

Explosive materials transported to the site will include blasting agents and initiation devices. Blasting agents are comprised primarily of ammonium nitrate and fuel oil. The ammonium nitrate and fuel oil will be stored in appropriate storage bins separate from the explosives magazine. Blasting initiation devices will be stored in prefabricated magazines in conformance with BATF, MSHA, and applicable state and local regulations.

20.3 Project Permitting Requirements

Engagement of local, state and federal regulators has already occurred, and three major areas of permitting have been initiated, including 404/408 permitting with the U.S. Army Corps of Engineers (USACE), and 402 and air quality permitting with the State of Nebraska. Initiation of the balance of permitting for the Project is dependent upon the completion of the mine plan and surface facilities being developed as part of this technical document. Typically, larger mining operations such as this have the benefit of a pre-feasibility stage of analysis and development from which permitting is generally initiated. With the completion and publication of this FS, the balance of permitting for the Project can commence.

The Project will be held to permitting requirements that are determined to be necessary by Johnson and Pawnee counties, the State of Nebraska, and the U.S. Environmental Protection Agency and USACE national policies, such as the National Environmental Policy Act (42 U.S.C. 4321) and the Clean Water Act (33 U.S.C. 1251 *et seq.*). The list of potentially applicable permits and authorizations for the Project are presented in Table 20-1.

Table 20-1: Project Permits

Permit/Approval	Issuing Authority	Permit Purpose	Status
Federal Permits Approvals and Registrations			
Explosives Permit	U.S. Bureau of Alcohol, Tobacco and Firearms (BATF)	Storage and use of explosives	Mine Safety and Health Administration (MSHA) and Department of Homeland Security (DHS) will also regulate explosives at a mining operation.
EPA Hazardous Waste ID No.	U.S. Environmental Protection Agency (EPA)	Registration as a Conditionally Exempt Small Quantity Generator (CESQG) or a Small Quantity Generator (SQG) of waste	NioCorp laboratory facilities likely to generate small quantities of hazardous waste.
Spill Prevention, Control, and Countermeasure (SPCC) Plan	U.S. Environmental Protection Agency (EPA)	Regulation of facilities having an aggregate aboveground oil storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons with a nexus to jurisdictional waters	REQUIRED. Adjacent jurisdictional drainages.
Notification of Commencement of Operations	Mine Safety and Health Administration (MSHA)	Mine safety inspections, safety training plan, mine registration	REQUIRED. All mining operations in Nebraska.
Federal Communications Commission Permit	Federal Communications Commission (FCC)	Frequency registrations for radio/microwave communication facilities	REQUIRED. If NioCorp intends to use business radios to transmit on their own frequency.
Clean Water Act Section 404 Permit	U.S. Army Corps of Engineers (USACE)	Permit for discharge of dredged or fill material into waters of the U.S. under Section 404 of the CWA	REQUIRED. Construction of waterline will impact jurisdictional drainages and wetlands
Clean Water Act Section 408 Authorization	U.S. Army Corps of Engineers (USACE)	Authorization to modify civil works project under Section 408 of CWA	REQUIRED. Authorization required at waterline outfall in Missouri River
State Permits, Authorizations and Registrations			
Permit to Appropriate Water	State of Nebraska Department of Natural Resources (DNR)	Regulates the use and storage of surface and ground waters	REQUIRED to appropriate water.
Explosives Permit	Nebraska State Patrol	Regulates the use, storage, or manufacture of explosive materials.	REQUIRED. Also regulated by BATF, MSHA, and DHS.
Permit to Discharge under the National Pollutant Discharge Elimination System (NPDES)	State of Nebraska Department of Environmental Quality (DEQ)	Multiple permits applicable to the discharge of industrial wastewater and stormwater.	REQUIRED. Project likely to have excess water that will require some form of treatment and disposal.
Mineral Exploration Permit	State of Nebraska DEQ	Regulates the exploration for minerals by boring, drilling, driving, or digging.	REQUIRED. Already obtained for exploration drilling program.
Air Construction Permit	State of Nebraska DEQ (under Federal PSD Program)	Regulates emissions during construction activities to protect ambient air quality.	REQUIRED. Under Nebraska Administrative Code (NAC) Title 129.
Air Operating Permit	State of Nebraska DEQ (under Federal PSD Program)	Regulates emissions during operation to protect ambient air quality. Will be based on a FS mine plan.	REQUIRED. Class I (Title V) federal major source PSD operating permit will likely be required as per NAC 129.
Water Well Installation Declaratory Ruling Request	Nebraska Department of Health and Human Services, Division of Public Health	Water well installation requirements; well must be registered with the Department of Natural Resources.	REQUIRED. Already obtained for hydrogeological portion of exploration drilling program.
Authorization for Class V Well Underground Injection	State of Nebraska DEQ	All activities conducted pursuant to Title 122 - Rules and Regulations for Underground Injection and Mineral Production Wells.	REQUIRED. Already obtained for hydrogeological portion of exploration drilling program. <u>May</u> also be required for future disposal of water treatment sludge or RO brines.
Septic Systems – Permit for Onsite Wastewater Treatment System Construction/Operations	State of Nebraska DEQ	Protects surface water and groundwater as well as public health and welfare through the use of standardized design requirements.	REQUIRED. Needed if the septic system does not meet the “Authorization by Rule” requirements due to quantity or quality of the wastewater, as per NAC 124.
Boiler Inspection Certificate	Nebraska Department of Labor	Protects public safety through an inspection and approval process of boilers.	REQUIRED. For installation of boiler(s) is installed in any of the facility buildings.
Section 401 Water Quality Certification	State of Nebraska DEQ	Program evaluates applications for federal permits and licenses that involve a discharge to waters of the state and determine whether the proposed activity complies with NAC Title 117- Nebraska Surface Water Quality Standards. Isolated wetlands are included in NAC Title 117.	REQUIRED. Completed jointly with USACE during 404 nationwide permitting process.
Development Permit	State of Nebraska DEQ/Johnson County Floodplain Administrator	Program regulates building requirements for any structures that are constructed on a floodplain.	REQUIRED. Will be needed if NioCorp constructs any building on a designated floodplain.
Fire and Life Safety Permit	Nebraska State Fire Marshall	Review of non-structural features of fire and life safety.	REQUIRED. Project proponent to submit operating and building plans. State Fire Marshall will then determine required inspections as per NFPA 101.
State Business License	Nebraska Secretary of State	License to operate in the state of Nebraska.	REQUIRED. All business entities in Nebraska.
Retail Sales Permit or Exemption Certificate	Nebraska State Tax Commissioner	Permit to buy wholesale or sell retail.	MAY BE REQUIRED. Will be required if NioCorp is direct selling niobium product.
Solid Waste Management Permit	State of Nebraska DEQ	Regulates the construction and operation of solid waste management facilities.	REQUIRED. Will be needed if NioCorp intends to create an on-site solid waste management facility. This could include the TSF.

Permit/Approval	Issuing Authority	Permit Purpose	Status
Drinking Water Construction Permit	Nebraska Department of Health and Safety	The Drinking Water Construction Permit regulates the design and construction of a public water system.	MAY BE REQUIRED. All drinking water systems that serve more than 25 individuals and are considered to be “non-transient and non-community” are required to obtain a Drinking Water Construction Permit. This would include the use of RO permeate produced at the plant site.
Drinking Water Permit to Operate	Nebraska Department of Health and Safety	Defines testing and water quality criteria for public drinking water systems.	MAY BE REQUIRED. All drinking water systems that serve more than 25 individuals and are considered to be “non-transient and non-community” are required to obtain a Drinking Water Permit to Operate.
Radioactive Materials Program and Licensing	Nebraska Department of Health and Human Safety	Regulates and inspects users of radioactive materials.	REQUIRED. If the plant uses sealed sources for process measurements or if naturally occurring radioactive materials are possessed as a result of beneficiation activities.
Hazardous Waste Management	State of Nebraska DEQ	Management and recycling of hazardous wastes.	REQUIRED. As per Title 128 of the <i>Nebraska Hazardous Waste Regulations</i> NioCorp must notify the NDEQ of hazardous wastes generated or transported from the facility.
Dam Safety Approval	State of Nebraska DNR	Regulates the design and construction of any dam (i.e., any artificial barrier with the ability to impound water or liquid-borne materials).	REQUIRED. Will be required for TSF (dam) and Mine Water Pond.
Water Storage Permit	State of Nebraska DNR	Regulates any water impoundment that has a normal operating water volume of at least 15 AF below the spillway.	REQUIRED. Will be required for the Mine Water Pond, as it will impound greater than 15 AF below the spillway.
Local Permits for Johnson and Pawnee Counties			
Building and Construction Permits	Johnson County Zoning Administrator	Ensure compliance with local building standards/requirements.	REQUIRED. This permit will most likely be included with the Permitted Use Zoning Permit
County Road Use and Maintenance Permit/Agreement	Johnson County Zoning Administrator	Use and maintenance of county roads.	MAY BE REQUIRED. Will be needed if NioCorp intends to maintain any of the area county roads.
County Road Use and Maintenance Permit/Agreement	Pawnee County Commission	Use and maintenance of county roads.	MAY BE REQUIRED. Will be needed if NioCorp intends to maintain any of the area county roads.
Permitted Use Zoning Permit	Johnson County Zoning Administrator	Regulates and authorizes permitted uses.	REQUIRED. Issuance of this permit will require completion on an application form, and at least one meeting with the county zoning regulators and at least one public comment meeting.
Special Use Permit	Pawnee County Assessor	Regulates and authorizes permitted uses	REQUIRED. TSF land currently zoned for agriculture. Zoning regulations allow for mineral extraction.

Source: SRK, 2017

The following is a brief discussion of the more material permits which are likely to form the critical path in the Project permitting timeline.

20.3.1 USACE 404/408 Permitting and NEPA

Clean Water Act Section 404

Section 404 of the federal Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into Waters of the U.S. (WOUS), including wetlands and jurisdictional drainages/waterways. Activities in WOUS regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into WOUS.

Proposed activities are regulated through a permit review process. An individual permit is required for potentially significant impacts. Individual permits are reviewed by the USACE. However, for most discharges that will have only minimal adverse effects, a general permit may be suitable. General permits are issued on a nationwide, regional, or state basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met.

For the most part, NioCorp has directed the engineering partners on the Project to avoid both floodplains and any potentially jurisdictional water features during the design process. The mine and surface plant facilities have been sited to avoid these features. This design approach is viewed very favorably by the USACE.

With respect to the waterline corridor, all but the final outfall section has been permitted under the USACE Nationwide Permitting Program. The final section (~900 ft) will be authorized under the same Nationwide Permit once the CWA Section 408 process described below is completed. The Nationwide Permit process does not require individual National Environmental Policy Act review.

Clean Water Act Section 408

At the request of the USACE, an assessment of CWA Section 408 permitting has been initiated. Section 408 deals with the review and approval of all requests to modify, alter, or occupy any existing USACE-constructed public works project. Public works projects include dams, basins, levees, channels, navigational channels, and any other local flood protection works constructed by the Corps. In the case of the Project, this assessment focusses on the review of potential impacts to the bank stabilization structures along with the revetments placed by the USACE in the Missouri River just downgradient of the proposed dewatering water discharge point. Revetments are sloping structures placed on banks or cliffs in such a way as to absorb the energy of incoming water. This assessment should be completed in concurrence with the 404 Nationwide permitting process.

National Environmental Policy Act Review

Within most federal permitting processes, the need for environmental impact analysis is typically required for major federal actions. The National Environmental Policy Act (NEPA) requires federal agencies to consider the environmental effects of, and any alternatives to, their proposed actions. A USACE action that involves the placement of fill material into a WOUS and issuance of a permit generally requires an assessment of compliance with NEPA prior to issuance of the permit. For the

issuance of a nationwide permit, that compliance with NEPA is pre-assumed, as all impacts under the nationwide permit are considered insignificant; thus allowing for a general permit to be issued.

In the event that additional NEPA analysis is requested by the USACE (or cooperating federal agency, such as the U.S. Environmental Protection Agency or EPA), the NEPA process would generally involve one of two levels of analysis:

- Preparation of an Environmental Assessment (EA) and *Finding of No Significant Impact* (FONSI); or
- Preparation of an Environmental Impact Statement (EIS).

It is important to remember that both EAs and EISs are public disclosure documents, not permit or approval documents. They are intended to disclose what, if any, environmental impacts may occur from the Project and guide the decisions of federal agencies. The primary difference between the two types of documents is that an EA is prepared when no significant impacts are expected or the potential impacts are unknown, and an EIS acknowledges that there is a potential for significant impacts, and analyzes and discloses what those potential impacts are. Significance is determined based on a variety of factors such as compliance with state, federal, and local regulation regulations, USACE, EPA and USFWS policies and guidelines, and other site specific concerns such as removing water sites or critical habitat.

At this time, the preparation of a comprehensive EIS is not anticipated for the Project, but remains a risk until the USACE has acted upon (i.e., completed) the official permit application (submitted on March 24, 2017) and has issued a FONSI on the Section 408 action regarding the river outfall structure. Only in rare circumstances, has the preparation of an EA resulted in the decision to subsequently prepare an EIS.

20.3.2 Nebraska NPDES Permitting Program

The current Project water balance suggests that excess water from underground dewatering operations will need to be managed for discharge to the environment. The current plan is to discharge dewatered groundwater via waterline and diffuser directly to the Missouri River, approximately 31 miles (50 km) to the east of the Project site. The Missouri River is believed to be the only regional water body of sufficient quantity (flow) and quality to accept the projected volume of water from the mine with minimal pre-treatment, and still meet applicable discharge and surface water quality standards. Various rights-of-way and easements will also need to be negotiated with Johnson, Pawnee, Richardson and Nemaha counties and private landowners. In addition, the location and design of the in-stream diffuser and impacts to any jurisdictional areas along the proposed waterline corridor, will need to be addressed through the USACE nationwide permitting process.

In the State of Nebraska, all persons discharging or proposing to discharge pollutants from a point source into any waters of the state are required to apply for, and have a permit under the National Pollutant Discharge Elimination System (NPDES) to discharge, including all significant industrial users discharging to a publicly owned treatment works (POTW). The NDEQ is responsible for developing and issuing NPDES permits, and for insuring that permitted facilities comply with permit requirements.

NPDES Permit Timing

Regulations require an individual, site-specific NPDES permit application be submitted to the NDEQ at least 180 days (six months) prior to the date of first discharge. This is predicated on an administratively and technically complete and accurate permit application. If changes are made or additional information is submitted or is required by the agency, the 180-day period may start over. NPDES permits are public noticed for 30 days before being issued. If comments are received and a hearing is required, the NDEQ would schedule a hearing and respond to any comments received at the hearing. This may require an additional 60 to 90 days.

20.3.3 DHHS Radioactive Materials Program and Licensing

The Elk Creek Mineral Resource, and thus the residual post-processing tailings, will contain trace amounts of uranium and thorium, which are Naturally Occurring Radioactive Materials (NORM). At issue will be the ultimate classification of the tailings because of these constituents, and the occurrence of these constituents in the processing circuit. Preliminary discussions with the State of Nebraska have indicated that a Broad Scope Radioactive Materials License, issued under 180 NAC 3-013 by the Nebraska Department of Health and Human Services (DHHS), may likely be necessary.

As defined by the Nebraska Radiation Control Act, radioactive material means any material, whether solid, liquid, or gas, which emits ionizing radiation spontaneously. Radioactive material includes, but is not limited to, accelerator-produced material, by-product material, naturally occurring material, source material, and special nuclear material. The classification of radioactive material appears to be irrespective of any concentration – it merely has to emit ionizing radiation. The material for processing, waste rock, and tailings are likely to be seen as naturally occurring material, and therefore, classified as a radioactive material.

The DHHS retains the right to require registration or licensing of [any] radioactive material in order to maintain compatibility and equivalency with the standards and regulatory programs of the federal government or to protect the occupational and public health and safety and the environment [NRS 71-3507(2)]. At the same time, the DHHS can exempt certain sources of radiation or kinds of uses or users from licensing or registration requirements when the department finds that the exemption will not constitute a significant risk to occupational and public health and safety and the environment [NRS 71-3507(4)].

At a minimum, the Broad Scope License will require the development and implementation of a formal Radiation Safety program for the facility, including environmental and personnel monitoring programs, appropriate warning signage be displayed around the site, and a final permanent closure cover for the TSF be engineered and constructed. DHHS oversight and the Broad Scope License will necessarily cover all points of potential worker exposure, including but not limited to: underground mining, crushing, transportation and stockpiling, conveying, and processing, especially in areas where airborne dust containing uranium and thorium (as well as radon gas) can occur. Worker protection from ionizing radiation and radon will also be regulated by the U.S. Department of Labor, Mine Safety and Health Administration (MSHA) under 30 CFR PART 57 – Safety and Health Standards – Underground Metal and Nonmetal Mines, Subpart D – Air Quality, Radiation, Physical Agents, and Diesel Particulate Matter. Both programs will examine potential exposure limits, engineering and

administrative control requirements, the use of appropriate Personal Protective Equipment (PPE), and monitoring/reporting programs to ensure worker protection.

In the likely event that the Elk Creek facility is regulated in this way, some land restrictions may be invoked at the time of mine closure. While these requirements appear to be directed at uranium mills and commercial radioactive waste disposal facilities, and not necessarily mine tailings for operations containing NORM, the law makes no clear distinction between the facility types. As such, the State of Nebraska could apply them under either scenario, which could even include the possibility of deeding the land to the State of Nebraska following closure.

Irrespective of ultimate classification, the tailings (and their disposal facility) will require financial assurance for reclamation and closure. Again, these rules appear to be directed at uranium mill tailings and low-level radioactive waste facilities, but are non-specific enough that they could be applied to other situations where NORMs are being actively managed. In addition to a direct reclamation financial assurance, it is probable that the state will require a funding mechanism (e.g., trust fund, escrow, etc.) for monitoring and maintenance of the facility in the longer term as part of a Broad Scope License.

DHHS License Timing

NioCorp estimates that a Broad Scope License for the Project will take 6 to 9 months to obtain once the formal application has been submitted, and will involve several months of discussions and negotiations related to engineering, design, monitoring, and terms and conditions.

20.3.4 Nebraska Air Quality Permitting

The Nebraska air regulations are primarily based on regulations developed by the U.S. EPA to address the Clean Air Act (CAA) requirements. Air quality permits are the primary tool used by the NDEQ to implement the CAA. For businesses that intend to operate unit sources that emit regulated pollutants that will exceed Nebraska air quality thresholds, a construction permit will be required.

There are two types of construction permits: state construction permits and federal construction permits, known as New Source Review (NSR) or Prevention of Significant Deterioration (PSD) permits. The type of construction permit that is needed will depend on the quantity of air pollutants that potentially could be released from the new plant or expansion project.

Because the Project includes a primary sulfuric acid plant [a regulated facility under 40 CFR § 52.21(b) which anticipates emissions in excess of the regulatory thresholds], and since Nebraska is currently classified as in “attainment” of all ambient air quality standards, a federal PSD construction permit will be required. The entire permit process is expected to take at least 190 days, provided that there are no significant technical issues or problems in obtaining information, and the facility has submitted a complete application (including detailed air dispersion modeling). Typically, however, PSD permits require over one year in order to complete.

The PSD permitting process includes both public and EPA review and comment periods. Part of the EPA review of the application includes additional scoping through issuance of a PSD Public Notice Package to other federal agencies and land managers, local officials, affected states and others, as necessary. This can lengthen the permit timeline. However, opportunities exist within the program to authorize certain early construction activities (typically limited to ground clearing and grading

activities) prior to permit issuance. The nature and extent of these variances must be negotiated and applied for with the NDEQ.

The sulfuric acid plant is currently assumed to only exist for the purpose of supplying sulfuric acid to the super-alloy materials production process. Alternatively, the sulfuric acid plant may be built with enough capacity to provide the majority of sulfuric acid off site as a saleable product.

In addition to the construction permit, the NDEQ also issues operating permits based on a source's level of emissions. There are two types of operating permits: major source (federal program) and minor source (state program). As before, the potential to emit associated with the sulfuric acid plant will necessitate the issuance of a major source permit for the operation. The federal major source program (a.k.a., Class I or Title V) regulates larger sources of air pollution. A Class I source has the potential-to-emit (PTE) quantities greater than:

- 100 t/y of any criteria air pollutant, excluding lead;
- 10 t/y of any single hazardous air pollutant (HAP) or 25 t/y of a combination of HAPs; or
- 5 t/y of lead.

The operating permit incorporates all of a source's requirements into one permit, including all construction permit limitations and federal regulations. Operating permits usually require additional monitoring, stack testing, reporting, and recordkeeping. However, the application for the operating permit need only be submitted within 12 months after the emissions unit(s) begin operation, or within 12 months of becoming subject to the operating permit requirements, whichever is earlier.

Earthworks associated with digging holes, grading soil, stockpiling of topsoil, and land clearing where the new source will be located, which will not result in a change in actual emissions, and are not of a permanent nature, do not require a construction permit or prior approval of the NDEQ under Title 129, Chapter 17 (*Acceptable Pre-Construction Dirt Work* dated August 2016).

20.3.5 Nebraska Dam Permitting

The Department of Natural Resources (DNR) regulates the construction, operation, and maintenance of dams in Nebraska to protect life and property from dam failures. The DNR regulates all dams in the state that:

- Have a total height of 25 ft or more and an impounding capacity at the top of dam that is greater than 15 acre ft;
- Have an impounding capacity at the top of dam of 50 acre ft or more and a total height that is greater than 6 ft; or
- Are located in a high hazard potential location.

As promulgated in Chapter 46, Article 16 - Safety of Dams and Reservoirs, approval of applications shall be issued within 90 days after receipt of the "completed" application plus any extensions of time required to resolve matters diligently pursued by the applicant. At the discretion of the DNR, one or more public hearings may be held on an application (46-1654). This will, of course, add additional time to the overall permitting process for the TSF and Mine Water Pond.

20.3.6 Greenhouse Gas Permitting

The NDEQ defines Greenhouse Gases (GHG) as chemical compounds that, when emitted into the atmosphere, have the potential to cause climate change. There are currently 73 GHG chemicals

identified in 40 CFR § 98 Table A-1 to Subpart A, which include, but are not limited to: CO₂, CH₄, N₂O, and Fluorinated GHGs (SF₆, PFCs, HFCs). Recent rulemaking by the EPA incorporates changes impacting the regulation of GHGs and establishes emission thresholds for GHG emissions, while provides the State of Nebraska (among others) the authority to issue PSD permits governing GHGs.

Because not all GHGs remain in the atmosphere for the same amount of time or have the same potential effect in the atmosphere, a system of equivalents (using CO₂ as a baseline or CO₂^e) was developed to account for the variation between compounds. For New Sources, the PSD permitting threshold is: 100,000 t/y CO₂^e (as of July 1, 2011). Preliminary calculations for the Project suggest that the operation will be above this threshold.

To date, the EPA has not implemented a minor source program for GHGs, and Nebraska has not chosen to implement a minor source program either. At this time, no fees will be collected, but all sources will be required to report GHG emissions.

20.3.7 Permitting Status

Initial permitting activities commenced in January 2015 with the submission of a Jurisdictional Delineation report to the USACE for the mine site. In addition, several high-level meetings with federal, state and local agencies have been held in order to introduce the Project to the local regulatory communities.

NDEQ Construction Air Permit

A pre-application meeting took place with the NDEQ on September 8, 2016. Subsequent to this meeting, the Project team has begun analysis of processes that result in emissions regulated by the NDEQ, and have completed initial air emissions calculations. These calculations continue to evolve as the process develops. At the current time, it appears the Project will require a PSD major construction and operating permit. The PSD process requires ambient air monitoring for a number of pollutants, and a request to trim that list to PM_{2.5} was submitted to the NDEQ on December 6, 2016. The NDEQ denied NioCorp's request, and the Company has proceeded to conduct air monitoring for all of the monitoring parameters required under the PSD program.

NioCorp currently anticipates submitting the Air Construction Permit application by the end of 2017 with an anticipated permit issuance in 2018.

CWA NPDES Permit

A Section 402 permit will be required to authorize discharges of underground mine dewatering water to the Missouri River. Initial coordination with the NDEQ occurred in 2015, and NioCorp is currently in the process of updating and finalizing the discharge model to include in the permit application. MixZon (2016), of Portland Oregon, evaluated a discharge outfall that would meet the acute (860 mg/L) and chronic (230 mg/L) water quality criteria for chlorides at mixing zone limits of 250 ft and 5,000 ft, respectively, downstream from the discharge location in accordance with NDEQ requirements and guidelines, using the CORMIX mixing zone model. The preliminary model indicated that a multiport diffuser configuration would be required in the Missouri River to meet these requirements. The preliminary design of this diffuser has begun. Agency meetings with the NDEQ and EPA occurred on November 17 and again on December 9, 2016 to discussing the 402, 404, and 408 permits, and identify a path forward for the NPDES discharge permit for the Missouri River.

Subsequent meetings with the NDEQ regarding the Section 402 permit occurred on April 21, 2017 (Pre-Application Meeting) and May 23, 2017 (Alternative Analysis for Anti-Degradation meeting). Additional evaluation, design optimization and modeling will need to be performed to arrive at an optimized outfall configuration for this discharge.

USACE Wetland Permitting

As indicated above, permitting associated with impacts to jurisdictional wetlands and WOUS are anticipated to be authorized under the USACE nationwide permitting process. This process was unofficially initiated with the development of the AJD between NioCorp and the USACE. The official permitting commenced with the submittal of the 404 PCN application to the USACE, which occurred on March 24, 2017, followed by another PCN submittal (and response to comments) on May 5, 2017. This process is expected to be completed in 2017.

On June 7, 2017, NioCorp (through Olsson Associates), submitted a letter on behalf of Elk Creek Resources, requesting initiation of a 33 U.S.C 408 (Section 408) review by the USACE. The review is for the proposed construction and operation of an outfall structure into the Missouri River. At this time, it does not appear that a Categorical Permission would apply to this component of the Project; rather, the USACE believes, and is proceeding under the assumption, that the 408 evaluation will require an individual NEPA analysis (environmental assessment). This process could take six to nine months to complete once initiated.

Temporary Limestone Processing

The Project may require temporary limestone processing during the construction of the mine shaft. Third-party portable limestone processing equipment may be used on site to crush and handle limestone removed from the mine shaft, so long as that material meets construction specifications and does not leach potentially deleterious constituents (i.e., heavy metals or NORMs). The NDEQ has confirmed that third-party operators will be required to have an air quality permit to operate equipment on site.

20.3.8 Post-Performance and Reclamation Bonding

In addition to lacking hardrock mining regulations for reclamation and closure, there are also limited requirements for the provision of financial sureties with respect to hardrock mining operations in Nebraska. One possible exception would be under the scenario in which the facility falls under a broad scope radiological license, which has financial assurance requirements for reclamation and closure (“decommissioning funding plan”). As noted before, however, these rules appear to be directed at uranium mill tailings and low-level radioactive waste facilities, but are vague enough that they could be applied to other situations where NORMs are being managed, though NioCorp has conservatively assumed that the licensure program and financial surety requirements will apply to the Project. These surety requirements extend to long-term site monitoring, maintenance, and care, and include the following mechanisms:

- Pre-payment (Trust Fund);
- Surety Bond;
- Insurance;
- Letters of Credit; and/or
- Corporate Guarantee (provided parent company passes financial test).

In addition, financial assurances will also be required for the TSF, for which jurisdiction will fall under the NDEQ Title 132 - Integrated Solid Waste Management Regulations, and includes the requirement for a detailed, third-party closure cost estimate, proper disposal of all materials or wastes left at the site, and post-closure care for the solid waste disposal area in compliance with the post-closure plan. Allowable mechanisms for financial assurance under the solid waste regulations include:

- Trust Funds;
- Surety Bonds Guaranteeing Payment or Performance;
- Letters of Credit;
- Insurance;
- Corporate Financial Tests;
- Local Government Financial Tests;
- Corporate Guarantees; and/or
- Local Government Guarantee.

At this time, the type and phased amount of financial surety for Elk Creek has not yet been established, though the amount of bond will only reflect the liability on the ground at any given time (i.e., NioCorp should not be required to bond for reclamation of all of the TSF cells when only one will be active and unreclaimed at any time). The specific requirements will be refined through meetings and negotiations with the two agencies and the submission of formal permit applications.

20.4 Community Relations and Social Responsibilities

Community relations and stakeholder engagement have been undertaken in parallel with field operations in Nebraska and have included town hall and individual meetings with local landowners. Some early communications have occurred between NioCorp and Johnson, Pawnee, Nemaha and Richardson County representatives (including the county commissioners) as well as the Southeast Nebraska Development District (SENDD). Given the accelerated schedule proposed by NioCorp for the Project, all of the relevant regulatory agencies will need to be formally engaged as soon as possible using the designs presented herein as the basis for permitting. Any significant deviations from this design, could, therefore, have an impact on overall Project timing.

NioCorp is committed to ensuring that a proper Social License is garnered from the community and stakeholders. Thus far, support for the Project has been positive from those who have been engaged and notified of the pending Project. However, as with any major mining project, there remain vocal opponents and non-governmental organizations (NGOs) who will oppose the Project on principal alone. These groups are likely to include organizations such as Bold Nebraska, a citizen group focused on “*taking actions critical to protecting the Good Life.*” NioCorp has already engaged with Bold Nebraska in early discussions about the Project on May 23, 2016, and has kept the group informed of major developments over the past year.

20.4.1 Health and Safety

Occupational health and safety at the Project will be strictly regulated by the U.S. Department of Labor, Mine Safety & Health Administration (MSHA), under Title 30 of the Code of Federal Regulations, Mineral Resources, Parts 1 through 199 (30 CFR Parts 1 through 199). This includes all of the training requirements specified in 30 CFR Parts 46 through 49. Given the radiological nature of

the mineralized material, MSHA will likely institute radon exposure and monitoring requirements on all underground workers in accordance with 30 CFR § 57.5039 thru § 57.5047.

Because Nebraska has not enacted any workplace safety and health rules, the federal Occupational Safety and Health Act (OSH Act) governs workplace health and safety requirements in private (private businesses and nonprofit organizations) sector workplaces. In addition, the Nebraska Occupational Safety and Health Surveillance Program (NOSHP), established in 2010 under the Nebraska Department of Health & Human Services, provides state-based occupational health surveillance, while the Nebraska Department of Labor (DOL) Office of Safety is charged with the protection of people and property through enforcement of the Nebraska Amusement Ride, Boiler Inspection, and Conveyance Safety Acts. With respect to the Project, DOL safety staff will inspect boilers and pressure vessels to ensure that they are properly installed and maintained.

20.5 Reclamation and Closure

Without specific hardrock mining regulations, there are limited obligatory requirements for reclamation and closure of mining properties in Nebraska. There are provisions, however, within the applicable regulatory framework which are likely to be applied to the Project during the permit and licensing processes, specifically those associated with the TSF. The following sections provide a summary of the key elements to the approaches proposed for closure and reclamation of the Project, and form the basis for the closure cost estimate.

20.5.1 Surface Disturbance

The principal objective of the surface reclamation plan will be to return disturbed lands to a productive post-mining land use. Soils, vegetation, wildlife and radiological baseline data will be used as guidelines for the design, completion, and evaluation of surface reclamation. Final surface reclamation will blend affected areas with adjacent undisturbed lands so as to re-establish original slope and topography and present a natural appearance. Surface reclamation efforts will strive to limit soil erosion by wind and water, sedimentation, and re-establish natural drainage patterns.

20.5.2 Buildings and Equipment

All surface structures and equipment will be evaluated for appropriate post-closure re-use or disposal. Buildings and equipment will be decommissioned, decontaminated (as necessary), dismantled, and either salvaged or disposed of in an appropriate on-site or off-site disposal facility.

All wells, including dewatering and production wells, monitoring wells, and any other wells within the Project Area used for the collection of hydrologic or water quality data or incidental monitoring purposes, will be properly abandoned in accordance with NDEQ and DNR requirements.

20.5.3 Tailings Disposal Facility

Since the definition of Solid Waste in Chapter 1 of Title 132 – *Integrated Solid Waste Management Regulations* includes material generated from mining operations, the tailings disposal facilities at the Project will likely be subject to all or part of the Title 132 regulations, including the closure requirements. The design of the TSF cells allow for concurrent reclamation in order to reduce the amount of precipitation contact water that will require active management. Once a cell of the TSF has reached design capacity, it will be closed. For purposes of closure cost estimating and potential

future bonding requirements, this approach will assume that only one cell will be active at any given time for which reclamation (and bonding) may be required. In addition, the approach to TSF construction and material placement will allow the operator to concurrently close portions of each cell as they reach capacity.

The initial closure cover will consist of surface grading, and placement of a geomembrane liner over the graded tailings. This liner requires an over-liner drainage system that discharges to the outer slope of the embankment of each TSF cell, and placement of adequate thickness of cover to allow for vegetation; though a root barrier may be necessary to prevent rooting into the tailings. With respect to post-closure requirements, operators of solid waste disposal areas shall provide for post-closure care for a period of at least 30 years. At this time, there is no anticipated post-closure solution/draindown management consideration for the TSF cells given the nature of the tailings materials and the conceptual closure approach. This approach to closure of the TSF cells is considered conservative, and was selected to demonstrate feasibility and permit ability with respect to the NDEQ landfill regulations and on the advice of the agency. Given the current LoM expectation, additional technologies and/or approaches to equally effective closure options may likely be developed prior to actual reclamation of the site.

20.5.4 Closure Cost Estimate

Closure costs for the Project, including estimates for post-closure monitoring and maintenance, have been estimated at just over US\$39 million. This conservative approach and estimate consider the fact that: 1) none of the facilities are constructed (i.e., final actual configurations are unknown), 2) costs for materials and services are difficult to predict 30 years in advance, and 3) no trade-off studies or final risk assessments have been performed on the closure approach (normally done later in the mine life).

20.6 International Standards and Guidelines

The United States is a Designated Country with respect to the Equator Principles. Designated Countries are those countries deemed to have robust environmental and social governance, legislation systems, and institutional capacity designed to protect their people and the natural environment (Equator Principles Association, 2011).

The current release of the Equator Principles (EP III), launched on June 4th, 2013, covers more projects and streamlines the process to focus on legal compliance in Designated Countries. The reworded Principle 3, states that: “the Assessment process should, in the first instance, address compliance with relevant host country laws, regulations and permits that pertain to environmental and social issues.” This is in an effort to streamline assessments, especially in Designated Countries whose laws already meet the requirements of environmental and/or social assessments (Principle 2), management systems and plans (Principle 4), stakeholder engagement (Principle 5) and, grievance mechanisms (Principle 6). In this case, an evaluation of compliance with host country laws is considered sufficient. Elsewhere (non-Designated Countries), compliance with the applicable International Financing Corporation (IFC) Performance Standards (updated in January 2012) and the World Bank Group Environmental, Health and Safety Guidelines is generally required. Other changes in EP III included:

- public disclosure of the Environmental and Social Impact Assessment for the Project, or at a minimum, its summary statement;
- analysis of alternatives to address greenhouse gas reductions;
- in non-designated countries, consideration of the new IFC Performance Standards around labor standards, and occupational health and safety diligence requirements in relation to primary supply chain employees and contracted workers, and possibly human rights due diligence in limited “high risk circumstances”. The new IFC Performance Standards also require *Informed Consultation and Participation* of affected peoples, or even, *Free Prior and Informed Consent* for certain projects. This latter is stronger than most of the legally required consultation frameworks around the world.

At this stage, the Project is in compliance with EP III.