

SASKATCHEWAN METALS PROCESSING PLANT ENVIRONMENTAL ASSESSMENT PROCESS

ENVIRONMENTAL APPROVAL OVERVIEW

The SMPP has been through a rigorous environmental review process to determine the potential impacts of the project on the local environment. An Environmental Impact Assessment (EIA) has been completed, according to provincial guidelines, to obtain the environmental approval to construct the SMPP.

TIMELINE

August 2010, Fortune submitted an Environmental Project Proposal for the proposed SMPP to the Saskatchewan Ministry of Environment (MOE). The MOE determined that an Environmental Impact Statement (EIS) was required for the project.

January 2011, MOE released draft Project Specific Guidelines (PSGs) for the development in, to guide the creation of the EIS.

March 2011, PSGs were finalized after review and input from the public.

June 2011, First draft of the EIS was submitted to MOE to provide technical review comments.

September 2013, Deficiencies in the EIS were identified in the provincial technical review comments.

September 2013, the final EIS (including an Addendum document that addressed the deficiencies) was submitted to MOE for public comments.

For the Addendum, Fortune conducted/provided:

- Additional studies (human health risk assessment, waste water and geochemical characterization), and
- Modelling activities (assessment of injection capabilities into the Duperow and Souris River Formation, liner performance, impacts to ground water production)
- Additional information (cost benefit analyses, mass and energy balances, revised water balance, air emissions data)
- Additional commitments to the Commitments Registry (For example - develop a financial assurance fund, demonstrate hydraulic conductivity of compacted till liner is 1×10^{-9} m/s, develop and submit approval for secondary containment inspection program, develop a PRSF Management Plan - including a remedial plan if fluids are detected beneath this storage facility)

November 2013, A 60 day public review period was provided due to the level of local interest

January 2014, Fortune addressed public concerns in a 3rd submission document.

- the MOE was therefore able to consider the EIS, Technical Review Comments, Addendum, and the response to public comments in their decision process

February 11 2014, The Environmental Impact Statement for the SMPP was approved

Ministry of Environment stated that the ministry and reviewing agencies are satisfied that, if the mitigation and environmental protection measures outlined in the EIS are implemented, and terms and conditions are imposed as presented in the approval letter, adverse effects can be minimized and benefits enhanced. Approval under The Environmental Assessment Act, was therefore granted to Fortune Minerals Limited for the SMPP as described in the EIS and supporting documents.

This conclusion is based on Fortune's commitments as documented in the EIS, on the Minister's of Environment's ability to impose specific conditions; and on the knowledge that additional environmental protection requirements can be imposed through terms and conditions forming part of permits and licences required by provincial legislation.

The following Acts and/or Regulations were taken into account to provide the environmental approval for the SMPP:

The Environmental Assessment Act
The Hazardous Substance and Waste Dangerous Goods Regulations
The Environmental Management and Protection Act
The Dangerous Goods Transportation Act and Regulations
The Occupational Health and Safety Act
The Occupational Health and Safety Regulations
Mineral Industry Environmental Protection Regulations

A significant amount of work has been completed by, and on behalf of Fortune to study the surface and subsurface environment, develop containment designs, and create environmental impact mitigation plans.

The following Baseline Information was collected to identify the existing environment:

- Land Use
- Geology and Hydrogeology
- Surface Water
- Air Quality
- Noise
- Soils
- Heritage Resources
- Biology (Terrestrial and Aquatic)

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An Environmental Impact Assessment was conducted to examine the potential effects of the proposed SMPP to the physical and human environment.

The following analyses were completed to determine any potential impacts:

- Groundwater contaminant transport and flow models were developed to predict contaminant transport from the Process Residue Storage Facility and liner performance
- Analytical and numerical models were created to simulate the effect of groundwater production on the Dalmeny Aquifer and other users
- Assessment of injection capabilities into the Duperow and Souris River Formation
- Human Health Risk Assessment
- Waste water and geochemical characterization
- Noise and air emission modelling studies were also conducted to estimate potential environmental impacts of the proposed project

To lessen any potential impacts, Fortune has considered numerous options and alternatives for the proposed SMPP project. These include alternatives for the selection of the site, processing facility and site layout, water supply, water and residue storage, process solution disposal, and the metallurgical processes. Fortune is confident that the proposed plans to construct the SMPP have considered all viable options to ensure that potential environmental impacts are avoided and/or minimized. Fortune is committed to preventing or reducing adverse environmental effects associated with the project, wherever possible. General mitigation measures planned for this project include the following:

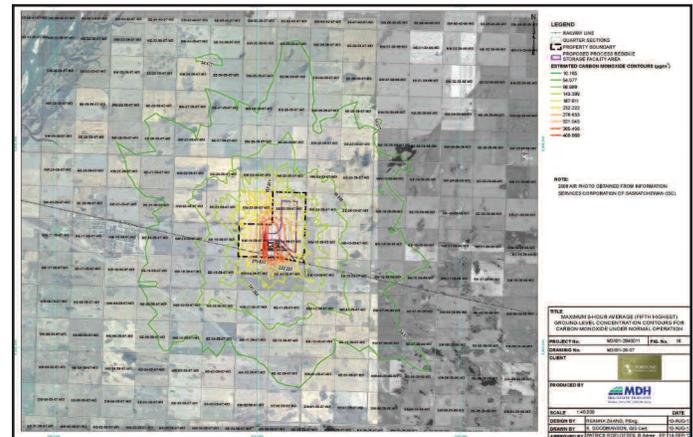
- Obtaining all required permits and approvals prior to construction;
- Using best practice, environmentally sound construction methods (i.e. minimal clearing, salvaging topsoil, etc.);
- Construction of appropriate containment systems (i.e. berms, perimeter ditches, ditches and ponds with engineered liners, etc.);
- Use of best available technologies to reduce water, power, and energy use;
- Use of best available technologies to reduce air emissions; and
- Development and implementation of a site Environmental Monitoring Program.

These measures are intended to provide effective long-term containment and mitigation of environmental impact. Considering the mitigation and environmental protection measures outlined in the EIS are implemented, and terms and conditions of the Ministry of Environment are imposed, impacts beyond the site boundaries are expected to be minimal (i.e. low). The area immediately surrounding the proposed development is dominated by agricultural activities and the processing of metal concentrates has a negligible effect on this surrounding land use. Overall any impacts are expected to be minimal with the planned design, monitoring and mitigation measures.

Impact predictions were made on specific areas of interest raised by local residents during consultation efforts. These include:

AIR

An air dispersion model (AERMOD) was used to estimate maximum ground-level concentrations of the possible air emissions for a variety of periods along and beyond the property boundary. AERMOD is approved for use in Saskatchewan by the Ministry of Environment (MOE). It was run with data that included representative topography, land-use, and meteorological conditions around the site. Five-year meteorological data (2003 to 2007) was provided by MOE for the central air dispersion modelling zone and used in the model to examine various routine operation emissions and the defined start-up and upset scenarios.



The final modeling results show that under normal operation, all ground-level concentrations for all modelled periods (i.e. 1-hour, 8-hour, 24-hour, and annual) from all emission sources of the SMPP site met the provincially regulated emission objectives. When considering effects to the surrounding area, all results satisfied these emission objectives.

To ensure air emissions remain at these low levels, Fortune has included bag houses, demisters, and scrubbers with single and double stages into the project design along with a commitment to develop a long-term monitoring program to measure air emissions from the stack sources and ambient air quality parameters and to develop an Emergency Preparedness Plan (EPP) for potential leaks.

The plume existing the stacks is mainly expected to be comprised of carbon monoxide (1,222 µg/cm³ at a 1 hr duration) and nitrogen dioxide (296 µg/cm³, 1 hr duration) at levels much lower than provincial objectives (15,000 and 400 µg/cm³, respectively). Carbon monoxide is commonly emitted from volcanic activity, natural and man-made fires, and the burning of fossil fuels while nitrogen dioxide is generally produced from the combustion of engines, gas heaters and electrical storms.

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Sulphur dioxide has been estimated to be released from the facility at 8.7 µg/cm³ for a 1 hour duration while the provincial objective is 450 µg/cm³ for the same duration. The other emission durations for sulphur dioxide (24-hour and annual) also had reduced rates below the provincial objectives of 150 and 30 µg/cm³, respectively, as compared to the estimated releases of 2.0 and 0.2 µg/cm³ from the SMPP.

NOISE

The results of the Noise Impact Assessment indicate that the daytime limit is below Alberta Energy and Utilities Board (2007) guidelines (at each of the receptor locations, and the Permissionable Sound Level for nighttime is exceeded slightly at a residence to the east and another southwest of the site. However, since actual noise levels are expected to be lower than those predicted in this study, due to the worst case modelling inputs, no mitigation measures are required at this time. Fortune has committed to further noise monitoring once the proposed facility is operational to confirm the actual noise coming from the SMPP and to determine if any further mitigation measures are required.

Local residents are only expected to experience a short-term noise disturbance from construction activities and adjacent landowners will be advised of the construction activities. Construction noise is not expected to significantly add to the existing ambient noise levels from equipment used for agricultural activities.

Given the existing noise emissions within the project area from agricultural, rail, and road maintenance activities, wildlife is expected to have become habituated, or tolerant to increased noise and activity levels.

DUST

Dust control measures will be implemented throughout the life of the facility. Operational activities such as wetting the process residue piles, wind baffles, utilizing covers and dust suppressants will control dust from the facility. Monitoring for dust on and off the property will determine the need for any additional measures to suppress dust generation.

The process residue generated at the SMPP is a filter cake with approximately 31% moisture content. The moisture content will help to minimize fugitive dust emissions from the placement of the residue. Once a storage cell is filled with residue, the 'store and release' cover system will be constructed. The cover system will prevent dust emissions from the capped cells, as well as limit oxygen and water infiltration, and support vegetation. Due to the larger particle size, any dustfall originating from the SMPP will be deposited near the source and therefore it is not expected to be dispersed far from the site.

To mitigate potential impacts from dust generated by traffic travelling on the road to the site, Fortune has indicated the Schultz Road access to the site from Highway 305, will be paved. For any roads that remain gravel, dust suppression will be carried out if emissions from the movement of vehicles and equipment are significant.

SURFACE WATER

No impact to surface water outside the proposed project boundaries is anticipated as a result of the proposed SMPP development. The proposed development does not intersect any watercourses; therefore, a surface water diversion structure is not expected to be required. No regional flood plains were identified that may cause flooding within the proposed site area.

The proposed project is also not anticipated to have an impact on the flow or water quality of the North Saskatchewan River, Rice Lake, or other creeks and rivers in the area. Most of the area located within and around the proposed development does not contribute to the regional runoff of the North Saskatchewan River, rather the runoff flows into local wetland areas. No surface contaminants are expected to be released into the surrounding natural drainage basins as a result of the proposed project. The use of an engineered drainage collection system (i.e. storm water collection systems) and proven spill containment procedures will ensure there is no contaminate release. Any gas and diesel fuel, oils, and oil filled transformer stations at the proposed SMPP site will be stored within separate secondary containment areas. Therefore, no significant impact is expected to the regional drainage basins from the proposed development. Fortune may decide to install culverts and divert surface water runoff around the facility and into the natural drainage course, if there are significant drainage volumes during the life of the SMPP. Appropriate provincial regulations will be followed if Fortune decides to divert any surface runoff. Sediment and erosion control measures will be installed at locations where eroded materials may enter surface drainage features and other wetland areas, during construction.

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GROUND WATER

A groundwater assessment provided information on the following:

- Shallow (Quaternary aged) hydrogeology;
- Baseline conditions for major aquifers beneath the proposed site; and
- Hydrogeology in support of the design of the proposed metals processing and waste storage facilities.

This hydrogeological information collected at the site was used to support the Environmental Impact Assessment and provide instrumentation that can be used for long-term monitoring of the Process Residue Storage Facility (PRSF) and groundwater production in the vicinity of the site.

Twenty-six boreholes were drilled at twenty-one locations, including five piezometer stack locations (two piezometers at each location). Five deep boreholes were drilled to the Lea Park Formation shale to provide geological information for the site. Twenty-one shallow augerholes were drilled for both geotechnical and hydrogeological purposes. The depths of the boreholes varied between approximately 9 m and 107 m.

Five piezometers were installed in the Upper Floral Aquifer and eleven were installed at the oxidized/unoxidized Floral Formation till contact. The piezometers were used to acquire baseline groundwater chemistry, potentiometric data, and hydraulic parameters for these major hydrostratigraphic units. Fortune will measure groundwater levels and conduct geochemical analyses on the existing piezometers at the SMPP site. Some of the existing piezometers at the site may need to be decommissioned as the construction of site infrastructure will occur on top of this instrumentation. New instrumentation will be installed as required.

HUMAN HEALTH

A Human Health Risk Assessment (HHRA) was conducted to evaluate the potential effect of the facility on those working at the site and in the surrounding agricultural area. The HHRA included an examination of the potential impact of direct contact and incidental ingestion of process residue from the PRSF. There were no identified risks associated with the facility to those in the surrounding agricultural area either through dust emissions or contamination of groundwater as no exposure pathway has been established with mitigation efforts in effect. Risks to on-site workers associated with exposure to harmful substances can be adequately managed by the development of appropriate on-site policies and procedures as required by The Occupational Health and Safety Act and The Occupational Health and Safety Regulations. These regulations also address the requirement to have a written emergency plan to deal with workplace spills, leaks and accumulations and to provide the related supplies and worker training.

Fortune acknowledges responsibility for all aspects of its operations. In keeping with this commitment, an environmental management plan to protect the environment and lessen any potential impacts will be created and approved prior to construction. Continual environmental monitoring during the facility operation and closure will ensure the appropriate mitigation measures are applied. Impacts beyond the site boundaries are expected to be minimal.

The proposed SMPP facility will also be subjected to a number of inspections conducted by various provincial and national regulators such as Transport Canada, SaskPower, the Technical Safety Authority of Saskatchewan, the Occupational and Health Division of the Ministry of Labour Relations and Workplace Safety, etc. In addition, third party inspections of critical systems will likely be arranged annually by insurance carriers and brokers, as part of Fortune's continuing effort to reduce risk and minimize any potential loss. The community monitoring program will also have a role in the review of site operations.

This document contains forward-looking information. This forward-looking information includes statements with respect to, among other things, the proposed development of the NICO project and the SMPP, the permitting process for the NICO project and the SMPP, the anticipated capital and maintenance costs of the SMPP, the anticipated production from the SMPP, the number of employees expected to be employed at the SMPP and the wages expected to be paid to such employees, the possibility that the SMPP may be able to source materials from other projects, the anticipated impact of the SMPP on the environment and the measures expected to be taken by the Company to mitigate such impact. Forward-looking information is based on the opinions and estimates of management as well as certain assumptions at the date the information is given (including, in respect of the forward-looking information contained in this press release, assumptions regarding the Company's ability to arrange necessary financing for the NICO project and the SMPP, obtain all necessary permits for the NICO project and the SMPP and negotiate an Impact and Benefit Agreement with the Tłı̄cho Government and assumptions regarding the capital and maintenance costs of the SMPP, the production from the SMPP, the number of employees to be employed at the SMPP and the wages expected to be paid to such employees and the impact of the SMPP on the environment. However, such forward-looking information is subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information. These factors include the inherent risks involved in the exploration and development of mineral properties, the risk that the Company may not be able to arrange the necessary financing to construct and operate the NICO mine or the SMPP, uncertainties with respect to the receipt or timing of required permits for the development of the NICO project or the SMPP, the risk that the Company may not be able to negotiate an Impact and Benefit Agreement with the Tłı̄cho Government, the possibility of delays in the commencement of production from the NICO project or construction of the SMPP, the risk of capital or maintenance cost overruns, the risk that the Company may not be able to source materials for the SMPP from other projects, the risk that the environmental impact of the SMPP may be greater than anticipated and other factors. Readers are cautioned to not place undue reliance on forward-looking information because it is possible that predictions, forecasts, projections and other forms of forward-looking information will not be achieved by the Company. The forward-looking information contained herein is made as of the date hereof and the Company assumes no responsibility to update or revise it to reflect new events or circumstances, except as required by law. The disclosure of scientific and technical information contained in this document has been approved by Robin Goad, M.Sc., P.Geo., President and CEO of the Company, who is a "qualified person" under National Instrument 43-101.



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