactive materials is governed by regulations established by the Department of Transportation (DOT). These regulations are promulgated in the hazardous materials regulations contained in Title 49 of the Code of Federal Regulations (CFR).

U.S. Environmental Protection Agency ("EPA")

The U.S. Environmental Protection Agency is the competent authority in the United States dealing with the administration, regulation and enforcement of federal laws designed to protect the environment and human health.

Wyoming Department of Environmental Quality - Uranium Recovery Program (“WDEQ-URP”)

Occupational and public exposures to radiation and radioactive materials at uranium recovery facilities in the State of Wyoming are governed by regulations issued by the Wyoming Department of Environmental Quality - Uranium Recovery Program (WDEQ-URP). Radiation standards are set by the NRC and these may be adopted by individual states following development and approval of an “Agreement State” program by the NRC. Although the NRC does not directly license operations covered by approved Agreement State programs, the agency exercises ongoing oversight of these programs.

In addition to implementing regulations governing radiation protection, radioactive materials licenses are issued by the WDEQ-URP for ISR uranium facilities. These licenses include additional, specific requirements for implementation of radiation protection programs. In most cases, the license will incorporate commitments made by the licensee in the license application. The radiation safety staff must meet stringent qualifications requirements set by the NRC and be well versed in the requirements of the license and the license application in order to properly implement the radiation protection program.

2.2.2.3 In-situ recovery regulatory environment

The Company’s operations in Wyoming are subject to a myriad of rules and regulations which are governed by multiple federal, state and local authorities and cover all aspects of the Company’s activities including exploration, construction, extraction, processing, disposal of waste, transportation of yellow cake, health and safety and restoration.

2.2.2.4 Environmental

Some of the more significant rules and regulations requiring to be complied with include:

- Atomic Energy Act of 1954
- Clean Air Act of 1963
- Clean Water Act of 1972
- Comprehensive Environmental Response, Compensation, and Liability Act
- Endangered Species Act of 1973
- Federal Land Policy and Management Act of 1976
- General Mining Act of 1872
- National Environmental Policy Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act

2.2.2.5 Safety

The Occupational Safety and Health Act of 1970 is the primary law governing occupational health and safety in the US. In the State of Wyoming, this act is administered by the Wyoming Occupational Safety and Health Administration. Radiation safety, which includes the protection of workers, the public, and the environment, is administered by the Wyoming Department of Environmental Quality Uranium Recovery Program.

2.2.2.6 Licenses and permits

The following table contains a summary of the approved licenses and permits for Lance.

Table 2-1: Summary of approved licenses and permits for Lance

Regulatory Agency	Permit or License
EPA	Approval to Construct Retention Ponds
EPA	Approval of Class III Aquifer Exemption
USACE ¹	Verification of Preliminary Wetlands Delineation
USACE	Nationwide Permit Coverage Authorization
WDEQ-URP	Radioactive Material License
WDEQ/AQD	Air Quality Authorization
WDEQ/LQD	Permit to Mine Underground Injection Control (“UIC”) Class III Permit Mineral Exploration Permit/Drilling Notification Wastewater Pond Construction Permit (lined retention ponds and sediment pond)
WDEQ/WQD	UIC Class I Permit (deep disposal wells) Permit to Construct Domestic Wastewater System Stormwater WYPDES Permit (construction) Stormwater WYPDES Permit (industrial) WYPDES Permit (Pond underdrains, CBW French Drain) Public Water Supply System – Permit to Construct
SEO ²	Permit to Appropriate Groundwater for Mine Unit 1 and Mine Unit 2 ISR Wellfield Permit to Appropriate Groundwater for Mine Unit 3 and Mine Unit 4 ISR Wellfield

Notes:

(1) US Army Corps of Engineers

(2) Wyoming State Engineers Office



3. Employees

Peninsula is an equal opportunity employer that embraces diversity and associated benefits thereof.

One of the Company's guiding principles contained in our Code of Conduct is integrity, where we expect our employees do the right thing, be honest, show respect and value differences. We further believe that we should recognise performance and celebrate success.

Table 3-1: Peninsula Energy Workforce

Workforce	2022	2021
Number of company employees	33	29
Number of external workers	5	4
Total	38	33

3.1 Diversity

The Company recognises the benefits arising from employee and Board diversity, including a broader pool of high-quality employees, improving employee retention and motivation, accessing different perspectives and ideas and benefiting from all available talent.

The Company is committed to inclusion at all levels of the organisation, without discriminating against gender, marital or family status, sexual orientation, gender identity, age, disabilities, ethnicity, religious beliefs, cultural background, socio-economic background and perspective.

Table 3-2: Peninsula gender diversity

Description	Male	%	Female	%
<i>30 June 2022</i>				
Board of directors	5	83.3%	1	16.7%
Senior management	7	100.0%	0	0.0%
Other employees	22	88.0%	3	12.0%
Total	34	89.5%	4	10.5%
<i>30 June 2021</i>				
Board of directors	5	100%	0	0.0%
Senior management	6	100%	0	0.0%
Other employees	19	86.4%	3	13.6%
Total	30	90.9%	3	9.1%



3 EMPLOYEES

3.2 Health, safety and wellbeing

One of the Company's core values is the protection of the health and safety of our employees, contractors and members of the communities where we operate. We believe that all injuries, incidents and occupational illnesses can be prevented and that everyone should go home safe and healthy at the end of each workday. No work is so important that health or safety should be compromised.

To achieve our goal of zero injuries and work-related illnesses, we are committed to the following measures:

- We will promote healthy and safe behaviour as a core value in our culture;
- We will provide a working environment free of uncontrolled hazards;
- We will identify, control and, where possible, eliminate risks to the health and safety of our employees, contractors and the public;
- We will maintain exposures to radiation and radioactive materials to our employees and the public As Low As Reasonably Achievable (ALARA);
- We will establish clearly defined safe operating practices and procedures and will train our employees and contractors in their use;
- We will provide the expertise and resources needed to maintain safe and healthy working environments;
- We will monitor and assess the management of health and safety at our operations in an effort to continually improve our overall performance; and
- We will comply with all applicable health and safety laws and regulations and will incorporate other measures including industry best practices to ensure that we have a robust, world-class health and safety management program.

All employees are expected to contribute to making Peninsula a healthy and safe place to work and are accountable for performing their jobs in compliance with this policy and our health and safety programs. All levels of management are responsible for ensuring there are no breaches of our health and safety practices and are expected to motivate and coach their team and to champion positive health and safety behaviours.

3.3 Training

The Company has developed a comprehensive training program to ensure that all employees and contractors are familiar with the environmental, health, and safety aspects of their assigned tasks. In many cases, these requirements are specified by regulatory agencies with authority at the Company's operations. Training at in situ recovery facilities in Wyoming is regulated by several agencies due to different aspects of the operation.

In broad terms, the training program has been designed to cover regulations and agency requirements in the following key areas:

- Industrial safety training;
- Radiation safety training;
- Environmental protection training; and
- Other, including but not limited to:
 - Archaeological Resource Unanticipated Discovery Plan Training;
 - Environmental and quality management training; and
 - Transportation security training.

Table 3-3: Safety training

Safety training	2022	2021
Number of training hours concerning safety	449	585

More information on the Company's spending is provide in Section 3.8 Education and professional development below.

3.4 Health

3.4.1 Occupational exposure monitoring

Occupational and public exposures to radiation and radioactive materials at uranium recovery facilities in the State of Wyoming are governed by regulations issued by the Wyoming Department of Environmental Quality - Uranium Recovery Program (WDEQ-URP). These regulations are promulgated in the Uranium Recovery Rules and Regulations and govern operations at solution uranium recovery facilities in Wyoming.

This Company has a Radiation Protection Program (“RPP”) to provide assurance that radiological protection measures, monitoring, and surveillance at Lance are performed in accordance with the applicable regulations, rules, and guidance to ensure the safe handling of radioactive materials. The primary goal of the RPP is to limit radiation exposures in the performance of job functions and to maintain all exposures As Low As Reasonably Achievable (ALARA).

All employees and contractors at Lance who are working in restricted areas are issued with personal dosimeters which they wear at all times while on site. All employees leaving restricted areas are required to undergo surveys for contamination on their hands, feet and body and may be required to shower and change clothing before leaving the site.

External radiation levels are monitored by performing periodic surveys in areas where the potential exists to encounter elevated radiation levels. Surveys may be performed for gamma and beta dose rates depending on the area and the likelihood for personnel exposure. These areas include process piping and vessels where solutions may collect and trap radioactive materials containing significant quantities of uranium decay products that may contribute to elevated beta and/or gamma exposures.

Gamma dose rates at in-situ solution uranium recovery facilities are generally low. External exposure to gamma radiation may be maintained ALARA by minimizing time in a radiation field, maximizing the distance from a radiation source, and/or providing shielding between a potential contamination source and personnel. Gamma surveys are conducted at various locations at Lance at least once a month.

A bioassay program (urine and/or faecal) is used to ensure that exposures to radioactive materials are maintained ALARA. In those cases, in which air sampling results indicate that an action level may have been exceeded, the bioassay program assists in determining if an actual exposure to radioactive materials occurred and ultimately assist with additional actions to be taken.

The maximum calculated annual occupational doses for employees working at the Lance for the year ended 30 June 2022 was 15.0 mrem which was well below the maximum allowed 5,000 mrem/year allowed. The maximum calculated occupational doses for employees for the last five years is illustrated in Figure 3.1 below:

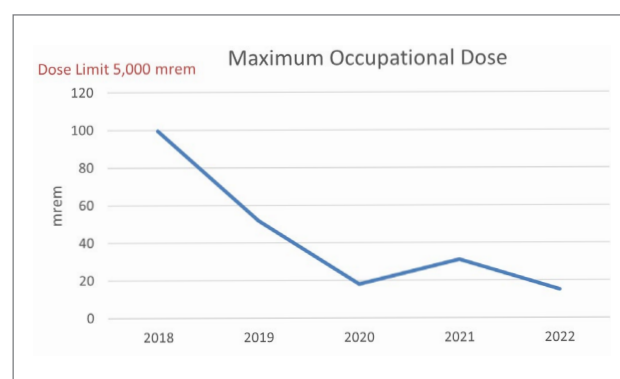


Figure 3-1: Maximum calculated occupation doses

3.4.2 Other

In addition to radiation exposure monitoring, the Company also monitors other environmental hazards such as noise, hazardous chemicals, airborne contaminants and gasses.

3.4.3 COVID

Depending on the jurisdiction, the Company follows the guidance provided by the Centres for Disease Control and Prevention in the US and Australia.

3 EMPLOYEES

3.5 Safety

The Company has an established Safety Committee. The main purpose of the Safety Committee is to communicate the importance of safety and to help identify and mitigate unsafe work conditions and practices. The Safety Committee consist of the Manager of Health, Safety, and Environment and at least four volunteer non-supervisory members. The Company’s Board regularly conducts reviews of the Safety Committee’s activities.

Safety Committee meetings are held monthly or more often as required.

Regularly scheduled safety meetings are also held with all of the Company’s employees working at Lance. The purpose of these meetings is to encourage communication concerning health and safety at the facilities. Management may also use this opportunity to provide employees with information concerning new safety requirements, refresher training in current requirements, and other health and safety topics of interest. Employees are encouraged to use this opportunity to inform management of safety concerns.

“Tailgate” safety meetings are held with the Company’s employees and contractors working at Lance for safety concerns specific to their job tasks. The purpose of these “tailgate” meetings is to encourage communication concerning health and safety relating to day to day assignments. The immediate supervisor conducts these meetings.

Contractors and their employees are bound by the same safety rules and regulations as the facilities at which they work.

The Company has an Emergency Response Plan that contains procedures that have been developed to cover specific categories of emergencies that could occur at Lance. Through an established Memorandum of Understanding with Crook County, employees at Lance actively engage with the Crook County emergency response agencies, including joint emergency exercises, site tours and planning sessions.

The following table provides information on Lance’s Lost Time Incidents (“LTI”), Medical Aid rates and Total Recordable Injury Rates (“TRIR”). Lance’s TRIR is also benchmarked against the available TRIR for the U.S. “Other Metals” mining industry which includes uranium mining.

Table 3-4: Safety statistics for the year ended 30 June 2022

	Number of hours worked	LTI		Medical Aids		US Other Metal Mining TRIR ¹
		Number	Rate	Number	Rate	
Employees	57,011	0	0	0	0	3.00
Contractors	3,702	1	54.02	0	0	3.00
Employees	53,913	0	0	1	3.71	2.70
Contractors	343	0	0	0	0	2.70

Notes:

⁽¹⁾ Available data is for 31 December 2019 and 31 December 2021

The Company has an Emergency Response Plan that contains procedures that have been developed to cover specific categories of emergencies that could occur at Lance.

3.6 Performance recognition

The Company has an established Remuneration Board Committee that acts on behalf of the Board and that provides Non-Executive oversight of the Company's remuneration practices.

Included in the Remuneration Committee's mandate are reviews of the overall effectiveness of the Company's short-term and employment equity plans to ensure that these are overall effective in the achievement of the Company's objectives. Key Performance Indicators used ("KPI's") are designed to also contain elements related to the attainment of health, safety and environmental performance metrics.

3.7 Wellbeing

The Company provides private medical health coverage as a standard condition of employment for US based employees.

This private medical health coverage includes support for emotional health related matters as well as tools and programs to support employees' general health and wellbeing. Virtual counselling, online therapy, support programs for autism, eating disorders and substance use and programs to help life events are just some examples of support provided.

3.8 Education and professional development

The Company believes that employee work performance is vital to the success of our organisation. Employees are eligible for reimbursement of professional education that will assist the employee in performing his or her essential job functions and related travel costs approved by the organisation. Technical training is also essential due to the fast paced, ever-changing environment of today. We are committed to developing our personnel, consistent with the Company's objectives.

The Company has three qualified Radiation Safety Officers who receive biannual refresher training. The Company's Health and Safety Specialist has received extensive training during the year under review towards qualifying as a Radiation Safety Officer.

During the year personnel participated in various training courses covering a variety of areas including health safety & environment, and finance and administration. Members of Strata Energy site management also attended the 2021 Wyoming Mining Association Annual Convention, held in July along with Mr Wayne Heili, Peninsula Energy Ltd. CEO, who serves as a member of the Wyoming Mining Association Board.

Table 3-5: Training and professional development spending

Workforce	2022	2021
<i>Training</i>	\$ 6,625	\$ 7,196
Health and safety	\$ 4,555	\$ 6,192
Administrative	\$ 2,070	\$ 1,004
<i>Professional dues</i>	\$ 783	\$ 1,583
Health and safety	\$ 158	\$ 248
Administrative	\$ 625	\$ 1,335
<i>Safety awards</i>	\$ 18,353	\$ 2,274
Total	\$ 25,761	\$ 11,053



4. Environment

Peninsula Energy is committed to the protection of the environment for the benefit of the current and future generations.

4.1 Environmental management

Environmental excellence is essential to the long-term success of our enterprise. To achieve our goal of minimizing and mitigating our impacts on the environment, we are committed to the following measures:

- We will promote protection of the environment as stewardship is a core value in our culture.
- We will identify, seek to diminish and, where possible, eliminate adverse impacts on the environment from our activities.
- We will establish clearly defined practices and procedures to protect the environment and will train our employees and contractors in their use.
- We will provide the expertise and resources needed to ensure protection of the environment.
- We will establish, maintain, improve and encourage effective participation in programs to eliminate or minimize our impacts, conserve resources, minimize emissions and manage waste.
- We will monitor and assess the management of environmental protection at our operations in an effort to continually improve our overall performance.
- We will comply with all applicable environmental laws and regulations and will incorporate other measures including industry best practices to ensure that we have a robust, world-class environmental management program.

All employees and contractors of Peninsula are expected to consider the impacts of their work on the environment and are accountable for performing their jobs in compliance with this policy and our environmental management program. All levels of management are responsible for ensuring there are no breaches of our environmental practices.

4.2 Environmental Management Program

The Company adopted a comprehensive Environmental Management Program that formalises the approach for instituting sound environmental management practices at Lance. This program is designed to ensure compliance with applicable regulatory requirements and apply best management practices.

The environmental protection and monitoring requirements for Lance are primarily determined by Wyoming Department of Environmental Quality (WDEQ) permit and license requirements. The environmental surveillance programs include routine monitoring and analysis of water, air, soil, sediment, and vegetation within the permitted areas and surrounding environs to ensure compliance with WDEQ rules and regulations and that Lance does not cause any adverse environmental impacts. The monitoring programs are designed to provide environmental control based on many years of industry monitoring experience in conjunction with guidance and suggested practices from the relevant regulatory agencies.



4 ENVIRONMENT

4.2.1 Water

The Company recognises that Lance is in a water scarce area and process flows have been optimised to minimise the amount of water used. Water that is extracted from the ore body during the uranium recovery process is returned to the wellfields on a continuous basis, thereby reducing water consumption.

Water used during the uranium extraction process is also cleaned through reverse osmosis during the wellfield restoration process, effectively improving groundwater quality.

The primary risks to groundwater at Lance are excursions of mining solutions into unaffected aquifers and long-term migration of affected fluids to adjacent, useable sources of water. This is controlled by well construction and testing techniques, maintenance and an inward hydraulic gradient during recovery and restoration operations, and groundwater restoration where the goal is to achieve baseline water quality post mining to ensure no effect on adjacent aquifers. The effectiveness of these mitigative efforts are conformed through rigorous monitoring programs as described below:

There are three distinct phases of the groundwater and surface water monitoring programs.

Preoperational Water Monitoring

Preoperational water monitoring is performed as a part of the site characterization process. Preoperational sampling establishes baseline water quality in overlying, production, and underlying aquifers and local surface water features, which provides a basis for comparing operational monitoring data. Preoperational monitoring is also performed to determine groundwater and surface water quality in the area surrounding the active mining areas and lined retention ponds to allow monitoring impacts during operations.

Operational water monitoring

Operational water monitoring is performed to ensure that Lance's facilities are constructed and operated correctly to avoid adverse impacts on water quality. This is accomplished by comparing the operational monitoring data with preoperational data to determine whether mining operations are adversely affecting water quality. Operational data is analysed from underlying, overlying, and production aquifers and surface waters and compared with preoperational data to determine whether mining activities are having an effect on water quality. Operational data from wells and surface water features located in the surrounding areas allows determination of impacts to these resources from operations.

Operational monitoring includes private wells near active wells and any surface water features that lie within Lance's licence boundary.

Data gathered as part of operational monitoring include general water levels, conductivity, pH, water quality and radionuclides.

Post operational wellfield groundwater monitoring

Post operational water monitoring is performed during and after groundwater restoration activities and is used to determine the effectiveness of restoration processes. The restoration monitoring provides data for comparison with the approved groundwater restoration goals.

Table 4-1: Liquid effluent management

Description	Unit	2022	2021
Annual amount of liquid effluent generated and released into the environment	m ³ / year	37,505	41,947
Number of evaporation / retention ponds	Nr	1	1
Total size of evaporation / retention ponds	Ha	1.21	1.21
Cumulated storage capacity of the evaporation / retention ponds	m ³	41,519	41,519

Table 4-2: Water consumption

Description	Unit	2022	2021
Water withdrawn from the environment	m ³ / year	40,653	42,096
Water released	m ³ / year	0	0

The Company recognises that Lance is in a water scarce area and process flows have been optimised to minimise the amount of water used.

4.2.2 Air quality

Monitoring programs

Lance’s environmental monitoring program includes routine monitoring and analysis of air samples within the permitted areas and surrounding environs to ensure compliance with federal and state rules, regulations and permit requirements. The air monitoring programs are designed to provide maximum surveillance for environmental control and are based on many years of monitoring experience in conjunction with guidance and suggested practices from regulatory agencies.

Operational monitoring is performed to determine whether mining operations are having an impact on air quality. Airborne particulate sampling is performed at the locations specified in the WDEQ-URP License and Lance’s RPP. This is accomplished by comparing the operational monitoring data with preoperational data. NRC guidance recommends continuous air particulate and radon samples at the locations selected for preoperational monitoring.

Specifically, monitoring is performed for natural uranium, thorium-230, radium-226 and lead-210, radon-222.

None of the measurements taken during the reporting period exceeded regulatory limits. Airborne particulate and radon gas monitoring since the beginning of operations have shown concentrations that are essentially at background. This data is used to determine the annual dose to the public, which is consistently well below regulatory limits. Figure 4.1 below shows the average annual Radon-222 concentrations relatively consistent with and mostly below background levels (the Southwest station is considered background).

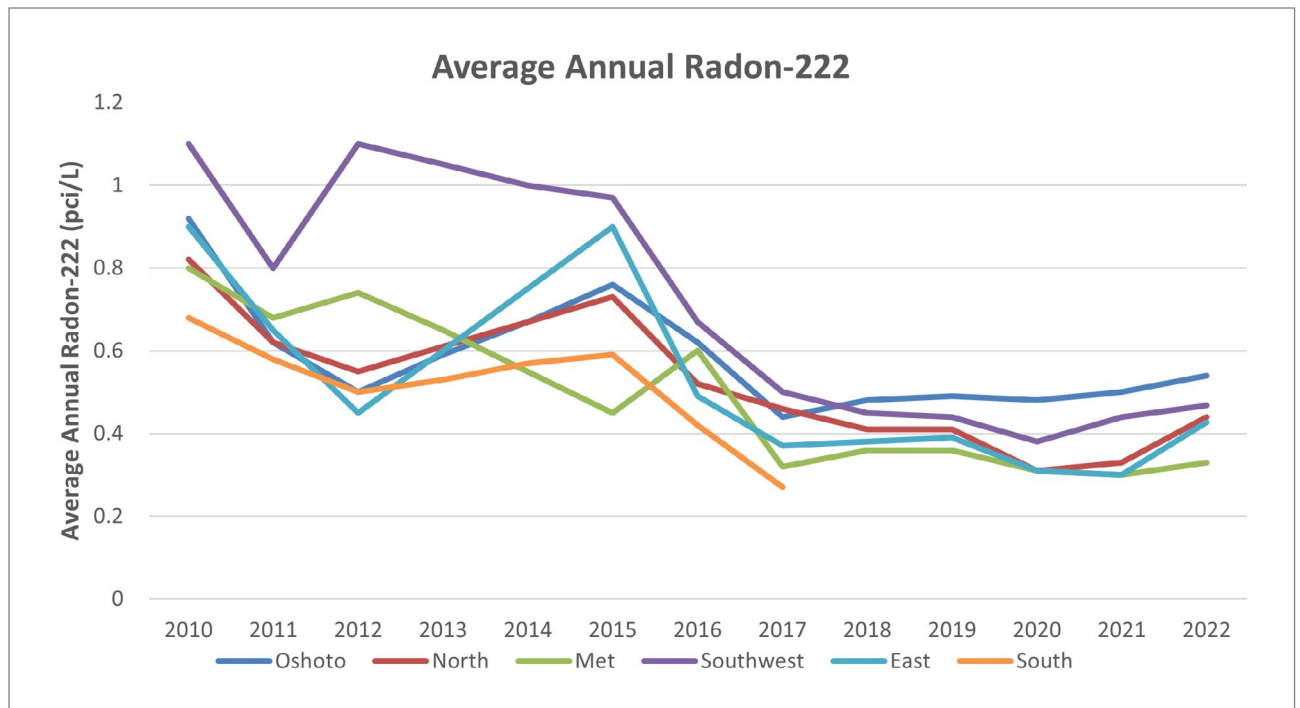


Figure 4-1: Average Annual Radon-222 emissions

Dust control on public roads

The Company is providing dust control measures to mitigate the dust generated by all traffic (not limited to dust generated by Lance related traffic) traversing on a set of roads totalling 8.5 miles as agreed to with the Crook County in terms of a Memorandum of Understanding executed in 2013. During the period under review the Company has spent US\$50,449 (2021: US\$30,150) on these dust control measures.

4 ENVIRONMENT

4.2.3 Radiation

The environmental surveillance program includes routine monitoring of direct radiation levels at selected environmental monitoring stations to ensure compliance with federal rules and regulations. In addition to routine direct radiation monitoring at the environmental monitoring stations, nonroutine monitoring may be performed in areas where it is suspected that operational activities may have resulted in the deposition of radioactive materials.

An annual ALARA Audit Report, prepared by an independent specialist, is submitted to the WDEQ – Uranium Recovery Program (URP). The 2021 ALARA Audit Report, covering calendar year 2021, was completed in March 2022 and included a review of the following elements:

- Employee exposures and incurred doses;
- Bioassay results;
- Inspection results;
- Documented training program activities;
- Radiation safety meetings;
- Radiological survey and sample results;
- Reports on overexposures;
- Operating procedures;
- Emergency preparedness;
- Environmental monitoring program; and
- Quality Assurance Program.

The 2021 ALARA Audit Report did not identify any exceedances of regulatory limits.

The maximum calculated Total Effective Dose Equivalent (“TED”) for any potentially exposed member of the public in 2022 was 0.7 mrem for a hypothetical public resident at the Oshoto monitoring location, primarily due to radon dose. In all cases, the estimated public doses were well below the 100 mrem / year limit (including radon). The calculated TED for members of the public over the last 5 years is illustrated in Figure 4.2 below.

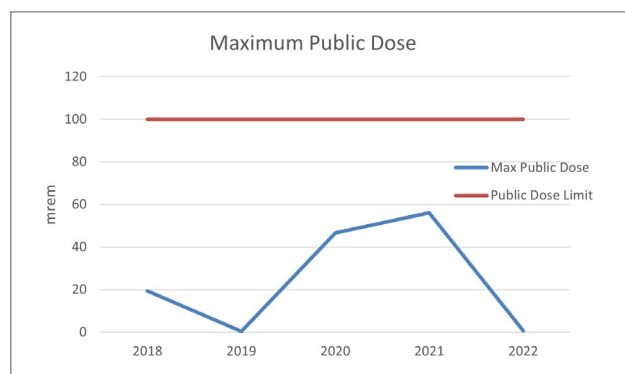


Figure 4-2: Maximum calculated TED for members of the public

4.2.4 Soil and sediment

Soil and sediment monitoring are performed to ensure that releases at Lance are not affecting soil and sediment radionuclide concentrations. Record is kept of the total number and volume of all mining solution spills. Considerable effort is made to control silt and sediment runoff from disturbed areas through the use of berms, leak detection systems and field monitoring inspections that are conducted during every shift.

The company did not record any reportable mining solution spill incidents during the period under review.

4.2.5 Waste management

The Company’s Lance operation has a strong focus on recycling to maximise the amount of items that would have become production waste and thereby effectively reduces the Company’s carbon footprint.

4.2.5.1 Solid waste

Solid waste includes solid material and equipment that are not generated by source material recovery or which have been successfully decontaminated and will include hazardous and non-hazardous waste. Non-hazardous materials may include construction debris, office trash, and decontaminated material and equipment. Non-hazardous materials are stored in commercial trash containers and are disposed by a contracted waste disposal operator to a permitted municipal landfill.

4.2.5.2 Hazardous waste

The environmental management program developed for Lance includes storage and disposal procedures for wide variety of wastes, including used tires, motor oil, batteries, fluorescent lamps, computers, monitors and electronics.

4.2.5.3 Radioactive waste

Radioactive waste includes by-product material in the form of process solids (e.g., filter media, resins), contaminated soil, equipment and parts, debris, and personal protective equipment (PPE) that cannot be decontaminated and released for unrestricted use. By-product materials are collected in work areas using drums or other containers that are specifically designated for the storage of by-product materials. The Company maintains agreements with two facilities for the disposal of by-product material generated by Lance.

Table 4-3: Waste production and recycling

Description	Unit	2022	2021
Non-hazardous waste production	kg	8,237	1,778
Low level hazardous waste	kg	33,875	23,369

4.2.6 Vegetation and food

Routine monitoring and analysis of vegetation samples may take place within the permitted license areas and surrounding environs in instances where a significant pathway to humans exists. Modelling for Lance has determined that the vegetation and food pathway represents less than 5% of the total dose to the public, so routine vegetation monitoring is not required.

4.2.7 Visual impacts

Measures are taken at Lance to mitigate visual impacts to facility and development areas as described below:

1. Prompt revegetation of wellfield development areas after completion of construction.
2. Limited facility outdoor lighting to reduce nuisance light to surrounding neighbours.
3. Use of natural colours for facility infrastructure to better blend in with natural surroundings.
4. Trees are planted around plant facilities to provide a sound and visual barrier to the nearest neighbours and improve site aesthetics.



Figure 4-3: Tree Planting for sound and visual barrier for the plant facility area

4 ENVIRONMENT

4.2.8 Restoration and reclamation

Successful reclamation of disturbances caused by exploratory drilling, wellfield development and associated mining infrastructure is key to meeting both WDEQ and private landowner requirements for returning disturbed lands to pre-mine class of use and an important aspect of Peninsula's environmental stewardship responsibility.

The Company has a reclamation plan, approved by the WDEQ and affected surface landowners, for Lance covering aspects such as groundwater restoration, decontamination and decommissioning of process buildings, equipment, facilities, lined ponds, wellfields, soil and surface reclamation.

As required by Lance's Permit to Mine and Radioactive Materials License, the Company updates its restoration and reclamation liability on an annual basis and submits a report to WDEQ-LEQ and WDEQ-URP who review and assess the adequacy of the Lance restoration and reclamation cost estimates. The bond includes the estimated independent third-party contractor rates to complete all reclamation activities as well as the estimated restoration costs for projected activities for the coming year. The estimate also includes a 25% contingency to ensure that adequate funds are available to return the site to pre-mining conditions. As at 30 June 2022, the total restoration and reclamation cost estimate for immediate closure of the Lance Project was estimated to be \$10,098,015. As required by law, the Company has provided a bond covering the full amount of this estimated liability.

An important principle adopted by Peninsula as part of its overall restoration and reclamation philosophy is to ensure that remedial activities are undertaken on an ongoing basis. For example, restoration and reclamation activities commence as soon as a wellfield has been mined out. This includes groundwater restoration, removal of all installed infrastructure and revegetation of impacted areas.

As part of the permitting amendments to allow for low pH leaching at Lance, the Company had to conduct a low pH FLT to confirm the results of laboratory tests conducted. To demonstrate proof of concept for groundwater restoration, the Company was required to provide the following performance-based evidence:

1. Demonstration that groundwater restoration following low pH ISR can be achieved consistent with laboratory testing and geochemical modelling;
2. Demonstration that injectivity will be adequately maintained during groundwater restoration following low pH ISR; and
3. Demonstration that unanticipated events were captured, understood, and can be prevented or managed in future operations.

The Company was able to successfully meet all three of the stated criteria above and the interim FLT results were submitted to the WDEQ - Land Quality Division and WDEQ-URP in December 2019. Both agencies approved this Interim Restoration Report in April 2020.

During May 2022 the Company was notified that Lance was granted a license amendment that allows the use of several different oxidants in conjunction with low pH lixiviants in the uranium extraction process. Importantly, the Company has been granted approval to select from three different commercially available oxidants, gaseous oxygen, hydrogen peroxide, and sodium chlorate. The flexibility in selecting an oxidant would be useful during periods of supply shortages. The amended license also adds flexibility in the design and location of reagent storage and distribution systems, which may result in additional cost efficiencies.

4.2.9 Rehabilitation of the Karoo Uranium Project

Since announcing its decision to exit from the Karoo Uranium Project in South Africa in April 2018, the Company has, with the support of our South African partners, actively engaged with various regulatory authorities to secure the required approvals to undertake rehabilitation and remedial activities of old trial mining areas (Ryst Kuil and Rietkuil) that were left abandoned by our predecessors following exploration activities conducted in the late 1960's to early 1970's.

Whilst awaiting final approval from the various regulating authorities, the Company was able to attend to the rehabilitation of 12,468 boreholes (of which 8,928 were abandoned boreholes left by previous operators) and disposed of approximately 150 tons of bulk samples at an approved disposal facility and attended to limited construction activities in preparation for the planned rehabilitation of the legacy trial mining areas.

Following receipt of the last remaining approval, rehabilitation activities commenced at Rietkuil in June 2021 and the backfilling of the historical trial mining area was completed in September 2021. Backfilling of the decline and all major earthworks activities at Ryst Kuil was completed in December 2021. Remedial actions at both sites included the use of uranium bearing ore stockpiles that were left on surface as backfill material which was then covered with waste rock.

Independent radiological surveys identified minor surface areas at Ryst Kuil and Rietkuil where contamination exceeded the National Nuclear Regulator's public release limits and remedial work on these was undertaken in April 2022. Following an inspection by the National Nuclear Regulator in May 2022, the need to do more work on these areas was identified and the Company attended to this in July and August 2022.

The completion of work at Ryst Kuil will conclude the surface rehabilitation work programmes for the Karoo Project and the Company has commenced the processes to apply for closure from the South African regulators which is expected to take some time to finalise.

Any EESG performance metrics related to the Karoo Uranium Project have been excluded from the data contained in the reporting sections above as the Company views this as a discontinuing operation.



Figure 4-4: Open cast pit at Rietkuil during the rehabilitation process



Figure 4-5: Celebrating completion of the backfilling at Rietkuil

4 ENVIRONMENT

4.3 Climate change

The Board has adopted a formal Climate change policy. Peninsula Energy supports the goals of the 2015 Paris Agreement and is making a valuable contribution in providing an alternative to fossil-based fuels and the reduction in greenhouse gas emissions by producing uranium that is used in the production of electricity.

The Company has also identified key parameters which will be monitored and reported on to measure and understand the direct and indirect impacts of its own operations.

4.3.1 Energy consumption

Since the Lance project utilises in-situ recovery mining, large excavation, haulage, and support equipment is not implemented. The vehicle and equipment fleet is relatively small, so fuel consumption is low relative to other mining industries.

Lance projects are fully permitted to use low pH mining solutions. Laboratory and field tests indicate that, in comparison to alkaline leaching, considerably fewer pore volumes are required to extract the same amount of uranium from the ore body. It is anticipated that electricity consumption will decrease by more than half compared to alkaline leaching. This also means that water consumption from the approximately 1% of over production (bleed) during mining activities will also be considerably smaller.

A summary of energy consumption for Peninsula Energy is provided in the table below.

Table 4-4: Energy consumption

Description	Unit	2022	2021
<i>Electricity consumption</i>			
Corporate office in Australia	kWh	5060	2530
Lance Project	kWh	2,211,967	1,431,355
Efficiency (kWh per lb of uranium produced):	kWh / lb	745	15,937
Liquid propane consumption	Litres	154,874	157,124
Efficiency (...per lb of uranium produced)		52	1,750
<i>Fuel consumption</i>			
Diesel and petrol consumed	Litres	43,896	39,966
Efficiency (litre or gallon per lb of uranium produced):	Litre / lb	14.8	445

4.3.2 Atmospheric emissions

Table 4-5: Atmospheric emissions

Description	Unit	2022	2021
<i>Radioactive atmospheric emissions</i>			
Radon emissions generated	MBq / year	1.89E+6 (51.1 Ci)	1.14E+6 (30.83 Ci)
<i>Non-radioactive emissions</i>			
NO _x (nitrogen oxides)	T / year	43.9	40.8
SO _x (sulfur oxides)	T / year	2.9	2.73
CO ₂ (carbon dioxide)	T / year	1,688.2	1,574.1
VOCs (Volatile organic compounds)	/ year	4.1	3.8
Greenhouse gas emissions	teqCO ₂ / year	1,688.2	1,574.1
PM10	T / year	22.0	20.9

4.3.3 Reagent consumption

Table 4-6: Reagent consumption

Description	Unit	2022	2021
Hydrogen Peroxide	Litres	53,208	26,611
Sulfuric Acid	Tonnes	577	2,379



5. Social

As the operator of Lance, Strata Energy Inc (Strata) is responsible for reporting to its owner, its stakeholders and the public about its exploration, development, licensing, construction and production activities within the United States.

5.1 Community Outreach and Communication Policy

Strata's management team has the responsibility for translating what Strata technical staff is doing into terms the public can understand and appreciate, and for communicating this information to a range of stakeholders including shareholders, landowners, mineral owners, business people, lawmakers, government officials, the scientific community, educational institutions, regulatory officials, the media, and the general public.

Strata makes the information on its activities available to representatives of the media, organizations, individuals, and government and regulatory officials under an open-door policy except where prohibited by legal or other restrictions. Strata seeks the dissemination of accurate and timely information on its activities and programs to all who might benefit from or be affected by such activities and programs.

To ensure accurate and timely dissemination of information and responses to queries, the Company has developed a matrix and assigned responsibilities for the preparation and approval thereof.

Strata's management team routinely attend city, county and State government meetings to update the community on our activities, particularly when changes to the operation are proposed. Meetings are also scheduled with affected landowners as needed. The last extensive routine meetings with landowners were held during low pH transitioning in 2017 and 2018.



5.2 Little Missouri Headwaters Cultural Heritage Project

Lance sits along the Little Missouri River, a thoroughfare for peoples throughout prehistory. People traveling between the Powder River Basin and Thunder Basin and the Bear Lodge Mountains used the Little Missouri River as a natural travel route because of its water, firewood, game and other resources. Archaeological evidence indicates at least 11,000 years of human activity in the headwaters of the Little Missouri River including evidence of ancient camps, bison hunting, ceremonies and other activities. Numerous Native American tribes have historical ties to the area.

Strata acts as the custodian for a website (<https://stratawyo.com/little-missouri-headwaters-cultural-heritage-project>) created specifically for the Little Missouri Headwaters Cultural Heritage Project. This website is used by contributors to assemble information about historic human activity in the north-eastern Powder River Basin, giving Native American tribes and other interested persons the ability to learn more about properties of traditional religious and cultural importance where direct access to those properties might not be possible.



Figure 5-1: Little Missouri Headwaters Cultural Heritage Project

5.3 Strata Energy Scholarship Programs

Since 2013, the Company has been awarding scholarships to Crook County students through its Strata Energy Scholarship Programs that currently consists of two programs, namely the Community Energy Scholarship and the Opportunity Scholarship.

The Community Energy Scholarship is a 4-year scholarship with an annual eligibility requirement amounting to US\$2 000 per academic year for a total of four students who study in the fields of science, technology, engineering or mathematics.

The Opportunity Scholarship is an annual scholarship whereby one recipient receives \$500 per academic year and is available to high school graduates pursuing trades or college education, regardless of the field of study.

Since inception, the Company has awarded more than US\$25,000 to Crook County students in scholarships.

5.4 Procurement and recruitment

To the extent possible the Company recruits its employees for Lance from the surrounding area. Only in instances where required expertise is not available locally would the Company reach beyond the local area to find certain expertise. Materials required for construction and operations (pipe, fittings, well casing, vehicles) at Lance are sourced locally and regionally to the extent possible. Consumables such as fuel and propane are procured locally. Mining reagents are not available locally and are sourced through large national vendors.

5.5 Extraction royalties

Strata makes direct economic contributions in the form of various royalties and fees related to production and use of privately owned surface property. Royalties are typically based on sales of uranium and are paid to royalty interest owners on private land mining claims. Additionally, fees are paid to the Federal Bureau of Land Management and to the State for the sub-surface leases held by the government.

5.6 Participation on industry bodies / associations

Through its US based subsidiary Strata Energy the Company actively participates and contributes to dialogue on matters related to uranium mining in the US. Strata Energy is a member of the Uranium Producers of America and also a member of the Wyoming Mining Association.

Peninsula Energy is a contributing member of the Nuclear Energy Institute (“NEI”).



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